AMEE GLASGOW 2023
INCLUSIVE LEARNING ENVIRONMENTS TO TRANSFORM THE FUTURE

AMEE 2023

26-30 August

SEC, Glasgow, UK

"Inclusive Learning Environments to Transform the Future"

Abstract Book

In Person

Plenary 1A

1A

Date of presentation: Sunday 27th August
Time of session: 1745 - 1945
Location of presentation: Hall 2

Understanding Inclusive Leadership for HPE

Sophie Soklaridis[1]

[1]*Senior Scientist at the Centre for Addiction and Mental Health (CAMH). She is an Associate Professor at the Department of Psychiatry and Department of Family & Community Medicine at the Temerty Faculty of Medicine, University of Toronto, Canada*

Background

A commitment to inclusive leadership means everyone we work with can be a decision-maker. However, the current academic environment is resistant to this sort of paradigm shift. How does the practice of inclusive leadership push up against environments that are more traditional and against the hierarchical leadership that is deeply embedded in the fabric of social life? In this opening plenary, Dr. Sophie Soklaridis will analyze the work of inclusive leaders and the tensions this kind of leadership brings. She will challenge us to examine what structures and processes are exclusionary by design, and how integrating anti-oppressive practices is not the same as inclusion—in some cases even becoming weaponized to exclude certain groups. She will offer concepts and practices that will help us all advocate for a more inclusive and intersectional vision for leadership in HPE

Session 2A

2A (0398)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: Hall 2

Long live Communities of Practice in health professions education!

Eeva Pyörälä[1], Subha Ramani[2], Yvonne Steinert[3], Rashmi Kusurkar[4], Enjy Abouzeid[5], Evangelos Papageorgiou[6]

[1] University of Helsinki, Center for University Teaching and Learning, Helsinki, Finland [2] Harvard Medical School and Brigham and Women's Hospital, Boston, USA [3] McGill University, Institute of Health Sciences Education, Montreal, Canada [4] Amsterdam University Medical Centra – location Vrije universiteit, Amsterdam, The Netherlands [5] Ulster University, Faculty of Medicine, Londonderry, UK [6] Evangelismos Hospital, Athens, Greece

Background

The core mission of AMEE is to inspire excellence, collaboration, and scholarship in health professions education (HPE), bringing together educators worldwide to learn from and with each other. The AMEE Fellowship program was designed to provide support and mentorship for emerging health professions educators in their professional development as scholars, as well as for established scholars to gain recognition locally, nationally and internationally. This is not an individual but a collaborative endeavour where communities are nurtured across generations, professions and cultures.

The Communities of Practice (CoP) framework provides a lens through which to explore the communities that support the growth of HP educators.

Topic Importance

One of the pioneers of the concept **"**Communities of Practice**"** (CoPs) is Professor Jean Lave (Lave & Wenger 1991), who is being awarded the 2023 AMEE Honorary Fellowship. In HPE, advancement in expertise and scholarship is widely attributed to social learning,

involving interaction and collaboration within CoPs rather than through just acquisition of knowledge by individuals. In CoPs, participants from different backgrounds share a common passion and interest in finding solutions to real-world problems in complex settings.

In this symposium, a subgroup of the AMEE Fellowship Committee, the Chair of the Faculty Development committee and young HP educators offer versatile perspectives on the notion of CoPs in HPE. We explore (1) the framework of CoPs in HPE, (2) the mentoring scheme of the Fellowship committee supporting the growth of early-career educators (associate fellows), (3) CoPs in the Faculty Development, (4) inclusive CoPs in HPE, and (5) the collaborative practices of emerging HPE educators in the post-Covid-19 era taking advantage of social media, digital and virtual environments.

Format and Plans

The program of the symposium will include presentations, question and answer sections, and audience engagement modalities such as polls and word clouds.

Take Home Messages

The take-home messages of the symposium are to highlight the social dimensions of learning, showcase Communities of Practice in HPE as key to professional growth, and inspire educators, practitioners and scholars at different stages of their careers to come together, exchange ideas and expertise on educational practices and share their experiences of making progress as educators and HPE scholars.

Session 2B

2B (6922)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: M1

Advancing Anti-Oppression and Social Justice in Healthcare Through CBME

Ming-Ka Chan[1], Karen E. Hauer[2], Melchor Sánchez Mendiola[3], Jonathan Amiel[4], Michael Barone[5], Kimberley Lomis[6]

University of Manitoba, Max Rady College of Medicine, Winnipeg, Canada[1], University of California, San Francisco, USA[2] , National Autonomous University of Mexico, Faculty of Medicine, Mexico[3], Columbia University, New York, USA[4] , National Board of Medical Examiners, Philadelphia, USA[5], American Medical Association, Nashville, USA

Background

The systems that support medical education have long perpetuated structures of inequity, bias, and racism. It is a clear imperative upon the medical education community that we must advance anti-oppression and social justice within our curricula, assessments, and learning environments. Competency-based medical education (CBME) with its focus on patient-focused outcomes re-centers education around the needs of our diverse patient population and the learners who will care for them. In this symposium, we will examine how CBME provides new lenses through which to examine our education structures and opportunities to advance social justice and equity within our learning environments throughout each component of training.

Topic Importance

.CBME can be a powerful tool for promoting anti-oppressive pedagogy and social justice. This session will focus on opportunities to capitalize on this opportunity and pitfalls that may also arise

Format and Plans

The facilitators will present a panel discussion of the issues of racism, bias, and inequity within our current educational systems. They will then provide a framework for how CBME can address these issues with examples ranging from social justice curricular design, equitable programmatic assessment practices, and creating inclusive learning environments. They will then facilitate think-pair-share or small group discussions depending on the size and distribution of the audience to discuss how participants can apply these principles within their own context. The final half of the audience participation portion will include time for large group discussion and questions.

Take Home Messages

- Identify root causes of structural racism, bias, and inequity within the current medical education system.
- Discuss ways in which CBME can facilitate equity and mitigate bias within current educational practices ranging from curricular delivery to programmatic assessment.
- Evaluate opportunities for using a social justice lens within your current educational context

Session 2C

2C (1587)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: Argyll I

Beyond thinking fast and slow: theories informing teaching and assessment of clinical decision making and error

Michelle Daniel [1], Thilan Wijesekera[2], Andrew Parsons[3], Dario Torre[4], Steven Durning[5], Andrew Olson[6]

[1] University of California San Diego School of Medicine , La Jolla, California , USA [2] Yale School of Medicine, New Haven, Connecticut , USA [3] University of Virginia School of Medicine, Charlottesville, Virginia , USA [4] University of Central Florida, Orlando, Florida, USA [5] Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA [6] University of Minnesota Medical School, Minneapolis, Minnesota, USA

Background

Several theories of cognition should inform teaching and assessment of clinical reasoning and our understanding of error. Yet, most educators are familiar with just a few. These theories range from “micro” theories, that focus on what goes on “in the head” of the provider to “macro” theories that extend the boundaries of clinical reasoning to what goes on “out in the world.” The most well-known “micro” theory is Dual Processing Theory, popularized by Daniel Kahneman’s book “Thinking Fast and Slow”. Embodied cognition, ecological psychology, situated cognition and distributed cognition are a family of social cognitive theories that offer progressively more “macro” accounts of clinical reasoning and error. Collectively, they help us understand the mind as embodied (i.e., interacting with the body), embedded (i.e. interacting with the environment) and extended (i.e., interacting with other people and artifacts in larger systems) which can have profound impacts on how we think about teaching and assessing clinical reasoning, as well as research in the field.

Topic Importance

Competency in clinical reasoning and error mitigation are critical for physicians to improve patient outcomes. Thus, educators must understand the varied theories of cognition that can aid them in developing optimal curricular and assessment strategies. Research also has the potential to evolve more rapidly by understanding of these theories, which bring insights fomr the fields in which they were first developed.

Format and Plans

Presenters will describe multiple theories of reasoning and offer their perspectives on how they should inform teaching, assessment, and thinking about diagnostic error (45 minutes). The audience will then engage the presenters in a panel discussion to further elucidate the potential of these theories to change the way we teach, assess, and process errors (45 minutes).

Take Home Messages

- Our thinking about clinical reasoning and error has been limited to date by a near exclusive focus on dual processing theory.
- Embracing a wider range of theories (embodied cognition, ecological psychology, situated cognition & distributed cognition) can provide new insights for teaching, assessment, and understanding error.
- This broader range of theories should inform future research on clinical reasoning and error.

Session 2D: Research Papers: Assessment 1

2D1 (0482)

Date of presentation: Monday 28th August
Time of session: 09:00 - 09:20
Location of presentation: Hall 1, SEC

Progress Testing as a planning and self-assessment tool: student results and curriculum intervention

Mariana Passos de Souza[1], Valdes Roberto Bollela[1], Marcelo Riberto[1]

[1] *Faculty of Medicine of the University of São Paulo, Ribeirão Preto, Brazil*

Introduction

Progress Testing (PT) is a periodic longitudinal assessment of undergraduate students' knowledge acquisition, which can assist in curriculum management and personal evaluation. In 2005, our faculty started applying it to medical students, trying to detect potentialities and gaps in teaching, and allow students to assess their learning throughout the years. This study aimed to explore the results of progress testing from five cohorts of students, to evaluate their growth both in total and in specific areas, and to compare their results with the scores on the medical residency tests at this institution.

Methods

Retrospective study with five cohorts of students who initiated their course between 2010 and 2014, evaluating their results in an annual Progress Test. Students who did not miss more than 3 progress tests and who finished the course in their original class were included. The project was submitted for evaluation to the Ethics Research Committee where it was approved with a waiver of application of the informed consent form.

In relation to the test results, we analyzed the success rates by area and compared them to the progression of the class in the course and in the specific areas, using a linear regression model with mixed effects to analyze the variables. Furthermore, the correlation between the results of the students in the last year of the course and their respective

residence test results was performed, using Pearson's coefficient and its respective 95% confidence interval.

Results

Using overall data, the abstention rates were 15 to 20% in the first years, with less than 10% among last year students. There was significant knowledge gain ($p<0.001$) between 1st and 6th-year students, with 30% to 40% increase in correct answers when comparing average entrants and completers.

Uninterrupted growth in knowledge gain had varied onset among classes (from 3rd to 5th year). Final year students performed close to 70% of the test, with a standard deviation of 6-10%. The number of hours in the curriculum did not have a significant impact on results: subjects with more hours did not necessarily have the best results, but the introduction of the subjects was related to increased achievement in that area.

Macro analysis allowed for better use of the results, it was possible to observe at which points in the course there were unexpected outcomes: e.g. in the 2011 cohort, there was no significant growth between their 4th and 5th year results, and in that year there was a significant drop in performance in the area of gynecology, indicating it was the cause of the drop.

Overall, the average total score of the residency exam is lower than the score of the 6th-year PT, but these values are close when evaluated as a percentage. Separating the students into quartiles based on 6th-year' results and their residency test scores, on average 43,1% remained in the same quartile and students in Q1 and Q4 in PT tended to stay in the same groups in residence exam.

Comparing the results between the 5th and 6th grade progress test and the residency test, in general, it was possible to observe a moderate correlation between the tests, ranging from 0.4 to 0.62 with the 5th grade tests and 0.45 to 0.65 with the 6th grade tests.

Discussion And Conclusion

PT in the medical course proved to be a useful tool to assess progression in cognitive terms, in addition to guiding managers to review and adapt the curriculum: areas without progression are easily noticed and auditable if repeated over time. The groups observed had similar behavior regarding the evolution of the average score over the years, with significant increase throughout the course.

The systematic use of PT can also help students to self-manage their course performance and plan regarding their medical residency test goals, as it is an interesting predictive tool

for the acquisition and application of knowledge throughout the years, allowing them to establish early interventions if necessary, to enhance the expected annual growth.

References

WRIGLEY, W. et al. AMEE GUIDE A systemic framework for the progress test: Strengths, constraints, and issues: AMEE Guide No . 71. v. 31, n. 71, p. 683–697, 2012. J M Blake et. al. Introducing progress testing in McMaster University's problem-based medical curriculum: psychometric properties and effect on learning. AcademicMedicine: Journal of the Association of American Medical Colleges. 71(9): 1002-7, SEP 1996

2D2 (1084)

Date of presentation: Monday 28th August
Time of session: 09:20 - 09:40
Location of presentation: Hall 1, SEC

Exploring medical Students' Career readiness (XTRA) - Construction and Validation of a Novel Questionnaire.

Amanda Godoi[1], Charlotte Casteleyn[2], Farazi Virk[3], Mia McDade-Kumar[4], Patrice Baptiste[2], Ahmed Moussa[5], Matthew Byrne[6], Michal Tombs[1]

[1] Cardiff University, Cardiff, UK [2] University College of London, London, UK [3] Airedale NHS Foundation Trust, Yorkshire, UK [4] University Hospitals Birmingham NHS Foundation Trust , Birmingham, UK [5] Faculty of Medicine, Tishreen University, Latakia, Syrian Arab Republic [6] Nuffield Department of Surgical Sciences, University of Oxford, Oxford, UK

Introduction

The medical profession in the UK suffers from a recruitment and retention crisis and the reasons are multiple, complex and overlapping. Whilst solutions can never be straightforward when a problem is multifaceted, better preparing medical students for their medical career is an important part of the puzzle. The several facets of a medical career require students to go beyond clinical knowledge, and actively engage in additional extra-curricular activities that are integral to career progression. However, this depends on students' exposure, readiness and understanding of career planning skills.

Career readiness is a developmental process which allows planning and choosing career pathways that are tailored to an individual's self-concept (Super, 1996). Research to date has focused on how medical schools prepare students for transitioning into clinical practice, yet little has been done on the career readiness of future doctors. Super's lifespan, life-space theory provides insights into career maturity that can be applied to a medical professional's formation and development. Super's theory has been previously used to investigate the effect of career guidance on vocational development of undergraduate medical students (Savickas, 1984). However, medical portfolios and pathways have evolved significantly since then, requiring a more contemporary measure to assess medical career formation in the UK, specifically including: financial awareness, qualifications, research, and leadership experiences.

Methods

The aim of this study was to construct a contemporary instrument to assess career readiness among UK medical students. The questionnaire has been conceptually developed on basis of Super's theory (1996) and informed by the literature on medical careers. A pilot study was conducted alongside a literature review, cognitive interviews and consultations with experts in the field, to establish face validity. A 21 self-reported item instrument was constructed with 5-point Likert scales focussing on participant's values and competencies, administrative and financial aspects of career pathways and the skills and efforts made towards career development. An open invitation to medical students from UK universities was sent via social media and a total of 348 responses were received and analysed from 41 UK medical schools.

Results

Exploratory factor analysis revealed 5 factors with eigenvalues >1. Three factors were aligned with Super's theory (1996): Crystallisation (factor 1), Specification (factor 2), and Implementation (factor 3). Two further factors were identified and coded as UK Medical Training (factor 4) and Additional Accomplishments (factor 5). Cronbach's α coefficient (CCA) revealed that internal reliability for the derived factor subscales was acceptable (.71-.81), with the exception of factor 5 with a CCA of .39 which was subsequently excluded. The composite score for factors 1-3 aligned with Super's theory resulted in a CCA of .83. Pearson's correlation was used to demonstrate inter-item correlations and construct validity was shown through a significant relationship (<.0001) found between 1) the overall feeling of being prepared for professional career development and the factors within the questionnaire and 2) the three factors aligned with Super's theory.

Discussion And Conclusion

The XTRA questionnaire is a contemporary instrument, consisting of five factors, three of which are aligned to Super's theory and two additional factors more specific to a current medical career in the UK. Initial evaluation of the psychometric properties with a sample of 348 students from UK medical schools supported the content validity of the items and construct validity of the scales. The instrument can be used by educational and clinical institutions to measure career readiness among UK medical students, and by individuals as a way of tapping into their own career readiness. However, additional studies are needed to further evaluate the reliability and validity of the instrument. More specifically, it

will be particularly beneficial to further examine the construct and predictive validity of the instrument, and its relationship with important outcome measures.

References

Savickas, M.L., 1984. Construction and validation of a physician career development inventory. *Journal of Vocational Behavior*, *25*(1), pp.106-123.

Super, D.E., Savickas, M.L. and Super, C.M., 1996. The life-span, life-space approach to careers. *Career choice and development*, *3*, pp.121-178.

2D3 (0538)

Date of presentation: Monday 28th August
Time of session: 09:40 - 10:00
Location of presentation: Hall 1, SEC

Correlation between confidence-based formative and summative assessment results in medical students

Santi Silairatana[1, 2]

[1] *Faculty of Medicine Vajira Hospital, Navamindradhiraj University, Bangkok, Thailand* [2] *Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand*

Introduction

Multiple choice questions (MCQs) are widely used as an assessment method, thanks to objectivity of the constructs being evaluated and convenience. However, the compulsive nature of the test to require the test taker to choose one answer makes it imperative to make the best guess, which potentially brings about indifference between a good guess and knowledge and jeopardizes validity. Modified MCQs with **confidenced-based marking (CBM)** method may provide the same validity as the standard marking method while offers better insights and predicting values about students' knowledge at summation when used as a formative assessment. This study aims to determine correlations between assessment results based on confidence marking scheme and summative assessment results, as well as factors associated with confidence patterns among 4th year medical students during their internal medicine rotation.

Methods

This correlational study was conducted among 4th year medical students enrolled in Internal Medicine course at the Faculty of Medicine Vajira Hospital, Navamindradhiraj University, Thailand. In each 12-week rotation, participants were formatively evaluated using MCQs with CBM method at week 6, provided answers and feedback at week 8, and then evaluated with standard summative MCQ tests at the end of rotation. In CBM-based formative MCQs, the test taker must provide level of confidence for the option chosen in each item (X = I do not know, 1 = not sure, 2 = quite sure, 3 = certained). In addition to standard marking method (1 for correct and 0 for incorrect answer), correct items were scored as 1, 2, and 3 according to confidence level and classified the pattern as

"uninformed" (for X), "doubted" (for 1 and 2), and "mastery" (for 3), respectively. Incorrect items were scored as 0, -2, and -6 according to confidence level and classified pattern as "uninformed" (for 1) "misinformed" (for 2, and 3). CBM formative, standard formative, and summative scores, number of items classified by each pattern as well as confidence-related factors of interest including gender and GPAX were collected. Correlations between CBM formative and summative score, standard formative and summative scores, CBM and standard formative scores, and between each pattern of confidence and summative score were analyzed using correlation coefficient. Correlations between GPAX and the aformentioned scores as well as each confidence pattern were determined. Difference between by gender was determined using independent-sample t-test.

Results

From December 2020 to February 2022, a total of 97 students (39 males, 40.2%) completed the study. Both confidence-based formative and standard formative score were significantly correlated with the summative score, with correlation coefficients (r^2) of 0.27 and 0.38 ($p=0.029$ and $p<0.001$, respectively). Formative scores obtained CBM method were strongly correlated with the standard method ($r^2 = 0.73$, $p<0.001$). Confidence pattern as "doubted" was positively and significantly correlated with the summative score ($r^2 = 0.42$), while the pattern "misinformed" was negatively correlated with the summative score ($r^2 = 0.33$, $p<0.001$ for both). GPAX was significantly correlated with confidence-based formative, standard formative, and summative score with $r^2 = 0.33$, 0.27, and 0.46 ($p=0.001$, 0.008 and <0.001, respectively). There was no difference between genders in any variables studied.

Discussion And Conclusion

Correlations between MCQs with CBM and the standard method shows that CBM is a good tool to assess students' knowledge while offering better insights
about students' understanding and confidence in the topics. Relatively weak correlation between CBM scores and the summative scores may be explained by being early clinical year students, which make them remained largely uninformed or misinformed at the formative assessment. Stronger positive correlations between being "doubted" as well as negative correlations between "misinformed" and the summative scores make CBM formative assessment a good predictor of student's performance at summation. GPAX can also be a potential predictor as well, due to a good correlation with both formative scores and summative scores. CBM formative assessment combined with GPAX may be

used as an early detector and a predictor of achievement at summation so that intervention can be given in a timely manner.

References

1. Gardner-Medwin AR. Confidence-based marking: Towards deeper learning and better exams. In: Bryan C, Clegg K, editors. Innovative assessment in higher education. New York: Routledge; 2006. p. 141–9.
2. Gardner-Medwin AR. Confidence assessment in the teaching of basic science. Research in Learning Technology. 1995 Jan;3(1):80–5.

2D4 (0606)

Date of presentation: Monday 28th August
Time of session: 10:00 - 10:20
Location of presentation: Hall 1, SEC

Computer Adaptive Testing in progress testing: feasibility and comparison with non-adaptive testing

Elise van Wijk[1], Jeroen Donkers[2], Peter de Laat[3], Ariadne Meiboom[4], Bram Jacobs[5], Jan Hindrik Ravesloot[6], René Tio[7], Cees van der Vleuten[2], Alexandra Langers[1], André Bremers[8]

[1] Leiden University Medical Center, Leiden, The Netherlands [2] Maastricht University, Maastricht, The Netherlands [3] Erasmus Medical Center, Rotterdam, The Netherlands [4] Amsterdam UMC location Vrije Universiteit, Amsterdam, The Netherlands [5] university medical center groningen, Groningen, The Netherlands [6] AmsterdamUMC, location AMC, Amsterdam, The Netherlands [7] Department of Cardiology, Catharina Hospital, Eindhoven, The Netherlands [8] Radboud University Medical Centre, Nijmegen, The Netherlands

Introduction

Students from seven of the eight Dutch medical schools participate in a progress test (PT) (1). The classical PTs consist of 200 paper-based multiple choice questions (MCQs), identical for students of all levels of training, four times a year. In a Computer Adaptive progress Test (CAT), an algorithm selects questions based on the results of the previous questions (2). Because CAT is adapting to the student's abilities, theoretically a substantially reduced number of questions is required to determine the student's aptitude. Before replacing the classical PT by the CAT we wanted to determine how the classical PT results relate to the CAT results. To this end we conducted an experiment in which the same students were offered both a classical PT and a CAT.

Methods

In May 2022, students of three medical schools were offered both the classical PT and the CAT. To encourage students to perform to the best of their ability on both tests, the highest score was registered. The CAT used an item bank of 3800 questions from previous PTs that were calibrated using the Rasch model. Each student was presented 120 adaptively selected items. In the CAT students were obliged to answer all questions, whereas in the

classical PT students were allowed to choose the question mark option if they could not answer the question to avoid being penalized for a wrong answer. The allotted time to complete the test was 240 minutes in the classical PT and 180 minutes in the CAT. Students were stratified to start with either the classical PT (group 1) or the CAT (group 2). The time interval between the classical PT and the CAT was at least one day and at most seven days. Student performance was expressed as z-score for the classical PT and theta for the CAT. A t-test was used to calculate differences between group 1 and 2.

Results

1432 students (647 bachelor, 785 master) participated in both the classical PT and the CAT. The parallel-forms reliability, i.e., the correlation between the z-score of the classical PT and the theta of the CAT was 0.834. Students who started with the classical PT performed slightly better on the classical PT than students who started with CAT (Effect Size 0.171, $p<0.05$); there was no difference in performance on the CAT between the two groups. There was a weak correlation between the question mark option score in the classical PT and performance on CAT (correlation varying between -0.08 and -0.29), whereas the correlation between question mark option score and performance on classical PT was stronger (correlation varying between -0.23 and -0.65). Ninety percent of students finished the CAT within two hours. There were no performance issues with the digital assessment system and the algorithm was able to select questions of an appropriate level, defined as a difference of less than 0.1 between the estimated ability of the student (theta) and pre-calibrated level of difficulty of the question, in more than 99% of the questions.

Discussion And Conclusion

This study is the first to show the strengths and feasibility of a CAT based PT in a large cohort of medical students in an authentic examination setting. There was a good correlation between student performance in classical PT and CAT, which shows that CAT is able to determine a students' aptitude after a significantly shorter test. The strong negative correlation between the question mark option use and the performance on the classical PT, but weaker correlation between the question mark option use and performance on the CAT, suggests that students who are more hesitant to answer a question if there is a possibility to choose the question mark option might benefit from CAT. In conclusion, the use of CAT in the medical PT is feasible and enables a reliable estimation of the students' aptitude with a reduced testing time.

References

1. Tio RA, Schutte B, Meiboom AA, Greidanus J, Dubois EA, Bremers AJ. The progress test of medicine: the Dutch experience. Perspect Med Educ. 2016;5(1):51-5.

2. Wainer, H., Dorans, N. J., Flaugher, R., Green, B. F., & Mislevy, R. J. (2000). Computerized adaptive testing: A primer. Routledge.

Session 2E: Research Papers: Professionalism and Professional Identity

2E1 (1526)

Date of presentation: Monday 28th August
Time of session: 09:00 - 09:20
Location of presentation: Argyll II, Crowne Plaza

Professional Identity Formation according to Clinical Supervisors

Pieter Barnhoorn[1], Vera Nierkens[1], Mattijs Numans[1], Yvonne Steinert[2], Walther van Mook[3]

[1] Department of Public Health and Primary Care, Leiden University Medical Center, The Netherlands, Leiden, The Netherlands [2] Department of Family Medicine and Institute of Health Sciences Education, McGill University, Montreal, Quebec, Canada, Montreal, Canada [3] Department of Intensive Care Medicine, and Maastricht UMC+ Academy, Maastricht University Medical Centre, the Netherlands; School of Health Professions Education, Maastricht University, Maastricht, The Netherlands

Introduction

Supporting the development of a professional identity is a primary objective in postgraduate education. Our identity - who we are - guides our behavior. Our professional identity - who we are as professionals - guides our behavior as professionals and is the cornerstone of professionalism. Professional identity formation (PIF), defined as the development of professional values, actions and aspirations, is a process happening at two levels: (1) at the individual level, involving the psychological development of a person and (2) at the collective level, involving a socialisation process. Although residency is a key stage in PIF, only a few empirical studies have explored PIF during residency. The latter have highlighted the pivotal relationship between resident and supervisor, and focused specifically on PIF from the resident's perspective. Only one study focused on supervisors' perceptions of their roles in residents' PIF and the authors identified caring for patients, role modeling, and providing graded autonomy as important ways for clinical teachers to support PIF. However, the general practice (GP) setting has been left relatively unexplored, despite its unique educational and socialising environment. Therefore, in this exploratory

study, the authors sought to understand how GP supervisors perceive their roles in the PIF of GP residents.(1)

Methods

We conducted focus groups (FG) with GP supervisors of four training institutes across the Netherlands. Participants were purposefully sampled regarding GP practice site (rural vs urban). The FG-interviews each lasted 60-90 minutes. We used a semi-structured interview guide derived from the prevailing literature, with an emphasis on Cruess et al's conceptual framework of PIF (2) and pilot interviews. FG-interviews were recorded and transcribed verbatim. We chose an abductive approach to analysis, in which we integrated inductive data-driven coding with deductive theory-driven interpretation, using the conceptual framework of PIF as a conceptual underpinning.

Results

Eight focus groups with 55 GP supervisors were conducted. Twenty-seven supervisors were female (49%). Supervisors spoke openly about their perceived pivotal roles in residents' PIF, but at times had difficulty articulating the exact way in which they could support PIF in their residents. We identified three themes: the desired goal of GP training (supervising with the end in mind), supervisors' ways of working toward that goal (role modeling and mentoring), and prerequisites for achieving that goal (developing bonds of trust).

Discussion And Conclusion

This study is the first to explore PIF in GP training from the perspective of clinical supervisors. The three identified themes - the goal of residency, guiding through role modeling and mentoring toward that goal, and a bond of trust between supervisors and residents seem to mirror the three components of the therapeutic alliance between doctors and patients.

This study provides further understanding about the transition from *doing* the work of a GP to *becoming* a "real" – holistic – GP. Supervisors didn't see Miller's "Does" level as the highest aspirational level for training their residents. Rather, they had an "Is" level – reflecting the presence of a holistic professional identity – as an end in mind. On the one hand, supervisors spoke about guiding PIF as unplanned, as an implicit transmission of knowledge and skills, categorised as role modeling. On the other hand, supervisors reported more explicitly guiding residents regarding issues about what kind of a doctor they wanted to become, categorised as mentoring. Becoming a GP is embedded in

supervised practice. Many studies have shown the importance of the supervisory relationship in residency, mostly focused on entrustment. To entrust residents to increasingly take on more tasks and guide them in their PIF, a bond of trust or "click" appeared to be a prerequisite, according to supervisors. Just as the therapeutic alliance is defined by the quality of the patient-doctor relationship and is the most robust predictor of improved patient outcomes, it seems that the educational alliance in residency is defined by the quality of the resident-supervisor relationship. The latter might be a vulnerable condition because only a few GP supervisors are involved in this trajectory.

References

1. Barnhoorn, P. C., Nierkens, V., Numans, M. E., Steinert, Y., & van Mook, W. N. "What kind of doctor do you want to become?": Clinical supervisors' perceptions of their roles in the professional identity formation of General Practice residents. Medical Teacher. 2022; 1-7.

2. Cruess RL, Cruess SR, Boudreau JD, Snell L, Steinert Y. A schematic representation of the professional identity formation and socialization of medical students and residents: a guide for medical educators. Academic medicine. 2015;90(6):718-25.

2E2 (0534)

Date of presentation: Monday 28th August
Time of session: 09:20 - 09:40
Location of presentation: Argyll II, Crowne Plaza

Exploring Yarigai: the meaning of work as a doctor in medical professionalism

Hiroshi Nishigori[1], Yosuke Shimazono[2], Jamiu Busari[3], Tim Dornan[4]

[1] *Center for Medical Education, Nagoya University Graduate School of Medicine, Nagoya, Japan* [2] *Osaka University, Osaka, Japan* [3] *Maastricht University, Maastricht, The Netherlands* [4] *Queen's University, Belfast, UK*

Introduction

Increasingly, doctors seek work-life balance. While this may prevent burnout in the short-term, it may conflict with a core principle of medical professionalism, working dedicatedly for patients, thereby limiting the ultimate rewards of practising. Since Western cultures have tended to dominate global medical education, insights from non-dominant cultures are interesting. Japan offers the concept of *yarigai*. Experiencing *yarigai* means that an activity has rewarded dedicated work because it has intrinsic worth. Western researchers tend to privilege 'paradigmatic knowledge' (the central tendency) over 'narrative knowledge',(individual experience; Dornan and Kelly) but Eastern cultures prize narrative. Reasoning that stories told by experienced physicians' about what gave them yarigai could help students, residents, and young doctors explore what it means to work as a doctor, we asked: How do doctors talk about yarigai in patient care, and what values are embodied in their stories?

Methods

Kyoto University granted Ethical approval. We chose an idiographic epistemology and narrative inquiry methodology. A combination of snowball and purposive sampling helped us identify 15 Japanese doctors who were recognized for their dedication to patient-centered care and/or demonstration of yarigai. We recruited them for individual, face-to-face, semi-structured interviews, where they were asked: "Tell me about the patient(s) whose care gave you a feeling of *yarigai*." This yielded 51 instances of patient-doctor

interactions, which we analysed in Japanese. After group discussion, we chose four representative cases to translate into English and report.

Results

Dr. Mis (pseudonym), a neurologist, told us about a female patient in her 80s with Parkinson's disease who had aspiration pneumonia after being mistakenly given a powdered medication. He took the family's anger seriously and worked dedicatedly to care for the patient's needs. The family's emotions changed when they saw Dr. Mis working so hard to provide medical care. He said: "*That is how I found yarigai in facing difficulties and adversities.*"

Dr. Kan, who became a surgeon to deliver care to sick patients, looked after a patient with stomach cancer. She decided to perform an atypical operation, which preserved the patient's digestive function. She said: "*He is healthy and can still farm, which makes his life worth living.*" "*Sometimes, my patients bring me gifts: vegetables and things like that. That reassures me. I feel that I have something to contribute. That gives me a sense that I have a place here.*"

Dr Mur, a female internist, talked about looking after a terminal patient. She described the moment when she stayed with the patient and her family at the bedside: *"There was not much I could do… But I felt that my presence, my being there, was accepted and appreciated. It was as if I were a part of them."* The opportunity to be in company with the sufferer, witness strength in a seemingly powerless human being, and be included in the patient's family, is the "privilege of being a doctor," and a source of *yarigai* in her everyday work.

Dr. Kaw, an internist, described his yarigai experience as follows: **"***A patient, for instance, accomplishes something in his or her later life, and tells or shows what they have achieved. That's the most rewarding moment."* Here, the relationship, commitment, sharing of time with a patient, and the passing of time before receiving unexpected returns gave Dr. Kaw a feeling of yarigai.

Discussion And Conclusion

'Being with' patients and families, responding to anger, being willing to experience distress, working outside accepted norms of surgical practice, and accepting delayed recognition for hard work gave participants yarigai. Medicine is becoming ever more 'technological'.

'Relational' practice, these narratives suggest, can provide rich rewards. Physicians' yarigai narratives are a potential resource for medical education.

References

1. Dornan T, Kelly M. What use is qualitative research? Medical Education 2017; 51: 7-9

2. Mieko Kamiya. About Ikigai *(Ikigai-ni-tsuite)*. 1966. Misuzu-Shobo. Tokyo

2E3 (0843)

Date of presentation: Monday 28th August
Time of session: 09:40 - 10:00
Location of presentation: Argyll II, Crowne Plaza

Maturing through awareness: an exploratory ten-year study into the development of educational competencies, identity and mission of medical educators

Marleen W. Ottenhoff-de Jonge[1], Iris van der Hoeven[1], Neil Gesundheit[2], Anneke Kramer[1], Roeland M. van der Rijst[3]

[1] Leiden University Medical Center, Leiden, The Netherlands [2] Stanford University School of Medicine, Stanford CA, USA [3] ICLON Leiden University Graduate School of Teaching, Leiden, The Netherlands

Introduction

Faculty development (FD) in learning-centred medical education aims to help faculty mature into facilitators of student learning, yet it is often ineffective. Instead of FD focusing exclusively on improving educators' competencies, it may be more effective to include other educational qualities, such as developing an educational identity and 'mission' (1). 'Mission' refers to educators' personal source of inspiration, underlying their educational identity. The question of *who* I am as a teacher relates to an educator's identity, which focuses on the educator themselves, while the question of *why* I teach relates to an educator's mission, which focuses on the student and their learning. (2).

It is unclear how to support educators' maturation effectively and sustainably (1). Therefore we explored how and why medical educators working in learning-centred education contexts mature over time, from a holistic perspective.

Methods

We performed a qualitative follow-up study and interviewed 21 senior physician-educators at two times ten years apart. We selected participants with a variety of educational roles from two medical schools, in the USA and the Netherlands, both with learning-centred curricula. Four participants were involved in educational administration, the others were selected based on their long-standing pre-clinical educational involvement and excellent teaching, as reflected in e.g. student evaluations.

The codebook of a recently developed model (2) was employed to deductively analyse the educators' awareness of the workplace context and of their educational qualities. The model distinguishes four hierarchically ordered profiles. In the least elaborate profile, educators focus on adverse contextual circumstances while in the next profile, educators demonstrate behaviours and competencies of an educator. In the second most elaborate profile, educators extend their awareness to include their educational identity, whereas in the most elaborate profile, educators demonstrate characteristics present in the other profiles and also manifest and share their educational mission. Based on the coded text fragments, each educator was categorised into one of four profiles for the first and second interviews. An independent researcher, blinded to the interviewees' initial profiles, co-coded the second interviews. Those educators who advanced in profile were re-interviewed to explore factors they perceived to have guided their maturation. These data were analysed inductively.

Results

Six of 13 educators with potential to advance in profile matured over the 10-year study period. Maturation followed the order of the profiles from less to more elaborate; regression toward a less elaborate profile did not take place. The three participants who were initially categorised as focusing on adverse contextual circumstances all developed to a more elaborate profile. Three of the six educators who had been unaware of their educational identity developed this awareness. Two educators, initially aware of their educational identity, developed an awareness of their educational mission. For all profiles, maturation as an educator was perceived to be linked to maturation as a physician and to engaging in workplace related, informal learning opportunities.

Growth in competencies awareness was primarily attributed to external 'meaningful experiences', growth in identity awareness primarily to intrapersonal factors, and growth in mission awareness to both factors.

Discussion And Conclusion

Maturation of medical educators can take place, but is not guaranteed, and appears to proceed through a growth in awareness of, successively, educational competencies, identity, and mission. The least elaborate profile may be a temporary profile, caused by dissatisfaction with contextual circumstances.

Since maturation is a multifactorial process, FD interventions need to be diverse and embedded in the workplace. Offering varied educational tasks and activities can support

educators' growth in awareness of their competencies. Encouraging reflection on the 'self' and on the teaching-and-learning process may help to grow an awareness of one's educational identity. For the growth of an educational mission awareness, meaningful encounters with students may help to shift the focus from one's own teaching role to the student's development. Since maturation as an educator is linked to maturation as a physician, involving practicing physicians as faculty developers may be beneficial. In all steps it is important to be cognisant of adverse contextual circumstances.

References

(1) Steinert, Yvonne, Patricia S. O'Sullivan, and David M. Irby. "Strengthening teachers' professional identities through faculty development." Academic Medicine 94.7 (2019): 963-968.

(2) Ottenhoff-de Jonge, Marleen W., et al. "From critic to inspirer: four profiles reveal the belief system and commitment to educational mission of medical academics." BMC medical education 19.1 (2019): 1-14.

2E4 (0632)

Date of presentation: Monday 28th August
Time of session: 10:00 - 10:20
Location of presentation: Argyll II, Crowne Plaza

A surgical habitus: Is learner mistreatment a story of one bad apple?

Stephanie Peel[1], Andrew Glennie[1], Anne Mahalik[1], Stephanie Scott[1], Simon Field[1], Sarah Burm[1]

[1] *Dalhousie University, Halifax, Canada*

Introduction

Learner mistreatment is a persistent issue in medical education and of particular concern within the surgical learning environment. While numerous studies have explored learners' perceptions and experiences of mistreatment (see for example, Castillo-Angeles et al., 2017; Gan & Snell., 2014), faculty impressions on the mistreatment of learners remains under-explored. To begin to explore this gap, we invited surgical faculty to share their perspectives on what constitutes and contributes to learner mistreatment in the surgical setting. In this paper we drew on Pierre Bourdieu's theoretical concept of Habitus as an analytical tool to explore faculty perceptions of learner mistreatment.

Methods

Using constructivist grounded theory (CGT), we conducted 19 interviews with surgical faculty representing 10 different surgical disciplines. All interview questions were open-ended to yield descriptive data and participants were asked to share their opinions of, or experiences with, mistreatment in the surgical learning environment. In line with CGT, analysis unfolded inductively, following three progressively abstract analytical stages: *initial, focused,* and *theoretical* coding. Interestingly, our data revealed faculty reporting mistreatment as an infrequent occurrence. Faculty's position on the topic left us perplexed given the evidential support suggesting otherwise. To propose an understanding of this discrepancy, we drew on Bourdieu's concept of Habitus which refers to the way in which one comes to embody the unique rules and knowledge of their social environment. Within the surgical context, a habitus is created through residency education. Specialty training introduces learners to the practice of their chosen surgical field, including the education

norms, attitudes, behaviours, judgements, and values that are revered and those that are not.

Results

Participants' surgical training appeared to greatly influence the habitus they now embodied as faculty and consequently, their perceptions of mistreatment. Participants recalled incidents of ill treatment and offensive language as "commonplace" (Faculty 10) throughout their postgraduate training, to such an extent that "if a surgeon went off the handle and started yelling [they] … didn't really think much of it." (Faculty 3). Regardless of specialty and generational differences, many participants referred to developing a thick skin and enduring turbulent environments as inevitable aspects of becoming a surgeon. As one participant explained, "I just want[ed] to learn how to be a surgeon, and this [was] the way you did it." (Faculty 5). Participants' apparent acceptance and normalization of certain behaviours within the clinical environment meant their perceptions of what constituted mistreatment strongly contrasted some of the covert acts of mistreatment (e.g., learner neglect or exclusion) reported by learners in recent times. For many participants, mistreatment in the clinical learning environment had to be "egregious" (Faculty 1) or "horrendous" (Faculty 10) to be categorized as such.

Discussion And Conclusion

Our analysis indicates that surgical training does not just teach learners technical skills, but additionally reinforces particular social norms of what it means to be a surgeon. Consequently, many surgeons may not characterize incidents of mistreatment in the same way as learners. By drawing on Bourdieu, we learned how certain behaviours that could be characterized as mistreatment come to be normalized, and were perceived as being necessary, to developing surgical competence. In this paper, we move beyond thin explanations of mistreatment as an inevitable part of surgical culture toward a deeper understanding of *how* surgical culture comes to be embodied. As a surgical habitus is developed through one's social context, ways to address learner mistreatment must look beyond changing individual surgeons' behaviours. A Bourdieusian approach granted us the latitude to move beyond individualizing mistreatment as a story of one bad apple to deliberately considering the interplay between individuals and their social environment.

References

Castillo-Angeles, M., Watkins, A. A., Acosta, D., Frydman, J. L., Flier, L., Garces-Descovich, A., Cahalane, M. J., Gangadharan, S. P., Atkins, K. M., & Kent, T. S. (2017). Mistreatment and the learning environment for medical students on general surgery clerkship rotations: What do key stakeholders think?. *American Journal of Surgery*, *213*(2), 307–312. https://doi.org/10.1016/j.amjsurg.2016.10.013.

Gan, R., & Snell, L. (2014). When the learning environment is suboptimal: exploring medical students' perceptions of "mistreatment". *Academic Medicine: Journal of the Association of American Medical Colleges*, *89*(4), 608–617. https://doi.org/10.1097/ACM.0000000000000172.

Session 2F: Patil Innovation Awards Abstract Book

2F1 (1393)

Date of presentation: Monday 28th August
Time of session: 09:15 - 09:30
Location of presentation: Argyll III

ePosters as an active learning strategy in a Masters of Health Professions Education course

Kalyani Premkumar[1], Harini Aiyer[1], Ibraheem Othman[2]

[1] *University of Saskatchewan, Saskatoon, Canada* [2] *University of Saskatchewan, Regina, Canada*

Background

ePosters, a modification of traditional paper-based posters have gained popularity in medical education conferences since 2011. ePosters differ from the traditional poster in that the ePoster creator can focus on the learning process rather than reporting scientific outcomes. However, there is limited literature comparing ePosters to traditional paper-based posters and their impact on the student learning experience.

Summary Of Work

The "Technology and Simulation in Teaching and Learning" course was delivered remotely by the University of Saskatchewan in the Fall 2020 and 2021 terms. The course used ePoster presentations as an innovative active learning strategy and a component of student assessments. This study assessed the effectiveness of ePosters as an active learning strategy and identified effective strategies for engaging students in the class using a concurrent mixed methods study design. A short online questionnaire to understand the overall engagement with ePosters was followed by virtual in-depth semi-structured interviews to gain a deeper understanding of the attitudes of the students towards ePosters and their experience with creating, presenting, and engaging with e-posters.

Summary Of Results

The students showed a clear preference for ePosters over traditional paper-based posters and an appreciation for the novel learning opportunity. Emerging themes show an

appreciation for the interactive nature of e-posters, and the potential to incorporate non-traditional sources of information (such as videos, podcasts, audiobooks, etc.).

Discussion And Conclusion

ePosters were well-received as a classroom assessment tool by students. Students appreciated the potential of e-posters to go beyond that of traditional posters to include varied sources of information in an interactive manner. An important limitation of the e-poster was identified to be its

reliance on an internet connection, as this may prevent the presenter from streaming content during a presentation.

Take Home Messages

e-Posters as an assessment tool are well suited for online learning. Students will benefit from an orientation session introducing eposters, a tutorial on their creation, and a discussion board for learners for learners to peer review and share resources.

2F2 (1813)

Date of presentation: Monday 28th August
Time of session: 09:30 - 09:45
Location of presentation: Argyll III

Using the EPAs to Evaluate Clinical Experience of Dental Students – Development and Pilot Implementation Steps

Sivakumar Arunachalam [1], Seow Liang Lin[1], Allan Pau[1], Vishna Devi Nadarajah[1], Muneer Babar[1], Abhishek Parolia[1], Spoorthi Ravi Banavar[1], Kirti Saxena[1], Yogeswari Sivapragasam[1], Niekla Survia Andiesta[1]

[1] *International Medical University, Kuala Lumpur, Malaysia*

Background

Research demonstrated that dental education has struggled to implement assessment strategies that meet Miller's 'does' level. Entrustable professional activities (EPAs) are specific and observable and offer a practical means of assessment of clinical skills in a workplace setting. The EPA concept is innovative in harvesting learning through building trust and confidence among learners and supervisors in a meaningful learning environment. This paper aimed to identify core EPAs relevant to undergraduate dental training and inform implementation steps.

Summary Of Work

A taskforce was convened to draft EPAs statements based on and mapped to clinical and procedural experiences/competencies and aligned to task-based instructional strategy. The first set of EPAs was written using a nominal group technique, adopting an end-to-end process workflow. The brainstorming involved a continuous, iterative process of feedback and ranking. The EPAs were validated to improve the relevance by using a criterion-based rubric. A pilot was instituted on the core EPAs aligning to the principles of direct observation, feedback and reflection.

Summary Of Results

Ten core EPAs for undergraduate dental education were identified. The validation exercise rated core EPAs with an overall score matching close to the cut-off of 4.07 (EQual rubric). Competencies with knowledge, skills and attitude attributes for each EPA that are required of learners in order to demonstrate competence were detailed. The pilot implementation

described the concepts of entrustment, assessment, curriculum development, and the need for continuous faculty development.

Discussion And Conclusion

Core EPAs assessment may be investigated for its utility in making judgements on graduate work preparedness. The implications include developing robust observation systems that may allow dental students to meaningfully participate in patient care and maximize clinical experience. Roadblocks in assigning entrustment, a potential increase in the burden on the teaching faculty with supervising multiple students at different stages of training, and difficulties in the monitoring of supervision levels are some of the immediate challenges. A recommendation includes acknowledging the value of EPAs in different settings, including local, regional and international centres, and the formation of a consortium and sharing of perspectives.

Take Home Messages

An end-to-end process workflow provided the opportunity to elaborate a structured process for the development of EPAs for undergraduate dental education.

2F3 (0177)

Date of presentation: Monday 28th August
Time of session: 09:45 - 10:00
Location of presentation: Argyll III

Leveraging Virtual Learning Environments to Enhance Student Learning

Kwang Cham[1], Andrew Huhtanen[1], Keenan Hellyer[1], Jairus Bowne[1], Tiffany Chan[1]

[1] *University of Melbourne, Parkville, Australia*

Background

The constraints set by lockdowns and physical distancing during COVID-19 led to the development and extensive focus on digital learning. Digital learning offers multifaceted flexibility, allowing students to learn and work at their own pace and in the environment of their choosing. Technologies such as online simulators and immersive virtual reality (VR) have been used to support student learning. This study focused on non-immersive VR as an accessible and low-friction mean of accessing virtual learning environments (VLEs) to reduce students' learning burden.

Summary Of Work

93 optometry students across all year levels explored 360° panoramic VLEs of preclinical and clinical teaching spaces that were digitized using a Insta360 Pro 2 camera and hosted on Roslin, an online educational platform. Clinical equipment was scanned using a 3D scanner, the Artec Space Spider, and were accessible through Pedestal, a web content management system for 3D data. Students participated in an online Qualtrics survey and individual semi-structured interviews. Quantitative data was analyzed, and thematic analysis was performed on qualitative data from students' responses to identify key takeaways from the use of VLEs towards students' learning.

Summary Of Results

86% of students agreed that the digitization of the learning spaces was beneficial to their learning, with 73% reporting they felt less stressed being able to access the VLEs before physically attending classes in the learning spaces. Furthermore, 85% agreed that VLEs assisted in helping them feel more confident using the equipment and navigating through the physical learning spaces. They appreciated the novelty of including high quality reproductions of the learning spaces and felt the navigation through the spaces and

equipment was fun and enjoyable.

Discussion And Conclusion

Introductory digital resources like non-immersive VR are an accessible platform to helping students

orient and familiarise themselves with new environments. VLEs can potentially help to relieve student stress and reduce the learning load associated with entering practicum or new learning spaces.

Take Home Messages

Broader application of non-immersive VR can be implemented as introductory learning preparation tools to alleviate student stress and maximise the limited time in practicum to allow focus on learning outcomes and practical skills.

2F4 (1529)

Date of presentation: Monday 28th August
Time of session: 10:00 - 10:15
Location of presentation: Argyll III

The earlier, the better? Implementation of a curricular "student-as-educator" development program

Joana Fróes Bragança Bastos[1], Ugo Caramori[1], Olgata Silva[1], Ana Flávia Santos[1], Eliana Amaral[1]

[1] *Faculty of Medical Sciences, State University of Campinas Unicamp, Campinas, Brazil*

Background

In Brazil, health is constitutionally understood as a fundamental right of all human beings, guaranteed through social and economic policies whose actions and services are part of a regionalized and hierarchical network that constitutes the national unified health system "SUS" which is, by law, a teaching and learning scenario. There is a critical need to maintain the sustainability of a workforce of educators and to constitute professionals capable of integrating a healthcare structure that is inseparable from an educational structure.

Summary Of Work

The program was integrated into the medical curriculum as a potential strategy to build educational competencies for its medical students, aiming to introduce the core expertise of a medical educator and stimulate students' interest in medical education and faculty development. The activities were carried out in the following themes: teaching and learning, social accountability, student engagement, curriculum development, and competency-based education and assessment principles. Recommendations from faculty development programs were incorporated into its implementation: longitudinally structured, allowing cumulative learning, with activities based on workshops by the effectiveness practices; recognition was given to the institutional context, and reflection was stimulated to promote awareness of participants' roles in education.

Summary Of Results

Program evaluation showed increased participants' self-reported perceptions of importance, knowledge, and skills in all themes. It raised awareness of education as

expertise in the early stages of academic life, collaborating in the institutional curriculum development and evaluation, increasing students' institutional representatives, and contributing to learning related to medical education.

Discussion And Conclusion

The program effects strengthen students' collaborations in the institution, supports the development of a sustainable educational workforce for the future, and it contemplates strengthening our national

public health system, in its vast responsibility as an educational scenario and the provision of universal health care to thousands of Brazilians.

Take Home Messages

It is necessary to raise awareness that future health professionals are also future health educators.

Faced with an imminent growth in the involvement of students as partners in educational processes, institutions must pay attention to offering opportunities for their development in educational expertise.

"Student-as-educator" development programs can be a strategy to enhance the educational experience and develop a sustainable educational workforce for the future.

2F5 (1488)

Date of presentation: Monday 28th August
Time of session: 10:15 - 10:30
Location of presentation: Argyll III

A Novel Three-year Longitudinal Stepwise "Residents-as-Teachers" Program: Effectiveness and Lessons Learned

Jen-Feng Liang[1], Chen-Huan Chen[2], Hao-Min Cheng[1], Chia-Chang Huang[1], Ying-Ying Yang[1]

[1] *Taipei Veterans General Hospital , Taipei, Taiwan* [2] *National Yang Ming Chiao Tung University, Taipei, Taiwan*

Background

Most residents-as-teachers (RaT) programs are delivered over days to weeks without comprehensive evaluation, and stepwise milestone-based approaches have rarely been applied to RaT activities. This report aims to depict the implementation experience and the effectiveness of a novel longitudinal three-year RaT program.

Summary Of Work

The novel program included three once yearly face-to-face courses based on the preset teaching milestones. To evaluate the program effectiveness, we designed a randomized controlled study for first-year residents of all specialties in one medical center. The effectiveness was evaluated by the objective structured teaching exercise (OSTE), feedback from participants and medical students, and evaluation of clinical practice performance by program directors.

Summary Of Results

A total of 35 (37.6%) of 93 residents participated in this study, and 13 (37.1%) of all enrolled residents completed all three-year courses, including seven for the longitudinal program and six for the traditional. The serial OSTE revealed significantly higher scores in the longitudinal group in the second and third years (13.43 vs. 9.50, p=0.001 and 14.29 vs. 10.33, p=0.015). Satisfaction was higher when advanced topics were taught in the second and third years compared with those taught in the first year (4.43 vs. 3.89, p=0.02). The feedback from medical students was similar between the two groups, and the evaluation from program directors revealed insignificantly better clinical performance among the longitudinal course participants.

Discussion And Conclusion

The low participation and completion rate reflected the challenges faced by longitudinal program organizers. The two leading reasons of non-participation are “heavy clinical load” (82.4%) followed by “don’t want to waste a weekend to participate in such activity” (29.4%). The common reasons for absence from the scheduled courses included “some unexpected clinical event” (38.4%), “scheduling

conflict” (30.8%), and “exhaustion due to prior night shift” (30.8%). RaT are more than just about beneficial for student learning: Beyond the observed benefits on teaching skill enhancement, this study also showed a trend that residents completing teaching skills training had better clinical performance.

Take Home Messages

It is challenging to conduct a multi-year longitudinal RaT program on young residents. Nevertheless, longitudinal program design was associated with better learning retention, higher satisfaction, potientially better clinical presentation and worthy to be promoted.

Session 2G: Assessment: Assessment and the Learners

2G1 (5869)

Date of Presentation: Monday 28th August
Time of presentation: 0900 - 0915
Location: Castle I, Crowne Plaza

How does narrative group assessment of early patient contacts contribute to professional development?

Roy Claessen[1], Annelies van Ede[1], Stan Beumers [2], Petra van Gurp[1]

[1]Radboud University Medical Center (Radboudumc), Nijmegen, The Netherlands;
[2]Radboud University, Nijmegen, The Netherlands

Background

Literature provides ample evidence that early patient contacts (EPC) have a significant impact on the personal and professional development of medical students. However, evaluating professional development is sophisticated and consistency in the assessment tools is lacking. . At the end a narrative group assessment takes place in which students reflect on their own professional development and discuss it with peers. The impact of a narrative assessment on the learning outcomes of professional development is not clear. This study aims to explore how a narrative group assessment contributes to professional development in the context of longitudinal early patient contacts.

Summary of Work

In this explorative, qualitative study, we observed medical students during a new concept of narrative group assessment in the context of a longitudinal EPC course. Subsequently, explorative focus group interviews (students and assessors separated) were performed to get insights into students' learning goals, narrative assessment experiences and awareness of personal or professional development. Inductive analysis, using Atlas.Ti, was performed to collect common themes.

Summary of Results

A total of 31 students and 3 assessors participated in 5 semi-structured focus group interviews. The setting of a narrative group assessment stimulated a safe environment in which broadening on both individual and group members' learning goals and learning outcomes took place. Peer assisted learning, mainly through feedback, led to better understanding of their own learning process and helped their colleagues reflect on their stories as well. Both students and assessors underlined the importance of peer assisted learning and group reflection in stimulating personal and professional development

Discussion and Conclusion

Narrative group assessment, using peer interaction and with a supervisor as a process tool, in the context of a longitudinal EPC course deepens the learning process of undergraduate medical students and improves the awareness of learning outcomes regarding personal and professional development. One of the main mechanisms involved is peer assisted learning. This study illustrates the power of assessment for learning.

Take-home Message

Narrative assessment in a small group setting is a powerful tool in deepening the learning outcomes of early patient contacts.

2G2 (5145)

Date of Presentation: Monday 28th August
Time of presentation: 0915 - 0930
Location: Castle I, Crowne Plaza

To grade or not to grade? Students' perceptions of the impact of exam grades on their well-being and learning

Jussi Merenmies[1], Johanna Louhimo[2], Eeva Pyörälä[3]

[1]University of Helsinki, Faculty of Medicine, Clinicum, Childern's Hospital, Helsinki, Finland; [2]University of Helsinki, Faculty of Medicine, Clinicum, Department of Surgery, Helsinki, Finland; [3]University of Helsinki, Centre for University Teaching and Learning, Helsinki, Finland

Background

The Medical students' Association at the University of Helsinki put forward an initiative to replace the exam grades from zero to five with pass/fail. They expressed that grades cause students stress, exhaustion and unnecessary competition. Previous studies have shown that grades are related to perceived stress, but we know little about the relationship between grades, and student learning (McMorran et al. 2017; Kogan & Haer 2020; Chan & Luk 2021). The aims of this study were to explore (1) how students perceived the impact of grades on stress and exhaustion, (2) whether grades increased mutual competition, (3) how exams corresponded the working life competences, and (4) whether students received sufficient feedback on their learning.

Summary of Work

In March 2022, we sent medical students an online survey to explore their perceptions of the impact of exam grades on students' stress, exhaustion and mutual competition, the correspondence of exams to working life demands, and feedback on learning. The online survey consisted of background questions, statements answered on a 5-point Likert scale, and open-ended questions. Answering was voluntary and informed consent was requested.

Summary of Results

There were 512 students responding to the survey (56.9% of all students), 61.7% female, 37.1% male and 1.2% others. The majority of students (67.4%) was in favor of abandoning exam grades. 69.5% of students expressed that exam grades caused them extra stress and 55.9% exhaustion. 60.6% of students indicated that grades increased competition between students. 73.5% of the students reported that the exam grades did not correspond to working life competences. 30.9% of respondents received sufficient feedback through exams and 5.6% through oral feedback. 15.8% received written feedback on assignments.

Discussion and Conclusion

As in previous studies, grades caused stress, anxiety and competition among students. The assessment system should be improved so that it meets the demands of working life and that students receive feedback on their progress. More research is needed on the long-term effects between grades and student learning.

Take-home Message

Grades cause students stress, anxiety and mutual competition.
The assessment system as a whole should be developed so that students receive feedback on their learning.

2G3 (6762)

Date of Presentation: Monday 28th August
Time of presentation: 0930 - 0945
Location: Castle I, Crowne Plaza

Exploring student self-assessment and reflective practice as a means of predicting summative assessment outcomes

Sarah Plimmer[1], Aaron Harris[1], Craig Mounsey[1], Bareera Asad[1], Andrew Thompsett[1], Owain Roberts[1]

[1]*The University of Buckingham Medical School, Buckingham, UK*

Background

Accurate prediction of medical students' summative performance can enable the provision of timely, targeted academic support. However, there is a paucity of information on the means by which medical students self-assess their own performance. We aimed to quantify the accuracy of undergraduate medical students' self-assessed prediction of summative assessment scores, and to gain insight into the means by which medical students gauge their academic performance.

Summary of Work

First-year undergraduate medical students (n=185) were invited to complete a digital survey to reflect on their approaches to study and predict their likely scores in future end-of-year examinations, choosing from three categories: <10% below the class mean; ±10% of the class mean; or >10% above the class mean. Students were also invited to specify their reasoning for derivation of these predictions. Summative grades attained by survey respondents were subsequently analysed in the context of these survey data.

Summary of Results

Of the 45 students that responded to the survey, 58% accurately predicted their summative assessment performance (p=0.004). The remaining 18%, and 24% of respondents under-, and over-estimated their summative scores, respectively. The majority of students accurately predicted that they would obtain marks within ±10% of the class mean. Of those students that accurately predicted attainment of summative marks

>10% above the class mean, 75% had based these predictions on previous exam performance. The majority of inaccurate grade predictions were due to student overestimation - as opposed to underestimation – of summative performance.

Discussion and Conclusion

Students were able to predict future assessment performance with remarkable accuracy, with student performance in previous assessments, and peer-to-peer comparison of knowledge representing the primary means of accurate student self-assessment of summative performance. Students that self-identified as having a 'strong work ethic' commonly overestimated their grade outcomes. Additional support to help students identifying their own individual areas of strength and weakness to guide further study;

Take-home Message

Encouraging student reflection on performance and practice as well as providing formative assessment opportunities, and providing support mechanisms to enable students with a strong work ethic to ensure that their efforts are translated into tangible results are underlined.

2G4 (3610)

Date of Presentation: Monday 28th August
Time of presentation: 0945 - 1000
Location: Castle I, Crowne Plaza

Comparison of Academic, Administrative and Community Rater Scores at an Multiple Mini-Interview using Generalisability Theory

Chew Fei Sow[1], Carlos Fernando Collares[2], Allan Pau[1], Cees van der Vleuten[2]

[1]International Medical University, Kuala Lumpur, Malaysia; [2]2School of Health Professions Education, University of Maastricht, Maastricht, The Netherlands

Background

Multiple-Mini-Interviews (MMIs) are sampling approaches that use multiple short stations to select prospective students for professional programmes. Each station uses different interview scenarios and raters to effectively assess candidates' noncognitive skills. This study compared the performances of three sets of raters; academic, administrative staff, and community members, in an MMI for student selection using performance comparisons and Generalisability Theory to estimate the different sources of variance and generalisability (reliability) coefficients. The study aims to analyse the differences in performance scores from these raters and their psychometric projections on reliability with different samples of raters and stations.

Summary of Work

Eleven candidates participated in the 10-station MMI, each with an eight-minute duration, two minutes of preparation, and an academic assessment using a marking rubric. The entire interview was video recorded. The administrative staff and community members watched the videos independently and graded all candidates' performances using the same marking rubric. Generalisability and decision studies were used to analyse the collected data.

Summary of Results

Community members were the strictest, while academics were the most lenient. There were statistically significant differences between rater categories in 6 stations. Raters

were not scoring the candidates consistently. The Generalisability coefficient of 0.85 of one-rater results from the Decision study suggested good reliability of the 10-station MMI. The Decision study found that generalisability coefficients improved more with an increasing number of raters rather than number of stations. Four stations contributed to unreliability in each rater category and a combination of the rater categories

Discussion and Conclusion

Information on the number of stations, number of raters, and type of rater combination required to achieve good reliability enabled informed decisions on the process and implementation of the MMI. The station simulation that influenced unreliability helped us improve station writing and identify focus areas for training and development.

Take-home Message

Generalisability Theory informs MMI implementation decisions.

* The full manuscript of this study was accepted for publication and awaiting printing at the time of submission to AMEE 2023

2G5 (3898)

Date of Presentation: Monday 28th August
Time of presentation: 1000 - 1015
Location: Castle I, Crowne Plaza

Future proofing an undergraduate clinical portfolio: what do students value for learning?

Alison Sturrock[1], Charlotte Hammerton[1], Carys Phillips[1], Gil Myers[1], Taylor Bennie[1], Clare Wadlow[1]

[1]*University College London, London, UK*

Background

In response to student feedback, in 2021, UCLMS introduced a new clinical portfolio co-created with students, facilitating real-time feedback at the time of formative assessment. Literature supports this approach, in both timeliness and in its design to encourage student engagement in regular feedback. .
Form2 hosts the simplified assessment forms, which students complete in real time, documenting feedback received and gaining immediate supervisor approval. The option to send a 'ticket' for delayed, written feedback remained at the request of students. Progress, including all feedback, can be viewed in students' Academic Student Record (ASR).

Summary of Work

In response to student and educator feedback, this academic year we have simplified how students can view their progress and introduced and a new prescribing assessment. In 2021/22, we conducted a mix-methods evaluation including anonymous questionnaires and focus groups to understand student and educator perceptions of the new portfolio. Now this portfolio is embedded, we are repeating this evaluation to identifying how to optimise the portfolio for the student learning.

Summary of Results

In 2021/22, 54% of 23,542 assessment forms were completed in real-time. This academic year this has risen to 64% of 17,279 submissions.

Shared themes from 21/22 included: ability to review progress is valued, real-time feedback is educationally better, pros and cons of both feedback methods. Students overall described a positive experience of the new portfolio, however acknowledged that the value of feedback varies, often independent of method. Educators described challenges to providing meaningful in-person feedback and raised concerns about student behaviour and professionalism.

Initial results from 22/23 evaluation show continued overall student satisfaction. Concerns over feedback quality persist. Assessor availability and timing of feedback influence quality. An overall student preference for real-time feedback continues, however students find removal of a "ticket" option (delayed feedback) unacceptable.

Discussion and Conclusion

The discussion will centre around what has worked well, innovative changes, and the results of our ongoing evaluation. We anticipate take home messages to include suggestions on adapting undergraduate clinical portfolio for future student learning.

Take-home Message

Real-time feedback is important for students. A student centred portfolio encourages engagement. Be aware of the need to strike a balance between encouraging engagement and cheating.

Session 2H: Designing and Planning learning: Curriculum

2H1 (4097)

Date of Presentation: Monday 28th August
Time of presentation: 0900 - 0915
Location: Castle II, Crowne Plaza

Leadership and curriculum reform in times of change

Alison Jones[1], Svetlana King[2], Koshila Kumar[2]

[1]Flinders University, Adelaide, South Australia, Australia; [2]Flinders University, Adelaide, Australia

Background

Curriculum review and reform of health professional courses is critical, yet complex. These activities must address priorities of various stakeholder groups, align with health workforce needs, adopt sustainable approaches to delivery, and appeal to the expectations of high-performing students. Meeting such demands is challenging in an era of pandemic-related disruption coupled with significant changes to the educational landscape.

Summary of Work

We present our approach to health professional curriculum review and reform at Flinders University, Australia, guided by Moore's (1995) strategic triangle. This framework recognises the interaction between the authorising environment, operational capacity, and the public value that is created. The work was undertaken during 2021-2022 and included medicine, medical science, and clinical science. It was undertaken in challenging circumstances; the COVID-19 pandemic continued to disrupt education, while a recent university restructure had affected resource allocation. These circumstances afforded an opportunity to trade on disruption and increase momentum for curriculum reform.

Summary of Results

Our approach was underpinned by adaptive leadership (McKimm et al, 2022) and emphasised fostering authentic partnerships with students and industry, being responsive to change, and enhancing governance structures. This approach equipped faculty with the agency to make informed curriculum decisions. In this presentation, we explain our theory-informed approach to curriculum review and reform, with illustrative examples, to show how staff were supported in reviewing and renewing their curricula.

Discussion and Conclusion

Our approach to curriculum review and reform enabled faculty to focus on realigning expertise to relevant subject matter, and ensuring students and industry were authentically engaged in the process as partners to collectively focus on meeting health workforce needs. Fundamental to maintaining these partnerships was the need for transparency in communication, and collaboration, to establish and maintain a shared narrative to advocate for change.

Take-home Message

Integrating adaptive leadership (Heifetz, 2009) with the strategic triangle framework was valuable in supporting faculty to focus on strategic intent rather than operational matters. It helped to empower faculty to make informed decisions, authentically partnering with stakeholders to work towards a common goal.

2H2 (6541)

Date of Presentation: Monday 28th August
Time of presentation: 0915 - 0930
Location: Castle II, Crowne Plaza

Development of clinical reasoning course based on case based learning for the fourth-year medical students

Ji Seol Park[1], Ju Whi Kim[1], Narae Yoon[1], Hyun Bae Yoon[1], Yeon-Ju Huh[1], Sun Jung Myung[1], Wan Beom Park[1]

[1]*Office of Medical Education, Seoul National University College of Medicine, Seoul, The Republic Of Korea*

Background

The concept of 'clinical reasoning education' is gaining more attention but it is difficult to teach and evaluate. Case-based learning (CBL) is one way of educating clinical reasoning. We developed a curriculum of 'Advanced Clinical Reasoning' based on CBL using multimedia for fourth-year students. We aimed to evaluate whether the new course of clinical reasoning education has high satisfaction among medical students.

Summary of Work

Advanced Clinical Reasoning was mainly based on CBL with modifications. Twelve complex CBL modules were developed in a faculty workshop. Each case was developed by a multidisciplinary team composed of specialists from different departments, for example cardiologist and pulmonologist. Because of the fourth-year students finished their clerkship, data-seeking was prohibited during CBL sessions. A single CBL module was divided into 3 or 4 detailed stages and each stage was provided to students in a chronological sequence. Initial clinical presentations were provided in the first stage, followed by next work-up results in the second stage. Third and fourth stages specified the case. Every case contained a multimedia material and students were asked to come up with further clinical reasoning based on the information given. Student satisfaction survey of two parts, on the overall course and on each CBL session, with 5-point Likert scale. Students were peer evaluated throughout the course and student performance examination of multiple-choice questions took place after the course.

Summary of Results

In terms of the overall course, the mean percentage of students who responded 4 (Agree) to 5 (Strongly agree) was 80.3% (95% CI 75.8-84.8). Students were highly satisfied with within-group discussions and inter-group discussions. In terms of each CBL session, the student satisfaction was higher, as the mean percentage of students who responded 4 or 5 was 85.0 (95% CI 83.0-87.0). There was a significant correlation between the students' summative assessment scores and the peer evaluation scores ($r=0.496$, $p<.001$).

Discussion and Conclusion

'Advanced Clinical Reasoning' employed CBL with modifications to promote clinical diagnostic reasoning, and overall students' satisfaction was high.

Take-home Message

CBL modules based on complex case using multimedia could improve clinical reasoning skills in fourth-year medical students.

2H3 (5294)

Date of Presentation: Monday 28th August
Time of presentation: 0930 - 0945
Location: Castle II, Crowne Plaza

Designing a new health professions education curriculum for a diverse target population

Daniëlle M.L. Verstegen,[1] Janneke Frambach[1], Jill Whittingham[1]

[1]*Maastricht University, School of Health Professions Education/Faculty of Health, Medicine and Life sciences, Maastricht, The Netherlands*

Background

The Maastricht Master of Health Professions Education (MHPE) is an established post-academic Master of Science programme. The MHPE is part-time, mostly distance-based and serves a highly diverse global student population from different health professions. An in-depth analysis of the target group in 2018 identified that participants enter at different stages of their career, with different motivations and learning needs. Moreover, participants need flexibility in time, since they are combining the MHPE with their work as clinicians and/or health professions educators.

Summary of Work

We designed a new curriculum consisting of mandatory components (two short campus periods, online group tasks and a research thesis) and around 60% electives. Electives allow participants to focus on learning tasks related to roles of Educational Designer, Educational Leader or Educational Researcher (or a combination). Participants plan their own learning path, guided by a coach that they meet at least five times a year. The new curriculum uses programmatic assessment based on a competency framework and a portfolio. First evaluations are based on student questionnaires, focus groups with students and teachers, and observations of the coaches.

Summary of Results

All stakeholders agree that the intensive coaching is a major success factor. Students and coaches also enjoy the longitudinal relationship. Some students need time to get used to

programmatic assessment and support in self-regulated learning skills. Students comment that the mandatory elements provide structure and opportunities for interaction. The online group work can be difficult to plan. However, they enjoy and value the international and interprofessional collaboration. The large elective part allows students to balance their workload. Challenges for teaching staff relate to staff planning and estimating students' entry level when there no longer is a fixed sequence of learning tasks. Providing rich narrative feedback takes time and further staff development should focus on providing more feed-up and feed forward.

Discussion and Conclusion

The new Maastricht MHPE curriculum shows that competency-based education with programmatic assessment can be implemented in a part-time, largely online curriculum and helps to serve a diverse student population.

Take-home Message

- Coaching is key in programmatic assessment
- A combination of mandatory and elective elements allows the best of two worlds: structure and flexibility.

2H4 (3661)

Date of Presentation: Monday 28th August
Time of presentation: 0945 - 1000
Location: Castle II, Crowne Plaza

Applying Situation-Based and Interprofessional Experience-Sharing Strategies to Teaching End-of-Life Care

Chih-Chia Wang[1], Yan-Di Chang[2], Daphne-Yih Ng[1], Jen-Jiuan Liaw[3], Chung-Pei Fu[4], Chia-Chuan Hsieh[1], Ying-Chuan Wang[1], Wen-Hsin Lin[5], Ai-Ju Hou[5], Jung-Chung Lin[2]

[1]Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan; [2]School of Medicine, National Defense Medical Center, Taipei, Taiwan; [3]School of Nursing , National Defense Medical Center, Taipei, Taiwan; [4]Department of Occupational Therapy, College of Medicine, Fu Jen Catholic University, New Taipei, Taiwan; [5]Medical Education Office, Tri-Service General Hospital, Taipei, Taiwan

Background

End-of-life care involves not only bio-psycho-socio-spiritual aspects but also ethical, legal, and communications. The use of didactic lectures by a single professor does not cater to the diverse needs of terminal patients or medical students. We combined teaching initiatives we had previously reported– using microfilms and interprofessional experts (IPE) experience-sharing into a course on end-of-life care. We evaluated the learning outcomes before and after the course.

Summary of Work

Grounded in situation-based and experiential learning theories, we designed a 100-minute class on end-of-life care for medical clerks at our medical center as part of their compulsory medical humanities course that consisted of three parts: (1) introduction of some basic knowledge, and a 12-minute-long clip (30 minutes), (2) experience sharing from three IPEs: an end-of-life care clinician, a medical humanities educator, and a psychological counselor (40 minutes), (3) a forum among IPEs and students (30 minutes). Students voluntarily filled out the online pre- and post-tests, which comprised (1) self-reported confidence level, (2) a 7-item, 5-point Likert scale that measured the change in learning attitude (modified from G.J. Hwang et al, 2013), (3) satisfaction towards the class (maximum 5 points), and (4) qualitative feedback.

Summary of Results

Ninety-one valid pre- and post-tests were collected from 136 students (99 men, 37 women; response rate 67%). Results showed significant differences ($p < 0.001$) in the respondents' self-reported confidence towards end-of-life care and learning attitude. Students were highly satisfied with the use of microfilms and IPE experience-sharing (4.42-4.48 out of 5), reporting that the former provided a more direct sensory experience while the latter enhanced their understanding of clinical communications.

Discussion and Conclusion

Our method of combining situation-based microfilms and IPE experience-sharing demonstrated that medical students were able to learn from IPEs' precious experiences, understand the meaning and importance of the topics, feel more confident about their clinical work, and were quite satisfied with the teaching model. The IPE experience-sharing helped students understand common medical issues and controversies surrounding end-of-life care, and enabled them to accept others' perspectives and cultivate mutual respect.

Take-home Message

Teaching end-of-life care with situation-based microfilms and IPE experience-sharing can enhance students' understanding of issues pertaining to the holistic care of terminally-ill patients.

Session 2I: Education and Management 1

2I1 (5902)

Date of Presentation: Monday 28th August
Time of presentation: 0900 - 0915
Location: Castle III, Crowne Plaza

Student Support Working Group - Developing A Framework for Student Support in Undergraduate Medical Education in Vietnam

Barbara- Rose Gottlieb[1], Mai Nguyen Thi Tuyet[2]

[1]Harvard Medical School, Boston, USA; [2]Health Advancement in Vietnam, Hanoi, Viet Nam

Background

The project for Health Advancement in Vietnam (HAIVN) collaborated with 5 medical schools and consultants from Harvard Medical School to reform curricula, teaching and assessment in response to a call by the Ministry of Health for medical education reform (MER). MER creates new stressors for students. Although studies suggest that Vietnamese medical students have higher rates of anxiety, depression and suicidality than their non-medical student counterparts, medical schools have not had student support programs. HAIVN launched a technical working group (SS TWG) to broaden the vision of reform to include students.

Summary of Work

The mission of the SSTWG is to develop a framework for student support programs. In 2020, HAIVN convened the SSTWG that included faculty from the 5 medical schools. The group met every 2-4 weeks for 18 months to review adolescent development, guidelines for student support and best practices and developed a pro-active approach to student support guided by educational principles. Using an iterative process the group developed a locally customizable framework. The SSTWG developed strategies to enlist leadership support.

Summary of Results

The core domains include: Recruitment and enrollment, orientation, guidance and learning support, student life, student-run activities, personal development, student health including mental health, special needs and specific circumstances including sexual harassment. All 5 medical schools have implemented robust student support programs based on this framework.

Discussion and Conclusion

The framework creates a vision for students to grow and develop, learn life skills, and contribute society. This framework is guided by educational principles including student-centeredness and a developmental approach. Some schools had targeted programs in reaction to problems but none had a pro-active approach to student support.

Take-home Message

Student support is integrally bound with education.The needs of students must be integrated into education reform efforts.For schools that do not have comprehensive student support programs, it is critical to develop these programs. A process that combines a broad review of student needs and best practices with an understanding of local conditions such as the SSTWG can successfully plan student support programs that are effective and sustainable and can be implemented in other settings. Ongoing activities of the SSTWG include plans for evaluation and CQI.

212 (2848)

Date of Presentation: Monday 28th August
Time of presentation: 0915 - 0930
Location: Castle III, Crowne Plaza

A National Study of Excellence and Value in Doctor of Physical Therapy Postprofessional Residency Programs

Gregory W. Hartley[1], Mary Jane Rapport[2], Gail Jensen[3], Lisa Black[3], Matthew S. Briggs[4], Sara V. Kraft[5], Raine Osborne[6], Carol Jo Tichenor[3]

[1]University of Miami Miller School of Medicine, Miami, USA; [2]Hawaii Pacific University, Honolulu, Hawaii, USA; [3]Creighton University School of Pharmacy and Health Professions, Omaha, Nebraska, USA; [4]The Ohio State University Wexner Medical Center, Columbus, Ohio, USA; [5]Medical University of South Carolina, Charleston, South Carolina, USA; [6]University of North Florida, Jacksonville, Florida, USA

Background

Significant transformation in the education of physical therapists (PT) in the United States (US) is ongoing. The professional degree transitioned to a clinical doctorate (DPT), accredited postprofessional residency and fellowship programs are developed in 11 specialized and 9 subspecialized areas of PT practice, and board certification in specialty areas of practice is established to meet society's need for advanced knowledge and skills. There are currently 377 accredited postprofessional PT residency programs in the US, and this number continues to grow rapidly. Evidence suggests that there are multiple benefits and barriers to completing a PT residency. Thus, there is a need to investigate the critical elements of excellence, create a systems-based model for quality, establish best-practices, and ensure value for all stakeholders.

Summary of Work

A multi-year, qualitative study was designed to explore, identify, and describe excellence and value in PT residency education. Exemplar residency programs across the US were identified via a national survey of program directors from programs where there was evidence of novel, innovative, and/or collaborative curricula. The research team then employed qualitative methods using interviews and focus groups with multiple stakeholders, including organizational leadership, at these residency sites.

Summary of Results

Findings were synthesized and a conceptual model, grounded in the core domains of excellence and value in PT residency education, was created and supported by these themes: supportive leadership, collaborative partnerships, exceptional clinical mentoring, faculty as role models, and professional obligation. Three dimensions of excellence emerged: elevated practice, embodiment of professional formation, and a focus on practice-based learning. These dimensions impacted the perceived value of residency education across three spheres of influence: micro-level (resident, faculty, program), meso-level (institution, community), macro-level (profession, society). Excellent programs are well supported by the institutional mission, leadership at all levels, and evidence of continuous emphasis on program improvement, the resident as learner, and faculty as teacher.

Discussion and Conclusion

Programs of excellence share common characteristics that are designed to promote learner growth and foster value to patients, the profession, and society.

Take-home Message

Existing and developing postprofessional PT residency programs can use the conceptual model, recommendations, and action items to strive for excellence and demonstrate value.

213 (4111)

Date of Presentation: Monday 28th August
Time of presentation: 0930 - 0945
Location: Castle III, Crowne Plaza

Attitude of Medical Residents Toward Teaching Clinical Skills to Undergraduate Medical Students

Irma Manjavidze[1], Dali Chitaishvili[1], Salome Voronovi[1], Pirdara Nozadze[1], Zurab Vadachkoria[1]

[1]*Tbilisi State Medical University, Tbilisi, Georgia*

Background

Future physicians should be prepared for their academic role, as all doctors have a professional obligation to teach. From an administrative perspective, recruiting residents for the position of teacher brings the full benefits of the medical programs. Such an approach may alleviate the pressure on overburdened medical teachers and preserve the quality of medical education in situations of limited medical and educational resources. Considering the diligence, time constraints, and workload of medical staff, there is a growing need for resident teachers. Such a model has been used to teach clinical skills to medical students at the Clinical Skills and Multidisciplinary Simulation Department (CSMSD) of Tbilisi State Medical University (TSMU).

Summary of Work

Residents (n-16) who worked for at least one semester, as so-called “invited teachers” at CSMSD from September 2019 to July 2022, were eligible for our survey. The department designed the questionnaire to find out the residents' opinions about teaching clinical skills to Y2, Y4, and Y6 undergraduate medical students. The questionnaire consisted of 21 questions. Respondents were asked to express their level of agreement with 13 items using a Likert scale ranging from 1 to 5. They were asked to answer several open-ended questions as well.

Summary of Results

The response rate was 81%. (13/16). Twelve residents (92% of respondents) agreed that teaching medical students deepened their knowledge about the topic. Ten (76,9%) would

strongly recommend participating in such an activity to their friends. Four residents (30,8%) rated their role as teachers with a maximum of 5 points.

Discussion and Conclusion

For the future physician to embrace the role of teacher, the best way is to involve residents in practicing these skills. We consider it acceptable to recruit and regularly equip the department with young personnel, as it positively impacts faculty and according to our study, residents like to teach clinical skills.

Take-home Message

The Positive evaluation of Medical Residents Toward Teaching Clinical Skills to Undergraduate Medical Students, allows us to expand this form of education in the future

214 (6118)

Date of Presentation: Monday 28th August
Time of presentation: 0945 - 1000
Location: Castle III, Crowne Plaza

Is medical education and training provided of high quality and value for money? Ensuring the evidence to answer this question.

Jo Olagboyega[1], Susan Kennedy[1], Ciaran Crowe[1], Maggie Batchelor[1]

[1]*East Kent Hospitals University NHS Foundation Trust, Ashford, UK*

Background

The introduction of the 2021 NHS Education Contract as a means of regulating and providing a nationally consistent approach between HEE and all providers became a driver for a review of our quality assurance and governance strategy and processes.

Summary of Work

At East Kent Hospitals University Foundation Trust the Medical Education Department has built our staffing structure around embedding the quality agenda within every level of the workforce under a Clinical Associate Director of Medical Education with portfolio for quality and governance. The quality assurance team has implemented, through an iterative process, a system of logging, monitoring and reporting that enables assurance, scrutiny, risk assessment and evidencing of both the quality and value of medical education and training. A central repository for all issues needing action includes everything from survey results to induction issues or Doctors-in-Training raising concerns. A flow chart systematically defines how issues should be dealt with, with the majority being devolved to each individual Local Faculty Group (LFG) log for discussion and resolution. The introduction of interim LFG meetings also allows for more timely resolution of actions and feedback, thus ensuring the loop is closed. The Quality and Governance Committee process deep dives into each LFG log on a weekly cycle to scrutinise overarching themes, triangulate with other sources of data and intelligence and escalate where necessary. The reporting structure up is through the quarterly Local Academic Board with papers being submitted to HEE post meeting.

Summary of Results

Issues are dealt with promptly, appropriately and actions are tracked and recorded with accompanying evidence. As a means of being able to respond to the HEE quality and finance requirements, our processes are proving effective.

Discussion and Conclusion

The new quality landscape is demanding greater evidence of both quality and value for money and our new ways of working are incrementally and iteratively meeting this challenge. There is more work yet to do in terms of embedding and guaranteeing our systems.

Take-home Message

Developing new systems and ways of working that ensure tracked and evidenced actions as part of a quality assurance and governance process are essential in meeting new national requirements.

215 (5677)

Date of Presentation: Monday 28th August
Time of presentation: 1000 - 1015
Location: Castle III, Crowne Plaza

Progress and Challenges in Improving Quality of Health Professions Education in Ethiopia

Tegbar Yigzaw Sendekie[1], Tsigereda Bekele Belay[1], Tsion Assefa Beyene[1], Daniel Dejene Berhanu[1]

[1]*Jhpiego, Addis Ababa, Ethiopia*

Background

Ethiopia has made an impressive progress in building a strong health workforce through massive investment in education of health professionals and expansion of health facilities. In the last decade, the density of health workers increased from 13.6 to 27.6 health workers per 10,000 population. However, the rapid scale-up posed considerable challenges to assuring quality of health professions education. To improve quality of health professions education, the USAID Health Workforce Improvement Program (HWIP) has been supporting higher education institutions (HEIs) and key stakeholders since April 2020.

Summary of Work

HWIP provided technical assistance to 29 HEIs to improve quality of education guided by a theory of change. The interventions focused on optimizing implementation of competency-based curricula, strengthening faculty development, improving student selection and engagement, strengthening clinical education, institutionalizing educational quality improvement, optimizing use of clinical skills labs, expanding use of digital learning solutions and implementing gender transformative approaches. HWIP also worked with the Ministry of Health, Ministry of Education, Education and Training Authority and professional associations to strengthen quality assurance systems. Data on key performance indicators was collected annually to monitor progress, identify challenges and take corrective actions.

Summary of Results

The interventions strengthened capacity of 29 HEIs, developed the capacity of 2,867 instructors and benefitted 27,851 students. Compared to the baseline, the proportion of HEIs that implemented competency-based curriculum, faculty development, quality self-evaluation, eLearning and gender transformative approaches increased from 69% to 92%, 58% to 86%, 17% to 76%, 21% to 66%, and 38% to 72%, respectively. There was also improvement in student outcomes. Dropout rate decreased from 3.5% to 3.1%. Pass rate in national licensing examination increased from 54.8% to 56.1%.

Discussion and Conclusion

There is an encouraging progress in implementation of evidence-based educational quality improvement interventions and student outcomes. However, quality improvement efforts were hindered by the covid-19 pandemic, and conflict and instability in the country. There is a need to intensify the quality improvement interventions with focus on low performing HEIs.

Take-home Message

International partnerships are critical to improve quality of health professions education and build a strong health workforce in resource-limited settings.

216 (5085)

Date of Presentation: Monday 28th August
Time of presentation: 1015 - 1030
Location: Castle III, Crowne Plaza

Research Skills, Perception, and Motivation in the Undergraduate Medical Students

Jiravadee Tangjariyatam[1], Kittipong Panpanawan[1], Pornthep Tanpowpong[2], Pongtong Puranitee[2], Samart Pakakasama[2]

[1]Faculty of Medicine Ramathibodi Hospital Mahidol University, Bangkok, Thailand; [2]Department of Pediatrics, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok 10400, Thailand

Background

Faculty of Medicine Ramathibodi hospital has encouraged medical students to conduct their own research, beginning with an extracurricular program, and recently incorporating a 6-year longitudinal research courses. We aimed to survey all medical students on research-specific and transferable skills (such as teamwork, communication skills), perceptions of barriers, and students' motivations.

Summary of Work

This is a cross-sectional descriptive study using a validated self-report 5-point Likert scale survey on the aforementioned aspects. The survey questions have been formally translated, evaluated on agreement, reliability, and validity. Multivariable logistic regression was performed to define associations between research skills and factors of interest.

Summary of Results

We received 538 responses (a response rate of 44% with 66.5% of medical students in the pre-clinical years, and 50% females), while 43% had been involved in the processes of conducting research (e.g., writing a proposal, data collection, publishing a manuscript). The overall mean scores for research-specific skills, transferable skills, barriers, and motivation were 2.9, 3.5, 3.0, and 3.3, respectively. Students perceived that they were most

confident in research specific skills of data collection (mean 3.2, SD 0.9) and least confident in biostatistical analyses (mean 2.6, SD 1.0). For transferable skills, the highest score was team work (mean 3.9, SD 0.8) and the lowest score was data evaluation (mean 3.3, SD 0.8). The main barrier of conducting own research was “loss of the interest”.

Students reported motivations included “Doing research is useful for my resume” (mean 3.7, SD 1.1). Participants who had previous experience on writing proposals were significantly associated with higher overall transferable skills (≥3/5) with OR of 1.79 (95%CI: 1.04, 3.08). Moreover, more senior years in medical school and never been involved in writing proposals demonstrated higher scores in perception of barrier (≥3/5) (OR 1.17 [95%CI: 1.03, 1.33] and 1.53 [95%CI: 1.05, 2.21], respectively).

Discussion and Conclusion

Guidance on biostatistical analyses and data evaluation should be further encouraged. Medical students who have ever written a proposal is associated with perceived higher transferable skills and fewer barriers in conducting research.

Take-home Message

An early exposure to research proposal writing in medical students may improve the overall transferable skills and alleviate the perception of barriers in doing research studies.

Session 2J: Equality, Diversity and Inclusivity 1

2J1 (3511)

Date of Presentation: Monday 28th August
Time of presentation: 0900 - 0915
Location: Alsh 1, Loch Suite, SEC

Gender bias, discrimination, and 'doctor brides'. A socio-cultural dilemma of medical students in Pakistan

Mohammad Ashraf1, Huzaifa Ahmad Cheema2, Minaam Farooq2, Biah Mustafa2, Ammar Anwer3, Saman Shahid 4, Naveed Ashraf5

[1]Wolfson School of Medicine, University of Glasgow, Glasgow, UK; [2]King Edward Medical University, Lahore, Pakistan; [3]School of Medicine, The University of Lahore, Lahore, Pakistan; [4]National University of Computer and Emerging Sciences, Lahore, Pakistan; [5]Allama Iqbal Medical College, Lahore, Pakistan

Background

Pakistan largely remains a male-dominated country with conservative socio-cultural norms. Whilst women make up 70% of medical students nationally, approximately 50% are not retained in the workforce. Studies on gender bias/discrimination in the socio-cultural context of Pakistan are lacking. Another highly controversial issue and prevalent view in Pakistan is of 'doctor-brides'- the lay perception that women only study medicine to advance their prospects of a higher socio-economic arranged marriage proposal and, once betrothed, drop out of medicine. The poor national retention of female doctors, along with such stereotypes, has blamed women for contributing to the dire national shortage of doctors in Pakistan.

Summary of Work

A multicentre survey was conducted at 14 medical schools across Pakistan from September 2020 to April 2021, comprising medical students of either sex at both public-sector and private-sector institutions. Survey questions explored beliefs, experiences and knowledge concerning common stereotypes and social issues in medical education,

including female role models, work-life balance, gender roles and lack of support from family and faculty. Associations between gender with survey variables were explored.

Summary of Results

Of 377 subjects, 245 (65%) were women. The overall mean age was 21.4+/- 1.8 years. 211(53.8%) subjects aged 21-23, and 368 (97.6%) were Muslims. Significantly more women than men felt that men are encouraged and are more likely to assume leadership roles ($p=0.002$). More women also agreed that household chores and work impacted their speciality choice ($p<0.001$). Most sexual assault victims were women ($p<0.0001$). Regarding women being forced to quit medicine after marriage/childbirth by their in-laws/husbands or changing their careers from clinical medicine to preclinical teaching, 99(26.25%) subjects knew firsthand about such cases. The stereotype of 'doctor-bride' was well-known amongst medical students.

Discussion and Conclusion

Gender bias and discrimination were found to be widely prevalent in medical schools across Pakistan. The general perception of 'doctor brides' needs to be revisited as it may seriously hinder the progress of female doctors, medical education, and patient safety in Pakistan.

Take-home Message

- Socio-cultural views influence medical students/education in Pakistan
- These conservative norms impact men and women differently
- The lay perception of doctor-brides is significantly flawed
- Socio-cultural change is required to change unfounded and damaging stereotypes in medicine

2J2 (4938)

Date of Presentation: Monday 28th August
Time of presentation: 0915 - 0930
Location: Alsh 1, Loch Suite, SEC

Underrepresentation of female healthcare leaders in Pakistan: a qualitative exploratory study

Sundus Iftikhar1, Rahila Yasmeen2, Rehan Ahmed Khan3, Mahwish Arooj1

[1]University of Lahore, Lahore, Pakistan; [2]Islamic International Medical College, Riphah International University, Rawalpindi, Pakistan; [3]Islamic International Medical College, Riphah International University, Rawalpindi, Pakistan

Background

Despite being in high numbers in medical colleges only a small proportion of women join the workforce and even fewer reach leadership positions in Pakistan. Organizations like United Nations and Women Global Health are working towards closing the gender gap. In Pakistan, according to the list of private medical colleges issued by PMC (Pakistan Medical Commission), out of the 97 medical colleges, only 10 medical and dental colleges had a female deans/principal which makes only 10% of all colleges

The study aims to explore the enablers & barriers for women in healthcare leadership and to explore the strategies to promote women in leadership positions in Pakistan's specific societal culture.

Summary of Work

In this qualitative exploratory study semi-structured interviews of 16 women holding leadership positions in the healthcare profession i.e. medical and dental (basic or clinical sciences) were included. The data were collected until saturation was achieved

Summary of Results

Thirty-eight codes were generated that were combined in the form of categories. The major themes that emerged from the data were: elevating factors, the shackles holding them back, let's bring them up and gender roles in the society. Elevating factors were

intrinsic motivation and exceptional qualifications while the shackles were related to gender bias, male insecurities, and lack of political background. It was noteworthy that differences in gender roles were highly defined by culture and religion.

Discussion and Conclusion

There is a need to change the perception of South Asian society and redefine gender roles through media and individual attempts. The gender roles defined by society are mostly influenced by religion and culture this is why they are manifested in different ways across communities. This is why women preferred female mentors. The institutional policies to help promote gender equality would be mentorship programs for new faculty, gender-responsive training for everyone, equal opportunities for all, and maintaining gender diversity on all committees.

Take-home Message

If Pakistan needs gender diversity at leadership positions in healthcare, certain strategies must be adopted by individuals and institutes. At the institutional level, like-minded people, especially men in leadership positions should be involved to ensure that women deserving women are visible in leadership positions.

2J3 (5069)

Date of Presentation: Monday 28th August
Time of presentation: 0930 - 0945
Location: Alsh 1, Loch Suite, SEC

The Impact of the AMEE Student Task Force: Cultivating Student Engagement in Health Professions Education

Mădălina Elena Mandache1, Azhar Adam Nadkar2, Louise Jottrand3, Maria Al Rachid4

[1]University of Medicine and Pharmacy of Craiova, Craiova, Romania; [2]Tygerberg Academic Hospital, Faculty of Medicine and Health Sciences, Stellenbosch University, Cape Town, South Africa; [3]Université Claude Bernard Lyon 1, Lyon, France; [4]Universite Saint Joseph de Beyrouth, Beirut, Lebanon

Background

The AMEE Student Task Force (STF) plays a significant role in facilitating one of the largest and most impactful health professions education (HPE) conferences globally, ensuring seamless operations and promoting diversity and inclusivity. With over two decades of existence, the AMEE STF has become a highly sought-after platform for meaningful student engagement in HPE during the annual AMEE conference.

Summary of Work

In the last two years, the AMEE STF coordinators have closely monitored the impact of the AMEE STF experience on its members. Through pre- and post-evaluation surveys, STF members shared feedback on various factors such as the influence of their participation on their motivation, expectations, and aspirations for future engagement in HPE at different levels.

Summary of Results

For the past two years, the AMEE STF has consistently comprised over 70 students from different regions worldwide. Notably, some STF members served as the sole representatives of their countries, including those from Greece, Bangladesh, Tunisia, Nepal, Jamaica, South Africa, and Iran. Furthermore, over 90% of STF members from 2021 and 2022 indicated that their learning expectations were met at the AMEE Conference.

Also, more than 80% of healthcare students who participated in the AMEE STF expressed certainty in pursuing a career in HPE, with their future engagements focusing on research in HPE, curriculum development, and interprofessional education. Additionally, after the 2022 AMEE Conference, STF members reported implementing 11 new local initiatives and 10 educational projects.

Discussion and Conclusion

The AMEE STF provides a unique opportunity for students to engage in one of the most significant HPE events, both virtually and in-person. Beyond their assigned duties, the STF has the exceptional privilege of attending workshops and symposiums, expanding their knowledge and networking with renowned individuals globally. This opportunity is intended to develop local initiatives and educational projects within their countries, allowing them to positively impact the field of HPE.

Take-home Message

Cultivating student engagement in HPE is crucial, and the AMEE Conference and AMEE STF have an unmistakable impact, fostering an interest in HPE among healthcare students and promoting a new generation of healthcare professionals committed to prioritizing student engagement and patient-centered care.

2J4 (4556)

Date of Presentation: Monday 28th August
Time of presentation: 0945 - 1000
Location: Alsh 1, Loch Suite, SEC

Disability, Program Access, Empathy and Burnout in Us Medical Students: A National Study

Lisa Meeks1, Karina Pereira-Lima2, Melissa Plegue3, Neera Jain4, Erene Stergiopoulos5, Catherine Stauffer6, Zoie Sheets7, Bonnielin Swenor8, Nichole Taylor9, Christopher Moreland10

1Department of Learning Health Sciences at the University of Michigan Medical School at Ann Arbor, Ann Arbor, USA; 2Department of Neurology at the University of Michigan Medical School, Ann Arbor, USA; 3University of Michigan Department of Family Medicine, Ann Arbor, USA; 4University of Auckland School of Medicine, Grafton, New Zealand; 5Department of Psychiatry, University of Toronto, Toronto, Canada; 6University of Illinois Urbana-Champaign, Champaign, IL, USA; 7University of Illinois College of Medicine at Chicago, Chicago, USA; 8Johns Hopkins Disability Health Research Center, Johns Hopkins School of Nursing, Baltimore, USA; 9Department of Anesthesiology, Wake Forest School of Medicine, Winston-Salem, USA; 10Dell Medical School at the University of Texas at Austin, Austin, USA

Background

Students with disabilities, an important and growing population in medical education, report high levels of empathy and resilience yet little is known about burnout and empathy experiences. This study investigates whether self-disclosed disability and reported program access are associated with measures of empathy and burnout in a national sample of US medical students.

Summary of Work

Using the Association of Medical Colleges Y2Q survey data from two cohorts (2019 and 2020) we investigated associations between disability status, program access, empathy, and burnout using multivariable logistic regression models accounting for demographic, personal-related, and learning environment measures.

Summary of Results

23,898 (54.2%) provided disability data; 2,438 (10.2%) self-reported a disability. Most medical students with disability (SWD) reported having program access through accommodations (1,215 [49.8%] or that accommodations were not required for access (824 [33.8%]). Multivariable models identified that SWD with and without program access presented higher odds of high exhaustion (1.50 [95%CI, 1.34 - 1.69] and 2.59 [95%CI, 1.93 - 3.49], respectively) and lower odds of low empathy (.75 [95%CI, .67 - .85] and .68 [95%CI, .52 - .90], respectively) than their peers. In contrast, multivariable models for disengagement identified that SWD reporting lack of program access presented higher odds of high disengagement compared to peers (1.43 [95%CI, 1.09 - 1.87], while SWD with program access did not (1.09 [95%CI, .97 - 1.22]).

Discussion and Conclusion

This may be the first study to investigate the association between empathy, burnout, disability, and program access among medical students. Program access is associated with lower odds of burnout in disabled MD students, and that associations between disability with lower odds of low empathy persisted even after accounting for well-established factors associated with empathy in medical students.

Take-home Message

Students with disabilities were less likely to report low empathy regardless of program access. SWD with program access did not differ from peers in terms of disengagement. These findings add to our understanding of SWD in medicine as empathic future physicians.

2J5 (4262)

Date of Presentation: Monday 28th August
Time of presentation: 1000 - 1015
Location: Alsh 1, Loch Suite, SEC

Ethnicity bias in undergraduate medicine multiple choice questions - A hidden curriculum

Gloriana Suri 1, Melina Kellermann2, Devina Sohal3, Ed Luff4, Anna Ogier5, Emma Ferreira4, Dowan Kwon 1

[1]Bristol Medical School, University of Bristol, Bristol, UK; [2]North Bristol NHS Foundation Trust, Bristol, UK; [3]Sunshine Hospital, Melbourne, Australia; [4]University Hospitals Bristol and Weston NHS Foundation Trust, Bristol, UK; [5]Kingston Hospital NHS Foundation Trust, Kingston upon Thames, UK

Background

Anecdotally, ethnicity descriptors in multiple-choice questions (MCQs) can cause bias in clinical reasoning. These include assumed associations between ethnicity and pathology, such as tuberculosis in South Asian people. With the lack of literature on the role of ethnicity descriptors in clinical reasoning, we investigated ethnicity descriptor use in undergraduate MCQ resources.

Summary of Work

A United Kingdom (UK)-based mainstream commercial MCQ bank for undergraduate medicine finals was screened for ethnicity descriptors. Questions loosely mentioning ethnicity were flagged. The inclusion criteria consisted of questions explicitly stating the patient's nationality, skin colour, emigration history and birth location. Questions with terms potentially implying ethnicity such as patient names or travel history, were excluded.

Summary of Results

Finally included were 140 questions mentioning ethnicity descriptors from a bank of 8487. Of these, 70 (50.0%) associated an ethnicity with a stereotypical pathology, with 59 (42.1%) using mentioned ethnicity as a crucial risk factor for answer selection. 67/108 (62.0%)

MCQs mentioning minority ethnicity descriptors used ethnicity as a crucial risk factor to determine the answer, compared to 3/32 (9.4%) MCQs mentioning majority ethnicities (for the UK population, e.g. Caucasian, British).

Discussion and Conclusion

The impact of MCQ banks associating ethnicity with pathology may prime unhelpful biases in students, potentially affecting future clinical practice. Minority ethnicities seem to be used more in association with stereotypical pathologies compared to questions mentioning majority ethnicity descriptors. Learning through repetitive MCQ pattern recognition techniques may cause students to make unconscious associations, particularly in minority ethnicity patients, possibly widening healthcare inequalities. In some questions, ethnicity had no influence on clinical reasoning and uncertainty arose as to their purpose compared to questions where ethnicity descriptors were required in answer selection, such as reference to the UK hypertension treatment guidelines. The way these questions are constructed is not transparent, and it is unclear if there are regulations followed before their release.

Commercial MCQs mentioning ethnicity descriptors may reinforce unhelpful stereotypes, possibly minimising ethnicity as a mere risk factor. Whether this translates to clinical practice is still undetermined.

Take-home Message

Ethnicity descriptors in multiple choice questions could create learned biases in students. It is important their uses are further investigated and ensure adequate regulations are placed.

2J6 (3502)

Date of Presentation: Monday 28th August
Time of presentation: 1015 - 1030
Location: Alsh 1, Loch Suite, SEC

An Interdisciplinary, Post-Graduate Certificate in Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ+) Health

Eli Zimmerman1, Jasmine Walker1

[1]*Vanderbilt University School of Medicine, Nashville, TN, USA*

Background

Despite growing awareness of healthcare disparities facing lesbian, gay, bisexual, transgender and queer + (LGBTQ+) people, there remain unmet needs in the existence of educational opportunities for providers and trainees. These opportunities are limited during medical training, leading to varying levels of competence and comfort with issues facing LGBTQ+ patients. In order to create an inclusive and supportive environment at our institution, which is located in a conservative-leaning state in the southern US, we created a post-graduate certificate program for residents and fellows for additional training in the care of LGBTQ+ patients.

Summary of Work

We created a post-graduate certificate program for housestaff (residents and fellows) to increase knowledge and comfort of issues facing LGBTQ+ people, to develop leadership and cultural competence, and to equip participants to provide compassionate care for these vulnerable populations. The curriculum was developed through multidisciplinary collaboration both within and outside the institution, and with particular attention towards flexibility given busy housestaff schedules. Approval and accreditation were granted through the institutional Graduate Medical Education Committee (GMEC). The certificate was initially advertised to housestaff but was later extended to faculty.

Summary of Results

The program is currently in its second year and has 30 enrolled participants (15 per year) from 14 specialties, encompassing a wide range of disciplines, residents, and fellows of

varying stages in training, as well as faculty members. The program consists of monthly didactic seminars and quarterly journal clubs, with marked engagement and satisfaction from participants. Enrollment numbers have capped at the maximum determined by GMEC during both years of the program.

Discussion and Conclusion

Opportunities for LGBTQ+ health education in graduate medical education are limited, but development of programs to satisfy this need is feasible and impactful. A flexible structure allows for participation by housestaff and faculty, allowing for a unique learning environment.

Take-home Message

- Development of focused educational opportunities in LGBTQ+ health is achievable and impactful.
- Interdisciplinary participation creates a rich environment for participants.
- Increased awareness of the issues facing LGBTQ+ patients is critical for providers of all varieties.

Session 2K: Simulation 1

2K1 (3479)

Date of Presentation: Monday 28th August
Time of presentation: 0900 - 0915
Location: Alsh 2, Loch Suite, SEC

Cross-border simulation training: implementation strategies to bridge the global medical education gap

Oliver Neely1, Leasha John2, Ayesha Musa1, Afrah Shibu1, Rebecca Conway-Jones3, Rebecca Jurdon4, Kirandeep Saini5

[1]Green Templeton College, University of Oxford, Oxford, UK; [2]Oriel College, University of Oxford, Oxford, UK; [3]Barts Health NHS Trust, London, UK; [4]Frimley Park Hospital, Frimley, UK; [5]King's College London, London, UK

Background

Geopolitical barriers and the impact of COVID-19 impeded Palestinian medical students from accessing clinical opportunities. We set out to bridge this gap and improve performance in medical emergency scenarios by comparing three methods of implementing a cross-border medical simulation programme. Using U.K. based medical simulation software, lecturers and facilitators; we compared the viability and impact of unsupervised and guided usage of medical simulation software amongst medical students in Palestine.

Summary of Work

Prospective multi-site non-randomised study of Palestinian medical students (n=46) training in medical emergency management (Sept 2020-Dec 2022). All students were given access to medical simulation software (Oxford Medical Simulation™ (OMS)). They were allocated into three programmes: Programme 1 (P1): independent simulation training only; Programme 2 (P2): simulation training alongside a medical emergency lecture series (no medical simulation content); Programme 3 (P3): example based simulation lecture series followed by independent simulation training. Primary outcome: post-programme attainment score across five simulated medical emergency scenarios. Secondary

outcome: student subdomain performance (communication, technical, non-technical and teamwork skills). Scoring was completed using validated computer-grading via OMS. Qualitative feedback collected through feedback forms. All data analysed using one-way ANOVA (Microsoft Excel).

Summary of Results

Across five assessment scenarios, average attainment was 34.07%, 33.25% and 41.7% in P1 (n=24), P2 (n=11) and P3 (n=11), respectively. There was no statistically significant difference in student attainment ($F = 0.39$, $p = 0.69$). The difference in performance was not statistically significant across any of the subdomains ($p>0.05$). Anonymised feedback (n=25) showed 3.95/5 average agreement with that 'use of international software was relevant to practice in Palestine'. 32% faced technical challenges with the platform.

Discussion and Conclusion

The use of an additional framework of lectures and guidance did not improve attainment compared to independent usage of medical simulation software amongst Palestinian medical students. This study suggests donation of medical simulation software for independent student-guided usage is a low cost, locally relevant and technically feasible way to supplement medical education, without requiring additional cost-prohibitive guidance and supervision. This is a potential focus for future global medical education initiatives.

Take-home Message

Medical simulation could supplement international medical education to bridge global clinical opportunities gaps without the need for cost-prohibitive guidance or supervision.

2K2 (2591)

Date of Presentation: Monday 28th August
Time of presentation: 0915 - 0930
Location: Alsh 2, Loch Suite, SEC

Application of Rapid Cycle Deliberate Practice (RCDP) toward modified Basic Life Support (BLS) course

Chen Wei Lee[1], Hsueh Li Huang[1], Hung Mei Chen[1], Yi-Kung Lee[1]

[1]*Buddhist Dalin Tzu Chi General Hospital, Chiayi County, Taiwan*

Background

High-quality BLS is fundamental to successful resuscitation. According to our institution's analyzed data and field observation report, we have identified some errors that occasionally occurred during initial resuscitation, usually neglected by the team. The errors included delaying initiation of chest compression, improper chest compression cessation, improper airway opening, improper face mask seal and ventilation rate, prioritizing blood drawn over resuscitation Etc. Thus, we decide to reinforce BLS leader training to monitor and correct these mistakes to lead high-quality BLS.

Summary of Work

We set learning objectives and designed simulation scenarios and feedback checklists of the initial resuscitation scene. Then, we filmed a demonstration video of ideal BLS team performance and poor BLS team performance. During the simulation season, trainees will lead three standardized nurses to perform BLS. The standardized nurses will present the designated errors according to the simulation script. The duration of the simulation season was about 3-4 minutes. The instructor will observe thoroughly and provide debrief at the end. We use the demonstration video to deepen the trainee's impression of the ideal BLS team. The trainees repeated the simulation for deliberate practice. We arranged the pretest during the initial encounter and the post-test one week after the training.

Summary of Results

We have enrolled 27 post-graduate residents and 15 nurse practitioners in the training course. We classified the observation checklist into three categories: BLS algorithm

familiarity, leadership skills, and error identification. The average score of the pretest and post-test were 38.7 and 89.9 in BLS algorithm familiarity, 47.5 and 90.9 in leadership skills, and 23.5 and 66.8 in error identification. All categories achieved significant improvement ($P<0.05$).

Discussion and Conclusion

Traditional BLS training course provides a holistic concept of initial resuscitation. Meanwhile, optimizing the detailed performance and avoiding these errors will be the key to successful resuscitation. RCDP provides influential BLS leaders training in monitoring team members' performance to minimize medical errors that are cataphoric to patient outcomes.

Take-home Message

1. Analyzing the competency deficit in the real world is fundamental for training course design.
2. Embed real-world errors in simulation scenarios can foster trainee performance correction.
3. RCDP is a powerful tool to help trainee discover their deficit.

2K3 (2013)

Date of Presentation: Monday 28th August
Time of presentation: 0930 - 0945
Location: Alsh 2, Loch Suite, SEC

Laparoscopic 'Wet Lab' Simulation for surgical trainees; allowing easy transfer of skills to the operating theatre

Feidhlim McGivney[1], Abu El-Amin[1], Ashutosh Gumber[1], Linda MacDonald[1], Kawan Shalli[1]

[1]*NHS Lanarkshire, Lanarkshire, UK*

Background

Providing good quality laparoscopic simulation for surgical trainees remains a significant challenge. Laparoscopic 'box trainers' are relatively inexpensive and provide low fidelity simulation activities such as dice stacking and peg transfer. Human cadaveric courses are expensive and require significant resources to run. The use of animal tissue 'wet labs' for surgical training is well established but is not yet widely used for laparoscopic simulation. Our aim was to assess the educational value of using real laparoscopic equipment with animal tissue to simulate core general surgical procedures.

Summary of Work

Laparoscopic box trainers were set up with real laparoscopic equipment and porcine liver and intestines were used to simulate laparoscopic cholecystectomy and appendicectomy respectively. Participants were junior surgical trainees (ST1-ST3) and were supervised by senior general surgery consultants. Participants were requested to fill out a pre and post course questionnaire.

Summary of Results

There were 63 participants in total over 10 sessions. 62 of 63 participants filled out the pre and post activity questionnaire. All participants rated the overall learning experience as good or excellent (34% and 66% respectively). 60 of 62 participants found the course to be highly relevant to their needs. All participants reported an increase in their knowledge of these procedures after the learning activity. 79% of participants found the course information and practical skills learned were highly applicable to their workplace. All

participants responded that this educational activity would have a positive impact on patient care through gaining more confidence in applying safe laparoscopic technique.

Discussion and Conclusion

Laparoscopic training for junior surgical trainees has been severely impacted by the COVID-19 pandemic. Access to training lists for core general surgical procedures such as laparoscopic cholecystectomy are extremely limited. Therefore, the role for good quality laparoscopic simulation has never been so important. These simulation events were relatively easy and inexpensive to set up. Feedback overall was excellent from the participants. Our approach which uses animal tissue with familiar laparoscopic equipment creates a high-fidelity simulation environment. The skills learned can then be seamlessly transferred into the operating theatre, ultimately providing better and safer patient care.

Take-home Message

See above

2K4 (2488)

Date of Presentation: Monday 28th August
Time of presentation: 0945 - 1000
Location: Alsh 2, Loch Suite, SEC

Simulation-based mastery learning to teach healthcare professionals clinical procedural skills; A scoping review

Michelle Schlipalius1, Kate Reid2

[1]Monash University, Melbourne, Australia; [2]The University of Melbourne, Melbourne, Australia

Background

The apprenticeship model of medical education has been the traditional method to teach procedural skills. However, patient safety concerns have brought this method of learning under scrutiny and combined with a reduction in working hours has led to fewer opportunities to acquire procedural skills through practise in the clinical environment. As medical education develops from being based on time and procedure numbers to a competency-based approach, simulation-based mastery learning (SBML) becomes essential, as it enables learners to gain competency at their own pace, without a risk to patients and is independent of opportunities available in the clinical environment.

Summary of Work

A scoping review was undertaken to address the research question “what are the outcomes of using SBML to teach healthcare professionals clinical procedural skills?” Ovid Medline, CINAHL Plus, Ovid Emcare, Pubmed and Embase were searched using the terms “simulation-based mastery learning” OR “deliberate practice and mastery learning”. From 736 initially identified articles, 70 were included as they met the inclusion criteria. The methodological quality of each article was evaluated using the Medical Education Research Study Quality Instrument (MERSQI).

Summary of Results

The studies were published between 2008 and 2022. Most (73%) were performed in the USA. The most frequently studied procedural skill was central venous catheter (CVC)

insertion. Post-registration medical learners were most studied, 59% of studies had less than 50 participants and only 13% of studies involved more than one institution. The MERSQI score ranged from 8.5 to 16 with the median score 13.5. Studies evaluated outcomes at Kirkpatrick level one (47% of articles), two (83%), three (27%) and four (14%). Nearly all studies showed an improvement in Kirkpatrick level outcomes. Studies investigating skill retention showed that skill retention and skill decay occurred almost equally.

Discussion and Conclusion

The current literature suggests that SBML works! The challenge is for healthcare professional learners, educators, researchers and institutions to acknowledge this, integrate SBML into their curriculums and advance research. Medical education needs to move from the old paradigm of “see one, do one, teach one” to a new era of “see one, practice many, do one”.

Take-home Message

SBML is an effective method of learning procedural skills.

2K5 (5246)

Date of Presentation: Monday 28th August
Time of presentation: 1000 - 1015
Location: Alsh 2, Loch Suite, SEC

Micro-laryngology Training Course for laryngology specialists in China

Xingmei Wu[1], Wenbin Lei[1], Jie Deng[1]

[1]*The First Affiliated Hospital, Sun Yat-sen University, Guangzhou, China*

Background

With an "easy to learn, difficult to master" nature, micro-laryngology surgical training as well as laryngology specialist cultivation is of large demand in China. Micro-laryngology techniques are practiced and mastered mainly through apprenticeship and clinical operations, which relates to its long learning curve, heterogeneity and poses potential risks in patient safety. During the last 3 years, we developed a unified and referable training course based on simulation for laryngologists in China.

Summary of Work

We self-developed a micro-laryngology simulator system and incorporated it into our training course for laryngology specialist training. At the beginning of the course, a theoretical training session was carried out online, which allows access without restrictions to timing and place. Next a pre-training skill assessment test was taken so as to provide teaching with layers. After stratified learning through basic and advanced micro-laryngology simulator for a day and a half, trainees were to receive a final skill examination. All otolaryngologists in our hospital need to pass the skill examination before implementing micro-laryngology operations in real patients. Since 2019, the course was held twice per year and attracted a lot of laryngology specialists across the nation.

Summary of Results

During the past 3 years, more than 200 otolaryngologists have taken part in the course. Among them were senior otolaryngology residents, young doctors who interested in improving their micro-laryngology skills, and those who have already performed micro-laryngology operations individually for years. Combination of stratified teaching and

massed learning provides beneficial training environment for participants with different levels of expertise. According to questionnaire survey, 100% of them think it is helpful to improve their micro-laryngology skills. In young participants without much micro-laryngology experience previously, significant improvement of micro-laryngology related skills was observed after the course.

Discussion and Conclusion

Our micro-laryngology training course based on simulation and integration of multiple teaching and learning methods showed promising impact in shortening the learning curve. Further optimization of the course including corresponding evaluation system and validation is needed before generalization.

Take-home Message

Simulation helps improve micro-larynoglogy skills.

Session 2L: Supporting Learners: Learners' Experiences

2L1 (6690)

Date of Presentation: Monday 28th August
Time of presentation: 0900 - 0915
Location: Boisdale 1, Loch Suite, SEC

Strengthening first-year medical and health profession students' learning approaches

Iris Borch[1], Rannveig Grøm Sæle[1], Anita Iversen[1], Maria Fredriksen Kvamme[1], Kristin Benjaminsen Borch[1]

[1]*UiT The Arctic University of Norway, Tromsø, Norway*

Background

700 students from 13 health profession education programs at UiT the Arctic university of Norway are participating in an introductory course collaborating in interprofessional groups on topics like academic writing, communication, ethics, and health care systems. The transition from high school to higher education is challenging both socially and academically for many first-year students. At the same time academic achievement and students' well-being are related. Thus, we developed an intervention as part of a course revision aiming to help students choose more effective learning strategies that in turn could affect students' quality of life positively.

Summary of Work

By the time of the abstract submission, the first stages of the intervention and course development are completed. In collaboration with students who have attended the course previously, researchers and supervisors, the course has been developed to strengthen student learning outcomes and learning environment. Students' feedback is positive, they express this is a valuable and necessary resourse that could limit stress and improve their studying skills. We have integrated principles for effective student learning into the course syllabus, these will be used in the course delivery. The supervisors will receive guidance from academic developers prior to teaching activities. We have developed teaching resources like videos about effective learning techniques that will be

integrated into the learning management system and course training. Furthermore we have revised how the course content is teached.

Summary of Results

Teachers and students are currently developing the module together based upon experiences from similar projects at the bachelor program of psychology and first year course in chemistry at the same university.

Discussion and Conclusion

In this session we present experiences about the development and the piloting of the resources. In a rapidly changing society, competencies about how to approach new knowledge and be effective learners are essential for both students and health care professionals. We invite the audience to exchange experiences about how to help first year students learn to learn and use effective learning strategies. Furthermore, to discuss students' approaches to learning in relation to student well-being.

Take-home Message

By integrating a module on learning strategies into the syllabus we aim to improve students' sucess in higher education.

2L2 (4421)

Date of Presentation: Monday 28th August
Time of presentation: 0915 - 0930
Location: Boisdale 1, Loch Suite, SEC

Doctors in Training Perceptions of the Distribution of Postgraduate Medical Specialty Training Programme

Jack Haywood[1]

[1]*NHS England, London, UK*

Background

In 2019, Health Education England and NHS England (now merged) commenced a large programme of work to ensure tariff funding for postgraduate specialty training posts is equitably spread across the country based on the needs of the population. The overall aim is to reduce health inequalities by ensuring medical workforce training, and therefore supply, is equitably distributed.

Over the past year, there have been several trainee engagement events and written information provided. Notwithstanding this, there has been significant concern from the trainee body about the programme. The broad reasons for these concerns are evident, such as educational capacity and training location. However, the root causes of these concerns are unclear. Specifically, there is little understanding of how the redistributed posts could have an impact on individual decisions to commence core or higher specialty training, or trainees perceptions of the impact of the programme in the public, patients, and the wider workforce.

Summary of Work

To understand these concerns in detail, focus groups were carried out with postgraduate medical trainees from across England. These were carried out both virtually and in-person at trust level to ensure all trainees from across the engagement spectrum could participate (i.e., those in formal representation roles but also those who are not). In order to capture as many responses as possible, groups across many specialties, trainee grades, and geographical locations were carried out.

Summary of Results

Analysis of results is ongoing. The analysis of the transcripts will be conducted using thematic analysis, specifically Constant Comparison Analysis.

Discussion and Conclusion

This project seeks to use the thematic analysis to better inform decision-making regarding the programme, and improve communications to trainees about the aims, implementation, benefits, and risks of the programme.

Take-home Message

To make the programme a success, it is imperitive that all key stakeholders are engaged. This includes current and future postgraduate medical trainees to understand their perceptions and concerns. This will inform streamlined and targeted future communications from NHS England.

2L3 (6479)

Date of Presentation: Monday 28th August
Time of presentation: 0930 - 0945
Location: Boisdale 1, Loch Suite, SEC

The AMEE Student Task Force (STF): How a group of motivated students consider this experience as a learning opportunity

Alexandra-Aurora Dumitra1, Konstantina Papageorgiou2, Mehrdad Heravi3, Stella Goeschl1, Kosha Gala4, Aidan Kennedy5

[1]European Medical Students' Association, Brussels, Belgium; [2]University of Thessaly, Faculty of Medicine, Larissa, Greece; [3]Department of Medical Education, Tehran University of Medical Sciences, Tehran, Islamic Republic Of Iran; [4]International Federation of Medical Students' Associations (IFMSA), Copenhagen, Denmark; [5]University of Glasgow, Glasgow, UK

Background

The Association for medical education in Europe (AMEE) is one of the biggest health professions education conferences worldwide. The AMEE Student Taskforce has been an integral part of the AMEE Conference for the last 7 years, motivating nearly 5900 students to apply for it. It includes a team of enthusiastic students from around the world who work with the organizers to assist in the conference. Through our work, we aim to better understand the AMEE STF's impact each year and also analyze how working as an STF member has supported the students to develop their competencies in health professions education.

Summary of Work

In this paper, we have collected the student Task Force application data from 2021 to 2022. We have evaluated the trends, including the total number of applications, number of accepted applicants, and gender diversity of applicants. We measured the impact generated by attending the event and their general feedback using both subjective and objective questions.

Summary of Results

Nearly 5900 students have applied for STF in the past 7 years (813 applications in the last 2 years), and among those accepted in the last 2 years, 53% were female candidates. Talking about the impact of this experience, nearly 95% believed that they are highly and very highly motivated to work on an international level regarding HPE, 91% believed they are motivated to work on the enhancement of HPE at their local level. The most favored streams for participants as aspirations for future engagement in HPE were within research in HPE, Interprofessional education and curriculum development, respectively. At the end of the conference, 86.5% were certain about a career in HPE, and 93% of students met their learning expectations as a member of STF in the conference.

Discussion and Conclusion

In this paper, we concluded that this experience motivated participants to work in HPE at an International and local level, and they also met their learning needs.

Take-home Message

We shall continue to advocate and invest towards medical students' engagement in the system to create competent future healthcare professionals.

2L4 (5234)

Date of Presentation: Monday 28th August
Time of presentation: 0945 - 1000
Location: Boisdale 1, Loch Suite, SEC

You can lead a horse to water: Exploring student engagement in non-compulsory activities to support learning

Emma Kelley1

[1]*UCL Medical School, Faculty of Medical Sciences, University College London, London, UK*

Background

Student engagement is often linked to student success, resulting in enhanced satisfaction and academic outcomes (Kuh, 2009). As a clinical lecturer at UCL Medical school offering non-compulsory study-skills sessions, I found that students engaged well with individual sessions, but attendance for group sessions was poor and extended to other non-compulsory activities. The aim of my study was to understand what influences student engagement in these non-compulsory activities and identify how to mitigate these factors and reach students who were not engaging.
From my scoping review and my own experience, I proposed student engagement may be influenced by stigma, competition and overwhelm.

Summary of Work

I invited all undergraduate medical students at UCL to take part in an interview. Taking a phenomenological approach, exploring participants' lived experiences, I conducted eight semi-structured interviews with students across the program.
These were anonymised, transcribed, and thematically analysed using NVivo. I used an iterative, inductive approach, analysing my data and adapting my questions after the first four interviews to incorporate emerging themes.

Summary of Results

Emergent themes negatively influencing engagement included stigma and a reluctance to show weakness. This was associated with anonymity and clinical students noted competition as motivation to get an edge over peers, or simply to keep up. Clinical

students were also sceptical and questioned the medical school's motivation for running extra sessions.
Positive influencing factors included familiarity with the facilitator and incentives. Other factors were peer-pressure, feeling overworked and students not deeming sessions relevant.

Discussion and Conclusion

Stigma and students' reluctance to show weakness was one of the biggest negative influences on engagement. Students feared judgement from peers and felt that medical students always had to be in control, strong and composed.
Simple solutions include using anonymous platforms and offering incentives. Whilst reducing stigma, competition and mistrust require a cultural change, the reasons behind these issues need to be unpacked. In the meantime, collaborating with student groups to develop sessions may mitigate scepticism and peer-pressure.

Take-home Message

Student engagement is complex and nuanced.
It is impossible to guarantee engagement from all students, it is more important to have a targeted approach and improve engagement for students in need of extra support.
RP1745/SC

2L5 (6398)

Date of Presentation: Monday 28th August
Time of presentation: 1000 - 1015
Location: Boisdale 1, Loch Suite, SEC

Student-led development of learning resources

Charlotte Tulinius1, Ashna Biju1, George Nishimura2, Erin Fitz-Simons West1, Macky Padilla1, Tanzil Rujeedawa1, Ammar Kisat1, Edward Lau3

[1]University of Cambridge School of Clinical Medicine and Public Health Education Group, Department of Public Health and Primary Care, Cambridge, UK; [2]University of Cambridge School of Clinical Medicine, Cambridge, UK; [3]University of Cambridge, Public Health Education Group, Department of Public Health and Primary Care, Cambridge, UK

Background

Self-directed learning is known to engage the learner. However, most learning resources are still produced by faculty. Here we describe how we, as medical students, were supported to develop our own learning resources for the year four primary care curriculum and our reflections as junior medical educators.

Summary of Work

All Year four students were invited to participate in student-led development of learning resources. Through focus group discussions and workshops, all students got together to form three groups, each developing a different learning resource. As groups, we were supported to work together to develop feedback forms and identify ways to test the developed resources and reflect on strategies to improve the resources further. Feedback was collected from our student peers who tested the resource during their placements, as well as from faculty members to comment on the clinical accuracy.

Summary of Results

We identified three different learning resources as relevant and produced: Cheat sheets for history taking and examination, interactive case base modules, and a student guide to primary care placements. Feedback from fellow student users included comments like “appropriate to our level”, “relevant to our exams” and “user-friendly”. In addition, we

developed skills including critical analysis and a greater understanding of evidence-based methodologies. Quality assurance was difficult to obtain from faculty members at specific times that coincided with busy points in the academic year.

Discussion and Conclusion

Through developing our own learning resources, we appreciated the benefits this engagement and ownership brought to us as learners and educators. Working with fellow students, we generated an inclusive learning community keen to collaborate with one another. However, coordinating with faculty members to help feedback on our resources was at times difficult due to their busy schedules. Some of the student participants from this study are now setting up a research project which will look into the further development of collaboration between faculty members and student participants in the development of learning resources.

Take-home Message

Engaging in this project allowed us to work in an inclusive learning environment, developing relevant learning resources, and giving us new skills in critical and evidence-based analysis.

2L6 (4041)

Date of Presentation: Monday 28th August
Time of presentation: 1015 - 1030
Location: Boisdale 1, Loch Suite, SEC

What students learned from engaging in curriculum design: students' reflection

Nattacha Srithawatpong[1], Thananop Pothikamjorn[1], Teeradon Tanpipat[1], Siwat Techavoranant[1], Rahat Longsomboon[1], Thanapob Bumphenkiatikul[1], Danai Wangsaturaka[1]

[1]*Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand*

Background

Student engagement in planning a new curriculum is a rather infrequent event, compared to curriculum/course monitoring and curriculum administration. Students and recent graduates at the Faculty of Medicine, Chulalongkorn University, an ASPIRE-awarded school in student engagement, were invited to co-design the new curriculum. They were then asked to reflect upon their experience at the end of stage I (August-December 2022) of the curriculum development.

Summary of Work

Three committees involving 12 students and 18 recent graduates were established. Seven working groups with a total of 26 students, 1 recent graduate, and 3 teachers were tasked with the need assessment: gathering input from students, recent graduates, teachers, and other stakeholders; identifying the uniqueness of the community track; studying how to integrate health systems science; and summarising the international and national trends in medical education. Using the modified Delphi method, students and faculty designed the questionnaires, collected the data, and analysed them. The results were presented at the curriculum development seminar, in which 30 students and 5 recent graduates participated in discussions with the faculty. The students reflected upon their experiences after the seminar. The responses were analysed by thematic analysis.

Summary of Results

Student's reflective writings were conceptualised into four themes. First, they developed their domain-independent skills, such as data collection, presentation, and communication. Second, they learned about change strategies and challenges in change initiatives. Third, they gained deeper insight and understanding that the faculty are working hard, despite some wishes for more accelerated changes. They also developed a strong sense of ownership of the new curriculum. Finally, they acquired medical education knowledge including the principle of curriculum development, assessment programme, and grading system.

Discussion and Conclusion

Student engagement in curriculum planning is of great educational value. This process can be viewed as the grooming of change agents and the next-generation medical educationists. It also enhances the student-teacher educational partnership in the medical school.

Take-home Message

Curriculum revision is another good opportunity to promote student engagement.

Session 2M: Postgraduate Learning 1

2M1 (4894)

Date of Presentation: Monday 28th August
Time of presentation: 0900 - 0915
Location: Boisdale 2, Loch Suite, SEC

Tracking and tracing learning and impacts of staff and students engaging in the Ways of Knowing interprofessional education in healthcare program

Ngaree Blow[1], Joanne Bolton[1]

[1]*University of Melbourne, Parkville, Australia*

Background

Over the past three years, a team of First Nations (Indigenous) and non-Indigenous health professions educators have worked collaboratively to develop and implement an interprofessional 'Ways of Knowing' curriculum program. Cultural safety practice and collaborative practice are the two key foundations of the program and the pedagogical design draws upon a 'river model' of learning that 'ebbs and flows' "like the process of life-long learning" (Glatthorn and Jailall 2000 cited in Many Ways Learning, Andrews, 2017, p7). The program consists of 4 nested activities and includes a cultural walk, self-guided e-modules, interprofessional case study tutorial and a panel webinar. In 2022, the collaborative leadership team of the "Ways of Knowing" program were awarded a University Teaching Excellence Award. Subsequently educational research was undertaken to better understand the experiences and impacts for staff and students.

Summary of Work

Over 2022, the research team designed and refined a Logic Model (Kellogg Foundation, 2004) to determine the extent to which 'Ways of Knowing' program was working as intended, and to identify the experiences and impact of the program for staff and students. The research team was comprised of academics who are professionally and culturally diverse, supporting interprofessional and interface education research approaches.

Summary of Results

Guided by the Logic Model evaluation framework, the team identified key assumptions, including drivers, challenges, and opportunities relevant to the intersection of cultural safety practice and collaborative practice. Short term outcomes were investigated utilising student surveys implemented at 4 weeks after the end of the program, followed by student and tutor interviews implemented at 4-6 months after the program finished. Longer term outcomes were investigated through surveys reporting changes observed over their time of participation.

Discussion and Conclusion

Based on current results, the Ways of Knowing program has improved understandings of interprofessional health roles across disciplines, increased First Nations health awareness and improved recognition of the importance of both First Nations health and collaborative interprofessional practice.

Take-home Message

Tertiary health curriculums lack robust interprofessional education and Indigenous health education in medical and health professions courses. Combining these themes together allows for improved learning outcomes with increased understanding of both collaborative practice and Indigenous health.

2M2 (4985)

Date of Presentation: Monday 28th August
Time of presentation: 0915 - 0930
Location: Boisdale 2, Loch Suite, SEC

Teaching Skills Improvement Programs in Japanese Internal Medicine Residency Programs: Nationwide Survey

Shunsuke Kosugi1, Makoto Kikukawa2, Tadayuki Hashimoto3

[1]Iizuka Hospital, Fukuoka, Japan; [2]Kyushu University, Fukuoka, Japan; [3]Osaka Medical and Pharmaceutical University, Osaka, Japan;

Background

Residents have played an important teaching role for junior doctors and medical students in clinical settings. In the United States, the prevalence and characteristics of teaching skills improvement programs(TSIP) in internal medicine residency programs have been already reported. The Japanese Society of Internal Medicine developed new program requirements, which include teaching activities of the residents in 2018. However, there is little known about how many programs have their own TSIP for residents in Japan.

Summary of Work

The aim of this study is to investigate the current situation of TSIP in Japan and consider the prospects for the future.
A comprehensive questionnaire consisting of 15 questions made by Google form was sent to all 619 Japanese internal medicine program directors via e-mail in January 2023.

Summary of Results

The overall response rate was 21.8% (n = 135). Of the 135 responding programs, only 32.6% (n=44) have provided opportunities for residents to train their teaching skills. Of the 44 programs providing the opportunities, only 21.7% (n=10) required all residents to attend the instruction program mandatory at some point during their residency programs. In Japan, clinical supervision was the most common topic covered by the programs, followed by bedside teaching, compared to that in the U.S. where feedback was the most. Among the programs not providing the opportunities, 68 program directors felt that the residents

would benefit from a teaching skills program, but they do not have the resources to offer it at this time, given other required training.

If a web-based TSIP is available, 94.1% (127/135) of respondents consider utilizing the program.

Discussion and Conclusion

To the best of our knowledge, this is the first report on the prevalence and characteristics of teaching skills improvement programs in internal medicine residency programs in Asian countries.

This result has shown a different trend from the previous report in the U.S., for the topic and instruction format.

The current study has indicated that TSIP based on the needs should be more incorporated into the residency programs and web-based TSIP is especially expected in Japan.

Take-home Message

Medical educators should work on improving residents' teaching skills.

2M3 (5837)

Date of Presentation: Monday 28th August
Time of presentation: 0930 - 0945
Location: Boisdale 2, Loch Suite, SEC

PEM-POWERHOUR: Using cognitive load theory to optimise trainee education in the paediatric emergency department

Karl Pobre1, Fenton O'Leary1, Shefali Jani1, Michelle Hare1, Susan Phin1

[1]*Paediatric Emergency Department, The Childrens Hospital at Westmead, Sydney, Australia*

Background

The Paediatric Emergency Department (PED) presents a dichotomy between its rich learning context and inherent pedagogical challenges. On the one hand, the PED's acuity, complexity and dynamic nature impart high cognitive burdens on trainees, potentially hindering learning and access to education. On the other, it offers a fertile ground for learning paediatric emergency medicine (PEM). Cognitive Load Theory (CLT) provides principles and strategies which effectively reconcile such dichotomy.

Summary of Work

PEM-POWERHOUR is a learner-centred, interdisciplinary educational program at one of Australia's largest and busiest PEDs. It is characterised by structured, time-protected teaching and a co-designed curriculum leveraging the wealth of knowledge from interdisciplinary experts native to the PED. Integrating CLT strategies reduced trainees' extraneous load by providing uninterrupted space to focus on PEM learning. Learner intrinsic load was optimised by scaffolding learning through a variety of modalities, including interactive lectures, quizzes, case-based discussions, and simulation.
A learning needs assessment involving trainee surveys (n=75) and consultation with ED specialists identified high-yield PEM topics that formed the basis of the PEM-POWERHOUR curriculum. The PEM-POWERHOUR steering group - including the ED head of department, education, and roster team - strategised the structure, staffing and timing of teaching to maximise trainee access whilst maintaining clinical care. Weekly, hour-long, time-protected PEM teaching is provided to paediatric trainees rotating in PED.

Summary of Results

PEM-POWERHOUR was trialled for 12 months. A mixed-method approach was used to evaluate and improve individual teaching sessions and the overall program. 74 of 82 (90%) trainees responded to the summative programme surveys. One hundred per cent of trainees found the time-protected, structured curriculum beneficial for their professional development. All trainees recommended its continuation, found the sessions accessible and felt the program valued their learning needs. PEM-POWERHOUR is now a permanent fixture of the PED teaching program.

Discussion and Conclusion

PEM-POWERHOUR demonstrates the utility of CLT-informed education initiatives in complex healthcare settings such as PEDs. Specifically, it ensured quality and accessible education in PED that trainees valued. For such educational initiatives to flourish, it requires dedicated educators, collaborative departmental support and leadership committed to a strong learning culture.

Take-home Message

CLT provides strategies for creating conducive learning environments within complex healthcare settings.

2M4 (2356)

Date of Presentation: Monday 28th August
Time of presentation: 0945 - 1000
Location: Boisdale 2, Loch Suite, SEC

Development of clinical reasoning throughout the training and career of psychiatrists and factors which influenced the process

Kang Sim[1], Daniel Poremski[1], MY Tan[1]

[1]*Institute of Mental Health, Singapore*

Background

Clinical reasoning is an indispensable skill in the practice of psychiatry. Despite its importance and the existence of various pedagogical strategies, its emergence and development over time remain less examined in psychiatry. Understanding how clinical reasoning develops over time and training can allow better support of the learning of our trainees in psychiatry.

Summary of Work

The current qualitative study obtained the perspective of 26 clinicians at various stages of their career in psychiatry (psychiatry residents, associate consultants, consultants and senior consultants) to develop an understanding of how modes of clinical reasoning changed with time, and determine which factors contributed to these changes. We used a grounded theory approach to structure the analyses, and followed a constant comparative method to alter the line of questioning as explanations emerged.

Summary of Results

We observed several differences between the way psychiatry residents or psychiatrists explained their reasoning process. Residents in training adopted a more deductive logic-driven framework in their clinical reasoning. They were more diagnosis-centric versus more senior clinicians who emphasised a more holistic and problem-centric perspective. Senior clinicians employed a wider range of clinical reasoning strategies including inductive logic reasoning and intuition. In addition, participants attributed the changes that occurred over time to practical (such as greater clinical responsibility over time) and

individual (such as sensitivity to clinical reasoning process, reflexivity) factors. These changes manifest as an increase in repertoire and flexibility in deployment of different clinical reasoning strategies.

Discussion and Conclusion

It is important to raise awareness of the learner regarding deductive and inductive modes of clinical reasoning during supervision, and provide and plan adequate clinical exposure longitudinally within the training program to develop their clinical reasoning. Continued faculty development to facilitate development of clinical reasoning should be encouraged, as should reflexivity in the learners during clinical supervision.

Take-home Message

- Understanding how clinical reasoning develops over time and training can allow better support of the learning of psychiatry trainees
- Residents in training adopted a more deductive logic-driven framework
- Senior clinicians employed a wider range of clinical reasoning strategies
- Practical and individual factors influenced development of clinical reasoning
- Further work is needed to understand role of different contextual factors

Session 2N: PechaKucha™: Learners and Environments

2N1 (5426)

Date of presentation: Monday 28th August
Time of session: 09:00 - 09:11
Location of presentation: Dochart 1, Loch Suite, SEC

A window into the mind: a qualitative study towards understanding mentorship from an emergency residents perspective, is it the time to re-evaluate how to mentor our residents?

Mohammed Alrowais[1], Abdullah Althunayan[1], Abeer Ghawanni[1]

[1] *Department of Emergency Medicine, King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia*

Residency is a cornerstone in organizing knowledge into mental representation that physicians draw from when caring for patients. Complexity of the journey might result in less cognitive integration ,burnout, or drop-out of beautiful-minds from programs. Mentorship has been the way to ease the journey provided by experts and believed to be crucial. The purpose of this qualitative-study is to explore mentorship from residents' perspective and identify gaps for better implementation.
Semi-structured interviews with open-ended questions are used in this qualitative-study. A total of twenty-questions were centered around residents' experience to explore their attitudes towards the current practice. All interviews were audio-recorded, transcripted, and transcribed. Data was coded and analyzed using Heuristic-approach.
Total of fourteen junior-residents were interviewed until we reached to the saturation in data. Most of residents believed its essential to survive residency and would decrease the chance of having burnout, or decrease its intensity if happened. They described mentorship as a person provides guidance in life along with academic support. Nearly all of them did not feel comfortable to ask their mentors about academic questions fearing from judgments. Vast-majority of residents were seeing more value by a senior-resident mentoring them. Almost all of them described interpersonal characteristics of their ideal mentor without mentioning academic competencies.
This qualitative study intends to explore residents' mindsets toward mentorship. We recognized residents' needs and expectations from mentorship, and identified gaps between the current "Consultants-to-Residents" practice. Almost all residents would elect to choose a senior-resident in the program to be their assigned mentor for multiple reasons believing it would give better value to the concept; including but not limited to

their feasibility, openness, and better guidance toward exams. Residents stated a feeling of intimidation when raising questions or seeking help regarding exams due to knowledge differences, and felt the consultants are “outdated” when providing advice and act “idealistic” most of the time when related to academic guidance. To our knowledge, this study is the first in evaluating residents’ needs and identifying gaps toward better understanding of mentorship.

This study sheds light on re-evaluating the current mentorship practice. Considering current gaps and addressing residents’ needs by implementing novel strategies of mentorship could attribute to better academic and social outcomes during residency.

2N2 (5415)

Date of presentation: Monday 28th August
Time of session: 09:11 - 09:22
Location of presentation: Dochart 1, Loch Suite, SEC

Training, Practicing Medicine, and Teaching Learners with an Apparent Disability

Scott Wright[1]

[1] *Johns Hopkins University School of Medicine, Baltimore, USA*

Cerebral Palsy affects my speech, gait, and fine motor skills. The disability is immediately noticeable to all who see me. Having started medical school in the 1980's, my experiences as a disabled student / trainee, clinician, educator, and scholar are extensive. Given that the meeting's overall theme is "Supporting Learners" and one of the submission themes relates to 'equality, diversity & inclusivity' meant to address topics including challenging bias and stereotypes, widening participation and improving representation in health professions education, the PechaKucha format may allow me to share some perspectives in a circumscribed way. Some stories are funny, others are less so. As I am older and far more comfortable in my skin, it would be an honor to describe some parts of my journey related my professional identity formation and working as a clinician-educator with an overt disability. It is my hope that some of the ideas expressed may enable attendees to have a deeper understanding of what it can feel like to have a disability while trying to succeed in the medical profession; these insights may be helpful for those wishing to be supportive of disabled trainees and colleagues.

2N3 (4737)

Date of presentation: Monday 28th August
Time of session: 09:22 - 09:33
Location of presentation: Dochart 1, Loch Suite, SEC

Widening access to medicine: A realist evaluation of medical student selection pathways

Sarah Hyde[1], Emma Bartle[1], Annelise Cocco[2], Sandra Carr[3], Lise Mogensen[2], Rebecca Olson[4], Wendy Hu[2], Philip Roberts[5], Jennifer Cleland[6], Alexia Pena Vargas[7]

[1] School of Allied Health, University of Western Australia, Perth, Australia [2] School of Medicine, Western Sydney University, Campbelltown, Australia [3] School of Allied Health, Health Professions Education, University of Western Australia, Perth, Australia [4] SocioHealthLab, The University of Queensland, Brisbane, Australia [5] Centre for Sustainable Communities, University of Camberra, Canberra, ACT, Australia [6] Medical Education Research and Scholarship Unit, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, Singapore [7] Adelaide Medical School, The University of Adelaide, Adelaide, SA, Australia

Widening Participation (WP) initiatives in Medicine have existed since the late 1990's. In Australia there has been an increasing and focused recognition of the need to improve the number of applicants to medicine from First Nations students and those who identify as of rural origin. Many other disadvantaged groups in the community remain underserved however, and have limited access to the medicine admissions pipeline. Now, eight years on from the development of the United Nations Sustainable Development Goal 4, how well are we really doing to *ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*? Have we really enhanced the diversity of medical program entrants, and improved access to training for applicants from marginalised, under-represented and under-served groups in our communities? There is limited evidence to date about the success of widening access initiatives in meeting their objectives. The evidence that does exist is highly localised. Critical explanatory evidence to understand how the mechanisms work or not on a larger scale is missing. This study uses a critical realism approach to review WP literature and to analyse a case studies of the WP initiatives related to admissions in Australian and New Zealand Medical Schools. The aim is to understand *in what ways do widening access interventions enable or inhibit participation in medical education, for whom, and in what contexts?* Our research will help develop a theory to explain *key drivers and mechanisms that influence WP outcomes in Australian and New Zealand medical schools* to inform policy and admissions procedures.

This study is the first in a program of research for the recently formed Asia-Pacific Network for Qualitative Research on Widening Access to the Health Professions (WAQR). This presentation will showcase the results of the first phase of the analysis – a critical realist synthesis of the literature on WP outcomes to date in medical schools globally. Data presented will include factors that explain what counts as 'equity groups', what are the motivating factors behind WP in different contexts, how successful have these strategies been, and in what ways have outcomes been evaluated to date.

2N4 (4437)

Date of presentation: Monday 28th August
Time of session: 09:33 - 09:44
Location of presentation: Dochart 1, Loch Suite, SEC

Students' voluntary contribution to education reform

Min-jung Lee[1]

[1] *Department of Human Systems Medicine, Medical Education, Seoul National University College of Medicine, Seoul, The Republic of Korea*

Kyung Hee University College of Korean medicine in Korea has a unique student meeting. The Student Council, which started in 2016, calls itself the Curriculum Review Board. These students have been working to improve their education at the school of Korean medicine. Students gather in the committee room during the semester to plan a survey for this semester's class. They design questions that students think are necessary to improve their classes and questions that can reflect their opinions. At the end of the semester, they survey all grades and all courses independently. Students' honest voices gather. The results of the students' survey for each course are sent to the instructor in charge. In addition, these students write down recent issues about the school's education and create a session to gather, discuss, and organize their opinions. Finally, students take this concluded opinion and speak as student representatives at a school committee for improving the curriculum where educational stakeholders gather. I looked at how the students' voluntary and active efforts changed each student.

2N5 (5472)

Date of presentation: Monday 28th August
Time of session: 09:44 - 09:55
Location of presentation: Dochart 1, Loch Suite, SEC

Experiences of adapting a virtual near-peer mentorship service for a national clinical programme

Shiv Sharma[1], Saajan basi[2]

[1] *University Hospitals Bristol and Weston NHS Foundation Trust, Bristol, UK* [2] *North Middlesex University Hospital Trust, London, UK*

The Portfolio Clinic (CIC) was launched in 2021 to break down the boundaries to junior doctors accessing free career development mentorship. Through the creation of a virtual career development platform the social enterprise has engaged over 300 clinicians, connecting over 70 to a near-peer and enabling the next step in their career. The Portfolio Clinic was created in the midst of the coronavirus pandemic and as a result harnessed the movement towards social technology as a means to promote wellbeing, careers advice and portfolio support for doctors.

In 2022, the work and values of The Portfolio Clinic gained recognition from the Irish College of General Practitioners (ICGP) and a collaborative relationship was developed as they planned to design their own near-peer mentorship programme. The ICGP sought consultancy for mentorship design and mentor education from The Portfolio Clinic as a stepping stone towards total autonomy in mentorship delivery which is anticipated by the end of 2024.

Our Pecha Kucha will explore the adaptation of The Portfolio Clinic's near-peer mentorship programme to a national professional body of general practitioners. Attendees will hear our approach to establishing necessary structures for the delivery of virtual mentorship and the use of *design thinking* to maintain a mentee focussed approach. We will also touch on developing a supportive mentor education programme which looks to improve individual confidence whilst also contributing to ongoing professional development.

2N6 (0717)

Date of presentation: Monday 28th August
Time of session: 09:55 - 10:06
Location of presentation: Dochart 1, Loch Suite, SEC

Walking Classroom: a critical anthropological approach to enhance medical students' structural competency

Yi-Cheng Wu[1, 2]

[1] *Hsinchu Mackay Memorial Hospital, Hsinchu, Taiwan* [2] *Mackay Medical College, Taipei, Taiwan*

The concept of cultural competency has been raised as the medical education approach to enhance insight into racism and inequality in the USA. However, the methods to import such notions into the education arena are varied and challenging since the definition of culture may vary among different social contexts. Taiwan has experienced a specific history of modernization along with complicated colonial processes. The geographical situation and the interactions among multiple ethnic groups render the everchanging and complex cultural practices that affect human lives and health. This presentation introduces Mackay Medical College's 'walking classroom' project that collaborates with local indigenous communities and brings up the way to enhance medical students' cultural humility and structural competency during their rural medicine internship.

This presentation also reviews social medicine teaching methods in different countries and analysis Mackay Memorial College's students' works of photovoice and the narratives of teaching feedback. The paper points out the advantage of the 'walking classroom' method, which brings up critical anthropological reflections on health inequality and strengthens students' structural competency. By arranging the 'walking classroom' in the field trip courses, this method offers an immersive learning experience that accesses the issues of contemporary cultural practices, environmental justice, urban planning, and social, economic, and political factors that result in health inequalities and structural vulnerability among minority groups.

2N7 (0217)

Date of presentation: Monday 28th August
Time of session: 10:06 - 10:17
Location of presentation: Dochart 1, Loch Suite, SEC

A qualitative study exploring the views of medical students undertaking public health research projects.

Rajneesh Kaur[1], Genevieve Coorey [1], Joanne Hart[1]

[1] *University of Sydney, Australia*

Background

Core concepts of public health are integrated in medical curricula as their teaching facilitates understanding of the role of sociocultural determinants of health and disease. In addition to coursework, research projects can also be used to teach public health. The University of Sydney, Doctor of Medicine (MD) students may choose public health topics for their mandatory research projects. This study aimed to explore the views of medical students on public health research. The study was undertaken with students who had completed a public health research project.

Summary of work

Students conducted research projects using either population level data from the Public Health Information Development Unit database or individual level data from the National Health Survey collected by Australian Bureau of Statistics, both are freely available. Thirty-three students who completed a public health data project from 2000 to 2022 were invited to complete an anonymous survey and semi-structured interviews. Thematic analysis was used to analyse interviews and free-text responses of 16 medical students.

Summary of results

Most students reported that public health research projects were a better approach to learning about public health concepts than coursework. They reported gaining research skills from analysing large databases and some were motivated to undertake public health research in their future practice. Interestingly, some students felt that public health research projects are secondary preference to projects based on clinical datasets. Handling big databases and academic writing skills were considered the biggest challenges, although most students reported that they gained these skills by completion

of their research project. Many students reported that requirement of funds to access important variables within public health databases limited the scope of their analyses. Their project reports did not reach publication standard for this reason. Access to funds was considered as major deterrence to undertake public health research.

Discussion and conclusions

Engagement with large, diverse health datasets to complete a research project is useful for teaching public health concepts to medical students, and may encourage them to participate in public health research in their future practice. Funding and scholarship would facilitate more extensive and complete use of these data sources.

Session 20: Continuing Professional Development and Faculty Development

201 (4115)

Date of Presentation: Monday 28th August
Time of presentation: 0900 - 0906
Location: Carron 1, Loch Suite, SEC

Traditional to Transformational: Implementing a Mortality, Morbidity and Improvement (MM&I) Rounds for Systemwide Enhancement of Patient Safety in Primary Care

Noora Al-Mutawa1, Ayesha Hussain1, Katherine Grace Baisa 1, Mohamed Hashim Mahmoud 1, Alaa Daban1, Mukhtarul Islam1, Layla Aljasmi1, Zelaikha AlWahedi1

[1]*Primary Health Care Corporation, Doha, Qatar*

Background

Morbidity and mortality rounds are common in secondary and tertiary care, but not in primary care setting. In June 2022, Primary Health Care Corporation (PHCC) facilitated the traditional Morbidity, Mortality and Improvement Rounds in primary care online for the first time in the region. Purpose of program was to identify systems-based practice and issues compromising patient care to be discussed openly in non-intimidating environment, refocusing content for teaching patient safety principles and emphasizing error reduction strategies.

Summary of Work

To promote patient care and safety, a Scientific Planning Committee (SPC) was established comprising of Medical Advisory Committee (MAC), Workforce Training and Development, Operations, Clinical Affairs, Quality and Patient Safety, and Subject Matter Experts. SPC collaborated in developing, designing, and delivering sessions using global patient safety best practice. SBAR (Situation, Background, Assessment/Analysis, Review of Literature) was implemented for case discussion and evaluation. Program was accredited

by Department of Healthcare Professions, Ministry of Public Health as Category-1, Group Learning, Online Synchronous Activity, Live Webinar under Educational Rounds. Participants included physicians, nurses, pharmacists, dentists, and allied health professionals. Series of cases recommended by MAC were identified for presentation during MM&I rounds.

Summary of Results

Pilot session on "chest pain" was attended by 152 practitioners and evaluated by 50% of participants. 90% of respondents believed clinical information presented was pertinent to adverse outcome identified, while diagnostic studies relating to outcomes were well-described along with complication management and reasons for intervention. 98% agreed case was well-analyzed using systems error analysis (poor supervision, low staffing, inadequate care coordination) and root cause analysis of human errors (diagnosis, technique, judgment, communication). 96% stated information shared was relevant and supported learning points using evidence-based practice. 98% agreed to proposed actions to better manage and prevent similar problems in future.

Discussion and Conclusion

Strategies like engaging practitioners across professions and presenting errors as opportunities for learning and systemwide improvement were highlighted. Learning points identified support and facilitate the desired systemwide change to achieve better patient outcomes and safety.

Take-home Message

Well-structured organization-wide MM&I rounds in primary care educate and effectively engage healthcare professionals in managing future adverse events.

202 (3522)

Date of Presentation: Monday 28th August
Time of presentation: 0906 - 0912
Location: Carron 1, Loch Suite, SEC

Using Virtual Reality in the Kitchen Fire Response Course of the Nutrition Department

Ya-Lin Chang1, Tzu-Hung Liu2, Jing-Hui Wu3

[1]Department of Nutrition, Taipei Tzu-Chi Hospital, Buddhist Tzu-Chi Medical Foundation, New Taipei City, Taiwan; [2]Department of Medical Education, Taipei Tzu-Chi Hospital, Buddhist Tzu-Chi Medical Foundation, New Taipei City, Taiwan; [3]Department of Nutrition, Taipei Tzu-Chi Hospital, Buddhist Tzu-Chi Medical Foundation, New Taipei City, Taiwan

Background

With the advent of the metaverse era, dietitian training can be assisted by using multiple teaching technologies. In the past, we used traditional large fire drills to train all kitchen staff and new dietitians by practicing emergency responses in a hospital kitchen fire case. By using virtual reality (VR), we hope to provide a safe learning environment that allows learners to immerse themselves in the fire case without experiencing any harm and deepen their learning.

Summary of Work

The VR module was developed in March 2022 and has been used since April 2022 for the courses as follows: Dietitian In-Service Training (n=13); New Staff Orientation Training (n=10); Internship Food Service Course (n=9); and Kitchen Staff In-Service Training (n=33), with a total of 65 people trained from April to November 2022. After the trainees experienced the VR module and answered the embedded questions (considered a pre-test), they would have a post-test and fill out a satisfaction survey.

Summary of Results

After using the VR module, all trainees improved significantly. Senior dietitians had an average score of 77.0 on the pre-test and 96.0 on the post-test ($p<.001$). New dietitians scored 62.2 on the pre-test and 96.7 on the post-test ($p<.001$). Interns scored 79.0 on the

pre-test and 96.0 on the post-test ($p<.001$). Kitchen staff scored 49.2 on the pre-test and 79.5 on the post-test ($p<.001$). New dietitians improved the most by 34.5 points, followed by kitchen staff by 30.3 points and senior dietitians by 19.0 points. The average satisfaction score of all trainees was 97.6 (extremely satisfied).

Discussion and Conclusion

Through the implementation of the VR courses, all trainees' knowledge of kitchen fire safety improved significantly. Since VR is a new technology, age may influence the trainees' acceptability. The older group of the kitchen staff (52.7 years old on average) spent longer time on the device instruction and made more mistakes during use. But overall, VR is time-saving and effort-saving for kitchen fire response training. In addition, the VR module is fun and increases both the teaching quality and satisfaction of trainees.

Take-home Message

VR is a great learning tool for dietitians and kitchen staff and can help with kitchen fire safety.

203 (5037)

Date of Presentation: Monday 28th August
Time of presentation: 0912 - 0918
Location: Carron 1, Loch Suite, SEC

Creating Open Educational Resources, an alternative pathway for educator professional development

Gregory Doyle[1], Veronica Mitchell[1]

[1]*University of Cape Town, Cape Town, South Africa*

Background

Worldwide, the COVID-19 pandemic motivated educators' accelerated engagement with online technologies to facilitate and allow for student learning and communication. The question is still to be seen what will happen post-pandemic. Whether educators will continue to develop teaching resources which engage students rather than focus on creating conventional online material.

Summary of Work

During the Emergency Remote Teaching period at the University of Cape Town (UCT), we noted that most educators made narrated PowerPoint presentations to ensure the continued transmission of disciplinary knowledge. However, for a few educators, the pandemic and isolation opened new opportunities for sharing teaching resources inter-institutionally, locally and globally. These teaching materials are distributed as Open Educational Resources (OERs) using a Creative Commons license that permits sharing without infringing copyright. OERs are especially beneficial to middle-income countries because these freely available resources lessen the financial burden of creating teaching resources, cut back on time commitments in preparing teaching material and expand access to high-quality resources. Creating and publishing OERs is a form of professional development which helps educators develop new skills in creating content which incorporates education technology. If OERs published online could use digital modalities such as video, images, sound and animations, they would encourage constructive engagement in students' learning. In addition, new opportunities arise for collaborating with colleagues inter-institutionally to publish OERs, thus transforming current pedagogical practices.

Summary of Results

At UCT's Faculty of Health Sciences (FHS), educators are encouraged to create OERs and post them on platforms such as YouTube. Our presentation will generate a discussion on publishing OERs and showcasing content created over the past two years.

Discussion and Conclusion

We aim to encourage collaborative discussions for creating high-quality interactive resources while interrogating the potential for producing more resources inter-institutionally from institutions in South Africa.

Take-home Message

Creating and publishing OERs is a form of professional development if one considers the skills educators have to learn. In addition, practical technical assistance would make the process easier.

204 (4128)

Date of Presentation: Monday 28th August
Time of presentation: 0918 - 0924
Location: Carron 1, Loch Suite, SEC

Using Core Competencies as a guiding principle for Interprofessional Practice in Faculty Development

Yu-Pei Fan1, Kung-Pei Tang2, Yu-Hsia Lee3, Ya-hui Chang3, Jiun-Yi Li3, Lu-Chih Kung3

[1]Mackay Memorial Hospital, Department of Medical Education;, Taipei City,, Taiwan; [2]National Taipei University of Education, Taipei City, Taiwan; [3]Mackay Memorial Hospital, Taipei, Taiwan

Background

Measures to enhance interprofessional team competencies of healthcare professions are essential elements of patient-centered care. This study aims at developing effective guidelines to evaluate interprofessional education in terms of faculty development and to examine the effectiveness of the faculty development program for Interprofessional Collaborative Practice (IPCP).

Summary of Work

We adapted the 38 items of Core Competencies for Interprofessional Collaborative Practice (CCIPCP) developed by "Interprofessional Education Collaborative (IPEC) Expert Panel in 2011" for our local context. A Chinese version of CCIPCP was developed as a guidance to assess learning effects in the faculty training workshop. During the session of faculty training workshop, participants were required to investigate how or why the core competencies was (or was not) effective among interprofessional teamwork, and they also were required to assess his or her core competencies before and after attending the workshop.

Summary of Results

Firstly, only 17 items were remained in the Chinese CCIPCP version after expert validity test (Content validity index =0.94). The Cronbach alpha of the pilot test was 0.98 which gave a good feedback on the internal consistency. Secondly, total 8 workshops were conducted during 2018-2020 and 165 teachers in 14 healthcare professionals completed the survey (response rate 90%). Overall, the self-assessment results indicated that core competencies in all 4 domains are enhanced ($P<0.001$). Those with more experience in participating in IPP and teaching IPE had higher scores in all four aspects of core competencies with statistically significant difference. In addition, nursing educators had higher scores of core competencies in the pre-training survey, and had no significant difference among 14 healthcare professionals in post training survey.

Discussion and Conclusion

The Chinese CCIPCP version with 4-5 items for each domain is feasible for the Taiwanese local context. Results of the training survey showed that the level of core competencies had been improved significantly after attending the workshop, and the difference in level of core competencies among health professionals had been eliminated after attending the workshop.

Take-home Message

The core competencies for interprofessional collaborative practice can be used as an evaluation tool for faculty training courses, and this scale will be helpful to guide the learning of clinical educators.

205 (5981)

Date of Presentation: Monday 28th August
Time of presentation: 0924 - 0930
Location: Carron 1, Loch Suite, SEC

Developing a global spine surgery training online program

Monica Ghidinelli1, Bryan C Ashman2, Michael Cunningham1, Atiq Uz Zaman3, Bradley Jacobs4, Evan Davies5, Karsten Wiechert6, Klaus Schnake7, Daniela Cassini 1, Emre Acaroğlu8

[1]AO Foundation, AO Education Institute, Davos, Switzerland; [2]Canberra Hospital, Canberra, Australia; [3]Ghurki Trust Teaching Hospital Jalo Moore, Lahore, Pakistan; [4]Foothills Medical Centre, Calgary, Canada; [5]Southampton Childrens Hospital, Southampton, UK; [6]Michel Spine Center, Hamburg, Munich, Germany; [7]Malteser Waldkrankenhaus St. Marien, Erlangen, Germany; [8]Ankara Spine Center, Ancara, Turkey

Background

Most training programs in spine surgery are based on surgical apprenticeships through fellowships, supplemented by continuing medical education activities. Very few of these fellowships have a curriculum or formal training program. To fill this gap in spine surgeon's education we first developed a curriculum based on entrustable professional activities (EPAs) and then designed an AO Spine global online training program, which was officially launched globally in 2022.

Summary of Work

The Global spine diploma program is structured in 6 modules (Trauma, Degeneration, Pediatric and adult deformity, Oncology, Infection, and Spinal fragility fractures and Inflammatory spondyloarthropathy) each covered in 12 weeks for a total of 18 months. Asynchronous activities (recorded lectures, surgical videos, book chapters, journal articles, weekly forum-based case discussions) and synchronous (90 minutes live case discussions) are offered. For the case discussions, participants are subdivided into regional groups moderated by faculty from that region. This is to account for the local health care environment, however the live case discussions are also attended by a faculty from a different region to give an alternative perspective.

Summary of Results

A total of 123 participants (39 from Europe and southern Africa, 20 Americas, 26 Middle east and north Africa, 38 Asia Pacific) and 44 faculty enrolled in 2022. 105 (85%) of participants successfully completed the first semester (3 modules). Quality of content was very good/excellent for 88% of participants, faculty support was very good/excellent for 73% of participants, quality of live case discussions was very good/excellent for 75% of participants, while the Learning Management System was good/excellent for only 47%.

Discussion and Conclusion

The new online global spine training program is highly valued by participants. The main element for the success of the program was the faculty engagement in the weekly asynchronous case discussions and in the live case discussions. The online platform is under revision to improve the learner experience.

Take-home Message

The Global Spine Diploma program launched in 2022 offers young orthopedic surgeons and neurosurgeons easy access to education covering the main spine pathologies and to a network of leading experts in the field.

206 (3252)

Date of Presentation: Monday 28th August
Time of presentation: 0930 - 0936
Location: Carron 1, Loch Suite, SEC

Enabling collaborative learning in an online synchronized classroom of healthcare educators

Jason Wen Yau Lee1, Fernando Bello1, Nigel Choon Kiat Tan2

[1]Duke-NUS Medical School, Singapore, Singapore; [2]National Neuroscience Institute, Singapore, Singapore

Background

Collaborative learning is an approach that involves groups of learners working together towards a common goal. This constructivist approach does not view knowledge as being passively received, but a construction of new understanding through experience and social discourse. With Covid restrictions, in-person classes had to transition online, making collaborative learning challenging. Yet, we wanted to maintain constructivist principles in a teaching and learning course for Healthcare Educators despite moving it online.

Summary of Work

In order to create a collaborative learning environment in a synchronized online class, we used Miro, a visual collaboration platform akin to a digital whiteboard that can be accessed by multiple users. Learning activities prepared beforehand enabled each group to different 'spaces' within the board to work during the multiple breakout sessions. At the end of the each breakout session, groups reported back their discussion. All students have the ability to view each other's work in real time.

Summary of Results

A total of 59 Healthcare Educators divided in three cohorts across various professions completed 6 synchronous learning sessions in Zoom. While there was some hesitance initially, learners were quick to warm up to using the platform with guidance from the

instructor. The small breakout room discussion enabled rich interprofessional discourse to be captured in real-time. This also enabled instructors to easily monitor the discussion and facilitate the learning. The instructor received a feedback score of 4.3 out of 5 and learners shared that they will adopt similar practice for their own teaching.

Discussion and Conclusion

Despite moving the classes online, Miro enabled us to create a collaborative learning environment in a virtual space. The shared space also ensured individual accountability, which can be a problem especially in an online learning environment. One advantage of capturing the discussion in an online platform is the ability to archive discussion in a common location that learners can access at a later time.

Take-home Message

Transitioning teaching online does not mean that it has to be didactic and requires educators to innovate and leverage existing technologies. We demonstrated that it is possible to create a shared learning space for learners online that gives voice to our learners.

207 (6509)

Date of Presentation: Monday 28th August
Time of presentation: 0936 - 0942
Location: Carron 1, Loch Suite, SEC

MBA Essentials for Physicians Program

Nicole Parent1, Diane Poirier2, Alain Gosselin3

[1]Médecins francophones du Canada, Montréal, Canada; [2]CIUSSS du Centre-Sud-de-l'Île-de-Montréal, Montréal, Canada; [3]Ecole des dirigeants, HEC Montréal, Montréal, Canada

Background

Many physicians have clinical careers and choose to move into management responsibilities. They mostly enter this field with no management preparation. Physician managers must learn to influence and make strategic decisions that will impact their team and population health outcomes. While there are many training courses available to support managers in any field, no management program is available to support physician managers working in the complex environment of health care.

Summary of Work

The MBA Essentials for Physicians program was developed by two types of experts, an environment expert and a content expert. Médecins francophones du Canada contributed its understanding of the medical practice environment. The Executive Education HEC Montréal contributed its content experts.
Following a national needs assessment among physician managers and the work of a scientific committee involving physician and experts from HEC Montréal, five management challenges were identified. A co-construction approach was used to match these challenges to competencies. The program was built around 5 challenges/competencies, for 5 days : governance, finance, leadership, change and human resources.

Summary of Results

Launched in September 2020, today more than 160 physician managers have participated in this innovative "tailored" program", developed according to best practices

in continuing professional development (CPD). Two cohorts are offered each year. The program allows the physician manager to strengthen his leadership and position himself strategically, to master the tools of performance analysis and financial management, to use the tools of change management, and to apply conflict resolution and negotiation strategies. A learning workbook was developed to maximize the transfer of knowledge into practice. Its addresses what the participant wants to retain, what they want to share with others, and what they want to transfer to their management behaviors in a sustainable way.

Discussion and Conclusion

Time and effort were invested in identifying management challenges for physician and linking those to competencies in a collaborative manner. This program has also resulted in a coaching program for physician managers.

Take-home Message

The contribution and collaborative work of two types of experts, medical practice experts and knowledge experts, resulted in a common understanding of the leaning needs and in the choice of relevant competencies to include into the program.

208 (5462)

Date of Presentation: Monday 28th August
Time of presentation: 0942 - 0948
Location: Carron 1, Loch Suite, SEC

Hybrid flipped classroom in health system learning encourages teamwork among Interprofessional primary care teams in Thailand

Hathaitip Tumviriyakul1, Orawan Tatiwaytipong2, Vannaboon Phag Udom3

[1]Hatyai Medical Education Center, Hatyai Songkhla, Thailand; [2]Khaoyoi Hospital, Phetchaburi, Thailand; [3]East Sussex Training Hub Clinical Lead Assoc Dean East Sussex GP Tutor GP Training Programme Director, Brighton & Hove Chair, South East Thames RCGP Faculty, Sussex, UK

Background

A team approach is essential in high-quality primary care. It is related to reducing healthcare costs, fulfilling patient needs, and increasing job satisfaction among health providers. Learning how to work as a team is not straightforward. The benefit of the flipped classroom in enhancing team working skills is acceptable worldwide. A flipped classroom allows students to control their learning abilities and is a great way to work collaboratively outside the classroom. With the UK's NHS scenario, the study aims to measure the impact of flipped classroom online learning to enhance team-building skills.

Summary of Work

The study was a quasi-experimental study conducted in September 2022 among primary care providers such as doctors, dentists, nurses, pharmacists, physiotherapists, public health officers, and traditional Thai therapists. Each team comprised 3-4 participants from the same primary care unit. Participants independently watch pre-recorded videos and material online before participating in each of five consecutive synchronous sessions. Zoom was used during synchronous sessions. As a team, with the facilitator's guidance, participants discussed multidisciplinary roles, values, Edgar-Schein organizational culture, the process flow of care delivery, stakeholder analysis and workforce planning. At the end of the course, each team proposed the scope for change in their clinical practice. The descriptive statistic used numbers and percentages for quantitative data and a median with IQR for non-normal distribution qualitative data. The inferential statistics used a

Wilcoxon rank sum test to compare two samples' pre-post course knowledge and confidence scores at a significant level of 0.05.

Summary of Results

45 and 32 participants reported in pre-course and post-course evaluations. Most participants were nurses, public health officers, and doctors, respectively. The median satisfaction score with the course, content, and relevance was 9(IQR 8,10). After the course, participants reported significantly increased knowledge, more confidence, and more engagement in managing multidisciplinary teams ($p < 0.001$)
Discussion and Conclusion: The study ensured that hybrid flipped classrooms could enhance team working capacity. It increases knowledge and the participants' confidence in team building.

Take-home Message

Blending synchronous and asynchronous increase team learning among primary health care providers. This model could strengthen the primary care team and build teamwork skills.

209 (5025)

Date of Presentation: Monday 28th August
Time of presentation: 0948 - 0954
Location: Carron 1, Loch Suite, SEC

Learning-by-concordance for nurses and medical technologists: delivering interprofessional patient safety education to decrease medical errors in laboratory medicine

Chiao-Ni Wen1, Yueh-Lin Chung1, Hsiao-Chen Ning2, Chung-Guei Huang1, Shu-Yu Peng3

[1]Department of Laboratory Medicine, Chang Gung Memorial Hospital at Linkou, Taoyuan, Taiwan; [2]Department of Medical Research and Development Linkou branch, Chang Gung Medical Foundation, Taoyuan, Taiwan; [3]Department of Laboratory Medicine, Chang Gung Memorial Hospital at Taipei, Taipei, Taiwan

Background

The laboratory errors are a significant source of medical errors that can jeopardize patient safety, and most laboratory errors are related to the pre-analytical phase which often involves multiple healthcare professionals. Although several studies have shown education interventions could increase learners' knowledge about pre-analytical processes and then improve self-perceived adherence to guidelines, delivering effective education is still challenging for clinical educators including our team. Learning by concordance (LbC), based on script theory, is an on-line educational strategy to promote practice reasoning competency in case-based situations. Our objective was to develop a LbC activity regarding patient safety education in laboratory medicine and assess its impact on learning effectiveness among learners.

Summary of Work

We conducted this study in a medical center and recruited 20 medical technologists and 20 nurses to assess the learning effectiveness about patient safety. Firstly, a team of experienced nurses and medical technologists developed the LbC activity with 15 clinical vignettes. Secondly, before and after the LbC activity launched, all participants completed questionnaires regarding perceptions and knowledge about patient safety and self-perceived adherence to guidelines in the pre-analytical phase. Lastly, the focus group

discussion was used to explore participants' experiences and perspectives on the LbC activity.

Summary of Results

All participants acquired more knowledge and had positive perceptions about patient safety after the LbC activity. 55% of participants self-perceived to improve adherence to guidelines in the pre-analytical phase. Regarding the qualitative responses, most participants took positive attitudes toward the LbC activity, with themes of increased knowledge, induced reasoning on related issues and user friendly.

Discussion and Conclusion

Our study reveals the LbC activity was a favorable and useful approach to deliver patient safety education in laboratory medicine for healthcare professionals. Theoretically, the LbC is coherent with a cognitive apprenticeship, whereby learning is enhanced by panelists' experiential and contextualized knowledge. Moreover, the LbC activity are clinical cases which are familiar to those of healthcare professionals' clinical practice that could effectively help learners identify their knowledge gaps and then transfer to practice.

Take-home Message

Future researchers could develop well-designed studies regarding the LbC activity to ensure the training fidelity and the learning retention in patient safety education or other CPD programs.

2010 (6644)

Date of Presentation: Monday 28th August
Time of presentation: 0954 - 1000
Location: Carron 1, Loch Suite, SEC

What We Learn from Using Objective Structured Teaching Encounter (OSTE) for Faculty Development in South China

Shaoting FENG[1], Ming Kuang[1], Kunsong ZHANG[1], Daya YANG[1], Haipeng XIAO[1]

[1]*First Affiliated Hospital, Sun Yat-sen University, Guangzhou, China*

Background

The importance of faculty development to improve clinicians' teaching skills has been well articulated in a number of literatures. There are few objective measures of the impact of faculty development on clinical teaching skills in South China. The objective structured teaching encounter (OSTE) is a faculty development tool that may meet this challenge. It also has great potential to be used in the development and enhancement of teaching skills. The OSTE consists of a simulated teaching scenario involving a standardized learner with objective and immediate feedback given to the teacher, and includes a pre-determined behaviorally based scale or checklist to assess teaching performance.

Summary of Work

We have used OSTE to the training of clinical trainee teachers for teaching evaluation in First Affiliated Hospital, Sun Yat-sen University in South China. We designed a special training course for trainee teachers on their teaching skills, which was delivered in the form of lectures and workshops. At the end of the training course, four OSTE stations were designed to assess and give feedback to the participating teachers on their teaching skills, each station lasting 30 minutes. The four stations included instruction in case debriefing, instruction in bedside teaching, instruction in patient communication simulation, and instruction in simulation of clinical skills in action. Our scoring was combined with an overall evaluation of the teachers' teaching performance in 6 dimensions. 34 narratives based on the training and the experience of OSTE were collected and each clinical teachers offered his or her reflections on their own narrative. The content of the narratives and reflections were analyzed.

Summary of Results

The majority (94.1%) were deeply impressed by the experience of OSTE. Their feedbacks and provided with us significant suggestions to improving our design for OSTE of clinical teachers in different teaching scenarios.

Discussion and Conclusion

The OSTE is a novel tool to enhance faculty development. It is high time to incorporate OSTEs for evaluating teaching skills in South China. The net benefit from this would possibly encompass medical students, residents and academic staff, through bringing awareness about the importance of excelling in teaching skills.

Take-home Message

- OSTE
- Faculty development
- Clinical teaching skills
- Teaching evaluation

2011 (3139)

Date of Presentation: Monday 28th August
Time of presentation: 1000 - 1006
Location: Carron 1, Loch Suite, SEC

Crisis Leadership: Lessons Learned from Academic Medical Leaders during the COVID-19 Response

Heather Valenova Dayag1, Bobbie Ann Adair White1, Joann Farrell Quinn2

[1]Massachusetts General Hospital Institute of Health Professions, Boston, Massachusetts, USA; [2]University of South Florida, Tampa, Florida, USA

Background

Crisis leadership and emotional intelligence are critical to the performance of medical leaders to guide teams in response to crisis events, yet, these skills still need to be taught in health professions education. Previous literature suggests that emotionally intelligent leaders are self-reflective and can effectively convey their vision, foster engagement, and strengthen team cohesion. Our study explored academic medical leaders' experiences making effective teamwork decisions during the COVID-19 response.

Summary of Work

Semi-structured interviews were conducted with seven leaders representing diverse geography and roles in medicine and medical education in the United States. The interviews were video recorded, transcribed verbatim, and analyzed thematically. Two authors (HVD, BAAW) manually coded interview transcripts using a combination of inductive and deductive approaches based on Emotional Intelligence Competencies (Boyatzis, Goleman, & Hay Acquisition, 2001/2007; Boyatzis & Goleman, 1996).

Summary of Results

We identified four themes from medical leaders' perspectives in recognizing opportunities to encourage team learning in times of conflict. 1.) Interprofessional Teams. Interprofessional teams expanded opportunities for innovation by practicing grassroots and inspirational leadership. 2.) Structure. Providing a clear structure when needed encouraged a sense of team ownership to collectively establish workplace routines, which

has expedited the placement of policies and procedures. 3.) Collaboration of Work and Decision. Leaders who include team members in ongoing discussions throughout the planning and implementation phase had increased confidence to tackle information overload to make evidence-based decisions at a time when scientific literature was rapidly evolving. 4.) Expertise over Title. Shifting team members' talent to achieve certain tasks encouraged interprofessional team engagement, minimized the presence of hierarchy, and increased trust within the workplace.

Discussion and Conclusion

The research results emphasize the importance of incorporating crisis leadership in healthcare professional education to enhance medical leaders' preparedness to respond confidently and implement effective crisis team management. Leaders should harness the power of self-reflection and recognize the ability of emotional intelligence to build stronger relationships, defuse conflict, and make informed decisions as a team.

Take-home Message

Teaching crisis leadership in health professions education is essential in the future of healthcare to cultivate emotionally intelligent leaders.

2012 (6418)

Date of Presentation: Monday 28th August
Time of presentation: 1006 - 1012
Location: Carron 1, Loch Suite, SEC

Overcoming barriers to Continuing Professional Development (CPD) for medical educators

Ciaran Crowe1, Susan Kennedy1, Lucy Tague1

[1]*East Kent Hospitals University NHS Foundation Trust, Ashford, UK*

Background

Educators face difficulty accessing appropriate medical education CPD that ensures they are qualified, up-to-date and that they can evidence both. Feedback from clinicians shows they are keen to demonstrate such CPD.

Summary of Work

We undertook:
1. A literature/grey area search;
2.Mapping of this and existing CPD programmes to the Academy of Medical Educator (AoME) domains;
3.And a series of Educator engagement activities.

Summary of Results

We have developed an accessible and levelled approach to CPD which supports educators.

Research revealed widespread feeling that there are barriers to CPD e.g. lack of time, accessibility, lack of understanding of requirements/pathways into roles in medical education. We mapped elements from existing courses/programmes to AoME domains & then charted ways in which versions could be delivered locally. Our aim was to develop training for specific roles and at specific career points.

A world café activity engaged our educators in considering the mapped domains and prioritising them in terms of self-identified needs. Results revealed the greatest need was for accessible training on Domains 1 – 3; predictable given that all were in teaching and assessor roles. The other domains of AOME are less known and harder to evidence without explanation and training. Results indicated an appetite for a local programme covering all domains.
A survey demonstrated unsureness about what sort of training and/or qualifications might be required/most appropriate for specific roles. Even experienced educators did not necessarily understand how best to demonstrate appropriate levels of training and up-to-dateness in order to demonstrate CPD and evidence this at appraisal. The results also showed that those not currently in educator roles lack understanding of roles available and what training could/should be undertaken.

Discussion and Conclusion

Results will form a coherent programme which signposts a career pathway through medical education for any level of educator. It will enable educators to meet any HEE/GMC requirements plus enable them to provide high quality training and demonstrate this at appraisal.

Take-home Message

Engaging educators in the development of an accessible locally designed and delivered programme can help overcome barriers to CPD, build educator confidence in such a programme, encourage clinicians into a career in medical education and support career pathway progression.

2013 (0321)

Date of Presentation: Monday 28th August
Time of presentation: 1012 - 1018
Location: Carron 1, Loch Suite, SEC

Making Waves with Ultrasound Training for Nonclinical Anatomy Educators

Lane Fickert1, Natascha Heise1, Felicia Toreno1, Suzanne Dickinson 1, Delicia Peeples1, Kean Feyzeau 1, Ashton Pas 1

[1]*Eastern Virginia Medical School, Norfolk, Virginia, USA*

Background

Ultrasound (US) continues to influence modern medicine as a powerful screening and diagnostic imaging modality. Its noninvasive approach and efficiency apply to a wide range of specialties and play an important role in medical and health professions education. As an evolving thread at institutions incorporating US, a team of clinicians, anatomy faculty, near-peer students, and sonographers facilitate instruction and training sessions. Several national medical organizations provide formal credentialing, certification, and continuing education for diagnostic medical sonographers and clinical practitioners. However, formalized training for nonclinical anatomy faculty is limited and varies greatly. At Eastern Virginia Medical School (EVMS), the US Department bridged the gap by providing anatomy faculty with the knowledge and skills to contribute to US education and integration.

Summary of Work

At EVMS, US education is incorporated across the medical and health professions curriculum, emphasizing acquiring and interpreting an Extended Focused Assessment with Sonography in Trauma (eFAST) exam, recognized as a standard diagnostic protocol in emergency and critical care. To collaborate with the US education team and strengthen US knowledge, anatomy faculty attended case-based lectures, completed associated Sonosim® modules, and participated in US faculty lead and self-directed scanning sessions following the EVMS US learning objectives. The anatomy faculty compiled a portfolio of the images captured during each self-directed session for US faculty feedback.

Summary of Results

Through this effort, anatomy faculty gained the necessary US knowledge and skills to assist in teaching medical and health professions students during their didactic years. Combining existing knowledge of the anatomical sciences with this imaging modality enabled anatomy faculty to integrate content across courses emphasizing structure, function, variation, and pathologies. Anatomy faculty reported that feedback from the US faculty was essential to their understanding of US and competence in image acquisition and interpretation.

Discussion and Conclusion

US training is expanding across medical and health professions education and bridges basic science to clinical practice. Since the demand for anatomy faculty continuously rises to best prepare modern healthcare professionals, US training for nonclinical faculty may advantageously assist in this endeavor.

Take-home Message

Formalized US training for nonclinical anatomy educators may bridge the gap between US and the anatomical sciences to advance medical and health professions education.

Session 2P: Interprofessional and Team Learning

2P1 (5550)

Date of Presentation: Monday 28th August
Time of presentation: 0900 - 0906
Location: Carron 2, Loch Suite, SEC

Antimicrobial Drug Resistance Team Round for Improving and Enhancing Interprofessional Education in Healthcare-setting

Sunee Chayangsu1, Phadet Noophun1, Chawalit Chayangsu1, Jeerawat Kaewwinud1, Pinyok Srisansanee1, Natenapa Triniti2

[1]Surin Hospital and Medical Education Center of Suranaree University of Technology, Surin, Thailand; [2]Surin hospital, Surin, Thailand

Background

Antimicrobial drug resistance (AMR) is an increasing problem worldwide and need to be resolved urgently. Lacking of knowledge and awareness is the most important reasons. There is a misconception that broad spectrum antibiotics are always the better solutions. We set up a multidisciplinary AMR team round aiming to educate healthcare personnel at bedside to manage antimicrobial drug resistance, improve patient safety and develop interprofessional education in our institute.

Summary of Work

We set up the AMR team round, which consisted of infectious disease doctors to evaluate and suggest proper antibiotics for each patient, pharmacists to adjust dose of antibiotics, microbiologists to report drug sensitivity and improve culture technique, and infection control nurses to care of patient with multidrug resistance. First, we developed workshop for teaching and learning about AMR with 6th year medical students (extern) and interns. Then, AMR team round will visit patients who receiving broad spectrum antibiotics two times per week, discussion with 6th year medical students and interns and determine the appropriate antibiotics for each patient. The questionnaire was used to evaluate the

satisfaction, advantage, and suggestion of AMR team round from medical students and healthcare personnel.

Summary of Results

All 210 questionnaires were responded, including 15 externs, 21 interns, 10 pharmacists, and 164 nurses. The mean of satisfaction and advantage score were 4.3(±0.7) and 4.5(±0.7), rating score between 1-5. The mean of confidence when prescribing antibiotics from externs were 3.3(±1.0) and interns were 3.6(±0.7).

Discussion and Conclusion

Most participants agreed that AMR team round had a lot of advantages, importance and necessity for improving patient safety and managing antimicrobial drug resistance. The AMR team round is a model for interprofessional education that is improving knowledge, appropriate use of antibiotics, and teamwork to reduce antimicrobial drug resistance problem and enhance patient safety.

Take-home Message

“Interprofessional education as AMR team round may improve appropriate use of antibiotic, improve care of patient with multi-drug resistance and enhance patient safety.”

2P2 (3481)

Date of Presentation: Monday 28th August
Time of presentation: 0906 - 0912
Location: Carron 2, Loch Suite, SEC

Using IPE to promote practical confidence and compromise complications in central venous access procedure

Hathairawee Hawharn 1

[1]*Udonthani hospital medical education center, Udonthani, Thailand*

Background

Central venous access is a common procedure in hospitals and necessary in many conditions, however coming with overall complications rate of 15-33% varied according to anatomic site, technique, and operator experience. The procedure needs co-operative teamwork to perform. Inter-professional education(IPE) is an educational program that provides opportunities for multidisciplinary students to learn activities and having a learning experience together to improve their teamwork skill.

Summary of Work

We designed central venous access simulation IPE class for 42 healthcare professionals divided into 6 groups ,each group consisted of residents, internships, 6thyear medical students and ICU nurses. Setting-up three 45-minute stations: (1) Guideline compliance in risk reduction system, complication prevention, recognition and management (2) Live model ultrasound guided vascular access and (3) Simulation model ultrasound-guidance for insertion by team assigned as one physician performed procedure with two assistants (a physician and a nurse).Their skill was assessed by complete procedure successfully in simulation model. Their attitude about teaching methods were collected by questionnaires and group discussion after the class.

Summary of Results

There were 15 residents, 12 internships, 5 6thyear medical students and 10 ICU nurses attended the class. After IPE class, 85.7% of the participants had high level of confidence in central venous access procedure with the score of 5/5(40.5%) and 4/5(45.2%).Their

preference on the IPE , conventional simulation and lecture class were 60% , 33% and 7% respectively. The reasons for IPE class preference were ; it mimic the real situation in clinical practice (83%) , encouraged them to understand processes and their roles in teamwork to success the procedure and to reduce complications (81%) and it improved their teamwork skill (74%).

Discussion and Conclusion

Good co-ordination is important in performing many procedures included central venous access.The study showed IPE simulation class promoted understanding and may reduce risks of procedure.It helped learners to imagine the real situation, to know their roles and aware of complications. Practice the simulation in a team and learn by sharing with IPE class is effective. Moreover it promotes teamwork skills for healthcare workers.

Take-home Message

Simulation IPE class is effective in training central venous access procedure and can apply to other procedural skill training.

2P3 (2619)

Date of Presentation: Monday 28th August
Time of presentation: 1012 - 1018
Location: Carron 2, Loch Suite, SEC

The impact of distance learning on attitude towards dying patients among nursing students

Bozena Czarkowska-Paczek1, Anna Sadowska2, Izabela Krzykwa1

[1]Medical University of Warsaw, Department of Clinical Nursing, Warsaw, Poland; [2]Medical University of Warsaw, Departmen of Clinical Nursing, Warsaw, Poland

Background

Distance learning has been used as an alternative way of teaching for many years and will continue to be used. The Covid-19 pandemic resulted in the wide dissemination of distance teaching. To plan for the future in terms of the optimal mode of teaching and maximizing students' benefits, experiences from the pandemic should become the basis for establishing a new balance between face-to-face and distance learning. This transition concerns medical teaching, especially nursing education, since many skills and competencies that enable nurses to provide patient care are acquired during face-to-face teaching.

Summary of Work

The aim of the study was to assess the pre-and post-pandemic (2018 and 2021, respectively) attitudes towards dying patients among master's degree nursing students at the Medical University of Warsaw. Face-to-face teaching was used in 2018, and distance learning was applied in 2021.

One-hundred twenty-one students were enrolled in the study in 2018 and 102 in 2021. The study used the FATCOD-BP questionnaire (Cronbach's alpha 0.75) containing 30 single-choice statements in which 20 statements refer to attitudes towards dying patients and 10 towards the patients' families. The scale includes 13 and 17 statements about positive and negative attitudes, respectively. The score ranges from 30 to 150.

Summary of Results

No statistical differences between the total results of FATCOD-BP in 2018 and 2021 were found. However, students in 2018 showed a significantly more positive attitude towards positive statements. Statistical significance in the statements defining a negative attitude was also found. The results indicate that students in 2018 had more positive attitude toward dying patients.

Discussion and Conclusion

, especially in terms of the difficulties that organizing face-to-face teaching encounters, such as accelerated patient processing, reductions in the number of hospital beds, and/or limited space in highly specialized wards. However, disruption between students and real patients could result in a lack of achieving practical skills and social competencies, which are essential for future professional practice. Therefore, an appropriate balance between face-to-face and distance learning should be preserved.

Take-home Message

An appropriate balance between face-to-face and distance learning should be preserved in nursing teaching.

2P4 (4729)

Date of Presentation: Monday 28th August
Time of presentation: 0918 - 0924
Location: Carron 2, Loch Suite, SEC

The impact of a longitudinal interprofessional pharmacotherapy education program on medical and pharmacy students

Josephine Mertens1, Marleen Hessel1, Chris Walinga1, Ellen Koster2, Adriaan Norbart1, Vera Deneer2, Marcel Bouvy2, Teun van Gelder1

[1]Leiden University Medical Centre, Leiden, The Netherlands; [2]University of Utrecht, Utrecht, The Netherlands

Background

In a recent systematic review focusing on interprofessional education (IPE) covering medication safety in health professional curricula, the majority of published studies reported positive outcomes on learners' opinions, satisfaction and attitudes towards interprofessional collaboration. However, evidence is lacking on the superiority of IPE to uniprofessional education (UPE). Furthermore, a horizontal (in each year) and vertical (increasing in difficulty and covering a range of clinical areas) approach to IPE is often missing. Therefore, we developed a longitudinal IPE program with different learning activities increasing in complexity and responsibility. This study aims to determine the impact of a longitudinal IPE pharmacotherapy program on medical and pharmacy students' competence development compared to UPE.

Summary of Work

From September 2022 until June 2023 all participants of the program (n=500) receive the Interprofessional Collaborative Competency Attainment Scale (ICCAS), which is a validated 21-item self-report instrument to score perceived development of interprofessional core competencies. SPSS (version 25) is used to perform paired student's t-tests and calculate effect size using Cohen's d. Subgroup analysis is used to analyse the impact of the number of activities.

Summary of Results

Up until December 2022, 85 surveys were completed, with a 99% response rate. Interim findings show that all 21 ICCAS items improved significantly, particularly when pharmacotherapeutic treatment was planned by both disciplines together in practice. The significantly largest effect sizes were found in the categories of roles and responsibilities (Cohen's d =0.70), and team functioning (0.65). Students who completed three interprofessional activities showed the largest total effect size (0.68; P=0,038). A small effect size was observed when only UPE was followed (0.16).

Discussion and Conclusion

To our knowledge, these preliminary findings are the first to show that a longitudinal approach of an IPE program has more impact on interprofessional core competence development than single IPE or UPE learning activities. More students will be included to strengthen these findings and conduct additional (subgroup)analysis.

Take-home Message

Despite the challenges to develop a longitudinal IPE program, we encourage others to implement this in their curricula to improve collaboration in practice. Enable students to experience how they complement one another by allowing them to collaborate during multiple learning activities increasing in complexity and responsibility.

2P5 (3430)

Date of Presentation: Monday 28th August
Time of presentation: 0924 - 0930
Location: Carron 2, Loch Suite, SEC

Outcomes of integrating the hospital's risk management team and interprofessional staff in TBL medication error.

Sunee Neesanun1, Krittiya Kraisuwan 2, Worawit Thungwilai3, Waewdaow Srisit4

[1]Department of Internal Medicine, Medical Education Center, Sawanpracharak Hospital., Nakhonsawan, Thailand; [2]Chairman of the risk committee, Sawanpracharak hospital, Nakhonsawan, Thailand; [3]Department of Pharmacy, Sawanpracharak hospital, Nakhonsawan, Thailand; [4]Department of Nursing, Sawanpracharak Hospital, Nakhonsawan, Thailand

Background

The medication process is an important part of treating patients which requires the cooperation of experts from different disciplines. Previously, medication safety program lack of interprofessional collaboration, risk management, and interactive activities. Therefore, the team-based learning (TBL) medication error class was organized by inviting instructors who were physicians, pharmacists, nurses, and the hospital's risk management committee to jointly teach. The aim of this study is to evaluate the result of integrating a hospital's risk management team into interprofessional education (IPE) on TBL medication errors for 6th-year medical students.

Summary of Work

Divide students into 3 groups and explain the objectives of the subject. Assignment the duties of students to find information before the session including the hospital's medication process, responsibilities of personnel involved in the medication process, incidence reports, and case medical errors that students encounter while working. In the classroom, each group will present their work. The students and instructors participated in the discussion, and the final instructors summarized and feedback. After the session, students completed anonymous questionnaires.

Summary of Results

Out of 29 participants, 96.55% gained a better understanding of pharmacist and nurses' duties, and 86.26% of participants improved their understanding of the professionalism of professional peers and almost understanding of the medication process in the hospital. After integrating the hospital's risk management committee and IPE on TBL medication error; there was an increase in high-level students' confidence to detect medication errors by themselves (Pre vs Post IPE; 13.79% vs 72.41%). 86.20% of participants had the confidence to prevent and manage risk of medical errors in the future. All of the participants increased understanding of hospital risk management system and prefer to use IPE and TBL in medication errors in the future.

Discussion and Conclusion

Integrating the hospital's risk management team and IPE in medication error improved participants' understating of the duties multidisciplinary and increased confidence in risk management in the part of medication error in the future and attitude toward inter-professionalism.

Take-home Message

Integrating the hospital's risk management team, IPE, and TBL in medication error class improves students' understanding value of inter-professionalism, better understanding of hospital risk management system and increased confidence in risk management.

2P6 (4270)

Date of Presentation: Monday 28th August
Time of presentation: 0930 - 0936
Location: Carron 2, Loch Suite, SEC

Team Based Learning (TBL) in Health Professions Education: a systematic review using Michaelsen's conceptual model of TBL

Linda Roossien1, Lisa-Maria Van Klaveren1, Gerard Spaai1, Tobias Boerboom2, Diana H.J.M. Dolmans3, Rien de Vos1

[1]Amsterdam University Medical Centers, University of Amsterdam, Amsterdam, The Netherlands; [2]Utrecht University, Veterinary Medicine, Utrecht, The Netherlands; [3]School of Health Professions Educations, Maastricht University, Maastricht, The Netherlands

Background

Team-Based Learning (TBL) is increasingly applied in health professions education (HPE), both offline and online. TBL is a collaborative instructional strategy that stimulates deeper learning and contributes to the development of important skills for healthcare, such as clinical reasoning, problem solving, collaboration and communication. To further underpin and support the design, innovation and implementation of TBL within HPE, an up-to-date overview of the published literature on TBL within HPE is necessary to outline elements of Michaelsen's conceptual model of TBL that have already been investigated and their results as well as to indicate research areas are still underexamined within TBL. The aim of this systematic review is to provide that overview.

Summary of Work

The reviewers searched the PubMed, Medline, Embase, ERIC and PsychInfo databases for articles on TBL in undergraduate and graduate HPE published between June 2016 and June 2023. Data was extracted and coded using Michaelsen's conceptual model of TBL and Kirkpatrick's model for evaluating learning outcomes. Cochrane checklists were used to evaluate the quality of the selected studies.

Summary of Results

The search resulted in 1904 articles of which 198 articles met the inclusion criteria. Preliminary analysis showed that the majority of studies involved undergraduate students (97%). Element G of Michaelsen's conceptual model of TBL (learning outcomes) was investigated by most of the included studies (85%). These studies mainly examined learning outcomes at Kirkpatrick levels 1 and 2. More specifically, studies examining learning outcomes at level 2 focused on knowledge, only two studies included skills. Learning outcomes at Kirkpatrick levels 3 and 4 have not been examined in any of the included studies.

Discussion and Conclusion

From preliminary analysis can be concluded that the existing literature has mostly investigated the effect of TBL on traditional measures of performance (Kirkpatrick's levels 1 and 2). However, the effect TBL has on learning outcomes at Kirkpatrick's levels 3 and 4 and other elements of Michaelsen's model of TBL have not been well studied. Results of the full analysis and conclusions will be presented during the presentation.

Take-home Message

For the continued development of Team-Based Learning (TBL) in HPE, research in the areas that not have been well studied yet is important.

2P7 (3714)

Date of Presentation: Monday 28th August
Time of presentation: 0936 - 0942
Location: Carron 2, Loch Suite, SEC

Attitudes and Development Needs Related to Interprofessional Learning and Working and Interprofessional Identity Forming - A Mixed Method Study

Anna Miettinen1, Taru Kekoni1, Henna Saari1, Hannu Kautiainen2, Pekka Mäntyselkä1

[1]University of Eastern Finland, Kuopio, Finland; [2]Kuopio University Hospital, Kuopio, Finland

Background

To collaborate effectively in social and health care, interprofessional education should facilitate a change in attitudes toward collaborative culture, where the integration of interprofessionality as a part of professional identity is supported. According to Khalili and Price (2022) interprofessional socialization should be applied at system, professional, and individual levels.

We investigated existing attitudes and readiness of social and health care students and professionals for interprofessional collaboration and in addition, we investigated perceived development needs related to system, professional and individual levels to examine how pre- and postgraduate learning could enhance interprofessional identity forming.

Summary of Work

Mixed method study in eastern Finland involved social and health care students and professionals. The data were collected using a structured electronic survey. Attitudes and readiness towards interprofessional collaboration were assessed using The Readiness for Interprofessional Learning Scale (RIPLS) questionnaire. Perceived developmental needs related to interprofessional learning and working were analyzed using theory-guided content analysis.

Summary of Results

A total of 130 people participated in the survey. Most of the respondents were professionals (N=108, 83,1 %), aged ≥ 40 years and had work experience > 10 years. The responses to all RIPLS factors showed high mean scores representing positive attitudes towards interprofessional collaboration. Interprofessional collaboration development needs were categorized to system, professional and individual levels. According to theory-guided content analysis of developing needs, system level subcategories were collaborative structures, operating procedures and interprofessional education in the service system. Professional level subcategories were clearer responsibilities in interprofessional work, stronger interprofessional collaboration and increased interprofessionality in professional education. Individual level subcategories wereincreased knowledge and understanding, positive attitudes and appreciation and benefits of interprofessional work for the client.

Discussion and Conclusion

The attitude atmosphere toward interprofessionality was assessed positive providing a good baseline for interprofessional approach. Our findings provide system, professional and individual level practical suggestions how interprofessional collaboration and identity forming could be enhanced by lifelong learning and developing procedures in social and health care.

Take-home Message

To collaborate effectively, professionals should be educated to adopt an interprofessional way of working and interprofessional identity. Interprofessional identity forming may be enhanced by education and developing procedures at system, professional and individual levels in social and health care.

2P8 (5653)

Date of Presentation: Monday 28th August
Time of presentation: 0942 - 0948
Location: Carron 2, Loch Suite, SEC

Design and evaluation of interdisciplinary faculty wide interprofessional healthcare course

Carmen Ka Man Wong[1], Simon Kwun Yu Lam[1], Yin Ting Cheung[1], Roger YN Chung[1], Ann Lau[1], Baoting Zhang[1], Samuel Yeung Shan Wong[1]

[1]*Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong, Hong Kong*

Background

Early Interdisciplinary collaboration in undergraduate studies can help teamworking and interprofessional working. As part of faculty package a design thinking approach was used to innovate the curriculum with pedagogical aims of disciplinary specific skills, patient interviewing skills and team working.

Summary of Work

The course was conducted in Semester 1, year 1 for all faculty students over 13 weeks. Course content included public health roles, hospital and community care, medication management, Chinese medicine, bench to bedside and allied professionals (including OT, PT, dietician and social worker). Assessment included on site quiz 30% and media reflective work with peer evaluation 70%. Patient interviewees had chronic or rare diseases. Student and tutor awards were selected by voting on media work of patient illness journey and role of healthcare professionals. Evaluation included standard CTE and The Brief Attitudes Survey for Interprofessional Collaborative learning (BASIC-L).

Summary of Results

646 students were enrolled: medicine (n=295), nursing (n=211), pharmacy (n-59), public health (n=31),biomedical science (n=30) and Chinese medicine (n=20). The course involved 6 coordinators and 19 tutors for 106 mixed tutorial groups. Mean score of peer assessment was 4.9/ 5 of which 2 students failed and received counselling. Online

evaluation was emailed to students with response rate of 22% (n=148). Overall satisfaction with course 5.150/ 6 and teachers' performance 5.233/ 6.

Discussion and Conclusion

Best features included inspiring content, interesting and fun media work, working with other majors, patient interview and chance to meet friends. Some students suggested a longer course length and preference for pass/fail than a graded course. The mean of BASIC-L survey items ranged from 4.419 – 4.541/ 5 and highest in 'Patients would ultimately benefit if interprofessional student teams worked together to address patient concerns' (95.2% of responses) and 'I would welcome the opportunity to work in small group settings or rounds with students from other professions' (93.2%). Challenges in course organisation included physical space, timetabling and quiz monitoring.

Take-home Message

Early introduction of students across faculty can facilitate teamworking and friendships and early patient orientation can help guide students to a common healthcare goal. A positive experience of working together can help students to seek other interprofessional working opportunities.

2P9 (3305)

Date of Presentation: Monday 28th August
Time of presentation: 0948 - 0954
Location: Carron 2, Loch Suite, SEC

Researchers Never Walk Alone: a Social Network Analysis of an Undergraduate Medical Research Community

Seksan Yoadsanit1, Chawisa Teansue1, Peerapass Sukkrasanti1, Phanuwich Kaewkamjonchai2, Borwornsom Leerapan3, Setthanan Jarukasemkit1

[1]Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand; [2]ExChange Lab, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand; [3]Chakri Naruebodindra Medical Institute, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Samut Prakarn, Thailand

Background

Collaboration is one success factor in any community as it promotes the flow of knowledge and increases productivity. However, measuring collaboration as social capital is underexplored in undergraduate medical research communities. Social network analysis (SNA), a sociology methodology, is widely used to investigate and map relationships in communities. With SNA, social capital can be quantified and categorized into pre-defined network topologies leading to suitable interventions and monitoring tools. Hence, this study aimed to define and compare the social network structure that leads the research community at the Faculty of Medicine Ramathibodi Hospital, Thailand, to success.

Summary of Work

A cross-sectional quantitative survey was distributed to students who qualified for research scholarships in 2021 and 2022 to determine the advice-seeking frequency among related individuals. The results were compared between years to identify community transformation. SNA was used to analyze and visualize data into sociograms to explain three key features: clustering, global separation, and centrality (number of interactions/person). These parameters were computed into a small-world coefficient that reflects how close the network's properties are to a small-world, a pre-defined

structure. Small-world has been proven the most resilient topology due to multiple high-centrality individuals, who are vital connectors in forming collaboration within a community.

Summary of Results

The SNA shows that both successful research communities in 2021 and 2022 (n=14, 21 respectively) had a small-world structure (Q>1). Nevertheless, the small-world coefficient decreased from 1.32±0.12 to 1.11±0.05 (-15.9%), referring to the decline of small-world properties and the descent of resilience in this research community. Clustering decreased from 0.54 to 0.44 (-18.5%), and global separation increased from 2.97 to 3.77 (+26.9%), reflecting a reduction in team formation and collaboration across research clusters, respectively.

Discussion and Conclusion

This study may guide policymakers to preserve a small-world research community by promoting research collaboration. Interventions may include establishing accessible contact databases to maximize teaming opportunities and regular sharing sessions to decrease silos leading to further collaboration. A qualitative study to explore underlying factors will be further examined to create a holistic analysis.

Take-home Message

Assessing medical research communities with social network analysis may uncover opportunities for developing interventions to enhance collaboration.

2P10 (4862)

Date of Presentation: Monday 28th August
Time of presentation: 0954 - 1000
Location: Carron 2, Loch Suite, SEC

It's not just Learning Together: Developing an integrated curriculum of inter professional education across nursing and medical undergraduate programmes.

Lorraine Close 1, Janet Skinner1, Jenni Tocher 1, Trisha Lamb1, Vicki McCorkell1, Brian Gilhooly 1, Kate Leech1, Barbara Findlay1, Elsbeth Dewhirst1, Alan Gilchrist1

[1]*University of Edinburgh, Edinburgh, UK*

Background

Inter-professional Education (IPE) is an important part of undergraduate education for health care professionals (CAIPE 2021)
Both the General Medical Council and the Nursing and Midwifery Council state the importance of skills of inter professional working for new graduates.
However, activity that is deemed inter-professional is often simply a shared learning experience, introduced to reduce demands on resources. While shared learning involves different professions learning together it may lack the opportunity for true collaboration (Hill et al 2019, CAIPE 2017). We will discuss how our approach to IPE has successfully addressed these challenges through a longitudinal programme utilising innovative pedagogies.

Summary of Work

In recent years there have been a number of developments in our IPE programme within undergraduate nursing and medicine. We have developed an evidence informed programme that creates a clear pathway of longitudinal inter-professional learning through each year of the curriculum, weaving shared learning activities with true inter-professional exposure to create a robust learning experience that utilises a variety of teaching methodologies building in complexity across the years.

Summary of Results

Our IPE programme encompasses diverse teaching methods, addressing key issues for modern day health care curriculum developers including equality, diversity and inclusion, the integration of technical and non-technical skills into all aspects of teaching, preparation for working in multi-disciplinary teams and building deliberate practice together. Additionally students have been inspired to run extra-curricular IPE activity in addition to curriculum based learning.

Activity ranges from shared VR learning on empathy, communication skills and wellbeing to inter-professional non-medical and medical tactical decision games and low and high fidelity simulation activity that incorporates clinical decision making, managing complexity and understanding prioritisation in multi professional teams.

Discussion and Conclusion

Developing an integrated and inter-professional learning experience is a challenge for health care educators. Logistics and resource often create barriers to this learning. However with commitment it is possible to build a strong community of inter-professional practice that prepares health care students for practice.

Take-home Message

- Inter-professional learning is not the same as multi-professional learning or shared learning
- Inter-professional learning is an integral part of ensuring safe patient care
- Robust inter-professional programmes require time, collaboration and careful planning but this is worthwhile

2P11 (4787)

Date of Presentation: Monday 28th August
Time of presentation: 1000 - 1006
Location: Carron 2, Loch Suite, SEC

Repurposing an educational programme for foundation doctors for multiprofessional use

Thirza Pieters1, Zilley Khan1, Helen Johnson1, Maria Christou1, Helen Barker1, Ritwick Banerjee1, Francesca Crawley1

[1]*Health Education East of England, Cambridge, UK*

Background

The East of England (EoE) Foundation School developed its innovative training regional hub model in 2018. Training events are interactive and often include simulation and direct participation. The hub events enhance skills, but also support future career plans of doctors in their first two years post qualification (foundation training). Each Foundation Year (FY) trainee will book three half- day sessions as part of their generic training. The programme is well evaluated and successfully adapted to the virtual environment during the pandemic. The EoE Multiprofessional Foundation school was established in August 2022. This is the first time in the UK, where foundation doctors, dentists, pharmacists, and physician associates are being invited to take up multiprofessional learning events together.

Summary of Work

At the start of our Multiprofessional Foundation School journey, we opened our existing hub master class programme to a wider audience and invited foundation trainee pharmacists to participate on a voluntary basis. Trainees were able to choose from 16 clinical and 7 nonclinical topics, considered to be relevant to the pharmacy curriculum.

Summary of Results

In the first 6 months of the programme, 35 % (28) of the total of 80 foundation trainee pharmacists took the opportunity to engage with our multiprofessional events. Of the 16

clinical hub events offered 7 were attended by a trainee pharmacist. The three most popular clinical events were 'Cardiology', 'Psychiatry' and 'Microbiology'. Of the 10 nonclinical hub events, 6 were attended by a trainee pharmacist. The two most popular topics were 'Genomics' and 'How to deal with serious incidents'. The session on 'Genomics' was the most popular amongst trainee pharmacists, with 15% signed up across the region.

Discussion and Conclusion

An existing programme of clinical and non-clinical masterclass topics, originally developed for foundation doctors, can be engaging to foundation trainee pharmacists.The next stage for us will be to develop the offer further, so the masterclass model will become a key component of a sustainable programme of education for multiprofessional foundation level trainee

Take-home Message

An existing programme of clinical and non-clinical masterclass topics originally developed for foundation doctors can be engaging to multiprofessional foundation learners and key component of a sustainable programme of education.

2P12 (5599)

Date of presentation: Monday 28th August
Time of session: 10:06 - 10:12
Location of presentation: Carron 2

Teamwork is Dreamwork: A Multivoiced Approach to Interprofessional Education

Courtney Casserly[1], Dani Dilkes[1]

[1] *Western University, London, Canada*

Background

Interprofessional(IP) collaboration is at the center of much of the work of health care professionals(HCP), yet often Health Professions Education(HPE) inadequately prepares students for the complexities of interdisciplinary practice. Authentic, meaningful interprofessional education(IPE)
must integrate the perspectives of HCPs, patients and their families.

Summary Of Work

We have collected authentic stories of acute stroke care through interviews with five stroke patients and 22 HCPs involved in acute stroke care. Drawing on these narratives, we have crafted a multimedia story combining film, photography, and text. Digital storytelling allows us to share the multiple perspectives that exist in complex interprofessional health care situations. This project focuses on key domains of Role Definition, Team Functioning and Patient/Family-Centred Care in Interprofessional Education. This case will be integrated into Western University's Undergraduate Medical Education
curriculum and has been shared under a Creative Commons license.

Summary Of Results

The project resulted in the development of a rich interprofessional case focused on Acute Stroke Care. For learners, the main outcomes of engaging with the module will be improved recognition of distinct health care roles and the vital contribution of each team member. The case highlights the complexities of interprofessional practice by giving voice to each member of the team. Since the story is based on a real stroke patient and told from the perspective of the patient, it also highlights the importance of patient-centred care and of acknowledging the patient and their family as members of the team.

Discussion And Conclusion

For learners, the main outcomes will be improved recognition of distinct health care roles and the vital contribution of each team member. Our approach to developing the case was novel in that it was a collaborative process with each member of the team in charge of scripting their own scenes and choosing how to represent their profession.

Take Home Messages

Interprofessional practice is complex and often messy. But, through conversations with all members of this team, it was made very clear that understanding the roles of others in healthcare is essnetial for team functioning and for successful patient outcomes. This case is a first step towards integrated interprofessional education.

2P13 (6937)

Date of Presentation: Monday 28th August
Time of presentation: 1006 - 1012
Location: Carron 2, Loch Suite, SEC

Nurse-Debriefer Experience in a Structured Post-Resuscitation Debrief: An Exploratory Study

Cynthia Allyssa Claire1

[1]*Sengkang General Hospital, Singapore, Singapore*

Background

Nurses are often confronted with serious clinical events such as resuscitation. This emergency situation often places them in a stressful and traumatic state. It was evident by several studies that a debrief session post resuscitation was greatly valued by nurses as it allows them to address their emotions, and guide reflection of the event. It was also found that debriefers who received formal training on debrief will be able to achieve an effective debrief outcomes as. Albeit the vast research on the benefits of debriefing and training debriefers in structured debrief, little was explored from the view of debriefers on their experience, thoughts and feelings during a debrief session.

Summary of Work

An exploratory qualitative study was undertaken using a semi-structured, one to one interview over a period of six months. Participants were recruited via convenience sampling after they had attended Clinical Events Debriefing (CED) programme. The Nursing Education and Development (NED) of Sengkang General Hospital (SKH), Singapore, has initiated CED to train nurses to be debriefers by filling in the knowledge and skills gap on debriefing. From a total of 43 nurse debriefers, 10 were recruited for the study (n=10). To enrich the quality of analysis, a reflexive thematic analysis (TA) methodology was adopted for identifying, analyzing and reporting patterns (themes) within each data set.

Summary of Results

Four salient themes were identified: 1) structured debrief training; 2) transferring knowledge into actions; 3) debriefing in actions; and 4) a “debrief for learning” learning approach. All data explicitly and implicitly described the nurses’ multifaceted perceptions towards debriefing.

Theme 1 captures the importance and necessity of nurse-debriefers placed on receiving a structured debriefing training. Theme 2 explored the perspectives from debriefers if on their ability to apply the knowledge learnt during training to a real-life debrief session. Theme 3 focuses on debriefers’ thoughts and feelings during the process of debrief session. And lastly, theme 4 draws the attention on the educational values debriefers placed on debriefing.

Discussion and Conclusion

The discussion of the results was guided with an underpinning framework of knowledge transfer in six processes: 1) awareness; 2) acquisition; 3) transformation; 4) association; 5) application; 6) feedback. It illustrated the process of the knowledge application from classroom learning to real-life situation through the experiences of the nurse-debriefers. This study illustrates essential implications to promote nurse-debriefers’ readiness and motivation in providing debriefing post-resuscitation.

Session 2R

2R (2684)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: Dochart 2

Enhancing leadership in health/medical education applying an appreciative inquiry approach.

Rashmi Watson[1]

[1] *The University of Western Australia, Perth, Australia*

Background

Appreciative Inquiry (AI), is a well-researched and utilised strengths-based process that seeks the best of people and the organisations in which they work. AI has and can be used extensively in any area of education. The AI process is an inclusive one that encourages participation from all members to participate through its 4-D model (discover, dream, design and destiny). The presenter is an accredited Appreciative Inquiry facilitator who has led many educators through the process with positive outcomes and feedback because of the high-level of inclusivity. The strengths-based model has participants actively participating in the process from start to end with the focus on a common goal. The workshop will allow participants to take part in a 'mini' version of the process to experience how Appreciative Inquiry works and inspires all participants, enables a connected and collaborative process towards a common goal and it creates positivity through its positive approach.

Who Should Participate

- Any health education professional interested in participating in a process to think about their own daily work and how to get the most from it. You must be prepared

to be actively involved and be open to sharing your discovery with the group (all in a safe learning space).

Structure Of Workshop

- The workshop will involve participants taking part in the "4-D" appreciative inquiry model by choosing their own relevant topic then breaking into pairs for the activities, then small group and whole group discussion and sharing. It is a fun and interactive workshop with key take-aways that can be implemented into daily work once participants are back in their own work environments.

Intended Outcomes

1. Identify personal intention for session attendance
2. Outline the AI model and relate process to work practices
3. Participate in the four components of the AI model through discussion,, clarification, interpretation and translation
4. Create and design strategies and a vision for enhancing leadership as a health educator.

Session 2S

2S (5511)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: M3

Peer Feedback Among Faculty: A Culture of Conversation to Foster Mastery, Build Resilience and Combat Burnout

Andrew Bazakis[1], J.M.Monica van de Ridder[2]

[1] *Central Michigan University College of Medicine, Mount Pleasant, MI , USA* [2] *Michigan State University College of Human Medicine, Lansing, MI, USA*

Background

Once academic training is completed and one's career is advanced, performance feedback aimed at the continued pursuit of mastery can be lacking. Although faculty development content about feedback is frequently offered in medical education, this is targeted to our trainees (downward feedback) but not focused on feedback to our peers (peer-to-peer) or to our uplines (upward feedback). Since faculty have a formal training responsibility towards trainees, there is a hierarchy that makes giving feedback easier. This hierarchy is lacking in peer-to-peer feedback, making this conversation potentially uncomfortable. The lack of feedback can lead to a perceived sense of professional growth stagnation and contribute to burnout. In the pursuit of a culture of peer feedback, we will be presenting a template for such conversations fostering the continued pursuit of mastery that then promotes overall happiness and workplace resilience. A poll of experiences and barriers to peer feedback will be available to participants at the start of the workshop for the exploration of aggregate results during the session.

Who Should Participate

CPD; clinical and non-clinical faculty from universities, medical schools, and residency training programs, human resources professionals.

Structure Of Workshop

A combined platform of information sharing and dynamic group activities will be facilitated.

1. Opening and Concept Introduction - 10 minutes
2. Defining the landscape: Current literature and session goals - 5 minutes
3. Group Activity: Participant survey: Costs/benefits to peer feedback - 20 minutes
4. Principles of Success: Account for FEAR – 5 minutes
5. Opening the Toolbox: Some Practical Strategies – 5 minutes
6. First Tools: Open ACT- 5 minutes
7. Break – 5 minutes
8. Group Activity: example assessment and analysis – 20 minutes
9. Wrap-up and Questions – 10 minutes
10. Take Home Points and Resources – 5 minutes

Intended Outcomes

1. Define challenges to and benefits of a culture of peer feedback conversation
2. Apply a framework for peer feedback conversations, reflecting on potential barriers
3. Synthesize specific strategies within the peer feedback model
4. Predict and promote further inquiry into and use of peer feedback for professional development

Session 2T

2T (4065)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: M2

Troika: Consult and be consulted—on your most pressing EPA-related questions

Olle ten Cate[1], H. Carrie Chen[2], Sonia Frick[3], Machelle Linsenmeyer[4], Adi Marty[5], David Taylor[6]

[1] UMC Utrecht, Utrecht, The Netherlands [2] Georgetown University School of Medicine, Washington DC, USA [3] Limmattalspital, Internal Medicine, Zurich, Switzerland [4] West Virginia School of Osteopathic Medicine, Lewisburg, WV, USA [5] Orthopedic University Hospital Balgrist, Zurich, Switzerland [6] Queens University, Kingston, ON, Canada

Background

Entrustable Professional Activities (EPAs) are being developed and implemented in many schools and programs around the world. Those processes are not always easy. Anyone involved in such endeavors, be it in a management position, in a clinical department, or as an educational developer, will encounter moments that beg for consultancy. This workshop draws upon the multinational community to share and learn from peer wisdom and experiences.

Who Should Participate

Intended participants should have experience and background in working with EPAs. They should have participated in coursework or skills training related to EPAs, such as being alumni from the International Course *Ins and Outs of EPAs*.

Structure Of Workshop

After a brief introduction (15 minutes) and the formulation of a pressing, EPA-related question that touches on the work of the participant in their local context (5 minutes), the group will be divided in trios of participants who are not from the same institution or program. Each trio will then engage in the 'Troika Peer Consultation' exercise (45 minutes). During this exercise, participants will pose their pressing question and receive consultation from others in the trio. The process will continue until all members of the group have vetted their question. At the end, all participants will come back together to close the session with a 25 minute plenary discussion with the workshop leaders, who are all experienced with EPAs and instructors in the international course. We expect that more instructors will be present.

Intended Outcomes

Participants will share and gain fresh perspectives on the challenges of EPA development and implementation. Every participant will leave with peer advice for addressing the specific pressing question they posed to their peers. Acquaintance with the live Troika exercise procedure, as a faculty development tool, is also an outcome.

Session 2U

2U (6613)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: M4

Teaching While Training: The Next Generation of Medical Educators

Rille Pihlak[1], Matthew Stull[2], Kevin Garrity[3]

[1] St Bartholomew's Hospital, London, UK [2] Case Western Reserve University, Cleveland, Ohio, USA [3] The University of Glasgow, Glasgow, UK

Background

Medical education is reliant on the concept of near peer teaching. The system of medical education requires junior doctors to educate those that come after them while balancing growing towards competence as a clinician. However, there are limited outlets to grow as an educator while serving as a clinical trainee. This is particularly challenging in an era where educational skills are increasingly recognized as another competency needed to be a successful clinician. This can lead trainees to replicate more traditional didactic teaching methods and feel lost for where to turn for more innovative, learner-centered strategies. In addition, increasingly pressure of clinical environments make finding time to teach challenging, which can make teaching a stressful rather than rewarding experience.

This interactive workshop, organised by the AMEE Postgraduate Committee, will focus on methods of delivering focused, effective teaching for clinical learners 'on the run.' In addition, we will explore ways in which junior doctors can harness teaching opportunities to develop themselves as clinician-educators. We will discuss the challenges of delivering teaching in the clinical environment and achievable ways to overcome these. In particular, we will share experiences of balancing high-quality teaching with effective service provision in practice.

Who Should Participate

This workshop is aimed at trainees such as junior doctors and students, with an interest in improving their clinical teaching.

Structure Of Workshop

Workshop will have a balance between theory and practice, with facilitators sharing real life experiencesof developing as a young educator with lots of practical advice on teaching on the run.

Intended Outcomes

Participants will be offered tools to take home, apply to their context and share with their peers. In particular, participants will:

- Learn focused teaching techniques for demanding clinical environments.
- Develop strategies to balance the demands of clinical training and delivering high-quality teaching.

- Identify methods to use teaching opportunities to enhance their own development as clinicians and educators.

Session 2V

2V (2608)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: Staffa

LGBTQI+-inclusive Health Professions Education: creating meaningful change in learning environments

Eleonora Leopardi[1], Graeme Horton[1], Penelope Fotheringham[1], Katie Bird[2], Melodie Van Wyk[3], Katie Wynne[4]

[1] University Of Newcastle, Newcastle, Australia [2] University of Newcastle Medical Society, Newcastle, Australia [3] University of New England Medical Students' Association, Armidale, Australia [4] Hunter New England Local Health District, New Lambton, Australia

Background
LGBTQI+ individuals experience greater health risks than cisgender and heterosexual individuals, including higher prevalence of mental health conditions, cardiovascular disease, and alcohol, tobacco and substance use. Furthermore, stigma and discrimination hinder access to healthcare. To address this, specific training of healthcare professionals is paramount. Unfortunately, LGBTQI+ health issues are poorly addressed in medical curricula. Although curricular reform is essential, the existence of hidden and informal curricula in learning environments must also be addressed for changes to the formal curriculum to be effective. Many medical educators themselves are unaware of the nuances of LGBTQI+ health issues and are not only unable to train the students in providing gender-informed and inclusive care, but may also fail to reinforce or inadvertently undermine the content of the teaching sessions in the formal curriculum. Within our LGBTQI+-inclusive HPE initiative, we developed a faculty-development interactive Inclusivity Training (IT) workshop. The IT informs educators of challenges in LGBTQI+ health and empowers them to transmit relevant knowledge to medical students, demonstrate positive role modelling and inclusivity.

Who Should Participate

Educators interested in developing and refining an LGBTQI+-inclusive teaching approach and organisational stance, through role modelling and advocacy.

Structure Of Workshop

To begin, we will conduct a brief assessment of participants' knowledge, to create a participant-guided focus for workshop content. The body of the session alternates brief didactic moments (presentation of the Gender Unicorn, introduction of heteronormativity and cisnormativity) with active full- and small-group activities: personal reflections, role-playing scenarios, and planning of **how** to deliver learning activities to elicit LGBTQI+ learning in curriculum sessions.

Intended Outcomes

To provide a meaningful example of our work, we will run an abridged version of our IT, addressing the following learning goals:

- Define sex, gender identity, gender expression, sex characteristics and sexuality.
- Employ **only** appropriate language when discussing queer people.
- Explain the impact of heteronormativity and cisnormativity on queer people in accessing support from institutions, including healthcare.
- Integrate teaching of LGBTQI+ health issues in their teaching.
- Describe the importance of informal and hidden curricula in reinforcing formal curriculum content.
- Explain the importance of sustainability, context, and broad consultations in creating faculty development initiatives.

Session 2W

2W (1755)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: Jura

Practical Guide to Designing and Cultivating Communities of Practice to Propel Scholarship in Health Professionals

Satid Thammasitboon[1], Diane Nguyen[1], Rogers Ssebunya[2], Supaporn Dissaneevate[3], Jennifer Benjamin[1], Tessy Thomas[4], Brian John Rissmiller[1], Robert Cooney[5]

[1] Baylor College of Medicine, Houston, USA [2] Baylor College of Medicine Children's Foundation- Uganda, Kampala, Uganda [3] Prince of Songkla University, Songkhla, Thailand [4] Geisinger Commonwealth School of Medicine, Danville, USA [5] Geisinger College of the Health Professions, Danville, USA

Background

Interdisciplinary collaboration within and across organizations is critical for individuals and teams of health professionals to excel in health professions education. This can be challenging to achieve and sustain given conflicting goals among individuals and stakeholders, competing work demands, and system complexity. Communities of Practice (CoP) provides a framework to connect people in a shared domain to improve knowledge dissemination, facilitate learning, and stimulate creativity. Even though CoPs often represent networks of people who organically coalesce, a robust CoP needs to cultivate the pulsating rhythm of its community to bring it alive. Drawing from the multinational workshop faculty's expertise in CoP formation locally and global, this workshop aims to share a practical guide to designing CoPs as living entities, including foundational and guiding principles, strategies, technical and social infrastructure, with a focus on promoting North-South collaboration by deepening inclusion of individuals in low- and middle-income countries.

Who Should Participate

Educators, researchers, faculty developers and program leaders involved in health professions continuing professional development

Structure Of Workshop

Part I: Introduce the components of a CoP (domain, community, practice) and examine CoP as a means for value creation: learning, sharing knowledge and fostering a sense of belonging through collective identity and purpose.

Activity: Individual participants identify their communities (team, community, network) within their areas of interests, and discuss how to capitalize on the power of communities.

Part II: Analyze CoP guiding principles and practical strategies, derived from vast literature and workshop faculty's experiences in CoP formations (i.e. Global Health Scholarship, Academy of Health Profession Educators), to help nurture and sustain a CoP's living rhythm

Activity: Structured individual work and facilitated group discussion on how to formulate guiding principles and employ strategies to designing CoP in various contexts.

Part III: Discuss technical and social infrastructure for community cultivation including activities, tools, and use of technology (e.g. virtual CoP, platforms, best practices). Focus will be given to best practices for promoting North-South collaborations within CoP.

Intended Outcomes

1. Define "Community of Practice" as a framework to improve knowledge dissemination, facilitate learning, and stimulate innovation
2. Analyze guiding principles and strategies for building and sustaining a CoP
3. Discuss technical and social infrastructure for community cultivation

Session 2X

2X (4762)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: Barra

Creating Immersive 360-Degree Videos: A Hands-on Workshop_TEL COMITTEE WORKSHOP

Michelle Aebersold[1], Daniel Salcedo[2], James Thomas[3], Deborah Lee[1]

[1] University of Michigan School of Nursing, Ann Arbor, USA [2] Case Western Reserve University School of Medicine, Cleveland, OH, USA [3] Oxford University Hospitals, Oxford, UK

Background

The use of immersive 360-degree video viewed through a head mounted display is expanding in health profession education. The effectiveness of this technology mediated approach has shown positive learning outcomes in the areas of technical skill enhancement, increased understanding, engagement in learning, and increased empathy (Blair et al., 2021). The challenge in using 360-degree video is threefold; understanding how the technology works, identifying the pedagogical applications and learning how to create the learning the experience. This workshop will cover the basics of developing and utilizing 360-degree video in health professions education for a variety of situations including learning technical/non-technical skills, building empathy and understanding of the patient experience, and increasing knowledge of evidence-based practices.

In this hands-on workshop participants will have an opportunity to develop their own 360-degree learning scenario using pre-recording video clips that will be provided to them.

Who Should Participate

Anyone who is interested in health profession education using technology mediated learning methods such as immersive 360-degree video.

Structure Of Workshop

Overview of 360-degree video-what is it and how is it used (5 min)

Technology requirements: camera's, software, video editing, head mounted displays (15 min)

Applicable Learning Frameworks (5 min)

Integrating into education-Examples of how 360-degree videos is used in education and training (15 min)

Hands-on practice creating a 360-degree video learning experience (30 min)

Debrief and discussion (20 min)

Intended Outcomes

Understanding what is needed to develop and use 360-degree videos

Describe how 360-degree video can be used in education/training

Define best practices in using 360-degree videos

Develop a sample 360-degree video learning experience

Reflect on best practices for integration in health professions education

Session 2Y

2Y (4924)

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: Shuna

Utilizing social media for professional and scholarship development

Ardi Findyartini[1], Keith W Wilson[2], Komal Atta[3]

[1] Faculty of Medicine Universitas Indonesia, Jakarta, Indonesia [2] University of Dalhousie, Halifax, Canada [3] University of Faisalbad, Faisalbad, Pakistan

Background

Medical and health professions education teachers and professionals are expected to engage in professional development and scholarly activities. Professional development in teaching aligns with current definition of scholarship which has been expanded beyond research. In addition to scholarship of research or discovery, there are scholarships of teaching, integration and application (Boyer, 2000). All activities and achievements which fulfill the criteria: clear goals, adequate preparation, appropriate methods, significant results, effective presentation and reflective critique (Glassick et al 1997), are considered scholarship. Social media as an education tool can be helpful in fostering inclusive learning and scholarship. With current rate of social media use and the vast opportunity to engage academics and scholars through different social media platforms around the world, this workshop will discuss the modern concept of scholarship while encourage the participants to reflect on their use of social media for professional and scholarship development.

Who Should Participate

Medical and health professions education teachers, students, medical and health professionals

Structure Of Workshop

After introductions and icebreakers, participants will share their current uses of social media for personal and professional use. They will then be led through a brief didactic session on modern concepts of scholarship that apply to educators and faculty in health professions. In small groups, participants will then review a case study and apply their knowledge of scholarship and social media to answer key questions. There will be a large group debrief followed by further pointers. Participants will then develop a personal action plan and debrief prior to concluding remarks.

Intended Outcomes

- Explore modern concepts of scholarship
- Develop an awareness of using social media as a scholarly activity
- Explore practical examples of using social media as scholarship
- Develop a personal action plan using social media in your professional development

Session 2Z

2Z

Date of presentation: Monday 28th August
Time of session: 09:00 - 10:30
Location of presentation: Orkney

AMEE Simulation Club

Moderators: Walter Eppich & Rune Dall Jensen

Would you like a quick update on the latest literature on the use of simulation in health professions education? Join us at the AMEE Simulation Committee Journal Club on the 28th August 2023 from 09:00-10:30.

The AMEE Simulation Committee members have curated the most influential, innovative, provocative, and interesting papers on simulation published in 2022 and 2023. During the journal club, four top-rated papers will be presented, with the presenting authors describing their study and its impact, followed by a Q&A session with the audience. After the presentations, the simulation committee members and the audience will cast their votes for the best paper. The paper with the highest ratings will be awarded the Best Research in Medical Simulation 2023, along with a prize of 1000 Euros sponsored by MidtSim, the medical education and simulation center at Aarhus University, Denmark.

Attending this event provides you with an excellent opportunity to stay updated with the latest research in health professions education, particularly in simulation, which is of utmost importance in this field.

9.00-9.20
David Cook - *Management reasoning and patient-clinician interactions: Insights from shared decision-making and simulated outpatient encounters*

9.20-9.40
Marie-Laurence Tremblay - *Task complexity and cognitive load in simulation-based education: A randomised trial*

9.40-10.00
Taryn Taylor - *Maybe I'm not that approachable": using simulation to elicit team leaders' perceptions of their role in facilitating speaking up behaviors*

10.00-10.20
Eve Purdy - *Taking simulation out of its "safe container"—exploring the bidirectional impacts of psychological safety and simulation in an emergency department*

Plenary 3A

3A

Date of presentation: Monday 28th August
Time of session: 1100 - 1230
Location of presentation: Hall 2

Voices of Amee

Kulsoom Ghias[1], Caroline Bonner, Ugo Caramori[3], Lionel Green-Thompson[4], Marwa Schumann[5]

[1]The Aga Khan University, Karachi, Pakistan [2]Disabled Doctors Network, Queensbury, UK [3]University of Campinas (UNICAMP), Campinas, Brazil [4]University of Cape Town, Western Cape, South Africa [5]Charité Universitätsmedizin, Berlin, Germany

Background

Through this moderated panel discussion, we aim to provide a platform for speakers from diverse personal and professional backgrounds to share under-represented and varied points of view within health professions education in an effort to initiate important and much-needed conversations in our communities of practice. The panel includes speakers from various countries including:

- **Kulsoom Ghias, Pakistan (moderator)**
- **Caroline Bonner, UK**
- **Ugo Caramori, Brazil**
- **Lionel Green-Thompson, South Africa**
- **Marwa Schumann, Germany**

Feedback from our conference and other AMEE initiatives indicated that large segments of our community felt under-represented within the conference programme and within AMEE more generally.

We conducted a survey of the AMEE community to ask them whether they currently felt they had a 'voice' within the organisation or the more general field of HPE, and which topics and speakers they would like to be included in a panel discussion.

To date, almost 300 responses have been received, with 32% of respondents indicating they did currently have a voice, 25% indicating they did not, and 43% indicating they were unsure or had not previously considered the question.

Of those who indicated they did not have a voice, common reasons given included:

- Geographies, particularly SE Asia and South America but also countries seen as 'developing' where respondents felt their work was being rejected as it is not 'novel' in more established settings
- Mid-career professionals feeling shut out of 'expert' / 'senior leader' only groups which were perceived as an 'exclusive club'
- Being part of a smaller specialty or non-medical and/or non-clinical professional group which are not well-represented at the conference
- The challenges of navigating and making meaningful contributions as a novice to such a large and well-established community as a novice

Meet our Panellists:

Moderator: Dr Kulsoom Ghias, Pakistan

"The Voices of AMEE plenary is an opportunity for diverse points of view within health professions education to be articulated, initiating much-needed conversations and critical debates in our community of practice."

Dr Caroline Bonner, UK

"The recognition and support for doctors with disabilities during their training is a really important topic to us and one which, experience is showing, clearly has a lot that can be learned from and developed. Sharing, discussion and collaboration are key to making change happen and transforming the future, so I'm very grateful for you offering this

opportunity and I would love to be involved!"

Dr Ugo Caramori, Brazil

"Stories and voices matter, and that is what AMEE is all about! Part of who we are, as humans and educators, are our stories - made of cultures, singularities and who we can represent. Voices of AMEE allow new stories to come to the stage and contribute to new visions and reflections for the education of health professions"

Associate Professor Lionel Green-Thompson, South Africa

"Every year the corridors of the AMEE conference are filled with people who are here for the very first time – anticipating the new experiences and meeting their heroes. Sometimes they come from places far from Europe, far from the centre of control. My hope is that these people hear their voices in the panellists of the Voices of AMEE. Perhaps they will hear their own stories being told. Perhaps they will begin to see that their stories are also valued."

Dr Marwa Schumann, Germany

"I firmly believe that the essence of conducting research lies in providing a platform for our participants to express themselves. The actual significance of research lies not in its publication, but in the voices that resonate within it. This is precisely why the Voices of AMEE plenary holds immense value. Multilingual, multicultural, diverse and colourful are the voices of AMEE. Join the plenary and be part of the chorus"

AMEE 2023 will take place from 26-30 August 2023 at the Scottish Event Campus (SEC), Glasgow, UK. For more information on AMEE 2023 visit our Glasgow 2023 webpage.

Session 4A

4A (1606)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: Hall 2

Enriching our thinking about what it means to have an LGBTQ+ identity in health professions education

Jennifer Cleland[1], Duncan Shrewsbury[2], Saleem Razack[3], Jo Hartland (they/them)[4], Thanapob Bumphenkiatikul[5], Suntosh Pillay[6]

[1] Nanyang Technological University Singapore, Singapore, Singapore [2] Brighton and Sussex Medical School, Brighton, UK [3] University of British Columbia, Vancouver, Canada [4] University of Bristol, Bristol, UK [5] Chulalongkorn University, Bangkok, Thailand [6] Department of Health, KwaZulu-Natal, Durban, South Africa

Background

Decades of physicians poorly trained in LGBTQ + health represent a persistent failure of health professions education (HPE). Improved education depends on a thoughtful building of respect and responsiveness to diverse populations. Such cultural competency is now built into many programs (e.g., see Pregnall et al., 2021) but how well formal, informal and hidden curricula are aligned is unclear. Second, although there are common issues shared by all people of diverse backgrounds, each dimension of diversity has its own history that has resulted in unique sets of issues. Finally, as is seen in many other areas of HPE, there is an assumption that knowledge and attitudes from the Global North apply elsewhere. This is not the case: context matters (e.g., Yoshida, Matsushima and Okaza, 2022).

Topic Importance

Most of us in HPE espouse the importance of creating workplace and educational environments that are inclusive and inviting to everyone. Learners and colleagues can maximize their potential and their contribution to their profession only when they are not hindered by discrimination and prejudice.

Knowledge of issues that learners and colleagues of all dimensions face is critical to support equity.

Format and Plans

Cleland (Singapore) will introduce the session stating the need for critical inquiry and social justice in respect of LGBTQ+ (5 minutes). Presentations (8 minutes each) will focus on how to promote protection and inclusion in medical school and training, as follows:

1. Queerness and its relevance to professional identity formation (Shrewsbury, UK).
2. Considering multiple intersecting identities (Razack, Canada).
3. Inclusive affirming healthcare and health professions education (Hartland, UK).
4. Gender diversity in curriculum and learning environment for LGBTQ+ students (Bumphenkiatikul, Thailand).
5. Lessons learnt from the process of developing LGBTI+ guidelines for healthcare workers (Pillay, South Africa).

Cleland will lead a plenary discussion, presenting a summary of the key insights, eliciting responses via Mentimeter and moderating audience questions (45 minutes).

Take Home Messages

Participants will leave with:

- a better understanding of the importance of sexual minority inclusion in HPE,
- an awareness of relevance of context in respect of LGBQ+, and
- practical knowledge about methods that promote inclusion

Session 4B

4B (1173)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: M1

Acquisition of New Surgical Skills During the Long Careers of Practicing Surgeons

Ajit Sachdeva[1], Julian Smith [2], Michael J. McKirdy[3], Jacques Marescaux[4], Marisa Louridas[5], James Garden[6]

[1] American College of Surgeons, Chicago, USA [2] Monash University, Clayton, Australia [3] Royal College of Physicians and Surgeons of Glasgow, Glasgow, UK [4] IRCAD, Strasbourg, France [5] University of Toronto, Toronto, Canada [6] University of Edinburgh, Edinburgh, UK

Background

During the many decades of surgical practice, surgeons need to acquire skills to perform new procedures and use new technologies, in order to provide the best care to patients. Unlike the period of structured surgical training, practicing surgeons need to assess the appropriate time to acquire new surgical skills, seek out effective education programs to acquire the new skills, and safely transfer the new skills to surgical practice under the watchful eye of preceptors. This should be followed by objective assessment of the performance of surgeons by proctors, and evaluation of risk-adjusted patient care outcomes. The challenges associated with this complex, multi-part process require use of new strategies and innovative education programs.

Topic Importance

This topic is critical in efforts to ensure delivery of the best surgical care to patients. Effective education programs aimed at practicing surgeons are needed, and these should include courses in simulation-based settings coupled with interventions for safe transfer of the new skills to patient care and monitoring of outcomes. Participants in the Symposium will benefit from the experiences of experts who will share practical information. The

content of the Symposium should be of value to educators from various surgical specialties and from other procedural disciplines.

Format and Plans

The format of the Symposium will include introductory comments to frame the issues, followed by sharing of experiences from Australasia, Canada, Europe, and the United States, by four panelists who will be identified once the Abstract is accepted. After the formal presentations, there will be sufficient time available to engage the Symposium participants in the discussion, and their questions will be answered by the expert panelists. The Moderator will have preplanned questions that will be posed to the panelists and the participants to promote active engagement of all present.

Take Home Messages

At the conclusion of the Symposium, participants will be able to list strategies that practicing surgeons may use to determine the appropriate time to acquire new skills; outline the challenges and opportunities associated with learning new surgical skills; and discuss approaches surgical educators may use to design effective education programs focusing on new surgical skills, with guidance from experts locally and globally.

Session 4C

4C (1283)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: Argyll I

Postgraduate specialty choice - how can we recruit to less popular specialties

Simon Gregory[1], Marcelo GARCIA DIEGUEZ[2], Wunna Tun[3], Hans Hjelmqvist[4], Dimitri Parra[5], Rille Pihlak[6]

[1] Health Education England , London, UK [2] Universidad Nacional del Sur, Bahia Blanca, Argentina [3] International Academy of Medical Education, Yangon, Myanmar [4] School of Medical Sciences, Örebro, Sweden [5] The Hospital for Sick Children and University of Toronto, Toronto, Canada [6] St Bartholomew's Hospital, London, UK

Background

Many nations have differentials in the number of doctors willing to train in some specialties such as Family Medicine, Paediatrics, ObGyn, Acute Medicine and Medicine for the Elderly, but this might be opposite in another country. There are good examples of efforts to improve recruitment numbers in the "hard to recruit specialties". In England the number of doctors appointed to Family medicine Training has increased from 2671 to 4000 per each year. Psychiatry numbers have similarly increased, but appointees to Genitourinary Medicine has dropped. Family Medicine and Paediatrics are similarly less popular in Argentina, yet are most popular in Myanmar. Neurosurgery and Cadiovascular Surgery are very competitive in Europe,yet unpopular in Myanmar.

In some countries the geographical distances make some specialty places unpopular, but we can share good practices from Sweden.

It is clear challenges are replicated across nations but popular specialties vary. There is a need to share educational and recruitment best practices to ensure recruitment to all

specialties. There is a need to understand the cultural, economic and work-life balance backgrounds of specialty choices and how these have changed.

Topic Importance

There is a global shortage of healtchare professionals and a mismatch of career expectations. Health services and those we serve need doctors across specialties according to need. PGME educators need to understand the reasons behind specialty choices, good practices that can improve specialy popularity and what can improve the choice satisfaction.

Format and Plans

Presentations on:

- Competition and appointment ratios from various countries

- Innovations that have transformed recruitment.

- Examples from varied nations and specialties.

- Lessons from trainees to improve specialty choice satisfaction

Participants are given the possibility to actively engage with the topic through polling and discussion.

Take Home Messages

- Career intentions and workforce needs are mismatched.

- The public need and deserve healtchare professionals across specialties.

- The symposium will explore examples of improvements in some difficult to recruit specialties around the globe

- Symposium will also help explore the background infuences on specialty choices and how these have changed and can be changed

Session 4D: Research Papers: Designing and Planning Learning

4D1 (1252)

Date of presentation: Monday 28th August
Time of session: 14:00 - 14:20
Location of presentation: Hall 1, SEC

Using design thinking to co-develop planetary health education

Claire Palermo[1], Jessica Abbonizio[1], Michelle Lazarus[1], Gabrielle Brand[2], Gitanjali Bedi[2], Julia Choate[2], Fiona Kent[2], Shane Pritchard[2]

[1] *Monash University, Clayton, Melbourne, Australia* [2] *Monash University, Clayton, Australia*

Introduction

Climate change poses one of the greatest threats to human health. Health professionals within health systems are integral to addressing the global threat of climate change. As such, health professionals urgently require skills and knowledge for reducing the healthcare practice environmental footprint, managing climate-health impacts within the community, and engaging in climate advocacy. While learning outcomes and frameworks exist to guide planetary health education across the health professions, there remains uncertainty around the feasibility and transformative value of these educational approaches for health professions students (Guzmán, et.al, 2021). We aimed to highlight new possibilities in planetary health education in partnership with end users (students and industry healthcare professionals) by investigating design thinking as a method for co-developing high quality health professions education.

Methods

Underpinned by pragmatism, and informed by the five stages of design thinking (Discovery, Interpretation, Ideation, Experimentation, Evolution), we partnered with 22 “end-users” across 12 health professions education programs in a series of four online workshops. End-users included healthcare practitioners (HP) and undergraduate students from medicine (n=7 students; n=1 HP), nutrition and dietetics (n=3 students; n=2 HP) , biomedicine (n=4 students), pharmacy (n= 2 HP), nursing (n=1 students; n=1 HP) , and psychology (n=1 HP) disciplines. After the discovery and interpretation phases that defined

and understood the problem, during the ideation phase, we used phrases such as “how might we?” to support participants' imagination and minimize limits on idea generation. At the conclusion of the design thinking phases we asked participants to vote on the idea that they believed warranted further development or experiment and evolution. From participants’ preferences, we developed and piloted, with 90 third year nutrition science students, a planetary health workshop that highlighted Indigenous leadership and perspectives on climate health issues. We invited student participants to submit their reflections of the learning experience. Researchers also conducted one-hour reflective discussions after each workshop which were transcribed verbatim and analysed inductively using content analysis.

Results

Over 150 ideas were generated through the design thinking process, and based on students’ reflections of the final idea, the co-designed planetary health workshop indicated transformative learning was occurring with students feeling empowered with new attitudes towards Indigenous knowledge and skills in advocating for planetary health. Challenges related to using design thinking to co-design planetary health education included uncertainties in working with the openness of the co-design approach, the complexity of the wicked problem of planetary health, and uncertainties with harnessing diverse perspectives. Opportunities afforded by this approach included embracing innovative and relevant ideas of co-designing curriculum driven by end-users, and creating inclusive spaces where researchers learn ‘with’ participants.

Discussion And Conclusion

The design thinking process generated multiple new curriculum ideas for planetary health education that may not have otherwise been imagined through a more traditional curriculum design process. Design thinking was a feasible and useful approach for co-designing planetary health education curriculum and the co-designed planetary health workshop was well received. Application in complex areas for curriculum, such as planetary health, where student and industry voices need to be heard, may be a promising opportunity for health professions educators.

Funding: This work was funded by an AMEE grant 2021.

References

Guzmán, C. et.al. (2021) A framework to guide planetary health education. The Lancet Planetary Health. Vol 5. 10.1016/S2542-5196(21)00110-8.

4D2 (1986)

Date of presentation: Monday 28th August
Time of session: 14:20 - 14:40
Location of presentation: Hall 1, SEC

The complexity of social accountability translation: from mission to experience to actions

Amudha Poobalan[1], Anand Zachariah[2], Sarah David[2], Anna Pulimood[2], Jennifer Cleland[3]

[1] University of Aberdeen, Aberdeen, UK [2] Christian Medical College, M.G.R University , Vellore, India [3] Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, Singapore

Introduction

Medical schools are increasingly adopting socially accountable mission and curricula. The realisation of a social mission is dependent on an institution's ability to direct individuals to embody the mission's principles in their everyday activities (1). However, the experiences of learners and how they engage with such missions is relatively neglected. To address this gap in the literature, we explored how one medical school influenced its students to embody its social accountability mission.

Methods

This was an instrumental case study of one medical school in India with a long-established and explicit social-accountability mission. We drew on orientation discussions (by Zoom), the School website and a site visit to inform the research focus, then carried out interviews with graduates/alumni (n=51) as the primary data source. Interview data were collected in English between January and December 2020. Data coding and analysis were initially inductive but, after the themes emerged, we used MacIntyre's virtue ethics theory (2) to help us consider the relationships between character (disposition) and the institution, its traditions and structure in respect of social accountability.

Results

The School invested heavily in a virtues-focused selection process (e.g., compassion, empathy, service to the community). Once recruited, these virtues were reinforced

through various intentional practices: the formal, informal and hidden curriculum (e.g., placements in resource limited and/or remote and rural settings); community engagement and expectations (e.g., student self-governance); role modelling (by staff and more senior students). Much emphasis was placed on sustaining these traditions over time, creating a strong sense of identity and belonging among participants, traditions which were fostered further by the alumni network and continued engagement with the School post-graduation.

Discussion And Conclusion

This case study adds to the field of social accountability research in medical education. It highlights that the process of encouraging students to embody a social accountability mission in their working lives depends on a multiple interrelated approaches and actions, and the intersection between systems and individuals. Realising social accountability is complex and must be explicitly acknowledged in future policy, practice and future research.

References

1. Ellaway RH, Van Roy K, Preston R, et al. Translating medical school social missions to student experiences. Med Educ, 2018; 52: 171-181.

2. MacIntyre, A. After virtue: A study in moral theory (3rd ed.). London: Duckworth. 1985.

4D3 (0686)

Date of presentation: Monday 28th August
Time of session: 14:40 - 15:00
Location of presentation: Hall 1, SEC

Impacts of COVID19 on capacity building relationships: Has global health education become borderless?

Dawit Wondimagegn[1], Carrie Cartmill[2], Lidya Genene[1], Sophie Soklaridis[3], Engida Girma[1], Cynthia Whitehead[2]

[1] College of Health Sciences, Addis Ababa University, Addis Ababa, Ethiopia [2] The Wilson Centre, University of Toronto, Toronto, Canada [3] Centre for Addiction and Mental Health, Department of Psychiatry, University of Toronto, Toronto, Canada

Introduction

The Toronto Addis Ababa Academic collaboration (TAAAC) is a 20-year partnership between Addis Ababa University (AAU), Ethiopia and the University of Toronto (UofT), Canada. UofT faculty have traveled to Ethiopia to teach in the AAU curriculum across a broad range of health professions programs. The TAAAC program's success is tied to its design as a long-term relational partnership that emphasizes personal relationships between colleagues as equals, opportunities for formal and informal on-site interactions, transparent deliberations on identifying issues of power as they manifest, and the commitment on both sides to pay consistent attention to issues of power by remaining vigilant throughout interactions.[1,2] These strategies are designed to mitigate the hierarchies and power imbalances that are inherent in globalization of health professions education through subtle and mostly unintentional perpetuation of colonial structures of power between high-income and low-income countries.

The Covid-19 pandemic disrupted established norms of communication, uses of technology, and relationships throughout the world, and the TAAAC collaboration was no exception. As the TAAAC teaching trips shifted to virtual, faculty wondered what might happen to the relational foundations of the model. Our research question for this project was: How has the shift to a virtual teaching format affected power relations?

Methods

We employed a case study methodology to examine how the pandemic impacted the TAAAC partnership. Case study methodology permits an in-depth understanding of how a phenomenon develops over time in relation to change. It was therefore deemed a suitable methodology for understanding how power was redistributed as a result of the change in the mode of delivery. We conducted 16 in-depth interviews with TAAAC leaders and faculty teachers from both universities. Convenience sampling was used to recruit participants from two TAAAC programs: the Masters in Health Sciences Education and the Psychiatry residency program. Thematic analysis and postcolonial/decolonization theories were used to interpret the data. A postcolonial lens sheds light on how the seemingly 'leveling' function of virtual teaching may unintentionally encourage the perpetuation of colonial structures of power and facilitate the hegemony of knowledge to remain the same.

Results

Even with the shift to virtual, TAAAC's foundation continues to be relational and this focus is a powerful structure to mitigate power differentials. However, with power hierarchies still omnipresent, no matter how good the intentions, even deep relationships and personal relationships may not be enough to limit neocolonial effects without continued personal interactions. While the change to the virtual platform created an opportunity for people to continue to teach, it simultaneously eradicated the opportunity for ongoing development of relationships. It allowed people who would not otherwise have traveled to teach in person to be engaged in the program without the modifying and leveling benefits of contextual relationships. This opened up a space where previously unavailable knowledge and expertise could easily be transferred. However, this space also created a new pathway for the free transfer of gross and subtle forms of power relations to go unchecked by the filters of relationships.

Discussion And Conclusion

Moving to a virtual platform served a purpose in the context of the global pandemic. Nevertheless it rendered our global relationship to be borderless. Relationships can be envisaged as 'permeable borders' that serve as checks and filters within a world system that is historically structured to benefit those that are already powerful. When using virtual platforms for teaching, these structures are hidden, rendering differences less visible. In north-to-south educational partnerships the power differentials are omnipresent, but hard for many professionals in health sciences education to see when teaching virtually. Virtual

teaching could render global health education borderless and make it virtually impossible to examine permeations of western knowledge and power through the permeability of relationships.

References

1. Wondimagegn, Dawit, Pain, Clare, Baheretibeb, Yonas, Hodges, Brian, Wakma, Melaku, Rose, Marci, Sherif, Abdulaziz, Piliotis, Gena, Tsegaye, Admasu, Whitehead, Cynthia. Toronto Addis Ababa Academic Collaboration: A Relational, Partnership Model for Building Educational Capacity Between a High- and Low-Income University. *Academic Medicine* 2018; 93(12):1795-1801. doi: 10.1097/ACM.0000000000002352
2. Whitehead, Cynthia, Wondimagegn, Dawit, Bahiretibeb, Yonas & Hodges, Brian. The International Partner as Invited Guest: Beyond Colonial and Import-Export Models of Medical Education. *Academic Medicine* 2018; 93(1):1760-1763. doi: 10.1097/ACM.0000000000002268.

Session 4E: Research Papers - Observation and Feedback

4E1 (0813)

Date of presentation: Monday 28th August
Time of session: 14:00 - 14:20
Location of presentation: Argyll II, Crowne Plaza

Assessor positions in cultivating learning in programmatic assessment: Teacher, Gatekeeper or Team Member

Janica Jamieson[1], Simone Gibson[1], Margaret Hay[1], Claire Palermo[1]

[1] *Monash University, Melbourne, Australia*

Introduction

Programmatic assessment purposefully applies a variety of methods, moments, and people to construct a holistic picture of student performance and is becoming the prevailing approach to competency-based assessment within health professional education. This popularity is derived from programmatic assessment's capacity to remedy challenges encountered when operationalising competency-based assessment. Recent research demonstrates that programmatic assessment achieves the dual purpose of promoting student learning whilst enabling credible high-stakes assessment decisions (Schut et al. 2021). The exigent issue for programmatic assessment is stakeholder resistance encountered during implementation which can undermine success (Torre et al. 2021). Work-place based assessors are critical to the cultivation of inclusive learning environments and their buy-in to programmatic assessment is essential to support implementation. And yet, such positions within education initiatives are complicated by influential, yet often unrecognised, cultural and relationship dynamics. In this research, we applied the critical lens of Positioning Theory to explore the experiences of assessors involved in programmatic assessment and elucidate influences on implementation.

Methods

Positioning Theory facilitates the exploration of everyday social episodes for power, influence, institutional and cultural norms, and inherent and granted status, providing a unique perspective into how people respond in social situations. Focus groups and interviews with assessors (n=44) across practice areas (prevention and clinical), from two Australian dietetic programs were analysed using the framework analysis method and

informed by Positioning Theory. Both programs had implemented programmatic assessment for the mandatory 100-day placement in the prior year.

Results

Assessors positioned themselves within programmatic assessment in two of three ways. First, all assessors positioned themselves as a *Teacher*, reflecting the inherent right and duty to educate learners. The *Teacher* positioning was enacted in two distinct ways. Some assessors adopted a hierarchical approach characterised by one-directional dialogue that excluded and disempowered learners. Others described a collaborative approach, underpinned by bi-directional conversations, that empowered learners and gave assessors valuable insight into performance. Second, two mutually exclusive positions emerged – *Gatekeeper* or *Team Member*. *Gatekeepers* described a duty to protect the public, enacted as a vigilance for learner underperformance. Shifting responsibility for high-stakes assessment decisions from the assessor to the university diminished *Gatekeepers* authority and power, leading to resistance, frustration, and compromised an assessor's professional identity. In contrast, *Team Members* recognised their contribution to high-stakes as being valuable and were liberated from the burden and stress of assessment, enabling a supportive learner-assessor relationship to flourish. Authority was relinquished and power deferred to the learner and university. For some, the *Team Member* positioning arose only once they were familiar with programmatic assessment and had confidence in the rigor.

Discussion And Conclusion

Positioning Theory revealed the attributes of assessors who resisted and accepted programmatic assessment and how rights and duties were reorientated with implementation. The *Gatekeeper* positioning was incongruent with programmatic assessment resulting in ideological dissonance, presenting as tension and resistance. Leadership, perseverance, and discourse are strategies needed to redress such opposition and develop shared understanding and buy-in between all stakeholders, where the application of frameworks such as Polarity Thinking™ may be beneficial. Implementation of programmatic assessment was observed to redistribute authority and responsibility, favouring student agency and mutuality which optimises educational outcomes. This was accepted by the *Team Members* and enabled an inclusive educational alliance to form between assessor and learner. Programmatic assessment inhabits a cultural complex space and is contingent on the cooperation of a variety of stakeholders who have differing beliefs and values. This research provides new insights into supporting and engaging assessors to enable the cultivation of inclusive learning environments when transforming towards programmatic assessment.

References

Schut, S., Maggio, L. A. & Driessen, E. (2021). Where the rubber meets the road: an integrative review of programmatic assessment in health care professions education. Perspectives on Medical Education, 10 (1), 6-13.

Torre, D., Rice, N. E., Ryan, A., Bok, H., Dawson, L. J., et al. (2021). Ottawa 2020 consensus statements for programmatic assessment - 2. Implementation and practice. Medical teacher, 43 (10), 1149-1160.

4E2 (1088)

Date of presentation: Monday 28th August
Time of session: 14:20 - 14:40
Location of presentation: Argyll II, Crowne Plaza

A pattern review of feedback in health professions education

Catherine Patocka[1], Lara Cooke[1], Irene Ma[1], Rachel Ellaway[1]

[1] *University of Calgary, Canada*

Introduction

Feedback is an essential part of health professions education (HPE). Although the literature refers to feedback as if it were generic and well-defined, in practice what feedback means can vary greatly. For example, feedback is used to refer both to information from motion sensors in a haptic laparoscopic trainer and to the complex cyclic process of observing performances and providing information on how they might be improved. Recognizing that such polysemy undermines replication, synthesis, and implementation, some scholars have sought to standardize what they mean when they use the term 'feedback'. Parsing feedback into idealized definitions ignores the fact that it is a highly variant, contextually dependent, relational, and emergent phenomenon. Pattern thinking [1], the recognition of something new or unfamiliar in terms of something familiar, affords a different approach to examining feedback, that accommodates variety and uncertainty. No methodology has, so far, adequately described how to use patterns, pattern systems, or pattern languages in HPE or beyond. The objective of our study was therefore to describe a pattern review methodology and apply it to the concept of feedback in medical education.

Methods

Patterns emerge from activity. In HPE, this activity can be drawn mainly from scholarship such as publications and presentations. Therefore, we drew on knowledge synthesis practices and concepts, specifically the principles of scoping reviews, as the starting point for our pattern review. We adapted the five stages of scoping reviews [2] (1) Identifying a research question and scope of inquiry; (2) Identifying relevant studies; (3) Selecting studies; (4) Charting the data; (5) Collating and reporting the results

Results

Since patterns are about variances, connections, and associations, instead of defining a research question and from that the scope of inquiry, the first step was to clarify the scope

of our study by defining the perimeters of the pattern domain. In this case we focused on any use of the term 'feedback' in medical education, and the question by default was then 'what is the implied pattern system of 'feedback' in medical education?'. To identify relevant studies, we developed a search strategy in Ovid MEDLINE consisting of medical subject headings related to "feedback" AND ("Medical Education" OR "Physicians"). This search yielded 2461 citations. We recognized that each instance of feedback contributed to the overall pattern of feedback and its use in medical education so rather than applying inclusion/exclusion criteria at this stage, the full texts for 165 articles were reviewed iteratively and discursively, and inductively synthesized to develop a relatively stable pattern system. This system was then tested against the remaining 2296 citations.

The resulting pattern system incorporates 36 different elements captured under 6 broad domains: Feedback Referent (Performance purpose, Performance output, Performance outcome, Subject competence, Provider competence, Infrastructure, Sensor, Judgment, and Results), Feedback intentions (Assessment, Function, and Process purpose), Feedback Performances (Provider, Delivery, Timing, Frequency, and Relationship), Feedback Processing (Self-assessment, Emotion, Credibility, Self-directed assessment seeking, Attention, Interpretation, and Discussion), Feedback response (Goal setting, Self-efficacy, Orientation, Intention to change, Outcome, Unintended behaviors, Actual action, and Self-monitoring) and Feedback Meta (Culture, Recursion, and Context)

Discussion And Conclusion

We have developed a pattern review methodology that can capture and allow deeper analysis of the fuzzy constructs of health professions education, including, but not limited to, feedback. Pattern systems, which emerge from activity rather than being constructed *a priori,* offer a unifying and holistic frame that is more inclusive and flexible than taxonomic definitions**.** We have also demonstrated how pattern review can be directly applied to feedback, an important yet polysemic concept in HPE. Our feedback pattern system, grounded in evidence from scholarship, affords novel ways for integrative and trans-disciplinary scholarship. It is our hope that pattern systems and a subsequent pattern language (which includes rules and structures that define how patterns in a system can be combined) may provide us with greater understanding of how variant phenomena like feedback work and how they can be used by health professions educators to advance thinking and practice.

References

1. Ellaway RH, Bates J. Exploring patterns and pattern languages of medical education. *Med Educ*. 2015;49(12):1189-1196. doi:10.1111/medu.12836

2. Arksey H, O'Malley L. Scoping studies: Towards a methodological framework. *Int J Soc Res Methodol Theory Pract*. 2005;8(1):19-32. doi:10.1080/1364557032000119616

4E3 (1425)

Date of presentation: Monday 28th August
Time of session: 14:40 - 15:00
Location of presentation: Argyll II, Crowne Plaza

Feedback use in a formative and summative medical progress test: a mixed-methods study.

Elise van Wijk[1], Floris van Blankenstein[1], Friedo Dekker[1], Roemer Janse[1], Liesbeth Adelmeijer[1], Eline Dubois[1], Alexandra Langers[1]

[1] *Leiden University Medical Center, Leiden, The Netherlands*

Introduction

Growing evidence on the positive effects of formative testing is causing a shift towards more formative testing in medical education. Feedback on formative tests has been shown to improve the learning process by supporting self-regulated learning (1). On the other hand, low-stakes formative tests may be perceived as less valuable in the context of Expectancy-Value Theory (EVT), leading to lower levels of test-taking effort and motivation, and thereby diminishing the intended learning effect (2). To better elucidate the benefits of formative testing, further research into the effect of formative and summative testing on feedback use is required, which in turn may optimize students' learning process. Therefore, this study aimed to compare feedback use between medical students undergoing a summative and formative progress test (PT) and explore the underlying factors that affected feedback use in both test conditions.

Methods

In this mixed-methods study we compared unsupervised (online, formative) and supervised (in-person, summative) conditions of the medical PT. Normally, the PT is a summative test for all students in the Netherlands. Due to the COVID-19 restrictions, in February 2022 the PT was formative for second-year bachelor students and summative for third-year bachelor students at our institution. After the PT, students had access to the answer key and received feedback, both by e-mail and via the online Progress test Feedback system (ProF). We conducted a questionnaire among second-year and third-year students to measure feedback use after the PT in February 2022. Besides questions on feedback consultation, 6-point Likert scale items of the validated Student Conceptions of Feedback (SCoF)-questionnaire were included to measure active use of feedback. Additionally, semi-structured interviews were conducted among bachelor and master medical students who had participated in both formative and summative PTs during the

COVID-19 period (*n*=21). Quantitative data were analyzed using multiple regression analyses, chi-squared tests and an unpaired t-test. Qualitative data were analyzed using template analysis combining deductive and inductive coding. During analysis, EVT turned out to be an appropriate framework for data interpretation.

Results

Response rate of the questionnaires was 35.8% (113/316 students) in the formative group and 51% (154/302 students) in the summative group. Students in the summative group consulted ProF and the answer key more often compared to the formative group (adjusted OR=1.96, 95%CI 1.11-3.45; adjusted OR=2.09, 95%CI 1.08-4.02 for ProF and answer key, respectively). Consultation of the feedback by e-mail was the same in both groups (adjusted OR=0.95, 95%CI 0.46-1.96). Mean scores on the SCoF-items were relatively low and similar in both groups (mean score [SD]: 3.2[0.9] and 3.1[0.9], 95%CI -0.10-0.36 for the formative and summative group, respectively). The template analysis revealed four clearly connected motivational themes considering feedback consultation: *Value* (study credits or learning), *Effort* (low or high), *Strategy* (self-assessment or learning tool), and *Representation* (representative test result). Regarding active feedback use, grade focus was predominant.

Discussion And Conclusion

Questionnaire results show more feedback consultation after the summative PT compared to the formative PT, which suggests less engagement with the feedback after formative testing. This was further supported by the qualitative data, which revealed that the perceived utility value of the formative PT was low due to the lack of consequences and resulted in less effort and feedback consultation. Nonetheless, there were also students who valued the learning component of the formative PT by using this test directly as a learning tool or as self-assessment instrument. Both quantitative and qualitative data showed relatively low active feedback use in general. Considering active use of feedback, we observed that an unsatisfactory grade on the summative PT was a strong incentive to act on the feedback. These findings build on the model proposed by EVT, as the perceived value and effort appear to be important not only in test-taking motivation but also in the motivation to use feedback. It is important to take this into consideration with the introduction of more formative tests in the medical curriculum.

References

1. Koh LC. Refocusing formative feedback to enhance learning in pre-registration nurse education. Nurse Educ Pract. 2008 Jul;8(4):223–30.

2. Eccles JS, Wigfield A. From expectancy-value theory to situated expectancy-value theory: A developmental, social cognitive, and sociocultural perspective on motivation. Contemp Educ Psychol. 2020 Apr 1;61:101859.

4E4 (1457)

Date of presentation: Monday 28th August
Time of session: 15:00 - 15:20
Location of presentation: Argyll II

To DO or Not to DO: Exploring Medical Student Experiences with Direct Observation (DO) During the Pediatric Clerkship

Capri Alex[1], Barrett Fromme[1], Larrie Greenberg[2], Michael Ryan[3], Sarah Gustafson[4], Maya Neeley[5], Shaughn Nunez[6], Molly Rideout[7], Jessica VanNostrand[7], Nicola Orlov[1]

[1] University of Chicago Pritzker School of Medicine, Chicago, USA [2] The George Washington School of Medicine and Health Sciences, Washington, D.C., USA [3] University of Virginia School of Medicine, Charlottesville, Virginia , USA [4] David Geffen School of Medicine, University of California Los Angeles, Los Angeles, California, USA [5] Vanderbilt University School of Medicine, Nashville, Tennessee, USA [6] Texas Tech University Health Sciences Center School of Medicine, Lubbock, Texas, USA [7] Larner College of Medicine, University of Vermont, Burlington, Vermont, USA

Introduction

Direct observation (DO) is a critical tool to support competency-based medical education (CBME) in undergraduate medical education (UME). DOs create opportunities to assess learners in their performance of essential competencies such as communication, interprofessional collaboration, and professionalism - valuable markers of trainee development beyond the scope of what can be determined by a traditional multiple-choice exam. Despite the intrinsic benefit of DO and the Liaison Committee on Medical Education (LCME) requirement that United States (U.S.) medical students obtain at least one DO on each clerkship, little is understood about this process. Additionally, despite the 2020 graduation questionnaire (GQ) reporting that 94.1% of medical students were observed performing a patient history and 95.3% during a patient physical exam while rotating on their pediatrics clerkship, previous literature suggests that DOs occur infrequently and insufficiently across the medical education continuum. No studies currently further describe the quantity of observations, the quality of the observations, or subsequent feedback. Most importantly, it is unclear how DO's impact student performance. This multi-institutional, mixed-methods study describes the experience of medical students receiving DO assessments and subsequent feedback from residents and attendings during their pediatrics clerkship. Finally, we contextualized our findings to recommend that residents and attendings should receive training in competency-based

assessment and feedback to substantially improve the medical student experience and training.

Methods

We performed a mixed methods study using a convergent design across 6 diverse U.S. medical schools in 2022. We invited medical students to participate in a semi-structured focus group in the last 1-2 weeks of their pediatrics clerkship. The qualitative arm used a constructivist grounded theory and constant comparison process to explore the experience of medical students that encouraged or inhibited high-quality DO assessments during their pediatrics clerkship. For the quantitative arm, we administered an internally developed 34-item survey to determine the reported frequency, type, and quality of direct observations and subsequent feedback among the participants.

Results

73 medical students participated across 20 focus groups. Seven main themes emerged. Participants emphasized creating a safe learning environment with intentional and clear expectations as critical to optimizing the usefulness of the DO, reducing stress during the encounter by removing the summative aspect of observations, and that actionable, constructive, and timely feedback is highly valued. Students expressed desire for more dedicated DO opportunities accompanied with early and longitudinal feedback to provide learning benchmarks.

Overall, 97% (71/73) of participating students completed the survey. Students reported resident observation to occur the most (n=62, 89%), compared to the few students who ranked attendings as their primary observer (n=6, 9%) in the inpatient setting. Subsequent inpatient attending feedback occurred “less than half the time” or “never” for 31% (n=21) of students for all observations across the pediatric clerkship. Over 50% of participants reported that an attending observed their performance of clinical reasoning skills, communication skills, and presentation skills “daily” throughout the clerkship. While over half reported that an attending observed a history-physical at least once throughout the clerkship, a third said it never occurred at all (n = 23, 32%).

Discussion And Conclusion

This study’s qualitative arm revealed the medical student perspective on DO assessment in the pediatric clerkship: students identify value in the learning opportunity that these work-based assessments provide when done well, but experiences often involved

unplanned, informal assessments that induced student stress when graded and not followed with actionable, constructive, or timely feedback. The quantitative arm elucidated a significant majority of observations occurred by residents, who are not trained in assessment or feedback, of medical student skills largely outside of the patient clinical encounter. Our data revealed that attending observation is limited in the inpatient setting, and even less observations are followed with subsequent feedback. These findings only further validate the concern that LCME DO requirements are not actually being met, but more importantly that students are not receiving the feedback they need on vital skills they are using when engaging with patients to develop into competent physicians.

References

1. Fromme, H.B., Karani, R. and Downing, S.M. (2009), Direct Observation in Medical Education: A Review of the Literature and Evidence for Validity. Mt Sinai J Med, 76: 365-371. https://doi.org/10.1002/msj.20123
2. Holmboe E. (2015), Realizing the Promise of Competency-Based Medical Education: Academic Medicine. 90(4):411-413. doi:10.1097/ACM.0000000000000515

Session 4F: Patil Teaching Innovation Awards 1

4F1 (2017)

Date of presentation: Monday 28th August
Time of session: 14:00 - 14:15
Location of presentation: Argyll III, Crowne Plaza

Giving life to gamification in medical training

Pilar Munitiz Navarrete[1], María Catalina Solar Berguecio[1], Teresita Lyng Benítez[1], Mariana Jadue Zelada[1], Verónica Mir Bezanilla[1], Luz Torres Muñoz[1], Gonzalo González Ruiz[1], Pedro Lira Proust[1], Matías Bellinghausen Scott[1], Claudio Blacutt Crooker[1]

[1] *Facultad de Medicina Clínica Alemana-Universidad del Desarrollo, Santiago, Chile*

Background

Gamification is an increasingly common strategy in medical education, as it can improve learning through enjoyable activities. Furthermore, it could reduce stress in students with a high burden from their curricular activities.

Summary Of Work

Since 2015 we have performed different kinds of gamification activities during a week we call “Juegos del Hambre (Hunger Games)” with third year medical students. The main objectives are to learn while playing and competing, to encourage their motivation for studying and socialize with peers, all while distracting them from their daily routine. These last 2 years we have assessed the outcome of this methodology on the student’s knowledge, performing a pre-evaluation with no prior notice, and then repeating it at the end. We also assessed their level of satisfaction with a final survey.

All students are divided into randomized groups with different subjects assigned. There are 4 days of gamification divided into different activities such as kahoot questions, gymkhana, treasure hunting and a final play about the selected medical topic. Each group competes and earns points by solving the games related to all the topics. On the last day, the top 3 places are awarded.

Summary Of Results

In these past 2 years we found there was an increase in the average class grade in the final test, compared to the initial test. Furthermore, the survey revealed the majority of students enjoyed learning through gamification. Students highlighted how the activity encouraged teamwork and collaboration among the participants, especially with those they have never been involved with. They also emphasized it was a space for self-care.

Discussion And Conclusion

After 6 years of developing and perfecting this initiative, and 2 years evaluating results, we can say that it is beneficial for medical school students. The games promote debate, critical thinking and strategic thought processes, while learning in a different and fun way, breaking the routine and facilitating companionship among peers. For future research we would like to use better tools to evaluate the impact of this activity.

Take Home Messages

By incorporating engaging methodologies available, through gamification, the student can learn and develop other tools needed for their future clinical practice

4F2 (1136)

Date of presentation: Monday 28th August
Time of session: 14:15 - 14:30
Location of presentation: Argyll III, Crowne Plaza

Virtual reality as a teaching modality to mitigate bystander effect during medical and psychological emergencies

Darius Shaw Teng Pan[1], Wen Wei Chionh[1], Surabhi Riya Vig[2], Ada Ngo[1], Crystal Harn Wei Soh[1], Malcolm Mahadevan[1]

[1] *National University Health System, Singapore* [2] *National University Singapore, Singapore*

Background

Bystander effect occurs when witnesses to an emergency situation fail to intervene. Out-of-hospital cardiac arrest and mental health crisis are two emergency situations where timely and effective intervention by first responders is essential. Our study aims to evaluate the effectiveness of virtual reality (VR) as a teaching modality to mitigate bystander effect, through improving learners' knowledge and confidence in responding to medical and psychological emergencies.

Summary Of Work

Two de novo VR scenarios were developed by a team consisting of emergency physicians and information technology specialists. The interactive hands-on scenarios were designed from a first-person perspective with the learner playing the role of the nearest potential responder to an emergency situation. The first scenario involved responding to a patient in cardiac arrest requiring cardio-pulmonary resuscitation. The second scenario involved helping someone struggling with depression and suicidal ideation. We recruited twenty undergraduate students and university academic staff to participate in both VR scenarios. Participants' in-scenario responses were recorded. Validated pre-scenario and post-scenario tests were conducted for each scenario.

Summary Of Results

Learners' knowledge scores showed significant improvement following the cardiac arrest scenario and modest improvement following the mental health scenario ($t=5.2, p<.001$; $t=2.9, p=.010$, respectively). Participants reported higher confidence ($t=8.9, p<.001$;

t=6.2,p<.001) and increased willingness to help strangers undergoing crisis (t=4.2,p<0.001; t=3.3,p=.004) following both scenarios. Increase in knowledge scores post-scenario was positively correlated with increased willingness to intervene in medical emergencies ($F=20.53$, $p<.001$, $R^2=0.55$). Similarly, higher knowledge scores were strongly positively correlated to learners' degree of empathy for someone suffering from mental health crisis ($F=57.84$, $p<.001$, $R^2=0.76$).

Discussion And Conclusion

Our study found that VR has the potential to increase knowledge, improve confidence, and imbue empathy among learners. VR creates an immersive learning environment which allows learners to have an "in-person" perspective of attending to real-life emergencies. Such a platform allows learners to obtain real-time feedback which facilitates behavioural conditioning by encouraging desired action through positive reinforcement. VR therefore functions as a catalyst in promoting both cognitive learning and empathy development, mitigating knowledge and emotional barriers that contribute towards the bystander effect.

Take Home Messages

VR can be a valuable teaching modality in equipping and empowering learners to intervene timely and effectively when encountering emergency situations.

4F3 (1549)

Date of presentation: Monday 28th August
Time of session: 14:30 - 14:45
Location of presentation: Argyll III, Crowne Plaza

Online 3D Simulation Technology for Interprofessional Team Training

Kevin Shi[1], Sahar Farahmand[2], Vahid Mehrnoush[1], Shahriar Hosseinzadeh[3], Isabelle Rash[1], Karim Qayumi [1]

[1] University of British Columbia, Vancouver, Canada [2] University of Saskatchewan, Saskatoon, Canada [3] CanHealth International, Vancouver, Canada

Background

Team training for improving team dynamics and soft skills is proven highly effective. In medicine, interprofessional team members including nurses, physicians, technicians, pharmacists, social workers, and others receive training and credentials by profession. However, in hospitals, they work collaboratively, which creates a gap in medical practice, particularly in emergencies that may lead to medical errors with associated ethical, legal, and financial consequences. Physical simulations can provide a solution to bridge this gap in team training. However, while physical simulations with mannequins are effective as a synchronous method, they are expensive, limited by time and space, use hospital resources, and require full team participation. Therefore, we hypothesized that asynchronous simulation training for non-technical skills in a 3D online virtual environment could be as practical for team training and less costly than synchronous simulations.

Summary Of Work

Our primary objective was to develop a prototype of a 3D virtual simulation environment for interprofessional team training where team members are in control of their avatars and perform specific actions on a patient avatar. The instructor controls the patient avatar, and the team can communicate. Our secondary objective was to assess the usability of the developed 3D virtual prototype in a simulation environment for team training using a clinical scenario.

Summary Of Results

A prototype was built to hold effective and realistic communication in a virtual team training environment. The prototype test was positive, and team members of the usability test were satisfied with the prototype functionality.

Discussion And Conclusion

'Team Training' by CyberPatient offers a multiplayer working feature with the combination of voice chat, dynamic interactions between avatars and learners, and the facilitator fully controls the collaborative environment making CyberPatient's Team Training educational and fun. This will also allow learners to communicate and practice from anywhere in the world, including rural and remote areas, without additional expenses.

Take Home Messages

'Team Training' is an ideal tool to support team training and communication skills in the health education and healthcare environment. Full production of 'Team Training' is underway and will be commercially available in the near future. This platform also supports continued collaborative learning for learners in remote areas.

4F4 (0285)

Date of presentation: Monday 28th August
Time of session: 14:45 - 15:00
Location of presentation: Argyll III, Crowne Plaza

A.S.P.I.R.E: A student led model to foster a facilitative environment for undergraduate medical research

Shirish Rao[1], Yashika Zagade[1], Amey Kundawar[1], Aarya Desai[1], Amey Ambike[1], Alhad Mulkalwar[1], Ojas Krishnani[1], Munira Hirkani[1], Raakhi Tripathi[1]

[1] *Seth GS Medical College and KEM Hospital , Mumbai, India*

Background

Knowledge attitudes and practices regarding medical research are poor among the undergraduate students which is fueled by either lack of mentorship, conflict with academics or simply lack of motivation. Our curriculum lacks modules on practical aspects of research which leads to research becoming a completely extra-curricular, implying that the students have to learn everything on their own.

Summary Of Work

A student led research council, A.S.P.I.R.E. was established. Its activities were focused on building a peer-based environment to learn via module wise mentoring sessions and journal clubs. A live research database all the ongoing projects and vacancies therein was created which could be accessed by the students, thereby enabling them to get recruited as co-investigators in projects of their choice. Social media forums were also created to facilitate active discussion and remote learning. All of these activities were planned and executed by the students under the guidance of senior faculty. Effectiveness of these interventions were evaluated by conducting a prospective study, in which 92 1st Year MBBS students were included. Outcomes were evaluated at the end of 1st year (change in knowledge, attitudes, motivation & perceived skills) and 2nd year (change in research practices and projects undertaken) using self-designed, validated questionnaires.

Summary Of Results

There was a significant change in Knowledge (12.8±3.8, 19.3±4.8, P<0.001), Attitude (42.7±6.8, 54.4±7.9, P<0.001), Motivation (28.5±9.8, 39.2±11.1, P<0.001) & Skills (38.2±22.9,

62.7±22.2, $P<0.001$). A total of 44 research projects were initiated by 28 students with a median of 2 projects per student during the 2 years.

Discussion And Conclusion

Peer based intervention of a Student Research Council can improve the Knowledge, Attitudes, Motivation & Practices of UG Medical students towards Research. Interventions must be such that they are relatable and create a peer environment in the college that makes research easily accessible and enjoyable. Inspired by our impact, 6 other medical colleges have started research councils and adapted our working model.

Take Home Messages

A Student led Research council which conducts peer based activities can make research relatable, accesible and enjoyable for undergraduate students. Medical college must be encourged to form such concils to promote evidence based medicine and support student led innovations.

4F5 (0567)

Date of presentation: Monday 28th August
Time of session: 15:00 - 15:15
Location of presentation: Argyll III, Crowne Plaza

BUILDING PUBLIC HEALTH CAPACITY IN LOW-AND-MEDIUM INCOME COUNTRIES: THE PEOPLES-UNI EXPERIENCE

Manirakiza Joel Ruvugo[1,]

[1] *Joel Samson Ruvugo , Bujumbura, Republic of Burundi*

Background

In order to improve the health of the population and meet the Sustainable Development Goals, an educated Public Health workforce is essential. Peoples-uni, a charity registered in the United Kingdom, ran between 2008 and 2021 to help build Public Health capacity in low- and-middle-income countries (LMICs).

Summary Of Work

Open Educational Resources and an open source educational platform were used to develop and deliver Masters-level postgraduate teaching modules, by an international volunteer faculty. This allowed Peoples-uni to offer the education at very low cost. The programme was delivered fully online, and students could enrol in individual modules for Continuing Professional Development, but could also gain a Certificate, Diploma or Master's award. The tutors delivering this programme worked in more than 45 countries and facilitated online asynchronous discussions in small groups.

Summary Of Results

1736 students from more than 80 countries, mostly African enrolled and 562 students passed at least one module; 159 gained a masters award from Peoples-uni or one of the University partners , 45 gained a diploma and 96 a certificate. Graduates formed an Alumni group and are performing collaborative research, while some joined as tutors. An impact is seen on students and graduates, on their own careers, and on creating and applying evidence to improve the health of their populations. Attempts have been made to develop educational partnerships with two Universities in Tanzania, but these did not result in joint activities. The courses are all published under Creative Commons licences and freely available to others. The courses and curriculum have been adopted by four other educational organisations globally including in Africa and India.

Discussion And Conclusion

The online nature of the programme allows for scaling up to meet the major needs of Public Health in LMICs. The involvement in this educational initiative has been important, but there is much room for expansion of numbers. The programme organisers hope that others will use the positive experience from Peoples-uni to develop and run innovative programmes to build much needed global public health capacity.

Take Home Messages

The health of individual, household, community and population in any given setting need diversities of innovations to meet sustainable public health interventions. The execution of reach, benefit and empowerment embedded in the online practices will bring more students to enrol and graduate to implement culturally diverse public health interventions.

4F6 (0710)

Date of presentation: Monday 28th August
Time of session: 15:15 - 15:30
Location of presentation: Argyll III, Crowne Plaza

E-LbC: electronic Learning by concordance for teaching clinical reasoning

Hadeel Aboueisha[1], Enjy Abouzeid[2], Moataz Sallam[1], Wagdy Talaat[1]

[1] *Suez Canal University, Ismailia, Egypt* [2] *Ulster University, Londonderry, UK*

Background

Clinical reasoning is a crucial competency of health professional education and clinical practice. However, it is challenging to teach it to undergraduate medical students through a collaborative, personalized, and empowering experience.

Summary Of Work

Aim: To enhance undergraduate medical students' clinical reasoning skills by using online learning by concordance approach (LBC) to teach clinical reasoning and explore its effect on their clinical reasoning skills.

Methods: A Quasi-Experimental comparative (Pre-test/Post-test) study was conducted at FOM-SCU. This study ran into three phases. Pre-intervention phase: We have developed and administrated an online pre-script concordance test (SCT) using Wooclap app and designed the learning session. Intervention phase: We have used two online teaching approaches to teach two major themes in ophthalmology; the painless loss of vision theme by LbC approach and the Painful loss of vision by interactive lecture-based approach. During the post-intervention phase, we administrated an online post-SCT and online perception questionnaire.

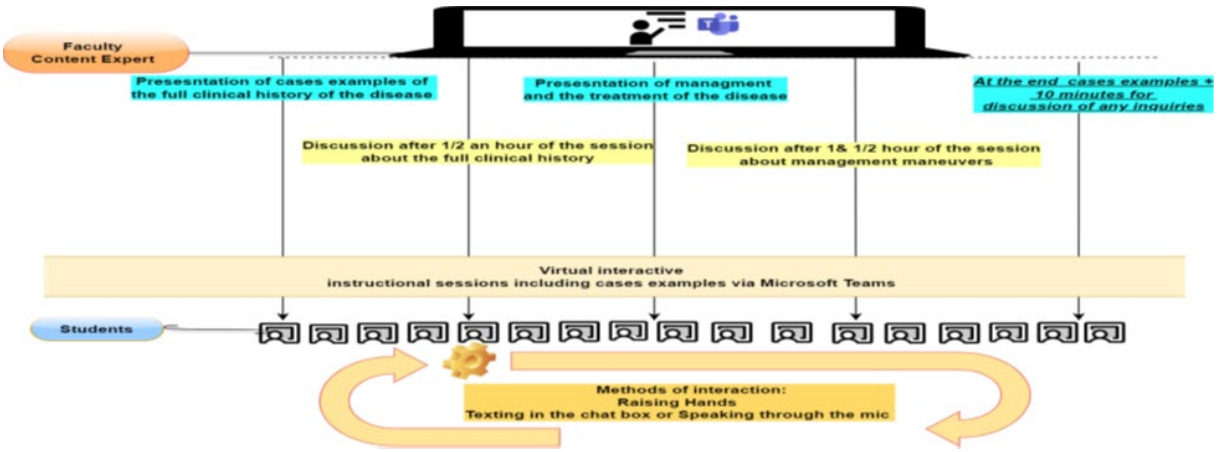

Figure 1: Painful vision Loss cases instructed by online interactive lectures via Microsoft teams.

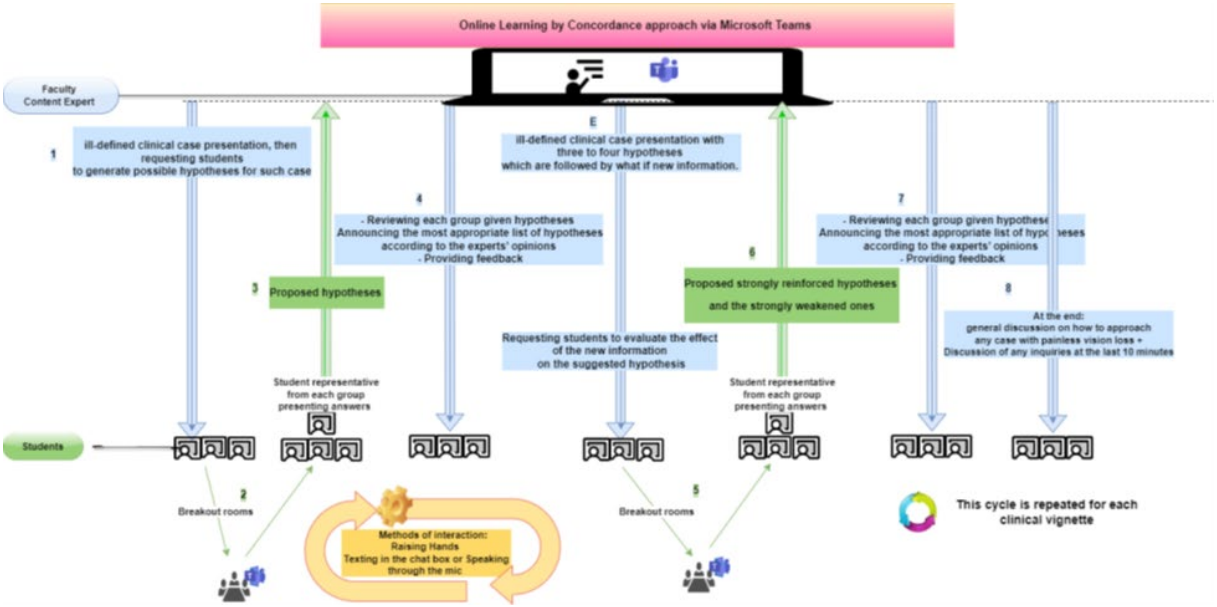

Figure 2: Painless vision Loss cases instructed by online LbC approach via Microsoft Teams.

Summary Of Results

There was no major difference between the total scores of the two groups in the pre-SCT. However, there was a statistically significant difference between the painless vision loss post-SCT and the painful vision loss post-SCT ($p < .001$). Paired T-test showed a statistically significant difference ($p < .001$) between post-SCT mean total scores and the pre-SCT mean total scores in both groups. Nevertheless, the effect size was large between the post-SCT mean total scores and the pre-SCT mean total scores (4.16) in the painless group. The students (62%) were satisfied with the online LbC approach as a teaching

method and (74%) reported that it aids in improving current clinical reasoning skills

Discussion And Conclusion

This study shows that the online learning by concordance approach has a positive influence on enhancing clinical reasoning skills and engagement. The students recognize the pedagogical value of the LbC and SCT and recommended these approaches as an instructional method for other clinical topics in their curriculum.

Take Home Messages

Online LbC approach declares a promising impact as an instructional approach for clinical reasoning skills.

Session 4G: Assessment: Assessment Design

4G1 (3042)

Date of Presentation: Monday 28th August
Time of presentation: 1400 - 1415
Location: Castle I, Crowne Plaza

An Experimental Comparison of Multiple-Choice and Short-Answer Questions

Brian Clauser[1], Janet Mee[1], Justin Wolczynski[1], Amy Morales[1], Miguel Paniaqua[2], Polina Harik[1], Peter Baldwin[1]

[1]NBME, Philadelphia, USA; [2]American College of Physicians, Philadelphia, USA

Background

Recent advances in automated scoring technology have made it practical to replace multiple-choice questions (MCQs) with short-answer questions (SAQs) in large-scale, high-stakes tests. However, most previous research comparing these formats has used small examinee samples testing under low-stakes conditions. Additionally, these studies have not reported on the time required to respond to the two item types. This study compares the difficulty, discrimination, and time requirements for the two formats when examinees responded as part of a high-stakes assessment.

Summary of Work

Seventy-one MCQs that had previously been administered as part of the United States Medical Licensing Examination were converted to SAQs. This produced matched items in each format. Items were randomly assigned to examinees completing a high-stakes assessment of internal medicine. No examinee saw the same item in both formats.

Summary of Results

Items administered in the SAQ format were generally more difficult than items in the MCQ format. The mean proportion of examinees answering correctly was 0.65 for SAQs and 0.80 for MCQs. The discrimination was modestly higher for SAQs (SAQ=0.19; MCQ=0.18). On average, responding to items in the SAQ format took 22 seconds longer (MCQ=83 seconds; SAQ=105 seconds).

Discussion and Conclusion

In general, these results support the interchangeability of MCQs and SAQs. When it is important that the examinee generate the response rather than selecting it, SAQs will be preferred. As in most previous studies, this study shows that SAQs are more difficult than MCQs. This study's modestly higher discrimination for SAQs is also consistent with previous studies. This suggests that for tests with an equal number of items, the SAQ form will be more reliable. Previous studies have not evaluated the relative time intensity of the two formats. For tests with equal testing times, the longer time required for SAQs more than makes up for the relative difference in reliability.

Take-home Message

The results of the present study (administered as part of a large-scale high-stakes test) are consistent with those of previous studies with regard the relative difficulty, discrimination, and evidence that the two formats measure the same construct. The longer response time for SAQs significantly impacts the efficiency of this format.

4G2 (4692)

Date of Presentation: Monday 28th August
Time of presentation: 1415 - 1430
Location: Castle I, Crowne Plaza

Video-Based Benchmarking: Addressing OSCE Examiner Variability in Medical Education

Rebecca J Edwards[1], Peter Yeates[1], Janet Lefroy[1], Robert McKinley[1]

[1]*Keele University, School of Medicine, Keele, UK*

Background

Objective Structured Clinical Examinations (OSCEs) are a common direct observation assessment used to monitor and certify clinical competencies. Despite their focus on standardisation, examiner variability remains problematic.

Examiner training shows limited success in reducing variability. Conversely, examiners' judgements can be influenced by preceding candidates' performances (i.e. contrast effects). We theorised that examiner training may lack sufficient specificity and proximity-in-time (i.e. time delay between training-OSCE) to reduce variability.

We developed and tested an intervention called Video-Based Benchmarking (VBB). This involves examiners assessing and receiving feedback on a station-specific OSCE performance shortly before scoring the target OSCE station, enabling mental comparison and adjustment to performance expectations.

Summary of Work

Intervention design was based on findings from our preceding realist evaluation. We used an internet-based experiment to test VBB's impact on score variance. Target performance order was counterbalanced; group assignment (intervention group and video order group) was randomised. Analysis was prespecified using Generalized Linear Modelling.

Summary of Results

82 examiners from UK Medical Schools participated. The model's explanatory power was weak (McFadden's R2=0.02); and no significant relationships between score variance, VBB (β=0.01, 95% CI[-0.04,0.07], p=0.61), and target video (β=0.04, 95% CI[-0.02,0.09], p=0.17) were found. Post-hoc analysis with a subset of examiners who showed greatest initial scoring discrepancy (>2-points from group mean) showed a significant difference (U=133; p<0.02; r=-0.36) between control (mean=3.01; n=19) and intervention groups (mean=1.84; n=24) on score variance for the borderline target performance.

Discussion and Conclusion

The null finding juxtaposes the preceding realist evaluation and wider literature indicating an impact of prior-performance information on subsequent judgements. Investigations suggest impact of confounding factors on model fit. Exploratory analyses suggest efficacy of VBB for examiners showing greater initial variation from the mean.

Comparing results with our previous realist evaluation, participants may require a larger dose (i.e. need to watch more videos), or additional support from procedural alterations (i.e. opportunity to discuss with peers) to resolve discrepancies. Alternatively, VBB may create a sense of increased confidence, or perception of adjustment without actual adjustment to frame of reference or scores.

Take-home Message

VBB may work best for examiners showing larger initial variation from the mean. Suggested intervention require investigation to determine efficacy and utility of VBB.

4G3 (5848)

Date of Presentation: Monday 28th August
Time of presentation: 1430 - 1445
Location: Castle I, Crowne Plaza

The design of an assessment template for OBE

Mariangela Esposito1

[1]*Royal College of Physicians of Ireland, Dublin, Ireland*

Background

The Royal College of Physicians Ireland (RCPI) has started the process of updating its Medical Training Curricula from a Minimum Requirements to an Outcome Based Education (OBE) model. Assessments have been redesigned through the pilot phases to facilitate the provision of structured feedback and trainer reporting on performance.

Summary of Work

One key aspect of OBE is prioritising the quality and frequency of feedback. This is particularly relevant for high-stake outcomes in terms of medical risk, responsibility and capability. For this reason, the model of Entrustable Professional Activities (EPA) has been included in the design of the OBE assessment at RCPI.

The EPA model is particularly relevant for OBE's Workplace-Based Assessments (WBAs) as trainers judge trainees' readiness for autonomy on a specific outcome primarily by using direct evidence of competence. EPAs are usually linked to specific learning outcomes, so they are independently executable, observable, and measurable, therefore, suitable for entrustment decisions.[1]

RCPI has designed a new ePortfolio form template to capture feedback for OBE's WBAs. This form called "Feedback Opportunity" is designed to adapt to any specialty and has a customisable section that links to specific types of WBAs.

Summary of Results

The form's main purpose is to ensure that feedback is regularly provided to trainees for all the available training opportunities. Feedback is provided by an “assessor” who can be the assigned trainer, other trainers, peers, or healthcare staff witnessing the trainee’s performance.
For high-stakes outcomes, an additional section of the form can be filled out according to the EPA model. The design of this section considers the level of independence/responsibility in a clinical task by a trainee, but it takes into consideration also a process of remediation/improvement/accountability by recommending frequency of re-assessment.

Discussion and Conclusion

By presenting the design of this form we aim to generate a discussion on the nature and limitations of assessment in OBE. We hope to gather feedback to continue to improve this template and facilitate the assessment experience for trainees and trainers.

Take-home Message

- Assessment template for OBE should include EPA
- Unique and customizable OBE assessment template

4G4 (5777)

Date of Presentation: Monday 28th August
Time of presentation: 1445 - 1500
Location: Castle I, Crowne Plaza

Sometimes a hawk, sometimes a dove: applying the Many facet Rasch Model to intra examiner severity bias in performance assessment

Imogene Rothnie1, Chris Roberts1, Leo Davies1

[1]*University of Sydney, Sydney, Australia;*

Background

A common threat to the validity of performance ratings in clinical competence assessment is examiner bias. There is consistent evidence that in any cohort of examiners, there will be relative levels of severity: 'doves' and 'hawks'. This relative difference in examiner severity has been manageable through sampling when examiners' severity is internally consistent, but this consistency may fail when examiners interact with other facets in an assessment, for example, examiner bias towards particular groups of candidates.

One little explored area is whether intra-examiner severity remains stable in the context of domains of performance assessed, which may have implications for the validity of score interpretations across a range of assessments. This study investigated the stability of intra- examiner severity levels when applying domain-based performance ratings in a medical student Objective Structured Clinical Examination (OSCE).

Summary of Work

The study focus was a 285 candidate, 12-station OSCE with a single examiner per station. Examiners used a 5-point scale with an accompanying rubric to rate performance in three domains on each station (knowledge application, communication and task organisation). Scoring data were analysed using the Many facet Rasch model. Chi-square analysis used for testing the significance of interactions between examiners' overall severity and domain.

Summary of Results

There were 618 examiner-domain interactions (206 examiners * 3 domains). Chi-square = 1,286.7 (618) was significant at $p < 0.001$. Nearly one third of examiners (n= 65) consistently altered their severity in at least one domain. Twenty-five examiners systematically awarded lower ratings in one domain and higher ratings in another.

Discussion and Conclusion

These changes in intra-examiner behaviour created significantly unexpected ratings for numerous students, threatening the validity of score interpretations as measures of student proficiency. The MFRM analysis addresses bias with numeric adjustments to affected scores but cannot reveal the underlying cause, e.g. bias may be attributable to individual examiners' conceptualisations of the task, professional backgrounds or even internal weighting of the domain. Further work could explore this qualitatively.

Take-home Message

In performance assessments, intra-examiner severity can manifest as bias towards different performance domains. Psychometric or examiner feedback mechanisms are valuable in reducing threats to the validity of score interpretations this source of bias presents.

4G5 (3408)

Date of Presentation: Monday 28th August
Time of presentation: 1500 - 1515
Location: Castle I, Crowne Plaza

Testing, spacing and interleaving improve exam scores among medical students in a randomzied trial

Håvard Ulsaker1, Ida Sara Johnsen1, Rune Standal2, Tobias Schmidt Slørdahl3, Børge Lillebo4

[1]Department of Circulation and Medical Imaging, Norwegian University of Science and Technology (NTNU), Trondheim, Trondheim, Norway; [2]IT Development Section, Norwegian University of Science and Technology, Trondheim, Norway; [3]Department of Circulation and Medical Imaging, Norwegian University of Science and Technology (NTNU), Trondheim, Norway, Trondheim, Norway; [4]Clinic of Medicine and Rehabilitation, Levanger Hospital, Nord-Trøndelag Hospital Trust, Levanger, Norway

Background

Testing, spacing and interleaving are proven beneficial on learning in several studies. The designs of such studies have been simple (e.g. foreign words) and the strategies have rarely been evaluated together. This study investigated if testing, spacing and interleaving applied in an integrated MD program promote knowledge retention.

Summary of Work

Students in five of six study years in the MD program at the Norwegian University of Science and Technology were invited to optionally solve five-six tests spaced throughout the semester for three semesters. Each test consisted of 30 interleaved MCQs from subjects tested on end-of-semester/-year summative exams, which tested all subjects of the respective term. By stratified randomization, each student was tested in half of the exam subjects. The difference in weighted average scores between tested and non-tested exam subjects was analyzed, with students serving as their own controls. Project approval was granted by the Norwegian Centre for Research Data. Participants submitted informed written consents.

Summary of Results

Out of 1500 students taking the exams, 808 completed all or all but one test and were analyzed. Students achieved on average 1.2±8.3% higher exam scores in tested compared to non-tested subjects (95% CI 0.1–1.8, p<0.001). For minor exam subjects (<4% of the exam), the average difference between tested and non-tested subjects was 2.4±18.9% (95% CI 1.1–3.7, p<0.001). There was no significant effect on major exam subjects (the two-four largest subjects) with a score difference of -0.1±17.6% (95% CI -1.3–1.1, p=0.901). The score difference was 1.6±8.1% (95% CI 0.9–2.2, p<0.001) for end-of-year exams and 0.1±8.7% (95% CI -1.1–1.3 p=0.926) for end-of-semester exams. There was no statistical difference between high- and low-scoring students.

Discussion and Conclusion

Testing, spacing and interleaving showed improved exam scores in the present intervention. Although the absolute effect size was limited, the difference seems non-negligible considering that exam scores largely were distributed between 70% and 90%. Students benefited more from the intervention on end-of-year compared to less extensive end-of-semester exams, and the effect was greater for minor than major exam subjects.
RP0927/SC

Take-home Message

Testing, spacing and interleavning are benefical on knowledge retention when applied as an entity in an integrated MD program.

4G6 (1379)

Date of Presentation: Monday 28th August
Time of presentation: 1515 - 1530
Location: Castle I, Crowne Plaza

Unpacking Causal Mechanisms in Programmatic Assessment using Critical Realist Frameworks

Priya Khanna[1], Chris Roberts[1], Stuart Lane[1]

[1]*University of Sydney, Sydney, Australia*

Background

Contemporary medical education innovations such as programmatic assessment require complexity-consistent approaches in evaluating the outcomes. While realist evaluation is becoming increasingly popular, it has been critiqued for its positivist underpinnings. Critical Realism is an ontological perspective that enables researchers in unpacking causal mechanisms that go beyond the empirical data. In this presentation, we describe the application of critical realist perspectives in understanding the outcomes experienced by students and faculty in a large-scale implementation of programmatic assessment.

Summary of Work

Data involved in-depth focus groups and interviews with years 1-3 medical students, faculty (learning advisors), and a rapid narrative literature review. Various modes of inference (induction, abduction, and retroduction) were used as methods for data coding. Critical Realist ontological stratification and the concepts of morphogenesis enabled unpacking conditions that may impact the sustenance and growth of programmatic assessment as a complex change.

Summary of Results

We found a significant mismatch between the intended program theories and reported outcomes. The underlying causal mechanisms involved three themes: anomie (sense of alienation and dysfunctionality); agnosis (superficial implementation without attention to structural agility and cultural adaptability) and agenesis (naïve and eclectic system of

assessment without attention to underlying education design). Retroducing the real involved interplay between assessment structures and cultural systems that provided conditions (constraints and enablers) and conditioning (acceptance or rejection of new 'non-traditional' assessment processes) that impacted the agency of students and faculty.

Discussion and Conclusion

In a complex change, it is critical to ensure a balance between agency, structure, and culture that can be achieved via agility in assessment structures, explicit integration of curricular design, and addressing changing learning culture to promote faculty and students' acceptance and trust related to the new norms, beliefs, and behaviors in assessing for, as and of learning.

Take-home Message

Critical realist framework and methodological inferences of abduction and retroduction can provide more meaningful and contextualised insights into evaluating the outcomes of a complex phenomenon such as programmatic assessment which is not just an educational but also a socio-cultural change. Understanding the interplay and balance between structure-culture and students' and faculty's agency is critical to sustaining such radical reforms.

Session 4H: Designing and Planning learning: Curriculum Evaluation

4H1 (6193)

Date of Presentation: Monday 28th August
Time of presentation: 1400 - 1415
Location: Castle II, Crowne Plaza

Early clinical exposure and barriers to student confidence to clinical examination

Kirsty Abraham1, Neil Harrison1, Ellie Hothersall1, Jennifer Kennedy 1

[1]*University of Dundee, Dundee, UK*

Background

Early clinical exposure is increasingly common amongst medical schools however in recent years, the COVID pandemic, NHS pressures and increasing medical student numbers have changed and shaped medical programmes, with the clinical experience of early year students and patient contact being disproportionally affected.

Summary of Work

Using an email-based questionnaire we looked to understand student experience of early clinical exposure in year 1-3 of the MBChB programme. 120 of 676 students responded (18%), 2 were removed as they were not in the correct student cohort. Responses which were significant outliers or commented on a non-core module increasing their numbers were excluded, as these were not deemed part of the core curriculum.

Summary of Results

Students in year 1-3 reported seeing an average of 2.25 patients in an academic year (range 0-17), whilst they reported taking a history from 1.84 patients (range 0-17) but examining just 0.74 patients (range 0-5). Examinations were infrequently done under supervision, averaging 0.28 patients a year. Student-reported confidence in examining

students is low and remains low until they reach their fourth year of the course. Student-reported confidence in history taking is higher. The students identified several barriers to examining patients, which fell into several themes; lack of opportunity (n=81), worry about patient discomfort (n=20), lack of confidence (n=11) and lack of supervision (n=11).

Discussion and Conclusion

There are some limitations to this study, as the year studied (2021-2022) was immediately post-COVID pandemic, and there may be a degree of lag of impact on experience and confidence. The findings are based on data which are self-reported retrospective accounts of the previous academic year. However, if we wish to continue to prepare students well for practice and offer early patient contact, then we need to address these barriers. Moreover, with the NHS workload showing no signs of reducing and the number of students set to increase, we need to identify sustainable ways of improving early clinical contact and experience for our students.

Take-home Message

Early clinical exposure is increasingly difficult to deliver due to increasing capacity.
The main student reported barriers to examining patients include lack of opportunity, worry about patient discomfort and lack of confidence and supervision.

4H2 (0402)

Date of Presentation: Monday 28th August
Time of presentation: 1415 - 1430
Location: Castle II, Crowne Plaza

Evaluation of a students-guided program to prepare nursing students for the OSCE

Rinat Avraham1, Ayala Katz1, Eitan Gur1, Daniel Dahan1

[1]*Ben-Gurion University of the Negev, Beer-Sheva, Israel*

Background

Objective Structured Clinical Examination (OSCE) is a stressful event and anxiety associated with the OSCE may affect students' performance. Good preparation for the OSCE should include both skills training and stress coping strategies, which may be performed by peers. This work present the evaluation of a program aimed at preparing students for their OSCE, developed and lead by peers and its effect on students.

Summary of Work

The program was developed for second-year nursing students (N=84), lead by advanced-year nursing students, and supervised by a faculty member. The program took place at the end of the course, before the OSCE, and included three sessions: nursing skills, a sequence of an OSCE station, and stress reduction strategies. A questionnaire evaluated the program in terms of participants' satisfaction, learning and behavioral outcomes. Participants were free to write personal notes regarding the program at the end of the questionnaire.

Summary of Results

Most participants were very satisfied with the nursing skills practice (82%), sequence of OSCE station (85%), and stress reduction strategies session (64%), and believed that they will recommend it in the future (82%, 84%, and 71%, respectively). Seventy six percent felt that the nursing skills practice developed their independent learning, as well as 82% with regard to the sequence of an OSCE station. Sequence of an OSCE station was found to be

the most helpful session for coping with the OSCE (95%), followed by nursing skills practice (94%) and stress reduction strategies session (88%). Five themes were derived from the thematic analysis of the participants' notes: knowledge enhancement, stress reduction, increase in self-confidence, organization of thoughts, and peer support.

Discussion and Conclusion

The program promoted students' competencies and reduced stress associated with the OSCE. By involving advanced students in educational programs, all sides benefit. Additional advantages are the opportunity to minimize faculty resources, and to expose and attract advanced students to the field of nursing education.

Take-home Message

Integrating advanced students into training programs for their peers is effective and may be empowering for both the giver and the receiver.

4H3 (2409)

Date of Presentation: Monday 28th August
Time of presentation: 1430 - 1445
Location: Castle II, Crowne Plaza

Effects of unfolding case study on nursing students' clinical reasoning, self-learning, and team cooperation

Ching-Yu Cheng[1], Shwu-Ru Liou[1], Chang-Chiao Hung[1]

[1]*School of Nursing & Nursing Department, Chang Gung University of Science and Technology, Chiayi, Taiwan*

Background

Based on problem-based learning, the unfolding case study reflects patients' constantly changing conditions to allow learners to learn from the process of completing tasks. The study aimed to develop an unfolding case and test its effectiveness in improving students' clinical reasoning, self-directed learning, and group cooperation abilities.

Summary of Work

An unfolding case, post-mastectomy wound infection and debridement care, was developed based on the clinical reasoning and unfolding cases models. The case study includes three segments and five stages that are conducted sequentially. Each stage contains stage goals, patient scenarios, focused questions, student tasks, pre-prepared answers, and mini-lectures. Some essential information about the patient is provided at first and more information is given after students complete tasks in each stage. Forty nursing students practiced the case study and completed the Nurses Clinical Reasoning Scale (NCRS), Self-Directed Learning Instrument (SDLI), and Questionnaire of Group Responsibility and Cooperation in Learning Teams (CRCG). Nine students participated in focus group discussions. Spearman correlation and regression were used to analyze quantitative data whereas content analysis for qualitative data.

Summary of Results

Scores on the NCRS, SDLI, and CRCG increased significantly at the posttest. Scores of NCRS, SDLI, and CRCG intercorrelated significantly. SDLI and CRCG could explain 82.9% of the

variance of NCRS. 65% of students thought the unfolding case study was more helpful than traditional case studies. Unfolding case studies could be described as a “reflection of clinical changes” and “practical application.” Because every stage of the case study contains scenarios, discussions, feedback, and mini-lectures, students can reflect on their own learning promptly, improve “patient-centered multidimensional data collection and analysis,” “learn from others,” and “think deeper and thoroughly.” Unfolding case studies can be applied to all subjects, especially patients with unstable and complicated conditions.

Discussion and Conclusion

The results were similar to previous studies that unfolding case studies enhanced students’ critical thinking abilities. Integration of films in patient scenarios and a combination of simulations is suggested in the future development of unfolding case studies.

Take-home Message

Integration of clinical reasoning processes and best care practices is suggested while developing the unfolding case studies. Learners are encouraged to work with teammates while implementing the case studies.

4H4 (6390)

Date of Presentation: Monday 28th August
Time of presentation: 1445 - 1500
Location: Castle II, Crowne Plaza

Can we use student assessment for learning as a source of feedback to curriculum and teachers?

Julius Josef Kaminski[1], Hans Hellfried Wedenig[1], Anne Franz[1], Harm Peters[1]

[1]*Dieter Scheffner Center for Medical Education, Charité – Universitätsmedizin Berlin, Berlin, Germany*

Background

TELLme, an online learning platform, has recently been implemented for the integrated, modular undergraduate medical curriculum at the Charité - Universitätsmedizin Berlin. The platform allows medical students to formatively self-test with multiple-choice questions (MCQs) linked to specific cognitive learning objectives (LOs). While the benefits of test-based learning and formative feedback for learners are well established, this study explores the potential of a formative MCQ-based plattform to provide feedback to the curriculum and teachers themselves.

Summary of Work

The analysis is based on SQLite queries of two million initial certainty-based assessment responses collected in TELLme between 04/2021 and 04/2022, comprising 5376 MCQs on 2596 LOs. For each LO, the proportion of incorrect answers (0.3 ±0.14) and incorrect answers of medium certainty (0.04 ±0.024) and high certainty (0.035 ±0.024) were evaluated. The data set was then reduced to LOs for which at least 200 MCQ responses were available and whose certainty statements deviated by more than 1 SD from the mean. The selected conspicuous MCQs were examined in more detail qualitatively with regard to the alignment of LOs, MCQs and teaching materials.

Summary of Results

We identified 264 LOs (10% of all curricular LOs) with a manifest clustering in 5 modules (Blood and Immune System; Heart and Circulation; Nutrition, Digestion and Metabolism; Respiration; Kidney/Electrolytes). An analysis of module core subjects provides further insights, as illustrated for physiology and pulmonology as core subjects of the module 'Respiration': 17% of all physiology LOs (39/226) and 18% of all pulmonology LOs (4/22) show presumably certain incorrect response behaviour. A qualitative probing of the associated learning objectives, teaching materials and self-testing MCQs indicates a suboptimal alignment of the identified learning objectives.

Discussion and Conclusion

Our study shows that student responses in a formative MCQ-based learning platform reveal curricular misalignments between LOs, MCQs and teaching materials, thereby providing valuable feedback to the curriculum and its teachers. A qualitative approach will allow more insight into the how and why, for example through focus groups with teachers and curriculum managers.

Take-home Message

Data sets from formative self-tests are not only valuable for learners, but can also be used as a source of feedback for the curriculum and their teachers.

4H5 (4916)

Date of Presentation: Monday 28th August
Time of presentation: 1500 - 1515
Location: Castle II, Crowne Plaza

Exploring preclinical students' experience of using concept mapping in integrating basic and clinical sciences

Irene Lee[1], Peiyan Wong[1], Ignasius Jappar[1], Suzanne Goh[1]

[1]*Duke-NUS Medical School, Singapore, Singapore*

Background

In a preclinical course, where Team-Based Learning (TBL) is the primary instructional method, learners undergo application exercises that build and emphasise clinical correlation. However, research has shown that novice learners need more guidance when handling unfamiliar information. The “conceptual coherence” model suggests that forming an explicit connection between basic and clinical sciences supports cognitive integration. Therefore, we incorporated concept mapping in the application exercises. Students created concept maps connecting the basic sciences underlying diseases and clinical manifestations. The subsequent questions were scaffolded in complexity to support the development of critical thinking skills. During the faculty-facilitated discussion, students would elaborate on their maps and receive feedback. This enhanced revision of key basic science learning points in a clinical context, which was reinforced by expert faculty sharing their clinical approaches. We aimed to explore if these changes, grounded by a “conceptual coherence” framework, better facilitated the students’ learning experience with basic science content.

Summary of Work

To describe students' learning experiences with the introduction of concept maps, we performed a thematic analysis on the qualitative feedback from a semester’s worth of session evaluations. Additionally, we determined students' ratings for the perceived clinical relevance of the course, based on a Likert scale that ranged from 1 (Strongly disagree) to 5 (Strongly agree).

Summary of Results

The thematic analysis identified key themes such as "explicit connection to the relevance of learning basic science concepts," "engaging and excellent faculty delivery of the session," and "more preparation needed for students with clearer expectations". Students also rated the clinical relevance of the course as 4.29 (SD 0.76).

Discussion and Conclusion

Our preliminary findings suggested positive learning experiences, with the changes grounded in the framework of conceptual coherence. In the thematic analysis, we uncovered some challenges of concept mapping within a TBL session, such as the limited time to prepare a concept map. Further assessment of students' perceptions of how concept map activities helped them make explicit connections between basic science concepts with clinical cases and retain basic science content, will be of interest.

Take-home Message

While in-depth studies are required, our preliminary findings supported concept mapping in the preclinical course.

Session 4I: Faculty Development: Leadership / Mentorship

4I1 (6332)

Date of Presentation: Monday 28th August
Time of presentation: 1400 - 1415
Location: Castle III, Crowne Plaza

"Leading in Learning" - Developing educational leaders to enhance curriculum design

Kerrin Begg[1], Lakshini McNamee[1], Jacky Van Wyk[1], Elmi Badenhorst[1], Busayo Ige[1], Gregory Doyle[1], Lunelle Pienaar[1], Steve Reid[1], Francois Cilliers[1]

[1]*University of Cape Town, Cape Town, South Africa*

Background

Compelling reasons exist for curriculum change in health professions education at the University of Cape Town (UCT), nationally, and internationally. Leadership is a key element in processes of envisioning, developing and implementing the change. Faculty development programmes, however, typically focus on course-level skills and planning and offer minimal input on change management and leadership.

Using government grant funding, an Educational Leadership fellowship (ELF) programme was developed for emerging leaders involved in the process of curriculum redesign. Fellows were nominated by their Heads of Department as they are expected to play a role in their own disciplines in line with institutional priorities determined through a consultative process of curriculum transformation.

Summary of Work

The 12-month project-based ELF was implemented with the purpose of enhancing the quality of educational leadership and curriculum design, through the development of individual and collective agency to lead educational change. The programme design included several interweaving elements: monthly contact sessions, an interprofessional multidisciplinary community of practice, and collaborative curriculum renewal projects

aligned to the broader transformation process. The programme itself was further interwoven with Curriculum Transformation workshops where fellows were able to participate and influence the engagements.

Summary of Results

At the conclusion of the first cohort of 35 fellows, we identified some key lessons: 1) Collaborative, co-creative curriculum change is possible when conducive spaces are made available; 2) Modelling is imperative in the design and implementation, "practicing what we preach"; 3) Adaptability is necessary to accommodate the various degrees of educational scholarship represented; 4) Reflections are necessary and powerful for personal and organisational culture change; 5) Embedding the intervention into organisational governance structures enables sustainability; and 6) Collective agency is realised when a critical mass of fellows engages collaboratively in organisational change initiatives.

Discussion and Conclusion

ELF as an intra-institutional intensive longitudinal faculty development programme is novel in South Africa, merging faculty development for leadership, educational scholarship and change management with a focus on curriculum transformation. A further innovation is the focus on collective agency and leadership, and the collaborative co-creative approach to the fellowship and curriculum design.

Take-home Message

ELF is a valuable model for building a community of practice, capacitate educational leaders and change agents.

412 (3692)

Date of Presentation: Monday 28th August
Time of presentation: 1415 - 1430
Location: Castle III, Crowne Plaza

Resilience: Perspectives of Hong Kong Medical Educators

Linda Chan1, Ganotice Fraide A.1, Julie Chen1, Carmen Ka Man Wong2, Eric Yuk Fai Wan1, Tai Pong Lam1, Samuel Yeung Shan Wong2, George Tipoe1

[1]Li Ka Shing Faculty of Medicine, The University Of Hong Kong, Hong Kong, Hong Kong; [2]JC School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong, Hong Kong

Background

The COVID-19 pandemic has negatively impacted the mental health of healthcare practitioners and learners worldwide to the detriment of patient care and healthcare systems. Resilience has clearly emerged as an important quality which medical educators are uniquely positioned to support, both in themselves and their learners. Yet, empirical research examining resilience among medical educators in Asia including Hong Kong (HK) remains sparse. Therefore, this study aims to explore resilience among HK medical educators and specifically, the factors they perceive as fostering and undermining their resilience.

Summary of Work

This work represents the qualitative portion of a multiphase mixed-methods study. Maximum-variation sampling was employed. Participants were HK-based medical educators affiliated with the city's two medical schools who were involved in teaching medical students, trainees and/or doctors. Semi-structured individual interviews were conducted which were video-recorded and transcribed anonymously. Participants' sociodemographics were also collected anonymously so as to characterise our sample. Thematic framework analysis was used to analyse the qualitative data.

Summary of Results

20 medical educators participated in the study and reported multidimensional factors as impacting their resilience. However, key patterns identified across the data suggested that resilience was seen to be predominantly promoted by individual factors such as personal traits, skills and abilities. In contrast, external aspects such as the organisation and the learning or practice environment were mainly perceived as undermining.

Discussion and Conclusion

To our knowledge, this is the first study in HK and Asia to explore medical educators' perspectives on factors fostering and undermining their resilience. The perceived dichotomy between supportive internal factors and undermining external ones suggests that there is room for faculty development initiatives which encourage educators to consider external factors alongside internal ones when fostering resilience.

Take-home Message

Multidimensional factors were reported by medical educators as influencing their resilience although individual factors were mainly perceived as resilience promoting, while external aspects were undermining.

Faculty development initiatives could raise awareness among medical educators about the importance of considering external factors in addition to individual aspects when addressing resilience.

413 (4547)

Date of Presentation: Monday 28th August
Time of presentation: 1430 - 1445
Location: Castle III, Crowne Plaza

A needs analysis for training faculty supervisors of medical student research projects.

Joanne Hart[1], Rajneesh Kaur[1], Mary-Jane Yang[1], Annette Burgess[1], Richmond Jeremy[1]

[1]*The University of Sydney, Sydney, Australia*

Background

Medical students undertake research projects to develop research skills to support evidence-based practice and promote future research endeavours. The University of Sydney Doctor of Medicine (MD) Program has a mandatory, 14-week research project (MD Project). This involves >260 individual student research projects and >180 project supervisors including clinicians, biomedical scientists, public health experts and other academics, who may not be trained in research supervision skills. This contrasts with higher degree research (HDR: Masters or PhD) project supervisors, who are required to undertake significant training. We undertook a needs analysis for training faculty supervisors of short medical student research projects.

Summary of Work

Two information sources were used to summarise training goals for MD Project supervisors: a scoping review of the literature and exploring supervisors' views through surveys and in-depth interviews. Data were analysed using descriptive statistics and thematic analysis.

Summary of Results

Although much has been written regarding HDR supervisor training, we found a paucity of literature regarding supervisor training for non-HDR projects. Common training topics included: program administration and degree requirements, managing timelines and

goal setting, and managing student-supervisor relationships and expectations. Surveying research supervisors (n=197, 77% response rate) indicated a third wanted more guidance. Of these, 62% needed information on program delivery requirements, 17% on study design and statistics and 10% wanted advice on dealing with student difficulties. In-depth interviews supported the survey findings, also revealing a need for greater access to library services. Supervisors also reported gaining satisfaction from their roles and developing their skills through collaborations with other supervisors.

Discussion and Conclusion

Training needs for supervisors of medical student research projects are consistent with those reported for HDR supervisors. The MD Project supervisors are time-poor clinical and academic staff, which needs to be considered for effective uptake and success of any training program. Further investigation regarding the best methods of delivering a supervisor training program are needed.

Take-home Message

Supervisors of medical student research projects would benefit from training for that role. Training needs are consistent with those of HDR supervisors. The best methods of delivering a supervisor training program are to be determined.

414 (4306)

Date of Presentation: Monday 28th August
Time of presentation: 1445 - 1500
Location: Castle III, Crowne Plaza

Humility in Medicine: An Integrative Review

Caroline Matchett[1], Ellen Usher[1], John Ratelle[1], Andrea Leep Hunderfund[1], Diego Suarez[1], Adam Sawatsky[1]

[1]*Mayo Clinic, Rochester, USA*

Background

The modern-day professionalism movement depends on virtues to undergird and sustain it. Competency-based curricula require that trainees exhibit behaviors associated with the virtues of integrity, compassion, and humility. Humility may be the most challenging virtue to understand and practice. This may be due to contrasting conceptualizations of humility and its role in medicine. This study aims to develop a cohesive conceptualization of physician humility in medical practice and define its functions and implications.

Summary of Work

This integrative review followed the methods outlined by Whittemore and Knafl. We searched PubMed, Ovid MEDLINE, Web of Science, EMBASE, ERIC, and PyscINFO from database inception through July 7, 2022. English-language empirical studies, perspectives, and editorials pertaining to the investigational aim were included. An applied thematic analysis was conducted. Two authors reviewed a subset of the articles and developed a codebook. Articles were reviewed in duplicate and coded. A third author resolved conflicts. As a research team, we reviewed coding, organized themes in relationship to the study aim, and refined themes through group discussion.

Summary of Results

Of 958 potential articles, 49 met the inclusion criteria. We identified an integrative definition of physician humility, functions of humility in medical practice, and tensions related to the concept of humility. From our review, we derived a nuanced conceptualization of what humility is – e.g., honest self-disclosure, unpretentious

openness, low self-focus – and what humility is not – e.g., low self-esteem, self-deprecation, meekness. Humility is integral for clinical practice, with connections to reflective practice, navigating ambiguity, responding to medical mistakes, team-based collaboration, and interpersonal communication. The professional imperative to act with humility can generate internal tension. The virtue may seem inconsistent with justifiable pride and confidence in practice. Patients may be skeptical of a physician who acknowledges their limitations too readily, and clinical educators may experience challenges in teaching or measuring humility.

Discussion and Conclusion

Humility in medicine is a rich, multidimensional construct with numerous implications for medical training and practice. These findings contribute to the discourse in medical education and professional development on humility in clinical practice.

Take-home Message

Physician humility is a multifaceted construct with many implications for medical education and practice.

415 (5561)

Date of Presentation: Monday 28th August
Time of presentation: 1500 - 1515
Location: Castle III, Crowne Plaza

Mentor Development: Addressing skills needed in academic medicine for effective mentorship

Janine Shapiro1, Camille Martina1, Alfred Vitale2, Rebecca Laird2, Edwin van Wijngaarden1

[1]University of Rochester School of Medicine and Dentistry, Rochester, NY, USA; [2]University of Rochester, Rochester, NY, USA

Background

The University of Rochester's Clinical Translational Sciences Institute developed the "Ever Better Mentoring" hybrid course. The 6-week online portion of the course is open for 6-weeks and is self-regulated. There are a total of 13 case studies situated within eight mentoring components. Before starting the course, participants must first complete the Mentor Competency Self-Assessment, a validated tool to evaluate skills of research mentors.

Summary of Work

The survey data was collected using REDCap (Research Electronic Data Capture), a secure, web-based software platform. The self-assessment covered 24 questions in eight mentoring components: 1. Aligning expectations, 2. Promoting professional development, 3. Maintaining effective communication, 4. Assessing understanding, 5. Mentee self-efficacy, 6: Addressing diversity, 7. Fostering independence, and 8. Navigating mentoring networks. The results were used to inform the knowledge and skills needed by our course participants and to direct the content of the 90-minute seminar. Areas that were below an average of 4.5 on a 7 point Likert scale were considered an area of need.

Summary of Results

Nineteen participants completed the survey and the online asynchronous portion of the course, and attended the virtual session. Academic appointments included senior

instructor (1), assistant professors (5), associate professors (6), and professors (7). The majority (78.9%) had formal mentoring relationships with a trainee or a junior faculty. The average number of mentees was 5.2 (range 0 to 15). The survey data identified areas below a sum average of 4.5 on a 7 point Likert scale in 12 of the 24 questions. They were: 1) aligning your expectations, 2) estimating your mentee ability, 3) helping network effectively, 4) setting research goals, 5) assessing mentee knowledge, 6) motivating mentee, 7) considering how differences may impact my expectations, 8) accounting for biases and prejudice, 9) accounting for different backgrounds of mentor and mentees, 10) stimulating creativity, 11) Negotiating a path to professional independence, and 12) coordinating with other mentors. The area of greatest need were components 5, 6, 7 and 8.

Discussion and Conclusion

The Mentor Competency Self-Assessment helps to identify the knowledge and skills needed by mentors.

Take-home Message

The results from this study can guide the design and implementation of faculty development programs in mentoring.

Session 4J: Interprofessional & Team Learning 1

4J1 (5765)

Date of Presentation: Monday 28th August
Time of presentation: 1400 - 1415
Location: Alsh 1, Loch Suite, SEC

Development of a training programme for trainee advanced clinical practitioners in a new Frailty Hospital at Home service

Bethan Arnold[1], Katy Baker[1], Fiona Green[1], Esther Hindley[1], Kelly Hunt[1], Vikky Morris[1], Hannah Podger[1], Lucy Pollock[1], Julie Vale[1]

[1]*Somerset NHS Foundation Trust, Taunton, UK*

Background

"Hospital at Home" or virtual ward services are an increasingly popular way of delivering care to patients, including older people living with frailty. Various staffing models exist, with services often relying on advanced clinical practitioners (ACPs) to provide much of the direct clinical care. Somerset Frailty Hospital at Home is a new service covering a large, predominantly rural area, with a workforce consisting mostly of trainee ACPs from various disciplines. These factors, combined with the need for seven-day working, make training challenging.

Summary of Work

This project seeks to design and evaluate a training programme to support the development of Frailty Hospital at Home ACPs, complementing existing Advanced Clinical Practice Masters courses. The programme comprises weekly small-group videoconference teaching, regular in-person simulation and clinical skills sessions, monthly peer-delivered sessions, and integrated workplace-based training. Qualitative feedback was obtained after a selection of didactic sessions, as well as before and after the first simulation session.

Summary of Results

The first simulation session was facilitated by a team comprising an ACP, a nursing clinical skills facilitator, physicians, and a simulation technician. It included seven participants from both nursing (n=4) and physiotherapy (n=3) backgrounds. Only one participant had previous simulation experience.

Following the session, which covered assessment of the acutely deteriorating frail patient, capacity assessments and treatment escalation plan (TEP) discussions in four integrated cases, 6/7 participants improved from feeling 'not very' or 'not at all confident' to 'slightly confident' at performing an A to E assessment. Confidence in discussing TEP with patients and next of kin also improved. Confidence in assessing unwell patients' capacity, however, did not improve substantially.

Aspects of the session that were highlighted positively included the psychologically safe and supportive learning environment created by the facilitators.

Discussion and Conclusion

Qualitative feedback and trainee availability have both impacted the design and delivery of our training, including simulation. Future sessions will build on this, including with community-based simulations to better imitate virtual ward assessments.

Take-home Message

Simulation can be an effective way to teach skills including clinical assessments and TEP discussions to practitioners from multiple professional backgrounds.
Teaching capacity assessments via simulation may require a more focused approach.

4J2 (3058)

Date of Presentation: Monday 28th August
Time of presentation: 1415 - 1430
Location: Alsh 1, Loch Suite, SEC

"What should I do when I get home from the hospital?" - An IPE Patient Discharge Training Competency-based Assessment

Linda Chang1, Dawn Mosher2, Radhika Sreedhar3, Martin MacDowell 1, Paul Chastain1, Heidi Olson1

[1]University of Illinois Chicago- Rockford, Rockford, USA; [2]Saint Anthony College of Nursing, Rockford, USA; [3]University of Illinois Chicago, Chicago, USA

Background

Almost 1 in 5 patients report an adverse event after discharge from the hospital.1-2This results in readmissions and increased cost to the patient and society. Although prevention of readmission can result in cost savings, literature is scarce about training healthcare learners to provide safe and effective transitions of care as a team3-6. The overarching goal of this project is to create an interprofessional team-based curriculum for healthcare students regarding patient discharge.

Summary of Work

This interprofessional team-based discharge simulation assesses participants' hospital discharge competencies. Students completed a self-study of didactics related to discharge to prepare for the simulation. This simulation consists of development and provision of team-based discharge education and direct observation/assessment of the interaction. Student knowledge and attitudes were assessed using pre- and post-curriculum surveys. Skills were assessed using a competency-based evaluation checklist completed by faculty and standardized patients.

Summary of Results

Thirty-five nursing, 22 medical, and 6 pharmacy students participated in this simulation. The teams met expectations in: explaining and providing list of medications (93%), interpreting key test results (80%), explaining major diagnoses & hospital course (60%),

assessing patient's ability to carry out the discharge plan (60%), identifying barriers related to social determinants of health (SDoH) (53%). Less than half the teams met expectations related to: explaining alarm symptoms requiring a call to PCP (33%), assessing the patient's safety related to taking medications (33%), explaining major side effects (33%), eliciting concerns regarding home environment and support (20%), and articulating the unique contributions/roles of team members (13.3%). Pre- and post-questionnaires completed by 58 students showed significant ($p < .05$) improvement in self-assessment for all questions related to discharge planning skills and SDoH.

Discussion and Conclusion

This simulation is ongoing, and data will continue to be collected. Preliminary results of this intervention show that healthcare students become better prepared to perform patient discharge education in many areas and is one small step we can take towards making patient discharges safer.

Take-home Message

Our interprofessional competency-based discharge curriculum can be used in a variety of settings. These tools have been utilized by an interprofessional team of faculty and can be implemented with minimal training.

4J3 (1728)

Date of Presentation: Monday 28th August
Time of presentation: 1430 - 1445
Location: Alsh 1, Loch Suite, SEC

Attributes for interprofessional education: A model for sustainable curriculum delivery

Donna Drynan1, Mohammad Azzam2, Moni Fricke3, Sylvia Langlois4, Laura MacDonald3, Marie-Claude Vanier5, Anton Puvirajah2

[1]UBC, Vancouver, Canada; [2]Western University, London, Canada; [3]University of Manitoba, Winnipeg, Canada; [4]University of Toronto, Toronto, Canada; [5U]niversity of Montreal, Montreal, Canada

Background

Contemporary education programs in the health and social care (HASC) professions emphasize proficiency in several overarching competency domains as a requirement for graduation, licensure, and professional practice. A subset of these competencies involves interprofessional abilities, which are optimally developed by engaging in interprofessional education (IPE) activities that are delivered sustainably along a continuum. Ultimately, active engagement in IPE is meant to prepare graduating HASC professional students for interprofessional collaborative practice (IPCP), which in turn is believed to lead to improved patient/client and community-oriented outcomes.

Summary of Work

This qualitative case study explored how four Canadian post-secondary institutions deliver IPE within their HASC professional education programmatic structures and curricula. Data were collected from institutional websites, publicly available IPE-relevant records and documents, and interviews with coordinators and faculty/facilitators of IPE curriculum.

Summary of Results

Initially, data were analyzed inductively to generate relevant themes, followed by a deductive analysis guided by the five accreditation standards domains identified in the Accreditation of Interprofessional Health Education (AIPHE) projects to reveal the extent to which IPE delivery at these institutions is addressed across these domains. Analyses of the data resulted in the following as being necessary for sustainable IPE delievery: one organizational attribute and four curricular attributes: (1) Central Administrative Unit; (2) Longitudinal and Integrate Program; (3) Theoretically Informed Curriculum Design; (4) Student-Centred Pedagogy; and (5) Patient/Client-Oriented Approach.

Discussion and Conclusion

Using these attributes and guided by AIPHE's accreditation standards domains, an organizational-curricular model for sustainable IPE is proposed, through which we asserted that IPE reinforced through these organizational and curricular supports reflects successful programming through which IPCP can be sustained over time and into practice, leading to patient/client-oriented outcomes. As such, curriculum developers in HASC professional education programs are encouraged to use this model to assess their respective IPE programming and create more sustainable IPE curriculum.

Take-home Message

Analyzing IPE programming across institutions provides valuable insights into shaping sustainable IPE for learners and future practitioners.

Having a conceptual model for sustainable IPE curriculum enables programs a means to assess and evaluate aspects or elements of IPE with respect to accreditation standards.

4J4 (3266)

Date of Presentation: Monday 28th August
Time of presentation: 1445 - 1500
Location: Alsh 1, Loch Suite, SEC

'Discharge the patient' escape room: developing teamworking skills in early year medical students

Chee Yeen Fung[1], Molly Nichols[1], Noreen Ryan[1], Amir H Sam[1]

[1]*Imperial College School of Medicine, London, UK*

Background

Effective teamworking amongst healthcare professionals is critical to patient safety and care, but it can be challenging to teach to medical students with limited clinical experience. Competitive entry to medical school, compounded by undergraduate assessment outcome rankings, can inadvertently promote non-collaborative behaviours. It is therefore crucial to teach and instil the importance of teamworking in an engaging, relevant and accessible way early in the curriculum.

Summary of Work

Following a teaching session on teamworking theory, second year medical students participated in a small group, timed, classroom-based, low-fidelity escape room which took a patient from admission to discharge. It included three paper-based puzzles which involved reviewing clinical documentation, understanding the roles of the multidisciplinary team, and solving logic puzzles. Facilitator-led group debrief focussed on teamwork and its clinical relevance. Students' written reflections (before and after the debrief) were captured through a questionnaire and were thematically analysed.

Summary of Results

Student feedback (n=242) was overwhelmingly positive with many reflecting enjoyment and good engagement. Many reflected on a new understanding of the importance of team diversity, individual value, psychological safety, and trust in colleagues, as well as leadership, delegation and communication. The significance of effective clinical teamworking was a common theme. Students gained practical understanding of

teamworking theory, with reflections highlighting transformative learning on self-awareness and the importance of their personal contributions.

Discussion and Conclusion

The classroom-based escape room is an effective and engaging method for enhancing early years students' understanding of the practical importance of teamworking in the clinical environment. The activity allowed students to identify factors which can impact teamworking. It enabled them to consider different personal and group approaches which could be adopted to enhance team performance, with potential to benefit patient care.

Take-home Message

This escape room is an effective and engaging method for transformative learning on the importance of clinical teamworking amongst early year medical students.

4J5 (4775)

Date of Presentation: Monday 28th August
Time of presentation: 1500 - 1515
Location: Alsh 1, Loch Suite, SEC

Bringing the mind and body together: simulation training for psychiatry and internal medicine trainees on medical emergencies in eating disorders

Shona Littlewood1, Anna Gray1, Kate Baird2, Luke Skelton3, Aria Prasad1, Omar G. Mustafa1, Sophie Butler3

[1]King's College Hospital, NHS Foundation Trust, London, UK; [2]University Hospitals Bristol and Weston NHS Foundation Trust, Bristol, UK; [3]South London and Maudsley NHS Foundation Trust, London, UK

Background

The mind and body are inseparable, yet traditional postgraduate training forces us into false dualism. We delivered a novel, cross-discipline simulation disrupting this paradigm. The experiential scenarios brought together medical and psychiatry trainees to learn with, and from, each other. Health Education England (HEE) awarded funding for the prototype. We report the first in a series of workshops which focused on the new guidelines 'Medical Emergencies in Eating Disorders' (MEED) (May 2022). Hospital admissions for eating disorders have increased by 84% in the last five years and the complexities, comorbidity, and necessary multidisciplinary working mean that that it is a relevant area to pilot this approach.

Summary of Work

The workshop ran twice. The content was based on the hospital journey of a patient with an eating disorder encompassing medical and psychiatric manifestations. There were three stages (admission, ward, discharge) with a paired medical and psychiatry scenario in each stage. Scenarios were designed to develop candidates' technical and communication skills, teamwork, empathy, and care planning. After each scenario, debriefing took place, covering clinical and human factors, including actor feedback. Pre- and post-course questionnaires were used to iteratively improve and evaluate the course.

Summary of Results

Five internal medicine and five psychiatry trainees attended. All reported that their session was pitched at the correct and relevant level to their curriculum and learning needs. There was an increase in the attendees' confidence in managing these patients: pre-course 0% felt very confident with 70% feeling very confident post-course. Trainees reported they had enhanced their communication skills with patients with eating disorders and become more familiar with the MEED Guidelines. Of note, self-identified learning points for future practice included an appreciation of the other discipline's work, and the importance of a collaborative approach.

Discussion and Conclusion

MEED Guidelines recommend joint training (medical and psychiatry) to promote safer care and better patient experiences. This pilot has also demonstrated the value to individual trainees and we believe this is widely applicable. Further simulation courses are planned, still based on complexity and uncertainty, using different physical and psychiatric co-morbidities.

Take-home Message

Simulating a patient journey highlights patient experience at all stages.
Cross-disciplinary simulation integrates and consolidates learning.

4J6 (2673)

Date of Presentation: Monday 28th August
Time of presentation: 1515 - 1530
Location: Alsh 1, Loch Suite, SEC

Cinemeducation: a mixed methods study on learning through critical reflection, perspective taking and emotional narratives

Mike Rüb[1], Eva A. Rehfuess[2], Lisa M. Pfadenhauer[2], Matthias Siebeck[1]

[1]Institute of Medical Education, LMU University Hospital, LMU Munich, Munich, Germany; [2]Institute of Medical Information Processing, Biometry and Epidemiology (IBE), Faculty of Medicine, LMU Munich, Munich, Germany

Background

The Medical Cinema "M23 Cinema" (M23C) is a cinemeducation course at Ludwig-Maximilians-Universität München which combines screenings of feature and documentary films with a discussion with experts, affected persons and the broader audience in an interprofessional and interdisciplinary learning environment. This study aimed to establish a conceptual framework and explore when and how learning occurs and what participants learn during the M23C.

Summary of Work

Informed by focused literature searches, discussions of the authors and the research results, a conceptual framework of the M23C was developed, comprising three dimensions (phases, learning methodology, potential impact). A mixed method study was undertaken. Initially, the qualitative component was conducted, comprising focus groups, expert interviews, a group interview and one narrative interview. All qualitative data were analysed using qualitative content analysis. The qualitative findings were used to inform the development of a survey among the participants of seven M23C evenings. The survey results were analysed descriptively. Lastly, the findings generated by both datasets were integrated using the “following a thread” protocol and visualised by joint displays.

Summary of Results

In total, 28 people were interviewed and 503 participants responded to the survey. The qualitative data confirmed the five distinct phases. The integrated results suggested three key components als learning methodology: offering space for critical reflection, stimulating perspective taking, and connecting knowledge with emotional narratives. Participants reported eye-opening moments in which they learned to change their opinions and attitudes, enrich their knowledge, experience empathy and the importance of working in an interprofessional team.

Discussion and Conclusion

Our findings suggest that the M23C as a cinemeducation course provides a unique learning environment in the training of health professionals. The M23C motivates students to set their own learning objectives. Cinemeducation should play a broader role in medical curricula in order to help students to become critical health professionals.

Take-home Message

- Cinemeducation enables students to learn through perspective taking, critical reflection and emotional narratives.
- The combination of a film and an open discussion motivates students to set their own learning objectives.
- The potential impact of cinemeducation might be a change in attitudes, knowledge enrichment, experiencing empathy and an open-mindedness about working in an interprofessional team.

Session 4K: Simulation 2

4K1 (5888)

Date of Presentation: Monday 28th August
Time of presentation: 1400 - 1415
Location: Alsh 2, Loch Suite, SEC

What doctors say matter: Breaking bad news through extended immersion in medical simulations

Peih-Ying Lu1, Anna Shan Chun Hsu2, Po-Chih Chang3, Hsin-Liang Liu4

[1]College of Medicine,/Center for Medical Education and Humanizing Health Professional Education, Kaohsiung Medical University, Kaohsiung, Taiwan; [2]College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan; [3]College of Medicine, Kaohsiung Medical University/Kaohsiung Medical University Hospital, Kaohsiung, Taiwan; [4]Kaohsiung Medical University Hospital, Kaohsiung, Taiwan

Background

Breaking bad news (BBN) is a challenging yet critical task in medical communication. Delivering bad news can elicit distress and other negative emotions for both the deliverer and receiver. Drawing from the modal model of emotion, this study explored medical students' appraisal, emotional, behavioral, and reflective responses in a BBN scenario during a two-day extended immersion in medical simulations session.

Summary of Work

Second-year clerks (n=185 undergraduate and post-baccalaureate medical students) attended one of three two-day sessions during the 2021 and 2022 academic year. Students in teams rotated at 20-25-minute intervals through six stations in which specific cross-cultural and psychosocial elements were included in extended scenarios.
In the internal medicine rotation, students encountered a simulated patient who either had an asthma episode and refused hospitalization or received COVID-19 consultation remotely. The patient was later rushed to the hospital and died of failed attempts of resuscitation; students then had to deliver the bad news to the patient's waiting wife. Pre-/post-questionnaires (n=175,184 respectively), post-session reflective writings, and 20

randomly selected video recordings were collected and analyzed to explore students' BBN experiences.

Summary of Results

Students perceived BBN to be important(4.61/5), and an impactive experience(4.60/5), and indicated BBN as a skill that they needed to improve on(81%). Triangulated qualitative findings from students' writings(n=67) and video showed students viewed BBN to be difficult and stressful, and experienced negative emotions such as panic, fear, and distress. They approached BBN by(i) following SPIKES procedures, which made SP felt there's a lack of empathy;(ii)explaining all procedures performed first as they were hesitant to deliver the news;(iii)diverting tension by referral to social worker or other professionals to provide additional support. Students were aware of inadequacies in learning opportunities and clinical experiences of BBN and reflected on actions they can take in the future.

Discussion and Conclusion

As training on BBN had been relatively inadequate, providing students with practice for BBN should be integrated incrementally throughout medical training before students reach the clinical milieu. Continuous feedback and support from medical educators are necessary and should be included.

Take-home Message

Strengthening students' communication skills, empathy, and resilience in breaking bad news needs to be explicitly designed and included in the training.

4K2 (3203)

Date of Presentation: Monday 28th August
Time of presentation: 1415 - 1430
Location: Alsh 2, Loch Suite, SEC

Teaching Assistants' Professional Identity Formation during a High-Fidelity Multi-Day Simulation

Rebekah Cole1, Robert Pickering1, Jonathan Shumaker1, Sherri Rudinsky1

[1]*Uniformed Services University, Bethesda, MD, USA*

Background

Teaching assistants (TAs) have been found to be effective instructors during simulation, even as much so as senior faculty. While the benefits of peer-assisted learning are well-known, no previous research has examined how TAs progressively develop as educators during simulation. The purpose of this grounded theory qualitative study, therefore, was to develop a framework for understanding the trajectory of TAs' professional identity formation during a high-fidelity simulation.

Summary of Work

The participants in our grounded theory qualitative study were nine TAs serving as instructors during a two-week prehospital simulation for second-year medical students. We interviewed each participant twice, for an average of 22 minutes each, in order to better understand how their experiences evolved during the simulation. Our research team then analyzed the interview transcripts using open and axial coding. We used selective coding to determine any intervening relationships between each of these categories in order to develop our grounded theory framework.

Summary of Results

Four progressive stages of TA development emerged as our framework: 1) self-exploration; 2) grappling with challenges; 3) overcoming challenges; and 4) professional identity development. The TAs started out highly-motivated, but then struggled with how to best communicate with their peers. They also grappled with their newfound role as an authority figure and their role in motivating their peers to learn. Once the TAs overcame

these challenges towards the end of the simulation, they articulated a commitment to serve as educators throughout their career.

Discussion and Conclusion

Understanding this four stage framework allows medical educators to intentionally enhance TAs' professional development during simulation. Ultimately, the role of educator is crucial for improving patient care and outcomes and devloping the next generation of healthcare professionals.

Take-home Message

Simulation-based education, compared to a traditional classroom, may have enhanced the trajectory of our participants' professional identity development as they were alloted ample hands-on time to immerse themselves into their new role as instructor. Faculty can capitalize on TAs' high energy and motivation in Stage 1 to encourage self-reflection and problem solving in Stage 2. Faculty mentorship during the challenges of Stage 3 will help facilitate TAs' confidence and professional identity development as they overcome challenges.

RP0030/SC

4K3 (5740)

Date of Presentation: Monday 28th August
Time of presentation: 1430 - 1445
Location: Alsh 2, Loch Suite, SEC

The impact of simulation training on midwife leadership in emergency situations

Paivi Naatsaari1, Veera Marttinen1, Marja Kaijomaa1

[1]*Helsinki University Women's Clinic, Helsinki, Finland*

Background

Good leadership is a critical part of successful teamwork and patient safety in emergency situations. It is a multidimensional task and requires clear communication (ISBAR, closed loop-communication), situational awareness and decision-making. These skills are important and can be practiced in regular simulation trainings.

In obstetrics, rapidly changing and unexpected situations are common and, prior the arrival of an obstetrician, a team of midwives often starts the first-hand treatment and medication. A rapid and co-ordinated midwife teamwork enables the achievement of best outcomes.

In our questionnaire study, we wanted to evaluate the impact of regular simulation training to perceived leadership skills among midwives.

Summary of Work

In Helsinki University Women's Clinic, weekly multi-professional and compulsory simulation trainings with the practice of technical and non-technical skills were started in 2015.

In January 2023, an electronic questionnaire was made to evaluate the impact of simulation training on perceived midwife leadership skills.

The questionnaire included questions concerning simulation and basic leadership elements (communication, task delegation) and the perceived ability to handle

emergencies, maintain situational awareness and decision making. Answers were given on a five-point Likert scale (0-5).

Summary of Results

Seventy-eight midwives with a variable working experience (< 10 years, 10-20 years, > 20 years) answered the questionnaire. When comparing midwives with a history of 1-2, 3-4 and 5 or more previously attended simulation training, the use of ISBAR-reporting ($p=0.010$) and the perceived ability to manage emergencies ($p=0.041$) and task delegation ($p=0.004$) increased as the number of attended simulation trainings increased.

The perceived capability to lead a midwife team ($p=0.032$) and the readiness to take the leader role ($p=0.022$) also increased with increasing simulation experience. Interestingly, the perceived impact of simulation training on the knowledge of essential communication skills (ISBAR ($p=0.014$), closed loop-communication ($p=0.026$)), the perceived competence in role delegation ($p=0.042$) and the readiness to take the leader role ($p=0.017$) was strongest among midwifes with the working experience of at least 10 years.

This may be associated with recent changes in midwife education or may reflect inexperience of emergencies in clinical work.

Discussion and Conclusion

Simulation training was considered beneficial in improving midwife leadership skills.

Take-home Message

Simulation training improves midwife leadership skills.

4K4 (4833)

Date of Presentation: Monday 28th August
Time of presentation: 1445 - 1500
Location: Alsh 2, Loch Suite, SEC

Practise makes perfect: Simulated Paediatric "On-Calls" for undergraduate medical students

Nicola Scanlon[1], Tom Slater[1]

[1]*St George's University Hospitals NHS Foundation Trust, London, UK*

Background

Students apply classroom learning on clinical placements, but oppertunities to practise core "hands-on" skills can be limited. A survey of twenty-one medical students showed minimal experience with on-call tasks: Five had no experience, sixteen had observational experience, and only four had ever actively participated. Self-reported confidence was low and all students reported anxiety around on-call work.

A simulated on-call may be an authentic way to address these gaps and direct student attention towards their professional identity as a junior doctor at an earlier stage.

Summary of Work

A simulated on-call session was developed for twenty-four students on paediatric placement at St George's University Hospital, in groups of three to five. Sessions began with an activity on task prioritisation, followed by a handover and then a two hour "on-call" experience. Tasks received at handover or delivered to their pager included; prescribing, assessments of real patients, low fidelity simulation, discharge correspondence, reviewing results, communicating with simulated parents and seeking advice from specialists. Students led a handover at the end of the "on-call" and a debrief concluded the session.

Summary of Results

Eighteen attendees completed the post-course survey and all reported they were "extremely likely" to attend a similar session again. Self-rated confidence improved in all

areas, but particularly with task prioritisation and seeking senior support. All respondents reported they would like to see simulated on-call sessions included routinely in the curriculum.

Discussion and Conclusion

This pilot programme has shown that an on-call simulation was a welcome addition by students to the curriculum. As with other such programmes, feedback focused on student satisfaction and self-rated confidence. Sustained improvement would likely require multiple sessions spanning a variety of medical specialities.

However, given the resource required to run this type of programme, further evaluation is necessary to determine the optimal role of the simulated on-call within the medical curriculum.

Take-home Message

Simulated on calls provide a safe, authentic learning environment to learn 'real-life' medical skills. Feedback showed that even a one-off session was well received and fostered confidence. Further evaluative data should span beyond student satisfaction to objective impacts on performance and patient care.

4K5 (2548)

Date of Presentation: Monday 28th August
Time of presentation: 1500 - 1515
Location: Alsh 2, Loch Suite, SEC

Using simulation-based training during hospital relocation: A controlled intervention study

Anders Schram1, Morten Søndergaard Lindhard2, Magnus Bie1, Maria Louise Gamborg1, Neel Toxvig1, Gitte Skov3, Rune Dall Jensen1

[1]Corporate HR, MidtSim, Central Denmark Region, Aarhus, Denmark; [2]Department of Paediatrics, Randers Regional Hospital, Randers, Denmark; [3]Department for Psychosis, Aarhus University Hospital-Psychiatry, Aarhus, Denmark

Background

During hospital relocations, it is important to support healthcare professionals becoming familiar with new settings. simulation-based training seems promising, as it can imitate a real-life scenario and prepare learners for new situations. Thus, in situ simulation has been suggested as a beneficial educational tool to prepare healthcare professionals for relocation. This study aimed to investigate the impact of a simulation-based training intervention on readiness to work in a new environment as well as health professionals' sick leave before and after relocation.

Summary of Work

The study was a controlled intervention study implemented at a university hospital in Denmark. Simulation was used to prepare employees for workflows prior to relocation. Before relocation, 1,199 healthcare professionals participated in the in situ simulation-based training program. Questionnaires on readiness to perform were distributed to participants at pre-, post-, and follow up (six months) measurement. In addition, data on participants' sick leave was gathered from a business intelligence portal. To compare dependent and independent groups, paired and unpaired t-tests were performed on mean score of readiness to perform and sick leave.

Summary of Results

Compared to the control group, healthcare professionals participating in the intervention felt significantly more ready to work in a new hospital environment.
The measure of sick leave indicated no significant difference, when comparing intervention and control groups before and after participating in the in situ simulation-based training intervention. In fact, sick leave among all participants increased by 2.1% (CI: 1.2 ; 2.9) from the first time period to the second time period.

Discussion and Conclusion

Healthcare professionals felt significantly more ready to work in a new environment, after participating in the in situ simulation-based training program, indicating that the intervention supported healthcare professionals during relocations. This may mitigate feelings of uncertainty; however, further research is needed to explore such effects.

Take-home Message

Applying an in situ simulation-based training program can improve the readiness among employees, before relocating to a new hospital setting. However, the impact of relocating seems to have an increasing influence on sick leave.

4K6 (4590)

Date of Presentation: Monday 28th August
Time of presentation: 1515 - 1530
Location: Alsh 2, Loch Suite, SEC

Welcome to the Nght Shift...

Pip Wills1, Leonie Griffiths1

[1]*The University of Melbourne, Melbourne, Australia*

Background

Junior doctors must be able to prioritise and manage multiple competing tasks in order to deliver safe patient care. However, they rarely practise this as a student. To prepare medical students for this transition in responsibilities, we developed a novel single facilitator, multiple station simulation for final year medical students to assist preparation for practice and asked for their feedback via a quality improvement survey.

Summary of Work

Aim: To assess if final year medical students find multiple task, single facilitator simulation is acceptable, and if it would improve their preparation for practice as interns. Postgraduate medical students were required to prioritise and complete a list of 6 tasks which included clinical deterioration scenarios and time urgent ward tasks. During the simulation the facilitator disrupted the scenario with 'ward calls' which required students to reprioritise their tasks, then complete all tasks to a satisfactory outcome. An immediate debriefing occurred at the conclusion of the simulation, and students completed a quality improvement feedback survey.

Summary of Results

In the initial quality improvement feedback survey, students found having to prioritise management decisions in a multitasking situation most useful. They stated that teamwork and practising how to escalate for help, assisted them in this. Students also found it beneficial to practise procedural and prescribing skills, and they gained confidence in answering phone calls from the nurses. Overall, they described the simulation as fun, realistic and useful for transition to internship. Some stated that the simulation would be

improved with a more detailed briefing or debriefing, and many students wanted more of these simulations.

Discussion and Conclusion

For the facilitator, issues occasionally arose with safety concerns and observing desired actions of all students. This was addressed by using a PEARLS debriefing model (Eppich) focussing on learner self-assessment in the analysis phase.

While students believed the simulation would assist in transition to practice, a formal research project will explore this further.

Take-home Message

Single facilitator Multiple station simulation is feasible, and may improve transition to practice for final year medical students becoming interns.

Session 4L: Supporting Learners: Residency

4L1 (5623)

Date of Presentation: Monday 28th August
Time of presentation: 1400 - 1415
Location: Boisdale 1, Loch Suite, SEC

Medical Humanities for Medical Learners: A 5-Years Longitudinal Experience of a U.S. Medical Residency Program

Abd Moain Abu Dabrh1, Arden Robinson1, Adam Perlman2, Rebecca Perlman2, Elizabeth Mattsen2, Chrysanthe Yates2, Thomas Waller2, Sally-Ann Pantin2, Joshua Keith2,

[1]Mayo Clinic, Jacksonville, Florida, USA; [2]Mayo Clinic, Florida, USA

Background

Medical Humanities (MH) is defined as studies about human culture including, art, literature, philosophy, and history. The Humanities in Medicine program at Mayo Clinic Florida is integrated into the Family Medicine Residency Program to cultivate the acquisition of skills, attitudes, and attributes in communication and professionalism competencies, and to promote overall well-being of these learners.

Summary of Work

We evaluated and summarized the experience and perception of medical learners about MHs programs integrated quarterly into their medical education/training core curricula. Pre-post Questionnaires were sent to 38 participating Family Medicine residents attending MH sessions over 5 years at Mayo Clinic Florida. The questionnaires included Likert-like scaled questions as well as open-ended questions. Responses were descriptively analyzed and summarized in rates and percentages. Open-ended questions were qualitatively analyzed and presented thematically.

Summary of Results

The majority of the residents agreed that the MHs sessions and activities they attended: were enjoyable (65.9% agreed); helped them to understand further their patients (63.1%

agreed); enhanced and supported their educational and professional goals (44.7% agreed); was personally edifying (52.6% agreed); and was valuable to their residency program training (94.7% agreed).

Discussion and Conclusion

This longitudinal, multi-year, and single-program experience presents evidence supporting the impact of MHs programs for medical learners. MHs can lead to personal and professional growth by improving communication skills and professionalism – part of the core competencies and milestones in medical education and training. MHs also cultivate empathy, joy, self and shared reflections, and opportunities for respite to support personal well-being for medical learners.

The implications and importance of these findings support what has been concluded in other studies: the humanities are essential to empower and equip future providers with necessary skills to perform and function effectively in their profession.

Further research using other validated scales and measures to examine and assess different milestones, competencies, and well-being-centered outcomes is warranted.

Take-home Message

Integrating MHs for medical learners can provide feasible pathways to improve communication skills, professionalism, joy, respite, creativity, and sense of well-being.
It is important to gage the views and diversity of thinking of participating medical learners to empower providing meaningful experiences.

4L2 (3963)

Date of Presentation: Monday 28th August
Time of presentation: 1415 - 1430
Location: Boisdale 1, Loch Suite, SEC

Which end do you have in mind? GP supervisors' perceptions of PIF outcomes in GP residency

Miami Al-Sabiry[1], Pieter Barnhoorn[1], Mattijs Numans[1], Irene Slootweg[1], Walther van Mook[2]

[1]Leiden University Medical Centre, Leiden, The Netherlands; [2]Maastricht University Medical Centre, Maastricht, The Netherlands

Background

Professional Identity Formation (PIF) is crucial for high-quality care and physician wellbeing. Few empirical studies examined PIF in postgraduate medical education, particularly in general practice (GP) residency programmes. GP supervisors supervise residents with an 'end in mind' which implies that supervisors have a clear vision of how residents should think, feel and act towards the completion of the training. However, which perceptions supervisors have of this end result of PIF in residency are underexplored. To facilitate guiding PIF, this exploratory qualitative focus group study aimed at investigating supervisors' perceptions of PIF outcomes in GP residency.

Summary of Work

Applying qualitative description, we conducted focus groups with supervisors using a semi-structured interview guide. We analysed supervisors responses to the question 'what are your views on the good GP'. In an iterative coding process applying the principle of constant comparison, we performed a thematic analysis of the focus group transcripts.

Summary of Results

Eight focus groups, with four to eight participants each, were conducted with 55 supervisors at four training institutes across the Netherlands. Twenty-seven supervisors (49%) were female. Throughout the data collection and despite the emphasis on the 'good GP', supervisors were inclined to address what they thought was a 'poor GP'.

According to supervisors, PIF outcomes in GP residency should revolve around taking ownership over patient care, self-care and the profession continuation and viability.

Discussion and Conclusion

PIF education can be challenged by a lack of positive language demonstrated by supervisors' emphasis on the attributes of the 'poor GP'. PIF outcomes -according to supervisors- should revolve around taking ownership over patient care, self-care and the profession continuation and viability. Supervisors have strong beliefs regarding ideals of the profession such as continuity of care. Trainees' PIF could be compromised when supervisors' beliefs do not resonate with residents' beliefs resulting in poor educational alliance. Collective reflection should be structurally implemented in faculty development courses to encourage supervisors to reflect on beliefs behind their teaching behaviours.

Take-home Message

Supervisors are inclined to address the 'poor GP' when prompted to address the 'good GP'. Supervisors' end in mind for GP residency revolves around taking ownership over patient care, self-care and the profession continuation and viability.

4L3 (6718)

Date of Presentation: Monday 28th August
Time of presentation: 1430 - 1445
Location: Boisdale 1, Loch Suite, SEC

Less than full-time working in the medical profession: a systematic review, and examination of doctors' characteristics and performance

Magdalen Baker[1], Asta Medisauskaite[1], Ann Griffin[1]

[1]*University College London, London, UK*

Background

The current generation of doctors prioritises work-life balance and is increasingly interested in less than full-time (LTFT) working, yet little is known about how this might impact the workforce over time. This study aims to summarise current knowledge on LTFT working in the medical profession, and to explore how it relates to doctors' characteristics and performance.

Summary of Work

Two parts:
Systematic review: Ten electronic databases were searched up to March 2022 for published studies and theses/dissertations. Two independent researchers screened studies, extracted data, and appraised relevant studies. Narrative synthesis was the chosen data synthesis method.
Retrospective cohort study: Data on UK doctors in training between 2014 and 2019 from the UK Medical Education Database were analysed. Associations between LTFT training and doctors' sociodemographic characteristics and performance were examined using univariable analysis before developing more complex multivariable regression models.

Summary of Results

The systematic literature search yielded 13,782 records. Interim results from 20 eligible studies, identified through screening a sample of all the records, revealed that LTFT working is more common among women and older doctors, and is protective against burnout and non-standard ARCP results during training. LTFT doctors work proportionally

more unsociable hours than full-timers and are less likely to be satisfied with their jobs. Screening of the remaining records for further eligible studies is ongoing.

The cohort study examined three doctor cohorts (Foundation; early specialty training; higher specialty training) from a study population of 163,469. Interim results from univariable analyses show that LTFT training was more common among women ($p<0.001$), doctors of white ethnicity ($p<0.001$), and doctors who had attended state schools prior to medical school ($p=0.015$). Analysis of performance data is ongoing, as is development of multivariable regression models which will control for confounding factors.

Discussion and Conclusion

This study evaluates existing knowledge and incorporates objective data to examine the factors and outcomes associated with LTFT working in the medical profession. The findings will aid workforce planning and provide insights into how LTFT working can be effectively implemented in medicine.

Take-home Message

Doctor shortages and increasing demand for workplace flexibilty necessitate a better understanding of how LTFT working might be utilised to foster a more relisilient medical workforce.

4L4 (5936)

Date of Presentation: Monday 28th August
Time of presentation: 1445 - 1500
Location: Boisdale 1, Loch Suite, SEC

National Healthcare Group (NHG) Orthopaedic Residency Programme takes the Clinical-Admin-Research-Education (CARE) initiative

Gerrard Gan1, Nurharyanti Sahari2, Wee Keng Lim2, Tong Leng Tan1, Muhammad Farhan Mohd Fadil1

[1]National Healthcare Group Orthopaedic Residency, Singapore; [2]National Healthcare Group Pte Ltd, Group Education, Singapore

Background

The National Healthcare Group (NHG) Orthopaedic Surgery Residency Programme takes a holistic approach to the education and development of her residents in a public healthcare system. While the budding surgeon may prioritise their surgical time and experience, there is also much value in developing their non-clinical roles in research and education. The programme performed an introspective self-study session at an institution level to review the programme's aims and to identify future challenges. Developing the resident's non-clinical attributes was one highlighted challenge.

Summary of Work

The conclusion of the self-study session bore a resident initiative to incorporating a Clinical-Admin-Research-Education (CARE) component into the protected teaching schedule. This allotted session will allow the resident to self-direct their own non-clinical interest and learning experience. As a start, an anonymised resident survey was conducted by the residents to explore their individual interest in this initiative.

Summary of Results

All current residents (year 1 to year 5) responded to the survey. 63.2% (12/19) voted in favour of the CARE initiative, with an averaged interest of 6.79 on a numerical scale of 1 (not interested) to 10 (very interested). Research (72.2%) and education (72.2%) were the top two components that they residents will want to pursue during their allocated

protected time. Presenting the survey findings to the programme directors and residents, this initiative was piloted over a 2 month period. The initiative was received positively, and had since been integrated into the protected teaching time.

Discussion and Conclusion

The CARE initiative is a resident-directed programme-facilitated effort to develop the individual resident's interest and potential. It aims to prepare all residents for their non-clinical roles as a consultant, and identify potential leaders. Our programme intends to not only measure this initiative by the research output and teaching hours of the resident, but also in the resident satisfaction in their training and development. We plan to share our findings at our next review.

Take-home Message

A formalised CARE component in the program can help encourage and facilitate the individual resident's development of their non-clinical attributes.

4L5 (1365)

Date of Presentation: Monday 28th August
Time of presentation: 1500 - 1515
Location: Boisdale 1, Loch Suite, SEC

What medical students and residents learned from reflecting from patients' perspectives: A qualitative study

Kazuki Tokumasu1, Puthiery Va2, Haruo Obara3, Lisa Rucker2

[1]Department of General Medicine, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan; [2]Department of Medicine, Albert Einstein College of Medicine/Jacobi Medical Center, Bronx, NY, USA; [3]Department of General Internal Medicine, Okinawa Chubu Hospital, Uruma, Japan

Background

Effective doctors reflect on their interactions with patients. The purpose of this study was to identify categories of difficulties identified during patient interactions and learning points gleaned by reflecting on the interaction from the patient's perspective.

Summary of Work

We conducted qualitative analysis on a number of difficult doctor-patient interactions and on the lessons learned when reviewing the interactions from the patient's point of view. Internal medicine residents and medical students participated in the study, twenty from the U.S. and twenty from Japan. Participants were asked to reflect on an interaction that did not go well with ambulatory patients from the patient's point of view.

Summary of Results

Four themes (Different expectations between patient and doctor, Language communication barrier, Time restrictions and Healthcare system challenges) emerged from the analysis. Three types of awareness (Appropriate communication, Empathy and Patient-doctor relationship trust) were identified after reflection. After reflection, the residents and medical students evoked a willingness to change their future behavior.

Discussion and Conclusion

This study revealed the types of residents' and medical students' cognitions of clinical experiences after reviewing the interactions from the patients' perspectives and the types of awareness from their reflections. These cognitive processes influenced the willingness to change their behavior. Apart from the biomedical aspect, clinical experiences with patients made the medical residents and students aware of the psychosocial domain of patient-centered care.

Take-home Message

Learners themselves need to understand how reflection on the patient's perspective leads to increased awareness and behavior change. Clinical educators can support this understanding by encouraging reflection, which helps medical students and residents become more self-aware and willing to change their behavior.

Session 4M: Postgraduate Learning 2

4M1 (4832)

Date of Presentation: Monday 28th August
Time of presentation: 1400 - 1415
Location: Boisdale 2, Loch Suite, SEC

Mentorship in Quality Improvement: The 3S Framework

Joan Binnendyk[1], Alan Gob[1]

[1]*Centre for Quality, Innovation & Safety, Western University, London, Canada*

Background

With a finite number of quality improvement (QI) experts available to teach and coach medical residents through the steps of a QI project, faculty leads functioning as mentors are needed to provide extra support. Without clear guidelines, however, faculty leads can provide a willingness to mentor but lack the skills to do so. Our study explored the qualities and characteristics required of effective mentorship from both the faculty lead and medical resident perspective.

Summary of Work

At our academic centre, a qualitative study was performed over two years with semi-structured interviews of five faculty leads performing a mentorship role and 17 medical residents enrolled in the Bootcamp in Sustainable Quality longitudinal program. Questions related to aspects that contribute to or hinder the effectiveness of a mentor in QI. Using a grounded theory approach, thematic content analysis of interview results was performed following open, axial, and selective coding processes.

Summary of Results

We identified three primary factors leading to effective mentorship in QI: structure (5Ws); support (relationships); and service (resources, products). Structure in the form of course expectations and meeting dates was a foundational requirement for both faculty leads and residents. From a support perspective, the mentorship relationship between the

faculty lead and residents required regular, pre-emptive check-ins, encouragement, and advocacy among stakeholders. The service factor required resources such as project contacts and data collection processes. The results of these interviews created a list of expectations to guide faculty leads in their mentorship role.

Discussion and Conclusion

Medical residents learning QI methodology with simultaneous knowledge application to an experiential QI project require two key pieces: coaching in QI and mentorship through a project. With a limited number of QI experts at our centre available to coach, we relied on faculty leads to perform a mentorship role. This study allowed us to learn the skills, knowledge, and attitudes necessary for effective mentorship from both acting mentors and mentees, and guided the creation of a mentor Terms of Reference contributing to transparency and clear expectations for both parties.

Take-home Message

While QI coaches focus on providing QI methodology expertise, faculty leads serving as QI mentors play a critical role in ensuring project success.

4M2 (6405)

Date of Presentation: Monday 28th August
Time of presentation: 1415 - 1430
Location: Boisdale 2, Loch Suite, SEC

Developing a Taxonomy of Leadership Behaviours in Internal Medical Trainees in Scotland

Amrita Brara1, Chloe Chang1, Joanne Kerins1, Samantha E Smith1, Victoria R Tallentire1

[1]*Scottish Centre for Simulation and Clinical Human Factors, Larbert, UK*

Background

Leadership plays a key role in medical emergencies. Poor leadership in critical situations has been directly linked to suboptimal care and team performance. Despite this, training specifically targeted at improving leadership remains limited.

Internal medicine training is a 3-year training programme in the UK. It precedes the majority of medical specialty training programmes and internal medical trainees (IMTs) make up a crucial part of adult medical emergency teams in hospitals. Indeed, IMTs are frequently expected to lead these teams and participate in key roles during emergency situations.

Summary of Work

IMT1s in Scotland attend a bootcamp where they participate in a variety of teaching modalities, including simulation scenarios. Teams of 4-6 IMTs took part in a standardised simulation scenario consisting of a patient with an unstable arrhythmia who subsequently goes into cardiac arrest.

3-minute segments of 18 videos consisting of 104 internal medical trainees in total were observed, with particular attention to the verbal leadership behaviours being performed. The videos were divided into coding units. A coding unit began when a trainee started speaking and finished when the subject or speaker changed. Coding units not showing leadership behaviours were discarded.

Summary of Results

A leadership taxonomy was developed based on relevant review of the literature and the observed behaviours of all 104 IMTs. 15 different leadership behaviours were observed which were classified into 4 domains of leadership behaviour: Structuring, Decision-making, Communicating and Supporting. All coding units that were identified as showing leadership behaviours were classified into a single category of the taxonomy. Supporting leadership behaviours were observed least frequently, with other domains being more predominant.

Discussion and Conclusion

IMTs display a variety of leadership behaviours in medical emergencies. This proposed taxonomy provides insight into the leadership behaviours of internal medical trainees. It provides us with a framework by which to understand and analyse their behaviour and thus will be useful in creating targeted training programmes to enable them to effectively lead medical emergency teams.

Take-home Message

Leadership in medical emergencies is suboptimal and impacts upon team performance. This proposed taxonomy of leadership behaviours provides a framework to understand and create targeted leadership courses for IMTs.

4M3 (4523)

Date of Presentation: Monday 28th August
Time of presentation: 1430 - 1445
Location: Boisdale 2, Loch Suite, SEC

"Go Up Under There": A Semantic Analysis of Direction in Operating Room Instruction

Tanvi Karmarkar1, Gary Sutkin1, Austin Bachar1, Ashna Mahadev1, Andrew McKenzie2

[1]University of Missouri Kansas City School of Medicine, Kansas City, USA; [2]University of Kansas, Lawrence, USA

Background

In our previous work, teaching surgeons used potentially ambiguous language in the OR 12.3 times per minute. Our objectives were to examine ambiguous examples featuring Directional Frame of Reference (DFoR), which involves instructions containing directional terms like "up" or "left", and to uncover what contributes to understanding or misunderstanding of such instruction.

Summary of Work

We audio- and video-recorded the critical moments of six surgeries, as chosen by the surgeons. With a semanticist, we chose potentially ambiguous DFoR terms commonly flagged in our previous work. We separately interviewed attending and resident surgeons, asking each to describe the meaning of those DFoR terms while they viewed case recordings alongside transcripts. We compared their responses, analyzing them for agreement in direction. We performed thematic analysis on case and interview transcripts for themes related to DFoR.

Summary of Results

Attending and resident surgeons disagreed on direction in 13 of the 26 (50%) DFoR examples. Resulting themes included: 1. Misunderstanding arising from using linear direction to describe three-dimensional space, e.g., "up" for anterior/cephalad/right. 2. Misunderstanding arising from lack of tacit knowledge, e.g., the novice resident not knowing whether "top" in "clean off the top" meant anterior or cephalad. 3. Adding

ambiguity by combining degree modifiers with DfoR, e.g., “we're far enough back” combines the ambiguities of “back” (DfoR) and “far enough” (degree modifier). 4. Adding ambiguity inherent in axial parts (noun-like directional terms), e.g. “bottom.” 5. Mitigating ambiguity by physical deixis (viz. pointing) concurrent with speech.

Discussion and Conclusion

Use of ambiguous language with DFoR incurs a high potential for misunderstanding, especially while using linear directions, combining degree modifiers, and adding axial parts. Potential for misunderstanding is exacerbated when individuals have a lack of tacit knowledge. We recommend avoiding linear directions, and instead physically pointing to represent complex 3D directions. We also recommend avoiding axial parts, especially with novice learners. Degree modifiers can be replaced with exact distances e.g., replace “little more anterior” with “1 centimeter anterior.”

Take-home Message

Instructions in the teaching operating room containing ambiguous directional framing should be replaced with clear terminology, and should include gestures, especially with novice residents.

4M4 (4672)

Date of Presentation: Monday 28th August
Time of presentation: 1445 - 1500
Location: Boisdale 2, Loch Suite, SEC

Implementation of an innovative technology called the OR Black Box: a feasibility study

Kjestine Emilie Møller1, Jette Led Soerensen2, Martha Krogh Topperzer1, Bent Ottesen1, Christian Koerner1, Mikkel Rosendahl1, Teodor Grantcharov3, Jeanett Strandbygaard1

[1]Rigshospitalet, Copenhagen, Denmark; [2]Mary Elizabeth's Hospital and the Juliane Marie Centre, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark; [3]Stanford University, Palo Alto, CA, USA

Background

The operating room (OR) Black Box is an innovative technology that captures and compiles extensive real-time data from the OR, allowing identification and analysis of factors that influence intraoperative procedures and performances. This technology is useful for identification of a broad range of learning needs and ultimately improving patient safety. Implementation of this kind of technology is still an emerging research area and prone to face challenges.

Summary of Work

Observational study running from 2017-2021 conducted at the Department of Gynecology, Rigshospitalet, Copenhagen University, involving 152 OR staff and 306 patients. It was a consent-based study, meaning that data was only to be captured if all OR staff and the patient had given informed consent. To structure, ensure transparency, and clarify whether or not the intervention was appropriate for further implementation the feasibility of the OR Black Box was assessed in accordance with Bowen's framework with eight focus areas.

Summary of Results

The OR Black Box had a high level of acceptability among stakeholders with 100 % participation from management, 93 % from OR staff, and 98 % from patients. The

implementation process improved over time, and an average of 80 % of the surgeries conducted were captured. The practical aspects such as numerous formal and informal meetings, ethical and legal approval, recruitment of patients were acceptable, albeit time-consuming. The OR Black Box was integrated without any changes in the scheduled surgery program. Relocation of OR staff declining to provide consent was possible.

Discussion and Conclusion

Implementation of the OR Black Box was feasible yet challenging. Management, nearly all staff, and patients embraced the initiative; however, ongoing evaluation, information meetings, and commitment from stakeholders are required and crucial to sustain momentum, continue implementation and expansion. Ideas from this study can be useful in the implementation of similar initiatives.

Take-home Message

The OR Black Box creates new opportunities for the identification of needs for learning for OR staff.
Implementing a comprehensive technology like the OR Black Box is complex and time-consuming.
To ensure transparency; implementation requires continuous information to everyone involved about what will happen to the data captured.

4M5 (3215)

Date of Presentation: Monday 28th August
Time of presentation: 1500 - 1515
Location: Boisdale 2, Loch Suite, SEC

Learning for doctor-to-doctor collaboration: a focused ethnographic study of intraprofessional workplace learning by residents

Lara Teheux[1], Wietske Kuijer-Siebelink[2], Lotte Bus[3], Jos Draaisma[1], Ester Coolen[1], Janiëlle van der Velden[1]

[1]Radboudumc Amalia Children's Hospital, Nijmegen, The Netherlands; [2]Radboudumc Health Academy, Nijmegen, The Netherlands; [3]HAN University of Applied Sciences, Nijmegen, The Netherlands

Background

To deliver high-quality care for individuals with complex care needs, residents need to be trained across the boundaries of their specialty (intraprofessional learning). Current literature mainly relies on self-reporting techniques and does not provide insights into tacit processes that influence intraprofessional learning. Our aim was to gain a deeper understanding of intraprofessional workplace learning by residents through observing everyday intraprofessional interactions.

Summary of Work

This focused ethnography was conducted in a tertiary care children's hospital. Seven residents from four specialties were selected through purposive sampling and observed in their work-related activities in various departments (>120 hours). We identified relevant artefacts (e.g., protocols) and conducted ten interviews with observed and related residents. Data collection and analysis were conducted iteratively in a research group with insider and outsider perspectives. A sounding board group of stakeholders (patients, supervisors, residents, researchers) was consulted regularly during the research process.

Summary of Results

Residents were involved in numerous intraprofessional learning opportunities as part of their daily work. How intraprofessional interactions take place and how residents learn

intraprofessionally was influenced by factors related to the involved health professionals and their interpersonal relationships, clinical learning environment, and care requirements. We identified at least three themes that deepened our understanding: 1) Intraprofessional stereotyping was abundant, and perceived irreconcilable dissonances among specialties hindered intraprofessional learning. 2) Team reflection on intraprofessional collaboration was often lacking, and intraprofessional conflicts could lead to resident disengagement. 3) Residents displayed limited capability in deliberately steering their intraprofessional learning process. There was a general focus on completing clinical tasks rather than learning and lack of awareness of intraprofessional learning opportunities other than conveying medical knowledge.

Discussion and Conclusion

Intraprofessional care offers many learning opportunities but does not automatically result in intraprofessional learning for collaborative practice. This ethnographic study provides insights into the behaviours and tacit processes that play a role in intraprofessional workplace learning by residents. Potential future research directions include (action)research of interventions to support intraprofessional workplace learning in clinical practice.

Take-home Message

The findings of this study illustrate that inclusive learning environments that provide space for individual and team reflection and promote deliberate intraprofessional learning are paramount for intraprofessional workplace learning.

Session 4N: Points of View 1

4N1 (4892)

Date of presentation: Monday 28th August
Time of session: 14:00 - 14:12
Location of presentation: Dochart 1, Loch Suite, SEC

Medical education in social vulnerability and low-resource scenarios: going beyond resilience.

Ugo Caramori[1], Karina Diniz Oliveira[1], Alcyone Apolinário Januzzi[2]

[1] *Faculty of Medical Sciences, State University of Campinas Unicamp, Campinas, Brazil* [2] *Serviço de Saúde Dr. Cândido Ferreira, Campinas, Brazil*

On the premise of building a social accountable and “real world” curriculum, the encounter with social vulnerabilities during clinical teaching is inevitable, especially in developing countries. Teaching with vulnerable populations is challenging and becomes even more complex when healthcare is provided in contexts with low-resources. In this scenario, in an apparently very dry glimpse in contrast to the great medical modernities, it is not enough to conduct an educational process that only generates a sense of resilience. Learning in vulnerability, and sometimes also being vulnerable regarding your resources, is an important scenario for expanding skills that are so discussed in medical education: capacity for innovation, teamwork, individualized clinical reasoning and health advocacy. In this point of view, we intend to present the paths and reflections of educators working in the public health and psychosocial care network in the city of Campinas (Brazil) in particular in the street outreach team for homeless population health care, a teaching scenario for the medical undergraduate course, residency in Psychiatry and Family Medicine. The paths to a socially accountable education must go beyond opening eyes to inequalities, but rather promoting and facilitating actions to reduce them.

4N2 (6301)

Date of presentation: Monday 28th August
Time of session: 14:12 - 14:24
Location of presentation: Dochart 1, Loch Suite, SEC

Can you really effectively teach a physical craft such as surgical skills online?

Leonie Heskin[1]

[1] *Royal college of Surgeons in Ireland (RCSI), Dublin, Ireland*

Medical education online if taught by a lecture or tutorial-based medical training was relatively easy to move online. Demonstrating, teaching and giving formative feedback for the acquisition of any physical skill, be it ceramics, building an electric circuit board or teaching surgical skills is much more of a challenge. Firstly there is a three-dimensional aspect to the models used or built in the teaching session that needs to be visually seen by both the educator and the trainee via a two-dimensional image. Also, there is a loss or damping down of the nuances of haptic feedback, how robust is the suture that has just been applied, and limited vision of the depth of a wound for example in surgical skills training. Remote learning of surgical skills to novice postgraduates was attempted by our team where basic equipment and sutures were sent to the trainees, they purchased food grade animal based simulators locally and their phones acted as cameras that were connected to Blackboard collaborate@ via an app called EpoCam@. Six junior surgical trainees who would usually get a three-hour group training session in person now got the same training online, teaching skills such as knot tying and suturing, tendon repair, vessel repair, and skin grafting. Over the course of these three hours, they now got 30-minute sessions each online with an experienced educator. The limitation for both the facilitator and the trainee is getting the view of the skill being demonstrated or practiced seen correctly. Some solutions were suspending the phone/camera from an overlying shelf or a pile of books but the main challenge is that the trainee's hand often blocked the view while suturing. Getting the camera angle correct with appropriate lighting that did not cast a shadow in the wrong direction was also a limitation. The positive feedback from the trainees at the end of this project is that they appreciated one-to-one formative feedback where their skills were corrected by the facilitator for the entirety of the skill.

Is it really possible to optimise the acquisition of surgical skills or any physical skill online?

4N3 (4187)

Date of presentation: Monday 28th August
Time of session: 14:24 - 14:36
Location of presentation: Dochart 1, Loch Suite, SEC

Re-thinking Geriatrics Education: Beauty and the Beast

Wee Shiong Lim[1], Siyun Leong[1], Kalene Pek[1], Sabrina Lau[1], Joanne Kua[1], Wei Chin Wong[1]

[1] *Institute of Geriatrics and Active Aging, Tan Tock Seng Hospital, National Healthcare Group, Singapore, Singapore*

"….. tale as old as time, song as old as rhyme…."

The relevance of geriatrics education is underscored by the inexorable worldwide trend of population aging. It is thus critical to equip students and healthcare professionals with a good grasp of topics such as frailty and dementia, and to influence positive attitudes towards older persons to reap the longevity dividend. Yet, the value proposition of geriatrics education is not a given, even in Asian societies where older persons are generally revered.

This presentation will share the 10-year journey in geriatrics education of the Institute of Geriatrics and Active Ageing (IGA). Established in 2013, IGA seeks to challenge bias and stereotypes of aging and older persons, and to equip healthcare professionals with core skills and knowledge which are relevant to the health and care of older persons.

The Beast: Ageism continues to rear its ugly head in subtle and not-so-subtle ways. Geriatrics education often has to contend with overcrowded curriculums and competing agendas. Public health measures during the Covid-19 pandemic aimed at protecting vulnerable older persons had unintended consequences on their physical and mental well-being, and posed unprecedented threats to inter-generational solidarity.

The Beauty: Partnership with two local medical schools facilitated early exposure to geriatrics and gerontology through an intercalated curriculum with dedicated Aging modules via creative pedagogy such as skills workshops and longitudinal patient programs involving older persons. Focused masterclass workshops equipped healthcare professionals with dedicated skills in topics such as dementia, frailty and sarcopenia. Research electives enabled deeper learning through scholarship and mentorship. IGA spearheaded educational initiatives (such as community engagement events to mark International Day of Older Persons and the Frailty-Ready Hospital campaign) to create awareness and clarify misconceptions about aging. The Covid-19 pandemic presented unique opportunities for further outreach to older persons through digital platforms and

social media, while enabling inter-professional representation with participation of junior staff.

Even as we usher in a new epoch of exciting opportunities in the post-pandemic era, the geriatrics education mandate remains a cornerstone in IGA's ongoing journey to advance the health and quality of life of older persons through evidence-based practice.

4N4 (6222)

Date of presentation: Monday 28th August
Time of session: 14:36 - 14:48
Location of presentation: Dochart 1, Loch Suite, SEC

Succession Planning and Talent Retention: Are we failing or only just passing in Medical Education?

Vishna Devi Nadarajah[1], Francis Wen[1], Noraidah Yusoff[1]

[1] *International Medical University, Kuala Lumpur, Malaysia*

In higher education human capital and talent are key for institutional sustainability and growth. The "great resignation" or " the big quit " as seen during the pandemic (2021 and 2022) has also impacted higher education. Universities are re-evaluating job descriptions, remote work arrangements and how work processes and knowledge are documented to risk manage the human capital loss and meet the needs of their diverse workforce. The previously mentioned strategies while necessary, may not be comprehensive enough for longer term solutions especially in medical education. Human capital loss in medical education is seen through faculty attrition and the reasons for this can include lack of tenured positions or career advancement opportunities, high workload, discrimination or harassment and lack of transparency in decision making. Experienced leaders in medical or higher education will attest that the efforts to retain good talent is well worth compared to the risk and time taken to hire and train new talent.

The point of view offered in this session will be that medical education institutions are only just passing and sometimes failing with succession planning and talent retention strategies. We will first discuss the value of succession planning and talent retention in the context of medical education. We will identify issues related to organisational and professional culture that form barriers to succession planning and talent retention strategies which in turn impacts faculty attrition. We invite the audience to engage with us on ways to overcome these barriers and inform educational leaders.

4N5 (4428)

Date of presentation: Monday 28th August
Time of session: 14:48 - 15:00
Location of presentation: Dochart 1, Loch Suite, SEC

ChatGPT: A friendly artificial intelligent or a disruption for medical education program design?

Jinjuta Ngeyvijit[1]

[1] *Pulmonary and Pulmonary critical care division. Department of Internal Medicine. ChaophrayaAbhaibejhr Hospital, Prachinburi, Thailand*

Medical education programs have evolved with the assistance of technology, transitioning from paper-based methods to paperless-based such as integrating online, on-demand and simulation case-based technology-integrated study. This has allowed for easier access to medical knowledge, although the reliability of resources may vary. A medical education program not only emphasizes knowledge but also critical thinking, ethical considerations, team work, interpersonal skills, and patient-doctor relationships. Instructors play a vital role in providing feedback and practice programs to help students become well-rounded doctors. Essay and patient report writing are crucial tools for evaluating students' knowledge and critical thinking skills, helping instructors gauge how each student efficiently approaches medical issues, gathers information, creates treatment plans, and interacts with patients.

The rise of artificial intelligence (AI) models such as chatGPT, an artificial intelligent model designed to generate human-like responses, using learning algorithm called the Generative Pre-trained Transformer (GPT), has made writing and answering questions easier and more accessible. Focusing on medical learning, chatGPT can easily transform medical knowledge to an excellent essay and easily simplify tangled thought on medical issues within a few minutes, which sometimes even the instructors found difficult to concludes and express his/her thought through writing.

My point of view is while AI has the potential to improve learning outcomes, it is important to consider how it may affect the authenticity and reliability of student work. Can patient reports or essays created by AI with information gathered by students be considered reliable and authentic assessments? It is not plagiarism but can we call this work valid? This area is still an open for further discussion that I, personally, think we cannot avoid facing.

To ensure the ethical use of AI in medical education and assessment, medical instructors

should thoughtfully evaluate its role. Early exploration of AI tools can offer immense benefits while mitigating potential negative outcomes. ChatGPT's arrival may profoundly impact the design of future medical education programs and assessment methods.

4N6 (4777)

Date of presentation: Monday 28th August
Time of session: 15:00 - 15:12
Location of presentation: Dochart 1, Loch Suite, SEC

The Right Thing to Do: An Urgent Call to Address Moral Distress in Residents

Allison Chrestensen[1], Elizabeth Anne Kinsella[1], Donald Boudreau[1], Will Bynum[2], Matthew Hunt[3], Robert Sternszus[1]

[1] *Institute of Health Sciences Education, McGill University, Montreal, Canada* [2] *Duke University School of Medicine, Durham, NC, USA* [3] *School of Physical and Occupational Therapy, McGill University, Montreal, Quebec, Canada*

Moral distress is the tension that may occur when one knows the "right" thing to do but feels powerless to act in alignment with one's values. Power structures, institutional priorities, and regulations are among the forces that constrain individual agency. Early studies on moral distress emerged from the nursing profession, and more recent research has documented it in practitioners from other disciplines, including medicine. However, little is understood about the experience of moral distress in residents, who may be particularly susceptible as a result of their unique position in the hierarchy of healthcare. Because they fulfil both teaching and learning roles, trainees must navigate complex webs of relationships, as well as political and social pressures. Importantly, these challenges occur during a critical period of professional identity formation. Some early research suggests that among trainees, there is a positive correlation between moral distress, burnout and intention to leave the profession. Given the alarming rates of attrition from the medical profession in recent years, moral distress among residents is a phenomenon that requires urgent attention.

Session 40: Postgraduate: Assessment

401 (6345)

Date of Presentation: Monday 28th August
Time of presentation: 1400 – 1406
Location: Carron 1, Loch Suite, SEC

Supervisors' perceptions of their role in supporting residents' learning - a qualitative study

Cecilie Normann Birkeli 1, Karin Isaksson Rø2, Lisbeth Rustad1, Monika Kverneneslˡ

[1]*University of Bergen, Bergen, Norway;* [2]*Institute for Studies of the Medical Profession (LEFO), OSLO, Norway*

Background

Supervision has always played an important role in resident's training. In addition to clinical, bedside supervision, new standards have, over the last few years, increased focus on educational supervision (ES). Support functions such as faculty development and guidelines are offered to communicate best practise, however few studies have mapped how attending physicians understand their role as educational supervisors. The aim of this study was to explore how supervisors experience this role and how they approach providing support for residents' learning.

Summary of Work

We used qualitative methodology with an inductive approach and conducted semi structural interviews. Participants were recruited by e-mail invitations, extracted from membership register at The Norwegian Medical Association and snowball methods. Thirteen supervisors from internal medicine, surgery, and anaesthesiology, with experience in supervising residents, were included. Interview transcripts were analysed using systematic text condensation following a four-step procedure: (i) total impression (ii) identifying and sorting meaning units (iii) condensation from code to meaning (iv) synthesizing condensation from description and concepts.

Summary of Results

Our analyses yielded four themes representing key aspects of the supervisory roles; supervisors describe educational supervision as an important support structure to ensure quality education in residents' training and upphold quality education in patient care, supervision means filling multiple expectations, establishing a good relationship between resident and supervisors is key to well-functioning ES and being a supervisor has a personal cost in absence of organizational resources.

Discussion and Conclusion

The many roles embedded in attending physicians' understanding of ES indicates a wide definition of ES and of the supervisory role. Supervisors acknowledged a theoretical distinction between ES and clinical supervision but struggled to translate the relevance of this distinction to everyday practice. Efforts to establish a good resident-supervisor relationship was influences by the proximity between supervisor and residents in clinical practice. The lack of organizational structures leads to supervisors themselves taking on a great responsibility of making sure ES was given priority, and for many this entailed a personal cost in finding time to do so.

Take-home Message

Educational supervisors define their role and responsibility to appear to be alone in trying to understand what is expected of them and how to act as supervisors.

402 (3064)

Date of Presentation: Monday 28th August
Time of presentation: 1406 - 1412
Location: Carron 1, Loch Suite, SEC

Establishing Competency Framework of Taiwanese Pharmacists Using the Nominal Group Technique

Ya-hui Chang1, Shao-Chin Chiang2, Chih-Wei Yang3

[1]Department of Pharmacy, MacKay Memorial Hospital, Taipei, Taiwan; [2]Department of Pharmacy, National Yang Ming Chiao Tung University, Taipei, Taiwan; [3]Department of Medical Education, National Taiwan University Hospital, Taipei, Taiwan

Background

The implementation of competency-based medical education (CBME) has been currently emphasized by key reports in health professional education worldwide. However, a consensus of the pharmacists' competency framework in Taiwan needs to be reached for national implementation of CBME. The present study aimed to report the results and impacts of a consensus process facilitating the establishment of pharmacist competency framework.

Summary of Work

An initial draft of pharmacist competency framework, including 6 core competencies (CCs) and 17 profession-specific sub-competencies (Sub-Cs), has been proposed by a CBME taskforce of the Taiwan Society of Health-System Pharmacists (TSHP) based on literature review and foundation training requirement of Taiwanese pharmacists. Expert pharmacist educators from teaching hospitals across Taiwan were invited to participate in the consensus meetings using the nominal group technique (NGT). NGT method could facilitate these educators to express their opinions freely with an interactive exchange of views and anonymous voting, resulting in an effective consensus-building process. The comprehension and agreement of educators on pharmacist-specific competency framework before and after the consensus meetings were assessed by a 5-point Likert scale questionnaire.

Summary of Results

Twelve pharmacist educators participated in 3 rounds of consensus meetings between November and December 2022. Finally, there were 6 CCs and 15 Sub-Cs developed after experts' full discussion in the consensus meetings. The comprehension and agreement of pharmacist educators on profession-specific content of the competency framework were significantly increased via the process (before vs. after: 3.02 ± 0.81 vs. 4.82 ± 0.43; $p < .001$).

Discussion and Conclusion

This study is the first report to show an effective consensus process facilitating the establishment of competency framework for foundation-level pharmacists in Taiwan. Pharmacist educators could enhance their comprehension and agreement on the pharmacist-specific content of competency framework via the consensus process of NGT. Further efforts should be conducted to disseminate and apply the framework for CBME implementation.

Take-home Message

The consensus process of NGT was effective to build a shared mental model of educators for CBME implementation.

403 (6286)

Date of Presentation: Monday 28th August
Time of presentation: 1412 - 1418
Location: Carron 1, Loch Suite, SEC

Longitudinal Training More Effective Than Episodic Time With Experts

Elizabeth Chawla1, Aditi Gadre2

[1]Medstar Georgetown University Hospital, Washington, DC, USA; [2]Georgetown University School of Medicine, Washington, DC, USA

Background

After three decades of efforts to improve Mental and Behavioral Health (MBH) training for pediatricians in the United States (US), little progress has been made. The COVID-19 pandemic has exponentially increased pediatric mental health needs, and yet studies show graduates of US pediatric residency programs are inadequately prepared to manage these issues. Accreditation requirements for pediatric training programs focus on exposing trainees to experts. These have included a required rotation in child development and behavioral pediatrics since 2000, and may soon require a Psychiatry rotation. Our pediatric residency program has tried these as well as other training approaches including integrating MBH specialists in the residents' pediatric clinics. We conducted a qualitative study of graduates from our program to explore the factors impacting trainee ability to learn and later apply MBH in practice.

Summary of Work

We performed semi-structured interviews with graduates purposefully sampled from a 6-year period spanning the implementation of various MBH training approaches in our program. Participants were asked to reflect on their training and current practice, and discuss experiences that impacted their learning and use of MBH skills. We iteratively analyzed and coded the interview transcripts using the Consensual Qualitative Research method followed by abstraction and synthesis of themes.

Summary of Results

Eleven graduates were interviewed. Factors impacting the learning and application of MBH skills centered around experiences that either facilitated or inhibited self-efficacy. Experiences where training had been 'outsourced' to non-pediatrician experts, the lack of modeling by pediatric faculty, episodic education resulting in limited exposure, and observation only learning environments limited the usefulness of training. Valuable experiences were those that provided 'access to the specialist' while caring for their own patients, graduated autonomy with scaffolded support, and environments that provided longitudinal education.

Discussion and Conclusion

Consistent with experiential learning theory, sending trainees to 'learn from experts' is not enough to achieve MBH competence. Residents who developed MBH self-efficacy did so over time while providing the care to their own patients with support from mental health specialists integrated into their clinics.

Take-home Message

Longitudinal training approaches allowing autonomy with graduated levels of support from knowledgeable faculty are more effective than episodic time with experts for learning complex skills.

404 (5788)

Date of Presentation: Monday 28th August
Time of presentation: 1418 - 1424
Location: Carron 1, Loch Suite, SEC

Applying Simulation Training to Learn Managing Emergent Events in Clinical Psychological Assessment

Ya-Jen Chuang1, Yung-Chi Hsu2, Hsun Ou1, Jen-Jiuan Liaw3, Shin-Chang Kuo1, Fang-Te Su1, Cheng-Yi Chao4, Chin-Bin Yeh5

[1]Department of Psychiatry, National Defense Medical Center, Tri-Service General Hospital, Taipei, Taiwan; [2]School of Medicine, National Defense Medical Center, Tri-Service General Hospital, Taipei, Taiwan; [3]School of Nursing, National Defense Medical Center, Taipei, Taiwan; [4]Department of clinical pharmacy, National Defense Medical Center, Tri-Service General Hospital, Taipei, Taiwan; [5]Department of Psychiatry, National Medical Center, Tai-Service General Hospital,, Taipei, Taiwan

Background

Violent Incidents and self-harm behavior are two important issues of emergent events during psychological assessment, but seldom occur. They implicate patient safety and occupational safety. Before clinical psychologist's internship, school lecture could only increase the trainees' knowledge of these two issues. We designed two simulation-based (SB) training programs, managing violent incident (VP) and managing self-harm behavior (HP), to teach trainees coping skills and collaboration among inter-professional healthcare teams for these emergent events.

Summary of Work

HP adopted in situ simulation, and VP applied simulation with integration of augmented reality through immersive projection of violent event. The quasi-experimental study, using purposive sampling, recruited 14 trainees for VP and 12 trainees for HP. The trainees were assigned into two groups: experimental group receiving SB training, and control group receiving lecture. Two experienced clinical psychologists rated their performance of skills in management of violent incident and self-harm behavior in simulation tests. After pre- and post-tests, all trainees completed questionnaires of examination, self-efficacy,

cognitive load, and self-satisfaction. Data were analyzed using generalized estimating equation model.

Summary of Results

Compared post-test with pre-test, the preliminary results showed the SB training significantly improved scores of skills in management of violent incident (B=13.89, P=0.000) and self-harm behavior (B=20.93, P=0.000), examination (VP: B=12.00, P=0.009), self-efficacy (B=1.50, P=0.007), and trainee's self-satisfaction (B=2.64, P=0.003). The post-test scores of intrinsic cognitive load (B= -6.86, P=0.007) were significantly lower than pre-test. In HP, the skill-improved scores of SB training were significantly higher than lecture. There were no significant differences between the two raters' skill rating (r= 0.83) and satisfaction(r=0.78) to trainees.

Discussion and Conclusion

In more complexed HP, the SB training showed more improved performance of skills than lecture. Even in less complexed VP, trainees with SB training showed better skill-performed quality than trainees with lecture. The simulation group stored skills of managing emergent events in procedural memory, and retrieved them to apply in clinical situation effectively. It decreased intrinsic cognitive load and increased self-satisfaction. Lecture group had to transform knowledge, stored in semantic memory, into skills with less effectively and accurately than simulation group.

Take-home Message

Simulation-Based Training could promote clinical psychologists' competence and skill-performed quality of managing emergent events during Psychological Assessment.

405 (3225)

Date of Presentation: Monday 28th August
Time of presentation: 1424 - 1430
Location: Carron 1, Loch Suite, SEC

Comparison of in-person and virtual MMI performance for admission into physical therapy

Alison Greig1, Reid Mitchell1, Louis Douesnard1

[1]*University of British Columbia, Vancouver, Canada*

Background

The COVID-19 pandemic forced academic programs to adapt their admission procedures to comply with public health mandates. While multiple studies have detailed the implementation of virtual multiple mini-interviews (MMI), focusing on feasibility and user experiences, few have investigated applicant performance between formats. This study explored whether a virtual format may negatively impact the assessment of non-academic qualities, which could hinder the effectiveness of the MMI.

Summary of Work

The University of British Columbia (UBC) Physical Therapy program MMI consists of nine 8-min stations. Total MMI scores and grade point average (GPA) were collected retrospectively for 2019-2020 (in-person; n=336) and 2021-2022 (virtual; n=386). Each format was compared for total MMI scores, internal consistency, factors predictive of successful admission to the program, and how the MMI changed an applicants' ranking from GPA alone.

Summary of Results

There was no significant main effect of MMI format on total MMI scores (in-person: 334±34 vs. virtual: 328±48, $p>0.05$). Internal consistency of the in-person MMI was lower than the virtual MMI (Cronbach's alpha: 0.570 vs. 0.781). GPA and total MMI scores significantly contributed to predicting applicant acceptance into the physical therapy program (in-person: Nagelkerke $R2=0.986$, $p<0.001$; virtual: Nagelkerke $R2=0.984$, $p<0.001$). Following the in-person MMI, 83 applicants' ranking changed from successful to non-successful while 91

applicants' ranking changed to successful ($p>0.05$). Following the virtual MMI, 86 applicants' ranking changed to non-successful whereas 114 applicants' ranking changed to successful ($p=0.06$).

Discussion and Conclusion

The MMI is a tool for admission committees to assess non-academic qualities, and it was designed to be conducted in person. The present study demonstrates that applicant performance on the MMI is similar whether conducted in-person or virtually. Despite the evaluation of similar non-academic themes across years, the internal consistency of the virtual MMI stations was higher than in-person. Improvements in interviewer training and efficiency of conducting the MMI may explain this difference. In summary, conducting the MMI virtually does not appear to negatively impact the assessment of non-academic qualities, which compliments the feasibility of using the virtual format.

Take-home Message

Conducting the MMI virtually does not appear to negatively impact the assessment of non-academic qualities.

406 (6194)

Date of Presentation: Monday 28th August
Time of presentation: 1430 - 1436
Location: Carron 1, Loch Suite, SEC

A near-peer led teaching session to support the transition into independent clinical practice

Joe Gleeson[1], Hayley Boal[1], Eleanor Dodd[1], Rebecca Morris[1], Joseph Thompson[1], Thomas Sharp[1], Ashley Wragg[1]

[1]*Mid Yorkshire Hospitals NHS Trust, Wakefield, UK*

Background

In the UK, newly-qualified doctors work as FY1s for one year before achieving full professional registration with the GMC. In their second year of practice, FY2 doctors are frequently handed much more responsibility than FY1s, which may include taking referrals, discharging patients, working independently within emergency departments, and supervising FY1s on the wards. They may also work in specialities such as Paediatrics and Obstetrics which they have not encountered since medical school. This can represent a significant step up in responsibility, which FY1s often feel under-prepared for.

Summary of Work

We ran a teaching day which was attended by all FY1s within our Trust, with the focus on the transition to FY2. The day was run by Education Fellows, who were 2-3 years ahead of the FY1s, and recently worked clinically in FY2 roles themselves. Half the day involved teaching sessions, including “ECGs not to miss in the ED”, a session recapping the key parts of specialities commonly encountered in FY2, and a discussion-based session on the role of the FY2, with Fellows sharing their experiences and fielding questions. The other half of the day was simulation-based, with FY1s completing simulations where they were in the role of the FY2, including dealing with human factors such as answering bleeps, receiving referrals, and supervising FY1s.

Summary of Results

The day was extremely well-received, with an average rating of 4.94/5 by the FY1s. Many FY1s commented that they felt more prepared for the transition to working as FY2s. Our multifaceted approach in teaching methodologies and usage of near-peer facilitators were particularly appreciated.

Discussion and Conclusion

The transition points from medical student to doctor, and from junior doctor to consultant are relatively well-discussed, and there are many programmes which aim to help those undergoing such transitions. The transition from FY1 to FY2 into more independent clinical practice can be significant, but there exists less teaching to help those undergoing this transition. This gap was addressed well by our session.

Take-home Message

A teaching session designed and delivered by junior doctors who themselves have recently undergone the transition from FY1 to FY2 can be a highly effective way to help bridge this gap.

407 (0645)

Date of Presentation: Monday 28th August
Time of presentation: 1436 - 1442
Location: Carron 1, Loch Suite, SEC

National Comparison of ACGME Milestones 2.0 Ratings and Physical Medicine/Rehabilitation Board Exam in Taiwan and the US

Wen-Hsuan Hou1, Kai-Hua Chen2, Shin-Liang Pan3, Jin-Shin Lai3, Taiwan Academy of Physical Medicine and Rehabilitation-Milestone Working Group (TAPMR-MWG)4

[1]Department of Geriatrics and Gerontology, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University/ Department of Physical Medicine and Rehabilitation, Taipei Medical University Hospital, Tainan/Taipei, Taiwan; [2]Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Chiayi, Taiwan; [3]Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, Taipei, Taiwan; [4]Taiwan Academy of Physical Medicine and Rehabilitation, Taipe, Taiwan

Background

Accreditation Council for Graduate Medical Education (ACGME) advocated "competency-based medical education for residents' education through graduation to unsupervised practice." Among the six core competencies of patient care (PC), medical knowledge (MK), systems-based practice, practice-based learning and improvement, professionalism, interpersonal and communication skills, PC and MK are specialty specific while the others are harmonized milestones throughout across multidiscipline. Thus, Taiwan Board of Physical Medicine and Rehabilitation (PM&R) launched a pilot trial to assess the PC and MK Milestones 2.0 adopted from the ACGME in 2021.

Summary of Work

This study aims to investigate the feasibility between residents' self-rating and clinical teachers' Milestones 2.0 ratings, and the ability to predict board certification. Self-rating data collected from 140 residents ranged from the first (R1) to fourth year (R4), 37, 34, 34, and 35 respectively. Each resident was assessed by either clinical teachers' direct observation or consensus through clinical competency committee (CCC). Secondary data of ACGME milestones national repot 2022 for the statistics of 1,580 residents (R1 to R4

were 169, 489, 468, and 454 respectively) from the US Milestones National Report 2022 was also extracted.

Summary of Results

Two common observations noticed between the US and Taiwan data. First, no matter ratings from residents or clinical teachers, the levels of PM&R Milestones 2.0 had similar incremental patterns from R1 to R4. Second, in general, clinical teachers' rated higher levels compared to the residents' self-ratings. However, discrepancy was noted for the predictive validities of Milestones between two countries. In the US, only Milestones ratings of MK well predicted performance in Part I written Examination but none of the Milestone ratings correlated with Part II oral Examination scores; while in Taiwan none of the Milestones ratings correlated the written or oral examinations, even for the same construct.

Discussion and Conclusion

Inconsistencies were existed in Milestones 2.0 ratings to predict PM&R Board Certification Examination scores between two countries. Further shared mental model through CCC and curriculum mapping by Program Evaluation Committees would be necessary.

Take-home Message

Milestones 2.0 Rating could support residents' training for PM&R board certification in Taiwan and the US.

408 (4918)

Date of Presentation: Monday 28th August
Time of presentation: 1442 - 1448
Location: Carron 1, Loch Suite, SEC

Development, implementation and evaluation of an integrated interdisciplinary Objective Structured Clinical Examination for Diabetes Certificated Education Specialists in Taiwan

Chung-Mei Ouyang1, Chin-Hua Liu2, Chun-Chuan Lee3

[1]Department of Dietetics, National Taiwan University Hospital Hsin-Chu Branch, Hsinchu City, Taiwan; [2]Department of Nutrition, Chang Gung Memorial Hospital, Chiayi, Taiwan; [3]Division of Endocrinology and Metabolism, Mackay Memorial Hospital, Taipei, Taiwan

Background

It is crucial for diabetic patients to be aware of diabetes-related knowledge and skills of self-management. Inter-professional collaboration is acknowledged as essential for quality patient-care. However, little is known about receptiveness to inter/intra-professional feedback in their training from Taiwanese Association of Diabetes Educators (TADE) that has more than 11,000 members and responses for training Taiwanese Diabetes Certificated Education Specialists (TDCES). Objective structured clinical examination (OSCE) is an organizational framework into which a variety of test methods can be incorporated as a training model for TDCES.

Summary of Work

We conducted to develop, implement and evaluate an interdisciplinary OSCE model for TDCES in three different area of Taiwan to assess the feasibility and impact from all participants. The developed model was implemented in diabetes education and counseling skills. The contents of OSCE were related to diabetes diet education as the theme of this program and we invited senior health professionals (dialectologists, dietitians and nurses) who were also TDCES to design the contents. A 6-station OSCE was conducted at three medical centers located in northern, central and southern area of Taiwan. There was a half-hour educational skill course on patient-centered and counseling skills before OSCE began. Utilization of Standardized Patients (SPs) instead of real patients were arranged and contracted to portray patients' conditions in stations of

communication and clinical skills. Satisfaction outcomes from all participants were collected and analyzed.

Summary of Results

A total of 164 TDCES attended the program. Overall satisfaction with OSCE process and outcomes were evaluated. Feedback from TDCES, assessors and SPs was completely positive. 100% of the participants were satisfied containing 92% “very satisfied” and 8% “satisfied” from TDCES. They valued the integrated interdisciplinary OSCE as a useful method of assessment and enhance of TDCES competencies.

Discussion and Conclusion

From this experience, we set up a new training model (OSCE) in diabetes education for DCES in Taiwan. It has a critical mass of faculty members of Taiwanese Association of Diabetes Educators that trained on blueprinting and station writing, as well as a group of assessors, facilitators and role players.

Take-home Message

The integrated interdisciplinary OSCE is a good training model of assessment and enhance of TDCES competencies

409 (0674)

Date of Presentation: Monday 28th August
Time of presentation: 1448 - 1454
Location: Carron 1, Loch Suite, SEC

Teaching, Learning and Assessment: Advanced Trauma Life Support and Virtual Patient Case Simulations

Nancy Posel1, David Fleiszer1, Alicia Rosenzveig2, Jean-Sebastien Pelletier1, Allison Pang1

[1]McGill University, Montreal, Canada; [2]University of Ottawa, Ottawa, Canada

Background

We supplemented Advanced Trauma Life Support (ATLS) training with interactive Virtual Patient Case Simulations (VPS) within the context of a blended learning mode, aligned with Entrustable Professional Activities (EPAs), where apprpirate. Nine diverse trauma cases were developed providing learners with opportunities for decision-making aligned with patient outcomes, feedback, and verbal or written handovers in the form of summary statements. Creation of an online, but authentic, stressful environment was added by placing timers and scoring at critical decision-making points.

Summary of Work

Thirty-seven first-year surgical residents Learners were divided into three randomized cohorts and required to complete three VPS of varying complexity at an appointed day and time. Subsequent to the activity, reports were generated through the VPS application, analyzing individual and group responses and summary statements.

Summary of Results

Report generation allowed extensive examination of individual learners as follows:
Decision-making was not always aligned precisely with the ATLS algorithm that had been taught and some learners made errors by missing critical information.
EPAs can be aligned with VPS.

Comprehensive 'whole patient' review was often lacking. Choices focused on the immediate injury, irrespective of stated co-morbidities and the impact of these initial decisions on long-term patient outcomes.

The quality of the required summary statements or 'handovers' was diverse, sometimes demonstrating knowledge gaps, misunderstanding of clinical information, and a lack of comprehensive and sequential reporting.

Discussion and Conclusion

VPS's provide options to teach and assess clinical encounters in an online, authentic, and interactive environment. The availability of VPS can provide objective measures for assessing individual resident responses, and thus, the opportunity for additional knowledge translation and timely remediation as required.

Take-home Message

- VPS can support teaching, learning, and assessment of critical decision-making, clinical understanding and script development, and comprehensive case management.
- VPS narratives and associated decisions can be associated with EPAs where simulation is permitted.
- They can help to gauge subjective levels of individual confidence with objective measures prior to placement in the actual clinical setting.
- Authors can integrate rationales and immediate feedback with their VPS, enhancing timely learning.
- Reporting features associated with VPS applications can support further analysis and potential research. Individualized reviews and reports support early remediation.

4010 (6708)

Date of Presentation: Monday 28th August
Time of presentation: 1454 - 1500
Location: Carron 1, Loch Suite, SEC

Non-technical skills and structured interviews in selection of surgical residents can translate to trainees' performance

Srila Samphao1, Osaree Akaraborworn1, Wongsakorn Chaochankit1, Seechart Noonpradej1, Pattama Tanaanantarak2, Tichakorn Petnarong1, Aseesa Mudraman1, Panchaya Wongsukon1, Jutamas Suwannatat1

[1]Department of Surgery, Faculty of medicine, Prince of Songkla University, Hat Yai, Songkhla, Thailand; [2]Department of Radiology, Faculty of medicine, Prince of Songkla University, Hat Yai, Songkhla, Thailand

Background

Surgical training is a complex, time-consuming process. Surgical candidate characteristics require either cognitive ability or noncognitive attributes (non-technical skills, NTS). Selection process and criteria for surgical residents is inconsistent around the world. Different selection criteria and methods may translate to trainees' performance.

Summary of Work

According to competency-based surgical curriculum, 6 competencies including patient care, medical knowledge and skills, practice-based learning and improvement, interpersonal communication, professionalism and system-based practice will be assessed. We compared trainees' performance at the end of first-year training (PGY1) between the selected group involving with NTS criteria and structured interviews (NTS group) and those without NTS criteria and unstructured interviews (non-NTS group). Furthermore, the performance of trainees in the non-NTS group at the end of first- and second-year training (PGY2) was also compared.

Summary of Results

A total of 34 residents: 18 in NTS group and 16 in non-NTS group was included in the study. At the end of PGY1, mean scores of all competencies in the NTS group were higher than the

non-NTS group. Mean differences of the scores in all competencies in the NTS group were statistically significantly higher than the non-NTS group. In the non-NTS group, mean scores of all competencies at the end of PGY2 compared with PGY1 were statistically significantly higher.

Discussion and Conclusion

The goal of surgical training program is to produce competence and safe surgeons. Selection of surgical residents, to date, is still variable. Some institutes include NTS and structured interviews in the selection criteria and methods. The NTS for surgeons including situation awareness, decision making, communication and teamwork and leadership is proved to be an important factor in improving surgical residents' performance. Our study showed that including of the NTS criteria and structured interview in selection methods can help select the good surgical candidates because it can translate to trainees' performance. However, the learning process and learning experience, including the NTS, during surgical training can improve trainees' performance and competencies.

Take-home Message

Selection of surgical residents using NTS criteria and structured interviews can translates to trainees' performance. Learning experience including the NTS improves trainees' competencies.

4011 (4975)

Date of Presentation: Monday 28th August
Time of presentation: 1500 - 1506
Location: Carron 1, Loch Suite, SEC

Medical Humanities Education and Its Influence on Physician Licensing Examination' Outcomes in Taiwan

Wen Su[1]

[1]*National Defense Medical Center, Taipei, Taiwan*

Background

Medical education has highlighted the significance of incorporating medical humanities training into the curriculum to enhance medical' future practice for at least twenty years. However, impact of medical humanities education on academic performance is unknown. Therefore, we aimed to assess whether medical humanities education is positively associated with outcomes of physician licensing examination.

Summary of Work

A retrospective cohort study of 377 department of medicine students from National Defense Medical Center in Taiwan during 2014-2017 was performed to evaluate medical humanities with performance in physician licensing examination. SPSS 23.0 was utilized to implement t-tests and logistic regression.

Summary of Results

Humanities education with performance were positive correlation with the outcome of physician licensing examination ($p < 0.001$). Adjustment with gender, the OR (95% CI) was 0.87 (0.81 - 0.94) on failure of physician licensing examination by each increased humanities education with performance.

Discussion and Conclusion

The result of this study is that students with higher scores in medical humanities education courses have a higher examination pass rate. Students with higher scores in

medical humanities education courses may feature altruistic and humanistic and learning in humanities course may enhance students' context understanding.

Take-home Message

Medical humanities education brings benefit for students' physician licensing examination. However, whether medical humanities education exerts its long-term effect on doctor-patient relationship is needed to follow.

4012 (5592)

Date of Presentation: Monday 28th August
Time of presentation: 1506 - 1512
Location: Carron 1, Loch Suite, SEC

Medical Ethics and Medical Communication Education Can Be Very Interesting: Incorporate Interprofessional Collaboration and Learning Assessment

Pei-Wei Wang1, Li-Lin Kuo1, Ting-Fang Chiu1, Ming-Chyi Huang1, Yi-Chun Chiu1, Da-Chen Chu2

[1]Department of Teaching and Research, Taipei City Hospital, Taipei, Taiwan; [2]TAIPEI CITY HOSPITAL, TAIPEI, Taiwan

Background

Medical ethics education and medical communication training courses need continuous innovation. The elements of interprofessional collaboration (IPC) are also required to make the scope of discussion topics more comprehensive. The aim of this study is to share our experience of an innovative faculty development course joining IPC, medical ethics and medical communication and analyze the most helpful participants.

Summary of Work

Instead of the traditional dogmatic lecture courses, we have established an innovative theater model and continued to improve it. Professionals from various disciplines in our hospital were invited to participate this course. Each course is two hours in total including the time for performing on stage. The mixed-methods approach is used to evaluate the learning effect. Questionnaires and evaluations include Jefferson Scale of Empathy, Perceived Confidence Scale, satisfaction survey and open-ended comments about participants' experience and impressions of this course.

Summary of Results

In 2022, we held five courses and collected 225 valid questionnaires. There is statistical difference between the pre-test and post-test scores of the Jefferson Scale of Empathy and Perceived Confidence Scale for all participants. However, no significant difference

between the scores of stage performers and simple audience was found. Besides, no significant difference between those who participated in this course for the first time and those participated before. Feedback shows unanimous appreciation, the course design is very practical, and participants can learn good communication skills.

Discussion and Conclusion

Interprofessional collaboration enables integrated patient care and is integral to medical communication and ethics. Our innovative curriculum is an application of cognitive load theory, supported by participant feedback, to educate well about the importance of medical communication and IPC. In addition to being very interesting, it also brought everyone the touch of not forgetting why you start. Although the course is only two hours, but still let all the participants benefit a lot.

Take-home Message

Our ever-evolving innovative teaching programs bring participants sound knowledge, skills and attitudes, as well as educational models of medical ethics, communication and IPC.

4013 (4903)

Date of Presentation: Monday 28th August
Time of presentation: 1512 - 1518
Location: Carron 1, Loch Suite, SEC

Assessing self-reported burnout rates among postgraduate medical education (PGME) trainees before and during the COVID-19 pandemic in two medical schools

Carol Hodgson1, Jonathon Osborne1, Erica Dance1, Craig Ferguson1, Gavin Low1, Jaelene Mannerfeldt2, Gillian Shiau1, Clair Birkman1, Emily Maplethorpe1, Janet de Groot2

[1]University of Alberta, Edmonton, Canada; [2]University of Calgary, Calgary, Canada

Background

The Maslach Burnout Inventory (MBI-HSS MP) is validated for assessing burnout [Emotional Exhaustion (EE), Depersonalization (DP), and Personal Achievement (PA)] in healthcare workers. Recent research on resident burnout during the COVID-19 pandemic shows little change from pre-COVID-19 burnout levels. Our question was, did PGME trainees perceive different levels of stress before and during the pandemic, controlling for gender, financial worry, average clinical hours, happiness with career, and level of work-life balance?

Summary of Work

Study was approved by both universities' ethics boards. Anonymous surveys were sent to Alberta PGME trainees in 2019 (pre-COVID-19), 2020/2022 (during COVID-19). The surveys included MBI-HSS MP, demographics, and potential stressors. Burnout indicator sums and Burnout indices [using Dyrbye 2014 cut-off values] were calculated. MANOVA was run with sum of EE, DP, PA, and Perceived Daily Stress as dependent variables with Year, Gender, Clinical Hours Worked, Worry Over Finances, Career Happiness, and Work-life Balance as independent variables.

Summary of Results

Sample sizes were n=718 (2019, pre-COVID-19), n=346 (2020, without COVID-19 surge), and n=128 (2022, during COVID-19 surge). The EE Sum(SE) and percent EE burnout in 2019, 2020,

and 2022, respectively were: 29.66(.40), 60.7%; 28.52(.61), 56.6%; and 33.47(.97), 74.4%. The DP Sum and percent DP burnout in 2019, 2020, and 2022, respectively were: 12.10(.25), 58.5%; 11.94(.35), 62.4%; and 13.69(57), 73.4%. The PA Sum and percent DP burnout in 2019, 2020, and 2022, respectively were: 33.83(.3), 30.3%; 34.65(.40), 20.7%; 33.53(.66), 15.5%. The Perceived Daily Stress Level (0-10) in 2019, 2020, and 2022, respectively were: 5.69(.07); 5.14(.11); and 5.75(.18).

MANOVA multivariate tests, all independent variables were significant with large effect sizes for EE with Happy Career and Work-life Balance; medium effect for DP and PA with Happy Career, and Perceived Stress with Work-life Balance; small effect sizes for Year.

Discussion and Conclusion

Burnout was related to perceived happiness with one's career and a feeling of work-life balance. The COVID-19 pandemic did not have a strong effect on burnout, controlling for other variables. Study limitation was lower 2022 response rate.

Take-home Message

Although burnout did not significantly increase because of COVID-19, controlling for other variables, percentage of trainees with burnout was alarmingly high (74%), especially in 2022 during a COVID-19 surge.

4014 (2748)

Date of Presentation: Monday 28th August
Time of presentation: 1518 - 1524
Location: Carron 1, Loch Suite, SEC

Utilizing OSCE to Teach Principles of Gender Affirming Care

Eric Hsieh[1], Krystle Santos[1]

[1]*Keck School of Medicine of USC, Los Angeles, USA*

Background

The 2015 US Transgender Survey reports that nearly one third of transgender patients who saw a provider in the previous year had a negative experience and approximately one quarter of transgender patients did not see a doctor due to fear of being mistreated as a transgender person. Medical providers need exposure to inclusive, affirming care and a mechanism to be made aware of their implicit biases to help develop their skills as health advocates and allies.

Summary of Work

165 residents from the USC Internal Medicine Residency Program were divided into 2 groups. Both groups received curriculum on gender identity, concepts in gender diversity and discussions around sex assigned at birth. The first group (85 residents) underwent an objective structured clinical examination (OSCE) focusing on the care of a transgender patient with chest pain. Residents received OSCE scores focusing on patient physician interactions and perceived implicit biases. Standardized patients provided one on one feedback to the residents with a focus on improving implicit biases. The second group did not participate in the OSCE. All residents rotate through our gender affirming clinic where patient satisfaction scores were measured for each patient – resident visit.

Summary of Results

Patient satisfactions scores in our gender affirming clinic among the group that participated in the OSCE were 0.36 points higher on average on a Likert scale. Residents were judged on empathy, communication, patient education, and overall satisfaction with physician. There were no significant differences in evaluation scores by faculty during the

residents' clinic experiences. Residents met with residency directors in small groups to discuss curriculum in improve gender affirming care. Residents who experienced the OSCE portion of the curriculum rated the curriculum 0.22 higher on Likert scale with comments focused on benefits of improving implicit biases.

Discussion and Conclusion

Addressing implicit biases is an important aspect of improving gender affirming care. While curriculum to improve inclusivity and diversity is essential, we must continue to explore mechanisms to alleviate implicit biases in order to improve care of our patients.

Take-home Message

Using OSCE simulation can be a valuable tool to improve implicit biases toward different patient groups.

Session 4P: Teaching and Facilitating Learning

4P1 (3552)

Date of Presentation: Monday 28th August
Time of presentation: 1400 - 1406
Location: Carron 2, Loch Suite, SEC

Adopting debriefing with PEARLS in Bedside teaching

Wanna Ardonk1

[1]*Buddhachinaraj Phitsanulok medical education center, Phitsanulok, Thailand*

Background

Background: Debriefing is a vital learning component of simulation-based education and bedside teaching (BST). Promoting Excellence and Reflective Learning in Simulation (PEARLS) is the best practice standard using the debriefing process with appropriate integration of feedback, debriefing, and/or guided reflection. Little is known about adopting PEARLS debriefing in BST. This study aims to research the students' satisfaction and assess how they learn and change in an experiential context with PEARLS in BST.

Summary of Work

Summary of work: In the academic year 2022, fifty 4th and 5th-year medical students at Buddhachinaraj Phitsanulok medical education center were divided into 11 groups and randomly assigned to receive BST using PEARLS debriefing in pediatric rotation. BST has three steps: 5 minutes-briefing, 30 minutes-patient encounters, e.g., history taking or physical examination, and 60 minutes-PEARLS debriefing. PEARLS was based on a five-stage debriefing, setting the scene, reactions, description, analysis, and application /summary. Results were analyzed using percentages and mean scores. Post-assessment was made through a survey using Likert-scale questions assessing students' satisfaction (rating score from 1 = very unsatisfied to 5 = very satisfied) and Debriefing Assessment for Bedside teaching (DABT) which modified from 6 elements of Debriefing Assessment for Simulation in Healthcare (DASH: rating score from 1 = extremely ineffective to 7= extremely effective).

Summary of Results

Summary of results: 34 students (68 % response rate) completed the survey. The mean satisfaction score and the student's future preferences for BST with PEARLS were 4.74 and 4.2, respectively. Most students (82 %) identified debriefing as the critical learning component. The average DABT score was 6.53. The participants rated the highest score in element 6, 'the instructor helped to see how to improve or sustain good performance.' Individual interview findings showed that BST with PEARLS was useful. It 'stimulates in-depth discussion about the history taking and physical examination that allows reflecting on my performance.'

Discussion and Conclusion

Discussion and Conclusions: PEARLS debriefing is one of the tools that facilitators can use to improve learning by encouraging self-students' reflection in bedside teaching.

Take-home Message

Take home message: It is essential to promote the development of debriefing skills of the teachers for bedside teaching as well as simulation training.

4P2 (6410)

Date of Presentation: Monday 28th August
Time of presentation: 1406 - 1412
Location: Carron 2, Loch Suite, SEC

What works and for whom? The pros and cons of three different models to develop research skills for rural clinicians.

Shabnam Asghari[1], Wendy Graham[1], Cheri Bethune[1]

[1]*Memorial University, St.Johns Newfoundland, Canada*

Background

Rural physicians are in an optimal position to conduct socially accountable, locally-relevant health research but often lack the required skills, competencies, and resources. Faculty development programs targeted to build research skills for rural clinicians provide the foundations to address rural health care issues in situ. 6for6 is a research skills development program created by Memorial University to empower and enable rural physicians to research solutions to community-specific health needs. The COVID-19 pandemic resulted in a modification to the program for online delivery for the 2020-21 cohort. The impacts of the virtual program versus a face to face model were investigated and have resulted in the adoption of a hybrid model utilizing in-person and online learning.

Summary of Work

We compared the effect of an online delivery model with the original model on the acquisition of learning competencies and participant experience. While the online delivery model presented some unique challenges, we found no significant difference in the participants' median change of research competency scores when compared to the in-person delivery model.

Summary of Results

The 2022-23 cohort is the first to experience the hybrid program delivery. The hybrid delivery model is designed so that two of the program's six training sessions are held in person while the remaining are held online via Zoom. We expect that there will be no

significant difference in the median score of self-assessed research competencies between program delivery models. However, preliminary results suggest that program participants prefer face-to-face delivery.

Discussion and Conclusion

Hybrid delivery models could offer a solution for program administrators and educators worldwide who are unsure whether to retain or remove the changes made to programs to adapt to the pandemic restrictions. In addition, hybrid program delivery promotes an inclusive learning environment by providing an alternative for participants who cannot attend the program in person, particularly distributed faculty in rural communities.

Take-home Message

The 2022-23 cohort of 6for6 participants will provide crucial insight into the effectiveness of hybrid program delivery. The results of this work will be applicable to programs worldwide that are working to develop an inclusive learning environment.

4P3 (4579)

Date of Presentation: Monday 28th August
Time of presentation: 1412 - 1418
Location: Carron 2, Loch Suite, SEC

Medical Students' Attitude Between Traditional Classroom and Virtual Laboratory Integrated-Case Based Learning

Tanit Boonsiri1, Arunee Suvarnajata1, Sirachat Nitchapanit1, Piyanate Kesakomol1, Pimwan Thongdee1, Ketsara Khamsaen1, Passara Wongthai1, Nitchatorn Sungsirin1, Pongthorn Narongroeknawin1, Veerachai Watanaveeradej1

[1]*Department of Microbiology, Phramongkutklao College of Medicine, Bangkok, Thailand*

Background

Laboratory integrated-case based learning (LI-CBL) is an active learning method using case studies integrated with laboratory practices of infectious disease courses in pre-clinical curriculum. It has been initiated since 2018. Because of the COVID-19 pandemic, the course was divided into the period of online and onsite with virtual LI-CBL and traditional classroom LI-CBL, respectively.

Summary of Work

To compare the attitudes of medical students towards virtual and traditional LI-CBL, a questionnaire was designed with a 5-point Likert scale, consisting of 16 topics. The questionnaire was administered to third-year medical students in 2020 and its content validity was determined by the item-objective congruence (IOC) method, with a score ranging from 0.9 to 1.0. The statistical t-test was used to analyse the difference in attitude scores between the two methods.

Summary of Results

All topics in the questionnaire were scored as excellent and good with more than 80% of 78 medical students. Interestingly, there were statistically significant difference in 4 topics between traditional classroom and virtual LI-CBL ($p<0.05$). The study found that traditional classroom LI-CBL was superior to virtual LI-CBL in terms of psychomotor skills, interesting

practices, and knowledge recovery. Nevertheless, virtual LI-CBL was better at engaging the students' attention compared to traditional classroom LI-CBL.

Discussion and Conclusion

Virtual LI-CBL was satisfiable for applied in the pandemic situation. However, hands-on practices were lacking in laboratory learning of virtual LI-CBL. To cope with this problem, onsite hands-on practices should be provided to medical students when the situation is unfolding.

Take-home Message

Virtual LI-CBL is a satisfactory solution during the pandemic, but traditional classroom is crucial for hands-on laboratory practices and psychomotor skill development.

4P4 (3416)

Date of Presentation: Monday 28th August
Time of presentation: 1418 - 1424
Location: Carron 2, Loch Suite, SEC

Comparison of medical students' perception of online versus in person Tutoring in PBL during the COVID-19 pandemic

Marina de Toledo Durand1, Reinaldo Bulgarelli Bestetti1, Helen Figueiredo Fumagalli1, Milton Faria Junior1, Gustavo Salata Romao1, Lucelio Bernardes Couto1

[1]*Universidade de Ribeirão Preto, Ribeirão Preto, Brazil*

Background

COVID-19 disrupted the medical students' learning process because of restrictive measures, which led to suspension of in person academic activities. In our institution, medical school employs PBL method and, during the pandemic, tutoring was provided by via online. Nonetheless, the medical student's perception about the impact of online tutoring on the learning process is unknow.

Summary of Work

We compared medical students' perception about the similarity of online versus in person Tutoring. We included students who have taken part in in person Tutoring before the pandemic for two semesters and in online Tutoring during the pandemic for two semesters (students at the sixth, seventh, and eighth stages, respectively). Online Tutoring was run as similar as possible in person Tutoring. Students were asked to respond a Likert scale questionnaire comparing the similarity of in person versus online Tutoring regarding six variables important for the learning process. A written informed consent was obtained from each student.

Summary of Results

A total of 168 of 263 (64%) students were included. A higher proportion of students disagreed that activation of previous knowledge, intrinsic motivation, knowledge sharing at the reporting phase of Tutoring, and specific learning in in person Tutoring were similar to those found in online Tutoring ($p < 0.0001$). A higher proportion of students, however,

agreed that the establishment of the learning goals in in person Tutoring was similar to online Tutoring ($p<0.0001$). No difference was observed regarding the appearance of fatigue after in person Tutoring in comparison to online Tutoring ($p > 0.05$).

Discussion and Conclusion

Students' perception about important factors for the learning process is different in in person Tutoring in comparison with online Tutoring. It is noteworthy that the establishment of the learning goals for the reporting phase of Tutoring is similar in both teaching modalities. This requires further studies.

Take-home Message

Online Tutoring is not similar to in person Tutoring regarding the learning process according to the students' perception.

4P5 (3160)

Date of Presentation: Monday 28th August
Time of presentation: 1424 - 1430
Location: Carron 2, Loch Suite, SEC

The Effects of simulation-based teaching on endotracheal intubation for patients with emerging infectious diseases

Chin-Ying Chiang1, Chi-Hsuan Fan1, Chia–Chun Chiang1, Lee Chi1, Chi-Hsien Huang1, Kai-Ying Liu1, Lab-Ti Chou1, Hui-Ling Lin1

[1]Chang Gung Medical Foundation, Chang-Gung Memorial Hospital , Linkou, Taiwan, No.5, Fuxing St., Guishan Dist., Taoyuan City 33305, Taiwan (R.O.C.), Taiwan

Background

In response to the emerging infectious disease viruses can be spread by high-risk aerosols, the health care professionals need to be trained for specific skills when performing emergency intubation care and airway treatment for patients with emerging infectious diseases. A simulation-based teaching plan was developed with an "~Epidemic Intubation ~ Emergency Tracheal Intubation Simulation Video for Emerging Infectious Disease Patients ". This teaching program was developed by multidisciplinary team cooperation for the improvement of quality clinical teaching, ensuring the safety of the medical team, and maintaining the quality of patient care.

Summary of Work

The simulation-based teaching program was developed with the KOLB experiential theory (eg. concrete experience, reflective observation, abstract conceptualization, and active experimentation), and can be used for resident physicians, chief physicians, nurses, as well as respiratory therapists who care for emerging infectious patients.
The content of the simulation-based teaching program for emerging intubation includes the "three no principles" for emerging infectious patient care, specific key points of care for physicians, nurses and respiratory therapists, introduction of TRM (team resource management), and 7P's of rapid sequence intubation (RSI) process.

Summary of Results

There were 79 trainees completed the program. The results show the average self-confidence level was increased from 6.9 to 8.4 (out of 10), increased by 1.5; the average cognition was scored as 93.6 out of 100; and the satisfaction of the program was 92.1%. The trainees gave positive feedback for the simulation-based teaching program, expressing that the program assists them to perform emergency intubation smoother, safer and more secure when care patients with emerging infectious diseases.

Discussion and Conclusion

In this simulation-based program we developed an emergency intubation teaching videos for caring patients with emerging infectious diseases. This program is also an application of TRM modules across medical teams (physicians, nurses, and respiratory therapists) which enabled multidisciplinary cooperation, cultivating team communication and caring capabilities.

Take-home Message

The results of this program can be served as a reference for medical educators in constructing an emergency intubation teaching approach for multidisciplinary clinicians.

4P6 (1558)

Date of Presentation: Monday 28th August
Time of presentation: 1430 - 1436
Location: Carron 2, Loch Suite, SEC

Outcomes of Clinical Skills Assessment After Implementing Online Learning During Covid-19 Pandemic

Stephanie DeSandro1, Katerina Tsai1, Carl Fasser1

[1]*Baylor College of Medicine, Houston, TX, USA*

Background

The COVID-19 pandemic resulted in widespread social distancing and masking that led medical training programs such as the Baylor College of Medicine (BCM) Physician Assistant (PA) Program to make changes in its curriculum, including in the Physical Diagnosis (PHD) course. Prior to COVID-19, students attended live lectures and in-person labs, engaged in real patient encounters, and participated in multiple face-to-face modified objective structured clinical examinations (OSCEs). In response to pandemic restrictions, PHD course instructors significantly adapted their methods of teaching and testing by switching to remote lectures, recorded practice videos, online small group labs, Zoom-simulated patient encounters, and virtual OSCEs (VOSCEs).

Summary of Work

This retrospective cohort study assessed if there was a significant difference in BCM PA students' average OSCE scores after in-person lectures and skills labs in the PHD course were changed to a virtual platform due to the COVID-19 pandemic. Data included performance scores achieved by 148 students in four cohorts enrolled in the PHD course offered by the BCM PA Program from 2018 to 2022.

Summary of Results

When comparing modified OSCEs by cohort, significant differences were found on the Neurology CSE, the overall CSA, and the History taking section of the CSA. On the Neurology CSE, the 2021 cohort (with post-COVID curriculum changes) scored statistically higher compared to the 2018 cohort (without curriculum changes) and the 2019 cohort

(with COVID curriculum changes). On the overall CSA, the 2018 cohort (including all components) scored statistically lower compared to the 2019 cohort (without the Physical Exam component) and the 2020 cohort (including all components). On the CSA History component, the 2018 cohort scored statistically lower compared to the 2019 cohort and the 2020 cohort. There were no significant differences between cohorts on the other five OSCE types before, during or after pandemic restrictions.

Discussion and Conclusion

The COVID-19 virus necessitated rapid changes in the approach to instruction and assessment within the PHD course. No differences were found between five of the seven OSCE types used in the PHD course over four years and during the COVID-19 pandemic.

Take-home Message

This research suggests that teaching and assessment of clinical skills using hybrid methods could be successful if implemented correctly.

4P7 (2775)

Date of Presentation: Monday 28th August
Time of presentation: 1436 - 1442
Location: Carron 2, Loch Suite, SEC

The evaluation of synchronous and asynchronous online learning: Learning outcomes and Cognitive load

Chih-Tsung Hung1, Wei-Ming Wang1, Ai-Ju Hou2

[1]Department of Dermatology, Tri-Service General Hospital, National Defense Medical Center., Taipei, Taiwan; [2]Medical Education Office, Tri-Service General Hospital., Taipei, Taiwan

Background

The impact of the coronavirus disease 2019 (COVID-19) pandemic imposed universities to provide students with online lectures. Various online settings of synchronous and asynchronous teaching appeared. This study aimed at comparing the online synchronous and asynchronous methods of dermatology lectures in undergraduate medical students.

Summary of Work

This study was conducted on 170 undergraduate fourth-year medical students, who participated in the lectures on the cutaneous system. The lecture was delivered through synchronous (online live lecture via Webex meeting) and asynchronous (lecture video shared on YouTube). The students choose the way to attend the online lecture by their will. We checked 1. learning outcomes (pretest, posttest, and retention test); 2. satisfaction of each online setting; 3. students' cognitive load (8 items, 5 for mental load, 3 for mental effort). Appropriate statistical tests were used for the data.

Summary of Results

In this study, 70 students attended the online lecture via the synchronous method, and 100 students attended the asynchronous online lecture. Compared with the pretest, the score of post and retention tests improved significantly in each synchronous and asynchronous teaching. However, there were no statistical differences in learning outcomes between synchronous and asynchronous online settings. Regarding satisfaction (0-5), the overall

satisfaction with each teaching method was high without statistical differences (4.6 for the synchronous method; 4.53 for the asynchronous method; $p = .410$). Regarding the cognitive load, the level of synchronous method is significantly lower than that of asynchronous method ($p < .0001$). In the subgroup analysis, no difference in mental effort was observed ($p = .056$), but the level of mental load is lower in synchronous method ($p = .0005$).

Discussion and Conclusion

Both online teachings, including synchronous and asynchronous settings, showed an increase in learning outcomes and a high degree of satisfaction for the students. Besides, students' cognitive load is lower in the synchronous setting than that of asynchronous setting. The main advantage of the synchronous setting is that students could interact with the teacher immediately.

Take-home Message

Online teaching offers an effective teaching method during the novel virus pandemic, especially the online synchronous setting can reduce students' cognitive load in learning.

4P8 (2832)

Date of Presentation: Monday 28th August
Time of presentation: 1442 - 1448
Location: Carron 2, Loch Suite, SEC

Using Role-play in teaching Medical Professionalism

Atikom Jaikla1, Chonakarn Niyomthong1, Pakarat Sangkla1

[1]*Surin Medical Education Center, Surin, Thailand*

Background

Medical professionalism is an essential skill for general practitioners. This study aimed to evaluate the efficacy and satisfaction of teaching medical professionalism using the role-play method and to acknowledge how medical students would learn medical professionalism during their clinical years.

Summary of Work

The learning objectives of this class were to make the first clinical-year medical students able to acknowledge and appreciate medical professionalism. During the course, we divided 29 medical students into six groups. Each group was assigned to prepare the role-play scenarios based on the six elements of medical professionalism: altruism, accountability, excellence, duty, honor and integrity, and respect for others. At the end of the class, all audience wrote down what they had learned, and their answers were scored. Later, the performer, the audience, and the medical teacher discussed and reflected on the activities and further medical professionalism learning strategy.

Summary of Results

Nearly all medical students (95.86 %) comprehended medical professionalism. They also expressed a significant satisfaction scale of 4.87 out of 5, which teaching by role-play method was easy to understand(5/5), fun to learn(4.79/5), participated in the activity (4.83/5), practically(4.79/5), and friendly medical teacher (4.92/5). Moreover, medical students will learn medical professionalism in later clinical years through role models, practice with actual patients, and learning from feedback.

Discussion and Conclusion

Teaching medical professionalism by using role-play effectively enhances learner comprehension and satisfaction. Furthermore, having a good role model contributes to a sustainable learning experience.

Take-home Message

Medical schools should provide a friendly learning environment to promote lifelong learning on medical professionalism.

4P9 (4445)

Date of Presentation: Monday 28th August
Time of presentation: 1448 - 1454
Location: Carron 2, Loch Suite, SEC

Impact of CBL on motivation, achievement and learning satisfaction of students during pediatric clerkship

Maia Kherkheulidze1, Nani Kavlashvili1, Eka Kandelaki1

[1]*Tbilisi Stat Medical University, Tbilisi, Georgia*

Background

Summary of Work

The study was conducted as an observational cross sectional study, after the pediatric exam to collect more accurate results. We compare 2 groups of students - 1 the study group taught by curricula includedwith CBL (group 1), and 2 group of students from previous year, who underwent pediatrics with old curricula (group 2). Study was based onA Likert scale questionnaire was circulated amongst students. The questions in the questionnaire were based on the content, conduct, relevance, motivational impact, communication skills, student interactions, students' satisfaction, critical thinking. We also compared exam scores for both groups. Participation was on a voluntary basis. 5 score Likert scale was used.

Summary of Results

Out of 210 students, 167 returned back the questionnaires (group 1:92, Group 2:75), from those 92 from 1 and 75 from second group. The achievement based on exam results was not significantly different, but there were slightly higher results in OSCE in first group. Most Majority (90%) of the students from I group 1 found CBL useful for learning and critical thinking as well as for team working. The learning motivation was not significantly different between the two groups, but learning satisfaction was higher in I group 1. The students from I group 1 found CBL interesting, relevant and applicable to clinical practice in future.

Discussion and Conclusion

Findings of our study shows that implementation of CBL in pediatric curricula is an effective tool and can play an important role in motivation, achievement and satisfaction of students.

Take-home Message

CBL is effective tool in pediatric education

4P10 (5730)

Date of Presentation: Monday 28th August
Time of presentation: 1454 - 1500
Location: Carron 2, Loch Suite, SEC

Differences in academic achievement and satisfaction according to medical students' preferences for Hyflex learning.

Ju Whi Kim[1], Narae Yoon[1], Yeon-Ju Huh[1], Hyun Bae Yoon[1], Sun Jung Myung[1], Wan Beom Park[1]

[1]*Office of Medical Education, Seoul National University College of Medicine, Seoul, The Republic Of Korea*

Background

The HyFlex (hybrid-flexible) model is described as a combination of hybrid, both online and face-to-face modalities, and flexible, as students may choose whether or not to attend face-to-face sessions. This study aimed to find differences in academic achievement and satisfaction according to medical students' preferences for Hyflex learning.

Summary of Work

In early 2022, integrated courses was delivered to second-year medical student via HyFlex model. We allow students to choose whether to attend classes face-to-face or online, synchronously or asynchronously. The final examination was composed of multiple-choice questions. We analyzed the examination scores to find out whether there was a difference in students' academic performance with the preference of face-to-face class based on attendance. At the end of first integrate course, students and professors were asked to evaluated the course using a 5-point scale, anonymously.

Summary of Results

In a HyFlex course, academic achievement was significantly higher in students have experience with face-to-face classes than students without face-to-face attendance (P=0.03). A total of 85.5% (136/159) of students and 52.6% (20/38) of professors answered the questionnaire. Students were generally satisfied with the course (4.2/5). In subgroup

analysis, students who answered that had participated only face-to-face were more satisfied and experienced more effective learning environment than other groups. Regarding their preferences, 38.6% answered that they preferred synchronous online session, 33.3% answered that they preferred face-to-face class, and 28.0% chose asynchronous recorded online clips. Among the subgroup, students who preferred asynchronous recorded online clips were less satisfied and experienced less effective learning environment than other groups.

Discussion and Conclusion

Students had differences in preferences depending on the learning method of the HyFlex course. There were differences in achievement and satisfaction according to students' preferences.

Take-home Message

Medical students' preferences for Hyflex learning could make differences in academic achievement and satisfaction.

4P11 (6196)

Date of Presentation: Monday 28th August
Time of presentation: 1500 - 1506
Location: Carron 2, Loch Suite, SEC

Psychological Need Fulfilment in Virtual Teaching: Lived Experiences of Residents and Faculty

Oksana Babenko[1], Shannon Gentilini[1], Nathan Turner[1], Olga Szafran[1], Sudha Koppula[1]

[1]*University of Alberta, Edmonton, Canada*

Background

Opportunities for teaching skill development in postgraduate medical education were traditionally accomplished in person but rapidly pivoted out of necessity to virtual delivery during the COVID-19 pandemic. Virtual teaching in medical education is predicted to continue, thus, an understanding of the lived experience of teaching in virtual environments is required going forward. The purpose of this study was to examine the lived experiences of residents and faculty teaching in virtual settings, including the perceived benefits and challenges.

Summary of Work

This was a qualitative descriptive study employing one-on-one semi-structured interviews with family medicine residents and faculty members at the Department of Family Medicine, University of Alberta, Canada, from May 2021 to May 2022. Participants were recruited via email, social media, and resident and department events. The interview transcripts were analyzed descriptively and thematically employing the Self-Determination Theory (SDT) framework.

Summary of Results

Ten residents (70% female, 80% <30 years of age, 80% urban stream) and 12 faculty (50% female, 50% <50 years of age, 83% urban stream) participated in the study. Resident and faculty participants used technology not only to deliver education but also leveraged various platform features to support their psychological needs in virtual settings. Participants reported technology problems and difficulties with audience engagement to

be key challenges in virtual environments. The reported benefits and challenges of virtual teaching were amenable to mapping onto three basic psychological needs of the SDT framework – autonomy, competence, and relatedness.

Discussion and Conclusion

Virtual educational delivery was born of necessity but is likely to be longstanding in medical education. Teaching via virtual platforms can support clinical teachers' psychological needs despite inherent challenges.

Take-home Message

- Virtual teaching settings are likely to remain post-COVID19 pandemic. The lived experience of residents and faculty teaching in these settings is worth exploring.
- Participants reported benefits and challenges to teaching in virtual care settings which could be mapped onto the Self-Determination Theory framework.

4P12 (2663)

Date of Presentation: Monday 28th August
Time of presentation: 1506-1512
Location: Carron 2, Loch Suite, SEC

Effectiveness of the SNAPPS to promote clinical reasoning in medical education: a systematic review

Sonia Vizcarra-Jimenez1, Javier Flores-Cohaila2, Marco Rivarola-Hidalgo3

[1]Centro de Investigación de Estudiantes de Medicina, CIESMED, Universidad Privada de Tacna, Tacna, Perú; [2]USAMEDIC SCRL, Lince, Lima, Peru; [3]Centro de Estudios e Investigación en Educación Médica y Bioética. Universidad Privada de Tacna. Tacna, Perú

Background

Clinical reasoning is a fundamental competency for the medical profession, yet its teaching remains a significant challenge. This competency development is ongoing, so teaching methods should promote self-directed learning. The Summarize, Narrow, Analyze, Probe, Plan, and Self-direct (SNAPPS) presents an opportunity to address these challenges. This systematic review with meta-analysis aimed to evaluate the effectiveness of the SNAPPS method in promoting clinical reasoning and self-directed learning behavior among medical students.

Summary of Work

A systematic review was conducted on three databases: PubMed, Embase, and CINAHL, using the terms: SNAPPS and Medical Education. To answer our research question, randomized controlled trials and quasi-experimental studies were included. The risk of bias of selected studies was evaluated using ROB2 and ROBINS-I. Findings were reported using a narrative synthesis and a meta-analysis with random effects model.

Summary of Results

Four studies with 368 learners were included in our meta-analysis. The risk of bias for our studies was of some concerns on RCTs (n=3) and of serious risk on quasi-experimental (n=1). Methods for training learners and preceptors were reported with the exception of one study. In our meta-analysis, learners using the SNAPPS method showed a higher

probability of self-directed learning behavior (OR: 14.58; CI 95% 8.05 – 26.40) than their peers. Regarding the number of differentials and length of the encounter and case discussion, the differences were slight. Finally, the GRADE certainty rating is moderate.

Discussion and Conclusion

Our review supports using SNAPPS over usual and customary methods to promote clinical reasoning and self-directed learning behavior in the workplace, although our certainty rating is moderate. Our implications for clinicians and medical educators, the SNAPPS is a must-have in the toolbox to teach clinical reasoning, as it promotes a more active role of the learners and requires no more time than usual and customary methods.

Take-home Message

- The SNAPPS method requires one minute more than the usual and customary method, making it a cost-effective teaching strategy
- The SNAPPS method promotes more self-directed learning behavior in learners than usual and customary methods.

4P13 (1010)

Date of Presentation: Monday 28th August
Time of presentation: 1512 - 1518
Location: Carron 2, Loch Suite, SEC

An Operational Model of Remotely Supervised Procedural Skills in a Service-learning Curriculum

Tzu-Yang Chuang1, Fang-Yu Chang1, Cheng-Heng Liu2, Nin-Chieh Hsu3, Yu-Chun Chiu2, Chih-Wei Yang2, Yen-Yuan Chen2, Wang-Hui Sheng2

[1]Department of Medicine, National Taiwan University, Taipei, Taiwan; [2]Department of Medical Education, National Taiwan University Hospital, Taipei, Taiwan; [3]Division of Hospital Medicine, Taipei City Hospital Zhongxing Branch, Taipei, Taiwan

Background

Service-learning curricula in rural areas are crucial for medical students to practice rural medicine. There were limitations on procedural skills training concerning the actual distance between supervisors and trainees. Nowadays, advances in technology provide students with more learning opportunities under remote supervision. Hand-held ultrasound is one of the representatives. We thought to explore the feasibility of student-operated ultrasound screening protocol with synchronously remote instructions and supervision by faculty from distant teaching hospitals. An operational model of remotely supervised student-operated tele-ultrasound in a service-learning curriculum was explored and investigated.

Summary of Work

The student-operated ultrasound screening protocol was performed during a service-learning trip at Taiwan's aboriginal tribes in 2022 July. With the support of video streaming and ultrasound images in-time transmission, real-time remote instructions and supervision from online ultrasound specialists were applied. This qualitative study incorporated field observation of the screening. Semi-structured interviews of student-operators, ultrasound specialists giving remote instructions and supervision, other service trip members, and screening subjects were conducted. Thematic analysis was used to analyze the interview transcripts and field notes. Literature review of relevant topics was conducted to supplement findings and arguments.

Summary of Results

Three themes and eleven sub-themes were extracted from the analysis. The first theme is the preparation stage, with sub-themes including the cost of rural practicing, operator training, establishment of procedure protocol and standard views, and accuracy of the evaluation. The second, process of the procedure includes indication: the decision of screening targets, acquisition: ultrasound key images, interpretation: findings of screening, and management: post-screening advice. The third, settings of the procedure location, with sub-themes covering traffic flow and personnel assignment, subject details, and tele-ultrasound settings.

Discussion and Conclusion

Using ultrasound screening as an example, our study presented the experience of remotely supervised student-operated procedural skills in underserved remote areas and has proven the protocol feasible, and it may expand to other procedural skills. From field observation and post-hoc interviews, three themes and eleven sub-themes emerged, which can serve as references for future implementation.

Take-home Message

Remotely supervised student-operated ultrasound screening protocols in rural, underserved tribes through video streaming and in-time transmission of ultrasound images are feasible. Three themes emerged from field observation, informing future implementations.

4P14 (4534)

Date of Presentation: Monday 28th August
Time of presentation: 1518 - 1524
Location: Carron 2, Loch Suite, SEC

Effect of "Bacteria Game" on consolidation of knowledge in medical bacteriology and antibiotic therapy from the perspective of medical students

Maia Zarnadze1, Mathilde Lescat2, Manana Loladze1, Saif Rustum1, Tsisana Lomashvili1, Dea Goderdzishvili1, Magda Tvildiani1

[1]Petre Shotadze Tbilisi Medical Academy, Tbilisi, Georgia; [2]Université Sorbonne Paris Nord, Paris, France

Background

Insufficient knowledge of bacteria and rational antibiotic therapy is one of the major causes of the misuse of antibiotics and development of resistance to them. Tbilisi Medical Academy piloted a gaming approach to stimulate consolidation of knowledge about bacteria and antibiotics by using the innovative approach - "Bacteria Game" . We were introduced to the “Bacteria Game” by our French colleagues at AMEE-2022 conference. Study aimed to find out the effect of the game approach on consolidation of knowledge about bacteria and antibiotics from students’ perspective.

Summary of Work

38 medical students (after the Bacteriology Course) were involved in the study. The Principle of the game – is to associate cards with the fun images of bacteria with rational antibiotic therapy and main resistances to antibiotics. The game was performed in groups, under the supervision of clinical microbiologist. A qualitative approach was applied where a five-point unipolar response questionnaire was filled out by the students. The number of participants in the survey is 29 (from 38).

Summary of Results

Most (89,5%) of the students think, that the Bacteria Game, is a useful tool for the organization of knowledge regarding bacteria and antibiotics and it helps in discovering

their own educational needs. 89,5% of the students agreed that the game allows for immediate feedback on individual knowledge gaps. They found the game fun (78,9%), engaging (94,7%) and thought, similar educational games should be used frequently within curriculum (89,5%).

Discussion and Conclusion

Educational Game after the completion of the Bacteriology course helps students to consolidate their knowledge about bacteria and rational antibiotic therapy, to identify gaps in their knowledge in a funny way and receive immediate feedback.
Further research with similar games after the courses of Bacteriology, Pharmacology, Infectious Diseases, with the identification of retention rate of knowledge, will be interesting to evaluate the impact of gaming approach on consolidation of the knowledge about bacteria and antibiotics and also to evaluate the effect of Game as an integration tool between preclinical and clinical courses.

Take-home Message

Bacteria Game helps students to consolidate knowledge about bacteria and rational antibioticotheraphy, to identify gaps in knowledge and receive immediate feedback.

4P15 (4735)

Date of Presentation: Monday 28th August
Time of presentation: 1524 - 1530
Location: Carron 2, Loch Suite, SEC

The IFMSA's approach to Peer-led Research Education

Amr Ali1, Maria Maties1, Mikulas Hampl1, Lucia Pérez Gómez2

[1]International Federation of Medical Students' Associations(IFMSA), Copenhagen, Denmark; [2]International Federation of Medical Student's Associations (IFMSA), Copenhagen, Denmark

Background

To this day, students lead a significant role in research education in their communities. Globally, the collaborative efforts done through peer-to-peer interactions through sessions, training and workshops on various research-skills relevant topics are the sole research education methodology carried out.

The International Federation of Medical Students' Associations (IFMSA) conducted a global survey in 2018 that revealed that 97% of medical students consider research education to be an essential part of the medical curricula. However just 20% believe it is sufficiently addressed in their universities.

Summary of Work

IFMSA has made various efforts throughout the past terms to build a research knowledge pool among medical students. This includes 3 different research educational activity toolkits guiding activities at the Local and national level and over 20 Sessions conducted in International and regional student conferences in the past year with a global audience. In addition to implementing the "Research Education: advancement and development for youth" and the "Training New Research Trainers" workshops developed to create medical students capable of distributing research knowledge, who will increase access to and improve the quality of Research Education worldwide.

Summary of Results

The Training New research trainers was conducted for the first time in August 2022, with 20 participants. A pre and a post-workshop evaluation form were conducted to assess its impact. The knowledge regarding scientific inquiry raised by 37%; literature review raised by 31%; for critical appraisal raised by 36%; for study designs and methodology raised by 31%; for responsible research and innovation raised by 40%; open science raised 26% and for publishing increased 40%.

Discussion and Conclusion

The efforts made by the IFMSA aim to enhance medical students' connection to research by building a worldwide network of research educators. The potential reach of the topics discussed in all the methodologies mentioned could reshape the concept of peer-led research education, making it more accessible.

Take-home Message

Research Education is essential for every medical student. The IFMSA looks to remove barriers that stand in the way of access to research, and its education and initiatives in progress are significantly and effectively bridging the gap to that goal.

Session 4Q

4Q

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: Hebrides

BEME Meet the Expert / Q&A session

Michelle Daniel[1], Morris Gordon[2], Satid Thammasitboon[3]

[1] University of California San Diego School of Medicine , La Jolla, California , USA [2] School of Medicine University of Central Lancashire, School of Medicine and Dentistry, Preston, UK, [3] Baylor College of Medicine, Texas Children's Hospital, Houston, Texas, USA

Background

Join us for an insightful question and answer session with distinguished experts in the field of medical education systematic review and synthesis methods. Whether you're a novice or experienced researcher, this session offers a unique opportunity to seek guidance and advice on your synthesis projects in health education, irrespective of your intended target journal for publication.

Session 4R

4R (0339)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: Dochart 2

Rich Pictures – a new methodology to support and study teachers` and educators` identity development

Marco A. de Carvalho Filho[1], Pauline Bakker[1], Grazyna Drzazga[1], Agnes Diemers[1], Yvonne Steinert[2]

[1] university medical center groningen, Groningen, The Netherlands [2] Institute of Health Sciences Education, McGill University, Montreal, Canada

Background

Becoming a teacher in the health professions education field is a challenging endeavor. Clinicians, nurses, basic scientists, psychologists, sociologists, artists, and other professionals need to develop a new professional identity by acquiring knowledge, skills, and competencies while aligning personal and professional values. This developmental process occurs through formal and informal interactions during socialization within the educational realm and can be particularly challenging when the values of the new professional identity collide with previous beliefs or assumptions. “Educators to be” can feel frustrated when structural or cultural constraints limit their autonomy in adopting modern teaching styles and pedagogical approaches. In this context, engaging in meaningful and purposeful reflections under the guidance of an experienced and trusted colleague may safeguard the joys and pearls offered by being a teacher while supporting the development of a sense of ownership vital to keep “the dream” alive. The ‘Rich Picture’ is a visual method derived from systems engineering that uses pictorial representations to capture an individual's perspective of a situation, including ideas, people, emotions, conflicts, and prejudices. Recently, it was incorporated by the health profession education field with two goals. The first is as a research tool to understand transitions focusing on

emotions, conflicts, dilemmas, and coping mechanisms. The second is as a pedagogical approach to nurture meaningful conversations in mentorship sessions.

Who Should Participate

Medical teachers and educators involved in faculty development or interested in studying teacher identity development.

Structure Of Workshop

0 - 15 min - Presentation of the Rich Pictures Method - personal experience of presenters

15 min - 30 min - Drawing session (challenging/rewarding experience lived as a teacher or self-portrait)

30 min - 60 min - Discussion of the drawings in small groups - facilitated by the presenters

60 min - 90 min - Debriefing and Wrap up

Intended Outcomes

1 - Get familiar with the Rich Pictures methodology

2 - Understand how the methodology can be used to support conversations about teacher identity development

3 - Gather insights and inspiration to adopt the methodology in participants` contexts

4 - Create an online community to share experiences and expertise.

Session 4S

4S (5514)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: M3

Addressing Complexity in Medical Education: Reflective Practice to Support Teachers

Jim Price[1], John Sandars[2], Stewart Mennin[3]

[1] Brighton & Sussex Medical School, Brighton, UK [2] Edgehill University, Ormskirk, UK [3] University of New Mexico School of Medicine, Albuquerque, USA

Background

Effective clinical education has several inter-related components, including the educator, the learner, the instructional approach and the wider clinical learning environment. Understanding this complexity is essential for both the professional development of medical educators and the improvement of teaching and learning. Reflective practice has the potential to increase understanding of clinical education, but only if the complexity is considered.

The workshop will present an innovative structured action learning set approach for reflective practice, based on Dewey's principles [1], but acknowledging 'wicked problems' and 'adaptive action' [2]. Ultimately the approach is designed to offer medical teachers a framework for meaningful reflection over time, as part of their professional development as an educator.

[1] Dewey, J. (1933). How we think. Buffalo, New York: Prometheus Books. (Original work published 1910)

Dewey, J. (1944). Democracy and education. New York: Free Press. (Original work published 1916)

[2] Eoyang GH and Mennin S. Wicked Problems in Health Professions Education: Adaptive Action in Action MedEdPublish 2019, 8:226 (https://doi.org/10.15694/mep.2019.000226.1)

Who Should Participate

All educators with an interest in reflective practice for medical & clinical education across the continuum, from undergraduate to postgraduate.

Structure Of Workshop

10 minutes: Icebreaker / Introductions

20 minutes: Presentation:

- Structure of workshop
- Overview of complexity in clinical education
- Wicked Issues & Adaptive Learning
- Medical Education Reflective Practice Sets (MERPS)

30 minutes : Small group work 1:

- Practical experience of a MERPS

15 minutes : Small group work 2:

- Discussion of next steps and implementation of MERPS

15 minutes : Final discussion – then close.

Intended Outcomes

- Increased understanding of complexity in medical & clinical education.
- Development of knowledge and skills in Medical Education Reflective Practice Sets (MERPS).
- Consideration of the enablers and barriers for implementing MERPS into practice, and how any barriers might be overcome.

Session 4T

4T (1384)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: M2

Optimising Design, Implementation and Evaluation of complex curricular and assessment changes using realist systems-thinking approach

Priya Khanna[1], Chris Roberts[1], Stuart Lane[1]

[1] *The University of Sydney, Sydney, Australia*

Background

As academics situated within one of the largest medical schools in Australia, we have been researching the design and impact of complex changes such as the programmatic approach to assessment. Our research is guided by our published 3P-6C Systems thinking Framework and Critical Realist framework. Curriculum renewal is a challenging endeavour as without sound theoretical foundations, the design can be fragmented, implementation can be messy, and evaluation can be inactionable. This workshop would involve practical applications of the 3P-6C systems thinking curricular framework in ensuring the curricular transformations are more integrated, meaningful, scalable, and sustainable.

Who Should Participate

Program Directors, Faculty Members, Staff , Educators and Students are involved in the curriculum renewal process involving complex interventions at undergraduate as well as specialty training programs

Structure Of Workshop

Participants will be divided into small groups of 5-6 in each group. Each group will be provided with flip chart and markers. The workshop will be undertaken in 3 phases.

Phase 1: Followed by an engaging meet and greet activity, an overview of systems thinking approach in dealing with complex adaptive systems will be provided. Participants will engage in discussions about dealing with complex interventions in their education programs. Participants will be asked to choose one or two complex problems they are currently working on.

Phase 2: An overview of the 3P-6C systems thinking framework will be provided. Participants will be able to apply the 3P-6C framework in navigating complexity, in a three-dimensional way, in their chosen curricular problem.

Phase 3: Followed by a discussion on the use of the critical realist approach in monitoring and evaluating complex programs, participants will be able to work through the evaluation of their chosen problem using the critical realist approach.

Intended Outcomes

Based on keynotes and group work, at the end of the workshop, participants will be able to:

1. Understand the core principles of newer and more holistic approaches to curriculum design and implementation such as systems thinking and critical realist frameworks 2. Apply these approaches in the curricular renewal and evaluation processes especially considering the scalability and sustainability of complex initiatives.

Session 4U

4U (3407)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: M4

Using insights from cognitive science for the teaching of clinical skills

Dario Cecilio-Fernandes[1], Rakesh Patel[2], John Sandars[3]

[1] School of Medical Sciences, University of Campinas, Campinas, Brazil [2] Queen Mary University of London, London, UK [3] Edge Hill University, Ormskirk, Lancashire, UK

Background

An important challenge for health professions' educators is the implementation of strategies for effectively supporting students acquire different clinical skills and minimize skill decay. Whilst educational theories such as deliberate practice and mastery learning underpin the teaching of many clinical skills, the application of evidence-based strategies from the cognitive science literature can inform how to acquire skill more securely and reduce skill decay over time as well. Cognitive science provides a fresh perspective on the role of knowledge for skills development, specifically the way in which both declarative knowledge (i.e. facts and events), and procedural knowledge (the automatisation of actions) are necessary for learning and retaining clinical skills. Both declarative and procedural knowledge require different strategies for developing both of them, and the 'know how' for doing that will be discussed in this workshop.

An overview of the theoretical foundations of cognitive science relevant for clinical skills development will be presented key evidence-based cognitive science strategies presented alongside. All concepts have been drawn from the wider literature and published in an AMEE guide. The aim of the workshop is to support participants apply the principles to their own teaching and learning contexts.

Who Should Participate

All health professions' educators interested in using evidence-based cognitive science strategies to enhance clinical skills training.

Structure Of Workshop

10 minutes – Theoretical foundations of cognitive science

15 minutes – Practical activity on dividing a clinical skill into declarative and procedural knowledge

10 minutes – Theoretical foundations of evidence-based cognitive science strategies

30 minutes – Practical activity planning a clinical skill training using evidence-based cognitive science strategies

15 minutes – Presentation of each group on the planning of the clinical skill training

10 minutes – Discussion of the challenges of implementing evidence-based cognitive science strategies

Intended Outcomes

(1) Learning the key evidence-based cognitive science strategies (2) planning skills training using evidence-based cognitive science strategies

Session 4V

4V (5570)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: Staffa

Decolonizing your curriculum, don't know where to start? You are not alone!

Zareen Zaidi[1], Tasha R. Wyatt[2], Nadine Mbuyi[1], Janneke Frambach[3], Daniëlle M.L. Verstegen[3]

[1] George Washington School of Medicine & Health Sciences, Washington, USA [2] Uniformed Services University, Bethesda, USA [3] Maastricht University, Maastricht, The Netherlands

Background

Globally the Black Lives Matter movement and Rhodes Must Fall campaign in Cape Town have drawn attention to the need to decolonize curriculum. The production, nature and validity of knowledge production is not a neutral project and knowledge can become a commodity in colonial exploitation, as did other natural resources. However, in the anti-woke era academics have expressed concerns that decolonizing curriculum is about dismissing or deleting what has been. Others may struggle with reconciling theories and design principles they feel are crucial for optimal learning. In this workshop we will delve into what it means to decolonize the curriculum while discussing concerns about undoing traditions and re-examining content.

Who Should Participate

HPE involved in: curriculum design, DEI-related research and program directors

Structure Of Workshop

1. Speakers introduction & positionality (10 min)

2. Audience poll (Using PollsEverywhere) to identify country of origin and exposure to colonialism (5 min)
3. Didactic slides introducing concepts of colonialism & decolonialism(5 min)
4. Interactive exercise: Participants will be broken up into groups of six, with an assigned facilitator. They will be given a curriculum sample and a worksheet
5. Participants will be asked to use the worksheet to assess and provide feedback regarding where colonialism and its impact is evident in the curriculum and where there are opportunities for change. (30 min)
6. Gallery Walk: The worksheets will be placed around the room on flipcharts and the audience will move from group to group hearing the key ideas. One of the workshop facilitators will be taking notes through out (20 min)
7. Key take Aways: Facilitator will summarize the key messages (5 minutes)
8. Relationship of discussion to literature and addressing anti-wokeness schools of thought (10 min)
9. Q&A (10 min)

Intended Outcomes

By the end of the workshop participants should be able to:

1. Describe the impact of colonialism and need to decolonize health professions medical education (HPE) degree programs
2. Examine a sample of learning activities from HPE curriculums to identify if they are alternate canons of knowledge which have been marginalized or dismissed as a result of colonialism and that should be included and discussed with learners

3. Specify steps required to create a process of decolonizing the HPE curriculum

Session 4W

4W (3313)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: Jura

Unleashing the Power of Emerging Voices: Driving Inclusion in Health Professions Education

Azhar Adam Nadkar[1], Maria Al Rachid[2], Mădălina Elena Mandache[3], Louise Jottrand[4], Subha Ramani[5], Eeva Pyörälä[6], Rashmi Kusurkar[7]

[1] Tygerberg Academic Hospital, Faculty of Medicine and Health Sciences, Stellenbosch University, Cape Town, South Africa [2] Universite Saint Joseph de Beyrouth, Beirut, Lebanon [3] University of Medicine and Pharmacy of Craiova, Craiova, Romania [4] Université Claude Bernard Lyon 1, Lyon, France [5] Brigham and Women's Hospital and Harvard Medical School, Boston, USA [6] University of Helsinki, Center for University Teaching and Learning, Helsinki, Finland [7] Amsterdam UMC location Vrije Universiteit, Amsterdam, The Netherlands

Background

Over the years, AMEE has placed a significant emphasis on amplifying the voices of students and young professionals (SYPs) in shaping their educational initiatives. One striking demonstration of this is the AMEE Conference STF 2022, where 70 students from 32 different nations gathered to showcase the organization's diversity and global reach. The AMEE STF provides a platform for health professions students from diverse backgrounds to connect with mentors, pursue their own goals in health professions education (HPE), and actively participate in promoting inclusivity and engagement in HPE. The diverse student cohort provides a rich source of new ideas and perspectives, further advancing the goal of advancing inclusivity in HPE.

This interactive workshop aims to explore the critical issue of inclusivity in HPE from the SYP perspective, with a focus on evidence-informed practices. Through large group brainstorming, brief presentations and small group discussions, participants will gain a deeper understanding of the factors that contribute to an inclusive and equitable learning environment and the impact of mentorship on student engagement in HPE. A key goal would be to empower emerging health professions' educators to drive positive change within their communities.

Who Should Participate

Whether you're a health professions' educator, mentor, young professional or student, this workshop is a must-attend for anyone committed to promoting inclusion and student engagement in HPE.

Structure Of Workshop

- Introduction (10 min): Workshop Objectives & Activities Overview
- Plenary Presentation (15 min): Inclusivity in HPE from SYP Perspective & Importance of Student Engagement & the role of AMEE STF
- Small group Activity (30 min): Small Groups identify challenges & opportunities for promoting inclusivity in HPE & discuss the role of mentorship
- Plenary Discussion (25 min): Synthesize key findings from small group activity, share experiences & perspectives
- Next Steps (10 min): Concrete Actions for Promoting Inclusivity in HPE
- Conclusion (5 min): Key Takeaways

Intended Outcomes

- Increased understanding of the critical issue of inclusivity in HPE from the perspectives of SYPs.
- Increased awareness of the impact of mentorship in promoting student engagement in HPE and enhancing inclusivity.
- Equipment of participants with the knowledge and skills to drive positive change towards promoting inclusivity and student engagement in their own communities.

Session 4X

4X (1801)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: Barra

Bridging Institutional Borders Through Research, Scholarship and Collaboration Practices

Gillian Scanlan[1], Susan Somerville[1], Rania Alkhadragy[1], Catherine Kennedy[1]

[1] *Centre for Medical Education, School of Medicine, University of Dundee, Dundee, UK*

Background

Ideas in scholarship and research transcend borders. When we promote and undertake research and scholarly activity outside our home institutions and localities and start to endorse international collaborative practice, we begin to develop a more holistic worldview and perspective on similar issues.

Academia is marked by expanding and diverse forms of teamwork, with studies suggesting that collaborations are perceived as one of the important components of academic and professional development (Shagrir, 2017). The practice of collaboration across organisations and cultures can extend and enhance our possibilities in both research and scholarly output. The collaborative approach can lead to diverse cross pollination of ideas and initiatives.

However, despite the need and motivation to collaborate, international work has its share of challenges. Some of these are minor and easy adjustments can be made, while others can have the potential to grind the project (s) to a halt. In this workshop we aim to explore the challenges and benefits of international collaborative practices and outline our best practice initiatives to take future projects forward.

Who Should Participate

Anyone with an interest in collaborations and sharing ideas in the area of health professions education.

Structure Of Workshop

The facilitators will share their experiences of research and scholarly activity within an international setting. We will reflect on the ways in which we collaborate, the advantages of collaborations, the important role that academic leaders and institutions play in encouraging collaboration, the benefits to these collaborations and the challenges we have encountered. The workshop will break out into small groups where attendees will be tasked with discussing their own experiences of collaborative projects and developing a best practice framework for promoting collaborative practice.

Intended Outcomes

At the end of this session, participants will be able to:

1. Discuss the challenges and benefits of collaborative practice for scholarship and research activities.
2. Identify how collaborative practices can contribute to advancing scholarly and research practices.
3. Create and contribute to the development of a best practice framework for promoting collaborative practice.

Session 4Y

4Y (0449)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: Shuna

Nurturing Professionalism: Using Situational Judgment Tests to Develop and Remediate Professionalism Issues

Michael Cullen[1], Kelly Dore[2]

[1] *University of Minnesota Medical School, Minneapolis, USA* [2] *Acuity Insights, Toronto, Canada*

Background

Situational judgment tests (SJTs) measuring non-cognitive constructs are commonly used in combination with more cognitively focused measures to support selection to medical school and post-graduate training across North America, the UK, Australia, Belgium and Singapore. However, the application of SJTs as a tool for supporting the development and remediation of key non-cognitive competencies such as professionalism is not as common. In this highly interactive, hands-on workshop, we will explore how an SJT paired with a developmental report and coaching fundamentals could be incorporated, with minimal resources, into an institution's broader teaching and development strategy, for both learners and faculty. To accomplish this, we will leverage an SJT that has been demonstrated to predict both positive and negative professionalism-related behaviors.

Who Should Participate

Program and institutional leaders and faculty, mentors and coaches who have responsibility for or interest in (1) developing professionalism in learners or faculty, (2)

identifying learners or faculty who are struggling with professionalism issues and (3) developing and providing appropriate supports and goal setting strategies.

Structure Of Workshop

1. Pre-workshop work (45 minutes):
    - Participants take online SJT and review their developmental report
2. Didactic and Group-Led Brainstorming (30 minutes):
    - Polling questions
    - Using SJTs to measure non-cognitive competencies
    - Utility of SJTs in predicting key outcomes
    - Untapped potential as developmental /remediation tool
    - Key challenges in using SJTs for development/remediation
    - Goal setting fundamentals
3. Interactive Debriefing Session and Discussion (1 hour):
    - Demo of 1-2 scenarios and peer-based discussion
    - Facilitated developmental report debrief in small groups
    - Small group discussion of key behaviors to work on/support required/challenges
    - Completion of goal-setting sheet
    - Group discussion: Optimizing SJTs as a development tool

Intended Outcomes

- Participants will learn how to incorporate SJTs into their curriculum to develop professionalism in trainees and faculty, including using goal-setting theory to set realistic, behavioral goals for improvement.
- Participants will learn how SJTs can be used to identify and provide support for trainees and/or faculty struggling in one or more professionalism-related areas
- Participants will learn different modes of providing support for struggling learners, including trainee feedback, coaching, mentoring, and structured supervision.

Session 4Z

4Z (4305)

Date of presentation: Monday 28th August
Time of session: 14:00 - 15:30
Location of presentation: Orkney

Making Effective Use of Technology in Teaching

Wendy Stewart[1], Keith Wilson[1]

[1] *Dalhousie University, Saint John, Canada*

Background

Many educators are early adopters of techology and when new technologies are available it is tempting to use them for teaching. The key to their effective use needs to be viewed in the context of the type of information we hope to convey and whether technology provides a means to deliver the information more effectively. To aid educators in selecting the correct technology to address specific learning needs, frameworks can be very helpful. The Technological Pedagogical Content Knowledge (TPACK) model provides us with a framework from which to consider when and how technology should be used.

Who Should Participate

Educators from any health professions discipline with an interest in the use of technology when teaching face to face or on line

Structure Of Workshop

A brief didactic presentation will introduce the TPACK model and how technology should be considered when integrating it into teaching. Using specific learning cases, participants

will have the opportunity to immerse in four different technologies, getting some brief hands-on experience with each. Using think-pair-share and small group discussion, they will then brainstorm ideas around the use of each technology and in what teaching context. The workshop will close with a facilitated discussion around best practices for integrating the use of technology in health professions education.

Intended Outcomes

Following participation in the workshop, participants will be able to:

1. Explain the TPACK model

2. Give examples of technology that can be readily used in teaching

3. Identify teaching opportunities where technology can enhance knowledge translation

4. Describe the optimal use of technology in teaching

Session 5A

5A (0246)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: Hall 2

Artificial Intelligence and Health Professions Education

Ken Masters[1], Daniel Salcedo[2], Raquel Correia[3], Martin Pusic[4], Rakesh Patel[5]

[1] Sultan Qaboos University, Muscat, Oman [2] Case Western Reserve University School of Medicine, Cleveland, USA [3] Université de Paris Cité, School of Medicine, Paris, France [4] Harvard Medical School, Boston, USA [5] The University of Nottingham, Nottingham, UK

Background

Artificial Intelligence (AI) impacts all professional and private spheres, and Health Professions Education (HPE) is already feeling some of that impact, especially as AI tools are increasingly used in healthcare practice. Unfortunately, HP Educators are currently grappling with many unknowns, depending on their stage of AI familiarity: Some do not know the basic AI terminology; others realise that AI is important, but do not know how to incorporate it into the curriculum; others wish to use AI as an educational tool but don't know how; others fear the ethical problems that accompany technology in general, and AI in particular.

This symposium is designed to introduce these topics and to help realise the full potential of AI in Health Professions Educators.

Suitability Level: Beginner and Intermediate.

This is an AMEE TEL Committee initiative.

Topic Importance

Most HP Educators are unfamiliar with AI, and it will become increasingly used in HPE. It is essential that HP educators become familiar with the basics and are able to respond and contribute to AI in HPE.

Format and Plans

- Rakesh Patel (Chair/Moderator): Introduction
- Daniel Salcedo: Introduction to AI terminology and concepts.
- Raquel Correia: Where and How in the curriculum can AI be placed?
- Martin Pusic: How can AI be used in HPE?
- Ken Masters: Ethical Issues in the use of AI in HPE.

Following these presentations, all speakers will form a panel to take Questions and Comments from the audience.

Take Home Messages

- Understanding basic concepts of AI is necessary to assess its effectiveness as an educational tool.
- AI integration in the different stages of HE curricula is dependant on the competencies that need developing.
- In addition to teaching *about* AI, AI can be used *by* HP educators to enhance HPE.
- AI raises new ethical issues that need to be identified and resolved.

Session 5B

5B (2365)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: M1

Implementing Evidence-informed teaching in practice. A BEME Symposium

Ronald Harden[1], Madalena Patricio[2], Morris Gordon[3], Jeni Harden[4], Susan van Schalkwyk[5], Rashmi Kusurkar[6]

[1] (Chair) / Editor of Medical Teacher, Dundee, UK [2] Lisbon School of Medicine, Universidade de Lisboa, Lisbon, Portugal [3] School of Medicine University of Central Lancashire, School of Medicine and Dentistry, Preston, UK [4] University of Edinburgh, Medical School, Edinburgh, UK [5] Stellenbosch University, Cape Town, South Africa [6] Amsterdam UMC location Vrije Universiteit, Amsterdam, The Netherlands

Background

Medical Education is undergoing a significant change with a move to competency-based education an authentic curriculum, the recognition of the changing role of the different stakeholders, the development and use of technology and the changing role including issues relating to the quality, diversity and inclusion and the changing of the expectations of the public. Much of the impetus for change represents the triumph of hope over reason, sentiment over demonstrated effectiveness and intuition over evidence.

The BEME Systematic reviews make evidence relating to teaching in practice widely available. Evidence-informed decisions should replace a PHOG approach where decisions are made on the basis of prejudice, hunches, opinions and guesses.

This symposium will look at how teachers can be encouraged to translate this evidence into practice.

Topic Importance

This symposia will consider the tools of systematic reviews and evidence synthesis in health education and how they can be employed to achieve the wider goals of evidence informed teaching practice. This vital connection bridges a gap by considering educational evidence and asking 'so what' from the perspective of the practising teacher and our learners.

Format and Plans

Six speakers will explore from their different perspectives how evidence-informed teaching can be introduced in practice:

- Need for evidence-based teaching (MP)
- Lessons learned from 10 years experience of evidence informed teaching (MG)
- Evidence-informed teaching from a curriculum perspective (RA**K)**
- Evidence-informed teaching in less resource contexts (SVC)
- The role of the student for evidence-informed teaching (JH)
- The role of the teacher for evidence-informed teaching (RMH)

Time will be allocated as follows:

- 0-5 minutes - Introduction
- 6- 45 minutes - Short presentations
- 46-85 minutes - Discussion with conference participants
- 89-90 minutes - Conclusions

Take Home Messages

- Evidence informed teaching in medical education is vital from many perspectives, including efficiency, effectiveness, morality and pragmatism.

- Reviews of all forms are increasing exponentially in health education literature, but execution is variable and represents a challenge for those wishing to practice evidence informed teaching

- Different contexts impact the uptake of evidence informed teaching, such as the element of education (e.g. curriculum design) or setting (E.g. Less resourced countries)

- A model of evidence based education must include not just evidence, but the expertise of teachers, as well as the needs and views of learners

Session 5C

5C (1167)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: Argyll I

Interprofessional Management Reasoning: Collaboration to Advance Education and Clinical Practice

Thilan Wijesekera[1], Emily Abdoler[2], Andrew Parsons[3], Gail Jensen[4], Conan MacDougall[5], Steven Durning[6]

[1] Yale School of Medicine, New Haven, USA [2] University of Michigan School of Medicine, Ann Arbor, USA [3] University of Virginia School of Medicine, Charlottesville, USA [4] Creighton University School of Pharmacy and Health Professions, Omaha, USA [5] UCSF School of Pharmacy, San Francisco, USA [6] Uniformed Services University School of Medicine, Bethesda, USA

Background

Management reasoning- the decision-making task about testing, treatment, follow-up visits, and allocation of resources- is a crucial ability for a broad range of health care providers. Literature within the field is still limited, and how management reasoning varies across different health professions is unclear. Despite management reasoning being inherently a situated and collaborative process involving the patient and healthcare team, little is understood about how different types of practitioners engage in management reasoning in clinical and educational practice.

Topic Importance

Advancing interprofessional management reasoning through health professions education can potentially improve patient outcomes, promote high value care, increase health equity, and facilitate practitioner thriving. This symposium will leverage expertise from an interprofessional group of leaders in the field to explore how management reasoning varies across the health professions. The expert panel (including a pharmacist, physical therapist, and physician) will then engage audience members in proposing a

shared language for management reasoning, highlighting opportunities for developing it, and provide strategies for interprofessional curricula and assessment.

Format and Plans

The session will open with a presentation of core concepts and recent developments within the fields of management reasoning and interprofessional education. An interprofessional panel of clinical reasoning experts will describe the management reasoning process within their fields, enumerate educational challenges for their respective learners, and strategize about next steps for interprofessional management reasoning. Over half of the session will be dedicated to panel and participant interaction in ascertaining a shared language for management reasoning, brainstorming interprofessional educational interventions, and prioritizing an agenda to move the field forward in both research and education.

Take Home Messages

Participants will learn that (a) though a nascent field, there are concepts, tools, and considerations that are being increasingly used to practice and teach management reasoning; (b) management reasoning is contextually situated with different providers of different expertise who can contribute together towards testing, treatment, and communication; (c) health professions education in management reasoning should be interprofessionally grounded in its curriculum development and assessment.

Session 5D: Research Papers: Continuing Professional Development

5D1 (0462)

Date of presentation: Monday 28th August
Time of session: 16:00 - 16:20
Location of presentation: Hall 1, SEC

Anti-Oppressive Faculty Development: Examining the Principles and Sustainability of HPE Programs

Qian Wu[1], Abigail Fisher[2], Betty Onyura [3], Hollie Mullins [1], Malika Sharma[4], Lindsay Baker [1]

[1] Centre for Faculty Development , Toronto, Canada [2] University of Toronto, Toronto, Canada [3] Centre for Addiction and Mental Health, Toronto, Canada [4] Unity Health Toronto, Toronto, Canada

Introduction

Institutions are increasingly initiating faculty development programs to better prepare faculty to manage issues related to equity, diversity, and inclusion (EDI) across health professions education (HPE) systems. However, little is known about the principles that underpin such faculty development programs, nor about their potential sustainability. To fill this research gap, we are examining both (a) the principles that underlie EDI faculty development programs in HPE, and (b) the sustainability of these principles during implementation.

Informed by a principles-focused evaluation (Patton 2018), the study uncovers the primary principles—overarching and operational—of anti-oppressive faculty development programs. O*verarching principles* reflect the philosophical and pedagogical paradigms that underpin the design of an educational intervention (see e.g., Baker et al. 2021). *Operational principles* refer to the guidance provided on how overarching principles should be implemented (Patton 2018). Surfacing the principles can provide meaningful insight about implementation priorities and decision-making processes, and allow for examination of how the real-life implementation of the program aligns or misaligns with espoused principles (Patton 2018).

Methods

This research study adopts a sequential QUAL→QUAL (descriptive → explanatory) multi-case study design approach. Descriptive case studies facilitate the development of rich descriptions of phenomena, in order to generate robust, comparative descriptions of the overarching and operational principles that underlie diverse programs. Explanatory case studies are ideal when asking why certain outcomes occur in relation to prescribed interventions, in order to explore how the implementation of diverse program principles facilitates or constrains program sustainability.

A total of five faculty development programs in HPE that are situated in Canada and the US participated as cases. Multi-source data have been collected to allow for triangulation, including publicly available records and documents, internal curriculum documents, semi-structured interviews with program coordinator/lead, developer, and teacher/facilitator, participant information survey, and cross-case focus groups. Data was iterative coded. Framework and matrix analysis were conducted.

Results

Our findings highlight that despite the various lengths, formats, and themes in the EDI faculty development programs, they share in their core values to bring awareness to issues to race and equity, to create a safe learning and working environment for students/staff/faculty, and to eventually bring changes to people's actions and to the broader system. Two of the programs are adaptations from the university-wide certification programs in EDI, while the rest of developed their own. These programs reside in various pedagogical paradigms, such as the transformative-change agency paradigm, and cognitivism-expertise paradigm (Baker et al. 2021), as illustrated in their choices of pedagogical tools, such as reflective exercises, role play, discussion, OSCE/OSTE, and end-of-session assessment. In terms of sustainability, some common constraining factors are the lack of financial support from the institutions, and dependence on passion and "labour of love" from program staff and faculty to run the programs and on a few facilitators who have the expertise in EDI to lead the workshops. Despite the challenges, these programs have been generally well received in their faculties and institutions, and the program leads and staff have been constantly seeking creative ways to increase their reach to those who need it the most and gain buy-in from them. Through a cross-case analysis, we also unpack contextual nuances across overarching and operational principles.

Discussion And Conclusion

Our research is critical to helping us understand the principles that underpin EDI faculty development programs and the sustainability of these principles during curriculum implementation. This work will inform academic health science institutions and faculty developers in the development and delivery of EDI related programs, in nuanced, ethical,

and sustainable ways. All of these efforts take place with a commitment to continually creating a more ethical, anti-racist, society.

References

Baker, Lindsay R., Shanon Phelan, Nicole N. Woods, Victoria A. Boyd, Paula Rowland, and Stella L. Ng. 2021. "Re-Envisioning Paradigms of Education: Towards Awareness, Alignment, and Pluralism." *Advances in Health Sciences Education : Theory and Practice* 26(3):1045–58. doi: 10.1007/s10459-021-10036-z.

Patton, Michael Quinn. 2018. *Principles-Focused Evaluation: The Guide*. New York: The Guilford Press.

5D2 (1124)

Date of presentation: Monday 28th August
Time of session: 16:20 - 16:40
Location of presentation: Hall 1, SEC

Costs and economic impacts of physician continuous professional development: a systematic review

Jonathan Foo[1], Stephen Maloney[1], David Cook[2]

[1] *Monash University, Melbourne, Australia* [2] *Mayo Clinic, Rochester, USA*

Introduction

Given limited resources, design and use of continuous professional development (CPD) should be informed by both effectiveness and cost. However, little is known about the cost and cost-effectiveness of CPD, with the last review published in 2002 including only 9 studies.[1] This program of research aimed to systematically map research methods, costs, and economic outcomes of physician CPD. All findings have been published.

Methods

A systematic review was conducted searching MEDLINE, Embase, PsycInfo, and the Cochrane Database from inception to April 2020 for comparative economic evaluations of CPD for practicing physicians. Two reviewers, working independently, screened all articles for inclusion and reviewed all articles to extract data on study designs, participants, educational interventions, costs, and outcomes. Both meta-analysis and non-meta-analytic synthesis was conducted for studies with comparable outcomes. Costs are reported in 2021 US Dollars.

Results

Of 3,338 studies screened, 111 were included. All studies involved CPD for practicing physicians. CPD activities most often targeted the population of primary care physicians (45/111, 41%). Regarding study design, 49% (54/111) used single-group designs, 23% (25/111) used nonrandomised comparative designs, and 29% (32/111) used randomised comparative designs. Cost of training was reported alongside non-monetary measures of

effectiveness in 48% of studies (i.e. cost-effectiveness, 53/111), monetary measures of effect in 27% of studies (i.e. cost-benefit, 30/111), and economic utility in 5% of studies (i.e. cost-utility, 5/111).[2]

Approximately half (62/111) of studies reported training costs, with a median of 3 (IQR 2-6) cost ingredients listed per study. The ingredients reported most often were faculty time (29%), materials (28%), and administrative staff time (27%). Median cost per intervention was $12,489 (range $1-$6,400,000) and the median cost per physician was $229 (range $1-$35,165) [Acad Med (2022) 97:1554-1563].

Studies reported a mean of 43% of Consolidated Health Economic Evaluation Reporting Standards (CHEERS) elements (measuring reporting quality) and scored a mean of 11.2 (of a possible 18) on the Medical Education Research Study Quality Instrument (MERSQI, measuring methodological quality). Details of economic methods were few: 16% (10/62) of studies reported the method of identifying ingredients, 16% (10/62) reported the approach to measuring ingredient consumption, and 42% (26/62) reported the approach to valuing ingredients [Perspect Med Educ (2022) 11:156-164].

Drug prescribing was measured as an outcome in 38 studies [JAMA Netw Open (2022) 5:e2144973]. Studies utilised single or multiple CPD modalities, most commonly paper materials (68%, 26/38), small group instruction (58%, 22/38), and audit and feedback (50%, 19/38). Compared to no intervention, CPD was found to result in economic savings ranging from $1 to $186,862 per year per 100 patients (n=24 studies). Comparing CPD against another CPD approach, 1-to-1 educational outreach was more effective compared to mailed materials (n=4) and group instruction (n=1).

Referral patterns were measured as an outcome in 31 studies [Acad Med (2022) 97:728-737]. The most common modalities included large group instruction (58%, 18/31), small group instruction (29%, 9/31), and internet (26%, 8/31). Comparing CPD with no intervention, 17 studies with intent to increase referrals had a pooled risk ratio of 1.91 (95% CI: 1.50-2.44; p<.001), and 7 studies with intent to decrease referrals had a pooled risk ratio of 0.68 (95% CI: 0.55-0.83; p<.001).

Discussion And Conclusion

It is likely that costs are being underestimate due to incomplete consideration of full program costs and interpretation is limited due to incomplete reporting.

CPD studies primarily focus on comparison to no intervention, and as expected CPD results in improved outcomes at a higher cost than no intervention. Given the limited number of studies comparing CPD head-to-head, the cost-effectiveness of specific CPD modalities relative to one another remains unclear.

Considerations for future research include: 1) study designs incorporating head-to-head comparisons to refine CPD cost-effectiveness; 2) use of rigorous methods to identify cost ingredients, measure ingredient consumption, and value ingredients – with a prioritisation of ingredients that contribute most to overall cost, and 3) explicit and transparent reporting of key economic details.

References

1. Brown CA, Belfield CR, Field SJ. Cost effectiveness of continuing professional development in health care: A critical review of the evidence. BMJ. 2002;324:652–655.
2. Cook DA, Stephenson CR, Wilkinson JM, Maloney S, Baasch Thomas BL, Prokop LJ, Foo J. Costs and Economic Impacts of Physician Continuous Professional Development: A Systematic Scoping Review. Acad Med. 2022;97(1):152-161.

5D3 (1304)

Date of presentation: Monday 28th August
Time of session: 16:40 - 17:00
Location of presentation: Hall 1, SEC

"Head of the Class": Equity discourses related to departmental leadership at a Canadian medical school

Anne Mahalik[1], Paula Cameron[1], Constance LeBlanc[1], Shawna O'Hearn [1], Christy Simpson[1]

[1] *Dalhousie University, Halifax, Canada*

Introduction

Departmental leaders regularly make decisions that impact current and future researchers, medical educators, and clinicians. However, equitable appointments of departmental leaders in medical schools have lagged behind other Equity, Diversity, and Inclusion (EDI) advancements. To identify opportunities to support and increase diversity in leadership roles we require a deeper understanding of discourses relating to departmental leadership appointments. Our research question for this paper therefore is: *How are assumptions about EDI and leadership communicated in policy documents and interviews with past and present* departmental leaders*?*

Methods

We conducted a Critical Discourse Analysis (CDA) to examine underlying assumptions shaping EDI policies and DH appointments in one Canadian medical school. Adapting the CDA approach described by Whitehead and colleagues (2014), we created and analyzed a textual archive of EDI documents (n=17, 107 pages) and led in-depth interviews with past (n=6) and current (n=12) departmental leaders.

Results

Little consensus was evident on which groups qualify as "equity-deserving". Interviews featured discussion of single EDI categories, focusing on gender and race. Other EDI categories were noticeably absent, including sexuality, disability, and Indigeneity, and there was limited acknowledgment of intersectionality (Crenshaw, 2017).

In interviews, departmental leaders framed EDI in four main ways:

1. Affirmative action policies: In certain conversations, participants equated equity with the existence of institutional policies. This discursive framing tends to attribute inequities to inadequate or absent policies, and assumes equity is achieved when these policies are introduced.

2. Mentoring relationships: Some participants spoke of the importance of building supportive relationships with future leaders from equity-deserving groups, including: cultivating the strengths of these future leaders, demystifying the path toward career progression, amplifying their voices and accomplishments, and listening to their experiences to tailor support.

3. Numerical representation: Participants discursively constructed equity as a numbers game—a matter of matching numbers in a department to numbers in wider society. Recruitment was a focus of this discourse, with little mention of retention and cultural changes necessitated by the changing face of leadership.

4. Relinquishing privilege: Three department heads described ways of leveraging their considerable privilege to make the path easier for equity-deserving colleagues. Listening more and speaking less and amplifying the voices of others were two strategies mentioned.

In policy documents, EDI was framed in three main ways:

1. Equity as a legal requirement: Policy documents we reviewed used legal language and conventions to convey the weight of responsibility in protecting employment equity.

2. Equity as aspiration: Despite the legal underpinnings of employment equity within universities and medical schools, documents occasionally present equity as a hope, rather than a clearly defined and measurable moral and/or legal responsibility. This tends to obscure the legal necessity to enact equity at all levels of university operations, including departmental leadership.

3. Equity as historical reparation: In most documents, equity was presented as ahistorical: something in the here and now that requires addressing. However, university documents at times couched equity in terms of historical harms, and the need to address harms that extend into the present.

Discussion And Conclusion

Discourses relating to EDI in leadership are changing slowly, with greater awareness of decolonizing and anti-racist practice, and concepts such as white privilege, allyship, and the minority tax. However, there is more urgent work to be done, including exploring ableism, neurodiversity, transphobia, heterosexism, and barriers experienced by first generation medical students, faculty, and leaders. In all documents and most interviews, there was no acknowledgment of intersectionality, the complex ways these identities and experiences coalesce in everyday life, including employment equity and departmental leadership. For example, exploring the unique, multi-layered experiences of racialized individuals within disabled and SOGI communities is crucial to understanding barriers to equitable leadership. Taking cues from equity-deserving leaders and scholars in this field will help ensure that leadership pathways are more inclusive, effective, and aligned with intentions.

References

Crenshaw, K. W. (2017). On intersectionality: Essential writings. The New Press.

Whitehead, C., Kuper, A., Freeman, R., Grundland, B., & Webster, F. (2014). Compassionate care? A critical discourse analysis of accreditation standards. *Medical Education*, *48*(6), 632–643. https://doi.org/10.1111/medu.12429

5D4 (0859)

Date of presentation: Monday 28th August
Time of session: 17:00 - 17:20
Location of presentation: Hall 1, SEC

From Accidental to Intentional Leaders: Understanding leadership and the role of the leader in the context of CPD.

Morag Paton[1], Tharshini Jeyakumar[2], Victor Do[3], Jerry Maniate[4], Walter Tavares[5], Suzan Schneeweiss[1], David Wiljer[1]

[1] Continuing Professional Development, Temerty Faculty of Medicine, University of Toronto, Toronto, Canada [2] University Health Network, Toronto, Canada [3] Postgraduate Medical Education, Temerty Faculty of Medicine, University of Toronto, Toronto, Canada [4] Department of Medicine & Department of Innovation in Medical Education (DIME), University of Ottawa, Ottawa, Canada [5] The Wilson Centre, University of Toronto, Toronto, Canada

Introduction

Although the Continuing Professional Development (CPD) field has rapidly expanded in scope, breadth, and depth, there is a gap in knowledge of how we understand CPD leadership and the role of the leader. Previous scholarship in this and similar fields indicates that leadership roles are poorly defined, and CPD leaders describe their journeys towards leadership as unintentional (Onyura et al., 2019; Paton et al., 2021). This study is aimed at answering the following question: how is leadership described or defined in CPD and what are the contextual issues that are and/or should be shaping its evolution?

Methods

This study was conducted between 2020 and 2022 and focused on CPD leadership in the North American context. Following ethical approval, and using convenience and purposive sampling, learners from a Canadian CPD leadership program and Canadian and US-based individuals who hold or have held positions with leadership responsibilities over various CPD domains, were invited to participate in this qualitative study. Participants had a range of leadership expertise.

Semi-structured interviews were conducted with consenting participants. Interviews were recorded and transcribed. The research team followed a qualitative thematic template analysis approach to data analysis using initial coding themes identified in an earlier scoping review of CPD leadership (manuscript submitted for publication). New codes were generated inductively as analysis continued. The team discussed, debated, and agreed upon overall leadership component categories and findings.

Results

Seventeen interviews were conducted. Although the definition of CPD leadership remains elusive, findings suggest there are multiple identified components of CPD leadership including attitudes (such as having a vision, and strategic thinking), skills (such as collaboration, adaptability and flexibility, and business management), and knowledge (such as contextual awareness).

The context uniqueness of CPD leadership further sets CPD apart from either undergraduate or postgraduate contexts in that CPD operates often on a cost-recovery model and serves health professions for the span of their careers.

Definitions of CPD leadership were elusive. For example, participants spoke of “formal” leaders and “informal” leaders, of “positional” leaders or “influential” leaders, of leaders from levels of “novice” to “expert”, and of organizations with many individuals identified as CPD leaders, to organizations with individuals who fulfill a leadership role within CPD but are never named as such. Participants described multiple pathways to their leadership positions, including previous experience in clinical areas, from other education portfolios, specialty organizations, and concentrations in research or accreditation practices.

Overall, participants agreed that there is more opportunity for CPD leaders to drive the CPD field forwards, some reflecting on missed opportunities early in the COVID-19 pandemic to drive innovation.

Discussion And Conclusion

This study has illustrated that while there are multiple components important to CPD leadership, including some that are unique to the CPD context, the definition of CPD leadership remains elusive. Contextual issues, such as health systems complexities or the positioning or CPD in a silo indicate that CPD is unique, and its leaders need to be continuously responsive and adaptive to this changing environment. As we move towards

a post-pandemic era, articulating the impact and value of CPD will be important for defining the roles, responsibilities, and accountabilities of those in leadership positions.

Attaining a leadership position within CPD has thus far predominantly embodied either accident or serendipity. As the evidence base of CPD continues to build and the impact of CPD interventions continues to be demonstrated, we recommend that the CPD leadership identity should likewise be bolstered. The CPD community will need both consensus-building collaboration and scholarship to better define CPD leadership, to build or rebuild pathways to CPD leadership positions, and to articulate the value of CPD and its leaders.

References

Onyura, B., Crann, S., Freeman, R., Whittaker, M.-K., & Tannenbaum, D. (2019). The state-of-play in physician health systems leadership research: A review of paradoxes in evidence. *Leadership in Health Services*.

Paton, M., Rowland, P., Tavares, W., Schneeweiss, S., & Ginsburg, S. (2021). The Ontological Choreography of Continuing Professional Development: A Mixed-Methods Study of Continuing Professional Development Leaders and Program Directors. *Journal of Continuing Education in the Health Professions*. https://journals.lww.com/jcehp/Fulltext/9000/The_Ontological_Choreography_of_Continuing.99845.aspx

Session 5E: Doctoral Reports: Assessment

5E1 (0756)

Date of presentation: Monday 28th August
Time of session: 16:00 - 16:20
Location of presentation: Argyll II, Crowne Plaza

How can assessment for learning meaningfully contribute to programmatic assessment?

Damian Castanelli[1]

[1] *Deakin University, Melbourne, Australia*

Introduction

Programmatic assessment is built on the promise of assessment *for* learning: offering a transformative shift from measurement to facilitating trainee learning through feedback. Although alluring in principle, research suggests that there are challenges in implementation. In this thesis, I explore two dilemmas arising from the persisting tension between assessment *of* and *for* learning. The first is the *firewall dilemma* that supervisors face in reconciling their dual role as coach and judge. The second is the *engagement dilemma* that trainees face in choosing whether to treat workplace-based assessment as a learning experience. I use a relational ontology and sociocultural theoretical framing to better understand the gap between the aspiration and the realisation of programmatic assessment and how we might reap the promised benefits of assessment for learning.

Methods

This research is set in postgraduate anaesthesia training in Australia and New Zealand and includes data collected from across both countries. The first study investigates the *firewall dilemma* using thematic analysis of interviews with supervisors of training (n=19), the educational supervisors in the workplace making decisions on progression. It explores how these supervisors experience their role in practice and how they make high-stakes decisions. The second study, using the additional theoretical framing of trust and power, investigates the *engagement dilemma* using constructivist grounded theory analysis of interviews with trainees (n=17). It explores how trainees come to trust supervisors in workplace-based assessments and how trust, power and trainee engagement interact within these assessments.

Results

The first study explored the balancing act between coaching and judging inherent in the supervisor of training role. Their preferred way to manage the *firewall dilemma* in practice was to incorporate judging as an extension of coaching within an established relationship. When the relationship was inadequate to withstand the challenge posed by trainee underperformance, the judging role superseded the coaching role. In the eyes of supervisors of training, using workplace-based assessments for learning compromised their utility for decision-making. Instead, local information collection systems were implemented to support decision-making. These *shadow systems,* largely hidden from trainees, used idiosyncratic criteria to produce collective judgements from trusted colleagues. Their use highlighted the misalignment between local "horizontal" and official "vertical" accountability systems (1).

In the second study, I found that trainees made rapid judgements about their trust in supervisors using their “feel for the game” rather than conscious deliberation (2). Trainees rationed exposure of their authentic practice to supervisors in proportion to their trust in them, and perceived supervisor investment invited deeper levels of trust. Trainees were more trusting and open to learning when supervisors used their power benevolently and avoided workplace-based assessments with supervisors they perceived as less trustworthy.

Discussion And Conclusion

This thesis shows that considering programmatic assessment through a sociocultural lens illuminates some of the complexities that must be considered when implementing such programs in practice. In particular, it shows that the *engagement dilemma* can be considered an extension of the *firewall dilemma*. Not only does the dual role of coach and judge complicate supervisor decision-making in workplace-based assessment, but it also shapes trainee behaviour. Trainees’ anticipation of the potential consequences of supervisors’ conflicting responsibilities can lead them to measure out their engagement in workplace-based assessment. Given the extent of supervisor power inherent in the hierarchical structure of training, prioritising the judging role amplifies trainee vulnerability and sabotages the invitation to assessment for learning. Our understanding of trainee engagement in workplace-based assessment is transformed by recognising that trainees’ willingness to brave the potential consequences of focusing on learning depends on the quality of supervisors’ invitation to learn and their trustworthy exercise of power. This thesis suggests that encouraging supervisor trustworthiness and re-balancing the *firewall dilemma* using supervisor power to emphasise the coaching role provide foci for interventions to enhance the invitation to assessment for learning and hence its value in programmatic assessment.

References

1. Wenger, E. (2010). Communities of Practice and Social Learning Systems: the Career of a Concept. In C. Blackmore (Ed.), Social Learning Systems and Communities of Practice, (pp. 179-198). Springer.

2. Bourdieu, P. (1998). Practical Reason - On the Theory of Action. Stanford University Press.

5E2 (0602)

Date of presentation: Monday 28th August
Time of session: 16:20 - 16:40
Location of presentation: Argyll II, Crowne Plaza

Direct Observation in Postgraduate Medical Education: A Misleading Concept

Chris Rietmeijer[1]

[1] *Amsterdam UMC location Vrije Universiteit, Amsterdam, The Netherlands*

Introduction

In spite of the much-emphasised importance of direct observation (DO) for the purposes of feedback and workplace-based assessment, most postgraduate medical education (PGME) programmes have trouble successfully incorporating DO in daily workplace learning[1]. This has been the reason for quite some research in the last decade, which has revealed several issues: a lack of time, unclear stakes, fear of assessment, unnatural and inauthentic behaviour, and problems concerning autonomy and efficiency[1,2]. These studies, however, give little insight into the different ways in which various manifestations of DO may impact residents and supervisors, and their interactions. Moreover, in most research, DO is conceptualised beforehand as an instrument for collecting information on residents' performance in competency-based medical education. If we want to improve the use of DO in PGME, we need a broader understanding of what DO, as a social event, *is* and *does* in workplace learning.

We investigated DO without pre-determined suppositions about such aspects as, for instance, its procedures or purposes. We defined DO as any situation in which a supervisor is physically present, observing how a resident is working with a patient. Our main research questions were:

How do residents, supervisors and patients experience DO situations? How does this vary and how do these variations affect them, the other participants and their interactions?

Methods

We started investigating these questions from a social constructivist perspective. We performed two focus group studies, with general practice (GP) supervisors and GP residents respectively. We applied the principles of constructivist grounded theory (CGT), which aims to build new theory from an inductive approach to the data.

As a next step in this research, we investigated patients' and residents' lived experiences in various DO situations. In these interview studies, we moved epistemologically from social constructivism to phenomenology, to investigate the essential elements in patients' and residents' experiences of DO situations.

Results

Our CGT studies with residents and supervisors enabled us to discern patterns in DO. Planned, bi-directional DO sessions, with residents and supervisors taking turns being the doctor or the observer, were highly valued by both residents and supervisors. However, a*d hoc*, uni-directional DO was the default. Some discomfort was frequently reported, least so when DO was initiated by residents and focused on advanced skills. Importantly, how *ad hoc* DO situations evolved was often unpredictable for residents. When frustrated, residents often did not discuss this with their supervisor; instead, they tended to withdraw from further DO situations.

Our phenomenological research of patients' and residents' lived experiences in DO situations revealed that residents often experienced DO situations as an assignment to show how they work independently, as if the supervisor were not there. Yet, we found that both patients and residents experienced the presence of the observing supervisor as that of an additional, senior, doctor. This made both patients and residents involve the senior doctor in the situation, to make sure that the senior agreed with the junior. It was therefore impossible for residents to show how they work independently, often to their frustration.

Discussion And Conclusion

Our major contribution to the literature is that we question the current concept of DO as a workplace-based assessment of how residents work independently; we assert that this concept of DO as assessment of Miller's 'does' level[1] is misleading. Misleading because, with this understanding of direct observation, we risk collecting artefacts and thereby frustrating residents. Moreover, with this concept, we risk falling short of patients' and residents' needs in DO situations. Lastly, we risk wasting important educational potential in these precious situations where a supervisor, a resident and a patient are together in one room, engaged in patient care.

Consequently, we suggest that when a resident and a supervisor are together, engaged in patient care, one-way DO is better replaced by bi-directional DO in working-and-learning-together sessions.
More broadly, our research provides residents and supervisors with guidance for discussing how DO best serves their purposes while preventing unconstructive discomfort.

References

1. Kogan JR, Hatala R, Hauer KE, Holmboe E. Guidelines: The do's, don'ts and don't knows of direct observation of clinical skills in medical education. *Perspect Med Educ* 2017;6 (5):286–305.

2. LaDonna KA, Hatala R, Lingard L, Voyer S, Watling C. Staging a performance: learners' perceptions about direct observation during residency. *Med Educ* 2017;2111:1–13.

5E3 (1557)

Date of presentation: Monday 28th August
Time of session: 16:40 - 17:00
Location of presentation: Argyll II, Crowne Plaza

What makes human judgments fair in assessment?

Nyoli Valentine[1], Steven Durning[2], Michael Shanahan[1], Lambert Schuwirth[3]

[1] Flinders University, Adelaide, Australia [2] Uniformed Services University of the Health Sciences, Bethesda , USA [3] Flinders University, Adelaide, Australia

Introduction

Although there is universal agreement that assessment should be fair, traditionally, 'objectivity' has been seen as the only approach to fairness, and human judgement in assessment has been surrounded with concerns of being 'subjective' and unfair. Equating fairness to objectivity may be intuitive, but this reduces a complex, multi-dimensional and contextual construct to a single linear, non-representative rule with limited fitness for purpose. Typically, workplace-based assessment occurs in authentic, unpredictable clinical environments where implementation of reproducible, measurement-based assessments is largely impossible. An ontological shift, looking beyond objectivity, is needed to better understand fairness in assessment. Enabling assessment programs to legitimately include expert human judgement alongside objectivity will add significant value to ensuring learners are better equipped to be the health professionals required of the 21st century.

Methods

We took a constructivist stance, assuming that fairness as a reality is socially constructed by multiple stakeholders, and that individuals and social groups share interpretations and understandings of fairness. We collected data from multiple perspectives to gain a richer and more nuanced understanding.

We first undertook an hermeneutic literature review for a scholarly knowledge synthesis and understanding of the factors, definitions and key questions associated with fairness in human judgement in assessment. Following this, we conducted two studies to better understand how supervisors, learners and assessment experts conceptualise fair judgement. The first study used semi-structed interviews using vignettes, and the second

consisted of online focus groups with assessment experts from Australian and New Zealand medical schools. After an initial analysis in study two, we discovered that fair judgement is best studied as a complex adaptive system (CAS) and so we proceeded with data analysis using a complexity lens. Finally, we held online focus groups with academic leaders from the Netherlands to better understand how external systems' forces on the CAS can impair fairness from emerging.

Results

In line with complexity theoretical notions, we saw the same four elements of fairness in all our data. These were transparency, fitness for purpose, accountability and credibility, and they occurred and interacted with each other at all levels in the assessment program. In our data the combination of these four elements behaved like a fractal. Also, within CAS, a system's behaviour relies less on the mere presence of the individual components but more on the dynamic strength and nature of the interactions between them. In line with this, in our analysis, we noted that people (learners, patients, faculty, assessors) seek to create fairness through managing the interplay between fitness for purpose, credibility, transparency and accountability when interacting with others rather than using them as a mere tick box list.

Assessors used different strategies to influence the interactions between the components of fairness, including utilising narratives, aggregating evidence from multiple sources, procedural strategies, enabling a culture allowing for learner agency with a focus on their learning, articulating reasonable expectations of learners and ensuring a sound theoretic basis of assessment design.

Discussion And Conclusion

Considering fairness as a CAS changes our views about how we can improve assessment and legitimise human judgement in our assessment programs. Because in CAS, the interactions between the entities are most important, measures like strict regulatory frameworks and tick box approaches to managing fairness are counterproductive as they limit the interaction between components. So, although strict regulations may be appealing from a managerial point of view, they reduce the ability for fairness to emerge and do injustice to the complexity of the real-world clinical and learning situations. People within CAS generate fairness through their interactions. When people with expertise, independence, situational awareness and agility interact using strategies to create fractal patterns this results in fairness. Replacing reductionist assessments and linear causal views with recognition of patterns in CAS will enable better understanding and can lead to

more purposeful, meaningful changes to support the use of fair judgement in assessment in the clinical workplace.

References

Valentine N, Shanahan EM, Durning S, Schuwirth L. 2022. Fairness in assessment: identifying a complex adaptive system *Submitted but not yet published*

Valentine N, Shanahan EM, Durning S, Schuwirth L. 2021. Making it fair: Learners' and assessors' perspectives of the attributes of fair judgement. *Med Ed.* 55(9):1056-1066

Session 5F - AMEE Fringe 1

5F1 (0245)

Date of presentation: Monday 28th August
Time of session: 16:00 - 16:20
Location of presentation: Argyll III, Crowne Plaza

Medical Student's Journey: Transforming Setbacks into Triumphs

Saurav Sarkar[1], Priyadarshini Mishra[1], Mukund Sable[1], Vinaykumar Hallur[1]

[1] *All India Institute of Medical Sciences, Bhubaneswar, India*

This Fringe activity is planned on the theme 'Inclusive Learning Environments to Transform the Future'; where a teacher takes care of a student who fails and loses hope. She helps him realize his potential and regain his confidence to go ahead.

We have planned this journey through a song and dance routine using popular Hollywood and Bollywood songs. The faculty would be singing and dancing, with karaoke display and the audience would be encouraged to join in the fun. The faculty promises an enjoyable experience while imparting a significant message to educators and learners alike.

The karaoke medley consists of four songs that narrate the journey of a struggling student who ultimately succeeds. The first song highlights the initial difficulties faced by the student while pursuing their course. The second song portrays the student seeking assistance from a compassionate teacher. The third song showcases the dedicated efforts of the teacher to help the student discover their potential. Finally, the last song rejoices in the student's success. A sample video is attached where the participants are singing and dancing to one of the songs that they are planning in the medley.

The audience would be entertained, and they would be invited to participate in the karaoke and the message will be conveyed through fun, song, and dance.

5F2 (4535)

Date of presentation: Monday 28th August
Time of session: 16:20 – 16:40
Location of presentation: Argyll III, Crowne Plaza

Just work together on this new primer… Are you thinking what I'm thinking?

Jayne Lysk[1], Stephen Lew[2]

[1] *The University of Melbourne, Melbourne, Australia* [2] *University of Melbourne, Melbourne, Australia*

The 4-year Doctor of Medicine course at The University of Melbourne launched its redesign in 2022, introducing many improvements including clinical placements commencing in Year One. The redesign of Year Two debuts in 2023, with more focus on briefing students adequately before commencing clinical rotations. Online primer modules have been introduced to demystify clinical placement and to facilitate the transition into their clinical teams, and to help orient the students toward what they might learn and experience.

Knowing that we did not have the ideal scenario of having a laid-out curriculum and having a number of student collaborators ready to assist, we nevertheless set off to make a one-hour primer on the 'medical term,' the four-week period in which students were placed with a general or specialty medicine unit.

We could have assembled a small group of clinicians to outline what they thought would was needed in a primer. However, we felt that this may continue to lead us to making assumptions about what students struggled with in their placement. Good management and good fortune brought Jayne together with Stephen. Jayne's education (versus clinical) background would act as a counterweight to Stephen's clinical upbringing and help to explicate the objectives of the medical term.

What followed were many hours of sharing and then challenging ideas as we brought our respective backgrounds to the project.

We did not start off with 'like minds thinking alike' mentality (that would have led to too many assumptions) but the iterative approach between 'unlike minds' worked so much better!

This session has been designed to capture what we learned from working together and explores the notion of the practice of attention. That said, we will incorporate activities to see if you are thinking what we are thinking.

5F3 (2934)

Date of presentation: Monday 28th August
Time of session: 16:40 - 17:00
Location of presentation: Argyll III, Crowne Plaza

Reel of the Medical Students

Zsuzsa Nebenführer[1], Levente Kiss[1], László Tornóci[1], Katalin Monzéger[1]

[1] *Semmelweis University, Budapest, Hungary*

Do you like dancing? Have you attended medical school? If you answer with "yes" to these questions, this session is the opportunity to combine them!

There are several books and movies about the long years of medical studies but we could not find any corresponding dance about it, so we devised a new scottish country dance - a 40 bar reel - about the medical studies. The title of this new dance is the "Reel for the Medical Students".

Each figure of this reel represents characteristic parts or topics of the medical studies. At the beginning of the dance we show you one of the best days of the studies - the boot camp before the first semester. As for hundreds of students their medical journey starts with the first anatomy lesson dealing with the structures of the hands and arms, you can see it in the first bars of the dance. Another figure of this reel represents other important subjects such as biochemistry, genetics and cardiology; later we show you the strict rules of an operating theatre. Some students like the logic of the hormonal pathways, others want to be a gynecologist or a urologist - we incorporated suitable figures for all of them into the dance.

During this interactive session the meaning of the different figures will be explained and the original reel will be danced. With less activity of the audience our interprofessional demo team - representing both the theoretical and the clinical parts of faculty - will perform the demonstration. If the audience is ready to participate, we will quickly teach these easy figures of the dance, so they will be able join the Reel of the Medical Students. Let's have fun!

Session 5G - Assessment: Evaluating Competence

5G1 (4965)

Date of Presentation: Monday 28th August
Time of presentation: 1600 - 1615
Location: Castle I, Crowne Plaza

Bringing Transparency to Supervisors' Conceptualization of Entrustment and Factors Influencing Entrustment Decisions: A Q-Methodology Study

Renee S. Chuang1, Fremen Chihchen Chou2, Nothando S. Nkambule3, Madalitso Khwepeya4, Yu-Che Chang5

[1]DrPH student, Health Policy and Leadership Program, School of Public Health, Loma Linda University, Loma Linda, CA, USA; [2]Center for Faculty Development, China Medical University Hospital; School of Medicine, China Medical University; Department of Emergency Medicine, China Medical University Hospital, Taichung, Taiwan; [3]PhD student, International Graduate Program of Education and Human Development (IGPEHD), National Sun Yat-sen University, Kaohsiung, Taiwan; [4]PhD researcher, Chang Gung Medical Education Research Centre (CG-MERC) Chang Gung Memorial Hospital, Linkou, Taoyuan, Taiwan; College of Medicine, Chang Gung University, Taoyuan, Taiwan; [5]Deputy Director, Chang Gung Medical Education Research Centre (CG-MERC), Chang Gung Memorial Hospital; Department of Emergency Medicine, Chang Gung Memorial Hospital; Associate Professor and Deputy Director, College of Medicine, Chang Gung University, Taoyuan, Taiwan

Background

Upon entering residency, medical residents are limited in their ability to apply contextual knowledge to abstract clinical situations or psychosocial aspects of care. For clinical educators, deciding when a resident is sufficiently prepared for unsupervised patient care is a daunting task. Premature, unsupervised patient care can risk patient safety and increase liability. The study aims to explore how clinical educators determine levels of supervision and entrustment in residents in the emergency workplace where entrustable professional activities and milestones assessments were executed.

Summary of Work

We employed Q-methodology to ascertain emergency physicians' perspectives of how they determine levels of supervision and entrustment to assign to residents in their daily clinical practice. Between August to September 2021, we recruited thirty-one emergency physicians across 12 teaching hospitals in Taiwan through purposive sampling. Using R software, we analyzed the Q-sorts, determined viewpoint loadings, and formulated the viewpoint arrays. Analysis of the post-sort interview data reinforced our interpretation and understanding of these viewpoints.

Summary of Results

Of the 31 Q-sorts, 29 (93.5%) successfully loaded onto four distinct viewpoints reflecting critical educational and clinical perspectives which dominate emergency physicians' entrustment decision and level of supervision on residents' practice in emergency context: residents' decisiveness, competency and risk for patient care; clinical educator's teaching philosophy and resident's willingness to learn; clinical educators' responsibility in maintaining residents' quality of practice; resident's moral values, self-awareness and clinical educator's capability to backup.

Discussion and Conclusion

Residents' ability to display contextual competence for patient care predominates clinical educators' entrustment decision and the level of supervision in emergency workplace. Moreover, the level of supervisor-trainee educational interactivities and strength of their relationships were highly valued. Post-sorting interviews uncovered that competency-based medical education assessments could contextually prompt clinical educators' responsibility in maintaining residents' quality of practice, scaffolding their development toward independent patient care and evaluative judgement. Although not prevalent, supervisors also highlighted that resident ability to demonstrates good moral characters and self-awareness is worthy of attention for 'Do No Harm' and patient-centered care.

Take-home Message

This study anticipated the transparency in supervision decision can guide future clinical educators when implementing supervision and entrustment standards in clinical setting.

5G2 (4949)

Date of Presentation: Monday 28th August
Time of presentation: 1615 - 1630
Location: Castle I, Crowne Plaza

Development and validation of objective structured assessment of surgical competence—Chinese version:next to surgical s EPA

Chia-Che Chen1, Mau-Roung Lin2, Weu Wang 3, Chin-Shen Hung 3, Hsin-Yi Chiu4, Chien-Yu Chen5

[1]Graduate Institute of Injury Prevention and Control, College of Publish Health, Taipei Medical University; Division of General Surgery, Department of Surgery, Taipei Medical University Hospital, Taipei, Taiwan; [2]Graduate Institute of Injury Prevention and Control, College of Publish Health, Taipei Medical University, Taipei, Taiwan; [3]Division of General Surgery, Department of Surgery, Taipei Medical University Hospital, Taipei, Taiwan; [4]Division of Thoracic Surgery, Department of Surgery, Taipei Medical University Hospital, Taipei, Taiwan; [5]Department of Anesthesia, Taipei Medical University Hospital, Taipei, Taiwan

Background

Great surgical skills are associated with patient's outcomes including post-operative complications, reoperation rate, and Mortality. Traditionally, the master-apprenticeship model was the corner of residency training. However, the subjective assessment and bias from personal preferences has been criticized. Objective Structured Assessment of Technical Skills (OSATS) and Non-Technical Skills for Surgeons (NOTSS) are the most common assessment tools in surgery. We conduct this study to demonstrate the reliability and validity of the Objective Structured Assessment of Surgical Competence (OSASC) - Chinese version to assess the surgical competence of residents in the operation theater in Taiwan.

Summary of Work

The study will use OSASC instruments which were translated in Chinese version via via Brislin's revised Translation Model, a two-stage translation model to Chinese version and via modified Delphi Method (total 21 board-certified surgeons) to assess the participating residents in three hospitals from 2022-02 until 2023-2. Scoring of the final OSASC

instrument will be in line with google format. The residents must be the operators. Attending surgeons are instructed to act as the first assistant or observer in the operation theater.

Summary of Results

Total 21 board-certified surgeons joined the modified Delphi Method. The Content Validity Index was high in the 17 items of the assessment (all over 0.8). After one year, total 48 assessments completed including 16 surgical residents and 12 attending surgeons. The internal consistency reliability of the OSASC for each of the operations was excellent, with Cronbach's alpha coefficients ranging from 0.93 to 0.973. All correlations coefficients were statistically significant, with all $p < .001$. The domain "Knowledge of specific procedure" ($r = 0.713$) demonstrated the strongest correlation with scores of competency scale, whereas the domains "Indication for Surgery" ($r = 0.429$) and "Applying effort, reflection, and self-improvement" ($r = 0.445$) showed the weakest correlations.

Discussion and Conclusion

The OSASC – Chinese version has a good relationship to competency scale and objective assessment to surgical competency. Therefore, broad evaluation should be used in the future and the basic concepts to EPA.

Take-home Message

Objective assessment of surgical competency is the cornerstone of surgery training.

5G3 (6384)

Date of Presentation: Monday 28th August
Time of presentation: 1630 - 1636
Location: Castle I, Crowne Plaza

Prognostic factors for passing the Swedish licensing test for international medical graduates

Magnus Hultin[1], Benoni Edin[1], Anders Själander[1]

[1]*Umeå University, Umeå, Sweden*

Background

Since 2016 the Swedish licensing test for IMGs consists of a theoretical test and a practical test. The candidate must pass the theoretical to qualify for the practical. The theoretical test consists of a 180-item MCQ/SBA exam and the practical test of an 18-station OSCE. The test takers are a mix of refugees of all ages and immigrants moving, or planning to move, for political, economic, or family reasons.
We here analyze if sex and age are factors for passing the tests.

Summary of Work

Sex and age when attending the first theoretical and practical test were compared to pass/fail-grade. Wilcoxon's signed-rank test, or Chi2, was used for statistical analysis.

Summary of Results

October 2016 to January 2023, the theoretical part was given on 23 occasions to a total of 1956 candidates. The total number of attempts at the theoretical test was 4291, and 1000 passed. Of those, 749 have taken the practical test, and 658 have passed. The total number of attempts on the practical test was 969. The average pass rate on the theoretical test was 24.7% compared to 67.2% on the practical test. 1021 females and 935 males took the theoretical test, and there were no differences between females and males in the pass rate. Neither was there an effect of sex on passing the practical test. The average age at the first attempt on the theoretical test was 34.4±6.3 (means±SD) years for females and 35.2±7.8 for males who passed the test compared to 36.1±7.8 and

38.4±8.9 for those failing. Males were older when taking the theoretical test ($p<0.001$), and in both sexes, those failing the test were older ($p<0.002$/$p<0.001$, female/male).
The average age at the first attempt on the practical test was 34.8±6.0 (means±SD) years for females and 36.1±7.9 for males who passed the test compared to 36.7±6.1 and 39.2±8.4 for those failing. There was no difference in age when taking the first practical test ($p=0.23$), but those failing the test were older ($p<0.04$/$p<0.015$, female/male).

Discussion and Conclusion

Younger IMGs taking the Swedish licensing test were more likely to pass the test.

Take-home Message

When taking the Swedish licensing test for IMGs, being younger is an advantage.

5G4 (3740)

Date of Presentation: Monday 28th August
Time of presentation: 1645 - 1700
Location: Castle I, Crowne Plaza

Use of Entrustable Professional Activities in postgraduate medical education in primary health care specialties

Tuula Oksanen1, Hannu Lassila1, Leena Ala-Mursula2

[1]University of Eastern Finland, Kuopio, Finland; [2]Research Unit of Population Health, University of Oulu, Oulu, Finland

Background

Competency-based postgraduate medical education, completed upon reaching predefined learning goals, is superseding time-based education. While such learning goals and assessments were first focused on individual competencies, transparency of evaluation criteria and feasibility of lengthy checklists were challenging. The solution was to define learning goals as entrustable professional activities (EPA). These activities, conducted by trainees, are supervised, and assessed by trainers who gradually grant responsibility and independence by making entrustment decisions, not compromising patient safety. Because EPAs were first developed for hospital-based specialties, we studied what is known about using EPAs in primary health care specialties.

Summary of Work

We conducted a scoping review using CINAHL, MEDLINE and PSYCINFO databases in 2021. We defined primary health care as family medicine, preventive medicine, public healthcare, global health, occupational health, general practice, primary health care, or primary care. The search criteria included: original research done in primary health care, investigating participants, and published in English. Exclusion criteria were review, no participants, undergraduate medical education, or non-medical specialization studies. We were especially interested in experiences on EPA development, implementation, and assessments.

Summary of Results

The search revealed eight studies from Western countries with diverse methodology. These studies had developed 12-80 EPAs, more universal in nature than those in the hospital specialties. The evaluation scales varied a lot, and none used the original entrustment scale. Upon implementation, expectations were more positive regarding curriculum development and goal setting than on assessments. Two longitudinal studies reported assessment technologies focusing on cognitive processes or needs for supervision.

Discussion and Conclusion

To our best knowledge, this was the first review to investigate experiences of EPAs in primary health care. In general, the developed EPAs were considered useful in goal setting. However, the perspectives of EPA evaluation and implementation to practice varied a lot. Our results highlight the need for developing optimal ranges of EPAs and their assessment scales in primary health care settings; clearly, more research is needed.

Take-home Message

- Entrustable prefessional acitivites (EPA) were originally developed for hospital-based specialties
- In our systematic review of their use in primare health care specialities, we found that EPAs were found useful in goal setting. Their implementation and assessments varied a lot.

5G5 (4958)

Date of Presentation: Monday 28th August
Time of presentation: 1700 - 1715
Location: Castle I, Crowne Plaza

Self-assessment of residents' competence: a factor analysis

Maham Vaqar[1], Muhammad Tariq[1], Azam Afzal[1]

[1]*Aga Khan University, Karachi, Pakistan*

Background

To be responsible for their own professional development over the course of their careers, residents need to be able to evaluate their own abilities. This study examined how a population of internal medicine residents assessed their own performance in 8 facets of competence during residency.

Summary of Work

An 8-item self-assessment questionnaire was distributed to 145 residents at the Aga Khan University from three successive cohorts. 103 residents (71%) completed the survey. To explore the dimensionality of the questionnaire, principal component analysis (PCA) was performed. Cronbach's alpha was used to estimate the internal consistency of the scale.

Summary of Result

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used, and there was sufficient inter item correlation (KMO = 0.905), indicating that the patterns of correlation were relatively compact. PCA indicated that the performance dimensions are related to a single construct that encompasses various elements of professional behavior. Cronbach's α was 0.91. On a scale of 1 to 7, our residents assessed their professional competence highly, with a mean score of 5.5 and a standard deviation of 0.8. No statistically significant gender or residency group differences were found for the 8 performance variables on the chi square or Kruskal-Wallis K Independent Samples tests.

Discussion and Conclusion

Our results from exploratory factor analysis indicate that residents have a one-dimensional view of performance. Our findings indicate that it is necessary to update our self-assessment form to include new performance dimensions, which will increase the likelihood of more constructs/factors emerging from the data. There is a need to compare the self-assessments of residents with the evaluations of faculty in order to determine their accuracy.

Take-home Message

- Medical education requires residents to evaluate their abilities and competencies as a crucial part of their professional development.
- Performance dimensions in our self-assessment questionnaire were related to a single construct that encompasses various elements of professional behavior.
- There is a need to further examine the sub-themes that fall under the umbrella of professionalism.
- Updating the self-assessment form to include new performance dimensions can increase the likelihood of more constructs/factors emerging from the data.

Session 5H: Designing and Planning Learning: Successful Learning

5H1 (3826)

Date of Presentation: Monday 28th August
Time of presentation: 1600 - 1615
Location: Castle II, Crowne Plaza

Teaching the Social Determinants of Health in Undergraduate Medical Education: an Experiential Program in the United Arab Emirates

Khairat Al Habbal1, Halah Ibrahim1

[1]*Khalifa University College of Medicine and Health Sciences, Abu Dhabi, The United Arab Emirates*

Background

Social determinants of health (SDH) impact health. Yet, research shows a lack of training on SDH in both undergraduate and postgraduate medical education, with studies confirming that the social needs of patients are not routinely identified or addressed by healthcare professionals in clinical practice. The medical education community is currently working to incorporate SDH into undergraduate training, but has had limited guidance regarding educational topics, modes of teaching, and evaluation criteria in this domain.

Summary of Work

Aim: to describe the development, implementation and early impact of a longitudinal SDH curriculum.

Methods:
Using the Institute of Medicine's Behavioral and Social Science Knowledge Domains as a framework, we designed an SDH educational program that includes a didactic component with interactive workshops, reflective practice training, and a longitudinal experiential component that integrates medical home visits with social activities in

collaboration with community partners. Student surveys and reflective narratives reveal positive perceptions of the program and increased awareness of SDH, social accountability, and cultural sensitivity.

Program Evaluation Using Miller's pyramid of assessment, knowledge is assessed through individual or group-based assignments while the experiential component is assessed though medical skills and SDH reflective practice.

Summary of Results

Student surveys show that the SDH program has shaped their professional identity formation and delivery of context-sensitive care. Reflective assignment analysis showed the development of student confidence as part of the multidisciplinary medical team with time and repeated exposure. Reflection facilitated by faculty showed that language and time were the main barriers to SDH education.

Discussion and Conclusion

Our SDH program achieved its objectives. Horizontal and vertical integration of the SDH program enabled students to better understand SDH concepts. can be reproduced in resource-limited/rich settings as it does not require many faculty members and embraces partnership with field experts and health providers to achieve its learning outcomes. Future steps include building new partnerships and creating social programs to enhance SDH education.

Take-home Message

SDH education through a combination of didactic course, reflective practice training and experiential program allows students to understand SDH and apply it in their practice.

5H2 (4979)

Date of Presentation: Monday 28th August
Time of presentation: 1615 - 1630
Location: Castle II, Crowne Plaza

Factors Associated with Self-Directed Learning (SDL) Readiness in Medical Students

Wachiraporn Arunothong1, Nipon Pantarote1

[1]*Medical Education Center Lampang Regional Hospital, Lampang, Thailand*

Background

Self-directed learning is a process where students shift from a guided form to take charge of planning, continuing, and evaluating their learning process. SDL in students is based on various factors and undergraduate and postgraduate students may have different factors contributing to readiness.

Summary of Work

Undergraduate and postgraduate medical students of Lampang medical educational center completed basic information questions. The SDL readiness scale was translated into Thai language. The IOC of each question is between +0.6 - +1.0 and the reliability = 0.941. The translated SDL readiness scale is a 5-point Likert scale.

Summary of Results

151 students completed the questionnaire. 75% were undergraduate students. GPAs of undergraduate and postgraduate students were 3.11 and 3.16. Significant differences were apparent in weekly hours between guided learning and self-practice in undergraduates and postgraduates, 14.1 Vs. 2.9 ($P<0.001$), and 17.8 Vs.28.3 ($P=0.023$). There were no significant differences in weekly hours when completing assignments, self-studying, supervision by staff, out-of-class discussion, and in multidisciplinary 'learning by doing' between the graduate categories. There were significant differences in the number of undergraduates and postgraduates involved in activity planning in the class 35% Vs.61%, ($P =0.005$), and in the evaluation of the curricula 62% Vs.82% ($P= 0.026$). There was no significant difference in total mean SDL readiness scores between undergraduates and

postgraduates (108.4 Vs.110.8). Factors predicting the increment of SDL readiness scores in undergraduate students were years of training (β = 2.3, P=0.045), GPA (β = 6.2, P= 0.012), activity planning involvement (β =5.7, P=0.021). There was no significant predictor of the increment in postgraduate SDL readiness scores.

Discussion and Conclusion

Undergraduate and postgraduate medical students had the same level of SDL readiness. To increase undergraduate student SDL readiness, instructors should include students in activity and curricula planning. Although increased years of training were a positive factor in undergraduate SDL readiness, this was not a factor in their postgraduate training. Further exploration of why duration of training is not a factor in postgraduate students is needed.

Take-home Message

SDL readiness in students should be evaluated and factors that contribute to the readiness should be promoted.

5H3 (4992)

Date of Presentation: Monday 28th August
Time of presentation: 1630 - 1636
Location: Castle II, Crowne Plaza

Can microlearning enhance learning of undergraduate anatomy?

Paul Lai[1], Josephine Lau[1], Maria Wai[1]

[1]*The Chinese University of Hong Kong, Hong Kong, Hong Kong*

Background

Microlearning, a way of acquiring knowledge through learning small chunks of information over a period of time, has increasingly gained popularity in medical education. This project aims to study its effectiveness in learning human anatomy by evaluating the participants' performance in two separate summative assessments.

Summary of Work

One half of the class of medical year 2 students (135 students) were recruited to participate in this project as the experimental group. The rest of the students (134 students) were in the control group. The project participants were offered 5-minute "bite-size" learning materials on specific topics (related to anatomy of abdomen) in the form of MCQs through an online platform (Blackboard) 3 times a week for 8 consecutive weeks during the teaching block for anatomy of abdomen. Correct answers with supplementary explanatory notes were instantly provided after the submission of answers. The rest of teaching and exposure such as dissection of cadavers were exactly the same for both groups.

Summary of Results

The overall marks and the marks of the specific topics (related to anatomy of abdomen) of both the experimental and control groups in the MCQ papers in the term test and the year-end final examination were analysed respectively. While the performance of the two groups of student showed no difference at term test, there was a statistically significant enhancement of performance in the MCQs of the specific topic in the experimental group (with mircrolearning exposure) at the final examination. Also, by using a regression

analysis, we found the overall performance of microlearning MCQs and the performance at the term test were significant predictors of performance at the final examination.

Discussion and Conclusion

These results demonstrate that microlearning can enhance learner's performance at summative assessments in terms of understanding and knowledge retention in an undergraduate course of anatomy. We would explore further the effectiveness of such microlearning strategy by applying mricrolearning for the whole class of medical students.

Take-home Message

This project has shown that microlearning, which can be easily conducted through students' electronic devices such as their smart phones, could be a useful strategy to supplement or enhance learning in undergraduate medical education.

5H4 (4929)

Date of Presentation: Monday 28th August
Time of presentation: 1645 - 1700
Location: Castle II, Crowne Plaza

The factors associated with the motivation to learning medical humanities: epistemic beliefs about medicine

Tiana Yu-Ting Tsao1, Jyh-Chong Liang2, Yen-Lin Chiu3, Huey-Ling Chen3, Tien-Shan Huang4, Yen-Yuan Chen3

[1]Department of Family Medicine, National Taiwan University Hospital Bei-Hu Branch, Taipei, Taiwan; [2]Department of Learning Sciences, National Taiwan Normal University, Taipei City, Taiwan; [3]Graduate Institute of Medical Education & Bioethics, National Taiwan University College of Medicine, Taipei city, Taiwan; [4]Department of Internal Medicine, Cathay General Hospital, Taipei City, Taiwan

Background

By learning medical humanities, students are expected to be empathetic, culturally competent, and capable of thinking critically. During the COVID-19 pandemic, understanding medical students' learning process and outcomes of medical humanities has become an even more essential issue in medical education. Epistemic beliefs are associated with learning outcomes and students' learning behavior. However, few studies have been conducted to examine the epistemic beliefs about medicine(EBAM) in medical research, and little has been examined about the relationships between epistemic beliefs and motivation to learning medical humanities.

Summary of Work

We used the modified Epistemic Beliefs About Medicine (EBAM) questionnaire to measure the student's epistemic beliefs. The motivation to learning medical humanities was indicated by whether the students participated in more than two experiential learning activities for medical humanities. Exploratory factor analysis (EFA) was used to validate the construct validity of the EBAM questionnaire. Student's t-test and Chi-squared test were employed to compare the differences between medical and non-medical students. Multivariate logistic regression was conducted to examine the relationships between the

epistemic beliefs about medicine and motivation to learning medical humanities after adjusting for other confounding variables.

Summary of Results

172 first-year medical and non-medical students consented to participate in this study. The students who held more simplistic epistemic beliefs about the credibility of medical knowledge, tended to be learners with surface motivation to learning medical humanities (odds ratio=0.43, p=.04). While the students with the simplistic epistemic belief of credibility of medical experts were more likely to be a learner with deep motivation to learning medical humanities (odds ratio=2.30, p=.01). Medical students were less likely to show deep surface motivation than non-medical students (odds ratio= 0.29, p=.02).

Discussion and Conclusion

Epistemic beliefs are associated with the motivation to learning medical humanities in two domains using the modified Epistemic Beliefs About Medicine (EBAM) questionnaire: the credibility of medical knowledge and the credibility of medical experts.

Take-home Message

Learning medical humanities is expected to cultivate the elements for being a good doctor such as empathy. Therefore, educators are highly encouraged to develop educational strategies for promoting medical students' motivation to learn medical humanities.

5H5 (5581)

Date of Presentation: Monday 28th August
Time of presentation: 1700 - 1715
Location: Castle II, Crowne Plaza

Exploring the role of basic communication science in clinical teaching and learning

Jacquelin Forsey1, Stella Ng2, Paula Rowland3, Risa Freeman4, Nicole N Woods5

[1]The University of Toronto, Toronto, Canada; [2]CACHE, UHN, Toronto, Canada; [3]The Wilson Centre, UHN, Toronto, Canada; [4]University of Toronto, Toronto, Canada; [5]TiER, UHN, Toronto, Canada

Background

Healthcare professionals must be adaptive communicators experts, navigating a complex interaction of high stakes, emotional situations, and contextual variation. Previous research has established that integration of basic science into a clinical curriculum supports the development of adaptive expertise. Our review of the literature identified conceptual groupings representing basic communication science underpinning patient-physician interactions: clarity & being explicit, patient activation/participation, epistemic access and power, identity, affiliative language, and managing transactional & relational goals. This study explored how basic communication science is manifested during clinical teaching and learning scenarios.

Summary of Work

To address our research question we observed clinical teaching encounters between medical trainees and staff developmental pediatricians at Holland Bloorview Kids Rehabilitation Hospital in Toronto, Canada. Subsequently, we conducted interviews with the staff to probe their knowledge and beliefs about patient communication and training approaches. This data was analysed qualitatively taking an abductive approach and using previously established conceptual groupings as sensitizing concepts.

Summary of Results

Constructs from 5 of the 6 conceptual groupings were evident broadly across the data. Staff physicians placed a particular emphasis on communication aimed at creating alignment with families, sharing information clearly, and building emotional connections. Language tools that shaped power dynamics and identity formation operated implicitly and were not discussed with trainees

Discussion and Conclusion

To utilize theory and conceptual knowledge to improve pedagogy, we need a strong understanding of current educational practices. This work is that first step, bridging theory and practice. Our results highlight the strengths of current communication training and illuminate areas where more in-depth and nuanced communication science would enable learners to develop the adaptive expertise they will require to provide the care their patients deserve.

Take-home Message

During clinical teaching encounters, physicians are able to share knowledge of some communication principles both implicitly and explicitly with their learners. However, greater awareness of communication theory, especially surrounding the role of power and identity would help senior physicians and trainees to adapt their practice during difficult conversations with patients.

Session 5I: Faculty Development: Engagement / Innovation

5I1 (0004)

Date of Presentation: Monday 28th August
Time of presentation: 1600 - 1615
Location: Castle III, Crowne Plaza

Factors Influencing Healthcare Professionals' Engagement in Medical Education Research: A Systematic Narrative Review

Ya-Shin Chen1, Sze-Yuen Yau1

[1]*Chang Gung Medical Education Research Centre, Linkou, Taiwan*

Background

Medical education research (MER) plays a vital role in ensuring that healthcare professionals possess the knowledge and skills necessary to provide high-quality patient care. Despite the growing recognition of the significance and potential impact on patients, the level of engagement among healthcare professionals in such research remains alarmingly low. To better understand the drivers and barriers to healthcare professionals' participation in MER, it is imperative to conduct a review to identify the factors that encourage or deter involvement.

Summary of Work

We have conducted a systematic narrative review according to the JBI method. The study synthesized literature on the factors affect healthcare professionals' participation in MER. A comprehensive search was performed in august 2022 across Web of Science, MEDLINE, Scopus, and Airiti Library to find eligible studies, using keywords: “medical education research”, “engagement” and “healthcare professionals”. The inclusion criteria were primary research studies encompassing all types of articles and research designs published in English or Chinese.

Summary of Results

A preliminary search yielded 494 research and 8 articles were included after eliminating duplicates, gray literature, non-educational research, methodology discussion research, and research on teaching and learning strategies. The findings highlighted a complex interplay of individual, organizational, and societal factors: Individual factors include research competency (8/8) and recognition of MER (5/8) were found to be major barriers to engagement; organizational factors include lack of policy support (6/8) and peer support (3/8) were also identified as the key obstacles; societal factors include research funding (4/8), research time (3/8), and limited access to research training (5/8) were also found to be important considerations The interplay of these factors is complex and varies depending on the cultural and political context.

Discussion and Conclusion

The findings provided valuable insights into the multifaceted nature of healthcare professionals' engagement in MER. The study highlighted the need for policies and practices that support and encourage their participation, including the provision of funding and training opportunities, and the creation of supportive organizational and cultural environments. Ongoing efforts are necessary to increase research participation and ensure that healthcare professionals are able to engage effectively in MER.

Take-home Message: (no take home messages in submission guidelines 2023)

512 (4247)

Date of Presentation: Monday 28th August
Time of presentation: 1615 - 1630
Location: Castle III, Crowne Plaza

A mixed method comparison of teaching approaches to critical reflection for clinical writing

Brett A. Diaz 1, Stella Ng2, Jacob Rieker3, Lindsay Baker 1

[1]Centre for Faculty Development, Unity Health & University of Toronto, Toronto, Canada; [2]University of Toronto Centre for Advancing Collaborative Healthcare & Education at University Health Network, Toronto, Canada; [3]Department of Applied Linguistics, Pennsylvania State University, University Park, USA

Background

Clinical notes shape how health professionals conduct interactions, perceive patients, and make recommendations. Clinical notes then become artifacts that follow patients through health systems. Nonetheless, education for their use tends not to question their function, their origins, nor the ideological and institutional effects they might incur.
We proposed teaching critically reflective practice (CRP) as a means to reshape notetaking, potentially refining it toward compassionate and ethical practices for patient and practitioner alike. Yet, there are a number of pedagogical approaches to teaching CRP. So, we sought to quasi-experimentally compare two approaches, Transformative Learning and Cultural Historical Theory.

Summary of Work

We conducted two faculty development interventions. Participants began the intervention by reading fictional trainee-patient interaction prompts, then writing a clinical note and feedback to the trainee. Participants repeated this procedure following the intervention. Participants were clinical practitioners with trainee oversight, HPE faculty, or both. Groups self-selected based on date/time availability (group1 n = 11, group2 n = 10). Data were texts based on the prompts, segmented into individual sentences for coding (MUs, n = 1,019).

We quasi-inductively coded MUs as critically reflective or not (how codes), and the content of the text (what codes). We quantized codes using a Bayesian framework to capture interaction effects for time, group, prompt, and genre conditions. How codes were modeled using a hierarchical binary logistic regression. What codes were modeled using a hierarchical multinomial regression.

Summary of Results

Interim quantitative results showed interaction effects between prompt, genre, and individuals. Our quantitative results illuminated relationships within the data for a further stage of qualitative analysis. That revealed details of individual variation, relations between prompt-based content and CRP, and changes in what-coded themes.

Discussion and Conclusion

Naturalistic conditions limited the quantitative strand of analysis. Nonetheless, we came away with insights relevant to HPE pedagogical science. This presentation will address findings in three areas: (1) teaching CRP changes situational perception, (2) changes in the content of critically reflective writing, (3) emotional discomfort of teachers switching approaches.

Take-home Message

The effects of multiple approaches to teaching CRP for clinical notes did not differ, but teachers had strong emotional experiences when changing approach, and learner practices changed in marked ways.

513 (2990)

Date of Presentation: Monday 28th August
Time of presentation: 1630 - 1645
Location: Castle III, Crowne Plaza

Co-constructing knowledge: an interpretive description of how clinician-teachers learn through teaching

Nissim Maxim Frija-Gruman1, Yvonne Steinert2, Mary Ellen Macdonald3, Ning-Zi Sun2

[1]University of Sherbrooke, Sherbrooke, Canada; [2]Institute of Health Sciences Education, McGill University, Montreal, Canada; [3]Dalhousie University, Halifax, Canada

Background

While learning through teaching is not a novel concept, little is known about how clinician-teachers learn clinical medicine while engaging in spontaneous clinical teaching with students and residents during patient care. The goal of this study was to explore how physicians may acquire clinical knowledge and skills while teaching during clinical supervision, as well as the contextual elements that support this learning.

Summary of Work

The authors used Interpretive Description to guide their inquiry, as clinical teaching and learning is practice-based. They conducted 22 semi-structured on-line interviews and 7 follow-up discussions with clinician-teachers who regularly supervise internal medicine residents (from March to November 2021). Clinician-teachers were asked to describe how they learned through spontaneous clinical teaching, guided by questions relating to what they learned, memorable teaching moments, and factors impacting their learning. The authors used thematic analysis to examine the data. Two theoretical frameworks, situated learning and cognitive apprenticeship, informed this study.

Summary of Results

Results indicated that clinician-teachers learned about clinical medicine during spontaneous teaching interactions with trainees. These interactions, embedded in authentic clinical care, were influenced by clinician and trainee characteristics and contextual affordances. Clinicians were stimulated to learn due to the trainees' presence

(e.g., by modeling best practices) or through explicit interactions with trainees (e.g., by answering questions, articulating concepts). These stimuli led to feelings of 'slowing down' in their thinking or 'performative pressure' to role model and teach effectively. Clinician-teachers then engaged in learning processes (e.g., reflection, researching) resulting in knowledge acquisition, reinforcement, and refinement, ultimately allowing for the co-construction of knowledge with learners of all levels.

Discussion and Conclusion

Spontaneously teaching during clinical care offers multiple opportunities for clinician-teachers to learn clinical medicine. Trainees brought novelty to interactions whereas clinician-teachers brought perspective, culminating in knowledge acquisition for both parties. Further research is needed to understand the contextual factors from the trainee perspective and explore awarding CME credit for clinical teaching.

Take-home Message

Understanding how clinical teaching can refine clinical practice may encourage frontline clinician-teachers to become more mindful of these processes; it can also help educators and institutions design work-based faculty development activities and consider strategies to enhance the recruitment and retention of physicians as clinician-teachers.

514 (3573)

Date of Presentation: Monday 28th August
Time of presentation: 1645 - 1700
Location: Castle III, Crowne Plaza

Health Professions Educator's motivation and work engagement in an Academic Medical Center: a trend analysis

Lisette van Bruggen1, Heleen Pennings1, H. Carrie Chen2, Marieke van der Schaaf1

[1]University Medical Center Utrecht, Utrecht Center for Research and Development of Health Professions Education, Utrecht, The Netherlands; [2]Georgetown University School of Medicine, Washington DC, USA

Background

Competent teachers are indispensable for high quality education. Good teaching knowledge, attitudes, and skills are very important, but becoming a competent teacher starts with motivation (Kirkpatrick & Kirkpatrick, 1994) and work engagement (Schaufeli et al., 2002). In 2011, University Medical Center Utrecht (UMCU) conducted a study to assess health professions educators' motivation and work engagement which showed that engagement for teaching was lower than for research and patient care. (Van den Berg et al., 2013). In response, UMCU further enhanced teaching certificates, decreased the bureaucracy for obtaining Teaching Qualifications, established a Teaching Scholars Program, launched a Society for Dedicated Educators, and promoted opportunities for Associate Professorships and Professorships in Teaching. We conducted follow-up studies in 2016 and 2022 to examine trends and the impact of these improvements in faculty development and opportunities on health professions educators' motivation and work engagement for teaching.

Summary of Work

All UMCU faculty engaged in teaching (i.e., required to or obtained a Teaching Qualification) were invited to complete a questionnaire rating 22 items affecting motivation for teaching. Work engagement was measured using the Utrecht Work Engagement Scale (UWES-9). The same online questionnaire was used in all three measurements. We calculated descriptive statistics; computed means for engagement

scores in teaching, research, patient care, and overall; and conducted one-way ANOVA to compare means across groups and over time.

Summary of Results

Participants numbers were 306 (2011), 154 (2016) and 151 (2022). For all participants, engagement scores overall and in each area (teaching, research, and patient care) increased over time. Factors enhancing teaching motivation included “emphasis on learning process”, “autonomy”, and “support”. “Teaching about my own specialty” consistently remained the top factor.

Discussion and Conclusion

As a group, teachers in our academic medical setting were motivated to teach and their work engagement increased over time. Time and departmental support remain crucial to stimulate motivation. However robust attention to building faculty teaching competence, community, and career opportunities (Van Bruggen et al., 2020) at the institutional level may help enhance motivation.

Take-home Message

Our findings suggest that institutional investments in faculty development may be able to change faculty attitudes and behaviors.

Session 5J: Equality, Diversity and Inclusivity 2

5J1 (6409)

Date of Presentation: Monday 28th August
Time of presentation: 1600 - 1615
Location: Alsh 1, Loch Suite, SEC

Retention rates in NHS employment of Refugee and Asylum seeker doctors at 2 years post GMC registration

Aisha Awan1, Ceri Butler2, Michelle Brennan3, Hussain Alawzi3, Jouher Kallingal4

[1]Faculty of Biology, Medicine and Health, University of Manchester, Manchester, UK; [2]Brighton and Sussex Medical School, Brighton, UK; [3]REACHE (Refugee and Asylum Seekers Centre for Healthcare Professionals Education), Manchester, UK; [4]Northern Care Alliance Foundation Trust, Manchester, UK

Background

In country recruitment of highly skilled refugee and asylum seeker healthcare professionals and their regaining of professional identity has been supported via the delivery of several educational programmes in the UK for 20 years. To determine the sustained impact of this route of recruitment, we looked to examine the retention of refugee and asylum seeker doctors in the NHS at two years post registration at the REACHE (Refugee and Asylum Seekers Centre for Healthcare Professionals' Education) programme based at Salford Royal Hospital.

REACHE provides displaced doctors, nurses and other health professionals a comprehensive pathway to medical registration and NHS employment. REACHE has delivered an integrated language and clinical education programme alongside pastoral support and professionalism training to over 600 healthcare professionals.

REACHE was established in 2003 and is funded by Health Education England and hosted by the Northern Care Alliance Foundation Trust and sits under the Social Responsibility umbrella of the University of Manchester.

Summary of Work

36 refugee and asylum seeker doctors who gained GMC registration from REACHE between 2020 and 2022 were contacted to determine if they were working in the NHS and in what capacity. The GMC (General Medical Council) register was examined to see what proportion of these doctors maintained their licence to practice.

Summary of Results

The results showed that 97.2% of refugee and asylum seeker doctors from the REACHE programme retained their GMC licence to practice two years post registration.
At two years post-registration, 40% of these doctors went into GP training posts, 9% into core medical training, 34% into non-training posts. 17% of these doctors were uncontactable but had maintained their GMC licence to practice.

Discussion and Conclusion

In country recruitment of highly skilled refugee and asylum seeker doctors has an enviable retention rate, with at least 83% of doctors confirmed as being employed by the NHS 2 years post registration and 97.2% maintaining their GMC registration.

Take-home Message

Supporting the regaining of professional identity in refugee and asylum seeker doctors who have a high post-registration 2 year retention rate in the NHS is socially responsible, good value for the tax-payer and essential in managing the significant workforce shortages facing the NHS.

5J2 (3732)

Date of Presentation: Monday 28th August
Time of presentation: 1615 - 1630
Location: Alsh 1, Loch Suite, SEC

Does widening participation create a sub-cohort of low achieving medical students?

Philip Chan[1], Kimberley Dancer[1], Scarpa Schoeman[1]

[1]*Kent & Medway Medical School, Canterbury, UK*

Background

Widening participation (WP) into the medical profession is considered as a societal good, in the context of justice and equity. It is part of the declared mission of the new medical schools established in the UK 2019-20. Recently, evidence has shown that special programs set up to widen participation by lowering academic tariffs for entry and teaching an extra year (Foundation programs) admit students who had a higher non-continuation rate, and performed at a lower level on the medical course, than standard entry students in UK. We have described an admission policy that did not accept lower academic tariffs, but instead measured attainment of applicants relative to their school background, which significantly increased WP .

Summary of Work

We examined course performance of our first two cohorts of students on all their summative assessments, comparing widening participation students with non-WP. As our relative attainment admissions policy only applied to school leavers, we only analysed results of this group. WP was defined by postcode of home esidence.

Summary of Results

There were 47 WP students and 87 non-WP (total n=134). Non progression, which resulted in repeating the year, was 28% WP and 22% non-WP (Chi-square NS). The mean cumulative mark + SD) in the Year 2 cohort was 73.12 + 6.9% WP and 74 + 5.2% non-WP (Fisher's NS). The decile rankings were not different for WP and non-WP students (Mann-Whitney).

Discussion and Conclusion

Our findings contradict previous research, which showed decreased attainment in the WP group particularly in the first years of the course. Those programmes deliberately selected students who met certain (often multiple) WP criteria, and allowed lower academic attainment from the start. In contrast, our WP students were selected blind to their WP status, according to relative attainment, on the same basis as all other students. This difference is critical.

WP students perform no differently to non-WP students in the first two years of the medical course, if both groups are selected according to the same criteria.

Take-home Message

Widening participation medical students are not low acheiving in comparison with their colleagues, if they are not specifically selected to be so.

5J3 (3888)

Date of Presentation: Monday 28th August
Time of presentation: 1630 - 1645
Location: Alsh 1, Loch Suite, SEC

Cultural and socio-economic diversity of physicians and medical applicants in Germany

Oana R. Grönel, Thorben Huelmann1, Wolfgang Hampel, Pedram Emami2

[1]University medical center Hamburg Eppendorf, Hamburg, Germany; [2]Hamburg Chamber of Physicians, Hamburg, Germany

Background

Medical professionals who represent the communities they serve are in a better position to understand patients' social circumstance and communicate in a more patient-centered way. A cultural mismatch between physicians and patients can negatively affect communication and lower satisfaction with treatment amongst patients. International studies show limited diversity and an underrepresentation of certain social groups in the population of physicians and medical students.

Summary of Work

We designed an observational study to investigate the cultural and socio-economic diversity of physicians and medical applicants in comparison to the general population in Germany. We invited 15195 physicians in Hamburg and 11287 medical applicants in Germany to participate in an online survey between June and August 2022. Data on participants' migratory experience and objective and subjective socio-economic background (SEB) upon admission into medical school were compared to census data using binomial tests.

Summary of Results

Compared to Hamburg physicians (69.3%), an even higher proportion of medical students (80.4%) in Germany relied on their parents' support to finance their studies. The lower three quintiles of objective SEB were vastly underrepresented in all subsamples of the

study and in particular amongst applicants and students admitted in Hamburg: 57.9% of physicians and 73.8% of medical students in Hamburg came from the top quintile of SEB. The Turkish and Polish communities, the two main cultural minority groups in Germany, were particularly underrepresented in the group of physicians from Hamburg and medical applicants and students in Germany ($p=0.02$; $p<0.001$). Findings suggest that applicants with the highest SEB score are 3.2 times more likely to be admitted than applicants with the lowest SEB score, after adjusting for highschool GPA and gender. The effect of migratory background was not statistically significant in our sample.

Discussion and Conclusion

In line with existing evidence, the vast majority of physicians and medical applicants come from the most affluent households when entering medical school. Also mirroring international studies, certain cultural minority groups such as the Turkish and the Polish are underrepresented in medicine.

Take-home Message

Widening participation strategies are needed to facilitate fairer access to the study of medicine in Germany, reduce health disparities and increase healthcare quality.

5J4 (4373)

Date of Presentation: Monday 28th August
Time of presentation: 1645 - 1700
Location: Alsh 1, Loch Suite, SEC

Pathways to Medicine: Healthcare professionals on graduate entry medical programmes in Scotland

Zoe McElhinney1, Jeni Harden2, Helen Richards2, Robert Scully3

[1]University of Dundee, Dundee, UK; [2]University of Edinburgh, Edinburgh, UK; [3]University of St Andrews, St Andrews, UK

Background

Scotland is experiencing significant challenges in the recruitment and retention of GPs and other doctors, particularly in rural areas. Two graduate entry medical programmes (HCP-Med [Health Care Professionals- Medicine] and ScotGEM [Scottish Graduate Entry Medicine]) have been developed with the aim of increasing recruitment into general practice. All HCP- Med students, and a proportion of ScotGEM students are already working as healthcare professionals.

Summary of Work

This longitudinal cohort study, following students from both HCP-Med and ScotGEM for the duration of their course, explores the experiences of this unique group of students including their drivers for studying medicine and their experiences of balancing the dual roles of health care professional and medical student.

Summary of Results

We report on the results from three waves of semi-structured interviews carried out with 18 students over three years. Results relate to four key themes: Education and career path - the early influences and experiences of participants in relation to their career paths; Choice to study medicine- the push and pull factors that shaped participants' choice to move into medicine; Transition from current healthcare role - the process of transitioning from their current healthcare roles to being a doctor and the impact in relation to their

identity; Future Career – the shifting aspirations as the students move through the programmes.

Discussion and Conclusion

Health care professionals' decisions to embark on graduate entry medical programmes are shaped by enjoyment of learning and direct patient care as well as career opportunities in their current profession. Mid way through their studies, students report positive experiences of both the academic aspects of their courses and their clinical placements but encountered challenges relating to balancing academic and other commitments and assimilating the identity of medical student into their existing healthcare professional identities.

Take-home Message

- Healthcare professionals' decisions to study medicine are prompted by intellectual curiosity, enjoyment of direct patient care and a lack of opportunities for developing these interests in their current role.
- Entering a Graduate Entry Medical programme from a healthcare professional background impacts students' abilities to identify as medical students and disrupts their existing professional identities.

5J5 (2362)

Date of Presentation: Monday 28th August
Time of presentation: 1700 - 1715
Location: Alsh 1, Loch Suite, SEC

Targeted mock interview workshops for shortlisted medicine candidates from Widening Participation backgrounds

William Wong[1], Kwame Baffour-Awuah[1], Remarez Sheehan[1], Matthew Partridge[1], Isabella Martus[1], Lucy Thompson[1], Sanah Ali[1], Sile Johnson[1]

[1]*University of Oxford, Oxford, UK*

Background

Entry into medicine at the University of Oxford is challenging due to a mixture of educational and socioeconomic factors. These barriers are amplified within under-represented groups across the UK, with uneven access to application and interview support. STEP inTO OxMed aimed to address this imbalance by providing standardised mock interview workshops to shortlisted medicine applicants from Widening Participation backgrounds.

Summary of Work

The University of Oxford stratifies all medical school applicants based on Widening Participation data including school and home information, eligibility for free school meals, and care status. STEP inTO OxMed receives a shortlist of those students in the highest scoring groups and provides 2-to-1 mock interview workshops according to mentor availability. Workshops follow a standardised protocol and are led by safeguarding-trained medical student mentors. Anonymised feedback is collected along with a voluntary admissions outcome survey after offers are released.

Summary of Results

Thus far, STEP have conducted 270 remote interviews for prospective medical students from disadvantaged backgrounds. The scheme was rated 4.9/5 based on 119 survey responses. In the latest cohort of 42 students, average confidence ratings rose by 61% (2.8/5 to 4.5/5, $p<0.01$) and students unanimously said they would recommend the

opportunity to future students. Qualitative responses cited specific tailored feedback as particularly helpful and mentioned including more ethical content as the main area to improve. Final admissions outcome data has been collected for one cohort to date. Of 59 survey responders, 72% of applicants were accepted to the Oxford course compared to an average post-interview cohort acceptance rate of 37%.

Discussion and Conclusion

This programme represents a proof-of-principle model for a targeted outreach programme with direct and demonstrable impacts on university admissions rates. A limitation in our analysis includes a degree of selection bias amongst the outcome survey respondents, with successful students being more likely to respond to the survey. Moving forwards, mentor recruitment will remain a priority to ensure we are able to reach as many eligible students as possible. Outcome data for future cohorts will be compiled to strengthen our analysis.

Take-home Message

Collaboration between the medical school admissions team and medical student body facilitates a scalable and effective approach to improving representation within medicine.

Discussion and Conclusion

Participants in this study, learners at Unav, consider that learning through simulation is an essential, motivating and rewarding part of their education, that provides a "complete pack" that includes theoretical-, experiential- and self-learning It connects them to real life, and helps prepare them for their future profession.

Take-home Message

Learning through simulated scenarios with standarized patients provides a "complete pack" that connects students to real life, and helps prepare them for their future profession.

5K2 (4210)

Date of Presentation: Monday 28th August
Time of presentation: 1615 - 1630
Location: Alsh 2, Loch Suite, SEC

The Debriefing Assessment in Real Time (DART) tool for Simulation-based Medical Education

Kaushik Baliga1, Andrew Coggins2

[1]University of Sydney, Sydney, Australia; [2]Simulated Learning Environment for Clinical Training (SiLECT), Sydney, Australia

Background

Debriefing following healthcare simulation is an important but challenging skill to master. Various contemporary tools have been shown to have value for assessing the quality of debriefing. The Debriefing Assessment in Real Time (DART) tool was examined in this international (USA and Australian) multi-methods study. DART purports to offer an alternative or additional assessment of healthcare simulation debriefings.

Summary of Work

A multi-methods study investigating both reliability and validity. Kane's framework was used to construct validity arguments. Enrolled raters (n=12) were regular simulation educators. Following brief training on the DART tool, raters were asked to score a sample of recorded simulation debriefings. Descriptive statistics were recorded, with coefficient of variation (CV%) and Cronbach's α used to estimate reliability. Raters returned a reflective survey following their scoring task. Content analysis identified common themes from this survey with coding completed by two investigators.

Summary of Results

Eight debriefings (μ=15.4 mins (SD 2.7)) included 45 interdisciplinary learners at various levels of training. Tool reliability (mean CV%) for key components were: Instructor Questions (IQ) μ=14.7%; Instructor Statements (IS) μ=34.1%; Trainee Responses (TR) μ=29.0%; IQ:IS Ratio μ=41.9%; TR: (IQ+IS) Ratio μ=22.8%. Cronbach α ranged from 0.852 to

0.978 across 8 debriefings. Post-experience responses suggested that DART may highlight suboptimal practices including unqualified lecturing.

Discussion and Conclusion

DART demonstrated moderate reliability and may have a role approximating debriefer verbal dominance during healthcare simulation debriefing. In the context of faculty development, debriefer peer coaching may benefit from utilizing the DART, particularly at either extremes of debriefer skill level. Inherent complexity and emergent properties of debriefing practice should be accounted for when using any assessment tool in this context. Further work may seek to inform the best use of assessment tools for longitudinal faculty development.

Take-home Message

- DART could be useful in highlighting suboptimal debriefing practices. In particular DART may identify “lecturing” in debriefings.
- DART tool may not be sufficiently detailed to rate the subtle behaviors and skills required for effective debriefing.

5K3 (4209)

Date of Presentation: Monday 28th August
Time of presentation: 1630 - 1645
Location: Alsh 2, Loch Suite, SEC

Difficult Conversations & Legal Frameworks: Preparing Final Year Medical Students for the Realities of the Ward

Leanne Lacey1, Orla Forker2, Joseph Thompson1

[1]Mid Yorks Hospital Trust, Yorkshire, UK; [2]Mid Yorks Hospital, Wakefield, UK

Background

From day one, Junior Doctors are expected to deal with complex communication, ethical and medico-legal scenarios such as managing suicidal patients threatening to self-discharge or patients with dementia attempting to leave the ward. Knowing how and when to apply the relevant legislation can be challenging and surveys of UK Foundation Doctors have highlighted that there is demand for further training before graduation1.
1. Machin LL, Latcham N, Lavelle C, Williams RA, Corfield L. Exploring the perceived medical ethics and law training needs of UK foundation doctors. Med Teach. 2020;42(1):92-100.

Summary of Work

Over ten days, 77 final year Medical Students attended a one-hour communication simulation session facilitated by Clinical Fellows. The session consisted of three scenarios based around challenging communication (e.g. aggressive patients) and application of legal frameworks: (i) mental capacity assessment and self-discharge, (ii) section 5(2) and (iii) liberty protection safeguards (formerly known as DoLS).

Students were randomly assigned a participant number and anonymously completed pre- and post- session questionnaires, collecting quantitative and qualitative data.

Summary of Results

95% of students reported they would benefit from mandatory training in legislation prior to starting FY1, with 70% preferring this teaching to be delivered by acting out scenarios with facilitators. Confidence following the session increased across all domains when

compared with pre-session data: (i) assessing mental capacity (63% to 99%), (ii) managing a self-discharge (22% to 100%), (iii) applying liberty protection safeguards (18% to 97%) and (iv) implementing section 5(2) (57% to 100%).

Discussion and Conclusion

There is high demand from final year students to have more training on the application of legal frameworks. A one-hour communication-based simulation session, facilitated by Clinical Fellows, has effectively increased student confidence in all assessed domains.

Take-home Message

Medical schools should consider implementing more training on the real life application of legal frameworks to better prepare students for Foundation Training.

5K4 (5235)

Date of Presentation: Monday 28th August
Time of presentation: 1645 - 1700
Location: Alsh 2, Loch Suite, SEC

Thinking on your feet: An integrated communication and clinical reasoning lab for third year veterinary students

April Kedrowicz1, Regina Schoenfeld1

[1]*North Carolina State University, Raleigh, USA*

Background

This laboratory was designed for veterinary students to:

- Integrate communication and clinical reasoning for a simulated case involving standardized clients.
- Provide constructive peer feedback based on the communication and clinical reasoning skills demonstrated

Summary of Work

Students were paired with a peer to participate in two encounters with a simulated client and patient. Each student was assigned a case to role-play a veterinarian during a clinical encounter while their partner served as a peer observer. Students were tasked with taking a history, explaining results of the physical exam, discussing differential diagnoses, presenting diagnostic recommendations and associated costs, and obtaining verbal consent for a diagnostic plan. Upon completion of the clinical encounter, the peer observer and simulated client provided medical, clinical reasoning, and communication feedback.

Summary of Results

Students appreciated the opportunity to simultaneously practice their reasoning and communication skills in the context of a clinical case. Prior coursework focused on one or the other set of skills, and they found it challenging to engage in both processes simultaneously. Students did not have access to case information ahead of time; they had to rely on their pre-existing clinical knowledge to proceed with the encounter. This

constraint made the encounter especially challenging because of the inability to research necessary medical information in advance. The increased stress associated with having a client present made it more difficult for them to generate differential diagnoses.

Discussion and Conclusion

This laboratory represents students' first opportunity to simultaneously practice clinical reasoning and communication skills. Despite the challenges associated with integrating communication and clinical reasoning, this lab enhanced students' confidence in their ability to "be a doctor", including the realization that they knew enough medicine to be able to efficiently formulate differential lists encompassing the most likely diseases for a patient with the particular signalment and presenting complaint.

Take-home Message

The increased cognitive load associated with integrating these skills impacted students' ability to simultaneously reason through a case and communicate with a client. Restating session goals at the outset allowed students to be more mindful of skill integration. Thus, more opportunities are needed for students to practice integrating professional skills and medical knowledge throughout the curriculum.

5K5 (5181)

Date of Presentation: Monday 28th August
Time of presentation: 1700 - 1715
Location: Alsh 2, Loch Suite, SEC

30 Years of Unannounced Standardized Patients: A Systematic Review and Call for Study Standardization

Zoe Phillips[1], Jeffrey Wilhite[1], Gabriel Hernan[1], Raphaella Lambert[1], Lisa Altshuler[1], Joseph Nicholson[1], Kathleen Hanley[1], Colleen Gillespie[1], Sondra Zabar[1]

[1]*NYU Grossman School of Medicine, New York, USA*

Background

Over the past 30 years, unannounced standardized patients (USPs), actors trained to portray a medical case without detection, have increasingly been used for medical training and care quality assurance. This systematic review aims to characterize the breadth of research involving USPs for patient safety and care quality, particularly the extent of standardization in project design and implementation.

Summary of Work

A medical librarian conducted a review of USP literature (1991-2021). The search strategy included (unannounced OR incognito OR covert) AND (standardized patient* OR standardized patient* OR patient simulation* or simulated patient*). We developed a tiered system to explore quality of reporting of inter-rater reliability (i.e., is the USP a reliable evaluator?) and case fidelity (i.e., does the USP portray the case in a standardized way?). For reliability, “gold standard” practice involves a statistical comparison between USPs and an external rater; lower tier mentions standardized checklist training. For fidelity, “gold standard” practice includes case validation during project implementation; lower tier involves case training prior to implementation.

Summary of Results

128 of 796 articles identified met inclusion criteria. Articles represented research from over 16 countries and included descriptive (67%), RCT/controlled experiment (24%), quasi-experimental (12%), cross-sectional (3%) and longitudinal/time series (1%) designs.

Reporting of efforts to ensure high rater reliability and case fidelity varied. 35% of the articles made no mention of reliability, 23% attained the lower tier definition, and 42% achieved the gold standard. 36% of the articles did not report case fidelity, 12% attained the lower tier definition, and 52% the gold standard. The most common fidelity method and inter-rater reliability method was audiotape review (37%) and use of multiple raters (33%) respectively. Only 34% reported training time for USPs (mean of 8.3 hours). 53% of articles reported USP detection rates (mean rate = 15%).

Discussion and Conclusion

USPs have been used to assess health systems and care workers in many contexts. As research using USPs advances, our work to characterize standardization in rater reliability and case fidelity can be used to ensure quality of design, implementation, and reporting.

Take-home Message

USPs have diverse and wide-ranging applications, but standardizing rater reliability and case fidelity could improve quality of design and implementation.

5K6 (5233)

Date of Presentation: Monday 28th August
Time of presentation: 1715 - 1730
Location: Alsh 2, Loch Suite, SEC

Simulated patients at risk? – Task Load during ten different curricular courses at Münster University. A prospective survey

Juliane Schopf[1], Johanna Kollet[1], Bernhard Marschall[1], Jan Siebenbrock[1], Hendrik Ohlenburg[1]

[1]*Institute of Education and Student Affairs, University of Münster, Münster, Germany*

Background

Simulated patients (SP) are widely used in medical education.[1] They present the gestalt of fictional patients so authentically that clinicians are unable to detect the simulation.[2] If trained carefully, SP simulate a broad variability of roles and components of consultation. It is a prime directive to maintain SP's physical and mental health. As demand varies across different roles this study aims to identify "critical" roles that need special care and supervision.

Summary of Work

90 SP acting in 986 situations within ten curricular courses at the faculty of medicine at Münster University were invited to fill out a paper-based survey based on "National Aeronautics and Space Administration-Task Load Index" (NASA TLX)[1] after each simulation anonymously. NASA TLX uses six dimensions (mental-, physical- and temporal demand, performance, effort and frustration) to assess task load on a 10-point Likert scale. Differences were analysed using one-way analysis of means assuming inhomogeneity (Welch-test), if significant pairwise t-testing between courses with compensation for multiple comparisons using Holm–Bonferroni method was applied.

Summary of Results

953 valid datasets were available for analysis. It revealed course-dependent differences within all dimensions ($p < 0.005$—$p < 0.001$). The subjects 'psychiatry' and 'psychosomatic' showed significant higher values for mental demand (6.67 | 6.21) and effort (6.50 | 5.77)

than others (meanothers = 3.49 | 3.70). 'Psychiatry' showed significantly higher values for physical demand (6.25) than other subjects (meanothers = 3.26).

Discussion and Conclusion

SP in 'psychiatry' and 'psychosomatic' experience significant higher levels of mental demand and effort.

Take-home Message

SP-Trainers should carefully attend those simulations and pay attention to potential task overload. Interestingly, SP in 'psychiatry' expressed high physical demand. Non-structured communication revealed the use of body-tension to create the required expression for the role.

Session 5L: Supporting Learners: Learning Environment

5L1 (3515)

Date of Presentation: Monday 28th August
Time of presentation: 1600 - 1615
Location: Boisdale 1, Loch Suite, SEC

Infrastructural preparedness: the transition from medical student to junior doctor is situational and contextual

Jennifer Cleland[1], Shiwei Chen[2], Helen Smith[1], Aloysius Chow[1], Vishalkumar Girishchandra Shelat[1], Nila Ravindran[1]

[1]LKCMedicine, Singapore; [2]Erasmus University, Rotterdam, The Netherlands

Background

Most preparedness for practice studies have focused on identifying individual and educational influences on preparedness. However, the transition from medical student to newly graduated doctor goes beyond the individual. Only by understanding the aspects of context as graduates enter the critical intensive learning period of the first months of working life, can we plan effective organisational and other structural supports, as well as give direction for future research. Our aim was to identify some of the infrastructures that conditioned junior doctors' preparedness to practice during the Covid-19 pandemic and examine the interrelationships between different infrastructures.

Summary of Work

This was a qualitative study using interviews. Interviews were carried out at two time points, six months apart (pre-graduation, then in Postgraduate Year One [PGY1]), in 2020. We report data from 39 interviews with 24 participants from one Singapore medical school, of whom 14 were interviewed at both time points. Interviews were audio recorded with consent. Data coding and analysis were initially inductive. We then applied Star's infrastructure lens to organise the data and increase transferability.

Summary of Results

Regulatory (e.g., government COVID-related guidelines), educational (e.g., modified school curriculum, workplace learning), organizational (e.g., new workflow, team working arrangements, areas out of bounds because of infection control), technological (e.g., online teaching), socio-cultural (e.g., support groups, local cultural contexts), and spatial (e.g., negotiating new working environments, space re-planning in clinical environments) constitutions simultaneously facilitated and limited junior doctors' preparedness for practice.

Discussion and Conclusion

Star's lens provided a way to integrate many different infrastructure aspects, clearly illustrating that performance was situated and relational not just about the individual's knowledge, skills and personal traits. Moreover, the infrastructural lens helped us to conceptualize preparedness as assembled rather than stabilized. The assemblage of preparedness will be different in different contexts and at different points in time (e.g., non-pandemic times).

Take-home Message

Acknowledging that activity and change are systems dependent shifts the focus of preparedness from the individual or the educational, to considering performance as something that is embedded in structures. Only by doing so can we plan effective organisational and other structural supports, as well as give direction for future research in this area.
RP 1898/SC

5L2 (3832)

Date of Presentation: Monday 28th August
Time of presentation: 1615 - 1630
Location: Boisdale 1, Loch Suite, SEC

The Relationship between Mistreatment and Medical Students' Perceived Psychological Safety in Clinical Settings

Jorie Colbert-Getz[1], Jennifer O'Donohoe[1], Katie Lappe[1], Kirstyn Brownson[1], Heather Campbell[1], Katherine Hastings[1], Candace Chow[1], Rachel Bonnett[1], Sara Lamb[1]

[1]*Spencer Fox Eccles School of Medicine - University of Utah, Salt Lake City, USA*

Background

Understanding factors within a clinical team that are associated with student mistreatment is a critical first step to designing an optimal clinical learning environment.(1) Psychological safety has been found to correlate with resident physicians' perception of the clinical learning environment.(2) To date, no study has investigated how medical students perceive psychological safety and how psychological safety might relate to reports of mistreatment in the clinical learning environment. In a psychologically safe environment, everyone "can speak up, offer ideas, and ask questions without fear of being punished or embarrassed."(3). We hypothesized that medical student clerkships with higher levels of psychological safety would have lower rates of student reported mistreatment.

Summary of Work

Spencer Fox Eccles School of Medicine third year medical students responded to two psychological safety questions,(2) on a strongly agree to strongly disagree scale and indicated if they experienced mistreatment in 7 clerkships on required end-of-rotation surveys (response rates >95%) in the last half of AY2021-2022.

Summary of Results

Most students (>80%,N>48) strongly agreed, agreed, or somewhat agreed that members of the clinical team were able to bring up problems and tough issues in each clerkship. The percentage of students who strongly agreed, agreed, or somewhat agreed that they

were free to question decisions or actions of those in authority varied by clerkship: Psychiatry (90%,N = 54/60), Pediatrics (83%,48/58), Neurology (77%,46/60), Family Medicine (76%,46/61), Internal Medicine (63%,37/59), Obstetrics-Gynecology (58%,34/59), and Surgery (41%,25/60). Mistreatment rates also varied by clerkship and shared strong negative correlations with responses to Question 1 (r = -0.90) and Question 2 (r = -0.88).

Discussion and Conclusion

Students felt less psychologically safe in clinical learning environments with higher reports of student mistreatment. Although, students felt team members were able to bring up problems and issues, they felt less able to question the decisions and actions of those in authority.

Take-home Message

System changes to mitigate student reports of mistreatment should focus first on creating a psychologically safe clinical learning environment.

5L3 (6649)

Date of Presentation: Monday 28th August
Time of presentation: 1630 - 1645
Location: Boisdale 1, Loch Suite, SEC

Wellbeing, self-care and mental health: fostering an inclusive learning environment in postgraduate medical education

Mary Ana Cordero Diaz[1], Carlos Felix Arce[1], Antonio Davila Rivas[1], Argenis Lopez Salinas[1], Carlos Arnaud Gil[1], David Saucedo Martinez[1], Gabriela Chapa Treviño[1], Minerva Cardona Huerta[1], Karla Morales Ayala[1]

[1]*Tecnologico de Monterrey, School of Medicine and Health Sciences, Monterrey, Mexico*

Background

Postgraduate medical education should underscore a commitment to physician health and well-being to foster optimal patient care. Academic and health care systems should advocate to foster an environment that promotes wellbeing and mental health of trainees in the medical education continuum.

Summary of Work

In 2022, residents from 17 specialties in a multicentric program in northern Mexico participated in a Wellbeing Program. Activities were conducted virtually and face-to-face: 1) wellbeing workshops, 2) mental health screening, 3)remediation, and 4) chief residents leadership program.

Summary of Results

1) Residents were invited to participate in virtual Wellbeing Workshops addressing different topics: professionalism, self-care, mindfulness, burnout prevention, and promoting a safe learning environment.
2) Mental health screenings tools were implemented online in collaboration with: a) the psychiatry department, and b) the university's office of students affairs and wellbeing. Participation was voluntary and confidential. For the first screening tool, Chief residents participated and shared with their fellow residents through digital media the invitation; respondents received results per email with recommendations and a directory of support

services and mental health professionals. For the second screening tool, all residents were invited to participate and, if required by the results, the main campus counseling office contacted individually the resident to offer support services.
3) A remediation plan for residents in difficulty was provided to medical residents struggling with their academic performance, professionalism lapses and/or mental health issues.
4) Chief residents participated virtually in a 1-year leadership program, topics addressed included: annual work plan, leadership styles, communication skills, crisis and conflict resolution, safe learning environment, wellbeing, mental health, and suicide prevention.

Discussion and Conclusion

Most of first year residents and chief residents from all programs attended at least 3 workshops during an academic protected time, while participation from residents of other years was low.

Academic health centers should implement educational and remediation strategies during residency to advocate and promote wellbeing, self-care and mental health.

Take-home Message

Academic and health care systems should advocate to foster an environment that promotes wellbeing and mental health of trainees in the medical education continuum.

5L4 (2926)

Date of Presentation: Monday 28th August
Time of presentation: 1645 - 1700
Location: Boisdale 1, Loch Suite, SEC

Time to make space for learning

Shalini Gupta1, Stella Howden2, Mandy Moffat1, Catherine Kennedy1, Lindsey Pope3

[1]School of Medicine, University of Dundee, Dundee, UK; [2]Learning and Teaching Academy, Herriot-Watt University, Edinburgh, UK; [3]University of Glasgow Medical School, Glasgow, UK

Background

The clinical learning environment (CLE) forms a central aspect of undergraduate medical education, enabling students to develop the knowledge, skills and attitudes required for professional practice. Teaching in the CLE is a demanding task that busy clinicians assume alongside existing clinical responsibilities; this task often becomes challenging owing to lack of suitable spaces. Despite the acknowledgement of the importance of space and its influence on learning, the area is under-researched in medical education. The current study addresses this gap, presenting the findings from a preliminary analysis of research conducted in the CLE.

Summary of Work

The study adopted an ethnographic approach, combining observations and interviews to explore clinical learning in a hospital ward environment. Observations of informal teaching and learning activities were conducted over a five-month period (approximately 60 hours). Deep immersion of the ethnographer enabled identification of key informants, which included medical students, junior doctors, postgraduate trainees and consultant supervisors in the selected ward. Individual interviews were conducted with 14 participants. Data was analysed using the Actor-Network theory to understand the interactions between the spatial attributes and the participants in the field.

Summary of Results

Analysis of observational and interview data led to generation of following themes: 1. Lack of space as a mediator of declining clinical teaching, 2. Ward footprint rendering clinical

teaching inconvenient and awkward, 3. Inadequate spaces affecting students' and junior doctors' sense of belonging and being valued, 4. Short clinical rotations influencing a sense of ownership of doctors' spaces, and 5. Contested nature of space in the CLE. Several illustrations of the field are included to contextualise the above themes, aid understanding of participants' experiences, and to frame recommendations.

Discussion and Conclusion

The study sheds light on the entanglement of space in CLE with students' and junior doctors' learning and belonging, drawing attention to a relative disregard for the doctors' spaces, stemming from conflicting hierarchies and lack of ownership. The research findings should advance inquiry of spatial elements in medical education and assist in the development of learning spaces in the CLE.

Take-home Message:

Space needs to be a core consideration when reviewing clinical teaching, given its intimate link to student learning and sense of belonging.

5L5 (2054)

Date of Presentation: Monday 28th August
Time of presentation: 1700 - 1715
Location: Boisdale 1, Loch Suite, SEC

The Appear and Disappear of Doctor's Opinion Paper: An Institutional Ethnography of PGY Training in Discharge plan

Fang-Yih Liaw1, Po Fang Tsai2

[1]Tri-sevice general hospital, National defense medical center, Taipei, Taiwan; [2]School of Medicine, College of Life Science, National Tsing Hua University, Hsinchu, Taiwan

Background

Although PGY training in Taiwan has long emphasized the importance of discharge plans, institutional implementing of the continuity of care still faces obstacles in frontline work. This article conducts an institutional ethnography of doctor's opinion paper (DOP) in long-term care, drawing its implications in medical education.

Summary of Work

From 2018 to 2020, investigators collected three kinds of qualitative data, including policy documents at different levels, 27 semi-structured interviews, and participant observations in PGY training for one year. The secondary textual data were generated from legal articles, executive orders, and training manuals; the primary data were gathered in a medical center hospital in Northern Taiwan.

Summary of Results

The appearance process of DOP is enforced by three institutional moves. First, the amending of the Long-term Care Services Act confined the irreplaceability of DOP with case abstract or certificate of diagnosis, second, both central and local governments of health affairs proposed financial subsidies for issuing DOP, third, Taiwan Association of Family Medicine hold lots workshop for years to promote and teach physicians to issue the DOP. Even with the institutional forces, DOP, however, seemed to disappear in frontline work because of the misrecognition that DOP belonged to family medicine specialists, the passive division of labor between attending physician and resident or nurse practitioner,

and prejudice that nurses as discharge planer rather than a physician would be appropriate to lead the discharge plan team.

Discussion and Conclusion

Promoting DOP in the PGY training offers an opportunity to enhance physicians' engagement in the discharge plans. Instructors should help PGY and residents of building confidence through issuing DOP, rise their constant contributions to the discharge-plan team, and cultivate the future attending physicians recognizing its importance.

Take-home Message

1. Long-term care has become more crucial in many countries with changing times, and physicians' thinking and training must be emphasized.
2. Increase junior physicians' self-identification and educate them as the next generation of physicians on the concept and actual practice of long-term care.
3. Through issuing doctor's opinion papers, rise PGY's constant contributions to the discharge-plan team.

5L6 (4163)

Date of Presentation: Monday 28th August
Time of presentation: 1715 - 1730
Location: Boisdale 1, Loch Suite, SEC

Quality Assessment of the Clinical Learning Environment for Anaesthesiology Residents at a University Hospital

Nadia Rousseau[1], Rebecca Fanning[1]

[1]*St James's Hospital, Dublin, Ireland*

Background

As part of the Irish National Anaesthesiology Training programme residents, with a wide range of experience from novice through to fellowship level, rotate through the department and are exposed to different surgical specialties, critical care and pain medicine in a modular format. A validated questionnaire - Scan of the Postgraduate Educational Environment Domains (SPEED) - was used to evaluate the clinical learning environment that defines three key domains:

- Personal development/goal orientation domains - Content
- Relationship domains – Atmosphere
- Organisation/regulation dimensions – Organisation

Summary of Work

Institutional ethical approval was granted. With written and informed consent all residents on rotation (July 2022 to January 2023) were invited to anonymously complete the SPEED questionnaire (written format). SPEED is a 15-item instrument designed to cover the three key elements of a clinical learning environment. Residents were asked to rate responses to the statements on a 5-point Likert scale. 28 Trainees returned the questionnaire (62% response rate) and descriptive statistics were used to analyse the results.

Summary of Results

The learning environment was positively evaluated in all three domains.

92.9% agreed that teaching and learning were emphasised and 100% thought that the training prepared them for their future careers.

85% rated the level of supervision as appropriate

79% felt that feedback was appropriate with senior residents generally more satisfied with their feedback than their junior counterparts.
A fifth of residents either disagreed (3.6%) or had a neutral response (18%) around feedback provision

The question about the impact an individual supervisor might have on the educational climate elicited the most negative responses.

Discussion and Conclusion

The intersection of health professions education and the clinical care environment is complex and multifaceted often with many challenges to learning. When stakeholders understand the facilitators and barriers to the provision of a quality CLE steps can be taken to ensure the effectiveness of clinical teaching programmes as well as resident satisfaction. This instrument appears feasible to use and provides useful feedback to organisers on how residents perceive their training which allows for quality improvement.

Take-home Message

SPEED can help to identify enablers of a positive, safe clinical learning environment that is critical to learning and professional development of residents

Session 5M: Postgraduate: Learning Methods

5M1 (6061)

Date of Presentation: Monday 28th August
Time of presentation: 1600 - 1615
Location: Boisdale 2, Loch Suite, SEC

Technical, Non-Technical, or Both? A Scoping Review of Skills in Simulation-Based Surgical Training

Amalie Asmind Rosendal1, Sigurd Beier Sloth2, Jan Duedal Rölfing3, Magnus Bie1, Rune Dall Jensen1

[1]Department of Clinical Medicine, Aarhus University - Corporate HR MidtSim, Aarhus, Denmark; [2]Department of Clinical Medicine, Aarhus University, Aarhus, Denmark; [3]Department of Orthopaedics, Aarhus University Hospital, Aarhus, Denmark

Background

Sociological research conducted in both clinical and simulation-based settings shows that the acquisition of technical skills (TS) happens in relation to other learners and teachers. Based on this research, TS and non-technical skills (NTS) might be recognized as intertwined and the distinction between the two skill sets seems arbitrary. Here, a gap in the literature is seen as TS and NTS are traditionally separately investigated in simulation-based surgical training (SBST). Furthermore, no consensus remains as to the extent of the relationship between the skill sets. Consequently, we reviewed the literature with the aim of mapping how publications on TS and NTS within SBTS have changed over time and investigated how the entities are related.

Summary of Work

We conducted a scoping review using the five-step framework by Arksey and O'Malley and reported our results according to the PRISMA guidelines for scoping reviews. Four databases were systematically searched for empirical studies on SBST addressing both TS and NTS learning objectives.

Summary of Results

We identified 3144 articles published between 1981 and 2021. The interest in SBST has increased greatly, with 48% of the identified publications being published within the past five years. While publications on NTS are increasing, the focus of SBST remains on TS. In total, 106 publications addressed both TS and NTS.

Only 45 of the included articles addressed the relationship between TS and NTS. These articles primarily focused on the derivative effect of NTS training on technical performance.

Discussion and Conclusion

Despite a general increase in SBST literature, investigations of the relationship between TS and NTS remain scarce. We identified an interconnection between some, but not all, NTS and TS. Our investigation was, however, challenged by the various definitions of what NTS encompasses, as well as by the variability in assessment tools used. Thus, the present study cannot definitively establish whether the relationship between TS and NTS exists, though, the argument of seeing the skill set as intertwined seems promising.

Take-home Message

In the endeavor towards investigating the relationship between TS and NTS, we suggest clear definitions and research-based assessment of both TS and NTS.

5M2 (3354)

Date of Presentation: Monday 28th August
Time of presentation: 1615 - 1630
Location: Boisdale 2, Loch Suite, SEC

The Asia Pacific Consortium of Veterinary Epidemiology (APCOVE): implementing online training

Annette Burgess[1], Harish Tiwari[1], Tyler Clark[1], Alexandra Green[1], Jenny-Ann Toribio[1], Meg Vost[1], Navneet Dhand[1]

[1]*The University of Sydney, Sydney, Australia*

Background

In 2022, The Asia Pacific Consortium of Veterinary Epidemiology (APCOVE) delivered 36 elearning modules, developed to support the training of field veterinarians in the Asia-Pacific region. Six key competencies included: outbreak investigation and surveillance, data analysis, risk analysis, One Health, biosecurity, leadership and communication. We sought to explore the effectiveness of the program, based on participant perception and knowledge acquisition.

Summary of Work

Delivered across 6-months, 139 veterinarians participated in the program from 7 countries: Cambodia, Indonesia, Laos, PNG, Phlippines, Timore Leste, Vietnam. Quantitative and qualitative data were collected by post-module, and pre- and post-competency questionnaires. Both closed and open-ended items were used. Questions were based on participant's perceived ability regarding the learning outcomes of each module; and engagement with learning material. Quantitative data was analysed using descriptive statistics. Open-ended questions related to the most useful aspects of the program, and suggestions for improvement. Thematic analysis was used to code and categories the qualitative data into themes. The end of competency assessment tasks were assessed by an independent assessor to determine the trainees' knowledge acquisition for each competency.

Summary of Results

In total, 93/139 (67%) trainees completed all competencies (36 modules). Participants reported vast improvements in their perceived competence in knowledge and skills relating to each competency, and application in the workplace. They valued the interactivity of the modules, including online tools, calculators, and knowledge checks. They felt the case scenarios and videos assisted their learning, with suggestions for improvement including increased provision of both. The inclusion of local face-to-face sessions to complement the online delivery was also suggested. The median score in the assessment tasks ranged between 85-90% across the competencies.

Discussion and Conclusion

Our findings demonstrate that the APCOVE elearning program provided veterinarians with an excellent framework to develop and practice their skills in epidemiology. While geographical barriers to participation were mitigated by online delivery of the APCOVE program, participant feedback indicates that the inclusion of face-to-face sessions, with opportunities for practice in the field, should be considered in future projects aiming to widen participation and increase engagement.

Take-home Message

Development and delivery of online training may help to strengthen field veterinary epidemiology capacity in the Asia Pacific region.

5M3 (5839)

Date of Presentation: Monday 28th August
Time of presentation: 1630 - 1645
Location: Boisdale 2, Loch Suite, SEC

Medical Multi-Professional In-situ High Fidelity Simulation

Hannah Delmas1, Ciaran Bartlett1, Nikki Jegatheeswaran1, Sara Sobhani 1, Reece Weaver1, Constance Wraith1, Arnee Yogarajah1, Caroline Curtin1, Peter Walker1, Yousef Eltuhamy

[1]*Barking, Havering and Redbridge University Hospitals NHS Trust, London, UK*

Background

Non-technical skills, including Human Factors, are being increasingly recognised as contributors to poor patient outcomes within healthcare systems. Simulation based training is being more widely utilised as an educational initiative to raise awareness of human factors and their influence on patient care. Such training is often delivered in controlled education environments; however, these settings are often not representative of clinical areas in which participants are normally based. This disconnect can result in reduced fidelity and realism for participants, as well as a reduced recognition of human factors within their normal working environments.

Summary of Work

As a Medical Education Team, we delivered multiple high fidelity simulation scenarios across two hospital sites. These simulations took place within the Medical Receiving Unit and Elderly care ward environment with members of the multi-disciplinary team. The simulation scenarios were designed around the acutely deteriorating patient with the main aims of the session centred around human factors including, communication, teamwork, situational and environmental awareness. Following the simulation, the candidates partake in a debrief with a trained debriefer to reflect on the scenario as a team and discuss any concerns or learnings they may have. Post course questionnaires were completed by candidates with a range of questions of both Likert scale (scale of 1-5) and open answers.

Summary of Results

Over the last year, 52 candidates have completed the simulation training and corresponding feedback questionnaire. 48 candidates agreed or strongly agreed that the training was representative of a real-life scenario and 50 candidates agreed or strongly agreed that training with different professionals improved their learning and communication.
In the open questions, candidates discussed the need for more regular sessions, increased confidence in knowing peoples' roles, teamworking, and their environment.

Discussion and Conclusion

Overall, these sessions have been well received by the clinical departments and their staff as a great opportunity to work together as a team and improve their environmental awareness. Moving forward, we are increasing the number of wards we deliver in-situ simulations to and are continuing to develop the simulation delivery based on the feedback from previous sessions.

Take-home Message

In-situ simulation provides an opportunity for human factor training within a real non-simulated environment.

5M4 (3990)

Date of Presentation: Monday 28th August
Time of presentation: 1645 - 1700
Location: Boisdale 2, Loch Suite, SEC

Title: A Novel IDEA(-R) for a Small Group Teaching Format

Beatrice Preti1, Michael Sanatani1

[1]*Western University, London, Canada*

Background

Small-group, case-based learning is ideal for teaching to higher Bloom levels. However, facilitators of these sessions may face difficulties when trying to incorporate common, literature-based session structures. These models frequently necessitate a pre-determined number of trainees attending; this can pose challenges to smaller postgraduate programmes where attendance may be difficult to predict (due to post-call days/clinical duties/vacation/illness).

Consequently, there is a need for a small group facilitation model which is flexible enough to allow for large variation in participant numbers, while still enabling the learning optimally done in small group formats.

Summary of Work

We designed a novel small group structure, termed IDEA-R (Individual answer/Discussion/Expanded discussion/Advancement of Case/Rearrangement), based on a combination of the think-pair-share and jigsaw models, altered to allow flexibility with attendance. IDEA-R is designed for a clinical lens, consisting of a case presented in pieces. Highlights of the IDEA-R method include the opportunity for several levels of discussion and regular changes in the small groups to stimulate greater discussion. The design is flexible enough to target learning outcomes of different Bloom levels and cater to different facilitation styles and practical issues, such as latecomers.

We trialled IDEA-R at a faculty development course, then during a teaching session. Feedback was collected and incorporated after each iteration.

Summary of Results

Fifteen individuals (9 consultants, 6 trainees) participated in a post-session survey. Consultants described feeling "very"(37.5%) or "somewhat"(62.5%) comfortable in using IDEA-R in the future; likewise, they would be "very"(62.5%) or "somewhat"(37.5%) likely to use IDEA-R for a future teaching session. Trainees ranked IDEA-R "very"(83.3%) or "extremely"(16.7%) effective for their learning; high interest(100%) was reported in attending another session using IDEA-R.

Participants described the method as flexible, engaging, helpful, and innovative/novel. Feedback incorporated post-session included encouraging participants to write down answer to commit, and adjusting the timing of session sections to allow for more small group discussion.

Discussion and Conclusion

IDEA-R represents a novel session format specifically designed for in-the-moment flexibility in smaller postgraduate programmes hoping to use small group teaching methods, but struggling with the numbers or commitment to attendance needed for session structures already available.

Take-home Message

IDEA-R is a novel small group teaching method.

5M5 (5469)

Date of Presentation: Monday 28th August
Time of presentation: 1700 - 1715
Location: Boisdale 2, Loch Suite, SEC

Simulation training program: integration in the teaching of Foundation doctors in a district general hospital

Mousumi Sadhukhan[1], Debbie Suggitt[1], Jeanette Baxter[1], Matthew Sharman[1]

[1]*Stockport NHS Foundation Trust, Manchester, UK*

Background

Simulation-based education (SBE) is a vital component of postgraduate medical education in UK. It is supported by national policies and literature. With opportunity for deliberate practice and mastery learning under supervision of qualified facilitators, this technology is becoming essential in medical education.

Summary of Work

In stepping Hill hospital, SBE was implemented in Foundation teaching program from 2017. Since then, we have innovated and redesigned the program from feedback received and challenges faced. Our faculty/facilitators are trained and are members of Association for Simulated Practice in Healthcare (ASPiH). Debrief is incorporated in each session. Next, we integrated SBE in the mandatory weekly teaching of foundation doctors. The topics are selected from feedback, Foundation curriculum and hospital patient-safety incidents. Each group has 4-5 trainees with a trained facilitator/s. At the end of the session all participants are invited to complete a validated (SET-M) structured questionnaire. Survey methodology adopted and simple statistical methods used for data analysis.

Summary of Results

Data collected between August to December 2022 from 10 sessions from a total of 152 responses showed that 70% strongly agreed that SBE empowered them to make clinical decisions and 88% strongly agreed that debriefing was valuable in improving clinical judgement. 87% strongly agreed that debriefing continued their learning and 77% strongly agreed that SBE helped in fostering patient safety.

Discussion and Conclusion

The feedback from the trainees was extremely positive in improving their knowledge and skills. Trainees felt that simulation provided the opportunity to practice clinical decision-making skills and develop key clinical skills like prioritisation and communication. Funding, resources, staff training and availability of faculty were the main challenges in implementation of the program. Post-covid, availability of space was an added challenge of restarting the program. Innovation and engagement of stakeholders helped us to overcome the difficulties. The main limitation continues to be one point data collection, providing parallel sessions and availability of faculty. Running simulation in interprofessional setting and insitu simulation will be the next step.

Take-home Message

Simulation can improve the quality and impact of training of our present and future doctors. It should be incorporated in the teaching programs and aligned to curriculum for maximum impact.

Session 5O: Assessment

501 (5072)

Date of Presentation: Monday 28th August
Time of presentation: 1600 - 1606
Location: Carron 1, Loch Suite, SEC

A pilot study to assess the medical personnel's proficiency toward a new dispute-related Act in 2022

Te-Yu Chung1, Yu-Ruei Kuo1, Yi-Chih Shiao2, Chih-Chia Wang2, Ruo-Nan Shen3, Chung-Pei Fu4

[1]National Defense Medical Center, Taipei, Taiwan; [2]Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan; [3]Taiwan Drug Relief Foundation, Taipei, Taiwan; [4]Department of Occupational Therapy, College of Medicine, Fu Jen Catholic University, New Taipei, Taiwan

Background

In Taiwan, the legislature passed an Act in 2022, named the Prevention and resolution of medical malpractice (PRM), to establish a dispute mediation process and strengthen physicians' responsibility to communicate with patients. Understanding the PRM could help medical personnel (MP) prevent/resolve medical disputes. This study aimed to assess the MPs' proficiency regarding the PRM with different length of clinical experiences.

Summary of Work

The PRM-focused questionnaire comprised two parts. In the first part, three questions were to assess the MPs' self-reported proficiency in the PRM details, including (a) dispute-related mediation resources, (b) nature of dispute mediation, and (c) the legal effect of mediation. In the second part, a post-lecture open-ended questionnaire toward what kinds of the protection should be endowed by the PRM as medical disputes occurred. Two groups were enrolled, one was MPs with more than 1 years of clinical experience (Group 1), and the other were post-graduate year doctors (PGY) in the first-year course (Group 2).

Summary of Results

49 participants in the Group 1 and 24 participants in the Group 2 were enrolled. In the first part, Group 1 members showed better proficiency in all items than ones in the group 2 (67% vs. 33% in (a), 90% vs. 80% in (b), 45% vs. 33% in (c)). Qualitative analysis found that all the participants appealed for (1) a user-friendly platform to provide involved people with legal aids, and (2) a thoroughly closed judicial proceeding to make involved people safe and free from being second victim.

Discussion and Conclusion

The data revealed that the MP with basically one-or-more year of clinical experience responded better level of proficiency to the PRM-related issues than ones in the PGY population. In item (c), however, there were more than a half not familiar with the legal effect of mediation. A great knowledge gap of relevant legal issues existed firmly. A tailored medico-legal course should be designed for clinical practitioners as part of continuum education training.

Take-home Message

The new law is ideal set for optimizing the current medical environment but should be broadcasted to medical personnel in an appropriate manner.

502 (5306)

Date of Presentation: Monday 28th August
Time of presentation: 1606 - 1612
Location: Carron 1, Loch Suite, SEC

Enhancing Equity in Health Professions Selection: Altering Response Format in SJTs to Reduce Demographic Differences

Colleen Robb1, Gill Sitarenios2, Harold Reiter3, Kelly Dore3

[1]Acuity Insights, Toronto, ON, Canada; [2]Acuity Insights/Trent University, Peterborough, Canada; [3]Acuity Insights/McMaster University, Toronto, Canada

Background

Although a diverse physician workforce is integral to reducing inequalities in health care1, racial minorities remain underrepresented in the physician population2. Programs are needing to make explicit efforts to increase minority representation across all stages of health professions selection3. Situational Judgment Tests (SJTs) are a popular selection tool, and this study examines if adding an audio-visual (AV) response format to the existing typed response (SJT-Casper) will further reduce group differences amongst health science, medical school, and residency applicants.

Summary of Work

18,685 applicants to various programs completed an SJT (with typed and AV responses). Effect sizes (Cohen's d) were used to examine subgroup differences for typed scores vs combined scores and, when possible, to GPA and other standardized tests (MCAT, & USMLE). Comparisons were conducted for race, ethnicity, income, English proficiency, rurality, disability status, and gender.

Summary of Results

All SJT scores, including typed-Casper, were smaller than GPA, MCAT or USMLE Cohen's D, where the data was published4-5. Group differences were reduced or maintained when combining AV and typed responses relative to typed -responses alone. Specifically, White relative to (i) Asian applicants (0.05 to 0.01), (ii) Black/African/Caribbean/African American applicants (0.77 to 0.54), and (iii) Hispanic/Latinx/Spanish applicants (0.40 to

0.42). This pattern was also observed when comparing low- and high-income applicants(0.31 was maintained), native and non-native English speakers (0.77 to 0.75), rural and non-rural applicants (0.15 to 0.16), and for disability status (0.02 was maintained). Gender differences increased slightly above negligible level in combined scores (0.21 and 0.14, respectively) with females scoring high

Discussion and Conclusion

Incorporating AV responses with text responses can further decrease disparities in selection.SJTs overall have notably smaller differences than academic focused metrics like MCAT, GPA, or USMLE and provide programs with a measure of other core attributes (e.g. professionalism) necessary for health care professionals.

Take-home Message

Despite being counter intuitive, addition of video response can further mitigate group differences in SJTs, thus SJTs when included in selection can potentially dilute the larger differences seen in other admissions metrics.

503 (6146)

Date of Presentation: Monday 28th August
Time of presentation: 1612 - 1618
Location: Carron 1, Loch Suite, SEC

Effectiveness of formative assessment and detailed feedback on student academic performance

Eka Ekaladze1, Gvantsa Vardosanidze2, Mary Jo Lechowicz3, Nino Tevzadze1, Luka Abashishvili1, Nani Kavlashvili1

[1]Tbilisi State Medical University, Tbilisi, Georgia; [2]Ken Walker International University, Tbilisi, Georgia; [3]Emory University School of Medicine, Atlanta, GA, USA

Background

Formative assessment is one of the main instruments in the assessment toolbox of American MD Program curriculum of Tbilisi State Medical University. It is widely used in OSCE-type examinations in "Becoming a Doctor" course with the participation of simulated patients. The aim of the study was to estimate the effectiveness of formative assessment and detailed feedback given to students during OSCE practice for the real OSCE examination for 4th year students.

Summary of Work

72 students of 4th year were divided into 2 groups: Group I (n=36) took OSCE examination with formative feedback as part of OSCE practice one week prior to the examination, and group II (n=36) – without formative feedback. Students were randomly distributed into groups. Checklists (maximal grade was 100 points) used for grading students, were known for them before the examination.

Summary of Results

The results of the group I students were higher than the results of group II students: 27.8% of group I and 19,4% from the group II got the highest marks (A-91-100); 38,9% of group I and 22,2% of group II students have grades 81-90 (B); C (71-80): 25% - group I and 38,9% - group II students; D (61-70): 8,3% - group I and 11,1% - group II; 8,3% of the students from group II had E (51-60) and none of them had below 51 points.

Discussion and Conclusion

Data analysis of the study demonstrates that 4th-year students who are getting formative assessment prior to the OSCE midterm have better results, than students without it. 66% of the group I student have the highest scores (A and B), compared to the group 2 students - 41%. Low-grade marks (C, D, and E) were prevalent in group II students (58,3%) compared to the group I (33,3%). The results show that formative assessment and detailed feedback has a positive influence on the academic achievements of 4th-year students in the OSCE examination.

Take-home Message

Formative assessment and detailed feedback given to students is the valuable instrument to help students to improve their academic performance

504 (5289)

Date of Presentation: Monday 28th August
Time of presentation: 1618 - 1624
Location: Carron 1, Loch Suite, SEC

Pilot of an adapted OSCE-Format for state examinations in psychotherapy in Germany: Results on test quality criteria

Barbara Hinding1, Christian Götz1, Annette Ehlenz1, Anna Hirsch1, Sabine Weimert1, Daniel Schwerdt1, Elisa Flach*1, Ulrich Scherer*1

[1]*German Institute for State Examinations in Medicine, Pharmacy, Dentistry and Psychotherapy (IMPP), Mainz, Germany*

Background

The procedure for obtaining licensure as a psychotherapist in Germany has undergone a significant revision in 2020. Part of the state examination is now an exam track modeled on the Objective Structured Clinical Examination (OSCE). Due to the novelty of this exam format in psychotherapy, a pilot study should provide indications on the feasibility and quality of the examination tasks. Two exam tracks with five stations á 20 minutes were developed and one was tested at four universities. Test-theoretical quality criteria were determined to gain insights for the development of the state examination.

Summary of Work

Each station equated one examination task consisting of several subtasks, which were evaluated using a 0-4-point rating scale. Psychotherapists with practical experience and lecturers at universities designed the tasks. The 49 examinees who voluntary participated were students from master's programs in psychology and psychotherapists in subsequent training. At each station, two examiners, trained on the new format and psychotherapists as well, evaluated the performance with a structured evaluation sheet. Data analysis focused on the dimensionality and reliability of the exam track (all tasks) and the five stations. Furthermore, difficulties and discriminatory power of the stations and the subtasks were determined.

Summary of Results

Barely more than 30% of the examinees passed the mock exam. On average, they scored 319 out of a possible 500 points (SD=75.46). Difficulty indices for the five stations ranged from 0.58 to 0.70, discriminant power from 0.42 to 0.71. Cronbach's alpha for the entire course, determined by the results of the five stations, was 0.82. The interrater reliability (ICC random with absolute agreement) for the course was 0.90, the values for the stations ranged from 0.66 to 0.85.

Discussion and Conclusion

The test course seems to be a demanding exam, which only a rather small part of the examinees passed. Results further suggest a reliable examination with high internal consistency and mostly good agreement between examiners, even across different sites. Overall, several important lessons were learned for optimizing exam development, particularly with respect to examinee instruction, task setting, passing scores, and training of simulated patients and examiners.

Take-home Message

Using OSCE in psychotherapy seems feasible and reliable.

* shared last authorship

505 (2719)

Date of Presentation: Monday 28th August
Time of presentation: 1624 - 1630
Location: Carron 1, Loch Suite, SEC

Reliability and Validity of the Chinese Version of the State-Trait Assessment of Resilience Scale

Wei-An Huang1, Ke-Hsin Chueh1, YING-JAY LIOU2, CHIEN HUANG3

[1]Department of Nursing, College of Medicine, Fu Jen Catholic University, New Taipei City, Taiwan; [2]Taipei Veterans General Hospital, Taipei City, Taiwan; [3]Department of Clinical Psychology, College of Medicine, Fu Jen Catholic University, New Taipei City, Taiwan

Background

In recent years, resilience is an important indicator of mental health. In response to the lack of resilience state scales for Chinese people around the world, we chose to establish the Chinese version of the State-Trait Assessment of Resilience Scale (CSTARS). Schools and hospitals need to use CSTARS to measure the resilience status of teachers, students and medical staff. Therefore, this study aims to explore the reliability and validity verification and provide global Chinese use.

Summary of Work

This study adopts a cross-sectional research design, adopts convenience sampling and snowball sampling. The statistical methods including Cronbach's alpha (α) coefficient, intraclass correlation coefficient (ICC), and Pearson product-difference correlation for acceptable reliability and validity demonstration.

Summary of Results

A total of 150 community residents in northern Taiwan were included in this study, with an average age of 38.77±10.91 years (60% were male). In this study, the overall expert content validity of the CSTARS were above 0.95. Item analysis results indicated that the scale had good discrimination ($p < .05$). The Cronbach's α in the total scale was 0.87. The test-retest reliability (ICC) was 0.90. The CSTARS was correlated with the PSS-10 ($r=-0.65$, $p< .001$) and the Chinese version of the CD-RISC ($r=0.72$, $p<.001$), with good criterion-related validity.

Discussion and Conclusion

The CSTARS has good reliability and validity. CSTARS has a good positive correlation with the Chinese version of the CD-RISC. Compared with the Chinese version of the CD-RISC, CSTARS can measure both the traits and the state of resilience. With only 13 questions, it can reduce the time required to fill out the scale and gain resilience status for faculty, students, and healthcare workers.

Take-home Message

1.Chinese people around the world should actively use this highly reliable and valid scale.

2.Schools and hospitals can regularly track the resilience health of faculty, students and healthcare workers can understand resilience status and improve staffs' retention.

506 (3846)

Date of Presentation: Monday 28th August
Time of presentation: 1630 - 1636
Location: Carron 1, Loch Suite, SEC

Impact factor analysis of medical students' score in national OSCE

Chi Chih Wang1, Chao Yen Huang1, Hsiu-Chin Lin2, Yeu Sheng Tyan1, Kuei-Chuan Chan1

[1]Chung Shan Medical University, Taichung city, Taiwan; [2]Chung Shan Medical University Hospital, Taichung city, Taiwan

Background

In recent years, the difficulty of OSCE national examination has been greatly increased. In response to this emergent problem, there are OSCE training programs in many medical centers in Taiwan. We want to defined the most important factors to predict the scores of medical students' in national OSCE.

Summary of Work

We aimed to find the most important factors, which can predict the scores of medical students' in national OSCE. We collected the total scores of the 68 candidates who accepted national OSCE in Chung Shan Medical University Hospital. We do the correlation statistics with the average score of the students in the last semester of sixth grade, the total numbers of OSCE rescue training course attendance, the total numbers of OSCE practice attendance in recent one year, the numbers of OSCE practice attendance in the last month before the national exam and the scores of last simulation OSCE test before national exam. We tried to find out the most important factors that correlate with the scores of our medical students in national OSCE.

Summary of Results

Whether in univariate analysis or multivariate analysis, the item with significant statistical difference is the student's average score in the last semester of sixth grade, in which univariate analysis :β=11.61, p=0.008, and multivariate β=12.57, p=0.005 were seen in our analysis. Our study showed the true key factor of total scores in national OSCE is still the

medical ability level of each medical student instead of rescue OSCE training or the intensive OSCE practice before national exam.

Discussion and Conclusion

Although we conduct many OSCE rescue training programs before national OSCE in Chung Shan Medical University, the most important factors to predict the scores in the national OSCE is the average score of the students in the last semester of sixth grade, which reflect a medical student's medical knowledge and practice ability level they learned in the past 5 years. We hardly manipulate the final scores of national OSCE by these rescue training programs.

Take-home Message

The important factors to predict pass or fail, need further evaluations because these students all passed in the final exam last year.

507 (6105)

Date of Presentation: Monday 28th August
Time of presentation: 1636 - 1642
Location: Carron 1, Loch Suite, SEC

Evaluating the impact of structured training of practical skills by formative practical assessment

Annica Lindkvist[1], Pernilla Lång[1], Catharina Hultgren[1], Sophie Curbo[1]

[1]*Karolinska Institutet, Stockholm, Sweden*

Background

In order to evaluate practical and clinical skills, the Karolinska Institutet regularly performs an investigation on how well recently graduated students perform in clinical practice.
A survey analysed in spring 2018, revealed that newly graduated Biomedical Laboratory Science (BLS) students generally performed poorly in skills of microscopy.
This project aimed to focus on and improve that specific skill and measure the outcome through a formative practical assessment.

Summary of Work

The student group consisted of 225 students enrolled in the Biomedical Laboratory Science program for a time period of five years between 2018 - 2022. The structured practical training was introduced during the 3rd semester. Practical skills in microscopy, among other skills, were examined in an objective structural practical examination (OSPE) at the end of the 4th semester. The assessment protocol consisted of 15 clearly defined, measurable criteria. We analysed the assessment outcomes before as well as after implementation of structured practical training.
We also conducted interviews with course organizers in consecutive courses to evaluate student performance.

Summary of Results

The quantitative formative assessment showed a significant improvement in microscopy skills, both on an individual level as well as on group level.

Before implementation of structured practical training 2018/2019 the pass rate was 78%. After the structured practical training were introduced in 2020/2021/2022 the pass rate increased significantly to 93%; p value <0.001.

The qualitative analysis, including interviews with course organizers, supported the quantitative outcome.

Discussion and Conclusion

In conclusion, this project demonstrates that the implementation of structured practical training can lead to significant improvements in microscopy skills of Biomedical Laboratory Science (BLS) students. The use of an objective structural practical examination (OSPE) provided a clear and measurable assessment protocol, which ensured that the assessment was objective and consistent. The results of this project provide a valuable contribution to the ongoing efforts to improve the practical skills of healthcare professionals and may have implications for other programs that aim to improve the skills of their students.

Take-home Message

Objective assessment protocol demonstrated that structured practical training improves microscopy skills of Biomedical Laboratory Science students.

508 (5448)

Date of Presentation: Monday 28th August
Time of presentation: 1642 - 1648
Location: Carron 1, Loch Suite, SEC

Health Equity Assessments in Undergraduate Medical Education: A Scoping Review

Gimena Marzan1, Constanza Yanez2, Michelle B. Bass3, Krisztina Fischer4, Rose L. Molina5

[1]St. Matthews University, George Town, The Cayman Islands; [2]Department of Public Health, School of Medicine, Universidad de Valparaiso, Valparaiso, Chile; [3]Pennsylvania Hospital, Philadelphia, USA; [4]Harvard Medical School and Brigham and Women's Hospital, Boston, USA; [5]Harvard Medical School, Boston, USA

Background

The Association of American Medical Colleges (AAMC) published diversity, equity, and inclusion (DEI) competencies in July 2022, which has catalyzed innovation in integrating health equity into longitudinal medical school curricula. Yet, there remains limited evidence for best practices to assess knowledge, skills, and behaviors to advance health equity and meet the AAMC competencies in undergraduate medical education.

Summary of Work

We performed a scoping review to describe the breadth and depth of health equity assessments in undergraduate medical education. In April 2022, we systematically searched PubMed and Embase databases for articles published between January 1st, 2012 and April 1st, 2022. Scoping methodology was used to map key concepts. We extracted data from the selected articles using a template that included the type of study design, educational strategies implemented, clinical experiences linked with the assessment, data collection method, types of assessment, validated instruments, and assessment completion rates of participants. We report descriptive statistics and findings from a critical review of the included articles

Summary of Results

We retrieved 991 articles and uploaded them to Covidence for screening. We removed 72 duplicate articles; two researchers screened 919 abstracts. We included 59 articles that met the inclusion criteria in the final review. We found a wide range of curricular topics assessed under health equity, such as racism, implicit bias, and microaggressions. The most common types of assessment were questionnaires (76.3%), self-assessment forms (33.9%), and essays on respondents' experiences (10.2%). Only 11 studies used instruments with psychometric evidence for assessment. Most studies assessed knowledge and attitudes using self-reported scales, and only a single study used a rubric for the assessment of student´s performance in a clinical setting.

Discussion and Conclusion

The most frequent type of assessment used for health equity in undergraduate medical education was questionnaires using Likert scale. There is a lack of validated instruments to assess health equity knowledge, skills, and behaviors in medical students.

Take-home Message

Development and validation of health equity assessments within a longitudinal medical school curriculum are needed to benchmark progress across the AAMC DEI competencies.

509 (4407)

Date of Presentation: Monday 28th August
Time of presentation: 1648 - 1654
Location: Carron 1, Loch Suite, SEC

Methods to assess clinical reasoning of respiratory therapist trainee

Kun-Ta Lee**1, Yun-Ting Tseng**2, Ming-Shun Wu3, Kung-Pei Tang4

[1]Taipei Medical University-Shuang Ho Hospital, Ministry of Health and Welfare, New Taipei City, Taiwan; [2]National Taiwan University Hospital, Taipei City, Taiwan; [3]Taipei Municipal WanFang Hospital, Taipei City, Taiwan; [4]National Taipei University of Education, Taipei City, Taiwan

Background

Clinical reasoning is the integration of thinking and the decision-making process when working through clinical scenarios. Health professionals are expected to possess critical thinking, patient-centered characteristics, and the abi lity to combine professional knowledge, skills, and values to address cases with various, complex, and uncertain contexts. Follow physician training, growing intentions of building up the concepts of clinical reasoning across the professions and the assessment tools in each status. Our aim was to assess the clinical reasoning in the training program of respiratory therapists through appropriate tools.

Summary of Work

We developed work-placed assessment methods for respiratory therapist trainees to promote clinical reasoning. Based on the paper review, we designed three classifications of written tests which included extended matching questions, key feature examinations and script concordance test firstly. Each question was based on the patient-centered clinical scenario that involved decision-making, troubleshooting, and question identification. Five experts in respiratory therapy with abundant teaching experience, from associate professors to clinical teachers, were invited to the consensus meeting. The consensus meeting was planned to (1) ensure two types of written tests (2) confirm the full scenario (3) establish two-way specification tables for each question. During the consensus, we used Delphi method to revise question stems and confirm sub-questions. Furthermore, item objective consistency (IOC) was used to calculate the object between

exam questions and assessing goals. The goals of the study dived into five professional knowledge and five abilities about clinical reasoning.

Summary of Results

We retained extended matching questions and script concordance test in line with the abilities of the respiratory trainee. And we calculated IOC of the questions.

Discussion and Conclusion

To enhance caring quality, health professionals emphasize assessing the ability of clinical reasoning and developing teaching methods through appropriate tools. We expect to apply extended matching questions and script concordance test in the training program to evaluate clinical reasoning ability. Also, these two results will be compared with the current assessment scale for clinical performance to calculate the correlation.

Take-home Message

Using appropriate tools to assess clinical reasoning of trainees is necessary for the education of respiratory therapist, not only enhancing cognitive learning, but also the ability of the professional field.

5010 (2130)

Date of Presentation: Monday 28th August
Time of presentation: 1700 - 1706
Location: Carron 1, Loch Suite, SEC

Development of evaluation system from undergraduate to postgraduate clinical training : a nation-wide EPOC (E-POrtfolio of Clinical training) in Japan

Masanaga Yamawaki1, Eriko Okada1, Nobutoshi Nawa1, Yu Akaishi1, Shouko Yoshida1, Yujiro Tanaka1, Ayako Kashimada1, Makoto Takahashi2

[1]Tokyo Medical & Dental University, Tokyo, Japan; [2]Hokkaido University, Sapporo, Japan

Background

The importance of seamless evaluation of competencies from undergraduate clinical clerkship to post-graduate clinical training has been pointed out. Though there are several e-portfolio systems for trainees, it is mostly used at the local level or only during student or residency period. We developed a nationwide evaluation system from clinical clerkship to residency period.

Summary of Work

EPOC (E-POrtfolio of Clinical training) is an e-portfolio system developed in Japan, and an evaluation system covered from clinical clerkship to residency period. The current version of EPOC is used at about 800 facilities and used by more than 8,000 residents, making it possible to obtain and analyze nationwide data on clinical trainees in Japan.

Summary of Results

EPOC data showed the degree of attainment of the two-year competence goals of about 3,000 trainees who started training in 2018, in chronological order by self-evaluation and instructor evaluation. Using these data, we showed not only show time-series mass data as quality control for facilities, but also can be used for individual trajectories for trainees. In this way, e-portfolio has the strength of being able to analyze a large amount of data over time and provide appropriate visual feedback, and the results can be used not only for student evaluation but also for program evaluation.

Discussion and Conclusion

We introduce the development of EPOC as a seamless evaluation system before and after graduation, efforts and challenges in system operation, and the findings and future plans that have been clarified through analysis using the obtained data. Also, as an example of using personal trajectory, we believe that it can be applied to remediation for trainees. Interventions such as feedback and coaching may be possible for learners who need remediation at an appropriate time before and after graduation.

In this paper we will give a scope on the knowledge and issues so far, including the development and operation of EPOC, including the post-corona era, and what is expected in the future.

Take-home Message

Big data obtained from EPOC is expected to contribute to the improvement of medical education at the national level.

5011 (2800)

Date of Presentation: Monday 28th August
Time of presentation: 1706 - 1712
Location: Carron 1, Loch Suite, SEC

Development of performance in clinical internships by international students

Yan Zhou1, Nicolaas Bos2

[1]Key Laboratory of Intelligent Education Technology and Application of Zhejiang Province, Zhejiang Normal University, Jinhua, China; [2]Center for Education Development and Research in Health Professions (CEDAR), LEARN, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands

Background

Medical education is increasingly internationalized, with more international students starting their clinical training in foreign countries. In order to complete their clinical internships, international students are often required to acquire and use a second or a new language in an unfamiliar foreign clinical environment. To assist international students to integrate into the local environment and to acquire similar academic performance, many universities use group learning activities in undergraduate medical curricula to foster interactions between students and faculty, as well as between international and domestic students. However, it is unclear if international students can perform similarly to domestic students in the clinical environment during their master programme and if their internship performances develop similarly. This study explores whether students' performance in clinical internships differs between international and domestic students over time.

Summary of Work

Students had several internship training sessions each year throughout their three-years master's programme. The assessors used a three-scale score ('Not-on-track', 'On-track', or 'Fast-on-track') to evaluate students' performance in each internship session. By using the Chi-square tests, we compared the assessment results of students' clinical internship performance of three academic year cohorts (N=635) between international and domestic students.

Summary of Results

The analysis revealed that international students improved more than domestic students in internship performance during their three-year clinical rotations. In the first year of clinical internship training, domestic students performed significantly better than international students. Both domestic and international students performed similarly in clinical internships during their second year. Whereas, in the third year, international students outperformed domestic students significantly in clinical internships.

Discussion and Conclusion

Despite the challenges of a language barrier and an unfamiliar clinical environment, international students' internship performances showed relatively a greater improvement compared to that of domestic students throughout the programme of their three-year clinical internships. This was caused by an underperformance in the first year and an overperformance in the third year. Future research should investigate whether these findings can be accounted for by variations in students' motivation, extra pressure, or additional clinical opportunities between international and domestic students.

Take-home Message

International students showed greater improvement in clinical internship performance than domestic students although they may encounter more challenges.

5012 (4381)

Date of Presentation: Monday 28th August
Time of presentation: 1712 - 1718
Location: Carron 1, Loch Suite, SEC

Attitude of medical students toward peer assessment in clinical clerkship

Panita Tangsittitum1, Lalana Yothindamrongkul1, Chidchanok Mahabhol1, Pumphat Aakkarachaisirilap1, Arucha Treesirichod1

[1]*Faculty of Medicine, Srinakharinwirot University, Ongkharak, Nakhonnayok, Thailand*

Background

Peer assessment is a strategy used in medical education for students to provide and receive constructive feedback. Peer assessment may offer an opportunity to evaluate aspects that are often challenging to assess, including professionalism, teamwork, and communication skills. Various studies have shown positive consequences of peer assessment on student academic achievement, professional development, and other outcomes. The study aimed to explore the acceptance of the peer assessment approach and the attitude of medical students toward peer assessment.

Summary of Work

Peer assessment was introduced in the clinical year. Students conducted repeated, longitudinal assessments of their peers from small-group, clinical skills learning activities. A self-report questionnaire (5 Likert scale questions), and a cross-sectional study were conducted on the medical student to explore the acceptance of the peer assessment approach and the effect of peer assessment on academic achievement, professional development, and other outcomes during their clinical clerkship.

Summary of Results

Clinical-year undergraduate medical students were randomly enrolled in this study (n=136). Overall, the acceptance rate of peer assessment was 82.0%. The student rated that the peer assessment method should evaluate anonymously, have the confidence to evaluate their friends, and acceptance of friends to evaluate themselves with rates of

92.0%, 83.8%, and 80.2%, respectively. Peer assessment also promotes ethical behavior, academic achievement, and teamwork skills, and fosters accountability, and communication skills with a rate of 81.6%, 80.6%, 77.0%, 76.6%, and 73.8%, respectively. Male students rated that peer assessment should be part of formative evaluation, and it promotes their learning more than female students ($P<0.05$). There was no correlation between student attitude and academic performance.

Discussion and Conclusion

Peer assessment has been increasingly integrated into educational settings as a pedagogy to promote student learning. The results have demonstrated a positive attitude of the student toward peer assessment. It can be a reliable approach for assessing the professional attributes of clinical performance. In conclusion, peer assessment can be a valuable and effective tool to promote student learning and performance.

Take-home Message

Effective utilization of peer assessment can provide an opportunity to promote student learning and performance in clinical clerkship.

Session 5P: Supporting Learners

5P1 (2538)

Date of Presentation: Monday 28th August
Time of presentation: 1600 - 1606
Location: Carron 2, Loch Suite, SEC

Do levels of empathy relate to burnout among medical students? A cross-sectional study in a university hospital

Warut Aunjitsakul[1], Jarurin Pitanupong[1], Aimorn Jiraphan[1], Kanthee Anantapong[1], Katti Sathaporn[1]

[1]*Faculty of Medicine, Prince of Songkla University, Songkla, Thailand*

Background

Although empathy is a key of professionalisms in medical education, inhibiting empathy is sometimes advised among medical students because excessive empathy might link to burnout, leading to negative impacts such as low mood or low quality of life. Due to that limited evidence of comprehensive investigation of burnout with empathy, this study aimed to examine relationship between levels of empathy and burnout with their subscales among medical students.

Summary of Work

This cross-sectional study was conducted on medical students who were currently experiencing medical training at clinical levels (fourth-to-sixth year). We included a medical student who aged more than 20 years and completed the questionnaires. We collected participant characteristics (e.g., age, gender, cumulative GPA, history of physical and psychiatric illness, and experienced stress within a year) as well as empathy, burnout and mental health. Linear regression analyses were performed to identify associations between empathy and burnout (total score and emotional exhaustion, depersonalization and personal accomplishment subscales). Correlations between the burnout subscales and empathy were also examined.

Summary of Results

From three-year clinical level, 91.6% (466 of 509) of medical students completed the forms, with mean aged 23.1±1.4 years and the accumulative GPA was 3.2±0.3. From the linear regression analyses, the empathy score was significantly associated with burnout total score, mental health score and experienced stressors within a year (Adjusted coefficient -0.36(-0.58,-0.13); -1.8(-2.07,-1.53); and 8.98(2.74,15.21), respectively). Empathy score was positively associated with emotional exhaustion score and negatively associated with depersonalization and personal accomplishment. Among empathy subscale, altruism significantly correlated with burnout total score (ρ=-0.29, p<0.001), particularly personal accomplishment (ρ=-0.41, p<0.001).

Discussion and Conclusion

Inverse relationship between empathy and burnout was found. The high level of empathy may help prevent depersonalization and enhance personal accomplishment; but not prevent emotional exhaustion of burnout. Empathy, particularly altruism, was related to personal accomplishment. Our findings suggest that empathy remains a key factor in preventing burnout, however, during medical training, appropriate levels of empathy should be instructed to medical students to prevent emotional exhaustion. Further causal explanation should be tested.

Take-home Message

In medcial training, empathy level should be considered, because excessive empathy could cause emotional exhaustion, but healthy empathy could decrease depersonalization and increase personal accomplishment.

5P2 (2610)

Date of Presentation: Monday 28th August
Time of presentation: 1606 - 1612
Location: Carron 2, Loch Suite, SEC

Student's Self-Assessment of Rural Competencies and Stress During Longitudinal Integrated Clerkship

Pairoj Boonluksiri1, Tipaporn Thongmak1

[1]*Hatyai Hospital, Songkhla, Thailand*

Background

Hatyai medical education center has launched rural longitudinal integrated clerkship (LIC) as the first school in Thailand since 2019. The duration of LIC is 40% of academic year. Students are expected to meet comprehensive care with across multiple disciplines. Rural competencies are promoted such as adaptability, resilience, comprehensive care, and healthcare system practice with scarcity and limitation. This study aims to survey rural competencies and factors associated with stress among students during rural LIC.

Summary of Work

Cross-sectional survey was conducted for 78 students rotating to 8 rural hospitals during 2019-2021. Self-assessment of rural competencies was performed with 4-point Likert scale questionnaire and used specific checklists for screening of adaptability by U of Denver, resilience by RS-14, and stress by Thai Public Health. Factors associated with stress were also analyzed by multiple logistic regression.

Summary of Results

All of 68% students were met overall rural competency. More learning experience over time was needed particularly in situation of scarcity and limitation such as effectively use of available resource, medical expense. Regarding adaptability status, 60% were flexible, 38.6% were rigid, and 1.4% were challenge. Resilience was surveyed at the beginning, mid, and the end of course in 2019 and found that it was above average with room for improvement equal 70.3, 69.7, and 72.3 respectively in each period (p=0.76). Incidence of student's stress was 58.7%. The potential factors associated with stress were senior

student, low confidence in knowledge gain, anxiety with frequent tests and final exam (OR 465, 2.9, 3.8, and 3.6 respectively).

Discussion and Conclusion

This study showed that LIC program can encourage students to develop adaptability and resilience that are essential for rural doctor's retention. However, scarcity and limitation are needed more to learn over time. Student's stress occurred due to fear of missing out (FOMO) knowledge gain and summative exams particularly at the beginning phase and needed more staff's supervision. However, they were anticipated to develop resilience that is a dynamic process and plays a mediating role in stress.

Take-home Message

Most LIC students can develop rural competencies over time. Nearly 60% students felt stressed associated with low confidence in knowledge gain and anxiety with exam during the beginning phase.

5P3 (4510)

Date of Presentation: Monday 28th August
Time of presentation: 1612 - 1618
Location: Carron 2, Loch Suite, SEC

Why We Should be Rude to Students: Teaching about Incivility in the Workplace

Penelope Hurst[1], Ruth Perkins[1], Zainab Akram Yousif[1]

[1]*University Hospitals Coventry and Warwickshire NHS Trust, Coventry, UK*

Background

There is increasing discussion across healthcare about the effect of incivility on the outcomes of our patients. Rudeness can have a significantly detrimental impact on staff morale, focus and willingness to work. Many institutions have projects in place to encourage civility in the workforce. We wanted to bring this a step forwards and introduce this at medical student level.

Summary of Work

We used a pre-existing simulated teaching session that is given to final year medical students and adapted it to include the topic of incivility in the workplace. The students work as a team to assess a simulated patient, then perform a handover to a senior. We taught the students about the impact of rudeness during the introduction talk, and gave them advice on how to handle it. During their session they found that some of the simulated colleagues were rude to them, so could practice managing this. We asked them to complete pre- and post-session questionnaires on incivility statements, grading from “strongly disagree” to “strongly agree”.

Summary of Results

We had 41 pre-session and 28 post-session questionnaires. We summarised the “agree” and “strongly agree” results together. Initially, 95% of students expected to face rude behaviour at work. 68% had already experienced rude behaviour as students, with only 17% feeling confident in managing it. Only 34% knew who to talk to if they experienced rudeness and 63% wanted to have incivility training.

Afterwards, 89% of students expected rudeness at work. 100% had a better understanding of incivility at work. Confidence managing incivility rose to 79% and 93% knew who to talk to if they experience rudeness. Overall, 96% of students felt teaching about incivility was useful.

Discussion and Conclusion

We were surprised that 68% of students had already faced rudeness at work. We were pleased to see the improved understanding after the session. Unfortunately students still expected to face incivility and we need to encourage all students to not accept it as inevitable. Students found the advice and training useful and we will continue to deliver this at our hospital.

Take-home Message

Teaching about incivility is not only beneficial but welcomed by students and should be encouraged across medical training.

5P4 (6186)

Date of Presentation: Monday 28th August
Time of presentation: 1618 - 1624
Location: Carron 2, Loch Suite, SEC

The Student Engagement in Medical Education: The Translation of Theory Into Practice From The ASPIRE Medical School

Nattacha Srithawatpong1, Surachai Leksuwankun2, Kongpapon Jirathamthanakul1, Kantawich Piyanirun1, Chanya Mittrakulkij1, Danai Wangsaturaka3

[1]Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand; [2]Department of Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand; [3]Department of Pharmacology, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Background

The conceptual framework of the student engagement (SE) in health profession education states that structural and psychosocial influences are the antecedents of SE. Currently, there is a lack of literature illustrating the translation of the framework into real-world practice. This study aims to review the practice of an ASPIRE medical school by identifying the structural and psychosocial influences of the behavioral student engagement.

Summary of Work

After receiving the ASPIRE award, the Faculty of Medicine, Chulalongkorn University established the Committee aimed at systematic development in SE. The study design is historical research conducted by analyzing data between 2017 - 2021 from 28 committee meeting minutes and five extracurricular activities lists from the Student Affairs. Two authors, KJ and KP, independently formulated codes. The conflicted issues were solved with consensus. The deductive thematic analysis employing the ASPIRE criteria was then used.

Summary of Results

Our analysis reveals 11 themes within 4 main ASPIRE criteria. SE in governance and provision of education are our two most frequent findings. The structural influences are

the SE Committee, the Student Union, official communication channel and their organizational development. The psychosocial influences are openness, positive communication, and reduction of hierarchical culture. To illustrate, arising from the SE Committee, the behavioral engagements are student-led curriculum evaluations, and its training workshops. These, in turn, shape the structural influences by further developing the committee and curriculum evaluation process. They also enhance psychosocial influences by cultivating younger students to engage in medical education, with increasing acceptance from the faculty. Additionally, during this 5-year period, approximately 402 extracurricular activities were initiated by the Student Union. Whilst, engagement in the academic community, including meetings and research, is to a lesser degree than others.

Discussion and Conclusion

Because of the unclear structural antecedents in student research promotion, there may be less engagement in academic communities. Inversely, the engagement in governance and the provision of education has grown over the years due to the official structural body. This study highlights the importance of the structural component of the system, which generates positive feedback loops to amplify SE.

Take-home Message

“Engagement breeds engagement”, as stated in Kahu’s engagement framework, flourishes in the real world.

5P5 (5953)

Date of Presentation: Monday 28th August
Time of presentation: 1624 - 1630
Location: Carron 2, Loch Suite, SEC

Diploma Graduate Nurses Transition Programme in a Singapore Academic Tertiary Hospital

Oo Khin Moe[1], Mui Leng Mary Tan[1], Cheang Leng Teh[1]

[1]*National University Hospital, Singapore*

Background

Newly graduated nurses enter the workforce every year. Evidence suggest that the first year of employment have significant impact on their future career directions.

Transiting into a new role, the graduates may face challenging situations, increased workload and job roles, interactions with peers, colleagues, patients and their families, and lack of support. These experiences may cause psychological stress and anxiety to new graduates and may have significant impact on their future career directions. Thus, a transition program was developed and implemented to provide newly graduated diploma nurses with knowledge and skills to transit into their new role.

Summary of Work

The Diploma Graduate Nurse Transition Program (DGNTP) comprises 15 hours of physical contact time with role-play, case-study, and group discussion conducted over a period of six months. The program encompasses 5 domains; managing expectations and stress management, interpersonal communication, management of patient care delivery, managing resources, and conflict management. The Casey-Fink Graduate Nurse Experience Survey (revised) and Connor-Davidson Resilience Scale was used to measure comfort and confidence with clinical and relational skill performance.

Summary of Results

A total of 22 nurses were enrolled and completed the DGNTP of which 77% were from the medical and pediatrics departments. Participants' feedback on the DGNTP were positive and the program had helped them during their transitional period.

Discussion and Conclusion

The Diploma Graduate Nurses Transition Program had improved nurses' preparedness and confidence with clinical performance during their transition phase. Clinical educators played a pivotal role to support newly graduate nurses for 'readiness' and 'preparedness' to provide safe nursing care independently.

Take-home Message

Structured transitional programme is recommended to support the newly graduated nurses when they enter to workforce.

5P6 (2392)

Date of Presentation: Monday 28th August
Time of presentation: 1630 - 1636
Location: Carron 2, Loch Suite, SEC

Medical Student´s Motivational Changes during the COVID-19 University Lockdown: A mixed method study

Parisa Moll-Khosrawi1, Josephine Küllmei2, Leonie Schulte-Uentrop2

[1]University Medical Center Hamburg Eppendorg, Hamburg, Germany; [2]University medical center Hamburg Eppendorf, Hamburg, Germany

Background

During the crucial stage of the COVID-19 pandemic face-to-face undergraduate medical education was replaced with online teaching activities. The university lockdowns might have affected students´ motivation, which is an equal learning dimension than the cognitive and metacognitive. Motivation is associated with learning outcomes, well-being and regulates the risk for bur-out.

Summary of Work

After the relaunch of face-to-face teachings in medical school, the situational motivation to engage in classes was assessed within a cohort 4th year students (n=111) and compared to the motivation, reported by 4th year students (n=144) prior to the pandemic. In subsequent qualitative analyses (focus groups) underlying variables that may have contributed to medical students´ motivation and pandemic related changes were identified. These variables were then systematically explored- individually and in combination.

Summary of Results

Students who participated in the teaching units after the universitx lockdown reporterted significant higher levels of controlled behavioral regulation (motivation). Extrinsic motivation and amotivation were also significantly higher towards participating teaching units (post-pandemic students). The qualitative analysis resultet in a total of sixteen subthemes which were classified under five core themes: Interaction with the lecturer;

disruption of face-to-face teaching units; disruption of patient contact; disruption of daily university life structure; social (peer) isolation through closure of universities. All these themes were identified as variables leading to the less autonomous forms of motivation.

Discussion and Conclusion

Students reported after the relaunch of university, inferior forms of motivation, characterized by lower levels of self-determined regulation and the reasons were decreased identification with being a doctor, fading ability beliefs, devaluing of the university, fear and anxiety due to COVID-19 and the lacking contact with the medical teacher- as well as with patients. The role of patient contact and with the medical teacher were pointed out to be crucial to foster the internalisation of the task (studying). Due to the decreased internalisation, the task was perceived as enforced from outside. This resulted in less identification and therefore in less self-determined motivation.

Take-home Message

Medical educators should consider the pandemic effects on studentś motivation and support students with their identification process of being a doctor. Interventions tageting and enhancing autonomous motivation might be useful.

5P7 (4630)

Date of Presentation: Monday 28th August
Time of presentation: 1636 - 1642
Location: Carron 2, Loch Suite, SEC

Predictors of prescribing skills acquisition in an integrated PBL-based medical curriculum

Ioulia Televantou1, Andrew Hitchings2, Stella A. Nicolaou3, Alexia Papageorgiou4, Anthony Albert5, Peter McCrorie4, Persoulla Nicolaou4,

[1]Department of Educational Sciences, European University, Nicosia, Cyprus; [2]Institute of Biomedical Education, St George's, University of London, London, UK; [3]Department of Life Sciences, School of Life and Health Sciences, University of Nicosia, Nicosia, Cyprus; [4]Department of Basic and Clinical Sciences, University of Nicosia Medical School, Nicosia, Cyprus; [5]Vascular Biology Research Centre, Molecular and Clinical Research Institute, St George's, University of London, London, UK

Background

Diverse factors mediate attainment in medical education and gaining further insight into these factors can support student learning. We have previously investigated mediators of pharmacology learning in the first year of an integrated, problem-based learning (PBL) medical curriculum. We found that a background in biomedical sciences or a post-graduate degree were associated with better performance in pharmacology knowledge tests, suggesting that baseline knowledge is advantageous. The present study aimed to investigate whether baseline characteristics and educational background mediate prescribing skills in final-year medical students.

Summary of Work

Data were collected from anonymized records of graduates in 2019, 2020 and 2021 from St George's, University of London and the University of Nicosia graduate-entry medical programme. The same curriculum and assessments are delivered in both institutions, with prescribing skills assessed using the Prescribing Safety Assessment (PSA). Relationships between student characteristics (educational background, age, gender, nationality,

ethnicity, native language and academic performance) and PSA scores were investigated using independent samples t-tests, correlation analysis and linear regression.

Summary of Results

Data from 591 students showed no statistically significant correlations between PSA score and age, gender, ethnicity and nationality. In contrast to the Year 1 results, a background in biomedical sciences or a post-graduate degree did not confer an advantage in the PSA. Linear regression showed that objective structured clinical examination scores explained 3.6% of the variability in PSA performance, and adding the final written exam score increased this to 24.9%.

Discussion and Conclusion

While prior study in pharmacology is advantageous for novice learners, this effect does not persist as a mediator of final-year prescribing skills. Concurrent final-year assessments only partially explain performance in the PSA. It is likely that prescribing is a distinct skill, underpinned by broader knowledge, experience and judgement, rather than baseline pharmacology knowledge, and is not adequately captured by other assessments of medical knowledge and skills.

Take-home Message

Prescribing skills are only partially explained by performance in other assessments, and no advantage is conferred by a background in biomedical sciences. Future studies may further investigate mediators of prescribing skills acquisition to support educators in addressing learning needs, which could ultimately contribute to reducing medication errors through effective training.

5P8 (4375)

Date of Presentation: Monday 28th August
Time of presentation: 1642 - 1648
Location: Carron 2, Loch Suite, SEC

Impact of COVID-19 and lockdown-related mental health issues on learning performance in medical education

Nino Sikharulidze1, Bidzina Chachkhiani1, Salome Khubulava1, Natalia Catherine Hargreaves2

[1]Petre Shotadze Tbilisi Medical Academy, Tbilisi, Georgia; [2]Tbilisi State Medical University, Tbilisi, Georgia

Background

Around the world, one of the greatest challenges in recent years has been the Covid-19 pandemic. It has greatly impacted people's everyday lives including physical and mental health due to the damage caused by the viral infection as well as consequences of lockdowns. Based on the literature review and point of interest, we decided to study the influence of the Covid-19 pandemic and related mental health issues on the teaching performance of lecturers in medical universities alongside the study process of medical students.

Summary of Work

To discern how Covid-19 and lockdown-related mental health issues impacted teaching and study processes, a respective questionnaire has been elaborated. The survey was delivered online within two different universities – Petre Shotadze Tbilisi Medical Academy (TMA) and Tbilisi State Medical University (TSMU).

Summary of Results

In total, 125 students and 25 lecturers participated in the survey. Responses reveal that Covid-19 has been diagnosed at least once in 19 lecturers (76%) and 49 students (43%), out of which 6 students (12%) admit having diagnosis of Covid-19 induced mental disorders.

In terms of teaching performance - 41% of lecturers admit that it has been affected and they have experienced teaching-related burnout during or since lockdown. It's notable that 25% of lecturers believe that the lockdown affected reaching the learning outcomes in the subjects which they lead.

As for learning – 42% of the students believe that their ability to retain information has worsened during/after lockdown and most of the reasons given are lack of concentration, relaxed mode or overuse of gadgets. 62% of the students get more tired while studying, in 72% the meantime of independent study has increased. Sleeping patterns have also changed (decreased) in 74%. As for reflection of findings on academic performance for 26% it has increased, for 44% it didn't change and for 30% it decreased.

Discussion and Conclusion

Apparently, the younger generation was more susceptible to Covid-19/Lockdown related mental health issues that affected their learning patterns, but had moderate influence on the academic performance.

Take-home Message

As lockdown-related mental health issues have affected learning patterns, that may lead to the need for different approaches to teaching

5P9 (6145)

Date of Presentation: Monday 28th August
Time of presentation: 1648 - 1654
Location: Carron 2, Loch Suite, SEC

The benefits of a near-peer mentoring programme for first-year medical students.

Nandini Nandeesha[1], Savannah Naylor[1], Olivia Jagiella-Lodise[1], Ashley Lanys[1], Seamus Sreenan[1], Marian Brennan[1]

[1]*RCSI University of Medicine and Health Sciences, Dublin, Ireland*

Background

Peer mentoring has been shown to have benefits to medical students. The Royal College of Surgeons in Ireland School of Medicine and Health Sciences (RCSI) implemented a student-led peer mentoring programme matching incoming Graduate Entry Medicine (GEM) students with a colleague from the year ahead.

Summary of Work

The aim of this study was to establish whether the programme was beneficial to students and to explore how students engaged with their mentors. We assessed whether engagement was virtual or face-to-face as well as exploring what mentees valued from the interaction. All GEM students were invited to participate in an online survey including quantitative and open-ended qualitative questions.

Summary of Results

34 students responded with 74% reporting that they had a peer mentor. The majority of students met with their mentor a few times each semester, more frequently during the first semester. Benefits of participation included helping to alleviate stress and uncertainty, as well as receiving advice on academic content and success in school. During interactions, most time was spent on academic tutoring and sharing personal resources. Participants suggested that mentees should be matched with mentors who plan to undertake residency in the same country. In-person interactions were preferred over online or hybrid methods by 38% of participants, with 53% of participants preferring

in-person specifically for the first meeting. Most students reported not keeping in contact with their mentor after the first term; however, this could be attributed to 53% of participants having a mentor outside of the GEM program, either peer (student) mentors or clinical mentors. 44% of the respondents were also peer mentors and the majority reported benefitting from the program as a mentor.

Discussion and Conclusion

Both mentors and mentees benefitted from the peer mentor programme. Students utilised the programme for academic advice and the major benefits of the programme related to stress reduction. Students reported that their desired destination for residency should be taken into consideration when matching with mentors. Online or hybrid meetings were preferred overall, however, the majority preferred the first meeting to be in person.

Take-home Message

A near-peer mentoring programme is beneficial for first-year medical students and is beneficial to both mentors and mentees.

5P10 (5236)

Date of Presentation: Monday 28th August
Time of presentation: 1700 - 1706
Location: Carron 2, Loch Suite, SEC

Non-academic Factors Including Mental Health Have a Significant Role in Student Dismissals

Davinder Sandhu[1], Uttam Udayan[1], Aparna Shivaprasad[1], Amruta Rajput[1], Nelda Ephraim[1], Lennon Bhagwandin[1]

[1]*American University of Antigua College of Medicine, Coolidge, St. John's, Antigua and Barbuda*

Background

Academic and non-academic factors play a significant role in students failing medical school. Understanding the factors that contribute to student dismissals can lead to better prepare students and faculty to achieve success, and make purposeful use of available resources. Failure results in high debt, disillusionment, loss of motivation and for many a worsening of their mental health.

Summary of Work

This is a descriptive analysis study of all 215 appeals to the American University of Antigua Appeals Committee in 2022. The students who failed and were appealing against dismissal (167) were compared with those students who eventually passed and needed to have a grade change (48). 18 students facing dismissal had appealed twice. The non-academic factors studied were financial stress/student debt, physical illness, mental illness, dependent children, carer for elderly parents, bereavement. and Covid-19 infection.

Summary of Results

There were 167 (78%) students facing dismissal (mean age 32 years) and 48 (22%) who appealed against their grade (mean age 31 years). In the dismissal group versus the grade change group, the incidence of financial stress was 21% (35) vs nil, mental illness 39% (65) vs 4 (8%), physical illness 38% (64) vs 3 (6%), dependent children 12% (20) vs 2 (4%), elderly parents 17% (28) vs 1 (2%) and bereavement 17% (28) vs 3 (6%). 20 (12%)

students experienced Covid infection. 49 (23%) students had 2 factors, 25 (16%) had three factors or more.

Discussion and Conclusion

Academic and non-academic factors are complex with multiple variables and equally important for student performance and health. Of these, mental health is a major risk factor, consisting of panic attacks, ADHD, depression is the most common. Educators need to be proactive and aware that student distress from poor academic performance can have multiple underlying non-academic factors including mental illness and earlier engagement may mitigate against future dismissals.

Take-home Message

- Poor academic performance may indicate both academic and non academic factors.
- Students are more likely to succeed if they are adequately prepared for medical education.
- Social networks of family and friends are equally important to support students.
- Early detection of struggling students can help in utilizing resources effectively to treat any underlying illness.

5P11 (4353)

Date of Presentation: Monday 28th August
Time of presentation: 1706 - 1712
Location: Carron 2, Loch Suite, SEC

Effect of spiritual awareness on stress management in medical students.

Shamim Sheikh 1

[1]*M. P. Shah government medical college, Jamnagar, India*

Background

This study iaimed to assess the awareness of spiritual wellness in medical students and the need of stress management strategies to include in curriculum.

Summary of Work

Qualitative cross-sectional study conducted with IInd year M.B.B.S. students.150 students volunteered.Pre validated Medical Student Stressor Questionnaire (MSSQ) consists of six hypothetical domain categories to stressors - ARS Academic Related Stressor, IRS Inter active /Inter personal related stressor, TLRS Teaching Learning related stressor, SRS Social stressors, DRS Drive/Desire related stressor, GARS Group activity related stressor.used.Spirituality awareness sessions were conducted with two follow-up sessions 3 monthly. Sessions comprised of Spiritual wellness awareness lecture,Pranayama (Breathing exercise),Transcendental sitting meditation. Two follow-up sessions conducted 3 monthly After experiences assessed by Index of Core Spiritual Experiences (INSPIRIT) to know the spiritual awareness and wellness.

Summary of Results

63% of students had moderate stress and 24% high level stress by ARS,TLRS and IRS cause moderate level stress in 59% and 55% of students respectively.IRS was identified the second most common stressor causing high level of stress in19%of students. Even though DRS caused severe stress in 2% of students. SRS and GARS were considered stressors causing mild stress .Significant decrease i.e from 63% to 47% observed in students having moderate level of stress with ARS. Increase in students with mild/no stress with ARS (36%)

suggest positive effect of spiritual awareness Significant effect noticed with DRS and GARS by increase in percentage of students with mild/no stress i.e 77% and 57% respectively.

Discussion and Conclusion

In MSSQ stressors of medical students are grouped into six categories.The most common stressor identified in study was ARS causing moderate level of stress followed by TLRS and IRS. Spirituality may be a buffer to the negative effect of stressorsby element of core spiritual experience i.e The perception of internalized relationship with GOD/ some form of Higher Power as defined by the person.. INSPIRIT was used to assess spiritual experience after both follow-up sessions showed 10% of students with high and 48% of student with medium low spiritual experience .

Take-home Message

Spiritual awareness sessions can be the strategy for stress management and need to be included in curriculum to improve learning and as stress management strategy.

5P12 (6431)

Date of Presentation: Monday 28th August
Time of presentation: 1712 - 1718
Location: Carron 2, Loch Suite, SEC

Relationship-rich education learning for transitions in higher education. Students as partners in teaching, learning and research

Kristin Benjaminsen Borch[1], Maria Fredriksen Kvamme[1], Anita Iversen[1], Rannveig Grøm Sæle[1], Iris Borch[1]

[1]*UiT The Arctic University of Norway, Tromsø, Norway*

Background

Researchers at the Faculty of Health Sciences, UiT The Arctic University of Norway involved students as co-creators in 2021-2022 for active contributions to the pre-planning of a research project aiming to improve students' wellbeing and learning. The university has 17.000 students, whereof 5000 are students at 13 health profession education programs.

Summary of Work

We have collaborated with the Student Parliament, and arranged seven workshops with 20 students from different campuses, faculties, and study programs. In this process the students have identified a need for locally tailored and practically applicable research. Additional to this, we have an ongoing study that explores understanding and management of mental health and wellbeing challenges, from the perspectives of 22 fulltime students at UiT, who have personal experiences with mental health and wellbeing challenges affecting everyday student life, and 5 psychosocial advisors at two of the northernmost student welfare organisations. We have run research projects together with students from educational programs in biomedical laboratory science, clinical nutrition, public health, and medicine.

Summary of Results

In collaboration with the students', we identified four central main themes urgent to develop more knowledge: the impact of basic needs and conditions for well-being and quality of life, the impact of social belonging and places to meet socially and for learning,

the effect of participation on quality of life and in learning, as well as predictable and stable learning and social frameworks in the education process.

Discussion and Conclusion

This co-creation process lays a basis for a knowledge gap identified by the students themselves and a newly co-designed research project RELATE – Relationship-rich education learning for transitions in higher education. Students as partners in teaching, learning and research. In this session we will elaborate on the results from the pilot project, how we are using the results to improve students learning environment. Furthermore, we will invite participants to discuss how students can be engaged as partners in education to increase critical thinking, collaboration, competencies regarded as essential for health professions.

Take-home Message

In co-creation with the students and the student welfare as active partners, we have identified the need for locally tailored and practically applicable research that are perceived meaningful.

Session 5R

5R (0372)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: Dochart 2

Context matters: exploring faculty development across different socio-cultural and linguistic contexts

Manon Kluijtmans[1], Barbara Blackie[2], Wendy Stewart[3], Yvonne Steinert[4]

[1] UMC Utrecht, Utrecht, The Netherlands [2] SIDRA medicine , Doha, Qatar [3] Dalhousie University, New Brunswick, Canada [4] McGill University, Montreal, Canada

Background

What is considered high quality teaching is dependent on context. Teaching & learning cultures may differ between countries, institutes, disciplines, and students. Many socio-cultural differences in context may also exist, for instance in language(s) of instruction, language(s) of informal conversation, cultural norms and values, and social-, environmental- or economical differences. Previous research has focused on teaching international or diverse student populations, yet limited research is available that informs how to prepare teachers for different teaching & learning contexts between countries and institutes[1]. Developing awareness and skills for teaching in, or across, different contexts, is highly relevant for faculty development, especially in light of increased faculty mobility and international collaborations such as joint education programs. In this workshop, we aim to explore how faculty developers and teachers have experienced working in and across different sociocultural and linguistic contexts. Which differences and similarities are being encountered? Are there themes that are recognizable across experiences? What helps or hinders overcoming perceived differences?

1 Lewis LD, Steinert Y. How Culture Is Understood in Faculty Development in the Health Professions: A Scoping Review. Acad Med. 2020 Feb;95(2):310-319.

Who Should Participate

Both teachers and faculty developers with experience or interest in teaching & learning across different cultural contexts.

Structure Of Workshop

A brief didactic presentation will provide a review of the current literature and summarize the experiences of the facilitators. Using prompt questions, participants will engage in guided small group discussions, sharing personal experiences with faculty development and/or teaching in different cultures. A facilitated discussion will then follow to identify common and unique challenges, as well as helpful or hindering factors, and identify good practices how faculty development can prepare teachers to work in or across different contexts. The workshop will conclude by generating actionable ideas: participants will discuss in small groups possible outlines for faculty development activities that address one of the identified themes.

Intended Outcomes

1. Explain similarities and differences in teaching and learning across cultural contexts.
2. Describe ways we can prepare teachers for different cultural contexts.
3. Identify challenges in providing faculty development in different cultural contexts.
4. Use the acquired skills and knowledge to generate actionable ideas for faculty development activities.

Session 5S

5S (5569)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: M3

Techniques for Developing a Community of Practice of Health Professions Educators at a Large, Clinically-Based Community Health System

Justin Triemstra[1], J.M.Monica van de Ridder[2], Ron Ford[1], Candace Smith-King[1], Jeri Kessenich[1]

[1] Corewell Health, Grand Rapids, USA [2] Michigan State University, College of Human Medicine , Grand Rapids , USA

Background

Historically, large health systems underprioritize health professions education compared to patient care and translational research. Consequently, faculty development, the professional identity formation of health profession educators (HPE), and educational scholarship has received less attention; negatively affecting the learning climate, retention of faculty, and quality of teaching.

To combat these dilemmas, educational leaders have developed communities of practice (CoP) for HPE across health systems (i.e. academy of educators). Although many models have been utilized successfully at traditional academic medical centers, implementation of CoPs at community health systems with less resources remain difficult to develop and sustain.

Therefore, the goal of this workshop is to (a) share experiences with the development of a successful CoP for HPE in a large, clinically-based, community hospital system, (b) explore activities that are low in cost and resources but positively contribute to the development of

HPEs in the areas of educational research, service, and education, (c) and discuss the different existing models that assist in creating CoPs for HPE.

Who Should Participate

Faculty Developers, Program Directors, Residents, Students and all others interested in health professions education and faculty development.

Structure Of Workshop

Introduction of the speakers and audience (5 min).

1. Define and share examples of different communities or practice (CoP) in health professions education (HPE); followed by a facilitated large group discussion (20 min).
2. Discuss the organization of a system-wide initiative that created a CoP for HPE; while discussing the components of leadership, participation, membership, time commitment, and a multi-year program evaluation (25 min).
3. In facilitated small groups, develop low cost content for participants home institution to stimulate professional development of HPE and to share resources in the area of (a) HPE research, (b) service and (c) teaching. The content will then be shared via gallery walk (30 min).
4. Take-home messages, question and answer (10 min).

Intended Outcomes

1. Explore the different types of communities of practice for health professions educators as described in the literature.
2. Understand how CoPs are organized and what challenges can occur throughout their development.
3. Create a list of low-cost activities that stimulate professional development in the areas of service, research, and teaching in HPE.

Session 5T

5T (1496)

Date of presentation: Monday 28th August
Time of session: 16:00 - 15:30
Location of presentation: M2

Reflections on Assessment for Learning and Coaching for Change

Glendon Tait[1], Nirit Bernhard[1], Susanna Talarico[1], Pier Bryden[1]

[1] *University of Toronto, Toronto, Canada*

Background

Programmatic assessment is increasingly being utilized to emphasize the learning function of assessment. Frequent, low-stakes assessments inform feedback and coaching, and over time form the basis of high stakes decisions (Heeneman et al., 2021). Key to the approach is the holistic review of, and reflection on data to inform ongoing learning. Reflection and directed self- assessment, captured through portfolios, have been employed as tools to foster reflective practice as well as to assess competence. Recognizing the limitations of self-assessment (Eva and Regehr, 2005), coaching relationships provide a context for directed self-assessment. One framework for this is the R2C2 model (Sargeant et al. 2015). This model builds on the learner's relationship with a faculty scholar and pairs reflection on feedback with coaching for performance change. The MD Program at the University of Toronto employs this model to facilitate dialogue about academic and personal progress between learners and faculty, and as the basis of progress reviews.

This workshop will present a novel approach to coaching within programmatic assessment, namely the use of the relationship created in reflective practice groups as the foundation for a coaching model of directed self- assessment (Tait and Kulasegaram, 2022). We will review how students reflect on assessments and feedback found in an e-

portfolio to create a learning plan and to engage in a facilitated feedback conversation with faculty coaches.

Who Should Participate

Medical educators and faculty developers who have implemented programmatic assessment and/or coaching relationships as part of ongoing learning

Structure Of Workshop

1. A primer on the basis and approach to programmatic assessment and directed self-assessment will be presented
2. Participants will simulate a small reflective practice group as an icebreaker
3. Following a demonstration of the R2C2 model, participants will engage in a facilitated feedback conversation (in pairs)
4. Participants will discuss in large group how this approach might be adapted to their own education context; challenges and strategies will be explored

Intended Outcomes

1. Review literature on portfolios, reflection, self-assessment, facilitated feedback, and programmatic assessment in medical education
2. Describe and adapt a programmatic assessment model to your own education context
3. Participate in/facilitate a mock reflective practice group
4. Experience the R2C2 model of facilitated feedback

Session 5U

5U (4298)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: M4

Using Systems Thinking to Facilitate Change in Health Professions Education

Keith W Wilson[1]

[1] *Dalhousie University, Halifax, Canada*

Background

When embarking on any health professions educational endeavour, educators may quickly discover several challenges to be addressed as problems can be complex in nature. For example, educators may want to address issues of inclusivity in curriculum design or perhaps implement change in assessment methods. The resultant change in health professions education is oft difficult – there are many interrelated parts and as a result it can be challenging to bring projects successfully to fruition. Systems thinking is an approach used in many professions to address complex problems. It allows us to examine problems from a broader lens - taking into account multiple angles. To this end, a main goal in using systems thinking to address educational problems is to understand the behaviour of involved processes, ultimately leading to creative ways to manage these complex problems. This workshop intends to aid participants in understanding and ultimately applying systems thinking to educational problems in their own context.

Who Should Participate

Educators involved in planning and implementing curricular, assessment or structural change

Structure Of Workshop

After introductions and icebreakers, participants will be led through a brief didactic session on system thinking, related examples, and how it applies to health professions education. Participants will be introduced to practical tools to address and analyze complex problems found in health professions education. In small groups, participants will apply their knowledge of systems thinking using a case study. This application of systems thinking principles will then be debriefed in the larger group. Further brainstorming to apply these to participants' own contexts will be explored before concluding the workshop.

Intended Outcomes

- Define systems thinking and explore its importance in health professions education
- Recognize the interdependency of components within a complex system
- Apply systems thinking principles to a sample health professions education problem

Session 5V

5V (4283)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: Staffa

Cultivating Belonging within the Learning Environment

Barret Michalec[1], Fred Hafferty[2]

[1] *Edson College of Nursing & Health Innovation, Arizona State University, Phoenix/AZ, USA* [2] *The Mayo Clinic, Rochester/MN, USA*

Background

Sense of belonging is directly connected to health profession students' well-being, confidence, and learning processes, as well as systems-level issues such as workforce retention and organizational culture. Given recent reports on the high number of healthcare practitioners leaving their profession, the high rates of burnout and depression among health professionals and health profession students, and the persistent need to bolster the healthcare workforce – it is essential to better understand how contemporary health profession students and faculty develop a sense of belonging within their education and clinical settings, how this sense of belonging is further cultivated by organizational and interpersonal factors, and how one's sense of belonging can support and reinforce positive well-being, self-esteem. Relatedly, given the recent influx of online and eLearning curricular we must examine how sense of belonging is cultivated in the "virtual (clinical) learning environment". Our Workshop not only outlines the fundamentals of belongingness in general and as it relates to health professions education - but also engages participants in multilevel assessment of belongingness within their own institutions, and walk them through evidence-based strategies to cultivate belongingness among students and colleagues.

Who Should Participate

Health Profession Education Faculty, Leaders, and Adminitrators

Structure Of Workshop

A.) the **WHAT** and **WHY** of Belonging --> Brief history of Belonging in health professions education

Aa.) Exercise to Prime participants' own sense of belonging

Aaa.) Notecard exercise to assess level of belonging within participants' own organization

B.) the **WHERE** of Belonging --> where can/does it occur/cultivate

Bb.) exploration of scales assessing Belonging in different spheres: learning environment, general

Bbb.) Exercise to explore where belonging is being cultivated (or hindered) in partiucipants' own learning environment

C.) the **HOW** of Belonging --> exploration of strategies of how can you cultivate belonging among your students and faculty

Cc.) Exercise for participants to develop 3-5 action-item plan within own learning environment

Intended Outcomes

A.) General understanding of the fundamentals of Belonging (as it relates to Health Professions Education.

B.) Apply fundamentals of Belonging to ownself, own organization, and practices/policies nested within organization.

C.) Create strategies/plan to enhance/cultive Belongingness among students/colleagues and within home learning environment.

Session 5W

5W (3078)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: Jura

Evidence Syntheses In Health Professions Education: From Research Question To Knoweldge Translation

Aliki Thomas[1], Lauren Maggio[2], Tanya Horsley[3], Ryan Brydges[4]

[1] McGill University, Montreal, Canada [2] Uniformed Services University of the Health Sciences, Bethesda , USA [3] Royal College of Physicians and Surgeons of Canada, Ottawa, Canada [4] University of Toronto, Toronto, Canada

Background

As the evidence base in health professions education (HPE) grows exponentially, so does the need to effectively synthesize the evidence. A concurrent boom in development and use of multiple knowledge synthesis techniques has left scholars challenged to navigate, identify, and apply both standard and innovative approaches when synthesizing evidence in HPE. In this workshop, we will briefly explore the nature, purpose, value and emerging discourses of five prominent knowledge syntheses (systematic, scoping, realist, narrative and umbrella). Drawing from the literature and extensive experience in designing and executing syntheses, the moderators will provide conceptual recommendations for selecting the most appropriate knowledge synthesis method to answer complex research questions often arising in HPE. They will also discuss the circumstances wherein each approach is best leveraged to inform practice and policy, and the role of syntheses in knowledge translation (KT).

Who Should Participate

Individuals interested in learning about the fundamentals of evidence syntheses, those looking to critically appraise and apply findings of 5 common evidence syntheses to their

practice, and those interested in conducting knowledge syntheses in their program of research.

Structure Of Workshop

The workshop will be divided into 5 parts

Part 1: I Introduction to evidence syntheses: what are they and are they used for?

Part 2: Brief presentation of the 5 syntheses approaches to include the goals and methodological philosophies underlying each type

Part 3: Small group work engaging with planning a simulated synthesis using 1-2 of the common approaches; the focus will be on how the paradigm can influence methodological decisions.

Part 4: Facilitated large group debriefing

Part 5: The role of evidence syntheses in informing educational policy and practice

Intended Outcomes

1. Discuss and discern the nature, purpose, value and role of systematic, scoping, realist, narrative, and umbrella reviews of HPE research;

2. Align the most suitable method with common question phenotypes;

3. Describe generally the types of knowledge produced by particular synthesis methods;

4. Propose what circumstance(s) the knowledge produced from each type of evidence synthesis can be used to inform educational practice and policy

Session 5X

5X (0768)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: Barra

Workplace Culture in Medical Postgraduate Training: Perspectives and Opportunities

Juliana Sá[1], Stella Yiu[2], Elif Cakal[3], Janice Hanson[4], Marianne Yeung[2] James Kwan[5]

[1] Faculty of Health Sciences University of Beira Interior, Covilha, Portugal [2] University of Ottawa, Ottawa, Canada [3] University Hospitals of Leicester, Leicester, UK [4] Washington University, Saint Louis, Missouri, USA [5]Tan Tock Seng Hospital, Singapore

Background
Organizational culture has been defined as "normative glue and a set of values, social ideals or beliefs that organization members share". An organization's culture has important effects on the training and performance of medical postgraduates. Research shows that work culture influences willingness to belong to the place, mediates interactions between trainers and trainees, and impacts the tacit knowledge needed for transition to practice. However, culture is frequently unrecognized and unaddressed in postgraduate training. In this workshop, facilitators will explore various aspects and implications of culture in the context of postgraduate training.

Who Should Participate
Clinical educators, program directors, supervisors, trainees, educational managers, healthcare managers, researchers, and others interested in organizational culture.

Structure Of Workshop
1) Opening Session (Large Group – 5 min): introductory poll; setting objectives

2) Presentation 1 (Large Group – 5 min): foundations of organizational culture

3) Presentation 2 (Large Group – 10 min): framework of culture in different perspectives:

- Consequences of Culture in the Educational Environment
- Interprofessional relationships for newly graduated physicians
- Interprofessional relationships along the career path
- Personal competence in recognizing culture and its biases in a particular workplace setting

4) Facilitated Small group discussion (Small Groups – 45 min):

Small groups will

a. discuss dimensions of culture; and
b. create a plan to assess the culture of a training program or a work environment/workplace
c. develop strategies to address challenges within the culture of a training program or a work environment/workplace

5) Large Group Session (Large Group – 20 min): summary of small group discussion

6) Closing Session (Large Group – 5 min).

Intended Outcomes

Participants will

a. Describe how organizational culture influences postgraduate medical training experiences;
b. Identify elements of their own workplace culture; and
c. Create action plans to positively impact organizational culture.

Session 5Y

5Y (0725)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: Shuna

How to Trouble Shoot, Adjust, and Adapt Active Learning: From Good Intentions to Great Outcomes

Malford Pillow[1], Nancy Moreno[1], Alana Newell[1], Sherita Love, PhD, MEd[1]

[1] *Baylor College of Medicine, Houston, TX, USA*

Background

This session addresses the problem of ineffective or poorly designed active learning instruction in health professions education. Renewed curricular efforts have focused on incorporating active learning (Sklar 2018), but very little addresses how to assess and redesign or realign existing active learning instruction for greater impact and efficacy (White 2014). The session will be to provide participants with strategies and approaches to enhance learner-centered teaching and outcomes with existing active learning instruction.

This session fits into an outcomes-driven, backward design framework to guide the work of curriculum planners in developing effective active learning experiences. We will specifically guide participants as they assess the effectiveness of their active learning instruction and redesign and realign these learning experiences to the outcomes and assessments.

Who Should Participate

This session is targeted towards faculty and curriculum developers, but is appicable to students, residents, and fellows.

Structure Of Workshop

15 min – Introduction and large group brainstorming.

10 min – Review active learning and pertinent backward design processes

20 min – Small group activity. Groups use a template (provided) to work with case-based active learning challenges seen in health science education. Cases will reflect the themes and priorities identified in the large group activity.

15 min – Small group debrief. Groups will summarize the main points and best practices from their assessment and redesign.

20 min – Gallery walk. Representatives from each small group will present findings from their assessment and ideas for improvement of active learning instruction with focus on alignment to learner-centered outcomes and the "big idea."

10 min – Large group discussion of next steps and review of resources available to assess and refine active learning.

Intended Outcomes

By the end of the session, participants will be able to:

1. Describe core principles of active learning
2. Discuss at least one framework (5E's or other) to apply active learning
3. Describe the principles for designing active learning in the context of backward design and learner-centered outcomes
4. Apply a template based on the frameworks discussed (provided by facilitators) to assess and realign their active learning instruction to learner-centered outcomes

Session 5Z

5Z (3752)

Date of presentation: Monday 28th August
Time of session: 16:00 - 17:30
Location of presentation: Orkney

Technology-enhanced hybrid learning in the "new normal": sharing our battle-tested lessons

K. Jean Chen[1], Marc Zucker[1]

[1] *University of Ottawa, Ottawa, Canada*

Background

As we emerged from the pandemic and entered a "new normal", hybrid learning is brought into high gear. How do you engage learners both in-person and remotely? How do you call on students to participate without making them feel targeted and without neglecting the other group of audience? How do you avoid distraction and "Zoom fatigue"? There is clearly a need for faculty and learner support in navigating this "new normal". This session includes practical tips on application of effective teaching in the virtual and on-site environment. Special attention will be paid to learner/audience engagement and ways to give virtual and on-site participants an equal presence. This 90-minute workshop will utilize a combination of small- and large-group instructional methods to explore the objectives. The session will start with an ice-breaker that will also serve as a demonstration of an interactive activity for the group, followed by a review of learning theories applicable for both in-person and virtual environment. Next, key considerations will be covered through the use of both large and small group activities, enhancing interactivity/engagement and highlight faculty development needs for synchronous distributed programs. A final wrap-up will occur to allow for debriefing on the session and to provide an opportunity for reflection and a commitment to change.

Who Should Participate

This session is designed for to any faculty member actively delivering undergraduate or postgraduate health professional education, especially ones who are part of a synchronous distributed program.

Structure Of Workshop

Time(min)-**Activity**-**Modality**-**Objective(s)**

0-10: Introduction/icebreaker-Large Group-Objective1

10-30: Special considerations when transitioning to hybrid teaching; review of pedagogical/andragogical principles/key considerations: technical, moderating/netiquette, privacy/EDI-Large&Small group-Objectives 2-3

30-50: Interactivity/engagement with hybrid learning-Small group breakout with large group reporting back-Objectives 2-3

50-85: Faculty development needs-Small group-Objectives 2-3

85-90: Wrap-up-Large group-Objectives 1-3

Intended Outcomes

At the end of the session, participants will

1. analyze challenges when transitioning from in-person teaching/presentation to a hybrid synchronous distributed environment involving both in-person and virtual audience.
2. apply teaching principles to technology-enhanced blended synchronous teaching sessions.
3. identify special EDI (equity, diversity and inclusivity) considerations with hybrid teaching/learning activities.

Session 6A

6A (2157)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: Hall 2

Continuing Professional Development of Healthcare Professionals: past, present and future

Céline Monette[1], Alvaro Margolis[2], Helena P Filipe[3], Harumi Gomi[4], Samar Aboulsoud[5]

[1] Chair, AMEE CPD Committee, Quebec, Canada [2] Incoming Chair, AMEE CPD Committee, Montevideo, Uruguay [3] Resources Task Force co-chair, AMEE CPD Committee, Lisbon, Portugal [4] Secretary, AMEE CPD Committee, Tokyo, Japan [5] Past-Chair, AMEE CPD Committee, Cairo, Egypt

Background

Continuing professional development (CPD) of healthcare professionals is an important stage in the continuum of health education. There has been a constant evolution of CPD and in recent years with the pandemic we had dramatic changes in the workplace of healthcare professionals and in CPD, including the use of technology.

As an example, AMEE, as a global leader in medical education, did a rapid shift in the use of technology for its educational activities, even its annual conference.

AMEE hosts a CPD committee, several committee task forces and a Special Interest Group working together on CPD to learn from the past, study the present and prepare for the future.

Topic Importance

The AMEE community of health educators, whether an organizer or an attendee of CPD activities, needs to be aware of the lessons learned and the trends regarding CPD, in relation to several dimensions, such as workplace and interprofessional team-based

learning, the use of technology, patient involvement in CPD, and regulation (such as accreditation, recertification and relicensure).

The AMEE CPD committee in turn wants to engage with the AMEE community in order to receive feedback to prioritize its work.

Format and Plans

The activity will start with an understanding about who is attending the session and what they need to learn, in order to prioritize the topics addressed. Then there will be a series of interactive presentations about the major topics mentioned above, with space for a dialogue with the audience, polling and large-group interactivity such as think-pair-share.

Take Home Messages

- CPD is an important part of the health education continuum.
- AMEE as a global educational leader is fostering the quality and efficacy of CPD.
- CPD is quickly evolving, because of changes in the workplace, interprofessional education, the empowerment of patients, the inclusion of technology, and its accreditation and evaluation.
- The AMEE community members, who organize or participate in CPD, have to consider these trends.

Session 6B

6B (1148)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: M1

Nothing about us without us: integrating patient voices in health professions education

Walter Eppich[1], Nancy McNaughton[2], Paul Murphy[3], Anne de la Croix[4], Debra Nestel[5], Sophie Soklaridis[6]

[1] RCSI University of Medicine and Health Sciences, Dublin, Ireland [2] University of Toronto, Toronto, Canada [3] Queen's University Belfast, Belfast, UK [4] Amsterdam UMC, Amsterdam, The Netherlands [5] Monash University, Melbourne, Australia [6] The Centre for Addiction and Mental Health, Toronto, Canada

Background

With changing demographics and healthcare needs, such as our aging population and patients living with chronic illness or disability, the 'patient voice' has never been more important. Yet this trend raises important questions: Why should we integrate patient voices in health professions education? What can be learned by including patient voices in educational design? Who benefits? The increasing engagement of patients or clients in different types and levels of heath professional training through co-creation processes has great potential yet also raises important educational and ethical questions for educators and health care practitioners.

Topic Importance

Without adequate consideration of patient perspectives, educational activities risk losing authenticity. Indeed, these activities may promote negative learning through stereotypical presentations of patients with a range of conditions, including issues related to equity, diversity, and inclusion. Concrete examples of these activities may include patient cases used for case-based teaching or experiential education using simulation-based

approaches. By applying principles of co-creation, educators may integrate patient voices, thus elevating relevant authenticity and minimising potential harmful stereotypes.

Format and Plans

This symposium brings together diverse perspectives including patient/client advocate, researcher, medical educator, and humanities scholar to address issues involving the co-creation of health professional education with patients. Panellists will examine the ways that patients are being incorporated into health professional training such as simulation-based education. They will also consider the benefits and implications of this patient involvement and concrete strategies to promote patient/public engagement in future education and research. After short presentations to prompt reflection, the session moderators will facilitate a discussion with panellists in response to audience questions.

Take Home Messages

1. The inclusion of patient voices in educational design through co-creation strategies has important benefits and implications.
2. Ethical considerations should guide the approach to including patient perspectives and patient voice.
3. Diverse perspectives increase the authenticity of an array of educational activities and has the potential to amplify the impact of educational research.

Session 6C

6C (0945)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: Argyll I

Engaging and retaining health professions educators in LMIC: Initiatives from Brazil, Africa, India

Joana Fróes Bragança Bastos[1], Kerrin Begg[2], Annette UWINEZA[3], Noha M Elrafie[4], Victoria Nyaiteera[5], Vinutha Shankar[6]

[1] Faculty of Medical Sciences, State University of Campinas Unicamp, Campinas, Brazil [2] UCT Faculty of Health Sciences, Cape Town, South Africa [3] University of Rwanda , Kigali, Rwanda [4] Ain Shams University, Cairo, Egypt [5] Mbarara University of Science and Technology, Mbarara, Uganda [6] Sri Devaraj Urs Academy of Higher Education & Research, Kolar, India

Background

Faculty from LMICs are hybrid educators with multiple roles and responsibilities, competing demands, and resource constraints. *Medical education is not prioritised as a career path; consequently, there is less dedicated time and fewer resources allocated. Faculty tend to adopt teaching styles they were exposed to as students, often with no previous experience in teaching methodology and the absence of faculty development plans or institutional support. Proposals for engaging, qualifying, and retaining health professional educators in high-income countries do not apply to LMIC contexts.

Topic Importance

As medical education is evolving, it is essential to start the debate for new solutions in LMICs, proposing inclusive, novel, and innovative ways to engage and retain faculty through developmental initiatives and career pathing.

There is a lack of contextual framework for medical education in different regions, thus a need to sensitize the worldwide community about the particularity and challenges medical educators face in their daily practices.

Format and Plans

1. Introduction: Hybrid clinician-educators in LMICs - challenges of engaging and retaining amidst the complexity of multiple roles and competing demands - 5min
2. Interactive activity- Padlet - 10min
"What context do you come from - HIC / MIC / LIC?
"What % of your core role is education/teaching?"
"What other roles are required of you?"

3. Presentations (35 min)
• "Growing educational leaders in a South African university";
• "Strengthening Health Professions Education Research in Africa - Lessons learned";
• "Adapting teaching methods to regional and local contexts";
• "Attracting and retaining Clinician educators in less attractive specialties in Africa";
• "Developing education technology skills in clinicians in India";
• "Medical educator career pathing in a South American University."

4. Mentimeter 5min
• career interests as a medical educator
• challenges or competing demands that you face

5. Pair-share: • initiatives tried in your context – 5min

6. Discussion & conclusions- 30min

Take Home Messages

Health Care professionals have multiple roles in LMICs. Consequently, engaging faculty in medical education requires different approaches than in developed countries.

Faculty development is essential for the effective performance of their roles as educators in resource-constrained contexts

It is crucial to create inclusive forums to discuss, propose and share experiences with Health professional educators in LMICs to transform the future.

Research Papers: Continuing Professional Development

6D1 (0377)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 09:20
Location of presentation: Hall 1, SEC

Is the assumption of equal distances between global assessment categories used in borderline regression valid?

Patrick McGown[1], Celia Brown[2], Ann Sebastian[1], Ricardo Le[2], Anjali Amin[1], Andrew Greenland[1], Amir H Sam[1]

[1] *Imperial College School of Medicine, London, UK* [2] *Warwick Medical School, Warwick, UK*

Introduction

Standard setting for clinical examinations typically uses the borderline regression method to set the pass mark.

To set the pass mark for each station, candidates' global ratings (GRs) (e.g. Fail, Borderline Pass, Clear Pass, Good and Excellent) are firstly converted into interval numerical values (Fail = 0, Borderline Pass = 1, Clear Pass = 2, Good = 3, Excellent = 4). Secondly, the total scores awarded to candidates for the station are plotted on the y-axis of a graph against the numerical value for the GR they received for that station on the x-axis. A best-fit line (using ordinal linear regression) is drawn from one end of the scale to the other. The point at which the best-fit line intersects the 'Borderline Pass' GR provides the pass mark for the station.

An assumption made in using this method is that there are equal intervals between GR. However, this assumption has never been tested in the medical literature. If this assumption of equal intervals does not hold, there might be important ramifications for the validity of pass mark setting and the number of students who would pass/fail an examination.

We examine if the assumption of equal intervals between GR is met, and the potential implications for student outcomes.

Methods

Clinical finals examiners were recruited across two institutions to place the typical 'Borderline Pass', 'Clear Pass' and 'Good' candidate on a continuous slider scale between a typical 'Fail' candidate at point 0 and a typical 'Excellent' candidate at point 1. Results were analysed using one-sample t-testing of each interval to an equal interval size of 0.25.

Secondary data analysis was performed on summative assessment scores for 94 clinical stations and 1191 medical student examination outcomes in the final 2 years of study at a single centre.

Results

On a scale from 0.00 (Fail) to 1.00 (Excellent), mean examiner GRs for 'Borderline Pass', 'Clear Pass' and 'Good' were 0.33, 0.55 and 0.77 respectively.

All of the four intervals between GRs (Fail-Borderline Pass, Borderline Pass-Clear Pass, Clear Pass-Good, Good-Excellent) were statistically significantly different to the expected value of 0.25 (all p-values <0.0125).

An ordinal linear regression using mean examiner GRs was performed for each of the 94 stations, to determine pass marks out of 24. This increased pass marks for all 94 stations compared with the original GR locations (mean increase 0.21), and caused one additional fail by overall exam pass mark (out of 1191 students) and 92 additional station fails (out of 11,346 stations).

Discussion And Conclusion

The finding that examiners do not perceive intervals between GR locations are equal to 0.25 is important, because this implies that the gold-standard method for standard setting in clinical examinations uses an assumption which is not true. Consequently, there are potential ethical and patient safety ramifications if this significantly affects medical student pass/fail outcomes.

Using our institution's conjunctive standard of passing ≥50% stations, the additional station fails with adjusted GR did not impact upon overall exam-level pass/fail outcomes. All students who would fail to pass ≥50% of stations with the adjusted regression calculation had already failed based on other passing criteria (overall or domain score requirements).

This indicates that despite differences in examiner perceptions of GR locations across the performance spectrum, the conventional borderline regression method is reassuringly robust and valid at a ≥50% station passing conjunctive.

Understandably, if more stringent conjunctive station pass requirements were used, both the standard and adjusted regression calculation would lead to additional overall fails.

However, as the number of stations required to pass increases, the adjusted regression

calculation leads to higher numbers of additional overall exam fails by station passing conjunctive compared to the standard calculation.

Conclusion: Although the current assumption of equal intervals between GRs across the performance spectrum is not met, and an adjusted regression equation causes an increase in station pass marks, the effect on overall exam pass/fail outcomes is modest.

References

1. Pell G, Fuller R, Horner M, Roberts T. How to measure the quality of the OSCE: a review of the metrics-AMEE guide no. 49. Medical teacher. 2010 Oct 1;32(10):802-11.
2. Daniels VJ, Pugh D. Twelve tips for developing an OSCE that measures what you want. Medical teacher. 2018 Dec 2;40(12):1208-13.

6D2 (1073)

Date of presentation: Tuesday 29th August
Time of session: 09:20 - 09:40
Location of presentation: Hall 1, SEC, SEC

Predictors of success and failure in international medical graduates: a systematic review of observational studies

Inge Schabort[1], Meisam Abdar[1], Rachel Couban[1], Nia Roberts[2], Carl Heneghan[2], Neha Arora[1], Farid Foroutan[1], Vahid Ashoorion[1]

[1] *McMaster University Faculty of Health Sciences, Hamilton, Canada* [2] *University of Oxford, Oxford, UK*

Introduction

International Medical Graduates (IMG), are defined to be physicians who immigrated to Western countries and are working in a country other than their country of origin and training.[1] IMGs are an important part of the international physician workforce, and many countries greatly depend on IMG physicians and are large net importers of qualified doctors. [2]

This study aimed to complete a systematic review of existing research on predictors for success and failure in postgraduate training and practicing associated with IMGs.

Methods

We searched Medline, PubMed Cochrane Central Register of Controlled Trials, BIOSIS Citation Index, CINAHL, Embase, ERIC, DARE, Global Health, LILACS via Global Index Medicus, Health Technology Assessment Database, Web of Science, Science citation index, Clinical Trials.gov, PsycINFO, Scielo and grey literature for studies of any design relating to the topic. Pairs of reviewers screened titles and abstracts, full text of potentially eligible studies, extracted data and assessed risk of bias independently and in duplicate. We organized outcomes in six groups including success in qualifying exams, success in matching for residency, success in certification exams and licensing exams to practice medicine, retention of IMGs to practice in the new country, being disciplined or receiving complaints and fitness to practice. When it was possible, we reported baseline probability, effect size

(in relative risk (RR), odds ratio (OR) or hazard ratio (HR) and absolute probability change for success and failure.

Results

Twenty-four studies (373,784 participants) reported the association of 93 predictors of success and failure for IMGs. Evidence from a low risk of bias (RoB) study demonstrated that female sex, English language proficiency, being graduated ≤5 years and higher scores in USMLE step 2 were more associated with success in qualifying exams. Results from a low RoB study showed that English fluency, Clinical Problem-Solving Test, and Situational Judgment Test were associated with success in Clinical Skills Assessment as a certification exam. Results from a low RoB study showed that IMGs who got a higher score on USMLE 2 clinical knowledge and in-training examination in post-graduate year (PGY) 1, 2 and 3 were less likely to fail in the American board of family medicine certificate. Results from a low RoB study showed that female IMGs were more likely to pass licensing exams in Finland (Absolute success increase (ASI) 14% (95%CI:0.5%,26%)). Results from a low RoB study showed that IMG family medicine residents who previously completed internship were more likely to pass Royal College of Physicians and Surgeons of Canada exam on first try (ASI 16% (95%CI: 3%, 20%)). Results from a low RoB study showed that male IMGs (HR: 2.73 (95%CI: 1.90, 3.93)) and candidates who attempt PLAB part 1, ≥4 times vs first attempters (HR: 2.3 (95%CI:1.26, 3.59)), and candidates who attempt PLAB part 2, ≥3 times vs first attempters (HR: 2.45 (95%CI:1.44, 4.18)) were more likely to be censured. Results from a low RoB study showed that the patients of non-USIMG vs. US medical graduates had significantly lower mortality than U.S. graduates (Absolute mortality decrement 5 (95%CI: 2, 7) in 1,000 patients) and patients of non-USIMGs had lower mortalities than patients of USIMGs (Absolute mortality decrement 76 (95%CI: 4, 163) in 10,000 patients).

Discussion And Conclusion

This study bolsters the understanding of predictors for success and failure for IMGs in postgraduate training and practice and will be instrumental to inform international and national physician labour workforce planning. More high -quality evidence on this topic is needed.

References

1. Tiffin PA, Orr J, Paton LW, Smith DT, Norcini JJ. UK nationals who received their medical degrees abroad: selection into, and subsequent performance in postgraduate training: a national data linkage study. BMJ open. 2018 Jul 1;8(7):e023060.

2. Canadian Institute for Health Information. Physicians in Canada, 2016: summary report.

6D3 (0561)

Date of presentation: Tuesday 29th August
Time of session: 09:40 - 10:00
Location of presentation: Hall 1, SEC

Academic performance comparing ethnic minority and White doctors in the UK GP licensing assessment

Aloysius Siriwardena[1], Vanessa Botan[1], Nicki Williams[2], Kim Emerson[3], Fiona Kameen[3], Lindsey Pope[4], Adrian Freeman[5], Graham Law[1]

[1] University of Lincoln, Lincoln, UK [2] Health Education England , London, UK [3] Royal College of General Practitioners, London, UK [4] University of Glasgow, Glasgow, UK [5] Exeter University, Exeter, UK

Introduction

There have been continuing concerns about the role of doctors' ethnicity in success or failure in the United Kingdom (UK) Membership of the Royal College of General Practitioners (MRCGP) licensing assessments since the judicial review of 2014. The cause of differential attainment, particular comparing White and ethnic minority UK trained medical graduates, who are considered to have received similar training , is poorly understood. It has been suggested, therefore, that this is due to subjective bias due to racial discrimination, particularly in clinical skills assessments. We aimed to investigate differential attainment in the full range of UK licensing tests for general practice comparing ethnic minority and White doctors.

Methods

We used a longitudinal design linking performance at selection for all doctors entering specialty training for general practice in 2016, demographic data including ethnicity, sex, country of graduation, declared disability (specific learning difficulties and other physical disabilities), and subsequent performance in the Membership of the Royal College of General Practitioners licensing assessments including the Applied Knowledge Test (AKT), Clinical Skills Assessment (CSA), Recorded Consultation Assessment (RCA), and Workplace Based Assessment Annual Review of Competence progression (WPBA-ARCP).

Ethnicity was divided into three categories: White, ethnic minority, and mixed. White included White British, White Irish, and any other White background. Ethnic minority included Asian (Bangladeshi, Indian, Pakistani) or Asian British, Chinese, Black (African or Caribbean) or Black British, any other Asian background and any other Black background, and any other ethnic group. Mixed ethnicity included mixed White and Asian, mixed White and Black African, mixed White and Black Caribbean, and any other mixed background.

Binary variables included: sex (male vs female), country of graduation (UK vs non-UK graduates), and declared disability (declared disability recorded vs no declaration of disability).

WPBAs are undertaken throughout the year and progress of the trainee is reviewed by a panel at their ARCP at the end of each academic year. Outcomes were categorised as 'or 'developmental' and there is also the option of releasing the candidate from the training programme.

The main outcome variables were pass (1) or fail (0) for the AKT, CSA, or RCA examinations and presence of only standard ARCP outcomes (1) (i.e., achieving progress and competencies at the expected rate or gaining all required competencies for completing training) versus at least one developmental outcome (i.e., further development of specific competences required) or release from training (0).

Descriptive statistics of frequencies and multivariable logistic regression models were used to identify predictors of pass rates for each assessment.

Results

We included 3429 doctors who entered specialty training for general practice in 2016. The sample included doctors of different sex (female 63.81% vs male 36.19%), ethnicity (White British 53.95%, minority ethnic 43.04% or mixed 3.01%), country of qualification (UK 76.76%, non-UK 23.24%), and declared disability (disability declared 11.98%, no disability declared 88.02%). Their scores and score bands in the MSRA were highly predictive for all GP training end-point assessments including the AKT, CSA, RCA, and WPBA-ARCP. Performance in licensing assessments for ethnic minority doctors was not lower when scores at selection and other demographic factors (sex, country of qualification and declared disability) were taken into account. Ethnic minority doctors did significantly better compared to White British doctors in the AKT (OR 2.05, 95% CI 1.03, 4.10, p=0.042) whilst there were no significant

differences on the other assessments: CSA (OR 0.72, 95% CI 0.43, 1.20, p=0.201), RCA (OR 0.48, 95% CI 0.18, 1.32, p=0.156), or WPBA-ARCP (OR 0.70, 95% CI 0.49, 1.01, p=0.057).

Discussion And Conclusion

Ethnicity did not reduce the chance of passing GP licensing tests once sex, place of primary medical qualification, declared disability and selection scores were taken into account. These factors including selection test scores should be taken into account when comparing candidate performance. Doctors with low selection test scores may need additional support during training to maximise their chances of achieving licensing regardless of their ethnicity or other demographic characteristics.

References

Botan V, Williams N, Law GR, Siriwardena AN (2022). *How is performance at selection to general practice related to performance at the endpoint of GP training?* Report to Health Education England. University of Lincoln: Lincoln.

6D4 (1508)

Date of presentation: Tuesday 29th August
Time of session: 10:00 - 10:20
Location of presentation: Hall 1, SEC

Exploring differential patterns in performance assessment comments by race/ethnicity, sex, and clerkship

DeJuan White[1], Camille Murray[2], Divya Pereira[3], Danielle Sargeant[2], Greer Spradling[3], Ulemu Luhanga[1]

[1] Emory University School of Medicine , Atlanta, GA, USA [2] Emory Rollins School of Public Health, Atlanta, GA, USA [3] Emory College of Arts and Sciences , Atlanta, GA, USA

Introduction

Previous research and medical education organizations report that clinical evaluations involve implicit bias. Given the prevalence of inequalities in medicine and the profound influence of implicit racial bias on patient outcomes, mitigating exposure to implicit bias is crucial to promote equity from the classroom to the clinic. We aimed to explore differential patterns in medical students' performance assessment comments by race/ethnicity, sex, and clerkship course using natural language processing packages in R.

Methods

Emory University School of Medicine (ESOM) medical students' individual and summary clerkship performance assessment data from 2018-22 were joined to demographic data. Using R, a combined race/ethnicity (race/eth) variable was created to better characterize the student body, gender-based analyses were conducted with a binary sex variable, and clerkship courses were split into Surgical, Medical, and Hospital-Based course groups (CG). Text mining was performed to determine word count for comments. Sentiment analysis of comments was conducted using a lexicon tailored to a medical context. ANOVA tests were run to analyze differences in sentiment and word count across race/eth, sex, and CG.

Results

There were statistically significant differences in sentiment based on race/eth for academic years (AY) 18-19 and 19-20 in individual data. Significant interactions were found between race/eth and course group in AY19-20 for sentiment. There was a significant difference in word count associated with race/eth in individual data from AY19-20. No significant differences in sentiment or word count by race/eth were found in summary data. There were significant differences in word count by CG in summary data from AY19-20 and AY21-22 and in sentiment by CG in AY21-22 with interaction between race/eth and course group in all AYs.

Individual data had a significant difference in sentiment by sex for academic year (AY) 2020-21. There were no significant differences in sentiment or word count by sex for summary data. Individual data had significant differences in sentiment by CG for all AYs. Summary data had significant differences in sentiment by CG for AY19-20, AY20-21, and AY21-22 with interaction between sex and CG for AY20-21. Individual data had significant differences in word count by CG for AY18-19, AY20-21, and AY21-22. Summary data had significant differences in word count by CG for all AYs.

Discussion And Conclusion

Differential patterns were found between individual versus summary performance data. For example, while significant differences were found by race/ethnicity and sex within individual performance data, these differences did not appear in summary data. These findings may provide some support for the importance of multiple sources of data being triangulated to reduce the effects of individual-level bias. However, significant differential patterns in performance were present in both individual and summary data when examining performance by course group. Specifically, when course groups were considered, results suggest medical students were assessed differently by race/ethnicity and sex.

Our findings suggest that systemic inequalities continue to influence student assessments despite diversity, equity, and inclusion efforts that have been made. Considering how these can have lasting impacts on medical practice, it is of utmost importance that medical schools explore alternate means of addressing inequitable outcomes, such as addressing evidence of bias in evaluations from a systems-based practice perspective.

References

1. Hanson JL, Pérez M, Mason HR, Aagaard EM, Jeffe DB, Teherani A, Colson ER. Racial/ethnic disparities in clerkship grading: Perspectives of students and teachers. Academic Medicine. 2022;97(11S):S35-45.

2. Walvoord EC, Howenstine MS, Allen BL, Ribera AK, Nabhan ZM, Tori AJ, Eichholtz RD, Dankoski ME. Engaging All Stakeholders to Create a Trusted, Data-Driven, Process Improvement Approach to Addressing Learner Mistreatment. Teaching and Learning in Medicine. 2022:1-1.

Session 6E: Research Papers: Topics in Postgraduate Medical Education

6E1 (1514)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 09:20
Location of presentation: Argyll II, Crowne Plaza

Healthcare management and medical residents: navigating between two worlds

Vivian Delgadillo-Sanchez[1], Felipe Aluja-Jaramillo[1], Francisco Olmos-Vega[1]

[1] *Pontificia Universidad Javeriana, Bogotá, Colombia*

Introduction

Administrative tasks have historically been part of the care burden of medical residents, who are forced to assume them often without prior preparation (Myers & Provonost, 2017). However, healthcare management (HCM) competencies are relevant to provide efficient and high-quality patient care (Souza, Ros & Zeferino, 2012). Limited information in the literature explains how postgraduate medical students acquire competencies in HCM in the workplace. Their experiences are rarely considered in designing educational transformation strategies in this area despite occupying a leading role in the day-to-day execution of administrative tasks in health organizations. In this study, we explore how residents' experiences in the workplace influenced the acquisition of HCM competencies using the Figured World theory as the theoretical framework.

Methods

We designed a constructivist grounded theory study. We conducted focal groups and semi-structured interviews with 22 medical residents of the Pontificia Universidad Javeriana from different learning levels and disciplines, rotating at the San Ignacio University Hospital in Bogotá, Colombia. We constructed the final results using iterative data collection and analysis, constant comparison methods, and theoretical sampling.

Results

We constructed two opposite figured worlds that represent residents' experience with the acquisition of HCM competencies: The non-managing physician and the physician-as-administrator. The former is characterized by a discourse that deliberately underscores the role of the HCM tasks as part of residents' training, is full of negative interactions with the healthcare team, and limits residents' agency. This world is heavily influenced and perpetuated by an established hierarchy and supervisors that uphold the discourse. In contrast, the physician-as-administrator world is enriched by strategies that incorporate the HCM tasks as part of the medical act. In this world, residents collaborate and learn from other healthcare team members, have supervisors who model how to incorporate HCM tasks into their daily activities and demonstrate an expanded sense of agency. Residents either align with one or the other, developing their professional identity according to the world they are being introduced to.

Discussion And Conclusion

Educational leaders must understand that the traditional non-managerial physician figured world gives residents a feeling of uprooting and discomfort when carrying out this type of tasks. It could also generate clinical safety risks and financial losses. To transform this world into the physician-as-administrator, it is necessary to reconfigure some workplace hierarchies, consolidate interprofessional collaborations and change the discourse perpetuated by influential role models. Supervisors must also strengthen their knowledge of HCM and improve its integration into clinical practice. Any effort to train residents on HCM competencies could be lost if the workplace underscores their value in patient care.

References

Myers, C.G., & Pronovost, P.J. (2017). Making Management Skills a Core Component of Medical Education. Academic medicine: journal of the Association of American Medical Colleges, 92(5), 582–584. https://doi.org/10.1097/ACM.0000000000001627

Souza, P., Ros, M. and Zeferino, A. (2012) The Brazilian public healthcare system and its participation in medical training. Health, 4, 500-505. doi: 10.4236/health.2012.48080.

6E2 (1540)

Date of presentation: Tuesday 29th August
Time of session: 09:20 - 09:40
Location of presentation: Argyll II, Crowne Plaza

Going Above and Beyond with SJTs: Impact of Applicant Characteristics on Open-Response SJT Participation

Jennifer Chen[1], Paula Costa[2], Aimee Gardner[1]

[1] *Baylor College of Medicine, Houston, Texas, USA* [2] *SurgWise, Houston, Texas, USA*

Introduction

Use of situational judgment tests (SJT) have gained popularity among medical education admissions as a standardized assessment of core competencies among applicants. Formats of SJTs range from rating effectiveness of scenario prompts on a 5-point Likert-scale to solely open-response. The goal of this study was to evaluate differences in applicant profiles among responders versus non-responders to optional open-response SJT questions during the application process.

Methods

This was a prospective multi-institutional study of general surgery applicants to five residency programs. Applicants completed a 32-item SJT designed to measure ten core competencies: adaptability, attention to detail, communication, dependability, feedback receptivity, integrity, professionalism, resilience, self-directed learning, and team orientation. Each SJT item included an optional, non-scored, open-response space for applicants to provide a behavioral response if they desired. Trends in applicant gender, race, ethnicity, medical school ranking, and USMLE scores were examined between the responder versus non-responder group. Medical school rankings were determined based on U.S. News & World Report.

Results

In total, 1470 general surgery applicants across five residency programs were invited to complete the SurgSJT. 1362 (93%) candidates completed the assessment and 1113 (82%) of these provided additional behavioral responses to at least one of the 32 SJT prompts. There were no differences in overall SJT performance, average USMLE Step 1 scores (Mean

236), race and/or ethnicity between the responder and the non-responder group. Applicants in the responder group tended to have higher USMLE Step 2 scores (252 vs. 250, $p < 0.05$), higher scores on SJT items related to attention to detail ($p < 0.01$), were more likely to be female (56% versus 46%, $p < 0.01$), and were more likely to be from a top 25 medical school ($p < 0.05$).

Discussion And Conclusion

Applicants more likely to respond to optional open-response SJTs had stronger applicant profiles in terms of USMLE Step 2 scores, medical school ranking, and SJT sub-scores. Use of open-response SJT items may help identify favorable attributes among residency candidates and serve as another tool in the screening process.

References

1. Gardner AK, Cavanaugh KJ, Willis RE, Dunkin BJ. Can better selection tools help us achieve our diversity goals in postgraduate medical education? Acad Med 2020; 95: 751-757.
2. Gardner AK, Dunkin BJ. Evaluation of validity evidence for personality, emotional intelligence, and situational judgment tests to identify successful residents. JAMA Surg 2018; 153: 409-416.

6E3 (1657)

Date of presentation: Tuesday 29th August
Time of session: 09:40 - 10:00
Location of presentation: Argyll II, Crowne Plaza

Collective learning promotes learning across boundaries in General Practitioner training.

Iris Meljes[1], Irene Slootweg[1], Maartje van den Bogaard[2], Vera Nierkens[1], Anneke Kramer[1]

[1] *Leiden University Medical Center, Leiden, The Netherlands* [2] *Iowa State University, Iowa , USA*

Introduction

Postgraduate medical education prepares future healthcare professionals to address the increasing complexity of healthcare. Residents should develop competencies to learn to bridge the boundaries between their various clinical workplace training sites and education at the educational institutes. Inability to apply competencies acquired in the clinical workplace to their education at the institution and vice versa, compromises the quality of patient care. Yet, residents see these learning contexts as separate worlds, each with its own objectives. However, Akkerman and Bakker (2011) postulate that boundaries between learning environments provide learning opportunities, yet little is known about how boundaries can be utilized for the benefit of learning in postgraduate medical education. In this study, we examined what learning mechanisms General Practitioner (GP) residents use to decrease the gap between their two primary learning contexts based on the question: What learning mechanisms do residents use when they cross the boundary between general practice and educational settings?

Methods

We applied principles of constructivist grounded theory (CGT) to secondary data sources (Whiteside et al., 2012). Data were collected through individual and group interviews, and process documents of 3 cohorts of residents participating in an innovative GP training program (N=21) in the Netherlands. Data were initially collected for evaluation purposes between 2017 and 2021. We focused on identifying learning mechanisms, defined as *"processes evoked by boundaries that promote learning across those boundaries"*. The

analysis process followed the steps of open, axial, and selective coding. IM analyzed all data. At least 4 interviews per cohort were also analyzed by VN or IAS. During the open coding phase they consulted regularly on coding, dilemmas, and emerging axial codes. Open and axial codes were generated inductively. Out of axial codes we extracted selective codes using literature (Akkerman & Bakker, 2011). The selective codes were constructed in consultation with IM, VN, IAS, and AK.

Results

The analysis resulted in one overarching theme: resident ownership of their learning across the boundaries. We see this theme as a temporal process consisting of four learning mechanisms. Through the first, *noticing differences*, residents gained an understanding of main features of the general practice and education at the institution. Furthermore, they identified learning needs arising from both learning contexts, and initiated activities to connect them. However, residents felt unsuccessful and ineffective in doing so. Second, through trial and error, residents *collectively created a structure* and routine to work together and individually on their learning goals. They integrated their learning needs and related activities in the clinical practice and education, aligning the two learning contexts. This phase was accompanied by growing confidence in their collective and personal ability to shape their learning. Due to Covid-19, not all cohorts of residents succeeded in establishing functioning collective learning. Third, through *reflection and intention setting*, residents developed a clearer sense of the challenges facing the future GP, and how they envisioned their own futures. Fourth, *transforming learning* pertains to residents indicating they changed from 'reactive consumers' to proactive assertive learners who set their own learning goals and determined their learning activities. They felt confident they had developed a method of lifelong learning.

Discussion And Conclusion

Our findings resonate with the work of Akkerman and Bakker (2011), yet our results highlight the importance of collective effort in learning across the boundary of clinical practice and theoretical education. The lack of collective learning in the third cohort seems to have hurt the learning mechanisms they used: we detected no reflection nor transformation of learning. Furthermore, our findings suggest that there is a progression in the four learning mechanisms between practice and the educational context over time, which is in line with other studies on boundary crossing. Consequently, we think the inclusion of collective learning opportunities in postgraduate medical education offers important benefits, as

learning across different contexts will be of increasing importance to deliver quality complex care.

References

Akkerman, S.F. and A. Bakker, *Boundary crossing and boundary objects.* Review of educational research, 2011. **81**(2): p. 132-169.

Whiteside, M., J. Mills, and J. McCalman, *Using Secondary Data for Grounded Theory Analysis.* Australian Social Work, 2012. **65**(4): p. 504-516.

6E4 (1228)

Date of presentation: Tuesday 29th August
Time of session: 10:00 - 10:20
Location of presentation: Argyll II, Crowne Plaza

Do malpractice claim cases improve diagnostic accuracy in clinical reasoning education during GP training?

Charlotte van Sassen[1], Silvia Mamede[1], Michiel Bos[1], Walter van den Broek[1], Patrick Bindels[1], Laura Zwaan[1]

[1] *Erasmus Medical Center, Rotterdam, The Netherlands*

Introduction

Diagnostic errors can lead to major consequences for patients, contributing to patient deaths more often than other types of errors[1]. Malpractice claims cases represent knowledge gaps that by definition impacted patients. Using malpractice claims cases as vignettes may be a promising method for improving clinical reasoning education (CRE) by enriching the curriculum with a variety of real-life illness scripts to include a greater diversity of common and uncommon diseases with atypical presentations or complex contexts. However, it is unclear whether exposure to a medical error that subsequently degenerated into a malpractice claim facilitates or hinders learning. Erroneous examples in general seem to enjoy a high acceptance in students and improve learning, but adding (information on) a malpractice claim might provoke a deeper negative emotional response which might interfere with learning.[2] Emotions create cognitive load, resulting in less working memory available for learning (cognitive load theory). In this study, we examined whether knowing that a diagnostic error resulted in a malpractice claim affects diagnostic accuracy and self-reported confidence in the diagnosis in CRE. Moreover, the subjective suitability of using erroneous non-malpractice and malpractice cases for CRE was evaluated.

Methods

In the first session of this two-phased, within-subjects experiment, 81 first-year GP residents were randomly primed with two cases containing a diagnostic error that ended in a malpractice claim and two cases containing a diagnostic error that did not end in a

malpractice claim, derived from a large Dutch malpractice claims database. The participants evaluated these four cases on suitability for CRE on a scale from 1-5. In the second session, participants solved four different cases with the same diagnoses as the first session (mirror-cases) and mean diagnostic accuracy was measured with three parameters (what is your next step?; what is your differential diagnosis?; what is your most probable diagnosis?) on a scale from 0-1. In addition, they reported their self-confidence in their diagnosis on a scale from 0-100%. In both sessions, the cases were mixed with 4 different fictitious neutral filler cases. Subjective suitability, diagnostic accuracy, and self-confidence scores were compared between diagnoses seen with and without a malpractice claim, using a repeated measures ANOVA.

Results

No significant differences were found in the mean scores for the three parameters of diagnostic accuracy between erroneous cases with (m) and without malpractice claims (nm) (next step: m=0.79 vs nm=0.77 p=0.505; differential diagnosis: m=0.68 vs nm=0.75 p=0. 072; most probable diagnosis m=0.52 vs nm=0.57 p=0.216), nor for the scores in self-confidence in the most probable diagnosis (m=53.7% vs nm=55.8% p=0.390). Overall subjective suitability- and complexity scores for erroneous malpractice- and non-malpractice case vignettes were similar (suitability m=3.68 vs nm=3.85 p=0.409; complexity m=3.71 vs nm=3.88 p=0.467) and significantly increased with higher education levels (e.g., undergraduate, postgraduate, GP vocational training).

Discussion And Conclusion

Since there were no differences in diagnostic accuracy and self-confidence scores between erroneous cases with and without a malpractice claim, both can be considered equally suitable for CRE in GP training. Contrary to the cognitive load theory, advanced learners may have more cognitive flexibility and may be able to handle more emotional load. Therefore, for advanced students such as GP trainees, a description of the malpractice claim itself can be added to a case vignette to add an extra dimension and deeper level to the reasoning process and thus intensify it, as extra training. These findings are supported by the subjective suitability scores, that showed no difference between erroneous cases with or without a malpractice claim and increased for higher educational levels.

One explanation for the absence of differences could be that there was no comparison with neutral cases and all participants were exposed to *erroneous* cases,

which in itself may cause an emotional response. Because the emotional impact of reading erroneous cases, with of without subsequent malpractice claim, was not measured in this study, we could not quantify the intensity of the emotional response, if present. Therefore, we recommend further research on this topic.

References

1. Zwaan L, de Bruijne M, Wagner C, et al. Patient record review of the incidence, consequences, and causes of diagnostic adverse events. *Arch Intern Med*. 2010;170(12):1015-1021.
2. McConnell MM, Monteiro S, Pottruff MM, et al. The Impact of Emotion on Learners' Application of Basic Science Principles to Novel Problems: *Acad Med*. 2016;91:S58-S63.

Session 6F: Teaching and Facilitating Learning: Teaching and Learning in the Clinical Learning Environment

6F1 (4260)

Date of Presentation: Tuesday 29th August
Time of presentation: 0900 - 0915
Location: Argyll III, Crowne Plaza

How ready are our near-graduates for internship? Night-onCall immersive simulation data over time and across consortium schools.

Tavinder Ark1, Elizabeth Wargo2, Ruth Crowe3, Dawn Dewitt4, Lisa Auerbach5, Lisa Dodson6, Verity Schaye2, Maureen Francis7, Adina L. Kalet1, Sondra Zabar2

[1]Medical Colleges of Wisconsin, Milwaukee, USA; [2]New York University Grossman School of Medicine, New York City, USA; [3]New York University Long Island School of Medicine, Long Island, USA; [4]Elson S. Floyd College of Medicine, Washington, USA; [5]City College of New York, New York, USA; [6]Medical Colleges of Wisconsin, Wausau, USA; [7]Texas Tech University, El Paso, USA

Background

New interns are expected to effectively interact with health care team members and perform basic patient care activities unsupervised. Night-onCall (NOC) assesses near-graduates' preparedness to perform various activities as an intern on-call from multiple perspectives (e.g., standardized nurse, resident, attending and patient). Now conducted across 7 medical schools, NOC provides insight into the readiness of near-graduates across settings and medical curricula.

Summary of Work

NOC is a simulation consisting of three standardized patient (SPt) based cases including assessments from a nurse (SN), an attending, a resident, and the patient's partner. Raters assess core competencies across activities an intern is expected to perform: communication skills, history gathering, physical examination (PE), and professionalism. NOC also measures students' skills performing an oral presentation, a literature search,

clinical documentation, and a patient handoff. Raters use behaviorally anchored checklists for all domains and rate students' performance as well-done (WD), partly done (PD) or not-done (ND). The number of items performed in each category is summated across cases and years and presented descriptively.

Summary of Results

Data from 2020 to 2022 (n=864) was analyzed across 7 schools. SPts rated students' communication skills (75% WD) higher than SR (61% WD) and SNs (57% WD). Within communication skills, Patient Education and Counseling skills were the weakest (56% WD). PE skills were also weak (48% WD). Only 16% of students performed the literature search using skills leading to best evidence and 48% of students articulated a well-formed clinical question. Faculty rated students' coverage notes as follows: 39% "beginning" with 56% "competent" in reporting and interpreting clinical data. Patient handoff skills were strong with 69% of students performing WD.

Discussion and Conclusion

While near-graduating students have strong basic patient communication skills, some need to improve on education and counseling, interprofessional communication, focused history gathering and PE skills. Their evidence-based medicine and written documentation skills are rudimentary. NOC provides actionable feedback to individual students and aggregate data to medical schools that may guide educational strategies that ensure patient safety and effective training early in residency.

Take-home Message

Graduating medical students demonstrate strong communication skills but can improve in other domains. NOC provides valuable student feedback and identifies program strengths and weaknesses.

6F2 (3036)

Date of Presentation: Tuesday 29th August
Time of presentation: 0915 - 0930
Location: Argyll III, Crowne Plaza

Where is Basic Science in Clinical Learning Environments? An Ethnographic Study

Tracy B. Fulton1, John Penner1, Marieke van der Schaaf2, Bridget O'Brien1

[1]University of California, San Francisco (UCSF), San Francisco, USA; [2]University of Utrecht, Utrecht, The Netherlands

Background

Few studies illustrate experiences of how basic science knowledge (BSK) is used in clerkship learning. This study explores the form that BSK takes in clinical learning environments (CLE) during interactions between faculty and learners.

Summary of Work

We observed eight inpatient Internal Medicine teams at one US institution. Our ethnographic data includes 27 hrs of non-participant observation of patient rounds and 24 30-minute interviews with team members. Constructivist grounded theory and constant comparative methodology guided analysis of field notes and transcripts, with the goal of characterizing the presence of BSK in this setting.

Summary of Results

Preliminary data analysis leads us to characterize BSK as mostly “beneath the surface” and invisible on rounds. We associate BSK invisibility on rounds with faculty and residents delegating it to others (e.g. consultants), and curtailing or deferring discussions. We found the idiosyncratic visibility of BSK on rounds to often be discrepant with the value and utility that participants ascribed to it. Participants defended importance of BSK mastery in providing effective patient care, associating it with “the best” team members. Participants also invoked importance of using BSK when making decisions about patients that “don’t fit the algorithm;” yet, these applications were rarely visible. Participants also associated BSK with “slowing down,” which the pace of clinical work rarely afforded. BSK appears to be an

implicit presence on rounds, assumed to be present in others' minds, and implied as being closely connected to patient care, but rarely made explicit.

Discussion and Conclusion

The diversity of ways in which clinical team members define, describe, and discuss basic science, and the contrast between its aspirational importance and its actual use may contribute to confusion and disagreement about the value and aims of basic science education in medical school. Further characterization of these representations may support improvements in how to support students as they transition from the classroom to the CLE.

Take-home Message

In characterizing the presence of BSK in the internal medicine CLE, we observed discrepancies between participants' and our characterization of the presence of BSK in the CLE on rounds. More research is needed to characterize the presence of BSK in the CLE outside of patient rounds.

6F3 (4687)

Date of Presentation: Tuesday 29th August
Time of presentation: 0930 - 0945
Location: Argyll III, Crowne Plaza

The transition from on-site to online lectures on learning outcomes in an internal medicine clerkship during the COVID-19 pandemic

Chaitong Churuangsuk[1], Warangkana Keeratichananont[1]

[1]*Department of Internal Medicine, Prince of Songkla University, Songkhla, Thailand*

Background

Social distancing during COVID-19 significantly affects medical education. On-site teaching has to be conducted online. Clinical training, such as history-taking and physical examination, is also limited. This study compared the learning outcomes between academic years before (2018–2019) and during the COVID-19 pandemic (2020–2021).

Summary of Work

The study design was a historically controlled study in fourth-year medical students in an internal medicine clerkship. The on-site group (n=239), academic years 2018 and 2019, was selected as the pre-COVID-19 period. The online group (n=240), academic years 2020 and 2021, followed an online lecture model during the COVID-19 lockdown. The online group read the online materials and watch a self-paced recorded lecture video before class. The learning outcomes were multiple-choice questions (MCQs) scores, modified essay questions (MEQs) scores, and the objective structured clinical examination (OSCE) scores.

Summary of Results

The on-site group had a median MCQ score 62.5 out of 100 (IQR 57.5, 67.9) compared to the online group's MCQ score 63.3 (IQR 57.9, 69.2), which was not significantly different between groups (p=0.24). Similarly, there was no significant difference in MEQ scores between groups (onsite group 63.8 [IQR 58.2, 69.3] vs. online group 64.5 [IQR 59.9, 70.0]; p=0.085). Surprisingly, the online group had a higher median OSCE score (15 out of 20; IQR 14, 17) than the on-site group (14; IQR 12, 16; p<0.001).

Discussion and Conclusion

Our results showed no difference in MCQ and MEQ scores between on-site and online groups. This might be because the online model is easy to access and allows students to review lessons at their own pace, although there is no face-to-face interaction with the lecturers. For clinical skills, the online group got higher OSCE scores than the on-site group, but the effect size was only one score, which means that COVID-19 had no effect on this result.

In conclusion, the switch from in-person lectures to online lectures during the COVID-19 pandemic did not compromise the learning outcomes in an internal medicine clerkship.

Take-home Message

The transition from in-person to online lectures, equipped with online materials and a self-paced recorded lecture video, during the COVID-19 pandemic did not compromise the learning outcomes.

6F4 (2613)

Date of Presentation: Tuesday 29th August
Time of presentation: 0945 - 1000
Location: Argyll III, Crowne Plaza

BOLUS teaching – Short, practical FY1 teaching sessions during the COVID-19 pandemic

Hamish Reed-Embleton[1], John Devlin[1], Callum Milne[1], Christopher Hay[1]

[1]*NHS Lanarkshire, Lanarkshire, UK*

Background

FY1 learning is mostly 'on the job' with almost no formal teaching for common procedural skills required by junior doctors. There are unwritten specific expectations of FY1 competence when called to clinical situations. In Hairmyres hospital (NHS Lanarkshire), FY1 formal teaching was often delivered by senior registrars or consultants, either with a level of specialist detail not required by most junior doctors or on topics lacking clinical relevance eg. portfolio completion.

Summary of Work

Brief Overview Learning Update Sessions (BOLUS) teaching was formed during the COVID-19 pandemic as an addition to the standard FY1 teaching program aimed to give FY1/interim-FY1 doctors short, highly relevant practical need-to-know clinical knowledge. We focused on collaborative interactive learning and followed the outcomes-activity-summary teaching style targeting out-of-hours scenarios and procedural skills for foundation doctors. The sessions usually included a 15-minute lecture/small group teaching followed by a roll play or practical application of the learning points. Participants were able to request teaching sessions. Confidence levels were assessed before and after teaching sessions using an ordinal scoring system.

Summary of Results

We demonstrated a significant improvement following bolus teaching sessions with a 5-fold reduction in those lacking adequate knowledge (68% to 12%) and an 8-fold increase in complete FY1/interim-FY1 confidence (3% to 24%). Throughout the programme, there

was consistently excellent feedback which reflected the clinical relevance of the sessions and commended the short BOLUS teaching style with mixed methods of learning tailored to each session.

Discussion and Conclusion

We were able to demonstrate a significant improvement in FY1/interim-FY1 confidence. Students' attention span declines after 15 minutes during lectures; BOLUS targeted a teaching style to combat this. The value of peer-delivered teaching was highlighted, enabling a more level learning environment, without judgement allowing more fluid learning discussions. It is essential that FY1 teaching continues to have varying methodologies, accommodating all types of learners. BOLUS teaching is a valuable addition to the current formal FY1 teaching.

Take-home Message

- Teaching by peers enables a more level learning environment
- Short, practical teaching sessions are a useful addition to FY1 teaching
- A mixed methodology of teaching accomodates more learners and helps to reinforce key information

6F5 (5130)

Date of Presentation: Tuesday 29th August
Time of presentation: 1000 - 1015
Location: Argyll III, Crowne Plaza

Peer Led Immersive Educational Environments in Practical Clinical Skills, What Have We Learnt and Where Next?

Tom Heathcote[1], Matthew McGinn[1], Victoria Pownall[1], Helen Box[1], Justin Shanahan[1]

[1]*University Of Liverpool, Liverpool, UK*

Background

In 2016 the University of Liverpool's School of Medicine opened its doors to "The Learning Zone" a purpose built inclusive, simulated clinical learning environment, where Undergraduate Student Doctors could collaborate and support one another to develop their clinical skills.

Summary of Work

Two key pieces of research sought to gain insight into Students' views and experiences of the Learning Zone. Qualitative data was obtained through the use of questionnaires and focus groups to further understand the Learning Zone and its impact on the student's skill development and transfer of learning to clinical practice.

Summary of Results

Through analysis of the data, two strong themes were identified. Firstly, the Learning Zone aids the students in their skills development and progression. Secondly, the learning that takes place in the Learning Zone is situated and transferrable to clinical practice.

Discussion and Conclusion

This teaching provision has proven to be extremely valuable to our students; as such it has been expanded to include similar learning spaces in all of our secondary care student doctor placements. Most recently a second on campus Learning Zone space opened in

January 2023 dedicated specifically to later year's students, a timely opportunity to reflect and distil what has been learned to date.

Take-home Message

Research undertaken supports underlying pedagogic principles and efficacy of the peer led learning within a simulated clinical environment.

6F6 (2433)

Date of Presentation: Tuesday 29th August
Time of presentation: 1015 - 1030
Location: Argyll III, Crowne Plaza

Teaching clinical skills using online modality through modified Peyton's framework at a medical university in Pakistan

Sana Saeed[1], Urooj Kashif[1], Samar Zaki[1], Unab Khan[1]

[1]*The Aga Khan University, Karachi, Pakistan*

Background

In undergraduate medical education, the Clinical Skills (CS) course in pre-clerkship years, initiates the development and refinement of basic clinical skills that are essential for students to develop mastery in clinical years.Medical institutions worldwide faced an unprecedented situation during COVID 19 of identifying alternative strategies to sustain the continuum of learning process. There is limited literature available which highlights the evolving pedagogical framework for teaching clinical skills using a virtual platform. This study explored the effectiveness and feasibility of using modified Peyton's framework for a virtual platform (Microsoft Teams) for teaching clinical skills to first and second-year medical students at The Aga Khan University, Karachi, Pakistan

Summary of Work

For evaluation, a mixed-method design was used, with pre-and post-session questionnaires. Students' satisfaction (N=200) was obtained through the university's standard session evaluation tool. For the qualitative arm, to explore the instructors' experiences, purposive sampling was used(n=8) and a focused group was conducted. Finally, performance of the students at the end of year summative Objective Structured Clinical Examination (OSCE) was compared with the students of previous year. Quantitative data was analysed using STATA® v 15.1 while FGD was transcribed and analysed through manual content analysis.

Summary of Results

Nine clinical skills (that included history and examination skills) were taught using the virtual platform. There was a significant improvement in post-session questionnaires in seven of these skills (p value <0.01). Four key themes emerged through content analysis and the instructors shared that the online teaching offers a promising platform for teaching history taking skills. The OSCE scores showed mixed results, with significant improvement in two out of four repeated stations [abdominal exam (87.33 ± 8.99, <0.001); and precordial examination (88.45 ± 8.36, 0.001)].

Discussion and Conclusion

Even though we were sceptical about teaching practical skills through online platform, the results of the study showed good buy-in from the facilitators and students.Modifying Peyton's framework to a virtual platform allowed us to sustain the continuum of clinical education during the COVID-19 pandemic.

Take-home Message

The modified Peyton's framework can be used for teaching clinical skills through a virtual medium to basic science students and should be further investigtaed in various clinical clerkships for subsequent years.

Session 6G: Assessment: Feedback

6G1 (4813)

Date of Presentation: Tuesday 29th August
Time of presentation: 0900 - 0915
Location: Castle I, Crowne Plaza

Developing a multi-source feedback tool for medical trainees

Ilona Bartman1, Christina St-Onge2, Nathalie Gagnon2, Andrea Gingerich3, Kiran Veerapen4, Eleni Katsoulas5, Saad Chahine5, Peter Wang6, Marguerite Roy7

[1]Medical Council of Canada, Ottawa, Canada; [2]University of Sherbrooke, Sherbrooke, Canada; [3]University of Northern British Columbia, Prince George, Canada; [4]University of British Columbia, Vancouver, Canada; [5]Queen's University, Kingston, Canada; [6]Western University, London, Canada; [7]University of Ottawa, Ottawa, Canada

Background

MCC 360 is a formative multi-source feedback (MSF) assessment developed by the Medical Council of Canada to support practicing physicians in making quality improvements in their practice. The program focuses on assessing a physician's communication, collaboration, and professional behaviors. Survey ratings and comments are collected from three groups - patients, coworkers, and colleagues. Physicians also provide a series of self-ratings. The data are amalgamated and presented in an individualized report. This report, with assistance from a trained facilitator, is used to create an improvement plan. From the outset, the vision for MCC 360 program included extending MSF tools and processes across the assessment continuum, beginning with undergraduate medical students. A collaboration of PhD education researchers and medical educators from four undergraduate medical programs in Canada, as well as MCC staff was established to adopt the existing MSF tool to an undergraduate context.

Summary of Work

The collaborators met numerous times over a period of three years to adjust the existing tool and design a pilot study to align with undergraduate medical education realities.

The changes to the tool included: reducing the respondent groups from three to two (the coworkers and colleagues' groups were repurposed into a new group of peers, supervisors, and hospital staff), the number of respondents per group was cut from 8-25 to 10, and the survey questions and rating scales were adjusted to a learner context. The data collection period stayed at 12 weeks. Each student received an individualized report.

Summary of Results

Due to administrative and recruitment challenges the tool was only piloted at one medical school with 11 students. Post-evaluation survey of the students revealed that the MCC 360 report had major or moderate impact on their learning. Working with facilitators helped them to better understand their areas for improvement; however, asking raters for assessments was mostly perceived as burdensome.

Discussion and Conclusion

Structured feedback in the areas of communication, collaboration and professionalism could be instrumental in developing good reflective habits for medical students and improve the health care they provide.

Take-home Message

Successful implementation of an MSF tool at the undergraduate level brings many positives although it requires much planning and logistical support.

6G2 (6443)

Date of Presentation: Tuesday 29th August
Time of presentation: 0915 - 0930
Location: Castle I, Crowne Plaza

Trustee vs Trustor: exploring entrustment factors and gender bias in feedback dialogs using natural language processing

Brian Gin1, Olle ten Cate2, Patricia O'Sullivan1, Christy Boscardin1

[1]*University of California San Francisco School of Medicine, San Francisco, California, USA;*
[2]*University Medical Centre Utrecht, Netherlands, Utrecht, The Netherlands*

Background

As entrustment gains increasing acceptance in assessment, educators have stressed its benefits to learning via progressions in clinical trust. Recent qualitative studies have shed light on how trainees experience entrustment, but identifying systematic differences in how trainees and supervisors navigate entrustment requires a quantitative approach. Here we develop a natural language processing (NLP) strategy to examine how trainees and supervisors may differentially prioritize factors important for trust, and how gender bias may influence this process.

Summary of Work

Combining a critical qualitative approach with quantitative methods, we examined N=24187 feedback dialogs (each with an associated entrustment rating) between students and preceptors collected over two years from all medical students at a single institution. Either student or preceptor documented the dialog. We looked for bias in both entrustment rating and sentiment by developing a gender-neutral deep learning NLP model. To identify factors correlating with entrustment, we employed an open-source language model to perform unsupervised semantic factor analysis and utilized an iterative collaborative approach with human coders. We used multilevel regression to identify bias and correlate entrustment factors.

Summary of Results

When students documented feedback, they appeared to assign themselves more trust (0.04 on a scale of 1-4, $p < 0.01$) while using more negative language (-18% sentiment, $p < 0.01$) compared to preceptors. Preceptors' documentation tended to assign female students higher trust (beta = 0.28, $p < 0.05$); no other evidence of gender or racial/ethnic bias was identified. Regarding entrustment factors, "oral presentation quality" correlated most strongly with entrustment ratings for both preceptors and students. Preceptors' ratings were more closely tied to specific presentation details compared to students' — whose ratings correlated more with general praise and communications skills.

Discussion and Conclusion

While trainee and supervisor viewpoints tended to agree on the most important factors associated with entrustment, trainees' documentation reflected a more holistic view of entrustment. The finding of gender bias in supervisors' entrustment rating invites further investigation.

Take-home Message

Given the hierarchy that shapes assignment of clinical responsibility, the difference in how supervisors and trainees prioritize entrustment could be used to develop tools to promote consistent and sufficient discussion of competencies, and to ensure the inclusivity of such discourse.

6G3 (0320)

Date of Presentation: Tuesday 29th August
Time of presentation: 0930 - 0945
Location: Castle I, Crowne Plaza

What do students consider useful written peer feedback? A Biomedical Laboratory Science student perspective

Henriette Lorenzen[1], Ditte Jacobsen[1], Marianne Ellegaard[1]

[1]*University College Copenhagen, Copenhagen, Denmark*

Background

Reflection is essential in clinical practice. At the Biomedical Laboratory Science program, University College Copenhagen, we use peer feedback to facilitate reflective learning.

Fourth semester students give anonymous criteria-based written peer feedback on individual written assignments.

Surveys show that our students are more positive about the learning outcome of giving than receiving peer feedback.

We aimed to gain insight into the students' perspectives on what characterizes useful written peer feedback. A better understanding may help faculty, as well as the participating students themselves, facilitate the development of students´ ability to give useful feedback.

Summary of Work

Two anonymous surveys were distributed (n=55). The students were asked to select: (1) two useful feedback comments, from 12 randomly chosen examples of previous students´ peer feedback and explain why they found them useful, (2) a useful feedback comment after receiving peer feedback on their own assignment, explain why they found it useful and suggest how it might have been even more useful.

Authors independently reviewed comments and explanations and categorized the content according to Voelkel(2020): Feedback type (content, writing skills, and

motivational), level of feedback depth (acknowledgement, correction, and explanation) and further characteristics (easy wins, specific, and feedforward). Agreement between authors was reached.

Summary of Results

In the first survey (n=30), most frequent features of the students' justifications of selected feedback examples were content (82%), correction (57%) and specific (45%).

In the second survey (n=33), most frequent features of the received feedback were content (61%), writing skills (55%), motivational (85%), explanation (55%) and specific (52%). Analyzing the students' justifications, most common were motivational (42%), acknowledgement (30%)/correction (36%) and specific (36%).

Discussion and Conclusion

According to the students, useful feedback should address errors of the content and give advice on how to correct problems. However, we were more inclined to mention the third level of feedback depth (explanation) than the students were. The students didn´t include the aspect of praise in their justifications for the selected feedback examples from previous students, but highly appreciated motivational comments on their own assignment.

Take-home Message

Asking students to explain why received feedback is useful, may increase awareness and encourage students to develop their ability to give feedback.

RP1475/SC

6G4 (3320)

Date of Presentation: Tuesday 29th August
Time of presentation: 0945 - 1000
Location: Castle I, Crowne Plaza

The power patients possess - Patient feedback for lifelong learning

Carolin Sehlbach1, Matthijs Bosveld1, Sjim Romme2, Marieke Nijhuis2, Marjan Govaerts1, Frank Smeenk1

[1]Maastricht University, Maastricht, The Netherlands; [2]Foundation Patient as a Person, Maastricht, The Netherlands

Background

Patient involvement in the evaluation of care delivery is growing. Yet, perceptions thereon can differ between patients and healthcare professionals. Given busy workplaces and daily routines, professionals might face challenges in recognizing patient feedback, diminishing learning opportunities in, from and for practice. Facilitated conversations on how to engage with feedback cues from clinical encounters can help to harness patient feedback as a powerful tool for lifelong learning, especially when patients are involved in these conversations. While a growing body of literature focusses on healthcare professionals' perceptions regarding patient feedback, research on patients' perspectives on engaging in feedback conversations and the conversation itself remains limited. Therefore, we aimed to explore patients' and healthcare providers' perspectives regarding the use of patient feedback for lifelong learning and inherent tensions in learning conversations.

Summary of Work

For this qualitative study, we used a pragmatic approach and conducted semi-structured interviews with 12 healthcare providers and 10 patients. We used thematic analysis to understand interviewee's perceptions regarding patient feedback and lifelong learning. We applied an inductive approach to thematic data analysis.

Summary of Results

Participants described the importance of patient feedback. They saw a role for themselves in giving or inviting feedback but often missed the tools for doing so. Based on the interviews, we were able to discern perceived inhibiting and facilitating factors and requirements for valuable use of patient feedback. Barriers included feelings of dependency and hierarchy, timing of diagnoses or disease status, and a lack of time. In contrast, a trusting relationship, a safe space, and meta-communication could support solicitation of patient feedback. Participating patients and professionals alike experienced tensions in managing power dynamics and empowerment in the treatment relationship. These tensions surfaced when embedding patient feedback into care processes.

Discussion and Conclusion

Patient feedback can contribute to professional's lifelong learning but requires navigating tensions around power and empowerment in the treatment relationship. It requires facilitation and training to use patient feedback, for both patients and healthcare professionals. Attention to power dynamics if not a shift in the treatment relationship is also required

Take-home Message

Meeting these requirements can aid to empower patients and open up learning conversations, thereby capitalising the power patients possess.RP1227/SC

6G5 (5836)

Date of Presentation: Tuesday 29th August
Time of presentation: 1000 - 1015
Location: Castle I, Crowne Plaza

Opt in or unsubscribe- How feedback interacts with self-regulation in medical students

Muirne Spooner1, Teresa Pawlikowska1

[1]*Royal College of Surgeons University of Medicine and Health Sciences, Dublin, Ireland*

Background

While feedback aims to support learning, students frequently struggle to use it. Leading feedback models have progressed from rater-centric delivery to learner-centred dialogue, signposting factors which influence feedback acceptance. This study explores how feedback experiences influence medical student' self-regulation of learning.

Summary of Work

This qualitative study was informed by a constructivist methodological approach. Final year medical students across three campuses (Ireland, Bahrain and Malaysia) were invited to share experiences of feedback in individual semi-structured interviews. The data were thematically analysed using a template analysis approach and explored through the lens of self-regulatory learning theory (SRL).

Summary of Results

57 students across three campuses were interviewed. We identified three overarching themes of self-regulatory activities interacting with feedback: modulation of metacognitive knowledge and beliefs; of learning goals and of learning strategies. Learners adjust their self-efficacy judgments in response to feedback. Emotional reactions associated with hostile interactions are commonplace and are associated with long-term impact on learning values and metamotivational beliefs. Learners display low levels of learning strategy selection following feedback but actively adapt strategies generated for them by the teacher. Task-specific feedback is frequently implemented. Feedback on

broader learning strategies may not be used, even when perceived as valuable, with personal and inter-personal factors mainly impacting this decision.

Discussion and Conclusion

Conclusion: Self-regulatory responses to feedback are complex. Strong emotional reactions to negative encounters derail self-regulatory processes that support learning. Despite championing of bi-directional dialogues, learners show preference for teacher-led instruction in developmental planning. Even when feedback is perceived as useful, learners may choose not to enact it. Perceived non-implementation of feedback should not be confused with ignoring it; learners report spending

Take-home Message

- Self-regulatory theory priovides a useful overarching framework to consider how learners use or do not use feedback.
- Broadly, fedback interacts with self-regulation in modulation of knowledge and metamotvational beliefs, learning goals and learning strategies.
- Emotional responses can overwhelm the learner ability to constructively self-regulate.
- Modern conceptualisation of feedback theory focusses on colobarative planning for change, but learners may favour feedback where is teacher-led.

6G6 (4499)

Date of Presentation: Tuesday 29th August
Time of presentation: 1015 - 1030
Location: Castle I, Crowne Plaza

Using Dialogue-Based Language AI to Score and Generate Feedback for Assessment: ChatGPT for Narrative Assessment.

Radhika Sreedhar1, Linda Chang2, Ananya Gangopadhyaya1, Yoon Soo Park1, Euna Chi1, Peggy Shiels, Woziwodzki3, Julie Loza1, Elizabeth Gabel4

[1]University of Illinois Chicago, Chicago, USA; [2]University of Illinois Chicago- Rockford, Rockford, USA; [3]University of Illinois Chicago, Rockford, USA; [4]University of Illinois Chicago, Peoria, USA

Background

While Artificial Intelligence(AI) technologies can analyse written responses1 and automated essay scoring technologies can score narrative assignments,2 assessments done by these systems are generally not based on relevance of content.3 With the advent of ChatGPT4, we sought to explore the ability of dialogue-based language AI to generate meaningful feedback for student assignments.

Summary of Work

We used ChatGPT, a dialogue-based language AI, to assess its ability to score and provide feedback for 39 written assignments. Both human assessors and ChatGPT measured learner responses to a self-directed learning assignment using a rubric with five domains: (1) self-identified patient-based learning need, (2) asking a question in the patient, intervention, comparison, outcome format, (3) acquiring information, (4) appraising information, and (5) applying the information to the patient. We examined inter-rater reliability between ChatGPT and human assessors using % agreement and kappa, both specific to items and across five items.

Summary of Results

Overall mean scores generated by ChatGPT and human assessors were 93% and 85%. Item-specific % agreement between ChatGPT and human assessors ranged between

82%-95%. The mean kappa was 0.34, demonstrating modest agreement while overall inter-rater reliability across rubric items, was 0.51.

For learners with lower scores (bottom 25%), ChatGPT was able to provide meaningful and actionable feedback, demonstrating promise as a formative tool for learning. The feedback generated included specific domains for improvement, quality of evidence gathered, structure of response, and inference of results. ChatGPT however, had difficulty linking several misplaced responses to prompts and in identifying the literature resource.

Discussion and Conclusion

Overall, the assessor agreement between ChatGPT and human raters demonstrate substantial promise in using a dialogue-based language AI as a formative assessment tool. In particular, the narrative feedback from AI was useful for struggling and borderline students; for these students, narrative feedback was diagnostic and actionable. In the era of unsupervised machine learning assessment, we hope to see further improvement in the quality of feedback.5 This will enable AI to boldly go where no human has gone before, while leveraging faculty time to provide better support to students in areas of need.

Take-home Message

Dialogue-based language AI can measure narrative assessment and generate feedback for learner assessment.

Session 6H: Designing and Planning Learning: Teaching Approaches and formats

6H1 (4843)

Date of Presentation: Tuesday 29th August
Time of presentation: 0900 - 0915
Location: Castle II, Crowne Plaza

TMET: Peer-assisted learning (PAL) practices in capacity building and its contribution to the hidden curriculum

Ghada Hussein Al Ghazali[1], Rannia Shehrish[1], Grace Huertas[1]

[1]*International Federation of Medical Students' Associations, Copenhagen, Denmark*

Background

The International Federation of medical student association focuses on implementing an optimal and efficient learning environment for medical students globally. As medical students are directly exposed to medical curricula, they should rightfully be engaged in their educational system. They should therefore influence the creation and development of their curricula. Nevertheless, before medical students can lobby for the highest standards and change in their Education, they should be aware of essential competencies, such as curriculum design, assessment, research, learning methods, and how to be a part of the medical education system, they should know what to change and how to make the change. As such, a call arises to meet those needs and provide students with a set of competencies to design, deliver, evaluate and follow up on non-formal education sessions related to Medical Education.

Summary of Work

IFMSA has considered peer education as one of the underlying capacity-building values to promote the transfer of knowledge, skills, and attitudes between peers, as equals. In 2014, IFMSA introduced a peer-led medical education workshop named Training Medical Education Trainers (TMET) that includes delivering medical education core competencies besides developing participants' facilitation, communication, leadership, and soft skills.

The delivery methods used during TMETs promote students' engagement and peer learning through small working groups, simulations, PBL, storytelling, reflection cycles, feedback, discussions, and role-playing.

Summary of Results

The workshop has been conducted 65 times during IFMSA pre-General Assemblies and Sub-Regional Trainings in more than 50 countries over all five regions, developing the capacities of more than 800 medical students worldwide on core medical education competencies. Collected data from pre and post-impact assessments for randomly selected 5 TMET workshops showed an improvement in participants' knowledge about teaching and learning theories, assessment and evaluation and curriculum planning, in addition to public speaking, communication and facilitation skills among others.

Discussion and Conclusion

Peer-assisted learning in non-formal education is key to providing a harmonious intelligence that allows the peers to use methods the students understand best to develop their medical education competencies, by equipping them with skills, and knowledge to make better students and ultimately better healthcare leaders.

Take-home Message

PAL is an essential component of the hidden medical education curriculum.

6H2 (3154)

Date of Presentation: Tuesday 29th August
Time of presentation: 0915 - 0930
Location: Castle II, Crowne Plaza

Teaching bioethics through debates during medical school clerkships

Amy Brown[1], Bri Anne McKeon[1], Heather Galon[1]

[1]*University of South Florida Morsani College of Medicine, Tampa, USA*

Background

Bioethics is an integral component in health professions education. Debate is a widely accepted teaching tool outside of medical disciplines and is lauded as a tool for teaching critical thinking, reflection, and interpersonal communication skills. Limited examples of the use of debate in teaching bioethics demonstrate high levels of student participation and critical reflection. We created a bioethics debate series to teach clinically relevant bioethical issues with the goal of improving students' empathy, active listening skills, and communication strategies.

Summary of Work

We implemented two one-hour debate sessions into an Obstetrics and Gynecology Clerkship with the topics of Maternal Fetal Conflict and Periviable Resuscitation. These topics were picked to maximize potential for students to discuss a bioethical dilemma they would experience during the clerkship. Students watched an instructional video with background information and were randomly assigned a specific viewpoint to defend in a small group session. Following the debate, the preceptor led a debrief on communication strategies and ethical guidelines for managing bioethical dilemmas in clinical practice. Students completed a survey prior to and following the debates to assess knowledge of bioethical principles (open ended), perceived skills in communication (Likert scale), and satisfaction with the debates (Likert scale).

Summary of Results

Sessions varied significantly in arguments and topics presented by students. Preliminary data from three sessions indicate that after the session students felt more comfortable

engaging in ethical discussions with patients. Students also reported having increased confidence in their ability to assess various viewpoints and counsel patients regarding treatment options during bioethical dilemmas. Students reported overall satisfaction with the debate style of learning.

Discussion and Conclusion

The debate method for bioethics instruction of medical clerkship students resulted in overall student satisfaction with the teaching method, as well as improvement in their perceived communication skills. The debate style specifically fosters critical thinking, diverse beliefs, and empathy that translate into patient interactions. This educational tool could be adapted to any health profession using bioethical dilemmas specific to that field or clinical context.

Take-home Message

Debate is a useful method of teaching bioethics due to the emphasis on communication skills, active participation, diversity, and empathy.

6H3 (2980)

Date of Presentation: Tuesday 29th August
Time of presentation: 0930 - 0945
Location: Castle II, Crowne Plaza

Comparing practical skills teaching by near-peers and faculty tutors – getting the best from both worlds

Roman Hari1, Sören Huwendiek2, Sarah Oppliger3, Diana H.J.M. Dolmans1, Renée E Stalmeijer1

[1]School of Health Professions Education, Maastricht, The Netherlands; [2]University of Bern, Institute for Medical Education, Bern, Switzerland; [3]Institute of Primary Health Care (BIHAM), Bern, Switzerland

Background

Near-peer teaching is an important teaching resource in most medical schools, especially in practical skills teaching. While near-peer teaching is often used to overcome staff shortages, it may have its own educational benefits and learning mechanisms. This study explored near-peers' and students' perception of differences in near-peer and faculty teaching of practical skills. We explored potential reasons for these differences and their effects on student's learning.

Summary of Work

Using a qualitative, thematic analysis design, we conducted a total of 8 focus groups: 4 with student that had experienced both near-peer and faculty skills training, and 4 with near-peers. Vignettes of typical teaching situations guided the focus group discussion. Focus groups were transcribed verbatim, followed by thematic analysis of transcripts. Cognitive apprenticeship was used as an analytical lens.

Summary of Results

1) Near-peers established a more informal and safe learning climate lowering the threshold to ask questions but sometimes leading to problems in classroom management. 2) Near-peers' teaching was more oriented towards the prescribed curriculum and students' needs affording more tailored explanations and feedback but

sometimes focusing too narrowly on exam-relevant content. 3) Faculty oriented their teaching towards clinical practice. Although participants found it helpful for the transition to clinical practice, it sometimes overwhelmed novice students. 4) Faculty focused more on stimulating students to think about unanswered questions and learning gaps which stimulated students' learning and motivation.

Overall, participants noted that near-peers saw students as "learners", informed by their own more recent student experience. Participants felt faculty saw students as "future physicians", driven by their role in keeping up high standards in patient care.

Discussion and Conclusion

Although similar in skills, near-peer and faculty skills teaching differ in style and underlying motivation. Near-peers are particularly helpful to introduce students to new topics and provide guidance in an exam-driven environment. Faculty have a crucial role supporting the transition from curricular learning to clinical practice.

Take-home Message

- Near-peers focus on students as learners. Their teaching is well tailored to students' needs, with the hazard of focusing on exam-related content
- Faculty see students as future doctors. This can be overwhelming for students but helpful later to support students' transition into clinical practice

6H4 (0003)

Date of Presentation: Tuesday 29th August
Time of presentation: 0945 - 1000
Location: Castle II, Crowne Plaza

Developing an EPA-based Individualized Learning Plans Program for PGY-1 Residents

Tzu-Hung Liu[1]

[1]*Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, New Taipei City, Taiwan*

Background

For postgraduate trainees, self-directed learning plays a vital role in their clinical training. The individualized learning plans (ILP) program is one of the potential measures that facilitate self-directed learning. In addition, entrustable professional activities (EPAs) are increasingly used to assess postgraduate trainees' competence. Therefore, we aim to develop an EPA-based ILP program for medical residents and evaluate its outcomes.

Summary of Work

We developed an ILP form and a protocol including one-on-one, monthly mentoring meetings for PGY-1 residents in their 3-month internal medicine rotations. In the first meeting, the residents would set their learning goals in the form of EPAs with their clinical mentor. In following meetings, the mentor would have an entrustment-based discussion with the resident and determine the resident's entrustment level based on the modified Chen entrustment scale. The ILP forms, the EPAs, and the entrustment levels were all collected for analysis.

Summary of Results

From August 2021 to August 2022, a total of 24 PGY-1 residents participated in this study. Each resident set up two learning goals as EPAs and had monthly meetings with their clinical mentor. These 48 EPAs were mainly aligned with two ACGME competencies, patient care (47.9%) and medical knowledge (22.9%). In the 3-month timeframe, 97.9% of the EPAs had been practiced by the residents, with one EPA unpracticed due to no patient case. The resident's entrustment levels were mostly level 2b (with supervisor in room

ready to step in as needed) (17.4%) or level 3b (with supervisor immediately available; key findings double-checked) (67.4%) in the second month. Their levels improved to level 3b (25.0%) or level 3c (with supervisor distantly available; findings reviewed) (58.3%) at the end of the program.

Discussion and Conclusion

This study found that an EPA-based ILP program could be developed and implemented well. The PGY-1 residents perceived their learning goals as EPAs and learned self-directedly toward the goals in the clinical environment. The clinical mentor could use entrustment-based discussion as an assessment tool. In the ILP program, the residents could achieve higher entrustment levels of their EPAs, even within a short timeframe.

Take-home Message

Incorporating EPAs into the ILP program helps better assess the self-directed learning outcomes of postgraduate trainees.

6H5 (5450)

Date of Presentation: Tuesday 29th August
Time of presentation: 1000 - 1015
Location: Castle II, Crowne Plaza

A novel approach to applied nutrition and lifestyle teaching- Practical workshops

Leila Saeed1, Bharat Pahilwani1, Maria Hayfron-Benjamin1

[1]*Queen Mary University of London, London, UK*

Background

Poor nutrition is a key risk factor in the development of chronic health conditions (1). Primary care clinicians provide guidance to patients including advice on healthy and balanced nutritional diets and lifestyle changes to prevent these conditions. The GMC's Outcomes for Graduates (2018) identifies this as a core competency for medical students (2). Our medical school is in a socio-economically deprived and ethnically diverse part of London.

Summary of Work

The aim of this educational event was to create a novel and practical teaching session to provide an opportunity for third-year medical students to apply nutrition and lifestyle knowledge in authentic clinical scenarios. A multi-disciplinary team of primary care clinician educators created a workshop for 45 third year medical students, students were subdivided into 3 groups of 15 students rotating through 3 separate tasks:

Provide nutritional advice to a patient newly diagnosed with coeliac disease.

Structure a junior doctor's daily routine to meet their specific nutritional and lifestyle needs within a typical weekly work schedule.

Plan meals for a family of five with different nutritional needs on a very restricted budget.

An online survey was distributed prior to the session to assess the students' baseline knowledge of nutrition and lifestyle advice and where they obtained this knowledge from.

The workshop ran 9 times. A post-session survey was provided to assess learning from and enjoyment of this learning event.

Summary of Results

Students enjoyed the relatability of the cases, and opportunities to discuss the challenges involved for each of the 'patients'.

Suggested areas for improvements included allocation of more time for each case, and for plenary discussion. The tutor-student ratio was perceived to be too low.

Discussion and Conclusion

This activity allowed students the opportunity to apply their clinical knowledge in authentic clinical situations, while also considering the competing demands on the time, the agency, and the finances of patients.

Working in groups exposed participants to alternative viewpoints and norms for other members of their group reinforcing the diversity of the lives of students and patients.

Take-home Message

Medical students need opportunities to consider the practical implications of advice they give to patients taking individual needs, and circumstances into consideration.

6H6 (4611)

Date of Presentation: Tuesday 29th August
Time of presentation: 1015 - 1030
Location: Castle II, Crowne Plaza

"He who teaches, learns": Adopting the lecture-tutorial system for clinician-teachers new to medical humanities

Yung-Chih Wang1, Yan-Di Chang1

[1]*School of Medicine, National Defense Medical Center, Taipei, Taiwan*

Background

Medical humanities is an integral part of the medical education program in Taiwan, its standards in the accreditation of medical schools having been stipulated in 2013. During the previous year, we were forced to recruit several new teachers for the introductory course on medical humanities due to a sudden shuffling of teaching schedules, and we adopted the lecture-tutorial system so that our clinician-teachers could also learn about the subject.

Summary of Work

The course was re-designed so that each unit comprised a lecture followed by small-group discussions. It was condensed into three main themes: (1) the medical student (new roles and identities, self-care, future career paths); (2) the patient (bio-psycho-socio-spiritual aspects, illness experience, suffering); (3) the society (social determinants of health, health disparities, the National Health Insurance). The lectures were presented mainly by the senior teacher. She provided a crash course on medical humanities for the new teachers who served as moderators in the group discussions, wrote the teachers' manual, and held weekly briefing and de-briefing sessions. We collected students' feedback on the course and interviewed the clinician-teachers about their experience.

Summary of Results

Out of 130 first-year medical students, 115 (88.5%) expressed satisfaction with the course. Most students reported that the discussions improved their ability to express themselves, and that the course enhanced their self-identity and understanding of holistic patient

care. They believed that the course could improve their sensitivity and empathy toward their patients in the future. The clinician-teachers felt that they learned a great deal by reflecting on the process, especially concerning course design and teaching skills.

Discussion and Conclusion

Despite the lesser effectiveness of didactic lectures, we needed to adopt this mode of teaching in order to alleviate the load upon our new teachers, and we compensated for this problem with the small-group discussions. Fortunately, our students were quite receptive towards this pedagogical approach. We plan to involve the new teachers gradually in the lectures until they are able to teach the entire course on their own, following which we shall revert to small classes.

Take-home Message

The lecture-tutorial system is a human-resource-saving method of teaching that may help clinician-teachers learn on the job.

Session 6I: Education and Management 2

6I1 (5903)

Date of Presentation: Tuesday 29th August
Time of presentation: 0900 - 0915
Location: Castle III, Crowne Plaza

Careers teaching for foundation doctors – Is near-peer guidance the answer?

Hayley Boal[1], Joe Gleeson[1], Ashley Wragg[1]

[1]*Mid Yorkshire Hospitals NHS Trust, Wakefield, UK*

Background

In the UK newly qualified doctors embark on a two-year programme, the Foundation Programme, rotating through typically six specialities. During this time, foundation doctors (FDs) must decide the next steps in their careers; this may be entering speciality training or increasingly more popular options such as locum work, trust grade positions, clinical fellow jobs or working abroad.

It was evident that little guidance was provided to FDs in making these decisions. When guidance was available this was often from senior doctors, many of whom faced this decision a number of years ago when processes differed and culturally entering speciality training direct from foundation training was the common pathway.

Summary of Work

The Clinical Fellows in Medical Education, post foundation training doctors and junior specialist trainees, developed a careers half-day teaching session for FDs. These small group half-day session discussed the numerous options available after foundation training and equipped these FDs with practical skills to enhance their probability of securing a competitive option, including workshops on interview skills and quality improvement projects. In total 46 FY1s and 56 FY2s attended, split over 12 sessions.

Summary of Results

The sessions were well received; overall 100% rated the session as good or excellent on a 5-point likert scale. An increase in confidence was observed between pre and post session questionairres:

Pre session

Post session

FDs made the following comments in feedback:

“Good to talk about careers, never talked before”

“Very informative on keeping a competitive portfolio”

“Clear concise info on post foundation applications- appreciated how you explained everything from the very basics as sometimes find base knowledge about this is assumed”

Discussion and Conclusion

FDs appreciated receiving teaching on careers; it was evident from feedback that they possessed limited information prior to the session and obtained value in discussing options in detail, including the pros and cons of each. Delivered by near-peer clinical fellows, who had all faced the same decision in the preceding one to three years, ensured that the session was delivered at an appropriate level and created an open discussion between facilitators and FDs.

Take-home Message

Near-peer teaching is a highly effective way to develop foundation doctor knowledge on careers planning.

612 (4714)

Date of Presentation: Tuesday 29th August
Time of presentation: 0915 - 0930
Location: Castle III, Crowne Plaza

The 'Buddy Project': patient perspectives in nurse education

Claudia Bronner[1], Jos Dobber[1], Suzanne Thompson[1]

[1]*Hogeschool van Amsterdam, Amsterdam, The Netherlands*

Background

During Bachelor nurse education, students learn to view patients from a professional or health care perspective. While education pays attention to the patient perspective, the lived experience of patients is of interest for student nurses - patient perceptions of illness and health, their lives outside of the role of 'the patient'- this is a neglected area of the nursing curriculum. To address this, we designed the 'Buddy Project' – an opportunity for student nurses to explore the patient perspective by 'stepping into the patients shoes' for a 20 week long learning experience.

Summary of Work

During the 'Buddy Project', the student nurse visits the patient on a weekly basis. Commencing this contact, they discuss their expectations and how they want to give form to their contact. In that regard, one student-patient contact – and its outcome - will differ from another. For students this will mean having the 'right conversations', being with (rather than 'doing to') in order to gain insights into the patient's lived experience. This approach requires student support. Fortnightly intervision with fellow students and a lecturer allow for the exploration of distance and nearness to the patient, the setting of boundaries and the discussion of other relevant topics. The 'Buddy Project' is assessed by a student led assignment, in which the student designs a relevant assignment to demonstrate learning and reflection.

Summary of Results

Using mixed methods, we evaluated the 'Buddy Project' with students, patients and lecturers. The results were unanimously positive. Patients and student nurses found the

experience enriching. These results suggest that experiencing the patient perspective helps students to create a 'compass' for professional practice, leading to the formation of judgment free professional behaviour. The student-led assessment design produced both rich and diverse products, such as podcasts, paintings and photocollages, suggesting deep engagement by the students with the learning outcomes of their experience.

Discussion and Conclusion

The 'Buddy Project' adds value to the bachelor of Nursing curriculum by creating education that focuses on the patient perspective. Additionally, this project contributes to the social mission of our University by having a positive impact on the local communities.

Take-home Message

Lived experience to explore the patient perspective.

613 (5094)

Date of Presentation: Tuesday 29th August
Time of presentation: 0930 - 0945
Location: Castle III, Crowne Plaza

Costing methodology in Health Professions Education: Trying to see the forest for the trees. A Scoping Review

Jennifer Yaros1, Chloe de Mortier1, Mirjam oude Egbrink1, Silvia Evers2, Agnes Paulus1

[1]Maastricht University, Faculty Health Medicine Life Science, School of Health Professions Education, Maastricht, The Netherlands; [2]Faculty of Health Medicine and Life Sciences, Care and Public Health Research Institute (CAPHRI), Department of Health Services Research, Maastricht, The Netherlands

Background

As awareness of resource scarcity in health professions education (HPE) grows, so too, does the desire to ensure that educational decisions are cost conscious. However, economic evidence within HPE is rare and the methodology for examining costs is unknown. To advance economic research in HPE, this investigation sought to better understand which costs are relevant to HPE and explore which methods are currently used when considering costs.

Summary of Work

A scoping review of the literature was conducted according to the guidelines from PRISMA-ScR and Joanna Briggs Institute. Evidence was sought in PubMed, ERIC, CINAHL and PyscInfo for all types of English language publications from 2012 onwards. Publications were included that reported on costs related to HPE. Two authors independently screened potential publications for eligibility. Data was extracted pertaining to bibliographic, educational and economic characteristics. Content analysis was performed to capture the current state of evidence for cost investigations in HPE.

Summary of Results

Of 1039 potential publications, 146 original research publications met the criteria for inclusion. Results demonstrate widespread heterogeneity in all aspects of cost

investigations. Topics of interest ranged from the cost of educating residents (n = 31), and simulation-based training (n = 21) to teaching methodology (n = 14). Education level ranged from undergraduate (n = 43), and postgraduate (n = 55) to continuing professional development (n = 11). Costs were presented from a variety of stakeholder perspectives, including clinical institutions (n = 55), learners (n = 41) and academic institutions (n = 29). Use of established economic methods was uncommon. The majority of studies did not identify the type of economic evaluation conducted (n = 73) nor a method for resource identification (n = 83).

Discussion and Conclusion

The quantity and diversity of cost investigations indicates that economic evidence is of interest to a variety of stakeholders across all levels and aspects of HPE. However, widespread inconsistency in methodology demonstrates the lack of consensus on how to structure and conduct cost investigations.

Take-home Message

Future research is needed to standardize costing methodology and improve rigor in economic investigations of HPE.

614 (6697)

Date of Presentation: Tuesday 29th August
Time of presentation: 0945 - 1000
Location: Castle III, Crowne Plaza

Residency selection in postgraduate medical education: A scoping review of current priorities and problem conceptualizations

Holly Caretta-Weyer1, Kevin Eva2, Lalena Yarris3, Daniel Schumacher4, Pim Teunissen5

[1]Stanford University School of Medicine, Palo Alto, California, USA; [2]University of British Columbia, Vancouver British Columbia, Canada; [3]Oregon Health Science University OHSU, Portland, Oregon, USA; [4]Cincinnati Children's Hospital Medical Center, Cincinnati, USA; [5]Maastricht University, Maastricht, The Netherlands

Background

The process of screening and selecting trainees for postgraduate training has evolved significantly in recent years, yet remains a daunting task. Postgraduate training directors seek ways to feasibly and defensibly select candidates, which has resulted in an explosion of literature seeking to identify root causes for the problems observed in postgraduate selection and generate viable solutions. We therefore conducted a scoping review to analyze the problems and priorities presented within the postgraduate selection literature in order to explore practical implications and present a research agenda.

Summary of Work

Between May 2021 and February 2022, the authors searched PubMed, EMBASE, Web of Science, ERIC, and Google Scholar for English language literature published after 2000. Articles that described postgraduate selection were eligible for inclusion. Thematic analysis was performed on a subset of 100 articles examining priorities and problem framings in postgraduate selection.

Summary of Results

2273 articles were eligible for inclusion. Articles were sampled randomly and then purposively to ensure adequate representation of the body of available literature. The majority of manuscripts were North American and, of the empirical studies, most were

descriptive in nature. Five distinct perspectives or problem framings were identified in the thematic analysis: (1) Identification of metrics to predict performance in postgraduate training; (2) selection as competition; (3) alignment between applicant and program; (4) addressing diversity, bias, and equity; and (5) the logistics or mechanics of the selection process.

Discussion and Conclusion

Each of these approaches focuses on a different priority outcome within the selection process. By further critically considering the nuances of variability in the problem being addressed within the current literature, we can gain insight into the assumptions and implications of viewing postgraduate selection through each of these problem lenses and identify gaps and opportunities for future research.

Take-home Message

This review provides insight into the problem framings authors use to describe postgraduate selection within the literature. The identified problem framings provide a window into the assumptions and subsequent philisophical and practical implications of viewing postgraduate selection through each of these lenses. Future research must consider the outcomes and consequences of the problem framing chosen and the impact on current and future approaches to postgraduate selection.

615 (6464)

Date of Presentation: Tuesday 29th August
Time of presentation: 1000 - 1015
Location: Castle III, Crowne Plaza

Candidate selection in medical education: Evaluation of age and generation on Situational Judgement Test performance on undergraduate and postgraduate entry

Natasha Gorowara1, Natapong Thaneerat1, Amarin Narkwichean2, Nopphanath Chumpathat3, Panunat Muangnoi1, Sivaporn Wannaiampikul4

[1]Faculty of Medicine, Srinakharinwirot University, Ongkharak, Nakhonnayok, Thailand; [2]Joint Medical Programme (between Srinakharinwirot University and University of Nottingham) Faculty of Medicine Srinakharinwirot University, Department of Obstetrics and Gynecology, Faculty of Medicine Srinakharinwirot University, Honorary Associate Profes, Bangkok, Thailand; [3]Faculty of Nursing, Huachiew, Chalermprakiet University, Samut Prakan, Thailand; [4]Joint Medical Programme (between Srinakharinwirot Univeristy and University of Nottingham) Faculty of Medicine, Srinakharinwirot University, Ongkharak, Nakhonnayok, Thailand

Background

Medical graduates should have critical judgement skills for effective patient care, and institutions should select prospective candidates based on decision-making skills. The Faculty of Medicine, Srinakharinwirot University, has two enrollment programmes in the special admission round: the Joint-Medical Programme (undergraduate) and postgraduate entry. The selection criteria include Multiple Mini-Interview (MMI), academic and non-academic evaluations. Nonetheless, more focus should be given to decision-making capabilities, which can be assessed by Situational Judgement Tests (SJT). The distinction between undergraduate and postgraduate entry is that the candidates are from different age groups and generations. Therefore, this study aims to find associations comparing SJT scores with age and generation.

Summary of Work

This observational cross-sectional study selected 53 candidates who were qualified for undergraduate and postgraduate entry to take MMI and SJT (trials only). The SJT was modified from the Association of American Medical Colleges, which included 30 scenarios with 186 items. Mann-Whitney and independent T-tests were used to analyse the results, and the coefficient correlation was applied for association with age.

Summary of Results

The number of candidates for undergraduate and postgraduate entry was 24 and 29, respectively. The mean age for undergraduate was 22.17±4.59, and the average SJT score was 122.72±10.65 for both programmes. SJT has discriminating power to select candidates as better SJT scores were noted between participants who gained satisfactory scores in MMI, compared with those who did not pass the interview (127.20±6.50 vs 117.87±11.75, p-value<0.001). Increasing age correlates with lower scores of SJT ($r=-0.358$, $p<0.01$). Moreover, candidates in younger generations (generation Z) have significantly higher median SJT scores than generation Y candidates ($p<0.05$).

Discussion and Conclusion

SJT can be used for individualised judgement skills as SJT have corresponding scores with MMI performance. The increasing age reveals no association with having higher SJT scores, as candidates of younger ages and generation Z achieved higher SJT scores.

Take-home Message

The medical curriculum should incorporate this tool to aid the selection of all candidates. Increased age and life experience do not necessarily associate with better judgement skills in SJT.

616 (4346)

Date of Presentation: Tuesday 29th August
Time of presentation: 1015 - 1030
Location: Castle III, Crowne Plaza

International Variation in the Self-Evaluation Guidance for Medical School Accreditation

Yuxing Emily Ma[1], Sean Tackett[1]

[1] *Johns Hopkins University School of Medicine, Baltimore, MD, USA*

Background

Accreditation is promoted as a key regulatory strategy to ensure high-quality medical education across the world's rapidly growing number of medical schools. The World Federation for Medical Education (WFME) has developed a Recognition Programme to standardize the practices of medical school accrediting agencies and, by extension, the medical schools they oversee. The WFME Recognition Programme, however, does not specify which metrics are required for schools to demonstrate compliance with standards. The goal of this study is to assess the variation in the medical school self-evaluation guidance provided by WFME-recognized accreditation agencies.

Summary Of Work

To acquire guidance for the medical school self-evaluation, we reviewed accreditation agency websites between June and July 2022 and contacted agencies for documents. We conducted a qualitative and quantitative document analysis of the guidance for comparable WFME standards.

Summary Of Results

We were able to obtain documents from 21 of 28 WFME-recognized agencies. Despite the WFME requirement that agencies make accreditation policies and procedures publicly available, 7/28 (25%) of the documents were not available online and could not be obtained by contacting agencies.

We grouped agencies' self-evaluation guidance into four categories along a spectrum of more prescriptive to less: data-collection instrument (DCI) (n=2), evaluation rubric (self-rated compliance with standards) (n=6), standard-specific free response prompts (n=6), and general guidance (n=7). DCI guidance requested that schools distribute surveys, complete tables with quantitative data, and supply school documents, whereas general guidance allowed medical schools to determine what evidence to provide. For the standard that was the most conserved across agencies, the DCI guidance was an average of 25 times longer and requested 7 times as much information as the general guidance.

Self-evaluation guidance category was not associated with country characteristics, such as geographic location, World Bank Income category, or Corruption Perception Index.

Discussion And Conclusion

There remains limited public availability of policies and processes of WFME-recognized accreditation agencies. Guidance provided by these agencies varies widely in format and specificity even for similar standards.

Take Home Messages

These findings raise questions about the comparability of agency practices. Additional study is needed to understand the reasons for and implications of variation in practices of WFME-recognized agencies.

Session 6J: Equality, Diversity and Inclusivity 3

6J1 (4261)

Date of Presentation: Tuesday 29th August
Time of presentation: 0900 - 0915
Location: Alsh 1, Loch Suite, SEC

Capacity Building for Whom? How Medical Education Journal Editors Conceptualize their Role in Expanding Diversity, Inclusion, and Access

Jeffrey Cheung1, Dorene Balmer2, Beth Bierer3, Anna Cianciolo4

[1]University of Illinois College of Medicine, Chicago, Illinois, USA; [2]University of Pennsylvania, Philadelphia, USA; [3]Cleveland Clinic Lerner College of Medicine at Case Western Reserve University, Cleveland, USA; [4]Southern Illinois University School of Medicine, Springfield, USA

Background

While editors of Health Professions Education (HPE) journals can serve as gatekeepers to scholarly productivity, they also can foster diversity, inclusion, and access in HPE scholarship. Understanding how editors conceptualize and operationalize capacity building is critical to optimizing efforts to expand diversity and alleviate disparities in scholarship. However, little is known about how this occurs.

Summary of Work

Working within constructivist grounded theory tradition, we asked how editors-in-chief (EiC) of HPE journals conceptualize their role in building capacity for the purposes of expanding diversity, inclusion, and access to scholarly publishing. We sampled EiC from preexisting lists and then snowball sampled to identify alternative and complementary perspectives. We conducted semi-structured interviews via Zoom; iteratively collecting and analyzing data in a constant comparison process.

Summary of Results

Based on interviews of 12 editors from across North America, Europe, and Australasia, EiCs have a broad understanding of capacity building and see it as central to their work. Nearly

all described developing their associate editors, peer reviewers, and supporting authors (particularly those from resource-limited countries) as part of capacity building; some included internships, workshops, and open access publishing. Geographic niche (regional vs international) influenced "degrees of freedom" to strategize capacity building. Editors of regional journals expressed greater flexibility than international journals, owing to support from a regional institution or society, clearly defined stakeholders, or less emphasis on conventional scholarship metrics (e.g., impact factor).

Discussion and Conclusion

This work suggests that each journal is situated within an ecology (including but not limited to the EiC) that influences how capacity building is enacted. International journals tend to emphasize scholarship - upholding conventional standards for scientific rigor; while more regional journals emphasize scholars - tailoring what they publish to meet the collective goals of individuals within their locale (e.g., society).

Take-home Message

EiCs play an important albeit potentially limited role in expanding diversity, inclusion, and access in HPE scholarship. How capacity building is conceptualized depends on the larger context of what the field of HPE values and defines as scholarship, which we argue is deserving of additional attention.

6J2 (0996)

Date of Presentation: Tuesday 29th August
Time of presentation: 0915 - 0930
Location: Alsh 1, Loch Suite, SEC

Effectiveness of Active Bystander Training: Developing a New Tool to Evaluate

Cindy Chew1, Lindsey Pope1, Kirsty Colquhoun1, Elaine Taylor1, Fozia Nazia1, Ian Hunter2, Craig Napier1, David Young3, Marina Politis1

[1]University of Glasgow, Glasgow, UK; [2]Department of Medical Education, Lanarkshire, Glasgow, UK; [3]University of Strathclyde, Glasgow, UK

Background

Discrimination and harassment have no place in Medical Education. Simulation has been suggested as an effective method to teach medical students the skills to be an active bystander when witnessing incivilities at work, beyond the theoretical. There is currently no tool to evaluate such training. We set about to develop a tool to evaluate the efficacy of planned simulation training to teach medical students how to be upstanders.

Summary of Work

An expert panel was convened. Panellists were invited to submit questions suitable for the proposed evaluation questionnaire / tool anonymously via Google form. Content validity and internal stability were analysed. Inclusion of questions was determined through an iterative modified Delphi process, repeated until consensus was reached (75% agreement). One reminder email was sent at 4 weeks to encourage response.

Students were asked to fill the final questionnaire / tool twice before any intervention to determine stability.

Summary of Results

Expert panel (N=10) consisted of medical educators from our Institution from a wide range of clinical practice. Medical Students (N=2) and a Lay person (N=1) were also included. Members were chosen for their leadership positions, experience in dealing with

challenging situations involving Medical Students, as well as their lived experience. Panellist self-identified with 8 of 9 protected characteristics under the UK Equalities Act 2010.

Thirteen questions were collated. 90% response rate was achieved at 6 weeks. Two questions (67% concordance) were excluded. Ten questions achieved 100% concordance and 89% concordance on the remainder. Given the high level of concordance, only 1 round was conducted.

Twenty-two matched pre-intervention responses to the tool were collected. Limits of Agreement were used to determine the agreement between the questionnaire scores on the 2 occasions. The mean bias was 0.04, 95% limits of agreement are (-11.1, 11.2).

Discussion and Conclusion

Through the involvement of expert and experienced panellists as well medical students and a lay person, a stable tool was developed. This tool will allow a more objective pre-/post- intervention evaluation of our intended simulation based active bystander training. This can potentially allow for inter-professional and inter-institutional comparison.

Take-home Message

We have developed a tool to more objectively evaluate Upstander training.

6J3 (6543)

Date of Presentation: Tuesday 29th August
Time of presentation: 0930 - 0945
Location: Alsh 1, Loch Suite, SEC

Sparking Transformation: Learning from the Sunnybrook Program to Access Research Knowledge (SPARK) for Black and Indigenous Medical Students

Csilla Kalocsai1, Maclite Tesfaye2, Oshan Fernando3, Ayelet Kuper4, Jill Tinmouth5, Sophie Weiss2, Nick Daneman5, Maydianne Andrade6, Mireille Norris5

[1]Department of Psychiatry, University of Toronto, Toronto, Canada; [2]University of Toronto, Toronto, Canada; [3]Sunnybrook Health Sciences Centre, Toronto, Canada; [4]Wilson Centre for Research in Education, University of Toronto and University Health Network, Toronto, Canada, Toronto, Canada; [5]Department of Medicine, University of Toronto, Toronto, Canada; [6]Department of Biology, University of Toronto, Toronto, Canada

Background

While there have been multiple calls to attend to issues of diversity in medical education over past decades, medicine has remained a predominantly white profession in Canada. Recently increasing activism to redress violence against Indigenous and Black people has led medical institutions to renew their commitment to EDI. Institutional efforts vary, but often include programs strengthening pathways. The literature on underrepresented students points to mentorship as essential; however, the lack of mentorship is considered a hallmark experience of non-white students. To produce transformative changes for medical learners, a triplicate mentorship initiative called SPARK was launched in Toronto in 2021

Summary of Work

This critical ethnographic longitudinal study aims to understand how SPARK achieves its impact in its local socio-cultural context. We draw on British philosopher Miranda Fricker's and American Black philosopher Luvell Anderson's concept of epistemic injustice to interpret our findings. Our team is comprised of SPARK leads, SPARK and non-SPARK students, education researchers, and equity advocates; we have heterogenous

positionalities, academic backgrounds, and experience in community organizing. We present findings from our first cycle of interviews.

Summary of Results

As Black and Indigenous students navigate their journey to/in medicine, they characterize medical school as unattainable, experience knowledge gaps, and the complexities of representation. They benefit from parental support and affirmative pathways but continue to experience racism. Mentors address knowledge gaps and support students in questions of identity, representation, and community. While mentors' have a deep appreciation of mentorship, many feel discomfort with learners, enact limited reflexivity, and do not understand the epistemic issues SPARK tackles.

Discussion and Conclusion

Within medicine's racist epistemic structures, SPARK may function as a program of epistemic justice, transforming Black and Indigenous medical learners' academic opportunities and shaping how they re/imagine their professional identities and careers in medicine and research. The limits of SPARK, however, are revealed through some of the mentor interviews that remind us that you can't reliably deliver justice "without embracing its values and principles as part of its ethos" (Fricker, 2013: 1331).

Take-home Message

SPARK may only achieve its social justice outcomes if its mentors can critically reflect on their positionalities and rethink the possibilities of mentorship in medical education.

6J4 (3111)

Date of Presentation: Tuesday 29th August
Time of presentation: 0945 - 1000
Location: Alsh 1, Loch Suite, SEC

Ethnicity and culture: experiences of working and learning at a UK medical school

Samantha Mills1, Lucy Green1, Kathleen Kendall1, Gary Hickey 1, Aude Campmas1

[1]*University of Southampton, Southampton, UK*

Background

The COVID-19 pandemic raised awareness of racism and inequalities in the health provision and outcomes for people from racially minoritized backgrounds. This contributed to renewed calls on medical schools to investigate and address racial inequality in its educational content, culture and processes. To take informed and relevant action this research explored how race and ethnicity are understood and experienced within the Faculty of Medicine (FoM) at the University of Southampton (UoS).

Summary of Work

Aims

(1) To understand and explore experiences and perceptions of race, ethnicity, and culture in the FoM.

(2)To develop recommendations for actions for senior leadership consideration.

Methods

Focus groups and interviews were conducted with staff and students in the FoM at the UoS (N=51). Discussions explored experiences/perceptions of working or learning in the Faculty with a focus on ethnicity and culture. Focus groups were transcribed for thematic analysis.

Participants also took part in an online consensus workshop where study findings were presented and breakout rooms used for discussion and developing recommendations. Participants prioritised recommendations based on individual perception of importance.

Summary of Results

Four key themes emerged from the findings; (1) distrust of reporting processes, (2) negative experiences associated with subtle, normalised expressions of racism and microaggressions, (3) minority ethnic staff and students lacking a sense of belonging (4) lack of racial representation in the curriculum.

The recommendations focused on (1) improving confidence and trust in reporting processes (2) improving education and awareness on microaggressions, (3) celebrating cultural differences within the Faculty.

Discussion and Conclusion

The project findings and recommendations made have formed the basis of a Faculty action plan. The plan will enable staff and students from all ethnic backgrounds to establish operational structures and oversee and monitor improvements to reporting confidence, delivering a diverse curriculum, and to the culture and sense of belonging in the Faculty."

Take-home Message

A key requirement for a change in culture is that students and staff feel confident to challenge behaviours and systems.

An action plan for change that is clear, timely and accountable is needed.

Developing solutions requires the involvement of people from all ethnic groups. We need to engage voices that typically avoid discussions about race and ethnicity.

6J5 (4400)

Date of Presentation: Tuesday 29th August
Time of presentation: 1000 - 1015
Location: Alsh 1, Loch Suite, SEC

Perceptions and experiences of the use of feedback in health professions education in Malawi

Emma Thomson1, Tuntufye Mwambyale1, Linda Jones2

[1]Kamuzu University of Health Sciences, Blantyre, Malawi; [2]University of Dundee, Dundee, UK

Background

This study investigated student and lecturer perceptions and experiences of receiving and delivering feedback at College of Medicine (CoM), Malawi, and how stakeholders felt this feedback influenced self-reported behavioural change. Most current literature on feedback is from western perspectives that we cannot assume will be applicable to Malawian culture, which is recognized as non-confrontational and hierarchical. This study seeks to contribute to discourses relating to the effectiveness of feedback particularly in a sub-Saharan healthcare education institution.

Summary of Work

Data was collected using semi-structured interviews with students and lecturers from all 3 faculties at CoM. Data was analysed sequentially for emerging themes using a grounded theory approach allowing themes to emerge from the data.

Summary of Results

Inductive data analysis resulted in eight interconnected themes: conception of feedback; affective dimension; thirst for feedback; need to achieve; feedback conversations; self-preservation; feedback relationships; students' ideal feedback which included the desire for pastoral support. Several tensions also emerged from student data: 1. yearning for feedback but experiencing corrective feedback as emotional assaults requiring action for self-preservation; 2. preferring to receive affirmative feedback, but acknowledging corrective feedback led to improved performance; 3. highly valuing dialogue and opportunities to seek clarification/understanding/defend themselves, which was deemed

less likely with senior faculty whose feedback was greatly respected. 4. Both stakeholders considered 'hard work=success' and feedback should result in students working harder, whilst students lamented lack of time for studies, sharing a view that critical feedback implied laziness.

Discussion and Conclusion

'Best feedback practices' articulated by CoM students were, unexpectedly, mostly aligned with western educational practices. Unique findings, unaligned with literature included: desire for lecturers to fulfil pastoral roles rather than simply feedback on tasks. One key tension was that whilst students greatly valued feedback from senior faculty, due to respect for hierarchy, they felt less able to engage in the dialogue they desired. It is hoped these findings will inform student induction curriculum and faculty development initiatives at CoM. The intention is to share the international evidence-base whilst collaborating with stakeholders to tailor feedback practices to the unique Malawian educational environment.

Take-home Message

Recommended feedback practices should be based on evidence from within the relevant context and culture.

Session 6K: TEL: Technology for Enhancing Learning

6K1 (3162)

Date of Presentation: Tuesday 29th August
Time of presentation: 0900 - 0915
Location: Alsh 2, Loch Suite, SEC

Investigating the impact of flipped learning on biomedical students' self-efficacy, performance and gender in a haematology course

Abdulrahman Algarni1, Badriah Algarni2

[1]Northern Border University, Arar, Saudi Arabia; [2]Ministry of Education, Jeddah, Saudi Arabia

Background

In a flipped classroom, students watch lectures online before the class session and then devote the class time to undertaking a variety of active learning techniques. A growing body of research in higher education demonstrates that flipped learning instruction yields positive results to enhance students' learning experience. Nonetheless, there is a scarcity of solid research in medical education, particularly on the influence of flipped classrooms on students' self-efficacy and gender. This study addressed the question of whether the flipped classroom affects medical students' sense of self-efficacy and academic performance.

Summary of Work

A total of 86 third-year medical laboratory science students undertook a ten-week haematology course. A quasi-experimental research design was used in which four groups were divided into one of two conditions; experimental (flipped teaching) and control (traditional teaching). Flipped instruction was designed based on Merrill's 'First Principle of Instruction Design Theory'. A quantitative approach was used to collect quantitative data including a self-efficacy survey and the students' hematology test, both of which were administered before and after the flipped classroom intervention. In addition, gender differences were compared between males and females in both groups.

Descriptive statistical analyses and analysis of variance (ANOVA) were utilized to analyse the data.

Summary of Results

The results showed that the medical students' self-efficacy scores in the flipped classroom increased significantly compared with the control group. Academic performance was not significantly different between the flipped and control groups. When gender was considered separately, female medical students in both the flipped and the control groups improved their academic performance and self-efficacy more than their male counterparts. The females in the flipped teaching group showed significant improvement in their self-efficacy compared with the males in both the flipped and the control groups and with the females in the control group.

Discussion and Conclusion

Instructors are encouraged to implement an innovative teaching strategy to replace the direct lecture format in teaching medical courses which could enhance students' learning. The flipped classroom can provide multiple opportunities for medical students to become autonomous as they develop academic self-confidence through the mastery of medical skills in the haematology course.

Take-home Message

Active learning improves student engagement and learning.

6K2 (2580)

Date of Presentation: Tuesday 29th August
Time of presentation: 0915 - 0930
Location: Alsh 2, Loch Suite, SEC

TikTok At Your Cervix - Delivering Obstetric Physical Examination Skills Via Social Media

Caleb Lim Chun Wei[1], Kirsten Ong Jie Ying[1], Jill Cheng Sim Lee[1]

[1]*KK Women's & Children's Hospital, Singapore*

Background

Teaching students and junior doctors how to perform obstetric vaginal examinations (VEs) has traditionally been very challenging because of the intimate nature of such examinations, inter-observer variability and the lack of consenting real-life patients. In this regard, social media serves as a powerful teaching complement to educate and equip junior doctors with the requisite skills and confidence to perform such intimate examinations.

Summary of Work

Cohorts of medical students rotating through the obstetrics and gynaecology (O&G) department participated in our blended learning workshop where they viewed a 1 minute TikTok instructional video on performing obstetric vaginal examinations. Thereafter, they attended a resident-led workshop where they performed simulated VEs through gamified models and objective structured clinical examinations. They completed a satisfaction survey at the conclusion of the workshop.

Summary of Results

There were 20 participants in the study. 10 were postgraduate while 10 were undergraduate medical students. The students unanimously agreed (100%) that the TikTok video was more useful (n=20) than conventional teaching mediums (e.g. lectures) in teaching VEs and more accessible than conventional teaching mediums. 95% (n=19) agreed that the TikTok video equipped them with more confidence to perform VEs in real life. 100% (n=20) agreed that the TikTok video was a fun and interesting learning tool. 95%

(n=19) wanted more obstetric and gynaecology content to be made available through TikTok videos. No difference was observed in this pilot study between undergraduate and postgraduate students and their reception towards our blended learning methodology.

Discussion and Conclusion

Learning in obstetrics and gynaecology can be enhanced through social media. Social media is a powerful tool to provide high fidelity simulation, improve the overall learning experience and engagement of medical students and overcomes the gender and social barriers which limits medical students' participation in performing intimate obstetric physical examinations.

Take-home Message

The ubiquity and accessibility of social media can be harnessed by clinicians in teaching the new generation medical students how to perform O&G physical examinations, where lack of experience typically limits students' confidence. Social media as a learning tool is preferred and widely accepted by most medical students. Residents are best poised to spearhead the introduction of social media in medical education.

6K3 (2723)

Date of Presentation: Tuesday 29th August
Time of presentation: 0930 - 0945
Location: Alsh 2, Loch Suite, SEC

Using interactive learning application to improve the learning effective of radiology students' professional abilities and English medical terminology

YI-HSIEN LIN1, YUN-XUAN TANG1, KUN-MU LU1, FAN-YUN KUNG1

[1]*SHIN KONG WU HO-SU MEMORIAL HOSPITAL, Taipei, Taiwan*

Background

For non-English-speaking countries, the students were unfamiliar with English medical terminology. Most radiology courses were traditional lectures, and passive learning can be difficult for students to focus on the course. Therefore, course became more interesting and diverse through game-based learning application. The purpose of this research is to explore the learning effectiveness of students in professional course combined with application "Kahoot".

Summary of Work

A total of 39 radiology students from different university in the past three years. Students in groups of 2-4 people used mobile phone online "Kahoot" for study in radiography courses. Teaching content for anatomy of radiography, basic clinical diagnostic and radiation technique skill with English medical terminology. After class, the teacher commented the core learning objective and supplemented the relevant clinical knowledge, while analyzing all students' pre-test, post-test and learning satisfaction using paired sample T-test.

Summary of Results

There was a significant difference in the scores of students on the pre- and post-course test ($p < 0.05$), with anatomy of radiography score from 39.97± 32.68 to 50.13± 26.45($p < 0.03$), basic clinical diagnosis score from 43.74 ± 23.59 to 65.41± 21.1 ($p = 0.01$) and radiation technique skill score from 24.72± 15.55 to 64.44± 20.1 ($p < 0.01$). 87% of students thought

game-based learning was interesting and engaging, 79% thought that this method of learning could better remember English medical terminology.

Discussion and Conclusion

According to the result, game-based learning engaged most of the students, allowing the review of class contents more enjoyable. However, if the game (kahoot) is not stable on the network, the effect is not good. Students can solve the problem through teamwork and professional knowledge, and the learning effective was reflect in their score.

Take-home Message

Game-based learning not only enhances student's concentration but also improves the score of academic questions.

6K4 (2799)

Date of Presentation: Tuesday 29th August
Time of presentation: 0945 -1000
Location: Alsh 2, Loch Suite, SEC

The First Experience of Medical Students in Using AI-Assisted Reading of CXR to Detect Pulmonary Tuberculosis

Pharida Pengwan1

[1]*Lampang Hospital, Lampang, Thailand*

Background

Currently, AI technology is widely used in medical imaging analysis. The most common disease in which AI is used as an analysis tool is pulmonary tuberculosis (TB) which is a major public health problem in Thailand. Lampang Medical Education Center launched the use of AI software (AIChest4All)® for screening pulmonary TB from CXR in December 2020. Most medical students were not experienced in using this software. To enhance their experience, the basics, effectiveness, limitations, and guidelines for using AI to analyze CXR were introduced to medical students via e-learning documents.

Summary of Work

The pre-test of 18-CXR images for detecting active pulmonary TB was given to the 4th-6th year medical students via google forms. After completing the pre-test examination, the students studied AI using guidelines and did the post-test which combined the AI results with the previous pre-test CXRs. The pre-and post-test scores measuring accuracy and 5-point confidence level (very low, low, moderate, high, very high) in detecting pulmonary tuberculosis from CXR were compared.

Summary of Results

In total, 44 medical students completed the pre- and post-test examinations (14 fourth year, 16 fifth year, 14 sixth year). The mean pre-test and post-test scores were 12.8 ±0.3 and 14.5 ±0.2 points, the p-value was 0.001. The pre-test scores of median and ranges were 13/18 points and 7-17 points, respectively; whereas the median and ranges of post-test scores were 15/18 points and 10-18 points, respectively.

When using AI, the confidence of medical students reading CXR increased about 6 times (OR: 6.05; 95% CI: 2.57-14.26; p-value <0.001). The 28 of 44 (63.6%) medical students showed higher confidence, but 2 students had less confidence. 14 students showed no change in confidence level.

About 63.6% and 34.1% of students thought that AI has high and moderate accuracy for detecting pulmonary TB, respectively. But 2.3% of students did not.

Discussion and Conclusion

Using AI-assisted reading of CXR shows better post-test results. AI helped detect and localize abnormality from CXR and increased confidence in diagnosing pulmonary TB, especially in non-experts.

Take-home Message

AI is a diagnostic aid for improved CXR interpretation, especially in non-experts.

Session 6L: Supporting Learners: Supporting Learners

6L1 (3037)

Date of Presentation: Tuesday 29th August
Time of presentation: 0900 - 0915
Location: Boisdale 1, Loch Suite, SEC

The ten year evolution of a UK Medical School Undergraduate Student Support Unit

Liz Forty[1], Peter Hunt[1]

[1]*Cardiff University School of Medicine, Cardiff, UK*

Background

The My Medic Learning Development Unit at Cardiff University School of Medicine provides bespoke support for undergraduate students (N=1500). The Student Support Unit was established in 2010 with the aim of providing confidential support for medical students struggling with performance, health, financial or personal issues.

Summary of Work

We examined the numbers of students accessing the service, method of referral, reasons for referral, and the demographics of students accessing the service, between 2010-2022

We invited students to complete a survey to share their perspectives on My Medic LDU. A thematic analysis of this qualitative data identified key themes around student perspectives of the service.

Summary of Results

In 2011-12, 19% of all referrals were self-referrals, with this increasing to 89% in 2020-21. The number of students accessing My Medic has consistently increased over time. The reasons for self-referral have also shifted from primarily educational reasons to the need for health and personal support. Approximately one quarter of UG students in the School

of Medicine at Cardiff are registered with My Medic-LDU (N=437) with a proportion of these (N=227) actively receiving support.

A thematic analysis of the survey data was undertaken. The analysis resulted in three main themes:

Occupational stressors within undergraduate medicine

The value of shared experiences

Normalising help seeking/reducing stigma

Discussion and Conclusion

The reasons for medical students seeking support have changed over time with a move towards seeking support in relation to psychological distress and mental health issues. The provision of a specialised service for medical students breaks down barriers and normalises support-seeking for medical students, who are often reluctant to seek help, particularly in relation to mental health concerns.

My Medic LDU has evolved in its role to not only provide confidential support for students, but to improve Student Health and Wellbeing through health promotion, early preventative measures, peer support and teaching, advocating for students' welfare, and creating a compassionate culture within the School.

Take-home Message

The reasons for medical students seeking support have changed over time

Medical students value support that is set within the context of their specific learning environment

6L2 (4266)

Date of Presentation: Tuesday 29th August
Time of presentation: 0915 - 0930
Location: Boisdale 1, Loch Suite, SEC

Do as I do, or do as I say? How to protect learners in a clerkship apprenticeship model

Andrea Guerin[1], Amber Hastings-Truelove[1], Denise Stockley[1]

[1]*Queen's University Faculty of Health Sciences, Kingston, Canada*

Background

The COVID-19 pandemic created the need to make constant changes to the clerkship curriculum at Queen's University to keep the program running. When the clerkship medical student leadership took on that role in September 2019, they had no way of knowing that they would be engaged in this discussion as well. Exit interviews with student leadership after the completion of clerkship and start of residency revealed this gap in student support.

During the early days of the pandemic, frequent and emergency meetings were common, and the lines between work and home were blurred by the urgency of the situation and constantly changing Public Health recommendations. Therefore, if faculty were participating in regarding the clerkship schedule, the apprenticeship model and social constructivist approach to clerkship lent itself to student leadership participating in these meetings as well.

Summary of Work

A qualitative study was done using document analysis to assess the impact of the COVID-19 pandemic on the Queen's Medical School clerkship curriculum. As part of the validation of the document analysis, the clerkship student leadership were interveiwed.

Summary of Results

The inteviews revealed an increased demand on student leadership in the first year of the pandemic, which was not reflected in any of documents nor in the clerkship literature.

Discussion and Conclusion

For the clerkship medical students, all safety considerations were centralized through Occupational Health, which meant that many of these unique needs of the leaders were not met. Using the information from the interviews and adapting examples for preventing resident burn out in the literature, proactive interventions to ameliorate causes of burnout in medical students were suggested. They include: schedule flexibility and redundancy, a medical student ombudsperson and safety advocate, and the possibility of providing alternate accommodations to prevent infection/spread. The needs of student leaders are unique and must be taken into consideration when curricular decisions are being made.

Take-home Message

Clerkship student leaders faced increased stress and burn out during the pandemic due the extra damands of their leadership role.

Individual measures specifically for medical student leaders should be put into place to address medical student leader burn out.

6L3 (5083)

Date of Presentation: Tuesday 29th August
Time of presentation: 0930 - 0945
Location: Boisdale 1, Loch Suite, SEC

PsyMentFreiburg - a longitudinal curriculum for maintaining mental health in medical students

Andrea Kuhnert1, Jule Schröder1, Timo Luoma1, Majke Kunze1, Irina Möllers1, Sophia Weegen1, Mikhail Gromak1, Ruth Pfeifer1

[1]*Department of Psychosomatic Medicine and Psychotherapy, University Medical Centre, Albert Ludwigs University, Freiburg, Germany*

Background

Students of medicine experience high psychomental stress during their studies. Complex study requirements paired with a high performance ideal lead to an even higher performance effort with decreased mindfulness towards one's own health. PsyMentFreiburg (PMF) offers a competency-oriented approach in the area of self and stress management, teaching of coping skills and development of an individual professional attitude. The program intends to alleviate stressful situations via improved self-perception and self-guidance, to stabilize mental health and boost motivation for one's studies.

Summary of Work

PMF provides a wide range of offers for med students in their 1st to 10th semester through Needs-oriented workshops tailored to study stage (basic, clinic I and clinic II), e.g. stress and self-management, dealing with errors, decision making, cooperative team work, resilience, interdisciplinary contexts mindfulness-based coaching (MedOn!, 5 sessions of 1.5 hours each) psychoeducational content on the platform InTensity

Summary of Results

N=99 participants out of 13 workshops (summer 2021 to summer 2022) evaluated their workshop in the whole as very good (M = 1.33, SD = 0.22, Likert scale: 1: very good to 6: very poor).

In the MedON! courses mindfulness and individual coping strategies increased significantly in a pre-post comparison conducted with paired t-tests across all groups (N = 68 participants in 8 courses over 3 semesters (summer 2021 to summer 2022).

Discussion and Conclusion

Needs-based WS for medical students were well accepted overall and rated as very good.

The results show that our mindfulness courses do improve individual mindfulness and we found first indications for a positive effect on student's mental health. To verify these results a randomized control group design is set in progress.

Take-home Message

Improved self-awareness, stress management and a healthy use of one's own resources are skills that are relevant to all healthcare professions.

Obviously, these skills can be taught as part of the course curriculum in medicine. This way, they could increase work satisfaction as well as Mental Health.

6L4 (2632)

Date of Presentation: Tuesday 29th August
Time of presentation: 0945 - 1000
Location: Boisdale 1, Loch Suite, SEC

Cultivating A RESponsive and Transformative Learning Community (CARES-TLC): a peer mentoring mixed method study

Siriwan Lim1, Zhou Wentao1, Cheryl Chan Jia Wen2, Lee Shin Syuen3, Hyo Jin Yoon1, Catherine Dong1

[1]National University of Singapore, Yong Loo Lin School of Medicine, Singapore;
[2]Department of Nursing, Tan Tock Seng Hospital, National Healthcare Group, Singapore;
[3]Singapore General Hospital, Singapore

Background

There is an increasing demand for nurses to provide nursing services in the primary and secondary healthcare settings. Higher education institutions play an important role to improve the nursing workforce by providing mid-career conversion nursing programme to working adults as a second career. Systematic reviews have shown the benefits of peer-mentoring in higher education instituitions. This study aims to explore the mentoring experiences of Career Conversion Programme and post-graduate nursing students and the elements of the peer mentoring programme that are effective and acceptable by them.

Summary of Work

This study was initiated in AY2020/2021 over 2 semesters: in-campus (phase 1) and in clinical (phase 2). Baseline data were collected at the start of study (i.e sociodemographic, Nurses' Self-Concept Instrument (NSCI), Groningen Reflective Ability Scale (GRAS), and Psychological Empowerment Instrument (PEI)] followed by second data at the end of semester 1 [reflections and Clinical Learning Laboratory with Peer Mentors Preference Questionnaire (CLLPQ) for mentees; Mentor Teaching Experience Questionnaire (MTEQ) for mentors]. Final data collection were in semester 2 [i.e. focus group interviews (FGIs), NSCI, GRAS, and PEI]. Quantitative and qualitative data were analysed using descriptive statistic and Wilcoxon signed test statistic and content analysis and thematic analysis, respectively.

Summary of Results

The content analysis of mentees' reflections in Phase 1 yielded four themes which correlate favourably with results from the CLLPQ and MTEQ for the mentees and mentors, respectively. The thematic analysis from FGIs in Phase 2 showed three main themes that aligns with the quantitative findings for NSCI, PEI and GRAS.

Discussion and Conclusion

The presence of the mentors increased the mentees' motivation to do better during in-campus practical sessions. However, the lack of face to face interactions and clarity in peer mentoring process and milestones affected the outcomes of the mentoring partnership.

To achieve the optimal outcomes from peer mentoring, there need to be clear guidelines for the mentoring process and alignment of targeted mentoring milestones.

Take-home Message

Peer mentoring provides a supportive platform that benefits mentees and mentors.

Face to face interaction with mentors is more impactful and preferred over online meeting.

Clear guidelines for the mentoring process and targeted milestones are needed to achieve optimal outcomes.

6L5 (4372)

Date of Presentation: Tuesday 29th August
Time of presentation: 1000 - 1015
Location: Boisdale 1, Loch Suite, SEC

Exploring student patterns of behaviour during clinical placements and the implications for supporting learning

Fiona Osborne1, Paul Paes2, Janice Ellis2, Charlotte Rothwell2

[1]Northumbria Healthcare NHS Foundation Trust, North Shields, UK; [2]Newcastle University, Newcastle upon Tyne, UK

Background

Clinical attachments are the cornerstone of undergraduate medical programmes. Log-book evaluations and observational studies suggest student behaviour during clinical placements is highly variable. As medical schools invest in longer, more diverse attachments, medical educators should consider how student learning is best supported through understanding behavioural trends.

Summary of Work

The study was approached using constructivist grounded theory methodology from an interpretivist perspective to address the following research objective:

To explore medical students' experiences during clinical placements with a focus on engagement with learning opportunities in order to discern any patterns of behaviour and the implications for learning.

Semi-structured interviews were conducted with a sample of 18 final year medical students. Fourteen interviews were conducted face to face and four remotely due to the advent of the Covid-19 pandemic. A pre-interview questionnaire was used to support exploration of experiences. Data collection was iterative and inductive. Analysis followed the constant-comparison method.

Summary of Results

Patterns of behaviour were evident in the general approach to activity, the engagement with specific activities and the management of relationships. Generally, students demonstrated a reticence to become directly involved with activities, characterised by 'hinting and hoping', 'caution/hesitance' and 'avoidance'. Creative manoeuvring during perceived undesirable circumstances was evident through 'adaptation'. Trends in relation to specific activities included selective attendance and assessment-driven engagement with patients and activities. Strategic behaviours to manage relationships included deliberately cultivating a positive student impression, tactical questioning of staff and real or fabricated demonstrations of interest in staff members' chosen specialties.

Discussion and Conclusion

Student patterns of behaviour during clinical placement have far-reaching implications for learning. Discriminatory practices governing patient interactions may detract from holistic learning and a patient-centred approach. Students' strategic behaviours toward supervising staff have the potential to exacerbate preferential treatment and perpetuate specialty denigration. Assessment driven patterns of selective behaviour may influence professional development and preparedness for practice.

Take-home Message

Medical students engage in a diverse range of behavioural patterns during their clinical placements which may have wide-ranging and significant implications for their learning. Understanding the nature and origin of these behaviours could help inform placement design and strategies to support student learning whilst in clinical environments.

6L6 (3887)

Date of Presentation: Tuesday 29th August
Time of presentation: 1015 - 1030
Location: Boisdale 1, Loch Suite, SEC

Unraveling the relation between autonomous motivation to learn and self-regulated learning in secondary and higher education

Peter de Jong1, Renée Hendriks2, Belinda Ommering3, Floris van Blankenstein1

[1]Leiden University Medical Center, Leiden, The Netherlands; [2]Hogeschool Inholland, Haarlem, The Netherlands; [3]Hogeschool Utrecht, Utrecht, The Netherlands

Background

Especially in lifelong learning and online learning, self-regulated learning (SRL) is an important competency, as both contexts are less structured and guided compared to traditional school learning. Literature suggests that autonomous motivation of students may be a precondition for SRL. However, the relation between autonomous motivation and SRL has not been explored accurately yet.

Summary of Work

To identify how the relation between autonomous motivation and SRL is being conceptualized in the literature, a scoping review was conducted. We were specifically interested in what ideas and hypotheses exist about this relationship, what the characteristics are of scientific research on this relationship, and which conclusions were drawn. The initial search resulted in 3337 records, and after exclusion 117 records were included in the study.

Summary of Results

In the selected manuscripts 115 hypotheses and 121 conclusions were identified. Furthermore, the scoping review revealed that autonomous motivation was described on two levels: autonomous motivation and intrinsic motivation, being a sub form of autonomous motivation. On the level of autonomous motivation, the relationship was most often described as unidirectional which means that autonomous motivation stimulates the use of SRL. On the intrinsic motivation-level, the relation was described in

four different ways: as a correlation in general, as a bidirectional relationship, as a unidirectional relationship between intrinsic motivation and SRL, and as a unidirectional relationship between SRL and intrinsic motivation. On both the autonomous and the intrinsic motivation level, the relation with SRL was predominantly positive. SRL was also described as including either autonomous or intrinsic motivation, or as a moderator between intrinsic motivation and a third variable.

Discussion and Conclusion

The scoping review clearly revealed that autonomous motivation and SRL are closely related concepts. However, the relationship is being described on different levels using different terms, and as a result the literature does not show consensus on how this relation is conceptualized. The results from this study may inform future investigations of the relationship between autonomous motivation and SRL.

Take-home Message

Autonomous motivation and self-regulated learning are positively related

The relationship is being described on different levels using different terminology

Session 6M: Postgraduate: Professional Identity and Professionalism

6M1 (5323)

Date of Presentation: Tuesday 29th August
Time of presentation: 0900 - 0915
Location: Boisdale 2, Loch Suite, SEC

"You appreciate grey in medicine": Exploring the Medical Professional Identity of Exemplary Professionals

Elizabeth Wargo1, Penelope Lusk1, Lisa Altshuler1, Verna Monson2, Donna Chen3, Adina L. Kalet2

[1]New York University Grossman School of Medicine, New York, USA; [2]Medical College of Wisconsin, Kern Institute, Milwaukee, USA; [3]University of Virginia School of Medicine, Charlottesville, Virginia, USA

Background

A core responsibility of medical educators is to foster a strong medical professional identity (PI) that is characterized by the alignment of one's values with actions. No studies specifically examine physician exemplars of PI. We describe the qualities of physicians identified by peers and trainees as exemplars of professionalism to support medical students' PI development.

Summary of Work

To elicit nominations of exemplary faculty physicians, we used Colby and Damon's criteria (1992): professional "commitment to moral ideals or principles," "disposition to act in accord with one's moral ideals," tendency to risk self-interest, inspire others, and "realistic humility about one's own importance." Nominees who agreed to participate completed the Professional Identity Essay (PIE), a 9-question reflective writing assessment. Three trained raters analyzed the PIE using Bebeau's developmental model of PI, informed by Kegan's theory of adult development (1994). Narratives were coded for increasing complexity of PI moving from external to internal definitions of role concepts.

Summary of Results

Of 212 faculty nominees, 35 were invited to participate (based on a number of nominations, diversity of ages, gender, race, backgrounds, and career stage), and 21 completed scorable PIEs. Five PIEs were coded as team-oriented idealist (Stage 3, 23.8%); four at Stage 3 in transition to 4 (19.0%); seven at self-defining (Stage 4, 33.3%); and five (23.8%) in transition to self-transforming professional identity (Stage 5). These results demonstrate differing ways faculty exemplars reflect on their experiences and embody PI– no singular perspective on PI emerged. With increased complexity of PI, exemplars wrote of acting upon their beliefs and values to improve how the profession treats society's most vulnerable, including bold initiatives involving community-based partnerships resulting in sustained improvements. Their stories set a compelling and inspiring ideal for learners.

Discussion and Conclusion

Exemplars show a range of responses and received a range of PIE scores. The range of PI for perceived exemplars shows learners nuanced role modeling and provides multiple pathways to strengthening their own professional identities.

Take-home Message

Professionalism exemplars' experiences illustrate the aspirational ideals of medical education

Exemplars' professional identity is diverse and represents a range of strengths and capacities

Diversity in exemplary identity can provide nuanced role modeling for students

6M2 (6640)

Date of Presentation: Tuesday 29th August
Time of presentation: 0915 - 0930
Location: Boisdale 2, Loch Suite, SEC

Professional Identity Struggle and Ideology: A Qualitative Study of Residents' Experiences

Adam Sawatsky1, Caroline Matchett1, Frederic Hafferty1, Sayra Cristancho2, Jonathan Ilgen3, Will Bynum4, Lara Varpio5

[1]Mayo Clinic, Rochester, MN, USA; [2]Schulich School of Medicine and Dentistry, Western University, London, Canada; [3]University of Washington School of Medicine, Seattle, WA, USA; [4]Duke University School of Medicine, Durham, NC, USA; [5]Children's Hospital of Philadelphia, Philadelphia, PA, USA

Background

To enter a profession is to take on a new identity. Professional identity formation is difficult, with medical learners struggling to adopt professional norms. One way to understand inherent tensions within socialization is to consider the role of ideology in medical education. In this study, we use the concept of ideology to explore residents' experiences with identity struggle during residency.

Summary of Work

We conducted a qualitative exploration of residents in three different specialties at three academic institutions in the U.S. Participants engaged in a 1.5-hour session consisting of rich picture drawing and a one-on-one interview. Interview transcripts were coded and analyzed iteratively, with developing themes compared to new data as it was collected. We met regularly to develop a theoretical framework to explain findings.

Summary of Results

We identified three ways in which ideology contributed to residents' identity struggle. First was the intensity of the work of being a resident and becoming a physician. All participants discussed the compelling forces of residency work requirements, future practice expectations, underlying perfectionism, and human limitations. Second were

messages regarding the subjugation of personal identities to the all-encompassing goal of developing a professional identity. Multiple participants expressed a desire to be more than just physicians but reported feeling that more wasn't possible. Third were instances where the imagined professional identity clashed with the reality of medical practice. Many residents described how their ideals misaligned with the ideals of the profession, or how the system constrained the alignment of practice with ideals.

Discussion and Conclusion

This study uncovers a deeper ideology that creates struggle as it often calls residents in impossible, competing, or even contradictory ways. As we uncover the hidden ideology of medicine, learners, educators, and institutions can play a meaningful role in supporting identity formation in medical learners through dismantling and rebuilding its destructive elements.

Take-home Message

1. Professional Identity Formation in medicine is a socialization process is affected by medicine's ideology--an ideology that calls residents into being in impossible, competing, or even contradictory ways.

2. This ideology creates moments of struggle as residents seek to construct a professional identity

6M3 (6645)

Date of Presentation: Tuesday 29th August
Time of presentation: 0930 - 0945
Location: Boisdale 2, Loch Suite, SEC

Transcultural Aspects of Professional Identity Formation in International Medical Graduates from the Republic of North Macedonia

Goran Stevanovski1, Melissa Guadron2, Tim Gaul3, David Stein4

[1]Department of Medical Education, Ss Cyril and Methodius University, Medical School, Skopje, The Former Yugoslav Republic Of Macedonia; [2]The Ohio State University, Columbus, USA; [3]University of Pittsburgh School of Medicine, Pittsburgh, PA, USA; [4]The Ohio State University Department of Educational Studies, Columbus, USA

Background

Professional Identity Formation (PIF) is the process through which one learns how to act, think, and feel like a physician (Merton 1957). Medical students spend much of their time learning how to internalize values, beliefs, and behaviors that will allow them to act like a professional (Birden et al. (2013). International medical graduates (IMGs) face a unique challenge in that identities fostered in their country of education may need to undergo significant change because of values, experiences, and knowledge gained due to processes of acculturation and professional socialization in new countries. Because of the significant migration of healthcare workers globally (Elshanti, 2020) it becomes necessary to study processes of acculturation and PIF. This study does so by considering the experiences of physicians educated in North Macedonia, who currently practice medicine internationally.

Summary of Work

We conducted a qualitative study of factors affecting PIF in IMGs from North Macedonia currently practicing medicine in Germany, Norway, and the United States of America. For this study, we conducted six semi-structured interviews, using Boyatzis's framework for devising a codebook (DeCuir-Gunby et al. (2011) to perform our analysis. The demographics of the participants place them in their early-to-mid thirties, four are female, two male. Five of them come from internal, while one from surgical specialties.

Summary of Results

Using Hofstede's cultural dimensions theory (Hofstede, 2011) to analyze our results, we found that factors affecting PIF for this cohort were: independence in practice (helping patients independently in emergencies and non-emergencies), self-esteem (practicing medicine on their unsupervised), and external relationships (professional socialization) – all showing positive valence in their effects.

Discussion and Conclusion

This study's insights on the challenges and opportunities for IMGs from North Macedonia in the process of integration can inform discussions and reorganization of medical education in the country. The findings also offer valuable guidance for program directors, faculty, and residents on optimizing the transition and the need for explicit training and implicit accentuation of PIF in medical curricula.

Take-home Message

By researching factors of PIF in IMGs in depth actionable tactics for attuning to opportunities for and enacting integration in the medical profession can be integrated into medical education

6M4 (0505)

Date of Presentation: Tuesday 29th August
Time of presentation: 0945 - 1000
Location: Boisdale 2, Loch Suite, SEC

Education for Professional Advocacy in Health Professions: Experiences of Professional Nurse/Midwife Advocates

Chanel Watson1, Pinar Avsar1, Louise Watson1, Jan Illing1, Beate Baldauf2, Tom O'Connor1, Declan Patton1

[1]Royal College of Surgeons in Ireland University of Medicine and Health Sciences, Dublin, Ireland; [2]University of Warwick, Coventry, UK

Background

The provision of clinical supervision for nurses and midwives has been hampered by workload and service demands taking precedence. It has recenty gained more visibility through the establishment of Professional Nurse Advocate (PNA) and Professional Midwife Advocate (PMA) roles. These are leadership roles based on the A-EQUIP model which draws on the work of Proctor (1986) whose framework of formative, normative and improvement supervision facilitates delivery and evaluation of clinical supervision. Education for the role is at masters level. The aim of this study was to conduct a systematic search of the literature to identify the experiences of using the Advocating and Educating for QUality ImProvement (A-EQUIP) model implemented by Professional Nurse Advocates (PNAs) or Professional Midwifery Advocates (PMAs).

Summary of Work

The study systematically searched for articles and grey literature based on UK studies or studies including the UK, published in English adopting a five-step process: setting review parameters, searching, screening, data extraction and reporting and synthesising. No time limits were set.

Summary of Results

16 papers met the inclusion criteria. Key findings indicate the restorative clinical supervision (RCS) was effective in supporting individual nurses to be more able to cope,

reduced stress levels and improved compassion satisfaction and led to enhanced team resilience and morale. Educational preparation for the role was viewed positively in terms of participants being able to provide RCS though fewer reported knowing how to foster continuous quality improvement.

Discussion and Conclusion

This review has identified gaps in the literature and the evidence supporting the A-EQUIP model including perceived benefits from the PNA role. Given the challenges faced in the global healthcare workforce in relation to recruitment and retention, initiatives such as the A-EQUIP model that serve to support healthcare professionals from all disciplines in practice should be explored within a robust research programme

Take-home Message

Restorative clinical supervision is effective in supporting individual nurses to be more able to cope, reduced stress levels and improved compassion satisfaction and led to enhanced team resilience and morale.

Educational preparation for the role has been viewed positively in terms of participants being able to provide RCS though fewer reported knowing how to foster continuous quality improvement

6M5 (4034)

Date of Presentation: Tuesday 29th August
Time of presentation: 1000 - 1015
Location: Boisdale 2, Loch Suite, SEC

To curate a narrative medicine workshop based on phenomenology triggering questions to facilitate empathy

Ju-Chuan Yen1, Min-Huei Hsu2, Ting-Fang Chiu3, Ming-Chyi Huang4, Yi-Chun Chiu5, Da-Chen Chu5

[1]Department of Ophthalmology, Ren-Ai Branch, Taipei City Hospital, Taipei City, Taiwan; [2]Graduate Institute of Data Science, College of Management, Taipei Medical University,, Taipei City, Taiwan; [3]Department of Education and Research,Zhong-Xiao Branch, Taipei City Hospital, Taipei City, Taiwan; [4]Department of Education and Research, Song-Der Branch, Taipei City Hospital, Taipei City, Taiwan; [5]Department of Education and Research, Taipei City Hospital, Taipei City, Taiwan

Background

Narrative medicine or reflective medicine has emerged in medical education for almost three decades after Rita Charon's advocations. Many researchers supported narrative medicine as an antidote or complementary to evidence-based medicine. Here, in Taipei City Hospital in Taiwan, we have curated a narrative medicine workshop as a PGY orientation course based on phenomenology with triggering questions for the cultivation of six core competencies of ACGME for three consecutive years. The aims of this study were to report the outcomes of the three-years outcomes and shared our curating methods.

Summary of Work

Toronto's empathy questionnaires (TEQ) were deployed as a reference scale before and after the workshop as an outcome of the narrative medicine workshop. Triggering questions based on phenomenology theory with relevant six core competencies of ACGME were developed and presented. Learners' responses to triggering questions were summarized as relevant themes as well.

Summary of Results

Results revealed the mean and standard deviation of the TEQ pretest was 41.23 ±3.36 while 43.39 ± 4.22 for that of the posttest. While deploying paired t-test to examine the differences between the pretest and post-test of TEQ, the P value was 0.04, the difference's statistically significant. Yet for the triggering questions, the responses were amazing as the learners shared the sufferings of the vignettes and showed empathy towards relevant scenarios such as I could understand that long sickness makes a good doctor.

Discussion and Conclusion

No one was born to be a doctor. We learn our lessons from patients' sufferings. The narrative medicine workshop augmented by triggering questions created based on phenomenology theory, makes learners build on clinical competencies as well as empathy from transcended personal experiences. The results were rewarding after our efforts. Learners even shared their personal stories or stories from seniors to make themselves more fit in the clinical context in their beginning orientation course.

Take-home Message

Based on phenomenology theory, a narrative medicine workshop could authentically put PGY learners to learn clinical scenarios and augment their empathy to further their clinical practice competencies. These three-year results showed the paid off in empathy and core competencies. Hopefully, this methodology might help other learners globally as well.

6M6 (4800)

Date of Presentation: Tuesday 29th August
Time of presentation: 1015 - 1030
Location: Boisdale 2, Loch Suite, SEC

Sanctions for Professionalism Breaches: Are Learners and Leaders On The Same Page?

Linessa Zuniga1, Michelle Lopez1, Wesley Mayer1, Mark Harbott1, Teri Turner1

[1]*Baylor College of Medicine, Houston, USA*

Background

Professionalism is a growing area of study in graduate medical education; perceptions between residents and program leaders regarding appropriate consequences for professionalism lapses has not been well studied. We sought to compare the perspectives of trainees and program leaders surrounding professionalism lapses and appropriate sanctions to identify potential areas to target for education.

Summary of Work

A 25-item survey describing professionalism scenarios was created and grouped based on elements described in professionalism milestone categories (professional behavior, well-being, ethical principles, and accountability). The survey was sent to Baylor College of Medicine residents and program leaders across specialties. Respondents were asked to select what they felt was an appropriate sanction for each scenario, ranging from no action to expulsion. Each sanction was assigned a numeric score. Median differences between residents and leadership responses in each scenario were analyzed using Wilcoxon rank sum test. Median differences in opinions by specialty were analyzed using Kruskal-Wallis test. Internal consistency of the domains was measured by Cronbach's alpha.

Summary of Results

There were 178 respondents, 82% (n=146) residents and 18% (n=32) leadership. Response rate was 13.8% for residents and 36.8% for leadership. There was a significant difference in resident versus leadership opinions in 6 of 25 questions There were statistically significant

differences in opinions concerning appropriate sanctions between residents and program leaders for lapses in the domains of well-being (recognizing importance of maintaining personal and professional well-being) and accountability (completion of responsibilities). The Cronbach's alpha for all domains is above 0.7, indicating high internal consistency.

Discussion and Conclusion

Program leaders differ from residents in their opinions on how professionalism lapses should be handled, most notably in the domains of well-being and accountability. Based on this, future work should target development of educational and professional instruction to better align expectations amongst residents and program leadership in these important domains.

Take-home Message

Professionalism is a growing area of study and education in graduate medical education. Despite this, there is little data comparing professionalism expectations between program leaders and learners. Our study demonstrates discrepancies in two key areas of professionalism that should be targets for educational interventions.

Session 6N: PechaKucha™: Teaching and Learning

6N1 (5732)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 09:11
Location of presentation: Dochart 1, Loch Suite, SEC

Point of Care Ultrasound in Uganda: developing interprofessional training systems, and empowering team learning

Peter Waitt[1], Jacqueline Nalikka[2], Isabella Harriet Migisha[3], Mubaraka Kayiira[3], Faith Katusabe[3], Abdullah Wailagala[1], Peace Okwaro[3], Stephen Okello[2], Mohammed Lamorde[3], Paul Blair[4]

[1] Infectious Disease Institute, Kampala, Uganda [2] Makerere University Walter Reed Project, Kampala, Uganda [3] Infectious Diseases Institute, Kampala, Uganda [4] ACESO, Henry M Jackson Foundation, Maryland, USA

Over 3 years clinical point of care ultrasound (POCUS) skills have been developed initially for a multi-disciplinary team to respond to high risk pathogen outbreaks in Western Uganda. The ebola outbreak of 2022 enabled further application of skills acquired during the COVID-19 pandemic.

The potential role for POCUS was identified, due to no imaging modalities being previously routinely available in high risk isolation areas within Uganda. Outcomes during the West Africa Ebola outbreak may have been worsened due to lack of available imaging.

Literature review suggested that clinical chest POCUS training to medical doctors could be condensed. As both medical and nursing staff are expected to make diagnostic decisions, inclusion of both was considered necessary to develop a model within Uganda with regional generalisability.

A blended learning approach was selected. Peer-learning drew from strong team dynamics to build confidence. Of particular interest was how groups who had not studied anatomy – certificate and diploma nurses - would fare.

Over 3 years, 5 doctors, 8 research nurses (degree), 8 clinical (infection prevention & control) nurses – (certificate & diploma) were trained. Face-to-face training was initially proposed to ground the whole group in basic understand of ultrasound physics, probe

selection, and the concept of clinical POCUS.

As the project progressed, a blended learning approach was taken, to empower different cadres of staff to learn together. Having built confidence and competence in Chest POCUS, other potentially more challenging systems were introduced.

With COVID-19, national lockdown and travel restrictions necessitated adaptation of training. Consequently, an adapted hybrid approach, using online training on Zoom was adopted, with support for individuals to practice the techniques. Developments in POCUS ultrasound machines enabled tutors to provide real-time support for trainees during clinical scanning, using the Philips Lumify system and Reacts software.

Regardless of cadre all staff who completed training gained competence in chest ultrasound within a 12 week period, with faster accrual of skills in those with prior anatomy training. Among staff who have been regularly scanning over a 12-24 month period, no difference in the usability of POCUS images has been noted between the cadres.

6N2 (4803)

Date of presentation: Tuesday 29th August
Time of session: 09:11 - 09:22
Location of presentation: Dochart 1, Loch Suite, SEC

Not So Silent Night: Building an Institution-Specific Night Medicine Curriculum

Jessica Chambers[1]

[1] *Dell Medical School | The University of Texas at Austin, Austin, USA*

Overnight and cross coverage medical teams are increasingly relied upon to provide safe, quality care overnight, when the hospital functions with less staff and ancillary services. Night medicine experiences are ripe with learning opportunities, but often underutilized by academic-minded clinicians due to lack of time, availability, and structured educational tools. We see a need for design and implementation of dedicated night medicine curricula across institutions and specialties worldwide, with careful attention paid to the unique structures and functions night teams operate upon across the globe.

An ideal curriculum design for night medicine rotations includes structured goal-setting, specific and realistic learning objectives, formal time for teaching, engaged faculty, and individualized learner attention. That being said, most teaching hospitals are operating without formal faculty involvement overnight, and junior clinicians must often harness their own enthusiasm to drive didactics in the dark of night. Subsequently, many medical education systems are seeing both trainee-lead curriculums implemented at institutions where faculty are not available or present overnight. This presentation will highlight the diverse ways in which formal overnight education is carried out across the United States, Canada, and the United Kingdom across fields of internal medicine, pediatrics, and emergency medicine.

Our goal is to normalize dedicated learning overnight and put forth validated methods for providing a rich educational experience for physicians in training. These methods include, but are not limited to, focused lectures on common cross-cover patient issues, case-based learning and “night reports,” bedside teaching and diagnostic management, direct supervision and guidance during acute situations (if possible), and point-of-care ultrasound (POCUS) training to enhance diagnostic accuracy. Teaching tools are often program-dependent and vary dramatically depending on the learner level, overnight flow of patient care, program culture, and availability of protected space and time for education. Audience members will be able to adapt the presented overnight teaching techniques to their own institutional needs. Finally, the presentation will briefly highlight the

growing evidence that learner autonomy and decision-making are ultimately improved by night medicine curricula rooted in team-based decision making.

6N3 (4067)

Date of presentation: Tuesday 29th August
Time of session: 09:22 - 09:33
Location of presentation: Dochart 1, Loch Suite, SEC

How to embed a student-run clinic in a medical curriculum

Laura Kalfsvel[1], Floor van Rosse[1], Hugo van der Kuy[1], Walter van den Broek[2], Melvin Lafeber[3], Jorie Versmissen[1]

[1] Erasmus MC, University Medical Centre Rotterdam, Hospital Pharmacy, Rotterdam, The Netherlands [2] Erasmus MC, University Medical Center Rotterdam, Institute of Medical Education Research Rotterdam, Rotterdam, The Netherlands [3] Erasmus MC, University Medical Center Rotterdam, Department of Internal Medicine, Rotterdam, The Netherlands

In a student-run clinic, medical students practice outpatient clinic consultations with real patients. Student-run clinics originated in the United States of America, where they function to provide medical care to people without access to regular healthcare. While not originally set up for teaching purposes, these clinics offer great educational value. The student-run clinic in the Rotterdam medical curriculum is a learner-centred student-run clinic for patients within regular clinical care.

During the third and fourth week of their clerkship internal medicine, students are teamed up in pairs or groups of three and perform outpatient consultations on cardiovascular risk management. Students prepare the consults and discuss them with a clinical pharmacologist. During the consultations, a clinical pharmacologist supervises the students. Students use the WHO six step method for rational prescribing and national guidelines to determine the pharmacotherapy during consultations. Students are able to prescribe medication under direct supervision when necessary. In the eighth week of their clerkship, they have a follow-up appointment with the patients, either through a phone consultation or physically in the outpatient clinic.

At present, literature shows the value of a student-run clinic on different levels. However, current research is based on extracurricular student-run clinics, which often attracts highly motivated students. The student-run clinic in the Erasmus MC is not only the first student-run clinic where students can prescribe medication themselves, it is also the first student-run clinic embedded in a medical curriculum. This PechaKucha will show you how we have overcome the challenges of embedding a student-run clinic in a medical curriculum and hope to inspire you to do the same.

6N4 (5033)

Date of presentation: Tuesday 29th August
Time of session: 09:33 - 09:44
Location of presentation: Dochart 1, Loch Suite, SEC

Educating and empowering students to be the drivers of sustainable change

Angela Millar[1], Heather Shearer[2], Lloyd Thompson[1], Kirsty Alexander[1], Vicki Tully[3]

[1] School of Medicine, University of Dundee, Dundee, UK [2] University of St Andrews, St Andrews, UK [3] school of medicine university of dundee, Dundee, UK

Scottish Graduate Entry Medicine (ScotGEM) is a four-year graduate-entry medical degree that includes a summatively assessed Healthcare Improvement curriculum element ("Agents of Change"). Students contribute to Agents of Change activities across 4-years, gaining the skills and knowledge to drive improvement whilst contributing to the wider system. This is focused on empowering graduates to become inspired, competent and confident change agents for individual, community and planetary health.

This presentation showcases this innovative curriculum, with examples from projects completed in Year 3 during a 10-month primary care-focused Longitudinal Integrated Clerkship (LIC). Reaching dispersed communities across Scotland, 70 different practices have hosted students.

Students speak to staff, shadow patient journeys and observe various systems and processes before a project topic is agreed. The imperative need to sustainably promote the health of communities now and in the future is paramount. In projects to date, four overarching topic areas have been identified; sustainability, clinical management, prescribing and monitoring of drugs, and improving practice systems. Using Quality Improvement and design methods, students gain a deep understanding of the system.

In collaboration with the team, project areas are identified which the practice, patients and student know to be manageable and sustainable given restraints. Furthermore, projects should be those where staff are trained, able and inspired to continue after the placement ends. Students have developed and delivered educational resources, engaged and empowered patients, and developed practice systems.

Although some projects focus on protecting planetary health, development of the curriculum means this is an ever-increasing part of project work and will be considered in all projects from 2023.

Staff begin to see students as the expert in Quality Improvement and students become the educator, inspiring staff in sustainable Healthcare Improvement. Students make a difference to patients and overcome their reluctance to engage others, developing a sense of autonomy. Overall, they are empowered to become change agents as clinicians and educators; and in some practices, projects have already evidenced sustainable change.

Our presentation shows how our students are trained and empowered to be the drivers of sustainable change, creating a ripple through colleagues, patients and wider communities.

6N5 (1466)

Date of presentation: Tuesday 29th August
Time of session: 09:44 - 09:55
Location of presentation: Dochart 1

Training on Patient Safety in Clinical Procedures for undergraduate medical students

Ramani Saravanan[1]

[1] *Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore*

Although the aspects of patient safety continue to be important within the realm of medical education, the breadth and depth of patient safety and quality improvement are far greater (Hughes, 2008). Training in patient safety should begin in medical school because it teaches students the risk in healthcare. Given the significance of patient safety, the third medical school in Singapore has incorporated patient safety modules into its curriculum. This deliberate inclusion, takes the form of a staged approach to learning to make room for a wide variety of patient safety initiatives, keeping with the evolving requirements of the healthcare workforce.

The Clinical Procedures course in the MBBS program places emphasis on International Patient Safety Goals (IPSG) (Kobayashi et al., 2021). Aspects like checking two patient identifiers, using SBAR for communication, improving the safety of high-alert medications, safe surgery processes, lowering the risk of healthcare-associated infections, and reducing or preventing patient's falls are among the fundamental information taught to students.

Patient safety is an emerging discipline in healthcare that focuses on risk reduction, incident management, and quality improvement (Leung et al., 2013). New responsibilities have arisen for medical educators due to the demand for patient safety curriculum and the transfer of safety lessons learnt in other high-risk industries (Ziv, 2000). The PechaKucha will emphasize how patient safety is taught and practiced during Clinical Procedures training.

References:

Hughes, R. (2008). Patient safety and quality: An evidence-based handbook for nurses.

Kobayashi, K., Ando, K., Nakashima, H., Machino, M., Kanbara, S., Ito, S., . . . Imagama, S. (2021). Challenges for joint commission international accreditation: performance of orthopedic surgeons based on international patient safety goals. *Nagoya Journal of Medical Science, 83*(1), 87.

Leung, G., Ang, S., Lau, T. C., Neo, H. J., Patil, N. G., & Ti, L. K. (2013). Patient safety culture among medical students in Singapore and Hong Kong. *Singapore Med J, 54*(9), 501-505.

Ziv, S. D. S., Paul Root Wolpe, Amitai. (2000). Patient safety and simulation-based medical education. *Medical teacher, 22*(5), 489-495.

6N6 (4010)

Date of presentation: Tuesday 29th August
Time of session: 09:55 - 10:06
Location of presentation: Dochart 1, Loch Suite, SEC

The Case for the Humanities in Health Professions Education

Wendy Stewart[1]

[1] *Dalhousie University, Saint John, Canada*

Early in training we are taught to listen and reflect back what we are hearing. This helps patients and families feel listened to and their input valued. Time goes by in training, and once in practice, the literature shows we interrupt patients and families within 10-20 seconds, waiting to speak rather than actively listening. Similarly, in interprofessional teams, effective communication continues to be one of the most challenging aspects of team-based care. Another problem is the way our brains think and operate, and the resultant diagnostic failure rate of 15%. The humanities can help with these challenges, providing space to enhance diagnosis and clinical care.

By their very nature, the arts and humanities can challenge us, cause us to pause and reflect on what we are doing, how we are doing it and why. They can provide us with opportunities to slow down, take time to truly listen and see situations through a different lens. The use of different media can provide a means to explore our biases, to come face to face with our assumptions, and appreciate multiple perspectives.

Drawing on different media examples, this lively presentation will use rapid fire examples to demonstrate how the humanities can be used in health professions education. It will demonstrate how to quickly engage learners, bring experiences to life and push them beyond their comfort zone to grow as a professional. The presentation will integrate examples demonstrating the use of visual art, film, theatre and music. Topic areas covered will include communication, conflict, active listening and critical thinking. By the end of the presentation, it is hoped you will be convinced of the role of the humanities in health professions education and consider how you might apply the examples in your own setting.

6N7 (5134)

Date of presentation: Tuesday 29th August
Time of session: 10:06 - 10:17
Location of presentation: Dochart 1, Loch Suite, SEC

Communication skills competencies throughout a medical curriculum: What do we teach? When do we do it?

Elena Maria Trujillo-Maza[1], Andrés Camilo Cardozo Alarcón[1], Agustín Pérez[1], Mariana Lema-Velez[1], Maria Teresa Gomez-Lozano[1], Elizabeth Moros Reyes[1], Daniel Suarez-Acevedo[1]

[1] *Universidad de los Andes, Bogotá, Colombia*

Communication skills are strategies that elicit an efficient transmission of information, just like a PechaKucha™ does. Research suggests strong healthcare communication skills education is still needed -even for people with good interpersonal skills. Effective communication may improve medical outcomes and patient satisfaction; on the other hand, ineffective communication leads to a higher incidence of adverse events, poor assessment of physical and psychological symptoms, and increased rates of malpractice claims. At our institution, the training in communication skills was designed to meet the competencies defined by the Association of American Medical Colleges (AAMC), but there is no consensus on how such endeavour could be achieved in all medical schools. We will show the results of an exploratory qualitative case study using thematic analysis and pre-established categories derived from the AAMC model that aimed to explore narratives about communication skills in different courses that take place throughout the undergraduate medicine curriculum. Data were collected by reviewing documents from 19 courses in the curriculum, such as syllabus, evaluation matrices, and homework instructions; we sampled courses from all stages and fields of study included in the curriculum. We will show how the curriculum was originally built to include these competencies and compare it to how the competencies appear throughout the courses offered to medical students. Colour and size will be used to reflect the coding process, and quotes will be shown to directly give voice to the "official curriculum". Finally, this project is embedded in a wider project that will compare these findings to the experiences of students and teachers to unravel the “operational” and "hidden" curricula and create a unified view of communication skills learning processes and outcomes.

6N8 (4003)

Date of presentation: Tuesday 29th August
Time of session: 10:17 - 10:28
Location of presentation: Dochart 1, Loch Suite, SEC

Looking to the Future: Local Examination Development through Comprehensive Examiner Development Program

Abdullah Al Battashi[1], Siham Al Sinani[1], Iman Al Lawati[1], Ahmed Al Mamari[1]

[1] *Oman Medical Specialty Board, Muscat, Oman*

Oman Medical Specialty Board (OMSB) envisions a future that achieves independency of its core businesses including the development and delivery of its Board Examinations. Fulfilling OMSB's vision entails the development of local subject matter experts (SMEs) and examiners with a direct focus on the local context. To achieve this effectively, a comprehensive examiner development for local examiners is essential.

OMSB's comprehensive examiner development program was developed reviewing best practices, utilizing examination experts, and inclusion of technology. The program is composed of a two-level structured progressive framework: foundation and advanced. The foundation level is composed of three modules and enables examiners to write and review items and progress to the advanced level. The advanced level is composed of four modules including examiner leadership, psychometric analysis, and online psychometric exercises. The program provides examiners a clear pathway to enhance their examination development skills and commitment.

Since the initiation of the program in 2021, 34 training activities were conducted and more than 600 SMEs and local examiners were certified. This transformed the development and delivery of 19 Residency and four Fellowship Board Examinations from international sources to local capacity. In addition, OMSB banked more than 41,000 items and over 130 examination forms to be utilized for specialty and fellowship board examinations.

Developing high-stake board examinations undergoes rigorous processes where the involvement and commitment of SMEs and examiners is essential. Examiners commitment to examination processes and difficulty in accessing and working with an externally adopted online platform are major challenges. OMSB addressed these challenges by developing a progressive structured program and utilizing an all-in-one examiners practice platform. OMSB continuously evaluates the program to address arising issues

and gaps.

Developing a structured development program for examiners strengthens the local development of board examinations that are context sensitive and ensures independence and sustainability. To assist with the implementation and sustainability of the program, an all-in-one comprehensive, accessible, and user-friendly local examiners' practice platform is developed. The platform is composed of multiple examination development practice exercises that enhance the examiners' skills.

Session 60: Competency Based Medical Education

601 (2932)

Date of Presentation: Tuesday 29th August
Time of presentation: 0900 - 0906
Location: Carron 1, Loch Suite, SEC

Enhancement of direct ophthalmoscope skill in medical students – Five Years Community Based Medical Education study

Anant Bhornmata1

[1]*Chumphon Khet Udomsakdi Hospital Medical Education Center, Chumphon, Thailand*

Background

Fundus examination by using direct ophthalmoscope is an important tool for fundoscopy. Community based medical education (CBME) study was used as a technique to teach with direct ophthalmoscope from 2016 to present in noncommunicable diseases (NCDs) patients. The aim of this study is to evaluate the skill of direct ophthalmoscope in CBME.

Summary of Work

All fifth year medical students (2022) of Thammasat University, Chumphon Khet Udomsakdi Hospital campus were enrolled in this study. Fifteen medical students were learned the skill of direct ophthalmoscope with patients in community. The reported form of direct ophthalmoscope skill and focus group discussion were used to evaluated.

Summary of Results

Hundred percent of students have aggreged that the community based is more benefit than in hospital based. Focus group discussion was classified into four categories; learning skill, learning environment, happiness of learning and stress. All categories were superior than in hospital learning (100%) and learning skill of direct ophthalmoscope mean was 93%.

Discussion and Conclusion

Teaching the skill is need more practice (doing by own self) than lecture or demonstrate. The CBME is the good choice in this study. Moreover, medical students can learn extra more about NCDs and daily life of the patients. These also can be integrated the knowledge in holistic health care for medical students.

The result of five years CBME study with direct ophthalmoscope skill (paused in 2020 and 2021 due to pandemic of COVID-19) were shown to be superior than in hospital based. Therefore, learning of direct ophthalmoscope skill will add in the curriculum of fifth year medical students in Chumphon Khet Udomsakdi Hospital Medical Education Center and may be extend to another campus in the future.

Take-home Message

Teaching skill is not restricted only in the hospital based. Community based learning is one of the techniques to initiate a good relationship and holistic health care between medical students and people in the community.

602 (3971)

Date of Presentation: Tuesday 29th August
Time of presentation: 0906 - 0912
Location: Carron 1, Loch Suite, SEC

Full-Scale Implementation of Workplace-Based Assessment for Resident Otolaryngologists Using the Emyway Platform

Jeng-Wen Chen1, Wei-Chung Hsu2, Pa-Chun Wang3

[1]Cardinal Tien Hospital and Fu Jen Catholic University, New Taipei City, Taiwan; [2]National Taiwan University Hospital and Children's Hospital, Taipei, Taiwan; [3]Joint Commission of Taiwan, Taipei, Taiwan

Background

The Taiwan Society of Otorhinolaryngology-Head and Neck Surgery (TSO-HNS) developed an educational framework based on EPAs in 2020 that comprises 11 EPA titles mapped to the milestones and competencies of resident otolaryngologists in Taiwan. In the present study, we conducted a full-scale, multicenter evaluation of training programs for resident otolaryngologists by using the CBME-based platform Emyway.

Summary of Work

To expedite CBME for postgraduate resident physicians, the Joint Commission of Taiwan introduced Emyway as an information platform in 2021. The TSO-HNS CBME core group members developed an otolaryngologist-oriented system on Emyway platform specifically designed for their needs. The platform consists of a surgical log, workplace-based assessment (WBA) and feedback, and a dashboard demonstrating resident physicians' achievement in entrustment levels. The TSO-HNS implemented Emyway-based formative assessment at full scale in August 2022. Here, we report the results of the first 5 months.

Summary of Results

In all, 412 trainers and 270 trainees across 34 otolaryngologic training programs participated in the Emyway platform. A total of 2,725 replies were obtained between August and December 2022, with the majority being evaluated in the surgical theater

(53.7%;1,464/2,725), and third-year residents (31.0%;844/2,725). Among the 11 EPA titles, the three most commonly evaluated tasks were “head and neck” (20.5%;559/2,725), “sinonasal” (14.9%;406/2,725), and “ear” (12.6%;344/2,725). Additionally, task complexity increased with the residents’ seniority (P<.0001). The correlation between the trainees’ self-rated scores and trainer ratings was favorable (r=0.499;P<.001). Word counts of ≥10 were noted in the reflection texts of 96.5% of trainees and the feedback texts of 78.1% of trainers. The stratification of entrustment levels by program and EPA titles helped identify targets for faculty development and tasks necessitating higher levels of teaching activities, respectively. The trainers’ feedback texts were coded per ACGME’s core competencies, which revealed a need for training in communication skills.

Discussion and Conclusion

The Emyway platform helps in the documentation of workplace-based teaching and learning experiences and the trajectory of competency achievement of resident physicians. This platform also facilitates programmatic assessment and learner-centered coaching feedback.

Take-home Message

The TSO-HNS piloted the universal implementation of a WBA system on the Emyway platform.

Preliminary analysis of the collected data shows potential for identifying areas requiring curriculum reform.

603 (5672)

Date of Presentation: Tuesday 29th August
Time of presentation: 0912 - 0918
Location: Carron 1, Loch Suite, SEC

Unheard Voice from Residents' Perceptions of Receiving Feedback in Competency-based Medical Education

Yen-jung Chu[1], Yi-da Sie[1], Fremen Chihchen Chou[1]

[1]*China Medical University Hospital, Taichung, Taiwan*

Background

Understanding resident perceptions, feedback dynamics, and how to manage it can help create an environment conducive to behavioral change and sustainable learning in the context of competency-based medical education. Our institute, a pioneer in Taiwan, has been conducting CBME-based residency training since 2015, and our residents are well-versed in the program. This study aimed to investigate residents' perceptions of CBME and explore factors contributing to meaningful feedback from their perspectives.

Summary of Work

Twenty emergency medicine residents participated in four focus groups (1-4th years) to investigate perceptions of feedback quality and process in CBME. Guiding questions were used in semi-structured interviews, which were audiotaped and transcribed verbatim. Data collection and analysis were conducted using qualitative content analysis. Two investigators independently open-coded the transcripts. Themes were identified through interactive group discussions and revisiting transcripts until the content was exhausted and theoretical saturation was achieved.

Summary of Results

Three key themes emerged through the iterative analysis process. They were the driving force of feedback in the CBME system, characteristics of meaningful feedback perceived by trainees, and technical tips for running CBME. The driving force of feedback included personal conceptualization of seeking feedback, interference of credentialism on the trainees' behavioral pattern of seeking feedback, and the students' perceptions of

teachers' characteristics (the degree to which teachers understand the CBME concepts, assessment content, and value education). The characteristics of meaningful feedback comprised of timely, specific, and actionable feedback based on direct observation. Technical tips for running CBME included creating a transparent process and user-facilitating interface to reduce the cognitive workload of the assessments and feedback.

Discussion and Conclusion

Our study revealed the driving force of seeking feedback in the CBME system is complex and highly influenced by the execution of direct observation. Opinions not based on direct observations compromise the credibility of assessments. Some trainees tend to seek feedback outside CBME due to interference from credentialism and misalignment between the result of assessments and self-evaluation. From trainees' perspectives, feedback could be reciprocal, bidirectional, and highly dynamic in the interaction between trainees and supervisors.

Take-home Message

Residents expect authentic direct observations as a cornerstone of CBME implementation and a foundation of feedback credibility.

604 (5467)

Date of Presentation: Tuesday 29th August
Time of presentation: 0918 - 0924
Location: Carron 1, Loch Suite, SEC

Levels of Miller's pyramid and feedback on clinical competencies during formative and summative assessments in undergraduate dentistry education

Gergely Jozsef Csaba1, Zsuzsanna Varga1, Kristóf Tóth2, Zsuzsanna Füzesi1

[1]University of Pécs, Medical School, Department of Behavioural Sciences, Pécs, Hungary; [2]University of Pécs, Medical School, Department of Dentistry, Oral and Maxillofacial Surgery, Pécs, Hungary

Background

Undergraduate dentistry students are required to master a wide range of clinical and communication skills during their studies as defined by their competency-oriented Completion and Exit Requirements in Hungary. Before licensing examinations, the clinical competencies are assessed in different subjects with continuous workplace-based formative assessments and end-of-term summative exams. Formative assessments may provide basis for extensive feedback which is essential for achieving the expected learning outcomes. It is currently unknown whether the assessment methods incorporate the idea of competency orientation and the relevance of feedback.

Summary of Work

Therefore, we conducted a qualitative study with retrospective, semi-structured interviews to evaluate the formative and summative assessments of three clinical subjects from the students' point of view. One focus during the interviews was how the different competency levels of Miller's pyramid were assessed during the semester and at the end-of-term examinations. The other focus was the feedback students received from their instructors and examiners. 25 final-year dentistry students (78% of the whole year) took part in our research in the fall of 2022 at the University of Pécs, Medical School.

Summary of Results

According to the interviewees clinical skills were thoroughly practised throughout the semester with varying levels of supervision. History taking and physical examination were mostly done by the students alone, without explicit evaluation or feedback from the instructors. Setting up treatment plans and implementing the patient's dental therapy received the greatest attention with continuous feedback-rich formative assessments. Regarding the summative oral assessments, the main focus was on theoretical knowledge rather than clinical competencies, although both lower and higher order thinking skills were assessed. Study participants received little or no feedback on their communication skills, and these were not assessed neither during nor at the end of the semester.

Discussion and Conclusion

Student's experiences indicate that workplace-based assessments appropriately evaluate the clinical skills regarding therapies, however diagnostic and communication skills are not part of these. The summative examinations are conducted with theoretical focus and underrepresented performance assessment. There are some gaps between the competency-based framework and the current assessment methods.

Take-home Message

It is necessary to introduce performance assessments in dentistry education that focus on history taking and communication skills in general.

605 (4848)

Date of Presentation: Tuesday 29th August
Time of presentation: 0924 - 0930
Location: Carron 1, Loch Suite, SEC

Developing the Competency-Based Medical Education in Well-Child Care for Medical Students

Waralee Dejputtawat1, Pornsuda Krittigamas1, Worachet Teacharak1

[1]*Nakornping Medical Education Center, Chiang Mai, Thailand*

Background

Since 21st century, Competency-based medical education (CBME), an outcomes-based approach has been proposed in many medical curriculums including pediatrics. In the traditional teaching of well-child care (WCC), the medical students were assigned to approach the parents and children for history taking, physical examination and child health supervision. This way of teaching was not achieved the 6 core competencies of ACGME and Medical Council of Thailand, particularly interpersonal and communication skill and system-based practice. Therefore, the novel teaching method in WCC with CBME was developed to promote the optimal learning outcomes.

Summary of Work

Objectives:

(1) To develop the Competency-Based Medical Education (CBME) in well-child clinic (WCC)

(2) To survey the perception of the learning experiences in WCC with CBME in the fourth- and fifth-year medical students

Methods:

52 of 4thand 5th year medical students answered the 5-point Likert scale questionnaires about their experiences in WCC during attending the pediatrics rotation in 2022. The assigned tasks for 2 hours of WCC session were achieved. The novel teaching method

starting with the traditional approach to parents and children, tracking the health care system (HCS) by following the family, experience the multidisciplinary team including the pharmacists and vaccine system, learning hands-on vaccination from the nurses and oral health care by the dentists. The reflection from the medical students was collected before and after attending WCC.

Summary of Results

The medical students who were assigned to the novel teaching method in WCC with CBME mostly were satisfied and responded the better scores, especially in the domains of self-efficacy in preparing vaccine and vaccination, multidisciplinary team in the HCS, understanding the WCC components and experiencing more empathy. Many medical students were impressed of hands-on vaccination and understanding the whole frameworks of WCC.

Discussion and Conclusion

To achieve the optimal learning in WCC, implementation of CBME is the effective way to teach the medical students. The further study should be evaluated in the sixth-year medical students. The longitudinal study should be performing to evaluate the long-term learning outcomes.

Take-home Message

Benefit of CBME is well documented that course curriculum should be launched for the medical students.

606 (5078)

Date of Presentation: Tuesday 29th August
Time of presentation: 0930 - 0936
Location: Carron 1, Loch Suite, SEC

Validation of EPAs-based Assessment Tools for Competency-Based Emergency Medical Education Training

Cheng-Ting Hsiao1, Chih-Ming Hsu1, Fremen Chihchen Chou2

[1]Chang Gung Medical Foundation, chiayi, Taiwan; [2]Center for Faculty Development, Department of Medical Education, China Medical University Hospital, Taichung, Taiwan

Background

Competency-based medical education (CBME) requires extensive workplace assessments and feedback to promote the progress of trainees' competency. Entrustable professional activities (EPAs) translate competencies into daily clinical practice that clinical teachers can easily observe and assess. This study aimed to develop and validate an ad hoc EPA-based assessment tool for CBME.

Summary of Work

The EPA-based ad hoc assessment tool (EBAT) was developed based on the TSEM official document with eight components description model proposed by the relevant AMEE guide and was verified by a focus group of experts in TSEM. In the meantime, another group of experts with the qualification of developing national OSCE examinations developed an Objective Structured Clinical Examination (OSCE) scenario with a checklist and global rating. Voluntary residents were invited to take the OSCE test, and their performance in the scenario was videotaped. A total of 53 videos were collected for analysis. Two pairs of qualified clinical teachers were recruited and trained to evaluate the 53 performance videos using EBAT and OSCE tools. We analyzed the correlation and compared the inter-rater reliability between EBAT and OSCE.

Summary of Results

The inter-rater reliability (Krippendorff's alpha value) of OSCE checklist scores is 0.456 and global rating is 0.435, while EBAT checklist scores is 0.543 and entrustable level is 0.445.

The Internal consistency of assessment tool (Cronbach's alpha value) of OSCE checklist scores and global rating is 0.414, but EBAT checklist scores and entrustable level is 0.763.

The criterion validity with Pearson's correlation coefficient (r) for EBAT checklist scores and OSCE checklist scores is 0.536 and Spearman's rank correlation for EBAT entrustable level and OSCE global rating is 0.570.

Discussion and Conclusion

Having a reliable and valid assessment tool is crucial to assess trainees' performance in specific clinical activities. EBAT has higher internal consistency than OSCE. This indicates that EBAT may provide a more coherent assessment in the same clinical scenario than OSCE. EBAT shows good criterion-related validity with OSCE, suggesting comparable assessment effectiveness.

Take-home Message

The EPA-based ad hoc assessment application provides a coherent and easy-to-use tool for clinical teachers and reliable as well as valid information for the Clinical Competency Committee.

607 (3664)

Date of Presentation: Tuesday 29th August
Time of presentation: 0936 - 0942
Location: Carron 1, Loch Suite, SEC

Evaluating the Long Term Impact of a Spiral Integrated Curriculum on Competency Acquisition

Alice Kam1, Denyse Richardson2, Nicolas Fernandez3

[1]University of Toronto, Toronto, Canada; [2]Queen's University, Kingston, Canada; [3]university of montreal, montreal, Canada

Background

Spiral Integrated Curriculum (SIC) is highly valued in Competency-Based Medical Education(CBME) but potentially conflicting opinions on the process of resident competency acquisition. Core components, representing the CBME viewpoints, focus on competency acquisition and sequenced progression. These components were developed based on evidence-informed medical education literature and expert consensus. However, little is known about how to achieve competency acquisition and how to develop sequenced progression during residency. Our study aims to evaluate residents' long-term perception of competency acquisition in a SIC.

Summary of Work

To understand the learning process in SIC, we developed SIC following Kern's (2016) and utilized a subjectivist inductive approach to evaluate SIC. The key features of our SIC include 1. Synchronizing all evidence-based teaching techniques to allow knowledge foundation building; 2. Integration of scaffolding strategies and teaching techniques to facilitate self-reflective learning supported by external feedback; 3. Facilitation of tailored learning experiences; 4. Promoting independence without explicitly assisting students in looking at a subject. Upon the REB approval, we conducted a prospective cohort study in Year 1 and 2 Family Medicine residents at the University of Toronto. Data analysis was undertaken using a constructivist general content qualitative analysis and SPSS quantitative analysis.

Summary of Results

Upon completion of Stage 1 of this study, our concussion curriculum had a participation rate of 80%, n=114 out of 141 participants for AHDs. Our curriculum knowledge assessment immediately pre and post-AHD demonstrated statistically significant positive change (n=33), pre-intervention (M = 10.5, SD = 1.6) and post-intervention (M = 11.1, SD = 1.7), t(32) = 2.1, p = 0.042). Our curriculum evaluation demonstrated sustained positive behavioural change (5 out of 6 residents reported using the study guide) at six months. The unintentional education consequence in our study allowed us to create a more vigorous concept explanation for residents and to hone into the benefits of spiral reflective learning with external feedback.

Discussion and Conclusion

Our Stage 1 study concluded that this SIC is a workable solution. Our future study will include triangulation with curriculum learning measures to strengthen our analysis of tailored learning experiences.

Take-home Message

The subjectivist inductive approach of curriculum evaluation provides opportunities for future competency-based curriculum design studies.

PreviouslyReviewedAbstractCode: RP0949/SC

608 (4436)

Date of Presentation: Tuesday 29th August
Time of presentation: 0942 - 0948
Location: Carron 1, Loch Suite, SEC

Developing a competency-based career education program in residency training

Min-jung Lee1, Seung-Hee Lee 1

[1]*Department of Human Systems Medicine, Medical Education, Seoul National University College of Medicine, Seoul, The Republic Of Korea*

Background

Doctors' career paths are not finalized during basic medical education; instead, they reflect a lifelong process of maturation. After becoming medical specialists, doctors should take the initiative in designing their career paths. The core competencies from different countries cover career planning in professionalism and leadership areas. However, educational programs on career planning competencies during residency have received little attention. This study aimed to develop a career education program for career planning in residency training based on the core competency of career planning and stakeholders' needs.

Summary of Work

Through a literature review, we established the core competency in career planning as a sequence of four stages. The content was constructed based on Super's career development theory and Dreyfus' five-stage model of adult skill acquisition by referring to core competencies from the UK, US, Canada, and South Korea. We validated the core competency by conducting surveys and focus group discussions among faculty members and residents at Seoul National University Hospital. We developed an educational program based on this core competency and a qualitative analysis of stakeholders' opinions.

Summary of Results

The stepwise core competency in career planning was determined to be valid. In the first stage, residents recognize the importance of career planning and explore their career choice priorities. Residents then explore career information and set career goals in the second stage. In the third stage, residents develop career skills through participating in programs and mentoring in their fields of interest. Finally, in the fourth stage, residents acquire job search skills. We developed an educational program by utilizing the core competency, step-by-step, as a framework and following stakeholders' needs. The program's preferred considerations were the accessibility of education during busy work periods, autonomous participation, and effectiveness.

Discussion and Conclusion

This study is significant because it developed a systematic educational program based on the core competency for career planning that training hospitals and residents can use. Through this program, we expect that short-sighted and subconscious career choices will transform into career designs based on long-term, well-informed perspectives.

Take-home Message

Residents could develop competency for career planning through four stages, Perceive, Explore, Participate, and Search.

609 (6703)

Date of Presentation: Tuesday 29th August
Time of presentation: 0948 - 0954
Location: Carron 1, Loch Suite, SEC

Quality Improvement in Timeliness of Workplace Assessment in General Surgery Residency CBME

Kara Nadeau[1], Madeleine Deschenes[1], Jaime Wilson[1], Aruba Nurullah[1], Caitlin Cahill[1], Jennifer MacMillan[1]

[1]*Northern Ontario School of Medicine (NOSM), Sudbury, Canada*

Background

The transition to Competency-Based Medical Education (CBME) in Canadian surgical residency has made workplace assessments (WBAs) an essential component in evaluation. They provide key feedback, identify challenges for timely remediation, determine resident progression, and provide quality assurance of training. The turnover period for completion of WBA ranges enormously at our institution, from immediate to months after the encounter. Many are left incomplete. The delayed feedback is generally vague, attributed to poor recall of the event. The literature suggests that the optimal time to perform WBAs is within 72 hours of the encounter, and that completion after 14 days should be excluded from assessment data. A pre-implementation institutional audit revealed that only 19% and 57% of WBAs were completed within 3 days and 14 days of the encounter, respectively.

Summary of Work

A quality improvement initiative was undertaken within the General Surgery Department in Sudbury, Canada with the aim to improve the timeliness of resident WBAs. Stakeholder analysis identified timeliness as a necessary component of helpful WBA completion, that a cultural shift in the department is needed to increase consultant accountability and motivation to prioritize timely WBA completion, and that WBAs are time-consuming in an already busy environment. Multiple interventions were undertaken including an educational intervention, engagement of stakeholders, facilitation of the technological process, email and poster reminders, and personalized feedback.

Summary of Results

A substantial improvement in WBA timeliness was achieved post-implementation, with 82% and 94% completion achieved within 3 and 14 days of encounter, respectively, and no incomplete WBAs. Same-day completion improved from 15% to 68%. The median number of days to completion improved from 8.4 to 0.8 days.

Discussion and Conclusion

Timely completion of WBAs is a key component of high-quality feedback for residents in CBME. The quality improvement initiative was successful in substantially improving the timeliness at our institution. Next steps include sustainability and implementation at other sites.

Take-home Message

In a General Surgery residency training program in Canada that has recently transitioned to CBME, timeliness of WBA completion had been identified as a factor contributing to poor quality feedback. A multifaceted quality improvement initiative was successful at dramatically improving the timeliness of WBAs.

6010 (4953)

Date of Presentation: Tuesday 29th August
Time of presentation: 0954 - 1000
Location: Carron 1, Loch Suite, SEC

Could EPAs be Used to Predict OSCE results?

Pongthorn Narongroeknawin[1], Kristsanamon Rittiluechai[1], Thammanoon Srisaarn[1], Pornpattra Koochumpoo[1], Sommai Yochana[1], Dusit Staworn[1]

[1]*Phramongkutklao College of Medicine, Bangkok, Thailand*

Background

Entrustable Professional Activities (EPAs) are clinical activities that learners can be trusted to perform without direct supervision once they have demonstrated the necessary level of competence, while Objective Structured Clinical Examination (OSCE) are structured assessments of clinical skills. Therefore, if learners have demonstrated competence in the specific EPAs being assessed in an OSCE, it is likely that they will perform well on that OSCE. Recently, EPA-based assessment has been implemented with an online web application to the clerkship rotation at Phramongkutklao College of Medicine (PCM), Thailand. The purpose of this study was to the association between EPAs and OSCE results.

Summary of Work

A retrospective cohort study was conducted on 95 medical students who completed EPAs and OSCEs as part of their clinical training program. The number of trusted EPAs during clinical rotation was identified, and comprehensive OSCE was assessed using a standardized format in the final year.

Summary of Results

The number of trusted EPAs was moderately positively correlated with the comprehensive OSCE score (r=0.25). The percentage of agreement between trusted EPAs and passing OSCE was 77.9% (Cohen's k: 0.38). 63 of 73 students who were trusted during their clinical rotation passed the comprehensive OSCE (positive predictive value = 85%).

Discussion and Conclusion

The study findings suggest that EPAs could be used to predict OSCE results to some extent. However, it is important to note that other factors such as test anxiety, familiarity with the specific OSCE format, and other environmental factors can also influence OSCE results. Therefore, the use of EPAs as a predictor of OSCE performance should be interpreted with caution.

Take-home Message

EPAs could be used to predict OSCE results to some extent.

6011 (4196)

Date of Presentation: Tuesday 29th August
Time of presentation: 1000 - 1006
Location: Carron 1, Loch Suite, SEC

Learning plan use in undergraduate medical education: a scoping review

Anna Romanova1, Claire Touchie1, Sydney Ruller2, Shaima Kaka1, Alexa Moschella1, Victoria Cole1, Marc Zucker1, Susan Humphrey-Murto1

[1]University of Ottawa, Ottawa, Canada; [2]Ottawa Hospital Research Institute, Ottawa, Canada

Background

Competency-based medical education (CBME) requires deliberate and planned continual assessment and performance improvement, but this is hindered by the fragmented nature of medical training. An effective means of bridging this continuity gap and tracking trainees' progress along their learning trajectory is not clear. Informed by self-regulated learning (SRL) theory, learning plans (LPs) may be the answer as they allow learners to take an active role in their training. In medical education, LP use has been mostly explored at the postgraduate level, yet medical students have unique learning needs well suited for using LPs. The purpose of this study was to summarize the literature regarding LP use in undergraduate medical education (UGME), explore the student's role in LP development and implementation, and determine additional areas for research.

Summary of Work

Arksey and O'Malley's (2005) framework was applied to conduct a scoping review. The literature search was done in November 2022 in MEDLINE, Embase, PsycInfo, Education Source, and Web of Science databases with no restrictions on language, publication date or geographic location. Through an iterative process, inclusion and exclusion criteria were developed and a data extraction form refined. Data was analysed using quantitative and qualitative content analyses.

Summary of Results

The literature search identified 3824 publications, of which 247 were selected for full text screening. Data was extracted from 36 articles. Results demonstrate a diversity of LP use in UGME with no common framework for LP development or implementation. Several barriers and facilitators to LP use were identified, including training on goal setting as well as LP development and implementation, added time for students and their supervisors to create and review LPs, and student guidance by an experienced mentor throughout this process.

Discussion and Conclusion

Our results demonstrate that LP use in UGME is at an early stage. Most are pilot initiatives and lack guiding frameworks for their creation and quality assessment. However, LPs appear well suited to support workplace learning for medical students and adoption of LPs at this stage may facilitate the translation of SRL skills into residency training.

Take-home Message

There is a diversity of LP use in UGME. LPs may be the answer to supporting SRL in medical education.

6012 (0878)

Date of Presentation: Tuesday 29th August
Time of presentation: 1006 - 1012
Location: Carron 1, Loch Suite, SEC

Implementing Entrustable Professional Activities Improves Physical Therapist Trainee Evaluations

Chi-Ping Tseng[1], Yu-Lin Lai[1], Hsing-Yu Chen[1], Hsiao-Ting Tsai[1], Jui-Chi Hsu[1]

[1]*National Taiwan University Hsin-Chu Hospital, Hsin-Chu, Taiwan*

Background

Entrustable Professional Activities (EPAs) are units of professional practice that may be entrusted to a learner to execute unsupervised once they demonstrate the required competence. There was no specific assessment form to evaluate a trainee's clinical performance of a certain task in the physical therapy (PT) teaching program in our hospital before 2020. Thus, we introduced EPAs to our clinical PT teachers and implemented the idea of EPAs in our forms to improve trainee evaluations.

Summary of Work

In 2021, we gave a lecture to all clinical teachers in our PT Department to introduce the concept of EPAs, and the first EPAs evaluation forms were designed. We re-examined our EPAs forms after one year of application and found there were no descriptions of the relevant core competencies. To improve the form, we had another training course to include Competence-Based Medical Education (CBME) & Milestone in 2022. The most relevant core competencies of EPAs were selected by on-site voting according to clinical experience, and two questionnaires were collected from each clinical teacher before and after the course. The voted core competencies and the milestone levels discussed were added to the form after the course. Finally, we conducted a satisfactory survey on the revised form.

Summary of Results

The results from both questionnaires demonstrated improved understanding of the concepts after the second lecture in 2022: the average score for EPAs went from 5.3 to 8.8;

for CBME, from 2.9 to 8.1; and for the relationship between EPA and CBME & Milestone went from 4.0 to 8.7, all on a scale of 10. On the other hand, the satisfactory survey indicated that most of the clinical teachers believed the revised form was more beneficial for evaluating clinical task performance of a trainee than the previous one.

Discussion and Conclusion

From both questionnaires, understanding toward EPAs was further improved when the related topics were introduced. Our experience demonstrated that faculty lectures can improve knowledge and consensus on EPAs within clinical teachers and further improve the clinical evaluation forms we have.

Take-home Message

Informative courses for clinical PT teachers can effectively help improve their knowledge and consensus on EPAs-related concepts and implementation on trainee task evaluations.

6013 (3859)

Date of Presentation: Tuesday 29th August
Time of presentation: 1012 - 1018
Location: Carron 1, Loch Suite, SEC

Evaluating the Effectiveness of EPAs and DOPs for Obstetrics and Gynecology Training among Medical Intern

Korrakot Wanachayanon1, Chitrakan Chareonboon1, Kannikar Saisawat1

[1]*Medical Education Center, Chiangrai Prachanukroh Hospital, Chiangrai, Thailand*

Background

The Department of Obstetrics and Gynecology at Chiangrai Prachanukroh Hospital is performing a comprehensive evaluation of medical intern proficiency in Entrustable Professional Activities (EPAs) and Direct Observation of Procedural Skills (DOPs). The purpose of this evaluation is to enhance the medical intern proficiency and ensure that they have the necessary skills and competencies to deliver standard quality patient care in the local hospital setting.

Summary of Work

The objective of the study was to determine whether EPAs and DOPs can accurately assess the ability of medical interns to independently treat obstetric patients in a local hospital setting by answering the questionnaire to assess confidence in providing obstetrics and gynecology care, including performing procedures, independently at local hospitals using a Likert-type questionnaire with responses ranging from 1 (not confident) to 5 (very confident).

Summary of Results

The study conducted with 13 general practitioners at 6 Chiangrai Local Hospitals found that their level of confidence was moderately high when examining obstetrics and gynecology patients (3.54±0.67) and when performing obstetric and gynecological procedures (3.54±0.90). In addition, the responses from the medical intern questionnaire were consistent with the assessment results of DOPs and EPAs, as reported by the staff.

The study also showed that the general practitioners considered the assessment of EPAs and DOPs to be appropriate (3.78±0.97).

Discussion and Conclusion

The study found that the medical interns had a moderately high level of confidence in examining obstetrics and gynecology patients and performing obstetric and gynecological procedures and the assessment results of DOPs and EPAs were consistent with the responses from the medical intern questionnaire, as reported by the staff. This suggests that EPAs and DOPs can accurately assess the ability of medical interns to treat obstetric patients independently in a local hospital setting.Result of the study indicates that the use of EPAs and DOPs in evaluating medical intern proficiency is acceptable and reliable.

Take-home Message

The use of Entrustable Professional Activities (EPAs) and Direct Observation of Procedural Skills (DOPs) can be an effective way to assess the proficiency of medical interns in obstetrics and gynecology, and enhance their confidence and abilities when performing clinical tasks.

6014 (3951)

Date of Presentation: Tuesday 29th August
Time of presentation: 1018 - 1024
Location: Carron 1, Loch Suite, SEC

How does online faculty development course promote participants' learning self-efficacy for convening clinical competency committee

Jeng-Cheng Wu1, Wen-Hsuan Hou2, Yu-Lin Wu3, Chien-Yu Chen4

[1]Department of Urology, Taipei Medical University Hospital, Taipei, Taiwan; [2]Department of Geriatrics and Gerontology, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan; [3]Department of Education, Taipei Medical University Hospital, Taipei, Taiwan; [4]Department of Anesthesiology, Taipei Medical University Hospital, Taipei, Taiwan

Background

The Clinical Competency Committee (CCC) plays an important role in systematic and programmatic assessment in the way of promoting Competency-Based Medical Education (CBME). Faculty development is a critical resource for implementation of CCC. We had developed a 3-hour in-person faculty development workshop for CCC board members and effectively promoted the CCC-related knowledge and self-efficacy. However, due to COVID-19 pandemic, online courses have been substituted to the onsite workshop. This study aims at exploring the learning self-efficacy of participants after online faculty development course.

Summary of Work

A 3-hour online faculty development course (1-hour lecture followed by 2-hour video-assisted group exercise with instructed discussion) was hold for members of CCC during COVID-19 pandemic. A pre-post-test was conducted for convening CCC knowledge. After the course, all participants received learning self-efficacy survey by a modified tool (i.e., twelve 5-point questions of three domains, including cognitive, affective, and psychomotor factors) validated by Kang et al. in 2019. One sample t-tests compared the mean scores of each domain to 4-point, which indicates the confident level of self-efficacy, was applied to prove the significant benefit.

Summary of Results

Overall response rate was 88.9%. The results of one sample t-tests for participants' learning self-efficacy demonstrated significant benefits on cognitive (mean difference 0.41, $p<0.01$) and psychomotor (mean difference 0.24, $p=0.02$) domains. By contrast, there was no significant difference between pre- and post-test scores of knowledge. After adjusting to gender and experience of educational administration in the regression model, participants with clinical experience more than 20 years had significant higher level on cognitive ($\beta=0.44$, $p=0.04$) and psychomotor ($\beta=0.49$, $p=0.02$) domains of learning self-efficacy compared to their counter part.

Discussion and Conclusion

In this study, online faculty development workshop had significant benefit on participants' learning self-efficacy for convening CCC, especially to senior faculties with clinical experience more than 20 years. However, the efficacy on knowledge improvement still needed to be ameliorated.

Take-home Message

To implement CCC under the restrictions of personal contact during the epidemic, online faculty development course effectively promotes participants' self-efficacy on convening CCC.

Session 6P: Education and Management

6P1 (2741)

Date of Presentation: Tuesday 29th August
Time of presentation: 0900 - 0906
Location: Carron 2, Loch Suite, SEC

What did you learn in school today? Using students' reflections on learning outputs to evaluate teaching.

Gunnar Tschudi Bondevik1, Eivind Valestrand2, Monika Kvernenes2

[1]Department of Global public health and Primary care, University of Bergen, Bergen, Norway; [2]Center for Medical Education, Faculty of Medicine, University of Bergen, Bergen, Norway

Background

In student evaluation of teaching (SET), students are traditionally asked to rate key aspects of teaching and suggest improvements, without reflecting on what they have learned. Given the low validity of traditional SETs, we explored an alternative way of evaluating teaching drawing attention away from the teachers' performance and toward the students' learning outputs. Our aim was to explore how students reflect on their learning, and how teachers use this information to further develop their course.

Summary of Work

In January/February 2023, 102 3rd and 81 6th year medical students at the University of Bergen, Norway were invited to participate in the study, submitting a ½ page text of what they had learned upon completion of two courses on patient communication and consultation. The courses included a combination of introductions and student active teaching methods such as roleplay and peer-to-peer feedback. The teachers were given access to the anonymous student texts and asked to submit a one page reflection on the evaluation approach, what information they got from the texts and how useful they were in developing the course. The material was analyzed qualitatively using systematic text condensation.

Summary of Results

96% of the 3rd year students and 100% of the 6th year students responded. An analysis of the texts showed that students reflected on three aspects of their learning: 1) specific learning outputs related to the course curriculum; 2) the course itself, organization, teaching methods and teachers; and 3) their personal strengths, learning needs and professional role. 6th year students were more focused on the latter aspect compared to 3rd year students. The teachers found the detailed descriptions more useful compared to traditional SETs. They also highlighted how the exercise benefits the students because they get the chance to reflect on their own learning.

Discussion and Conclusion

Traditional SETs have been found to correlate with factors unrelated to quality of teaching nor to its efficiency of achieving the intended learning outcomes. Our results indicate that asking the students to reflect on what they have learned may be more beneficial for both students and teachers.

Take-home Message

Students' reflections on learning outputs is an alternative to traditional student evaluation of teaching.

6P2 (6057)

Date of Presentation: Tuesday 29th August
Time of presentation: 0906 - 0912
Location: Carron 2, Loch Suite, SEC

Perceptions of quality curriculum: a cross-sectional study among undergraduate medical students

Ana Mafalda Fonseca[1], Rui Miguel Duarte Vieira[1], Ana Isabel Gouveia[1], Isabel Neto[1]

[1]*Faculty of health Sciences of the University of Beira Interior, Covilhã, Portugal*

Background

The quality of the undergraduate medical curriculum is very important for development in the social, scientific, and economic fields. Thus, institutions must adopt systems of continuous improvement toward excellence in teaching. In this context, the evaluation of the perceived curriculum quality by the students through the application of questionnaires can be meaningful in terms of the identification of improvement measures in the curriculum.

Summary of Work

Our objective was to evaluate the perception of students who finish the 3rd year of the course about curriculum quality. We surveyed students enrolled between 2014 and 2021. A questionnaire was answered on paper in person except in 2020 and 2021 which was answered online. We used the Binomial Test and the Kruskall-Wallis Test to analyze the data. To assess differences between pairs of groups Dunn's Multiple Comparison Test was used. A p-value <0.05 was considered significant.

Summary of Results

637 out of 1001 students completed the questionnaire (global response rate 64%). In 2019 and 2020 the response rates were the lower ones (18% and 32%, respectively), whereas the remaining 5 cohorts varied between 69% and 94%. Globally, students' perceptions about the quality of the curriculum were highly positive (81%), especially in the second year of studies (89%). Among the different disciplines, Physiology, and Pathology are the ones

with a higher level of satisfaction (82% and 80% respectively), and Histology, Biochemistry, Genetics, and Embryology are the ones with the lower level of satisfaction (between 10 and 21%). During the COVID-19 pandemic, the levels of satisfaction were lower. The strengths and weaknesses of the first cycle of the medical curriculum were identified through open-ended questions.

Discussion and Conclusion

In general, students reported a high level of satisfaction with the teaching and curriculum at the end of the first 3 years of the medical undergraduate degree. However, there are some topics where they feel they are underprepared. Future challenges and directions include understanding the reasons that lead to a lower perception of the quality curriculum in specific subjects and planning implementation measures accordingly.

Take-home Message

The evaluation of the perceived curriculum quality by the students contributed to the identification of the areas that may need improvement measures.

6P3 (6023)

Date of Presentation: Tuesday 29th August
Time of presentation: 0912 - 0918
Location: Carron 2, Loch Suite, SEC

The Impact of an Integrated Health Literacy Curriculum on Medical Students' Familiarity, Attitude, Self-Confidence, and Communication Self-Efficacy: A Follow-Up Study

Ting-Gang Guo1, Jyh-Gang Hsieh2

[1]School of Medicine, Tzu-Chi University, Hualien, Taiwan; [2]Buddhist Tzu Chi General Hospital, Hualien, Taiwan

Background

Health literacy affects patients' ability to understand health information and make informed decisions about their health. Reducing the negative impact of health literacy discrepancies between doctors and patients is crucial. Cultivating and maintaining medical students' understanding of health literacy and communication skills is a meaningful way. Therefore, incorporating health literacy training into medical education has become increasingly necessary.

Summary of Work

Since 2019, the medical department of Tzu Chi University has implemented a four-week integrated health literacy training program for medical students during their family medicine rotation. The curriculum covers four themes: introduction to health literacy concepts and knowledge construction (2 hours), creating a health information-friendly medical environment (3 hours), oral communication in health literacy (4 hours), and the use and evaluation of auxiliary health education media (3.5 hours). The curriculum uses various teaching methods, including flipped classroom, role-playing, situational experience, standardized patients, group discussion, and feedback.

Summary of Results

Our study surveyed medical students' familiarity, attitudes, confidence, and communication self-efficacy regarding health literacy with a self-developed

questionnaire. We also conducted follow-up surveys one year after the end of the curriculum to understand the long-term impact. The study included a sample of 43 medical students, including 29 males (67.4%) and 14 females (32.6%), with an average age of 23.19 years. After the curriculum, students' familiarity, attitudes, oral and written communication confidence in health literacy showed statistically significant improvement, and communication self-efficacy also significantly improved. Paired t-test revealed a decreasing trend in all dimensions except written communication confidence one year post-curriculum. Notably, the decline in oral communication confidence was statistically significant. (Mean = 8.70 ± 0.83 vs. 8.11 ± 1.31, p=0.013)

Discussion and Conclusion

Few studies have examined the long-term effects of health literacy curriculums. Our research revealed that after taking the integrated curriculum, improvements in health literacy and communication self-efficacy did not persist well after one year. The limited sustainability of these abilities may be attributed to the need for longitudinal curriculums to sustain and enhance health literacy and communication self-efficacy.

Take-home Message

A longitudinal format of health literacy and communication self-efficacy training is necessary to sustain the acquired abilities.

6P4 (3060)

Date of Presentation: Tuesday 29th August
Time of presentation: 0918 - 0924
Location: Carron 2, Loch Suite, SEC

DEVELOPING LEADERSHIP AMONG DENTAL RESIDENTS. AN EXPLORATORY STUDY

Hawazen Radwan1

[1]*Prince Sultan Military Medical City, Riyadh, Saudi Arabia*

Background

Healthcare today requires leaders to take charge of leading and improving the healthcare sector. Saudi Commission for Health Specialties adopted Can MEDS framework for defining the competencies for all residency programs, including dental specialty. Senior residents should demonstrate readiness to transition to practice as a leader. It is imperative to investigate the leader role core competency development during residency programs that are not systematically studied.

Summary of Work

This was a qualitative study employing the Phenomenological approach. The theoretical saturation point determined the sample size using a purposeful sampling technique. Semi-structured interviews were used for data collection using a semi-structured interview guide. Thematic data analysis was done using Nvivo computer software by QSR International Themes were generated, and the data were interpreted within supported with the most relevant quotations.

Summary of Results

Sixteen senior residents were required to serve the study purpose. Three themes emerged. Awareness of residents about the leader role was limited as a competency. Residents perceived the leadership concept including a lack of consistency and structure under the training program. Summative reports were received as part of the assessment, whereas no integral protocol for formative feedback. Specialties, training centers, and coaching were identified as factors that impacted leadership development.

Discussion and Conclusion

This study highlighted the awareness, educational experience, and factors that impact leadership development during residency. Although the leader role was tackled as a required competency, our findings reflected improper articulation between the key competencies' awareness as objectives, educational activities, and assessment tools. That does not support the constructive alignment in achieving the learning outcomes reported in the literature. The residents struggled and varied in developing leadership skills relying on their learning environment.

Take-home Message

Our future residents' leaders need to know the way, go the way, to show the way. Residency programs may verify equivalent education of "leader role" for all specialties and training centers in residency training in Saudi Arabia. Dovetailing leadership coaching with daily teaching workflow and implementing faculty development initiatives to allow for appropriate feedback and assessment of these skills are advised.

6P5 (6007)

Date of Presentation: Tuesday 29th August
Time of presentation: 0924 - 0930
Location: Carron 2, Loch Suite, SEC

Effect of medical education on population health: evidence from China

Xiao ruilian1

[1]*School of Education & National Center for Health Professions Education Development, Peking University, Beijing, China*

Background

Good health for all is a main target for governments and international organizations. Life expectancy and mortality are universally viewed as key indicators for population health. Mortality represents the frequency that people will die within a certain period. Life expectancy covers mortality over the life course and tells us the average age of death in the population. The existing studies have fully shown the relationship between health workforce and population health, while the relationship between medical education and population health remains unclear. We evaluate the potential effect of medical education on population health.

Summary of Work

Using China data set for 29 provinces over a 15-year period (2005–2019), the panel data analysis was conducted where fixed effect models were estimated to determine effects of medical education on health outcomes. In the fixed effect models, both average life expectancy and the mortality rate were dependent variable, andthe number of medical students andper capita education expenditure were independent variables, with controlling for potential confounding factors.

Summary of Results

According to the results from the two-way fixed effect model, both the number of medical students and per capita education expenditure were significantly associated with average life expectancy($r=0.338, p<0.01$; $r=0.374, p<0.01$) and mortality rate ($r=-0.156, p<0.01$; $r=-0.243, p<0.01$) respectively. Heterogeneity analysis showed that compared with eastern

China, the increase of medical students in the central and western regions contributed to the increase of average life expectancy more significantly.

Discussion and Conclusion

We add new evidence of the association between medical education and population health. With the increasing number of medical students and per capita education expenditure, the average life expectancy would be longer and the mortality rate lower. We conclude that medical education, including the scale and investment, needs to be properly tailored to population health outcomes.

Take-home Message

Medical education, including the scale and investment, needs to be properly tailored to population health outcomes.

6P6 (4045)

Date of Presentation: Tuesday 29th August
Time of presentation: 0930 - 0936
Location: Carron 2, Loch Suite, SEC

Medical Students against GBV: Health Response to Gender-Based Violence

Arwa Sharaby1, Sarah Beaini1, Anna Rita Ronzoni2, Mariem Galaaoui3

[1]International Federation of Medical Students' Associations, Copenhagen, Denmark;
[2]World Health Organization - Regional Office for the Eastern Mediterranean, Cairo, Egypt;
[3]International Federation of Medical Students' Associations, Copenhagen, Denmark

Background

Gender-based violence (GBV) is a prevalent problem worldwide despite the many efforts exerted by international organizations and governments. it is even more prevalent during humanitarian emergencies due to mass displacement and the breakdown of social protections. Healthcare workers are often the first responders to GBV-related injuries. Consequently, there is a need for GBV education for medical students to ensure that future health professionals can sensitively respond to cases of GBV and act as crucial prevention agents in their societies. The International Federation of Medical Students' Associations (IFMSA) and the World Health Organization Eastern Mediterranean Region Office (WHO-EMRO) developed an online course on GBV in response.

Summary of Work

An online course "Medical Students Against GBV." was organized under two phases. The first phase consisted of an asynchronous self-paced held from the 7th till the 25th of October, 2022 to complete the WHO E-learning tool on Clinical Management of Rape and Intimate Partner Violence Survivors, followed by a synchronous course over Zoom from the 1st till the 25th of November (2 days/ week - 3 hours/day). The course aimed to mobilize medical students to advocate against and respond to GBV from a survivor-centered approach in their communities by discussing their role as future healthcare providers and the current interventions taking place.

Summary of Results

The GBV workshop included 27 medical students representing 15 countries from the Eastern Mediterranean region, 31 hours of session were delivered by ten trainers through asynchronous and synchronous modes. The outcomes were the graduation of 27 advocates that have reported an average 8.4 on a scale of 10 increase in confidence level when talking about GBV and increased willingness to organizing community based activities within their local communities through 16 national action plans (NAP) created under the guidance of GBV Focal points at WHO Country Offices. The outcomes of NAP will be collected through an impact assessment Form, and selected good practices will be presented.

Discussion and Conclusion

GBV is a public health problem. Therefore comes the importance of incorporating evidence-based teaching about the prevention, recognition and handling of GBV within the medical curriculum.

Take-home Message

Integeration of GBV Education within medical curriculum to build health workforce Capacities.

6P7 (6344)

Date of Presentation: Tuesday 29th August
Time of presentation: 0936 - 0942
Location: Carron 2, Loch Suite, SEC

Multidisciplinary Grand Round: Development of Medical Professionalism

Chatsuda Sookthon1

[1]*Si Sa Ket Hospital, Si Sa Ket, Thailand*

Background

Grand round is one of the methods of medical education. Residents conducted traditional grand rounds. Patients were present, and the senior physicians questioned the patient and observed any physical findings demonstrated by the resident. After the patient exited, his or her problems were discussed. However, the relevance of grand rounds is declining with decreasing attendance and a format that is different from its original design.

Summary of Work

Si Sa Ket Hospital Education Center is a rural medical education center, having experience teaching medical students for about 10 years. As working as teams in medical wards, multidisciplinary grand rounds were set up during 2020-2021, these activities included medical students, Interns, medical staff, nurses, pharmacists, physical therapists, and nutritionists to help them to understand the work of each party and also a holistic approach for patient care. The questionnaires were done before and after the activities to assess the level of confidence of medical students and interns about how to get information for principal diagnosis, proper investigation, and treatment. The 5-point Likert scale was used and a total of 141 questionnaires were collected from 59 Externs, 17 Interns, and 65 4th and 5th-year medical students.

Summary of Results

The result was an increase in scores of confidence significantly after the multidisciplinary grand round ($P<0.05$), including provisional diagnosis, how to choose proper investigation, appropriate treatment, holistic care, good communication with patients, and good communication with other members of the team. The medical students gained more

confidence than the interns. This might be because Interns have gone through a learning process more than Externs, giving them more confidence already. To evaluate satisfaction, they thought the grand round was useful (4.05), and improved their knowledge (4.07). Overall satisfaction was 3.99.

Discussion and Conclusion

From the questionnaires, it seems a multidisciplinary grand round could improve the confidence of medical students and interns in many ways, including knowledge and holistic care of the patient. This activity should be encouraged to be set in other departments as a good way for learning and development of professionalism.

Take-home Message

Multidisciplinary grand round should be encouraged to be set as a good way for learning and development of professionalism.

6P8 (3241)

Date of Presentation: Tuesday 29th August
Time of presentation: 0942 - 0948
Location: Carron 2, Loch Suite, SEC

'We must, indeed, all hang together' - partnerships to find innovative healthcare education and delivery solutions

Adrienne Torda1, Sze-Yuan Ooi2, Rebecca Pinheiro2, Lisa Altman2, Kristen Overton2, Jennifer Yu2

[1]UNSW Sydney, Randwick, Australia; [2]SESLHD, Randwick, Australia

Background

In 2021, the rapid rise in COVID-19 infections put overwhelming demand on healthcare services and disrupted healthcare education. Educational institutions had to balance the need for clinical training, against the risks of student infection or transmission of COVID-19. The impact of COVID-19 on the health workforce was also significant, resulting in workforce shortages. These issues made us work in partnership to find innovative ways students could continue training whilst helping with workforce delivery.

Summary of Work

In addition to 'Assistant in Medicine' roles, medical students took up many other roles in healthcare to help the surge workforce. During the greatest local surge in COVID cases, it was recognised that patients could be managed in the community if an appropriate monitoring service existed. These roles combined aspects of 'traditional' medical, nursing and technology skill-bases. Students at UNSW were deployed into an innovative program designed to deliver community-based healthcare to COVID patients via remote monitoring (RMS). These roles provided learning opportunities in healthcare technology, teamwork and clinical skills. Students were integrated into a multi-disciplinary care team with highly calibrated supervision.

Summary of Results

Medical students were recruited to these roles. Over the 8 months from September 2021 to April 2022, approximately 3900 patients were monitored by the RMS. This involved the

collection of over 83000 data points that related to patient management were registered and transmitted via a mobile phone app. The mean duration of service (to cover the crisis period) was 4.5 weeks, although some students worked more than 10 weeks. There was a 50% response rate to a survey collecting both quantitative and qualitative data to assess perceived skill development, wellbeing and perceived support in these roles.

Discussion and Conclusion

Overwhelmingly students found this experience valuable, and felt more confident in many skills, including teamwork, professionalism and communication. These are crucial for all healthcare students and this is a very meaningful environment for learning these skills. They simultaneously delivered care to thousands of patients with COVID.

Take-home Message

This is an example of how novel roles and innovative approaches to clinical training can provide solutions in times of healthcare crises.

6P9 (5700)

Date of Presentation: Tuesday 29th August
Time of presentation: 0948 - 0954
Location: Carron 2, Loch Suite, SEC

Continuing Medical Education in Georgia

Archil Undilashvili1, Ketevan Bibilashvili2, Nino Shiukashvili2

[1]Emory University School of Medicine, Atlanta, GA, USA; [2]Ken Walker International University, Tbilisi, Georgia

Background

In many countries, Continuing Medical Education (CME) is a commonly applied practice to guarantee the maintenance of the competence level, further advance professional skills, and provide safer medical care with better outcomes. Enhancing continuing medical education has a special role in the improvement of medical services in Georgia and similar countries, with a post-soviet background. For this, it is necessary to have a legislative and educational base, which can be created on the basis of synchronous, agreed cooperation of individuals and organizations interested in health care.

Summary of Work

In order to assess the current situation and general trends in Georgia, a survey was conducted among randomly chosen 46 medical residents with a pre-elaborated and field experts-approved questionnaire. The results of the questionnaire were collected and a SWOT analysis was formulated considering the historical background and the current situation in Georgia.

Summary of Results

Based on the results of the survey, residents have fewer opportunities to be involved in clinical procedures (74%) and whenever they are involved it is not adequate (81%); medical residents are less involved in clinical decision-making (91%) and professors are less supportive to encourage their clinical practice (76%). Besides, the evaluation process of medical residents is not relevant (71%).

Considering the above findings, SWOT analysis revealed several treads/obstacles, such as political and professional resistance, diversification of the funding system, and lack of experience/clinical knowledge after graduating from the residency program.

Discussion and Conclusion

Taking into account the rich experience accumulated in the country and abroad, and considering the results of the survey, it is recommended to create: An independent administrative structure, which represents private-public cooperation, with alternating leadership; a National Plan for Continuing Medical Education, and preparation of the relevant legal framework for implementation of the plan. This will make CME events more demanding and evaluative.

Take-home Message

In order to ensure the high professional level of doctors and consequently the quality of health care through continuing medical education, it is important to strengthen private-public Cooperation and create a national plan for CME with clear responsibilities.

6P10 (3895)

Date of Presentation: Tuesday 29th August
Time of presentation: 0954 - 1000
Location: Carron 2, Loch Suite, SEC

Rural Education is The Future of Rural Employment! A study of Medical students' experience in rural placements in the Hebrides

Gavin Hughes[1], Sophie Everitt[1]

[1]*The University of Aberdeen, Aberdeen, UK*

Background

Rural medicine is becoming an integrated part of medical school curricula due to exciting opportunities placements can present. Some medical schools specialise in remote and rural experiences with the Universities of Aberdeen, Dundee and St Andrews among others all offering specialised experiences in this field.

Summary of Work

The Western Isles Hospital (WIH) welcomes students from a variety of universities in both core and elective placements. To collect evidence of the quality of rural teaching, an online survey was carried out for medical students who had been on placement in WIH over a period of 6 months.

To understand the learning needs of final year medical students and to ascertain if they are being met at the WIH. To understand if students would want to return to rural areas to work once graduated. To gain feedback on improvements that can be made to undergraduate placements at the WIH.

Summary of Results

Study results showed that 100% of students would recommend a rural placement to a friend or colleague. 54% of students said they would return to the WIH as a doctor, with the remaining 46% of students open to this idea. Students were asked to rate the quality of their rural placement compared to their mainland equivalent from 1 to 5 (5 being

significantly better, 1 being significantly worse) 65% of students rated 5, and 35% rated 4. Students gave additional feedback in open-ended questions.

Discussion and Conclusion

The survey provides evidence that the learning needs of medical students are being met and exceeded at WIH. Rural placements are well acclaimed, and this translates to the high percentage of students considering a job in the WIH. This study indicates that medical students benefit from rural medicine experiences and additionally, rural locations benefit from rotating students for workforce planning.

Take-home Message

Feedback from students indicated improvements to their placements could be made with the purchase of equipment i.e student radio pagers and a structured clinic timetable, both of which are currently being implemented.

6P11 (6680)

Date of Presentation: Tuesday 29th August
Time of presentation: 1000 - 1006
Location: Carron 2, Loch Suite, SEC

Reduced volume of patient encounters during clerkship affect students' self-competencies on the clinical performance?

Sung-Soo Jung1, Da-Hyun Kang1, Chae-Uk Chung1, Jeong-Eun Lee1

[1]*CNU Medical School, Daejeon, The Republic Of Korea*

Background

Clerkship experiences are considered crucial for the development of clinical competency. COVID-19 pandemic imposed a significant reducing on volume of patient encounters during clinical clerkship. We aimed to find out whether number of patient encounters affected students' self-competencies on the clinical performance.

Summary of Work

We assessed self-competencies measured by survey-based evaluations of the clerkship. A serial survey of 3rd year medical students at the University of Chungnam National University Medical School was conducted in the 2 student cohort before and amid COVID-19 era. Students evaluated their self-competencies on course evaluation form with 1-5 Likert scales, respectively, before and after two weeks of respiratory medicine clerkship.

Summary of Results

Competencies on 5 clinical outcomes (history taking, physical examinations, clinical reasoning, interpretation of routine laboratory test, patients management) were compared. A total of 232 students were analyzed, and the average number of patient encounters was 8.76 before and 6.73 amid COVID-19 clerkship. The average score of 5 competencies was no difference between 2 cohort student group. There was no correlation between the volume of patient encounters and the student's self-competencies. Self-directed learning and bedside feedback in clerkship was correlated with competencies.

Discussion and Conclusion

Number of patient encounters didn't affected students' self-competencies on the clinical performance. However, self-directed learning and appropriate feedback are more important than the volume of patient encounters.

Take-home Message

Volume of patient encounters didn't affected students' self-competencies.

6P12 (5076)

Date of Presentation: Tuesday 29th August
Time of presentation: 1006 - 1012
Location: Carron 2, Loch Suite, SEC

Developing a Fellowship programme for Postgraduate Doctors in Training (PGDiTs)

Jane MacDougall[1], Ian Barton[1], Emily Wright[1]

[1]*Health Education England - East of England, Cambridge, UK*

Background

PGDiTs need to gain generic capabilities in leadership, management, research & teaching; many are also interested in developing portfolio careers. Fellowships can help to achieve these goals.

Several LTFT postgraduate fellowship opportunities had evolved within Health Education England - East of England (HEE-EOE) but there was no overarching coordination of the programme and recruitment and support were fragmented.

The aim of this project was to develop, monitor & evaluate a coherent fellowship programme in HEE-EOE, aligned to the region's priorities, and providing trainees with development opportunities in parallel with their clinical training.

Summary of Work

A HEE-EOE project group was formed to confirm the overall strategy and distribution of fellowship posts, with funding established from one budget. In addition to existing posts in leadership, education, simulation, faculty development and professional support, new posts were created in EDI, digital health, genomics, global health and trainee engagement. A template job description was distributed to supervising associate postgraduate deans (APGDs) for review and editing. A single recruitment process was developed with on-line interviews by supervising APGDs.

Fellowships now all start in September to coincide with a bespoke induction programme and the start of a regionally-delivered leadership and management programme. Fellows

are line managed by the APGDs and are expected to complete a project, presenting this at conferences or locally. Advice on projects is provided by the monthly HEE-EOE educational research group. Fellows have access to funding for personal development, including postgraduate degrees and conference attendance.

Monitoring & evaluation of the programme are in place.

Summary of Results

Detailed findings from programme evaluation will be presented. Key themes include recruitment, programme flexibility, project supervision by experienced educationalists, ethics approval for projects and how projects add value to individuals and HEE-EOE.

Discussion and Conclusion

Developing a unified fellowship programme for PGDiTs has been positively received by fellows, APGDs and HEE-EoE's Senior Leadership and Management Team. As well as providing development opportunities to individual PGDiTs, HEE-EOE benefits as a whole, because the projects are aligned to the region's priorities, therefore improving education and support for other PGDiTs throughout EOE, as well as showcasing good practice.

Take-home Message

Unified fellowship programmes benefit trainees and educational organisations.

6P13 (4604)

Date of Presentation: Tuesday 29th August
Time of presentation: 1012 - 1018
Location: Carron 2, Loch Suite, SEC

Social Accountability in Medical Education: A Necessity in the Globalization of Healthcare.

Rhea Rajkumar 1, Nameera Banu 1, Ahmed Othman1, Kosha Gala2

[1]*International Federation of Medical Students' Associations, Copenhagen, Denmark;*
[2]*International Federation of Medical Students' Associations, Copenhagen, Denmark*

Background

The International Federation of Medical Students' Associations (IFMSA) is one of the largest student-led organizations, dedicated to enhancing the quality of medical education and healthcare provided to future doctors.

IFMSA is a strong advocate for 'Social Accountability'(SA), an important aspect endorsed for medical curricula within Medical Education. Social Accountability includes directing medical schools' education, research, and service activities towards addressing the health concerns of utmost priority, of the community, region, and/or nation of its vested interests.

Summary of Work

IFMSA has created a comprehensive Social Accountability Toolkit that includes all the necessary information, assessment tools and action points for Medical Students to Advocate for SA.

IFMSA also organizes online and on-site educational activities, courses and workshops that are meant to develop participants' knowledge and competencies to design and implement activities towards improving SA in their respective medical schools, medical education systems, and thus globally. Online Social Accountability Workshop (oSAW) 20/21 and 22/23 graduated 39 participants all over the world.

IFMSA also organizes Medical Student exchange programs wherein they attend a 4 week clerkship abroad. In their Pre Departure and Upon Arrival Training, the students are capacitated to practice and Advocate for Social Accountability during their exchange.

Summary of Results

IFMSA participated in the World Summit for Social Accountability (2017), where the organization won the Charles Boelen Prize for their work on creating “the Students’ Toolkit on Social Accountability of medical schools”. IFMSA also joined forces with other like minded organizations to raise its voice through the Students' Declaration on Social Accountability in Healthcare Profession and Education.

A study was conducted to explore medical student perspectives and ideas regarding “Social Accountability of Medical Schools” and feasibility of IFMSA's Toolkit. A total of 268 medical students responded to the questionnaire out of which 93% considered themselves as Stakeholders in SA advocacy and over 87% found the toolkit to be useful.

Discussion and Conclusion

IFMSA has contributed to enhancing students' awareness globally on Social Accountability using different tools and innovations.

Take-home Message

It is important to continue impacting the world until Social Accountability is fully embedded formally within the medical curricula.

6P14 (2812)

Date of Presentation: Tuesday 29th August
Time of presentation: 1018 - 1024
Location: Carron 2, Loch Suite, SEC

The impact of COVID-19-related educational disruption on final year medical students in the United Kingdom

Sara Bawa1, Claire Bustin1, Chathura Kasunkumara Munasinghe1, Connie Wiskin1

[1]*University of Birmingham, Birmingham, UK*

Background

The COVID-19 pandemic created unprecedented pressure on healthcare systems worldwide. Public health measures that intended to limit the spread of the virus had the unintended effect of necessitating the swift development of novel medical educational methods. The medical students most affected by this period of change were those entering their final year. This study aims to explore their perceptions of the impacts of COVID-19 on their clinical learning and mental health, as well as identify ways in which medical schools can mitigate these impacts.

Summary of Work

This is a mixed method, single-site descriptive study comprising two parts: a questionnaire and semi-structured interviews. Participants were final year medical students at the University of Birmingham, UK. Quantitative data from the questionnaire were analysed using simple descriptive statistics and qualitative data from the questionnaire and interviews were analysed using thematic analysis.

Summary of Results

Forty-four students responded to the questionnaire, and a further nine were interviewed. Students self-reported higher levels of anxiety mid-pandemic on average. Four key qualitative themes were identified:

1. Learning opportunities - Opportunities for students to volunteer and work clinically during lockdown. Lack of clinical teaching due to reduced access to clinical areas, limited patient contact and busy staff was also identified.

2. Assessments - Changes to the type of assessments

3. Communication - Frequency, quality and tone of medical school communications

4. Wellbeing - Wellbeing services, loneliness and the implications of lockdown and social distancing on the mental health of final year medical students.

Discussion and Conclusion

Overall, the pandemic has had widespread effects on the learning and wellbeing of final year medical students, which may impact their competence and confidence as junior doctors. Improved two-way communication and access to wellbeing services have been identified as factors promoting the adjustment of students to rapid changes in teaching methods and assessments. Limitations of this study include and small sample size (difficulties with recruitment) and volunteer bias.

Take-home Message

Final year medical students were significally affected by teaching and assessment changes during the Covid-19 pandemic.

6P15 (0319)

Date of Presentation: Tuesday 29th August
Time of presentation: 1024 - 1030
Location: Carron 2, Loch Suite, SEC

Failure rate in 1st year Indian Medical Students who were taught new CBME Curriculum during Pandemic

Devansh Lalwani[1], Naitica Darooka[1], Sachi Kalawadia[1], Shirish Rao[2], Munira Hirkani[2]

[1] Seth GS Medical College and KEMH, Mumbai, India [2] Seth GS Medical College and KEM Hospital, Mumbai, India

Background

In 2020, Maharashtra University of Health Sciences University Examinations reported an increase in failure rate from an average of 15% to 27%. The new curriculum known as Competency Based Medical Education was introduced in 2019 by the Medical Council of India which included topics like the Foundation Course, Early Clinical Exposure and Attitudes, Ethics and Communication. The First MBBS batch was forced to switch to an online mode of medical teaching due to COVID-19.

Summary Of Work

The primary objective of the study was to assess the factors that caused the increase in failure rate of students who appeared first year MBBS MUHS university examination, for the batch of 2019 which had the new CBME Curriculum for the first time. We also assessed the influence of mental health and changed examination patterns on the failure rate. An online pre-validated questionnaire was circulated to colleges affiliated to MUHS.

Summary Of Results

Responses were obtained from 360 individuals (passed=74.5%, failed=25.5%). No association between frequency of teaching and self-study pattern was found($P>0.05$) despite the switch to online teaching modes. However, lack of regular internet access (OR=5.00, P=0.001) or device access (OR=3.17, P=0.001) had a significant influence on the

failure rate. Students who experienced severe stress(P<0.002) and severe depression(P=0.001) had a higher odd of failing. COVID-19 specific factors like, death of family member/friend during exams(P=0.001) and self/family member testing positive before exams(P=0.001) was found to be significantly associated. There was a significant association seen between the changed paper pattern, mainly additional BAQs and difficulty of MCQs that increased the odds of failure(P<0.05).

Discussion And Conclusion

Total failure rate of 27% in MUHS examination was attributed to multiple factors like, switching from offline to online modes to teaching, in which contributing factors were device/internet availability and online internal assessments, poor mental health of students due to lockdown as well as uncertainty of examinations, lack of knowledge and exposure to the changed curriculum and paper pattern. Surprisingly, lecture frequencies, teaching patterns had no influence on failure rate.

Take Home Messages

- The results can be used to formulate educational interventions that will help to improve academic performances, mental health and morale of the students.

Session 6R

6R (1103)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: Dochart 2

Promotion in academic medicine: working towards inclusive metrics for "research excellence" in faculties of medicine

Sophie Soklaridis[1], Constance LeBlanc[2], Anna MacLeod[2], Georgia Black[1], Ayelet Kuper[3]

[1] Centre for Addiction and Mental Health, Toronto, Canada [2] Dalhousie University, Halifax, Canada [3] University of Toronto, Toronto, Canada

Background

The concept of “research excellence” is complex, in theory and much less clear to define, measure, and use as a productivity metric, in practice. Research on the impact of narrowly defined productivity measures show that they are susceptible to bias and have historically been given undue weight during promotion processes in academic medicine. The COVID-19 pandemic highlighted the precarity of academic labour where some scholars experienced a disproportionate reduction in the time they could dedicate to “promotable” activities under what would be considered “research excellence”, such as grant-writing and publishing peer-reviewed papers. Many academic institutions have recognized these challenges and have responded by revising their metrics to address pandemic-related interruptions. However, there are a number of pitfalls to revising promotion criteria, including the risk of inadvertently reproducing inequity. In this workshop, participants will explore the barriers and enablers to developing inclusive promotion criteria in academic medicine. Using a concept mapping approach, participants will generate a series of questions that they can incorporate into the initial planning stages of revising promotion criteria.

Who Should Participate

This workshop is aimed at leaders who are involved with promotion processes and decision-making, including those who are involved with defining promotion criteria. This workshop may also be of interest to scholars who are considering promotion in their near future.

Structure Of Workshop

- A brief didactic presentation on the impact of the COVID-19 pandemic on the academic activities of scholars, with insights from our research in this area
- An interactive introduction to some of the proposed solutions for revising promotion criteria to become more inclusive and potential unintended consequences of these
- Small group work where attendees map questions that need to be asked before planning to revise promotion criteria
- Larger group discussion about the barriers and enablers to implementing revised promotion metrics within participants' own institutions

Intended Outcomes

Attendees will gain practical and applied insight into potential pitfalls when revising promotion criteria to become more equitable. By the end of the session, attendees will have discussed a range of barriers and enablers to designing and implementing promotion metrics and how these might apply in their own local settings.

Session 6S

6S (3613)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: M3

Building adaptive practices through effective self-regulated learning environments

Rune Dall Jensen[1], Maria Louise Gamborg[1], Jeffrey Cheung[2], Lia Fluit[3]

[1] MidtSim, Department of Clinical Medicine, Aarhus University, Aarhus, Denmark [2] Department of Medical Education, University of Illinois at Chicago College of Medicine, Chicago, USA [3] Health Academy, Radboud University Medical Center, Nijmegen, The Netherlands

Background

An essential part of Health Professions Education (HPE) is to prepare learners to solve problems they will encounter in their future work, defined by an ever-changing healthcare system [1]. Adaptive clinicians effectively apply their knowledge to routine problems, and solve non-routine problems by continuously learning as they work. Two concepts that can help us understand such adaptability are self-regulated learning (SRL) and adaptive expertise. Evidence suggests that learners' situated SRL experiences during undergraduate and postgraduate training connects to their adaptive expert problem-solving in practice. However, educators still struggle to use the vast literature on SRL and adaptive expertise to construct learning design that can foster such adaptive practices among healthcare professionals. Thus, this workshop aims to provide an overview of the concepts of SRL and adaptive expertise, to help participants formulate learning designs that promote these behaviors in their own clinical context

Who Should Participate

Educators, clinical supervisors, program directors, and researchers with an interest in fostering adaptable learners within medical education

Structure Of Workshop

1. Introductions (10 mins) + Brief Didactic Introduction (15 mins): We will define the core constructs of SRL and adaptive expertise and exemplify them in both a simulation and a workplace-based setting. Electronic hand-outs will be shared.
2. Small Group Activity (35 mins): Workshop participants will work in small groups (4-5) on three 'practice exploration' questions, designed to elicit personal examples of SRL and adaptive expertise in practice. Time will be provided to answer and record responses on an interactive platform (e.g., padlet).
3. Large Group Debrief (20 min): Presentation of group work and panel discussion on implementations and challenges.
4. Wrap up (10 minutes). All Panelists will reflect on key themes and discuss implications for future scholarly work.

Intended Outcomes

By attending the workshop, participants will learn about SRL and adaptive expertise and the evidence-based instructional design strategies for supporting trainees' learning in HPE. Furthermore, the presenters will share their own educational and research experiences working with these concepts, including challenges, pitfalls, and lessons learned. Our aim will be to inspire the participants to appraise and apply the SRL and adaptive expertise constructs and experiment effectively with their learning and assessment designs.

Session 6T

6T (1859)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: M2

Finding Success within CBME: Strategies that Support Workplace-based Assessment Implementation.

Neel Shah[1], Brigid Dolan[2], Celia O'Brien[2], Beth Barron[3]

[1] Mayo Clinic, Rochester, MN, USA [2] Northwestern University, Chicago, IL, USA [3] Columbia University, New York, USA

Background

A major mode of assessment in competency-based medical education (CBME) is direct observation in the workplace. While several frameworks support curricular and assessment development in CBME, challenges continue to limit the implementation of workplace-based assessments (WBA) and the potential of CBME in both undergraduate and graduate medical education. This session will focus on specific and practical strategies to address the different facilitators and barriers in WBA implementation that exist across institutions.

Within our three institutions, different outer and inner contextual factors led to varied approaches in WBA implementation. We will highlight the factors and strategies that impacted successful implementation, grouped into three areas for consideration: student development, faculty development, and organization/systems design. We will invite participants to identify contextual factors and create a plan for leveraging at least one local facilitator while addressing one key barrier to support successful WBA implementation in their own institutions.

Who Should Participate

Educators and administrators implementing CBME/WBA in health professions education

Structure Of Workshop

0:00-0:15 Introduction (Dr. O'Brien)

- *Overview*
- *Case Discussion*: *Example of WBA Implementation from a Clinician Educator's Perspective.*
- Attendees will be invited to think/pair/share: When thinking about WBA implementation at your institution, what are two current facilitators and two barriers to success?
- Table facilitators will list barriers/facilitators by topic (student, faculty, and organizational) for later discussion.

0:15-0:35 Topic one: Student feasibility and utility (Dr. Barron)

- Review of barriers/solutions from the 3 institutions followed by facilitated table discussion

0:35-0:55 Topic two: Faculty feasibility and utility (Dr. Shah)

- Review of barriers/solutions from the 3 institutions followed by facilitated table discussion

0:55-0:75 Topic three: Organization/Systems Design (Dr. Dolan)

- Review of barriers/solutions from the 3 institutions followed by facilitated table discussion

0:75-0:85 Attendees will choose one barrier from their home institution to commit to change to improve implementation; Will ask for 3 attendees to report out.

0:85-0:90 Conclusion

Intended Outcomes

Upon completion, attendees will be able to:

1. Identify local factors that support and hinder the implementation of WBA.

2. Compare and contrast successful approaches to engage students, foster faculty development, and design systems-based strategies to support WBA implementation.

3. Describe a strategy to support WBA implementation within the attendee's institution.

Session 6U

6U (5689)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: M4

Connecting with purpose: Seven steps to effect strategic program redesign for values-based outcomes

Lara Fuller[1], Gary D Rogers[1]

[1] *Deakin University, Geelong, Australia*

Background

In 2022, Deakin University's School of Medicine admitted its first cohort into a dedicated Rural Training Stream. The design of this stream was values-based and purposeful, to improve rural workforce outcomes for Western Victoria, Australia. Evidence was employed to modify factors in student selection and training demonstrated to increase the likelihood of graduates working in rural practice. Valuable lessons learnt from this 5-year re-design process have been shaped into strategic re-design principles.

Who Should Participate

This workshop is applicable to health professional educators or administrators interested in re-designing programs at any level to achieve a desired purpose.

Structure Of Workshop

Through facilitated peer discussion, participants will apply 7 conceptual steps of strategic program re-design to their own context.

1. Introduction, aims and structure of workshop (10 mins).

2. The design and implementation of Deakin's Rural Training Stream will be used to illustrate each step of the program re-design process. Participants will discuss in small groups (3-5) and apply concepts in their own program context. (10 mins per step, x 7; 70 minutes)

Seven steps:

- Clarify your purpose: what is the change you want to effect in the world and what is the potential impact of your program?
- Establish the baseline: how can you measure your current outcomes with reference to your purpose?
- Engage your allies: Who are your stakeholders, values leaders, process experts? Who has synergistic interests?
- Align policies with purpose: What evidence-informed policy changes would make a difference to achieving your purpose? What is the next step towards making these changes?
- Contextualisation: What is occurring in the broader environment that is aligned with your purpose and can be leveraged?
- Working at the edge of comfort zones: what is the 'stretch zone' for individuals and groups you need to influence? What would a staged approach look like?

- Evaluating outcomes and continuous improvement: How can a rapid translation feedback cycle be incorporated into the design of your initiative?

3. Wrap up: identifying your first step (10 minutes)

Intended Outcomes

Participants will leave this workshop having considered the greater purpose of their program, its potential for impact and some key elements required to create alignment with purpose and effect change.

Session 6V

6V (4815)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: Staffa

Strategies to Foster a Healthy and Inclusive Learning Environment in Medical School

Aviad Haramati[1], Diann Eley[2], Stuart Slavin[3], Antwione Haywood[4], Bonny Dickinson[5], Vishna Devi Nadarajah[6]

[1] Georgetown University School of Medicine, Washington, DC, USA [2] University of Queensland, Brisbane, Australia [3] ACGME, Chicago, USA [4] Indiana University School of Medicine, Indianapolis, IN, USA [5] Mercer University School of Medicine, Macon, GA, USA [6] International Medical University, Kuala Lumpur, Malaysia

Background

The *Learning Environment* (LE) in medical education is a complex entity involving a combination of personal, social, curricular, organizational, physical, structural, and virtual factors that can impact adversely on the well-being of learners. Moreover, the well-being of faculty and staff also affects the LE. Studies show that students and faculty from historically under-represented groups are at higher risk for stress and burnout, and experienced increased adverse events.

Who Should Participate

This workshop is intended for faculty (and students) interested in improving the learning environment, as well as individuals with administrative responsibilities of curriculum oversight.

Structure Of Workshop

Workshop has three parts: short didactic overviews of aspects of LE, audience response to two questions, and extended discussion by the participants. Experts from 3 countries will offer unique perspectives on the challenges and strategies they use to foster a healthy and inclusive LE. Each presenter has 5 min to address a different aspect of the LE: framework, persona/social elements, diversity, equity, and inclusion, curricular interventions, and the perspective of an institutional leader. Two questions about the elements of the LE will be posed to the audience for group discussions (5 min each). The next 20 minutes will have each table of participants addressing an aspect of LE that was presented, and suggestions on how they might improve the LE at their institution. A few examples will be presented to the large group, before a summary and wrap up with take-home messages.

Intended Outcomes

Outcomes for participants are

1. To gain an understanding of the elements that define the LE and how they impact on learner stress are essential to developing strategies to create a healthier LE.
2. To engage in strategic planning of interventions to improve their LE that fit with the culture of their institution and country
3. To raise awareness about the importance of addressing diversity, equity, and inclusion to optimize the environment for all students, faculty, and staff

Session 6W

6W (5748)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: Jura

Appreciative Inquiry (AI) enhances leader inclusiveness behavior in team learning: a case study from Cambodia.

Sambath Cheab [1], Sengkhoun Lim[1], Ann Toh[2], Yen Seow Benjamin Goh[2], Daniëlle M.L. Verstegen[3]

[1] University of Health Sciences, Phnom Penh, Cambodia [2] Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore [3] Graduate School of Health Professions Education, Maastricht University, Maastricht, The Netherlands

Background

Team learning requires knowledge, involvement, and information generation. Reflection helps teams learn better by identifying problems and solutions. Team learning involves sharing, co-creation, and constructive conflict. Team learning stakeholders include individuals, teams, and organizations. We will use Appreciative Inquiry (AI) to discuss (Inquiry) past successes (appreciation) with stakeholders to set goals for team learning. Unlike traditional problem-solving methods, this AI-based strategy prioritizes success. Discovery, dreaming, design, and destiny are the four stages of AI (determining the resources required to executive and sustain future development). We will use a case from Cambodia on team learning with guiding questions to start applying AI on analyzing and reflecting to the situation of audiences the way it different or the same. Complex healthcare systems necessitate cross-disciplinary collaboration. "The way a team plays" is needed to understand how teams synthesize and interpret diverse perspectives. Teamwork and a learning-friendly workplace determine a team's performance. Where to

start? AI collaboratively investigates, recognizes, and develops the best of "what is" in teams, institutions, and organizations to improve the future. This will teach the squad.

Who Should Participate

1. Medical Educators

2. Team leaders and members of Academic body

3. Lecturers

4. Students

5. People who interested in Team Building and Appreciative Inquiry in Change Management

Structure Of Workshop

Time allocated- Tentative Activities

5mn: Self-Introduction, Brief Agenda and Expected Outcome statement

15mn: Interactive introductory lecture with incorporating menti-meter as brainstorming, survey and expression related to the topic

20mn: Case Presentation From Cambodia on team learning with guiding questions to start applying AI again on analyzing and reflecting to the situation of audiences the way it different or the same

30mn: Small Group of 5 people discussion using AI approach in reflecting their own experiences on team learning

10mn: Whole group discussion using 4D of AI again by facilitator

10mn: Debriefing the session and take home messages

Intended Outcomes

1. Describe AI approach based on 4D (discovery; dreaming; design; and destiny).
2. Discuss the importance of team leader's inclusiveness behavior and team members' behavior in team learning.
3. Use AI approach by identifying past successes to set future goal in team learning.

Session 6X

6X (2641)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: Barra

Formalising support for learners on professionally regulated programmes using a case management approach.

Jennifer Kennedy [1], Ellie Hothersall[1], Kara Knight[1]

[1] *University of Dundee, Dundee, UK*

Background

Within professionally regulated degree programmes, support for learners takes many forms and follows different structures. Within the undergraduate medicine programme at our institution, we identified a lack of structure and process to enable the integration of informal student support mechanisms with a more formalised process. We therefore devised the Support and Progress Case Management Group. This group uses a case management approach for students who need extra support to progress through their programme or about whom progression decisions need to be made. It involves a formal process in which senior members of staff can make collective decisions about the timely provision of enhanced support for learning or personal and professional development, debarment from assessments due to attendance issues or temporary withdrawals from studies where necessary. The development of the case management group has provided a joined up method of identifying and supporting learners in difficulty and taking a collective approach to decision making including escalation to Fitness to Practice if appropriate.

We anticipate other institutions may be experiencing challenges with their support mechanisms/procedures and would benefit from sharing good practice in this area.

Who Should Participate

This workshop is for delegates who provide support for learners on professionally regulated programmes. Although our context is undergraduate, the content is transferrable to post graduate contexts.

Structure Of Workshop

- 30-40 minute interactive presentation outlining the background to setting up the support and progress case management group and some practical and operational guidance to implementation. With relevant student permission we hope to be able to provide the student voice to this presentation.
- 45 minute group work providing examples of student cases to analyse and decide on the most appropriate optimal management within the structure of the case management approach.

Intended Outcomes

- Explain the requirement for formalised support mechanisms within professionally regulated degree programmes
- Outline the practical and operational aspects to developing and implementing a support and progress case management group
- Analyse the type of student who benefits from a case management approach to support and progress and the potential outcomes
- Critically appraise your own support and progress structures to identify if a case management approach would be appropriate in your own context

Session 6Y

6Y (1199)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: Shuna

Moral Dilemmas, Moral Decision-Making, and Moral Distress in the Clinical Environment: Educational Strategies for Postgraduate Trainees

Dominique Piquette[1], Briseida Mema[2], Anne Kawamura[3]

[1] Sunnybrook Health Sciences Centre, Toronto, Canada [2] Hospital for Sick Kids, Toronto, Canada [3] Holland Bloorview Kids Rehabilitation Hospital, Toronto, Canada

Background

The development of moral reasoning among healthcare professionals, especially medical students, has once generated a lot of interest in the medical education community. More recently, *morality* as an educational topic and *sound moral decision-making* as a competence worth developing appear to have, in part, fallen into disfavor. Yet, healthcare systems face mounting pressure to provide more and better care with less resources, leaving clinicians facing moral dilemmas very frequently. The COVID pandemic has dramatically illustrated how acute shortages of healthcare resources can force healthcare professionals to make impossible choices, with important consequences on their wellbeing. Future clinicians need to be prepared to face these moral dilemmas in order to provide high-quality care while preserving their wellbeing. The best strategies to teach sound moral decision-making at the bedside have been little described, especially at the postgraduate level.

Who Should Participate

Clinicians who supervise postgraduate medical trainees and teachers/educators interested in ethics, from any discipline.

Structure Of Workshop

The workshop will be divided in three sections:

Part 1: Clarifying the concepts

Small Group Activity: Participants will review and discuss a short clinical vignette describing a morally-challenging clinical situation, and identify potential rationales for the decision made.

Mini-lecture: Facilitators will summarize key relevant concepts .

Part 2: Applying the concepts to diverse clinical environments

Reflexive exercise: Each participant will think of two recent clinical encounters involving a challenging and rewarding moral dilemma, and, in pairs, share their experiences.

Large group discussions on how to use naturally occuring moral dilemmas as learning opportunities to help learners develop their moral decision making.

Part 3: Teaching in practice

Small Group Activity: Participants will role play a series of clinical encounters to practice different strategies to foster moral decision-making.

Intended Outcomes

By the end of this workshop, the participants will be able to:

(1) Explain the concepts of moral decision-making/distress/orientation in today's clinical context;

(2) Discuss moral dilemmas encountered in their clinical environments, reflect on their own moral orientation(s), and identify opportunities to discuss moral decision-making with postgraduate trainees;

(4) Apply different strategies to foster postgraduate trainees' reflections on their moral decision-making, moral distress, and moral orientation;

Session 6Z

6Z (4760)

Date of presentation: Tuesday 29th August
Time of session: 09:00 - 10:30
Location of presentation: Orkney

How to gamify medical education: An interactive workshop

Afnan El-Gayar[1], Julius Josef Kaminski[1], Harm Peters[1], Arietta Lotz[2], Luisa Maulitz[2], Nadine Nett[2]

[1] *Dieter Scheffner Center for Medical Education, Charité – Universitätsmedizin Berlin, Berlin, Germany* [2] *Universitätsklinikum Bonn, Bonn, Germany*

Background

The development of serious games and their integration into curricula has become an integral part of technology-enhanced education. In the field of medical education, several studies have described pedagogical frameworks for serious game development and examples of their implementation. Despite growing reports on serious games in medicine, the appropriate use of gamification elements is rarely reported and remains unclear (Wang et al., 2016). For this reason, incorporating effective gamification elements and gamifying conventional learning content remains a challenge for educators interested in this approach.

Based on our facilitators' experience and the evidence available, this workshop invites participants to explore how gamification elements can be purposefully applied in educational settings and how different ingredients of educational games change the learners' experience.

We will showcase exemplary prototypes of educational games, all addressing the same learning content, and participants will be able to experience how their own learning experience is directly affected by different gamification elements. Together we will develop

a better understanding of how to select appropriate gamification elements for educational purposes that support learning and motivation. The aim is to increase the likelihood that the approach chosen to gamify curricular content will result in an effective learning asset that achieves both learner satisfaction and knowledge gain.

Who Should Participate

This workshop is for educators, faculty developers or instructional designers, or students in the medical field who are curious about what serious medical gaming can add to medical education. You do not need to be a hardcore gaming enthusiast to participate.

Structure Of Workshop

The workshop will consist of a sequence of short inputs from the facilitators combined with more extended hands-on small group tasks, followed by large group reflection and summary.

Intended Outcomes

After the workshop participants will be able to:

- Define gamification elements in the context of medical education.
- Identify gamification elements suitable for their own teaching/learning context and curricula.
- Describe the impact of different gamification elements on the learning experience.
- Outline an idea for your own gamification project and sketch an implementation plan.

Session 7A

7A (2766)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: Hall 2

IAMSE Symposium: Preparing for the future: challenges facing health professions educators

Peter de Jong[1], Bonny Dickinson[2], Kimberly Brown Dahlman[3], Neil Osheroff[4]

[1] Leiden University Medical Center, Leiden, The Netherlands [2] Mercer University School of Medicine, Macon, GA, USA [3] Vanderbilt University Medical Center, Nashville, USA [4] Vanderbilt University School of Medicine, Nashville, USA

Background

The world around us is changing rapidly and new developments enter the education arena. The educator of tomorrow faces issues of educator diversity, equity, and inclusion, a further changing balance between foundational science knowledge and clinical skills, and quickly advancing possibilities for artificial intelligence taking over traditional teaching methods. In this IAMSE symposium we will address several of these challenges and will seek for insights from the audience.

Format and Plans

Topics that will be discussed in this symposium:

- Bonny L Dickinson (Mercer University School of Medicine, USA): The educator to design pathways to introduce medical students (especially those underrepresented in medicine) to careers in academic medicine.
- Kimberly Dahlman (Vanderbilt University Medical Center, USA): The educator to integrate diversity, equity, and inclusion principles in the curriculum they are teaching.

- Neil Osheroff (Vanderbilt University School of Medicine, USA): The educator be prepared for the changing balance between foundational science knowledge and clinical skills
- Peter GM de Jong (Leiden University Medical Center, The Netherlands: The educator to use or avoid artificial intelligence in teaching and learning.

Session 7B

7B (1205)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: M1

Postgraduate Medical Education in disrupted and conflict settings

Juliana Sá[1], Wunna Tun[2], Simon Gregory[3], Rille Pihlak[4], Anton Volosovets[5], Gunaida Al-Gunaid[6]

[1] Faculty of Health Sciences University of Beira Interior, Covilha, Portugal [2] International Academy Medical Education Myanmar, Yangon, Myanmar [3] Health Education England , London, UK [4] St Bartholomew's Hospital, London, UK [5] Shupyk National Medical Academy of Postgraduate Medicine, Kiev, Ukraine [6] Arab Board Certificate in Anesthesiology, Aden, Yemen

Background

We heard at AMEE 2021 of 113 armed conflicts since the turn of the century. Postgraduate Medical Education in countries in peace and stability will differ from countries facing disruptions such as war or conflict situations. In disrupted settings, PGME struggles with organizational, financial and sometimes even ethical constraints. There is a shortage of trainees and faculty in conflict areas and often complete or partial interruption of training of health professionals all together. At the same time unfortunately, conflicts continue for long periods of time and trained professionals are urgently needed. Strategies to improve working conditions need to be addressed, as well as, how PGME could be continued and help respond to the needs of that community.

Topic Importance

In conflict setting PGME suffers difficulties in staff recruitment and proper resource allocation, the quality of PGME training is affected, and professionals suffer from intense stress and pressure. The lack of medical educators in times of war and conflicts impact on the knowledge that is transferred to future generations. There is little knowledge about how disrupted or conflict settings impact PGME, therefore it is extremely

important to discuss and showcase the challenges and opportunities colleagues have faced in these settings. This can then lead to building educational strategies that can be implemented in these areas and highlight how the global educational community could support these efforts.

Format and Plans

This session will include a panel of educationalists from different conflict settings across the globe that will share their experience on developing and delivering PGME in disrupted settings. Participants will be given a possibility to actively engage in the discussions by asking questions and contribute to building the global MedEd support to areas in need.

Take Home Messages

PGME faces several challenges in disrupted and conflict areas. Educational and organizational strategies can be implemented to ensure quality and continuity of PGME in challenging times.

Session 7C

7C (1643)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: Argyll I

The WHO Europe – AMEE Symposium: Unlocking the new frontline competence: effective risk communication and community engagement in health emergencies.

Cristiana Salvi[1], Philippe Borremans[1], Janusz Janczukowicz[2]

[1] *WHO Regional Office for Europe, Copenhagen, Denmark* [2] *Medical University of Lodz, Lodz, Poland*

Background

The Covid-19 pandemic has shown us that now, more than ever, we need health professionals equipped with a comprehensive set of competences to effectively respond to emergencies. This includes risk communication, community engagement and infodemic management, or RCCE-IM. In a nutshell, RCCE-IM enables and empowers people to take informed decisions to protect their health, thus bridging health service delivery and access. It is a public health intervention as vital to emergency control as biomedical sciences. This symposium brings the experts from the WHO Regional Office for Europe to discuss how to develop the above competence via the health professions education and to achieve the transformative impact on student learning outcomes. Drawing from compelling examples and evidence-based practices, the symposium will demonstrate how incorporating RCCE-IM empowers students to become well-rounded healthcare providers. This also refers to the ability to become trusted influencers of their patients and to address the diverse needs and risk perceptions of communities during health emergencies. In this perspective, the symposium will provide insights into practical learning approaches fostering the development this new set of competencies. Attendees will gain inspiration from successful implementation models and will have the opportunity to discuss the methods of teaching, learning and assessing the new competencies. We will explore how the integration of RCCE-IM into healthcare courses is expected to innovate the healthcare education. Moreover, participants will be invited to use the available WHO

Regional Office for Europe's resources in this domain. Together, we need to empower the next generation of frontline healthcare professionals to make a lasting impact on the health and well-being of communities during emergencies.

Session 7D: Research Papers: Interprofessional and Team Learning

7D1 (0798)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 11:20
Location of presentation: Hall 1, SEC

Followership in Interprofessional Healthcare Teams: A State-of-the-Art Review

Erin Barry[1], Pim Teunissen[2], Lara Varpio[3]

[1] Uniformed Services University, Bethesda, USA [2] Maastricht University, Maastricht, The Netherlands [3] The Children's Hospital of Philadelphia, Philadelphia, USA

Introduction

Within medical education, preparing healthcare teams for collaboration has tended to focus on leadership development; less attention has been given to followership responsibilities and their ability to transition between leadership and followership roles. Historically, theories of leadership in interprofessional healthcare teams (IHTs) have not been complimented with considerations of followership. Instead, leadership and followership are topics largely siloed apart from one another. Recent theories of healthcare leadership have started to attend to power sharing across team membership (e.g., shared/distributed leadership). This focus will surely have important implications for followership—both for non-physicians and physicians who will need to shift into followership positions when they are not leaders. Therefore, it is important to understand the historical conceptualizations of followership, how modern conceptualizations are described, and to explore how followership might need to evolve to effectively support the future of IHT collaboration. This study set out to use an innovative knowledge synthesis approach called State-of-the-Art (SotA) literature review to answer the following research question: What are current conceptualizations of followership relating to interprofessional healthcare teams (IHTs) as presented in the peer-reviewed literature?

Methods

Working from a constructivist research orientation, we conducted a SotA review to generate a chronological overview of how knowledge about followership evolved. This review presents this summary in three parts: (1) a synopsis of the history of followership in IHTs, (2) an analysis of today's conceptualization of followership, and (3) a suggestion of where followership research relating to IHTs should go next. We adhered to Barry et al.'s six stage SotA review process.[1]

Results

Using our search strategy, a total of 48 articles were included in the study. ***History of followership in IHTs***: Articles about followership within IHTs started in 1993. Until about 2010/2011, followership was framed as more leader-centric with authors using more passive language to describe followers. Additionally, in this early period, leaders were described as using their position and hierarchy on IHTs to influence followers to uphold leader dictums. Starting in 2008, several scholars started emphasizing team members as increasingly important to achieve team goals and pushed against the leadership literature that was focused on leaders and leadership. At the same time in healthcare, publications such as the Institute of Medicine's report "To Err is Human" in 2000, World Health Organization's report "Framework for Action on Interprofessional Education and Collaborative Practice" in 2010, and Interprofessional Education's policies "Core Competencies for Interprofessional Collaborative Practice" in 2011 also started to push the focus away from leader-centric mentalities. ***Followership in IHTs today***: Based on the analysis of current publications four trends were apparent: (1) there is a push towards increased use of shared/distributive leadership within healthcare teams; (2) leadership and followership are connected, dynamic roles in teams that are not necessarily tied to specific individuals; (3) followership is understood as an active role necessary for effective team functioning; and (4) conceptually (e.g. in terms of underlying theories) and practically (e.g. in terms of required skills), modern conceptualizations of followership uphold both old and new ideas. This has generated a highly variable set of qualities associated with good followership.

Discussion And Conclusion

Today, the followership literature relating to IHTs has not cleanly split from old ideas of bold-leaders and blind-followers; instead, a mix of old expectations has combined with newer theories, concepts, and interpretations of followership. ***The future of followership in IHTs***: Leadership and followership are closely linked concepts. For leaders and followers in

modern IHTs to flourish, more contemporary conceptualizations of followership must be embraced, and traditional conceptualizations of leadership must be abandoned. We acknowledge that followership in different clinical contexts may look different; it is not a one size fits all solution. We need to be cognizant of the team dynamics that work within different contexts and harness leadership and followership conceptualizations that are congruent with those contexts. With this knowledge, education and training can better optimize shared/distributive leadership in IHTs.

References

1. Barry ES, Merkebu J, Varpio L. State-of-the-Art Literature Review Methodology: A Six-Step Approach for knowledge synthesis. *Perspectives on Medical Education*. 2022;11:281-288. doi:https://doi.org/10.1007/s40037-022-00725-9

7D2 (1038)

Date of presentation: Tuesday 29th August
Time of session: 11:20 - 11:40
Location of presentation: Hall 1, SEC

Interprofessional Simulation for the development of professional identity in final-year medical students.

Louis Fiander[1], Marie Bryce[2], Thomas Gale[2]

[1] *Univeristy Hospitals Plymouth NHS Trust, Plymouth, UK* [2] *University of Plymouth , Plymouth, UK*

Introduction

Professional identity is recognised amongst clinicians, educators and regulators as a critical area of development for medical students as they transition into doctors. The literature supports the potential of interprofessional simulation-based education (IPSE) as an effective means of promoting professional identity development but does not explain *how*. Quantitative assessments of identity development will always be limited, not simply because professional identity is a social construct but because of its intrinsically personal nature. The absence of group-specific qualitative studies in this area prohibits meaningful implications for educational practice from being identified and developed. Without understanding mechanisms of professional identity development, there is a risk that medical education curricula may fail to capitalise on potential positive professional identity development amongst medical students and may even reinforce negative identity development.

This qualitative analysis of how IPSE contributes to the development of professional identity in medical students allows sociological and psychological frameworks to be related to educational practice – providing building blocks for a professional identity development-focussed curriculum.

Methods

An IPSE curriculum is in place within the final-year medical curriculum at the University of Plymouth. 10 final-year students with experience of this curriculum were selected using purposive sampling. Through semi-structured interviews, participants were asked to

describe experiences contributing to their understanding of professional roles and interprofessional learning and their perceptions of the IPSE curriculum. Data were transcribed, inductively coded and analysed using Thematic Analysis. Further interpretative analysis was conducted using two theoretical perspectives: Social Identity Theory and Identity Theory.

Results

Interprofessional interactions, observations of clinical practice and observations of healthcare culture all contributed to participants' professional identity development prior to IPSE, with data highlighting the potential for both positive and negative identity development from these experiences. Participants' perceptions of what it is to be a doctor or nurse identified clear distinctions between the professional groups, related to role, characteristics and status. This highlighted the potential for development of stereotypes and potentially harmful intergroup prejudice in a contemporary medical curriculum. Developments and challenges were identified from participants' accounts of their IPSE experiences. Developments included increased confidence and perceived competence achieved through enactment of 'being' a doctor, a negotiated understanding of each professional group's respective roles and a reformulated approach to interprofessional practice. Challenges related to participants' perceptions of pressure and ineffective interprofessional communication. Analysis highlighted the common theme of intergroup anxiety amongst challenges experienced.

Discussion And Conclusion

Sociological models such as Mutual Intergroup Differentiation (MID)[1], if promoted through IPSE, may foster positive professional identity development by celebrating the positive distinctiveness of each group and highlighting mutual intergroup reliance and shared goals, whilst minimising factors such as intergroup anxiety. The post-simulation debrief presents an opportunity to foster such models. The structured debriefing format used in this study is a constructivist team-focussed approach that lends itself to the promotion of concepts supporting MID. The longitudinal aspect of an IPSE curriculum is also likely to facilitate reduction of intergroup anxiety through socialisation and sustained 'contact'. Reduced intergroup anxiety is associated with reduced prejudice and facilitates reduced intergroup bias[2].

The undertaking of an IPSE curriculum can make a significant positive contribution to professional identity development in final year medical students. The simulation aspect of

IPSE may provide students with an opportunity to adopt their tacit professional identities, including aspects of 'being a doctor' incapable of being adopted outside of simulation. The interprofessional aspect of IPSE may be experienced as stressful and as added complexity in relation to team communication and organisation. However, it may also enable students to identify otherwise unrecognised dimensions of professional roles, evaluate their own and other professional groups' capabilities and limitations and develop a more collaborative approach. Future development of IPSE should recognise models from sociological/social psychological literature such as MID to support collaboration, self-esteem and self-efficacy, whilst addressing the troublesome intergroup anxiety that may otherwise inhibit effective positive professional identity development.

References

1: Pettigrew, T.F. and Tropp, L.R. (2008), How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. Eur. J. Soc. Psychol., 38: 922-934. https://doi.org/10.1002/ejsp.504

2: Hewstone, M. and Brown, R.(1986), Contact is not enough: An intergroup perspective on the 'contact hypothesis'. In: Hewstone, M. and Brown, R.(eds.)Social psychology and society. Contact and conflict in intergroup encounters. Oxford: Blackwell, pp.1-44.

7D3 (0817)

Date of presentation: Tuesday 29th August
Time of session: 11:40 - 12:00
Location of presentation: Hall 1, SEC

An authentic struggle or an act of performance? Using simulation to understand helping behaviours in IP teams

Erin Kennedy[1], Taryn Taylor[1], Chris Watling[1], Richard Cherry[2], Sayra Cristancho[1]

[1] *Centre for Education Research & Innovation, London, Canada* [2] *Department of Anesthesia & Perioperative Medicine, Western University, London, Canada*

Introduction

Contemporary health care teams are complex and dynamic. Team members frequently encounter challenges that may require seeking assistance, either from within the team or from outside. Helping engagement is a socially complex experience, but we don't fully understand how clinical contexts shape how help may be sought or enacted. Moreover, despite how commonly help-seeking behaviours are encountered, understanding the complexities in the provision and receipt of help within interprofessional teams (IP) is underdeveloped in the health professions education literature[1]. IP simulation is an ideal setting in which to explore the helping phenomenon, as scenarios can be crafted to mimic the complexities of the healthcare context while also attending to educational goals.

Methods

Anesthesia and OB/GYN residents and nurses participated in IP simulations which required them to manage obstetrical emergencies while also attending to crisis resource management principles including leadership, communication, resource utilization, planning, etc. Using the tenets of grounded theory, the study utilized 14 unique scenario observations, 11 debrief focus groups and individual interviews. Video recordings and transcripts were analyzed iteratively across the research period using a constant comparative method, identifying and refining themes. Theoretical sampling was used to identify expert interview participants and to saturate themes.

Results

Helping engagement was a "struggle" and was influenced by individuals' shifting perceptions of leadership/followership responsibilities, and by their ability to speak up during scenarios. Team members tended to make assumptions about professional roles and responsibilities and also about the availability of human and material resources. As a result, participants frequently assumed that others would take responsibility for key tasks, rather than explicitly reassessing the leader/follower dynamic or speaking up to request help. Despite the intended low-stakes nature of the simulations, participants wanted to be viewed as capable and independent even when scenarios were designed to extend beyond their scope. The result, at times, were acts of performance whereby participants attempted to showcase skills and abilities, often to the detriment of the scenario itself.

Discussion And Conclusion

IP simulation provides an opportunity to expose and challenge assumptions that may interfere with helping engagement within IP teams. Simulation has been heralded within the literature as a safe space where learners can work at their limits of expertise. Our work demonstrates when these limits are reached, teams struggle with how obtain help in order push beyond boundaries.

References

1. Kennedy, E., Lingard, L., Watling, C., Hernandez Alejandro, R., Parsons Leigh, J., & Cristancho, S. (2020). Understanding helping behaviours in an interprofessional surgical team: How do members engage? American Journal of Surgery, 219(2), 372-378.

7D4 (1066)

Date of presentation: Tuesday 29th August
Time of session: 12:00 - 12:20
Location of presentation: Hall 1, SEC

The Balancing Act of Assessment Validity in Interprofessional Healthcare Education

Hester Smeets[1], Laurie Delnoij[2], Dominique Sluijsmans[3], Albine Moser[1], Jeroen van Merriënboer[2]

[1] Zuyd University of Applied Sciences, Heerlen, The Netherlands [2] Maastricht University, Maastricht, The Netherlands [3] Rotterdam university of applied sciences, Rotterdam, The Netherlands

Introduction

The need for interprofessional (IP) education and IP collaboration in healthcare practice to improve the quality of care is widely recognized. In order to determine the level of IP competencies in students within education, there is a need for IP assessments with a well-considered design. The literature offers few starting points for this and does not yet make clear how IP assessment can lead to valid statements about students' level of IP competence. Previous studies mainly look at this issue from an instrument perspective, for example the formulation of questionnaires. The current study takes a process approach, where IP assessment is developed through a continuous and iterative process, in line with modern theories of assessment validity (Kane, 2013). The current study focuses on two aspects of IP assessment in particular, namely authenticity and scoring. We investigated to what extent a prototype of an IP assessment is a solid precursor to internship practice (i.e., authenticity) and to what extent the assessment provides information to determine the level of IP competence among second-year students (i.e., scoring). The following research question was formulated:

- What are evidences and threats to validity for a prototype of an interprofessional assessment for bachelor health care students?

Methods

We conducted a qualitative design-based study within the context of a university of applied sciences. Two previous studies resulted in building blocks for a prototype of an IP assessment, which consists of an IP team meeting in which students from different professions discuss patient cases together. They also write care plans together on which they are assessed as a group, and a reflection report on which they are assessed individually. The prototype was evaluated in three group interviews. Students, teachers and IP assessment experts took part in these interviews in which they evaluated the prototype on the extent to which it is in line with IP practice and the extent to which it provides relevant information for determining the level of IP competence. Data was analyzed using a combination of deductive and inductive content analysis.

Results

Although both evidence for and threats to validity were mentioned, the threats refuting the assessment's validity prevailed. Evidence for the authenticity aspect was that the assessment task, conducting a team meeting, is common in practice. However, its validity was questioned because the task could be better structured and more "ideally" performed. In addition, it turned out to be more difficult for some professions to connect with the patient cases. Participants indicated that the assessment criteria were clear and applicable to the current assessment design. However, they also indicated that it was not yet clear how the current assessment design and criteria lead to a decision on IP collaboration between students, given the individual nature of the assessment and focus on the end product (care plan) rather than the process (team meeting).

Discussion And Conclusion

This study showed that validity evaluation exists of several balancing acts. The first balancing act is between authenticity and complexity. Complex tasks, like IP tasks, require a build-up, towards high complexity IP practice, and as a result it may be best to introduce IP assessment in a structured way. The second balancing act is between team scoring and individual scoring. In the IP context, collaboration is crucial, which implies that the group process predominates. In the current context however, students seem to use more individual strategies to solve the assessment task due to the individual focus in the assessment. In higher education in general, this appears to be an important issue and the literature shows that individual scores are still (too) often relied upon (Boud & Bearman, 2022). The third balancing act is that between authenticity and scoring, in which optimal

authenticity might lead to threats to scoring and vice versa. Having simultaneous optimal authenticity and scoring seems impossible, so it is important that validity is continuously evaluated to ensure authentic yet fair IP assessments for all participating professions.

References

Boud, D. & Bearman, M. (2022). The assessment challenge of social and collaborative learning in higher education, Educational Philosophy and Theory. https://doi.org/10.1080/00131857.2022.2114346

Kane, M. T. (2013). Validating the Interpretations and Uses of Test Scores. Journal of Educational Measurement, 50(1), 1-73. https://doi.org/https://doi.org/10.1111/jedm.12000

Session 7E: Research Papers: Continuing Professional Development

7E1 (1391)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 11:20
Location of presentation: Argyll II, Crowne Plaza

How medical students set goals: effect of goal setting behaviors on wellbeing and learner experience

Mary Cairns[1], Cassandra Sillner[1], Victor Do[1], Cheryl Goldstein[1]

[1] *University of Alberta, Faculty of Medicine and Dentistry Well Lab, Edmonton, Canada*

Introduction

Individuals who are admitted to medical school perform exceptionally well academically. They also must be highly motivated and often have achieved high standing in other extracurricular pursuits. Medical learning environments are known to be stressful and the clinical environments in particular can be very high stakes given that clinical learning takes place alongside active patient care. In addition, the competitive environment/atmosphere is quite unique in medical school. Medical learners are surrounded by peers who are equally or even higher achieving than themselves. The competitive pressure amongst peers can be immense despite the best intentions of all learners and faculty. All of these factors have a large impact on the way medical students frame their goals and motivations, and ultimately impact learner wellness. Achievement Goal Theory (AGT) outlines goal setting approaches. AGT notes that individuals can be trained towards more adaptive goal approaches, as certain orientations are associated with increased resilience and performance ability. To understand the specific ways in which goal setting behaviours affect the medical student experience, we aimed to conduct a qualitative exploration of their goal setting processes, including the types of goals they set, student awareness of their goal setting behaviours and how this process may affect their wellbeing and overall learner experience.

Methods

We conducted virtual semi-structured individual qualitative interviews with 19 medical students from all years across Canada. Interviews were coded and analyzed independently using reflexive thematic analysis as described by Braun & Clarke[1] Thematic analysis is an appropriate analytical framework to approach our research question as it will allows us to explore social, cultural and structural contexts and factors that influence experience of goal setting within medical education. Coding of the interviews occurred as transcripts became available so that early interviews could inform later interviews. Two researchers independently coded the transcripts and met with a third to review themes which were arrived at by consensus. Both inductive and deductive approaches were used in analyzing transcripts. Our analysis was informed by concepts relating to achievement goal theory and its application in educational settings, including medical education specifically. Trustworthiness of findings were established through record keeping of reflexive journals, researcher triangulation, use of a coding framework, team consensus on themes, and member checking.

Results

Our in-depth analysis of the data resulted in identifying a number of themes. Our study found that medical students have poor awareness of their goal setting approaches and the impact they have on perceived wellness. Often, participants had not specifically thought of their goal-oriented behaviours as “goal-setting”. Additionally, most medical students seem to follow distinct goal setting scripts, each associated with different motivations and priorities. Learner goal-setting behaviours in response to adversity also followed distinct scripts, highly influenced by their past experiences. Goal setting behaviours were substantially different between years of study, and were heavily influenced by curricular/educational demands which contributed to instances where learners identified incongruence between their goal-setting behaviours and their own personal desires for how they wished to learn and train. For example, in many instances, learners noted that despite their desire to pursue mastery-type goals, the educational demands (e.g. residency matching and need for reference letters), directed them to adapt their behaviours in a manner that was more in alignment with performance-oriented goals. This discrepancy was also noted to be a stressor in the educational experience, impacting wellbeing.

Discussion And Conclusion

Together these findings provide important insight into how medical students set goals, how these processes may impact wellbeing, and how goal-setting changes throughout training. This under-discussed area of learner behaviour and adaptations serves as an opportunity for ongoing exploration as we continue to study issues around professional identity formation, the hidden curriculum and wellbeing. These insights provide a foundation to develop programming around goal setting strategies that may better support learner adaptiveness and promote wellbeing.

References

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. https://doi.org/10.1191/1478088706QP063OA

7E2 (0947)

Date of presentation: Tuesday 29th August
Time of session: 11:20 - 11:40
Location of presentation: Argyll II, Crowne Plaza

Program Access, Depressive Symptoms, and Medical Errors Among Resident Physicians with Disability

Lisa Meeks[1], Karina Pereira-Lima[1], Elena Frank[2], Erene Stergiopoulos[3], Katherine Ross[4], Srijan Sen[2]

[1] University of Michigan Medical School , Ann Arbor , USA [2] Michigan Neuroscience Institute, Ann Arbor, USA [3] University of Toronto, Toronto, Canada [4] University of Michigan , Ann Arbor , USA

Introduction

Increases in the number of medical students reporting disability, coupled with disability-focused Accreditation Council for Graduate Medical Education (ACGME) regulations, have sparked a growing interest in disability for residency stakeholders. Although prevalence and characteristics of disability in medical student and physician populations are established, concurrent data for residents is lacking. Addressing this knowledge gap, we assessed the prevalence of self-reported disabilities, program access (ie, access needs self-reported as met via not needing accommodations or receiving accommodations), and the association between program access, depressive symptoms, and self-reported medical errors in a large, multispecialty cohort of US intern physicians.

Methods

Interns from 282 institutions across 22 specialties who enrolled in the longitudinal Intern Health Study in 2020 completed an online baseline survey 2 months prior to beginning their internships. The survey assessed depressive symptoms using the Patient Health Questionnaire-9 (PHQ-9). In an end-of-year (ie, the 12th month of the internship) follow-up survey, participants completed the PHQ-9, a question about medical errors, and disability questions that directly mirrored those in the Association of American Medical Colleges Graduation Questionnaire, which reports whether a resident has a disability (yes, no, or "I don't know"), category of disability, and program access. Only residents with clear responses (ie, yes or no) were included in the analysis.

Mann-Whitney or $\chi 2$ tests were used to examine differences in demographic (age, gender, sexual orientation, and race and ethnicity) and academic characteristics (specialty and residency institution type) by reported disability status. Differences in self-reported medical errors and changes in PHQ-9 depressive symptoms (ie, the difference between end-of-year and baseline PHQ-9 scores) based on program access and reported disability status were examined using $\chi 2$ and Kruskal-Wallis tests, followed by Dunn-Bonferroni post hoc for pairwise comparisons. Program access was defined as met for residents with disabilities (RWD) who reported receiving accommodations or not needing accommodations. A 2-sided $P < .05$ was considered significant.

Results

Overall, 2472 (51.8%) invited residents participated in the study. Of those, 1273 residents (51.4%; 706 women [55.5%], median [IQR] age 27.0 [26.0-29.0] years) responded yes or no to the disability questions and were included in the analysis (30 residents [2.3%] responded "I don't know" and were excluded). A total of 96 participants (7.5%) self-reported a disability. Most RWD self-reported having program access through accommodations (31 respondents [32.3%]) or that accommodations were not required for access (51 respondents [53.1%]).

RWD who self-reported that their program access needs were not met demonstrated a statistically significantly greater increase in depressive symptoms compared with nondisabled residents (median [IQR] survey score increase: with disabilities and without access needs met, 4.5 [1.0-10.5] vs without disabilities, 2.0 [0-4.0]; Dunn-Bonferroni-test for pairwise comparison, $z = 2.5$; adjusted $P = .04$) and were also significantly more likely to self-report major medical errors compared with nondisabled residents and RWD whose access needs were met (42.9% [6 respondents] vs without disabilities, 13.9% [163 respondents]; $\chi 2 = 9.6$; $P = .008$). No statistically significant differences in depressive symptoms or self-reported medical errors were observed between RWD with program access needs met and nondisabled residents.

Discussion And Conclusion

This is the first study to examine the prevalence of disability among residents across multiple specialties, estimating a prevalence of 7.5% and establishes an association between a lack of accessibility and heightened risk for depression and self-reported medical errors during training. This has important implications for the mental health and retention of disabled trainees, as well as for patient care.

Our findings, coupled with recent data showing low compliance with ACGME disability regulations, underscore the need to prioritize and enforce GME policies that improve access to training for disabled residents, both for the mental health of RWD and for the patients that they treat. Future research should focus on culture and climate that inform disability disclosure and accommodation requests in residency, including fear of stigma and bias.

References

Citations:

Meeks LM, Case B, Herzer K, Plegue M, Swenor BK. Change in prevalence of disabilities and accommodation practices among US medical schools, 2016 vs 2019. JAMA. 2019;322(20):2022-2024. doi:10.1001/jama.2019.15372

Sen S, Kranzler HR, Krystal JH, et al. A prospective cohort study investigating factors associated with depression during medical internship. Arch Gen Psychiatry. 2010;67(6):557-565. doi:10.1001/archgenpsychiatry.2010.41

7E3 (0568)

Date of presentation: Tuesday 29th August
Time of session: 11:40 - 12:00
Location of presentation: Argyll II, Crowne Plaza

Medical Students' Emotional Experience of Remediation: A Phenomenographic Study in 2 Countries

Lynnea Mills[1], Melissa Duffy[2], Christy Boscardin[1], Patricia O'Sullivan[1], John Young[3], Olle ten Cate[4], Terese Stenfors[5]

[1] UCSF, San Francisco, USA [2] University of South Carolina, Columbia, SC, USA [3] Zucker School of Medicine at Hofstra/Northwell, New Hyde Park, USA [4] University Medical Center Utrecht, Utrecht, The Netherlands [5] Karolinska Institutet, Stockholm, Sweden

Introduction

Failure and remediation are often high-stakes, intense experiences for medical learners, but only a small portion of the remediation literature focuses on learners' perspectives or experiences[1]. In this study, we sought to gain understanding of medical students' emotional experience of failure and required remediation. We aimed specifically to investigate the impact of time-variability (how much learners progress through curricula at a pace suited to their needs and skills) on learners' perceptions and experience of remediation, by characterizing similarities and differences in the experience for learners at institutions with different degrees of time-variability. We hypothesized that more time-variable approaches might increase normalization of needing additional time to achieve competencies and therefore reduce negative emotional impacts of remediation.

Methods

Because of the goal to characterize differences in the phenomenon of being subject to remediation, we used phenomenography, which was developed for education contexts and elucidates differences across participants' experiences[2].

We invited participation across 4 medical schools--2 in the U.S., with relatively time-fixed curricula; and 2 in the Netherlands, with relatively time-variable curricula--from students who had been told they had not met the school's expectations and were required to remediate at any point during medical school; we solicited participation via class listservs or through confidential targeted outreach from school leadership. We conducted semi-

structured 1:1 interviews virtually, in English. Two researchers conducted the interviews using a standardized interview guide and an agreed-upon approach to following up on participant responses. Questions did not explicitly mention emotion, but if students described or labeled emotions the interviewers asked follow-up probes. Questions included participants' initial reactions to hearing news of the failure, as well as how their perspective may have changed over time.

Results

Fourteen students participated: 5 from one U.S. institution, 1 from the other U.S. institution, 4 from one Dutch institution, and 1 from the other Dutch institution. Participants described struggling either on classroom-based pre-clinical exams or clinical rotations, with the former predominating among U.S. students and the latter among Dutch students. Students' time from the remediation experience to the interview varied from zero (ongoing remediation) to multiple years. All participants mentioned shame and a feeling of isolation related to an assumption that failure was uncommon; some participants described significant impacts of this feeling on their professional identity formation and career choice, and all called for significant increase in normalization in the process of needing guidance (which was not specifically queried in our interview questions); this did not appear to differ across institutions or countries. Students described different methods for gaining perspective on their failure, with most rationalizing the failed assessment as not being indicative of their long-term potential; most students also described a mix of adaptive and maladaptive ongoing impacts of the experience, such as improved knowledge and decreased self-confidence. U.S. students did express more feelings than Dutch students of stress related to the impact of remediation on their progression through training and timecourse of their studies. All students indicated remediation would be improved by more direct connections with other students experiencing the same process, citing the lack of relatability from peers and supports without personal experience of remediation.

Discussion And Conclusion

Students in varied institutional cultures and systems share many emotional responses to the remediation process, including a feeling of social isolation that impacts their self-confidence and professional development. Students' mixed emotions about the experience and their own skills may persist for years, and the long-term impacts may include career choice. Dutch students expressed less impact of the remediation process

on their planning and overall trajectories, and less associated stress, which likely represents a positive outcome related to the interaction of time-variability with

remediation, but we did not see the anticipated difference in how normalized the students perceived remediation to be in their institutions. The unanimity of learners' request for greater normalization of failure and connection with other remediating students serves as guidance for important and immediately actionable next steps for medical schools worldwide.

References

1. Mills LM, Boscardin C, Joyce EA, Ten Cate O, O'Sullivan PS. Emotion in remediation: A scoping review of the medical education literature. Med Educ. 2021 Dec;55(12):1350-1362.

2. Stenfors-Hayes T, Hult H, Dahlgren MA. A phenomenographic approach to research in medical education. Med Educ. 2013 Mar;47(3):261-70.

7E4 (1698)

Date of presentation: Tuesday 29th August
Time of session: 12:00 - 12:20
Location of presentation: Argyll II, Crowne Plaza

'I was exhausted ...': Overcoming challenges to Student Participation during Clinical Placement Abroad

Miriam Wijbenga[1], Robbert Duvivier[2], Erik Driessen[1], Stephan Ramaekers[3], Pim Teunissen[1]

[1] *Maastricht University (SHE), Maastricht, The Netherlands* [2] *UMC Groningen (CEDAR), Groningen, The Netherlands* [3] *Amsterdam University of Applied Sciences/Centre for Applied Research on Education, Faculty of Health, Amsterdam, The Netherlands*

Introduction

When undertaking placements abroad, healthcare students generally find themselves confronted with several personal and professional challenges, such as language barriers or different learning conditions.[1] This may distract students and have an impact on their participation in practice. To learn about their responsibilities in the workplace, or discuss patient approach, most healthcare students rely on their clinical network, including peers. Others consult with close family or friends to overcome challenges posed.[2] This study aims to investigate why, when and how healthcare students use their support network to overcome challenges to participate in practice, answering the following question: *How do undergraduate students cope with situations that affect participation in practice during clinical placements abroad, and what is the role of their support network herein?*

Methods

We used an exploratory, qualitative study design, with thematic analysis of results. The *critical incident technique* allowed us to explore the reasons leading up to, and consequences of, a specific incident in a certain context. Twenty-five physiotherapy students shared their clinical experiences via individual interviews, and recalled events when participation was affected by an unforeseen situation, either in or outside the clinic. Next, we explored students' strategies of seeking support within their social network to overcome individual challenges. Two researchers applied thematic analysis to the interview data, following an iterative approach. Team discussions supported focused direction of data collection and analysis, before further conceptualizing results.

Results

We distracted two main categories of events that challenged student' participation in practice. **Workplace-related events**often revolved around patient or staff communication, making students feel confused and insecure about their position as an intern. Inappropriate behaviour challenged students' professional attitude and integrity: *"Suddenly he becomes flirty to me. He was asking for my number, but I couldn't go and ask my instructor to help because he was in the treatment room with another patient already."* Generally, the clinical supervisor supported self-reflection, discussing lessons learned. For some students, language barriers made it hard to engage in conversation, reducing social interaction with staff: *"I am very much a person who wants to try and form connections with my colleagues. But there was really there was no space for that. And you know, you [end up] sitting eating your lunch in the corner."*

Life events reflected more personal stories, like grieving the loss of a distant family member. Although heartbreaking, this did not impact much on student' participation in the workplace; instead, work was considered a welcome distraction.Many students had to balance work, study and personal needs, such as accommodation and basic necessities: *"[What] I found tough during that time is that I had to work weekends. I was working seven days a week. And during the middle of my internship, I could see myself basically getting burnt out. […] I was exhausted."* Often, students would turn to family or close friends for mental or financial support. Only very few times did students involve their academic mentor or staff.

Discussion And Conclusion

Students involve clinical staff, peers, family and friends, making deliberate use of their support networks to overcome different challenges in participation during placement abroad. Mechanisms employed to overcome challenges to participation in practice depended on the type of event (personal or professional), making purposeful use of the available networks both in and outside the workplace. However, this coping mechanism may lead to unwanted clinical experiences, that can go unnoticed by the educational programme. Although understanding the context of the clinical learning environment abroad required energy to navigate cultural and language differences, participants that felt comfortable participating in patient-related tasks or team activities reported greater overall well-being. Our findings highlight the importance

of stimulating students to develop large support networks in the clinical workplace, instead of relying on existing academic support. Results may help undergraduate programmes to redefine roles and responsibilities of academic staff and healthcare professionals involved with placements abroad. Educational programmes should ensure support before, during and after placement is within students' reach.

References

[1]Thomas S, Thomas E, McLean M. 2018. Working in global health: A planning and implementation framework for international electives. Med Teach. 40:1055-1059.

[2]Wijbenga MH, Teunissen PW, Ramaekers SPJ, Driessen EW, Duvivier RJ. 2021. Initiation of student participation in practice: An audio diary study of international clinical placements. Med Teach. 43(10):1179-1185.

Session 7F: CPD: Regulatory, Learning and Other Issues

7F1 (4718)

Date of Presentation: Tuesday 29th August
Time of presentation: 1100 - 1115
Location: Argyll III, Crowne Plaza

The impact of train-the-trainer programs on the continued professional development of nurses: a systematic review

Ulla Bjerre-Christensen1, Signe Eshoej2, Emilie Moelholm Kjaerulff1, Ole Noergaard1, Tue Helms Andersen1, Mette Nexoe1

[1]Steno Diabetes Center Copenhagen, Herlev, Denmark; [2]Faculty of Health and Medical Sciences, Copenhagen, Denmark

Background

Train-the-trainer (TTT) models are educational models that disseminate knowledge by training professionals in educating other healthcare professionals within an organization. Given their cost-effective potential, TTT models have been widely applied within health care systems around the world, but evidence of their effectiveness remains unclear. We systematically reviewed studies evaluating the impact of TTT models on the learning outcomes of nurses.

Summary of Work

The reporting of our systematic review followed PRISMA 2020 checklist. Records identified from MEDLINE, Embase, CINAHL, and ERIC were independently screened by two researchers. Studies were eligible if they had evaluated learning outcomes of a TTT models targeting nurses. The quality of each study was assessed with Joanna Briggs Institute's critical appraisal tools and data of study characteristics extracted (objective, design, population, outcomes, results) Heterogeneity of outcomes ruled out meta-analysis; a narrative synthesis and vote counting based on direction of effects ($p<0.05$) synthesized the results. All records were uploaded and organized in

Summary of Results

Of the 3800 records identified, 11 studies were included. The studies were published between 1998 and 2021 and mostly performed in the US or Northern Europe. Nine studies had quasi-experimental designs and two was Randomized Controlled Trials. All evaluated effects on nurses of which two also included nurses' assistants. The outcomes measured knowledge (n=10), skills (n=2) or practice (n=1). The direction of effects of the 13 outcomes measured in the 11 included studies were all beneficial. The statistical analysis of the vote counting showed that TTT programs could significantly ($p<0.05$) improve trainees' knowledge, but the number of outcomes measuring impact on skills or practice was insufficient for synthesis.

Discussion and Conclusion

This review shows that TTT-programs can successfully disseminate knowledge within healthcare systems. Considering the nurse shortages faced by most Western healthcare systems TTT models that train nurses to train other nurses can be a timesaving and sustainable way of delivering education. However, comparative studies that evaluate effects on practice are needed to infer whether TTT programs are better alternatives to other educational models.

Take-home Message

TTT-programs can effectively disseminate knowledge within healthcare systems. Future research can clarify whether TTT-models are a timesaving and sustainable educational model.

7F2 (3531)

Date of Presentation: Tuesday 29th August
Time of presentation: 1115 - 1130
Location: Argyll III, Crowne Plaza

State of continuing professional development in the Asia Pacific region

Shuh Shing Lee1, Dujeepa D Samarasekera1, Su Ping Yeo1, Julie Chen2, Vishna Devi Nadarajah3, Ardi Findyartini4, Henry Yang5, Lawrence Sherman6

[1]Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore; [2]Li Ka Shing Faculty of Medicine, The University Of Hong Kong, Hong Kong, Hong Kong; [3]International Medical University, Kuala Lumpur, Malaysia; [4]Center of Medical Education, Indonesia Medical Education and Research Institute, Faculty of Medicine Universitas Indonesia, Jakarta, Indonesia; [5]Chung Shan Medical University, Taichung city, Taiwan; [6]Meducate Global, LLC, Tierra Verde, Florida, USA

Background

Continuing medical education and continuing professional development programs (CME/CPD) improve practice of physicians to deliver quality clinical care. However, the state of CME/CPD varies widely across countries, especially in Asia. This study explores the state of CME/CPD in the Asia Pacific region and suggests improvements based on the gaps in perceptions between accreditation organisations and physicians.

Summary of Work

A multi-centred study was conducted in Hong Kong, Indonesia, Malaysia, Singapore and Taiwan using a 28-item questionnaire comprising Likert scale questions and an open-ended question. Areas of focus included 1) perceptions with regard to current CME/CPD, 2) impacts of CME/CPD in development of learning, 3) gaps in CME/CPD and 4) future focus areas. Descriptive and thematic analysis were done for the close and open-ended questions respectively.

Summary of Results

A total of 867 clinicians from the 5 countries participated in the study. Many respondents (between 75.34% and 88.00% for the 5 countries) agreed that CME/CPD increased their

skills and competence in providing quality clinical care. Physicians from Indonesia and Taiwan did not participate in much CME/CPD due to reasons such as time constraint. Only 30.24% in Indonesia believed that the CME/CPD in their country is free from commercial bias compared to those from Singapore (56.92%).

Next, perceived CME/CPD system/programmes between accreditation organisations and physicians differ. For instance, top factors that influence physicians to participate in CME/CPD are the relevance of the activity to their practice or clinical specialty as the courses offered may not be useful. All the countries strongly expressed that CME/CPD should be funded, less pharmaceutical driven, unbiased and the educational provider should develop the content independently. Several suggested area to focus on improvements include 1) content and mode of delivery, 2) independency and funding, 3) administration, 4) location and accessibility and 5) policy and collaboration.

Discussion and Conclusion

Better understanding of physicians'' perspectives and implementation of changes meeting their needs could improve clinical care. The recommendations shared here may assist other medical associations with similar issues.

Take-home Message

Understanding the status of CME/CPD in each country is a fundamental step in harmonising the system across countries.

7F3 (6856)

Date of Presentation: Tuesday 29th August
Time of presentation: 1130 - 1136
Location: Argyll III, Crowne Plaza

Development of Nursing Education Framework (NEF): an integrated approach in building nurses' capabilities and competencies in Singapore mental health care

Ziqiang Li[1]

[1]*Insitute of Mental Health, Singapore*

Background

Traditionally, the clinical training and assessment for nurses' professional development was done through multiple contact points in a non-structured manner. It led to dissatisfying training effect and incomplete evaluation of nurses' required competencies.

This study aimed to develop a holistic conceptual framework to integrate and standardise the required competencies, evaluation methods, continuous learning needs assessment (LNA) and customised remedial support for nurses to function effectively in Singapore mental health setting.

Summary of Work

The existing training roadmaps, processes, work instructions, courses and relevant literature were reviewed, and six elements of evaluation and assessment gaps were identified. The holistic educational framework covering all aspects of the nursing job scope was developed with eight domains, including clinical practice & standards (mental health), (medical cares), ethos & values, communication & teamwork, patient safety & quality, information technology, research & EBP, leadership & management. The available and required educational activities were re-categorised to match the nurses' learning needs. Competency assessments were substantiated with Entrustable Professional Activities (EPA) to evaluate the overall and individual skill-sets. Integrated with the NEF, a new LNA process named SIT tool (Score, Interpret Track) was developed.

A remedial programme, Preceptlink, was incorporated to support nurses who require individualised coaching till standards are met.

Summary of Results

A pilot testing was implemented in selected wards. Road-shows and training sessions were conducted both synchronously and asynchronously online to prepare for the implementation. Interview were conducted to seek qualitative evaluation of the NEF. The NEF was then implemented organisation-wide. Modular on-site coaching and eLearning were provided to the nurses. Process evaluation at a 6-month time-point showed 99.67% of the nurses had completed the eLearning course and EPAs

Discussion and Conclusion

Adopting the NEF, it is expected that nurses would be able to strengthen their individual and team competencies that directly influence their quality of patient care, pushing towards clinical excellence. The NEF also help enhance the efficiency of the organisational training for nurses and the collective competencies of nurses working in the mental health setting.

Take-home Message

The new NEF was developed to transform nursing education and competency elements and process.

7F4 (6677)

Date of Presentation: Tuesday 29th August
Time of presentation: 1145 - 1200
Location: Argyll III, Crowne Plaza

An approach to quality in continuing education: Building the World Health Organisation (WHO) Academy

Sharon Mitchell1,2, Ifunanya Ikhile1, Janusz Janczukowicz3

[1]World Health Organisation, Academy, Geneva,, Switzerland; [2]Institute of Medical Education (IML), University of Bern, Bern, Switzerland; [3]Medical University of Lodz, Lodz, Poland

Background

The WHO Academy, responsible to build targeted continuing professional development (CPD) for health workers, are developing a quality system to deliver quality education. Three processes including quality planning, quality control, and quality improvement mirroring the Juran 1989 model for managing quality are in development. The provision of high quality training, meeting the demands of trained health practitioners requires a quality cycle that ensures consistency, upholds accountability and paves the way for a merit based award systems for trained health workers.

Summary of Work

Building the WHO Academy Quality system followed steps aligned to a modified plan-do-study-act (PDSA) model. Members of the team systematically searched literature and identified 32 examples of accreditation standards for the delivery of educational programmes. A core research team conducted a series of workshops to plan, draft and refine quality control criteria, and key indicators for success. The first iteration of standards were piloted using three learning programmes that underwent a quality control review with multiple reviewers between December 2021 and April 2022. Qualitative analysis was performed on feedback and a literature review was conducted for each cycle. The standards were altered in consultation workshops.

Summary of Results

4 PDSA took place between October 2021 and November 2022. In the first pilot, 16/48 criteria were modified. Several areas were identified as gaps. The second pilot had 5 reviewers, and modified, added or eliminated 37/61 criteria. A section was added for online self-directed learning. Assessment criteria were rewritten based on new literature. For the final pilot 108 criteria were tested. Feedback from the quality improvement intervention for this pilot is in analysis. A final consultation with external quality experts via survey is underway.

Discussion and Conclusion

Use of the PDSA methodology has enabled us to systematically identify and address gap, and continually improve a new system against evolving needs. This quality approach must offer confidence to health workers and invested learners, and support and partnership to national and regional education providers.

Take-home Message

Changes noted following the multiple PDSA cycles have led to significant positive changes to the WHO Academy quality approach and offers a systematic way to create and improve Quality education systems in medical education.

7F5 (1390)

Date of Presentation: Tuesday 29th August
Time of presentation: 1200 - 1215
Location: Argyll III, Crowne Plaza

Remote Assessment of Training Needs and Developing CPD programs: An example from an Online ECG Training Program

Suriyaarachchige Nishan Silva1, Bhaginda Gunawardana2, Tharindu Dushyantha Dewalegama3, Tharindu Dhananjaya Uyanage4

[1]Ochre Medical Centre, Deniliquin, Australia; [2]Base Hospital Kalutara, Kalutara, Sri Lanka; [3]Barham District Hospital, Barham, Australia; [4]Barwon Health, Geelong, Australia

Background

Continuing Professional Development (CPD) programs are very useful in upskilling trainee doctors in essential skillls like Emergency practices. However, creating a CPD program to suit the needs of a resouce limited developing country can be a challenging exercise. Therefore this research aims to assess the success of developing a self directed online Emergency CPD program (in ECGs) by international experts, using a remote training needs assessment method.

Summary of Work

The study was conducted in two phases. Phase-1 consisted of identifying Emergency ECG training needs using a self administered online questionnaire distributed among conveniently selected 200 Sri Lankan post graduate trainees involved in Emergency medical care. The Phase-2 of the study used the findings of these results and an online course was developed by a pannel of experts consiting of 3 Emergency Physicians based in Australia, a Medical Educationist and two Health Informaticians.

Summary of Results

In Phase-1, out of 188 valid responses, the most accurately diagnosed conditions were, Brugada Syndrome 181 (96.2%), Hyperkalaemia 172 (91.5%) and Long QT Syndrome (89.8%). Where as Pericarditis 36 (19.1%), Ischaemic changes on LBBB per Sgarbossa criteria 92 (48.9%) were the least accurately diagnosed. The least demonstrated skills were in

identifying ECG morphologies and clinically correlating them with patient presentation. Eventually 40 out of 136 Emergency Trainees and 36 out of 44 Other trainees claimed that they are not confident in answeing the questions asked based on complex ECGs. Based on these findings, as the Phase-2 of the study, an interactive online CPD course was developed using the Moodle 3.9.1 platform. It's a self directed course with assessments to ensure competency. The course was qualitatively evaluated by 5 Emergency physicians from Australia and Sri Lanka. 36 students who completed a post course evaluation provided positive feedback. A formal assessment body of a Primary Care College in Australia highly recognized the course and recommended it to their trainees as well.

Discussion and Conclusion

Remote training needs assessment and course development can lead to a promising trend in developing CPD programs for developing countries.

Take-home Message

Low cost CPD program development is a sustainable intervention to assist development of essential skills in Medicine in resource poor settings.

Session 7G: Assessment: Innovations in Assessment

7G1 (6284)

Date of Presentation: Tuesday 29th August
Time of presentation: 1100 - 1115
Location: Castle I, Crowne Plaza

Using a real-time feedback model on piloting OSPE assessments with international institutions

Anjali Gondhalekar1, Zakia Arfeen1, Ahmed Rashid1, Lamiaa Mohsen2, Marwa el Shabrawy2, Hend Mokhtar2

[1]UCL Medical School, London, UK; [2]New Giza University, Giza, Egypt

Background

Objective structured practical examinations (OSPEs) are widely used in Health Professions' Education. Whilst in some countries they have been used for decades, in others they have been introduced relatively recently.

International partnerships in medical education including the development of assessments are an increasingly popular tool, which help to raise standards.

When developing OSPE assessment material with an international institution, they will first draft OSPE stations which will receive tailored feedback and quality assurance by experienced academic members of the UCL team. The reviewed OSPE stations can then undergo any necessary amendments upon return.

Whilst effective, this method poses several challenges. Firstly, the feedback is unidirectional and can be delayed from the initial submission, which can erode the value that it provides to the international institution. Moreover, the lack a two-way dialogue precludes the international institution from clarifying details and voicing limitations that they may face in following through with advice.

This study evaluates the introduction of a real-time feedback model for OSPE assessments with international institutions and how this may improve the overall quality of the assessment output by the international institution.

Summary of Work

A live session in small groups between UCL and the international institution was hosted on Microsoft Teams. The session provided the international institutional team the opportunity to discuss feedback submitted by the UCL team in advance to the session and real-time edits were made on-screen by UCL facilitators.

Feedback forms were disseminated after the session.

Summary of Results

Feedback on the real-time feedback session with UCL faculty was resoundingly positive:

'face-to-face online session provided an opportunity to discuss and iterate on the comments and station questions'

'I was able to express my opinion more clearly and we were able to agree on some points after the discussion'

83% of respondents stated that they found it useful to have live edits made to the OSPE stations by the UCL facilitators.

Discussion and Conclusion

UCL will aim to provide further live feedback sessions after identifying the value that they provide to both host and international institutions.

Take-home Message

Timely feedback to faculty on high-stakes assessments with a face-to-face discussion can provide mutual benefit in strengthening international collaborations.

7G2 (1162)

Date of Presentation: Tuesday 29th August
Time of presentation: 1115 - 1130
Location: Castle I, Crowne Plaza

Modeling the MCAT score and its implication on medical student selection and performance

Michele Cherfane1, Marc Ghanem1, Sola Aoun Bahous1

[1]*Gilbert and Rose-Mary Chagoury School of Medicine, Lebanese American University, Byblos, Lebanon*

Background

American medical schools heavily rely on the Medical College Admission Test (MCAT) in selecting applicants. With the suspension of the MCAT during the COVID-19 pandemic, admission committees based their selection decisions on composites of GPA and interview scores. In this study, we aimed to develop an MCAT score predictive model using Machine Learning (ML) and subsequently examine the effect of this additional information on the selection of applicants.

Summary of Work

Admission application data were collected for applicants to the School of Medicine at the Lebanese American University from 2009 to 2022. Admission criteria included cumulative GPA, core GPA, a series of interview scores and MCAT scores, with the latter available until the academic year 2020. An ensemble ML model was developed to accurately predict MCAT scores using GPA and interview scores (N=905 applicants) and was trained to predict the missing MCAT scores of the 167 applicants for the academic years 2021-2022. The ML-based ranking model was compared to the actual ranking; We used the Cohen Kappa Correlation Coefficient to measure the level of agreement between the ML-based ranking and the actual ranking. The admitted students' final medicine year 1 grade was used as outcome variable.

Summary of Results

The trained model had an RMSE score of 0.086 on the validation dataset for standardized MCAT scores (0-1). There was a strong agreement between the ML-based and the actual ranking models (κ=0.98). Among the 64 admitted students, only 4 students would have been rejected, and 4 other rejected applicants would have been selected based on the ML ranking model. Furthermore, the difference in student admission rank led to awarding scholarship to 2 different students out of 7. Consequent to the addition of MCAT information (predicted), admitted students whose ranks improved did not perform better in their first medicine year than those who dropped.

Discussion and Conclusion

Our findings revealed that MCAT information did not improve or refine our selection process. GPA scores may be better indicators of academic performance particularly considering their nature as time-spanning source of information. Advances in artificial intelligence provide new possibilities to re-think selection and admission practices.

Take-home Message

Technology has an immersive role in medical education

7G3 (3157)

Date of Presentation: Tuesday 29th August
Time of presentation: 1130 - 1145
Location: Castle I, Crowne Plaza

Domains influencing faculty decisions on the level of supervision required for EPAs with analysis of feedback comments

Pedro Tanaka1, Chien-Yu Chen2, Alex Macario1, Roya Yumul3, Yoon Soo Park4

[1]Stanford University School of Medicine, Stanford, USA; [2]Taipei Medical University Hospital, Taipei, Taiwan; [3]Cedars-Sinai Medical Center, Los Angeles, USA; [4]University of Illinois at Chicago College of Medicine, Chicago, USA

Background

Entrustment decisions are situation dependent, based on supervisors' judgments regarding the case, the context, and the trainee's readiness for entrustment. Entrustment decisions are influenced by the trainee's ability, the personality of the supervising physician, the environment and circumstances in which the task is executed, and the nature and complexity of the task itself. The relationship between trainee and supervisor may also be important.

Summary of Work

We launched a custom designed online assessment tool (Web App) for first year clinical anesthesia (CA) residents which asked faculty to indicate level of supervision for one of the six Entrustable Professional Activities (EPAs) specifically expected of CA-1 residents. Faculty listed factors on the Web App that influenced their decisions on the level of supervision (entrustment) needed for each EPA after each encounter. Semi-structured faculty interviews were conducted to further understand domains influencing faculty decision on entrustment. Also, narrative feedback comments were analyzed to assess whether the comment was praising or critical, and whether it was relevant.

Summary of Results

Seven of the 14 theoretical domains from the Theoretical Domains Framework were identified as influencing faculty decision on entrustment: knowledge, skills, intention,

memory/attention/decision processes, environmental context and resources, beliefs of capabilities, and reinforcement. The majority (651/1116 (58.4%)) of faculty comments were critical/modest praise and relevant, consistent across all 6 EPAs. The written in feedback comments for all 1,116 Web App EPA assessments yielded a total of 1,599 sub-competency specific responses. These responses were mapped to least one or more of the five core competencies, and at least once to 13 of the 23 subcompetencies.

Discussion and Conclusion

Domains identified as influencing faculty decision on entrustment were knowledge, skills, intention, memory/attention/decision processes, environmental context, and resources, believes of capabilities, and reinforcement. Most narrative feedback comments were critical/modest praise and relevant, consistent across each of the EPAs.

Take-home Message

For entrustment to work properly faculty and trainee need to have same shared mental model about what a competent performance looks like

7G4 (4248)

Date of Presentation: Tuesday 29th August
Time of presentation: 1145 - 1200
Location: Castle I, Crowne Plaza

Assessments of Clinical Reasoning: Validity Evidence for the Clinical Reasoning Mapping Exercise (CResME)

Dario Torre1, Silvia Mamede2, Teresa Bernardes3, Analia Castiglioni3, Caridad Hernandez3, Yoon Soo Park4

[1]University of Central Florida, Orlando, USA; [2]Institute of Medical Education Research Rotterdam (iMERR), Erasmus MC, University Medical Center Rotterdam, Rotterdam, The Netherlands; [3]University of Central Florida, Orlando, Florida, USA; [4]Harvard Medical School, Boston, USA

Background

Clinical reasoning is vitally important for practitioners across the health professions. However, it is not entirely clear what strategies are most effective in promoting medical students' clinical reasoning and, even less, how to optimally assess this essential ability. Therefore, there is a need for medical educators to identify and develop effective instructional approaches supported by the sciences of learning that promote clinical reasoning across the educational continuum. The aim of this project was to gather validity evidence for a novel clinical reasoning mapping exercise (CReSME).

Summary of Work

Data include CResME performance from 120 third-year medical students from University of Central Florida (UCF) for three cases (chest pain, anemia, and abdominal pain). Each CReSME was scored by two physician-raters based on a scoring rubric that included a combined diagnosis and sequence score. Descriptive statistics were used to examine trends in scores. We gathered validity evidence for response process (inter-rater reliability), internal structure (internal consistency reliability and variance components analysis using generalizability theory), and relations to other variables (correlating the CREsMEs with patient encounter notes and NBME subject exams).

Summary of Results

Overall mean score across cases was 66 (SD 29). Internal-consistency reliability of cases (Cronbach's alpha) ranged from 0.75 to 0.91. The phi- and G-coefficient were 0.45 and 0.56, respectively. Students accounted for 10% of the total variance, indicating ability for differentiating high and low clinical reasoning skills; the interaction between learner and case, accounted for 8.1 % of the variance, demonstrating case specificity. There was a substantial predictive association between the overall CREsME scores and mean overall score of patient encounter notes from an OSCE examination performed at the end of the third year (0.46 $p < 0.01$). We also found significant associations between the CReSME scores and subject exams.

Discussion and Conclusion

CResME can be used to assess clinical reasoning. It can be prepared to address a variety of clinical problems, with varying levels of complexity, supporting developmental progress of learners throughout the curriculum. Future research is needed to continue gathering validity evidence for CResMEs with different learners across different settings and formats.

Take-home Message

the CResME could be utilized longitudinally to assess and monitor learners' thinking processes over time

7G5 (4506)

Date of Presentation: Tuesday 29th August
Time of presentation: 1200 - 1215
Location: Castle I, Crowne Plaza

A Novel Approach to Understanding Program-level Variation in National ACGME Milestone Ratings

Kenji Yamazaki1, Stanley Hamstra2, Laura Green3, Sarah Schnabel4, Sean Hogan1, Pooja Shivraj5, Eric Holmboe1

[1]Accreditation Council for Graduate Medical Education, Chicago, IL, USA; [2]University of Toronto, Toronto, Canada; [3]Sinai Hospital of Baltimore, Baltimore, MD, USA; [4]American Board of Ophthalmology, Doylestown, PA, USA; [5]American Board of Obstetrics and Gynecology, Dallas, TX, USA

Background

U.S. national milestone ratings should reflect differences in competence between individual residents, but analyses have demonstrated a substantial proportion of variance attributable to programs. Although program-level variation could reflect resident's competency levels legitimately, some research shows evidence of systematic program-level bias in milestone ratings. This requires empirical clarification. A group-centering method described in the multilevel analysis literature can facilitate interpretation of variance by decomposing it into the group mean and deviation from the group mean. This method is readily applicable to milestone data as each program's clinical competency committee (CCC) is the source of milestone ratings. Using this approach we compared national-level medical knowledge (MK) domain ratings with board certification exam (CE) scores (as an independent external benchmark) to determine if program-level performance tendencies converge across two independent measures within the same construct domain.

Summary of Work

The MK-domain ratings were extracted for penultimate mid-year rating of residents of Obstetrics and Gynecology (OBGYN, n of residents/programs=1336/257, December 2016) and Ophthalmology (Oph, 480/120, December 2018) specialties, who were matched with specialty-specific CE scores obtained after graduation. By each specialty, CE was

regressed on the program-mean of MK-domain rating and deviation from the mean. Regression analyses were supplemented with scatter plots for detecting outliers.

Summary of Results

One milestone-level increase in the program-level mean was associated with a 4.1-point ($p<.007$) increase and a 12.8-point ($p=.21$) increase on the CE for OBGYN and Ophthalmology residents, respectively. Group centering allowed us to adjust for within-specialty program-level effects, revealing a much stronger effect, showing that residents with one-level higher MK-domain ratings performed better than their program peers on CEs by 7.2-points ($p<.0001$) for OBGYN and 57.7-points ($p<.0001$) for Ophthalmology.

Discussion and Conclusion

Some variation in national program-level milestone means may be legitimate in both specialties, but some programs in Ophthalmology appear to rate residents more leniently. Further empirical and qualitative investigations are necessary.

Take-home Message

Group-centering of milestone ratings can enhance score interpretation and the nature of program-level variance in relation to relevant outcomes after graduation, and help program directors and CCCs improve their rating practices to support more effective resident professional development.

Session 7H: Scholarship of Education

7H1 (6155)

Date of Presentation: Tuesday 29th August
Time of presentation: 1100 - 1115
Location: Castle II, Crowne Plaza

The burden of grief: A scoping review of physicians' and nurses' experiences throughout the covid-19 pandemic

Sarah Burm1, Anna MacLeod1, Carolyn Melro1, Jackie Phinney2, Selena MacDonald1, Erin Kennedy3, Susan Robinson4, Frances Kilbertus5, Pauline Tran-Roop1

[1]Dalhousie University, Halifax, Canada; [2]Dalhousie University, Saint John, Canada; [3]Western University, London, Canada; [4]Canadore College, North Bay, Canada; [5]Northern Ontario School of Medicine (NOSM), Sudbury, Canada

Background

Workplaces can be inhospitable to the complex and sweeping emotions that accompany grief. Healthcare environments are no exception. Since the beginning of Covid-19, demanding workloads and increased patient and coworker loss have left health professionals (HPs) little time to discuss, let alone feel their grief. Consequently, many HPs report a diminished sense of connection to patients, to colleagues, and to their vocation, evidenced by the massive exodus of HPs leaving their professions.

Summary of Work

A scoping review was undertaken to deepen our understanding of the unique losses HPs have experienced during the COVID-19 pandemic. We focused on patient-facing nurses and physicians and selected work published between December 2019 and June 2022. Six databases and 13 grey literature sources yielded 1,780 studies for title/abstract screening. Full texts (n=348) were assessed for eligibility, with 100 studies ultimately included. Data were analyzed descriptively to enhance our contextual understanding of individual variables.

Summary of Results

Of the included evidence sources, 52 focused on nurses, 35 on physicians, and 13 on both groups. Text and opinion-based pieces (e.g. first-person vignettes) were most cited (n=66). Of the remaining sources, 29 were research/evaluation studies and 5 were other formats including poems and programmatic descriptions. Our analysis identified HPs experienced multiple forms of loss throughout the pandemic. The most obvious were experiences of bereavement. Other identified losses were more intangible, including the loss of professional identity and purpose. Oftentimes, HPs grief was compounded by increasing health and racial disparities, changing political and organizational climates, and negative public perception.

Discussion and Conclusion

This review provides a nuanced understanding of the personal and professional toll the pandemic has taken on nurses and physicians. The large number of first-person narratives about grief was striking, suggesting HPs used this modality as a therapeutic outlet to process their grief. Moving forward, we urge healthcare organizations and education institutions to better acknowledge grief as something all HPs experience as part of the intersection of their personal and professional lives and provide supports accordingly.

Take-home Message

The prevailing healthcare culture cannot continue to operate under the supposition that physicians and nurses disassociate from their professional role. Such behaviour is the antithesis of compassionate care.

7H2 (3597)

Date of Presentation: Tuesday 29th August
Time of presentation: 1115 - 1130
Location: Castle II, Crowne Plaza

Digging deeper: The use of Outcome Harvesting in Health Professions Education Scholarship

Andrea Guerin[1], Amber Hastings-Truelove[1], Denise Stockley[1]

[1]*Queen's University, Kingston, Canada*

Background

Outcome Harvesting (OH) is a novel qualitative evaluation methodology used in the evaluation of programs. Previously it has been limited to businesses and non-profit agencies. Many aspects of OH lends itself to scholarship in health professions education. Unlike other methods, OH does not begin with a hypothesis and therefore wides the scope of study of education programs and interventions. OH looks to identify all outcomes, defined as changes in behaviours or relationships (Wilson-Grau, 2019).

Summary of Work

Using the example of curricular modifications necessary for clinical clerkship during the first year of the COVID-19 pandemic at Queen's University in Kingston, Ontario, Canada, OH was used. Through the OH process and validation with stakeholders, 60 discrete outcomes were identified.

Summary of Results

These outcomes were further divided into intended, unintended, direct or indirect. Most outcomes identified were unintended and directly related to the COVID-19 pandemic (40), however there was a subset of outcomes that were intended and indirect (7), reflecting typical curricular maintenance. Interestingly there were 13 outcomes that were intended and direct, as for some areas of the curriculum, the pandemic created an opportunity for change.

Discussion and Conclusion

The use of OH allowed for a more in depth analysis of the impact of the pandemic on clinical clerkship. In addition to curricular changes that were made due to the opportunities created by the pandemic, it also highlighted the concept of fairness in decision making, which is not present in any of the literature. This will then serve as a guide for the creation of a tool for future curricular descision making. Thus OH represents a new way to evaluate complex systems, and can prove to be useful in identifying new facets of education interventions.

Take-home Message

Outcome Harvesting is a novel but useful qualitative research methodology for studying interventions in complex systems, such as health professions education.

It is not hypothesis driven, so allows for indentification of unintended outcomes, which is unique to this method.

The use of OH for study of the impact of the COVID-19 pandemic of Queen's Medical School clerkship curriculum characterized 60 outcomes, some that had not been previously identified in the literature.

7H3 (5544)

Date of Presentation: Tuesday 29th August
Time of presentation: 1130 - 1145
Location: Castle II, Crowne Plaza

Leveraging comparative narrative analysis to bring patient and caregiver voices into medical education

Tracy Moniz1, Carolyn Melro2, Chris Watling3

[1]Mount Saint Vincent University, Halifax, Canada; [2]Dalhousie University, Halifax, Canada; [3]Western University, London, Canada

Background

Educating for and practicing patient- and family-centered care requires a shared understanding of illness and its meaning and impact. The narratives of patients, informal caregivers, and physicians each offer a distinct perspective on clinical experiences, yet comparative research is uncommon. This study compares stories by these groups using end-of-life as a common context.

Summary of Work

An archive of 332 first-person written narratives about end of life (patient=64, caregiver=156, physician=88, dual role=24) published between January 1, 2010 and December 31, 2019 was created through searching public domains (e.g., national newspapers), personal blogs, and academic journals in Canada. We conducted a comparative narrative analysis for patterns of content (what people wrote about) and strategy (how they told their stories).

Summary of Results

Patients emphasized feeling gratitude, coping with change, and carrying on. Caregivers focused most on grieving loss and feeling gratitude, and physicians often wrote about valuing humanity and exposing system flaws. Physicians were most likely to ascribe agency to someone (patients) or something (death) other than themselves. All groups centered narratives on the patient foremost, with physicians most likely to decenter themselves. Physicians were also most likely to describe death as a source of tension,

while patients/caregivers tended to describe the illness experience, often comparing it to battle. Physicians and caregivers often narrated their stories as testimonies, with physicians attesting to the importance of humanity and caregivers paying tribute to loved ones. Patients often wrote quests—their journey to gain meaning from illness—culminating in gratitude and resilience.

Discussion and Conclusion

This study brings patient, caregiver, and physician voices into conversation, modelling a novel method that enables deeper understanding of different, even conflicting, perspectives. For example, while physicians look outward at 'system' flaws, the patient/caregiver experience is more about looking inward for meaning. Patients emphasize illness over death, striving to experience life amid death. Such disconnects suggest opportunities for enhanced perspective-taking in training and the need to foster learning experiences that integrate the unique perspectives of patients and caregivers along the medical education continuum.

Take-home Message

Comparative narrative analysis brings patient and caregiver voices into medical education, enriching understanding of how differences come to be and what they mean for illness and care.

7H4 (2785)

Date of Presentation: Tuesday 29th August
Time of presentation: 1145 - 1200
Location: Castle II, Crowne Plaza

The impact of the hidden curriculum on the professional idenitity of pre-clinical medical students

Jinelle Ramlackhansingh[1]

[1]*Memorial University, St John's, Canada*

Background

The hidden curriculum is described as individual behaviours that "...are a product of complex social-political relations involving institutions and organizations". It "hides in the gap between the ideal and the real practice of medicine".

Professional identity formation starts early in medical school. The research addresses the gap in scholarship on how the hidden curriculum shapes medical professional identity.

Summary of Work

This research was based on a two-year longitudinal critical ethnographic case study of one Canadian medical school. Data collection included interviews with pre-clinical students, administrative staff and faculty, and observation of medical school governance meetings. Critical theoretical frameworks of Bourdieu and Foucault were used to analyze the complex relations of power and influence.

Summary of Results

The research findings illustrated how medical students experience the effects of a powerful but hidden curriculum that influenced their professional identity development as "the good doctor".

A hidden curriculum was found operating within both the formal curriculum and informal curriculum. The hidden curriculum manifetsed and was taught through, developing a medical gaze, hierarchy, performance, competition and playing the game.

Discussion and Conclusion

In the formal curriculum, students were exposed to a predominantly biomedical discourse as standardised patients were only "bodies" for examination.

Students learned how to “play the game” to secure clinical symbolic capital. The students used their white coats and stethoscopes as symbols that gave them power to access patients for clinical examination. The appearance of being competent was valued and the students considered lying about their physical examination.

The “pimping” and bullying of students functioned to maintain hierarchy.

Students need space to critically reflect on their own embeddedness in a new culture.The findings of the research point strongly to a need for students to be able to explicitly reflect on their experiences. One pedagogical strategy for how to operationalise professional identity development is the establishment of communities of practice.

Take-home Message

The formal and informal curriculum supported both the ideology and counter-ideology of what it means to have a "good doctor" professional identity.

Medical schools should consider:

Pedagogical space in the formal curriculum to allow students to refect on thier experiences

The null curriculum,as what is not taught can be equally important.

7H5 (5316)

Date of Presentation: Tuesday 29th August
Time of presentation: 1200 - 1215
Location: Castle II, Crowne Plaza

The Writer's Repertoire: Exploring the notion of 'voice' in research writing

Chris Watling[1], Lorelei Lingard[1]

[1]*Schulich School of Medicine and Dentistry, Western University, London, Canada*

Background

Much of published research writing is dull and dry at best, impenetrable and offputting at worst. This state of affairs both frustrates readers and impedes the uptake and translation of research. Scientific conventions of objectivity and neutrality contribute to the problem, implying that 'good' research writing should have no discernible authorial 'voice'. Yet some research writers have a distinctive voice in their work that may contribute to their scholarly influence. In this study, we explore this notion of 'voice', examining what strong research writers aim for with their voice and what strategies they use.

Summary of Work

We recruited 21 scholars (14 women, 7 men) working in health professions education or adjacent fields, representing varied career stages, research paradigms, and geographical locations. We began with writers we identified as having a distinctive voice, and then used snowball sampling, asking early participants to point us toward others whose writing they admired. We interviewed participants about their approaches to writing and asked each to provide 1-3 illustrative publications. We analyzed interview transcripts thematically, and examined the published articles for evidence of the writers' described approaches.

Summary of Results

Participants shared goals of a voice that was clear and logical, and that engaged readers and held their attention. They accomplished these goals using approaches both conventional and unconventional. Conventional approaches included attention to structure and coherence, signposting, and metacommentary. While some writers kept

nearly exclusively to such strategies, many also used approaches more unusual in academic writing, including using language that was evocative (metaphor, imagery), provocative (pointed critique), plainspoken ("non-academic" phrasing), playful (including humour), and lyrical (attending to cadence and sound). Unconventional elements were more prominent in non-standard genres (eg. commentaries), although could also be identified within empiric papers.

Discussion and Conclusion

What readers interpret as 'voice' reflects strategic use of a repertoire of writing techniques. Conventional academic writing approaches, used expertly, can make for compelling reading, But the writers whose work commands attention often also draw on unconventional strategies. A broadened writing repertoire would likely serve most research writers well in more effectively communicating their work.

Take-home Message

Cultivating a repertoire of writing techniques may enhance the quality of scientific communication

Session 7I: Education and Management 3

7I1 (4207)

Date of Presentation: Tuesday 29th August
Time of presentation: 1100 - 1115
Location: Castle III, Crowne Plaza

Attitude of Thai medical students toward future working in community and community hospitals

Wasana Hongkan[1], Parinya Chamnan[1], Roungtiva Muenpa[1]

[1]*Collaborative Project to Increase Production of Rural Doctor, Nonthaburi, Thailand*

Background

Collaborative project to increase rural doctors (CPIRD) of Thailand recruited medical students from rural hometowns. The medical students study in universities in 3 preclinical years and 3 clinical years in teaching hospitals of Ministry of public health in all regions of Thailand. The objective of this study is to survey attitudes of CPIRD medical students in clinical years toward future working in community and community hospitals.

Summary of Work

During the academic year 2018, 1,349 fourth-sixth year medical students form 34 rural teaching hospitals under CPIRD responded to 5-Likert scales questionnaire (disagree to most agree) about their attitudes toward working in community and community hospitals. The response rate is 47%. Before completing the questionnaire the students were informed and reassured that research data would be treat anonymously.

Summary of Results

Of 1,349 medical students, 809 (60%) were female. There were 503 (37%) fourth-year students, 476 (35%) fifth-year students and 370 (28%) sixth-year students. About attitudes toward working in community after graduation were found very agree and most agree in Rural co-workers are more supportive of each other 95%, Friendly people 94%, Require multiple skills for working 93%, Freedom to work 88%, More risks for working 83%, Less

facilities and entertainment 77%, Loss of opportunities to gain knowledge 67%, Less socialize with friends 59%, Separate from family and friends 55%, Lower social status than urban doctors 52% respectively. About attitudes toward woking in community hospitals were found very agree and most agree in Important for health service system 97%, Prepare yourself to solve problems 96%, Curriculums prepare you to work in community hospital 94%, Challenge working 90%, Medical curriculums enhance you to work in community hospital 83% respectively.

Discussion and Conclusion

CPIRD medical students remain had positive attitudes toward working in community and community hospitals after graduation. The supervision during practices in community or community hospital, continuous professional development and community-engaged medical curriculum are the potential factors related to improve attitude toward working in community.

Take-home Message

Building the medical students to engage with community needed well-designed curriculum. Good supervision and opportunity to gain knowledge are needed for newly graduated doctor to work in community.

712 (6219)

Date of Presentation: Tuesday 29th August
Time of presentation: 1115 - 1130
Location: Castle III, Crowne Plaza

The physician-patient communication behaviors and implication of education among medical specialists in a hospital setting

Yi-Kung Lee1, Chen Wei Lee2, Yi-Fen Wang3, Ya-Hui Lee4

[1]Emergency Department, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation., Chia-Yi County, Taiwan; [2]Emergency Department, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chia-Yi County, Taiwan; [3]Office of Industry-Academia Cooperation, National Yunlin University of Science & Technology, Yunlin, Taiwan; [4]Department of Adult & Continuing Education, National Chung Cheng University,, Chia-Yi County, Taiwan

Background

Effective physician-patient communication builds robust physician-patient relationships and reduces medical disputes. The communication skill training program for physicians may increase effective physician-patient communication. However, much is unknown about the differences that exist in the communication behaviors of physicians in different clinical departments.

Summary of Work

Using a mixed-methods research approach, the researchers used Roter Interaction Analysis System to uncover the communication behaviors of internists, surgeons, family physicians, and emergency physicians at a regional hospital in Taiwan. Semi-structured interviews were conducted to collect the communication experiences of 20 physicians from the internal medicine, surgery, family medicine, and emergency departments. The characteristics were presented through descriptive statistics, bar charts, and dendrograms.

Summary of Results

The results of this study showed that the physician-patient communication model in Taiwan was consistent with the RIAS model, including four dimensions of data collection,

patient education and consultation, relationship building, convenience, and patient motivation, and further expanded the patient-centered communication as its behavioral indicator to include 10 factors and 31 behaviors to make them more complete. The characteristics are as follows: (1) Internists need to improve their overall performance in terms of physician-patient communication behaviors; (2) Surgeons performed well in building relationships through non-verbal methods; (3) Family physicians excelled in facilitation and patient activation. (4) Emergency physicians performed well in patient education and counseling

Discussion and Conclusion

This study further expands patient-centered communication as its behavioral indicator, making this theoretical framework complete and suitable for the cultural characteristics of Eastern countries, demonstrating the originality of this study. It provides a communication assessment tool for Eastern cultures, but also make the communication behavior more specific and operational.The characteristics of the aforementioned communication behaviors among internists, surgeons, family physicians, and emergency physicians can be used to construct indicators and education program of physician-patient communication in each clinical department and to develop patient-centered healthcare services in the future.

Take-home Message

The medical characteristics of physicians in different departments need to construct the indicators of physician-patient communication in each department.

It is necessary to develop specialty-specific physician-patient communication training program and assessment models to fit clinical needs.

713 (2557)

Date of Presentation: Tuesday 29th August
Time of presentation: 1130 - 1145
Location: Castle III, Crowne Plaza

The Foundation Programme: It's not where you do it but how you do it

Mike Masding1, Tom Yapp2, Tom Lawson2

[1]UK Foundation Programme Office, Winchester, UK; [2]UK Foundation Programme Office, Cardiff, UK

Background

Applicants to the UK Foundation Programme preferentially rank all 20 UK Foundation Schools. A competition ratio (CR) can be calculated based on the number of applicants who put a school as their first preference compared to the number of Foundation year 1 (F1) posts available within that school. The CR varies significantly with some schools oversubscribed (CR >1), and others less popular.

F1 doctors complete the annual General Medical Council National Trainee Survey (NTS) for the post they are in at that time. An Overall Satisfaction (NTS-OS) score for that post is calculated.

We have compared CR and NTS-OS scores for F1 posts to assess whether there is a correlation between Foundation School popularity and overall satisfaction with the training posts in that school

Summary of Work

NTS-OS scores for F1 posts in each Foundation School for 2018 (Medicine n=3496; Surgery n=2421; overall response rate 95.7%), 2019 (Medicine n=3526; Surgery n=2431; overall response rate 94.8%) and 2021 (Medicine n=2721; Surgery n=1865; overall response rate 76.0%) were retrieved from the GMC NTS website. Medicine and Surgery were used as the most common F1 posts . There was no NTS in 2020 because of the Covid-19 pandemic.

The CR for each Foundation School was retrieved from the UK Foundation Programme Office (UKFPO) website for 2017, 2018 and 2020, as this represents the cohorts of the applicants who subsequently completed the NTS in 2018, 2019 and 2021 respectively.

Correlation between Foundation School CR and the NTS-OS scores for F1 posts in Medicine and Surgery were assessed for statistical significance using Spearman Rank correlation coefficient calculations

Summary of Results

There was no correlation between CR and NTS-OS for F1 posts in Medicine ($r=0.07$, $p=0.56$) or for F1 posts in Surgery ($r=-0.03$, $p=0.82$)

Discussion and Conclusion

Based on 3 successive cohorts of applicants to the Foundation Programme, we demonstrate that there is no correlation between the popularity of a Foundation School and the overall satisfaction of the F1 training experience.

Take-home Message

Less popular Foundation schools provide just as good F1 training experience as more popular schools, if not better in some cases

714 (5227)

Date of Presentation: Tuesday 29th August
Time of presentation: 1145 - 1200
Location: Castle III, Crowne Plaza

Factors that drive attendance and absence in first year medical students

James Moss[1]

[1]*School of Medicine, Imperial College London, London, UK*

Background

Attendance at scheduled teaching is associated with more favourable academic attainment in higher education. Despite this, attendance has been a challenge for decades, and generally the student perspective about the value of attendance differs from that of their faculty. Medical students are expected to demonstrate professional behaviour throughout their training, with punctuality, attendance and engagement arguably manifestations of this. Many institutions articulate attendance policies for some or all of their teaching, however the overall benefit of these is disputed. Key limitations of the published literature include a predominant focus on lecture attendance only, and a reliance on questionnaire-only methodologies.

Summary of Work

This research sought to identify what factors medical students consider when deciding whether they will attend scheduled teaching or not. A qualitative approach was utilised, and semi-structured focus groups were undertaken to probe specific lines on enquiry. Data were transcribed and analysed from an interpretivist standpoint using Ajzen's Theory of Planned Behaviour (1985) as a lens.

Summary of Results

Fifteen student participants (40% male) enrolled and were allocated to four focus groups, which were approximately 60 minutes each. Transcripts were coded with 437 unique codes and two primary themes were identified. Firstly, factors associated with students' values and beliefs, such as community driven-factors and uncertainty. Secondly, faculty controlled factors including scheduling patterns and tutor quality. Assessment was a

dominant sub-theme across both primary themes. Students demonstrated a reasoned approach to determining whether they will attend or not, but opinions were not always consistent. The most prevailing finding was the consideration of the educational return for time investment. The Theory of Planned Behaviour seemed to align with the main findings.

Discussion and Conclusion

These findings provide a deeper insight into the factors that drive attendance and absence in undergraduate medical curricula in the UK. Many important factors are directly within faculty control and could be strategically modified to improve the strength of intention to attend, and the proportion of follow-through to execution of desired behaviours.

Take-home Message

Paternalistic enforcement of attendance may be less effective than addressing modifiable factors that affect the intention to attend, including scheduling patterns, tutor training and clear communication.

715 (3611)

Date of Presentation: Tuesday 29th August
Time of presentation: 1200 - 1215
Location: Castle III, Crowne Plaza

Comparative Study of Palliative Care Education and Service Performance among SEA Countries

Piwat Suppawittaya1, Nantadet Bunyavejchevin1, Phanuwich Kaewkamjornchai1

[1]*Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand*

Background

As Thailand has one of the fastest-aging populations in the world, medical attention should be focused on maximizing elderly patients' quality of life. Although Thailand's palliative care (PC) is categorized in level 3a, it is reported that medical workers still lack knowledge and awareness, leading to a lack of confidence to perform PC.

Summary of Work

A narrative review was performed from 2022 to early 2023, adopting an investigation tool investigator in Medline, Embase, and Google scholar to prove our hypothesis that different palliative care education for health professions led to different palliative care performances. 65 pieces of literature were identified that cover the development and comparison between PC medical education and service of countries in the South-East Asia (SEA) region.

Summary of Results

Despite similarities in society and culture among SEA countries, there are differences in PC systems' performance. Countries with high-quality PC systems including Singapore and Malaysia (categorized in 4a) also demonstrated a high level of palliative care education. In these two countries, rigorous efforts in integrating PC into mainstream medicine and medical curricula can be seen. Palliative medicine is regarded as a subspecialty. Specific hands-on training and workshops in addition to lectures to both medical professionals and volunteers, expand their knowledge, skills, experience, and confidence in treating patients. Written and oral examinations were required in addition to clinical training. PC is

not only included in health professional education but also in other professional education, extending the knowledge to other public sectors. On the other hand, other countries with lower PC development still have limited research, and information on education challenges in delivering care is reported.

Discussion and Conclusion

Existing pieces of literature demonstrate that health profession education, health systems, and policy process in the public sector are tightly linked in arranging high-quality PC systems. Moreover, the clinical knowledge and skills to provide high-quality PC alone are not enough to cope with the current aging society situation. The awareness of the importance of PC must also be raised.

Take-home Message

Not only teaching knowledge and skills to the health profession but also raising awareness and importance to both students and the public are crucial to enhance PC services.

716 (6056)

Date of Presentation: Tuesday 29th August
Time of presentation: 1215 - 1230
Location: Castle III, Crowne Plaza

The Cringeworthy facts about Programmatic Assessment: APN Lead's Perspective

Chua Xanthe 1

[1]*Department of Nursing, Tan Tock Seng Hospital, National Healthcare Group, Singapore*

Background

The concept of programmatic assessment (PA) was implemented in 2021 over a twelve month integrated Advanced Practice Nurse (APN) internship (IAI) program. Prior to this, all APN interns will have to successfully pass the summative OSCE before they can apply for APN certification.

Summary of Work

In this program, routine information about the intern's competencies and feedback is continually collected as a clinical portfolio at different data points. Every quarterly, the institution lead will present the development of the intern's progress to the institution and cluster Committee APN Competency (CAC). The CAC will then triangulate and evaluate across the assessments before making a collective decision on the progression of the intern. At the end of the internship, APN interns who demonstrated competence in the defined requirement will be recommended for certification.

Summary of Results

In the IAI program, all interns are exposed to a variety of work-based assessment tools and activities to capture their learning. These are usually performed by the faculty who may be their APN preceptor, clinical supervisor or senior APNs etc. However, with the removal of the national OSCE exam, many faculty had felt a sense of responsibility weighing down on them. They are aware of the potential consequences of failure to fail. In addition, they also brought along with them the examiner mentality and had unintentionally treating every assessment opportunity as a "mini OSCE". These had

unknowingly created psychological stress among the interns as they now perceive all the multiple assessments as high stakes.

Discussion and Conclusion

In PA, assessment and learning are intertwined with the intent to optimize learning. However, it requires a change in mindset on both the faculty and intern involved. Faculty development should include calibrating among faculty to promote continuous dialogue between them and the interns focusing on feedback and personal development. Faculty should be assured that the decision making will be done at a higher level. As for the interns, they should be focusing on feedback reception and improvement.

Take-home Message

When embarking on a new program, it is important to periodically review and evaluate the effectiveness of the program with the various stakeholders.

Session 7J: Equality, Diversity and Inclusivity 4

7J1 (4745)

Date of Presentation: Tuesday 29th August
Time of presentation: 1100 - 1115
Location: Alsh 1, Loch Suite, SEC

The ACT Cultural Competency Model for Healthcare and Education: BEME Guide No. 79

Shuangyu Li1, Katherine Miles1, Riya George2, Candan Ertubey3, Peter Pype4, Jia Liu1

[1]GKT School of Medical Education, King's College London, London, UK; [2]Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London, UK;

[3]School of Psychology, University of East London, London, UK; [4]Department of Public Health and Primary Care, Ghent University, Ghent, Belgium

Background

Cultural competence resides at the core of undergraduate and postgraduate medical and health professional education. The evolution of studies on cultural competence has resulted in multiple theoretical frameworks and models, each emphasising certain elements of culturally appropriate care, but generally lacking a coherent and systematic approach to teaching this subject.

Summary of Work

Following a meta-ethnographic approach, five databases were systematically searched to identify relevant articles published between 1990 and 2022. After citation searching and abstract and full article screening, a consensus was reached on 59 articles for final inclusion. Key constructs and concepts of cultural competence were synthesised and presented as themes, using the lens of critical theory.

Summary of Results

The review results are consolidated into this newly created transformative ACT Cultural Model. ACT stands for Activate consciousness, Connect relations, and Transform into true

cultural care. This model considers obtaining knowledge, increasing awareness and heightening sensitivity as the starting point of cultural competence development. It denotes that culturally competent care can only be achieved when all stakeholders are connected. That involves personal connectivity, community connectivity, and interprofessional connectivity. The last part of the ACT model is to understand existing barriers and transform practice into true cultural care. This model illustrates the cultural strategies, skills and commitments required for achieving true culturally competent care.

Discussion and Conclusion

The ACT cultural model provides a set of guiding principles for culturally appropriate care, which can also support high-quality educational interventions. Contrary to many other theoretical frameworks/models, the ACT cultural model is action-orientated and transformative in its conceptualisation and approach. Informed by critical theory, the ACT model suggests that researchers can use their research to advocate for the marginalised by transforming the existing social constructs and empowering human beings. Future research should not only describe but also aim to eliminate disabling factors to address inequality in healthcare.

Take-home Message

Cultural competence training should include meta-cognitive skills, which help students to learn cultural knowledge as a dynamic entity.

Curricula should be co-created with all stakeholders who contribute to different aspects of students' development.

Longitudinal cultural curricula are more sustainable compared to standalone teaching to develop students' lifelong commitment.

7J2 (3997)

Date of Presentation: Tuesday 29th August
Time of presentation: 1115 - 1130
Location: Alsh 1, Loch Suite, SEC

Gender difference in career preferences and salary expectations among medical students

Xuanxuan Ma[1], Hongbin Wu[1]

[1]*Peking University Health Science Center, Beijing, China*

Background

Previous studies have shown that gender differences in medical students' career choices are common. Whether these differences have changed with progression to higher grades is poorly understood. This study aims to examine the association between career preferences, salary expectations, and gender, and to assess whether these differences are heterogonous across grades.

Summary of Work

This study was based on an anonymous survey conducted in 2021. Comparison of responses between men and women to detect any differences in career preferences and salary expectations. For additional analyses, the career preferences were further divided into two categories: shortage and non-shortage specialties, based on the supply-demand gap of physicians in China. Logistic and Tobit regression were separately used to model the association between gender and career preferences or salary expectations.

Summary of Results

A total of 151367 unique medical students from 117 colleges were analyzed. There are 82112 women (54.2%). The most preferred specialty among women was internal medicine while the most preferred by men was surgery. Women were more likely to select shortage specialties after adjusting sociodemographic characteristics of students (OR, 2.73; 95% CI, 2.61 to 2.86; P<0.001). These odds were higher for second-year (OR, 2.60; 95% CI, 2.42 to 2.81; P<0.001), third-year (OR, 2.93; 95% CI, 2.73 to 3.15; P<0.001), fourth-year (OR, 2.89; 95% CI, 2.60 to 3.21; P<0.001), specifically for fifth-year students (OR, 3.52; 95% CI, 3.03 to 4.08;

P<0.001). Women were less likely to expect a higher starting salary after adjusting covariates (coefficient, -0.10; 95% CI, -0.11 to -0.10; P<0.001). And stronger associations were found in the subgroup of fifth-year students (B coefficient, -0.12; 95% CI, -0.13 to -0.10); P<0.001).

Discussion and Conclusion

In this study, men were more likely to choose surgery, and women were more likely to choose shortage specialties and had lower salary expectations. And the association between gender and career preferences and salary expectations is heterogenous across different grades.

Take-home Message

The gender difference in career aspirations described in this study offered a perspective from China, a low and middle-income country, and had implications for medical schools. Medical educators should treat gender diversity as an innovation challenge and act to address inequalities in health professional education.

RP1731/SC

7J3 (3750)

Date of Presentation: Tuesday 29th August
Time of presentation: 1130 - 1145
Location: Alsh 1, Loch Suite, SEC

Graduates' reflections on professionalism: Intersections of race, gender, and activism

Mantoa Mokhachane1, Tasha R. Wyatt2, Ayelet Kuper3, Lionel Green-Thompson4, Ann Zeta George1

[1]University of Witwatersrand, Johannesburg, South Africa; [2]Uniformed Services University of the Health Sciences, Bethesda, USA; [3]University of Toronto, Toronto, Canada; [4]University of Cape Town, Cape Town, South Africa

Background

The ideal doctor is based on western views which might exclude people who do not conform to rigid prescriptions. This view might be reinforced through weaponization of professionalism against non-conforming individuals who bear body piercing, tattoos, dreadlocks, etc.1 This could pose challenges for contemporary medical professionals who are expected to be the 'right kind of doctor'. In 2015 #FeesMustFall protests erupted in institutions of higher learning throughout South Africa. Students fought for social justice to curb financial exclusion of students from university. There is paucity of data on medical students' lived experiences of professionalism or becoming professionals during social upheaval.

Summary of Work

explore students' lived experiences while in medical training between 2015-2020. The participants had been in their first to fourth (MBBCh 1-4) years of study during the #FeesMustFall 2015/2016 protests.2 A purposive sample was drawn from senior clinical students and recent graduates. This paper concentrates on recent graduates' experiences of professionalism during protests and beyond. We examined how gender, race, hairstyles, adornment, and protests played out in their experiences of professionalism in training. We employed an intersectional analytical lens analysing the transcripts.

Summary of Results

Participants experienced their medical training as an alienating space. They felt victimized and judged because of their engagement in activism for social justice, their gender and race. Participants felt silenced, more so in academic teaching hospital as compared to non-academic institutions. For example, Moitseki (pseudonym), with an African hairstyle said “In the hospital I was never the noisy one, I was never disruptive, I wouldn’t stand up and say that, no, but Black registrars are being disrespected by consultants and so forth. I’m suspicious that, that transition might have been informed by the fear of victimization”.

Discussion and Conclusion

Doctors are expected to look and behave a certain way based on fixed rigid prescriptions. This image excludes those who wear their hair in locks, displays body piercing, or engages in activism for social justice. Women seem to have it worst than men, but in all cases, professionalism is used as a weapon against those with these characteristics.

Take-home Message

Inclusivity is essential in medical education

RP1366/SC

7J4 (3231)

Date of Presentation: Tuesday 29th August
Time of presentation: 1145 - 1200
Location: Alsh 1, Loch Suite, SEC

What makes a 'good doctor'? A critical discourse analysis of medical students with lived experience as patients

Erene Stergiopoulos1, Tina Martimianakis2

[1]Faculty of Medicine, University of Toronto, Toronto, Canada; [2]Wilson Centre for Research in Education, University of Toronto and University Health Network, Toronto, Canada

Background

What constitutes a 'good doctor' varies widely across groups and contexts. While patients prioritize communication and empathy, physicians emphasize medical expertise, and medical students describe a combination of the two as professional ideals. We explored the conceptions of the 'good doctor' held by medical learners with chronic illnesses or disabilities who self-identify as patients to understand how their learning as both patients and future physicians aligns with existing medical school curricula.

Summary of Work

We conducted 10 semi-structured interviews with medical students who self-identified as patients. We used critical discourse analysis to code dimensions of the 'good doctor'. Using concepts of Bakhtinian intersubjectivity and the hidden curriculum we explored how discourses of the 'good doctor' either aligned or misaligned with formal and informal curricular content.

Summary of Results

According to participants, dimensions of the 'good doctor' included communication, empathy/attention to illness impact, and boundary-setting. Students reported that formal teaching on empathy and illness impact were present in the formal curriculum, however ultimately devalued through day-to-day interactions with faculty and peers. Importantly, teaching on boundary-setting was absent from formal curricula, however participants independently developed reflective practices to cultivate these skills. Moreover, we

identified two operating discourses of the 'good doctor': an institutionalized discourse of the 'able doctor' and a counter-discourse of the "doctor with lived experience" which created a space for reframing experiences with illness and disability as a source of expertise rather than a source of stigma.

Discussion and Conclusion

Perspectives on the 'good doctor' carry important implications for how we define professional roles, and hold profound consequences for medical school admissions, curricular teaching, and licensure. Medical students with lived experiences of illness and disability offer critical insights about curricular messages of the 'good doctor' based on their experiences as patients, providing new considerations for curriculum and faculty development.

Take-home Message

1. Medical students with disabilities who self-identify as patients carry dual perspectives as both patients and providers and hold a unique lens for understanding the 'good doctor'

2. Participants emphasized three dimensions of the good doctor: communication, empathy, and boundary-setting.

3. Not all dimensions were reflected in the formal or hidden curriculum, holding implications for teaching, learning, assessment, and matriculation

7J5 (0785)

Date of Presentation: Tuesday 29th August
Time of presentation: 1200 - 1215
Location: Alsh 1, Loch Suite, SEC

Mapping the Self-Disclosure Journey: Exploring Self-Disclosure of Mental Illness and Addiction by Medical Learners

Javeed Sukhera1, Aliya Kassam2, Benedicta Antepim2

[1]Hartford Hospital and the Institute of Living, Hartford, USA; [2]University of Calgary, Calgary, Canada

Background

Despite the proliferation of initiatives to address wellbeing and reduce burnout, mental illness and addiction stigma remains rooted within medical education. One mechanism to address stigma is self-disclosure of mental illness or addiction. Given the paucity of literature on self-disclosure in medical learners, we sought to explore experiences of self-disclosure in medical education.

Summary of Work

In a mixed method, convergent triangulation design, authors recruited medical learners across Canada. Quantitative data included the Opening Minds Scale for Healthcare providers (OMS-HC), the Self Stigma of Mental Illness Scale, a wellbeing measure, and questions on substance use from Statistics Canada. Qualitative data included semi-structured interviews, which were collected and analyzed using a phenomenological approach. Qualitative data were collected simultaneously, analyzed separately, and triangulated with the quantitative data. Discrepancies were discussed until consensus was achieved.

Summary of Results

Overall, N= 125 medical learners (n= 67 medical students, n=58 resident physicians) responded to our survey, and N=13 participated in interviews (n = 10 medical students, n =3 resident physicians). Disclosure was a complex process that appeared to become more challenging over time due to the internalization of negative attitudes about mental

illness. OMS-HC scores showed resident physicians had more negative attitudes towards mental illness and disclosure (47.7 vs. 44.3, p = 0.02). Self-disclosure was modulated by the degree of intersectional vulnerability of the learner's identity. When looking at self-disclosure, people who identified as men had more negative attitudes than people who identified as women (17.8 vs 16.1, p = 0.01). Racialized learners scored higher on self-stigma. Interview data suggested that disclosure was perceived as having a positive outcome, including the perception that self-disclosure made learners better physicians and educators in the future.

Discussion and Conclusion

Understanding the complex process of disclosure is not a one size fits all approach. Fear of disclosure is an important factor shaped by the learning environment. Self-disclosure in medical education holds implications for the teaching, learning and overall wellbeing of medical learners.

Take-home Message

Self-disclosure experiences are positive and percieved to make learners feel they are better physicians and educators, yet several aspects of the learning environment appear to make self disclosure difficult.

7J6(4449)

Improving integration for International Medical Graduates at Foundation Level

Eleanor Pilsworth[1], Laura Kyle[1], Bethan Arnold[1], Malvika Subramaniam[1], Amy Whitworth[1]

[1] *Somerset Foundation Trust, Taunton, UK*

Background

International medical graduates (IMGs) make up a significant proportion of the NHS workforce; approximately 37% trained outside the UK, and 26% trained outside of Europe (references). It is important we recognise how differences in training and culture impact the experience of the IMG working within the NHS, and develop ways to support and enhance their experience. The current literature focuses on IMGs in higher training, meaning our work with Foundation Year 1s (FY1) is a new development and vital to ensuring the IMGs feel supported and integrated in the Foundation level workforce.

Summary Of Work

We developed a training program for FY1 IMGs. IMGs highlighted their own learning needs, and feedback from senior, supervising clinicians enabled us to develop a tailored, adaptable training program. This encompassed a combination of lectures, tutorials, simulation sessions and pastoral care. Learners provided written feedback and a thematic analysis was undertaken. Likert scales were used to measure learner confidence and utility of sessions.

Summary Of Results

There has been an overall increase in increase in learner's confidence and knowledge, as demonstrated via self-scored Likert scales. Teaching sessions have been, and continue to be, developed based on the IMG feedback and needs which are highlighted through other sessions. Feedback from supervising consultants is being sought.

Discussion And Conclusion

This program has been met with positive reactions from IMG learners and supervisors alike. The program is fluid, allowing adaptations for each individual learners need, although a number of gaps in IMG education remain. To address this, we are developing an IMG specific induction with a period of supernumerary shadowing prior to commencing ward work and on-call shifts, and an IMG buddy program.

Take Home Messages

- Supporting our international medical graduates early helped them feel valued and supported in their new roles within the NHS.

- Focussing on skills such as documentation, handovers, simulated ward round has helped understanding of what is expected within the NHS.

- Peer mentorship is invaluable in this setting.

- There are many gaps to fill if we are to integrate our colleagues into the NHS.

Session 7K: TEL: Best Practice for Enhancing Learning with Technology

7K1 (2900)

Date of Presentation: Tuesday 29th August
Time of presentation: 1100 - 1115
Location: Alsh 2, Loch Suite, SEC

Escape rooms for education

Ava Chow[1], Nazlee Sharmin[1]

[1]*University of Alberta, Edmonton, Canada*

Background

Gamification incorporates game dynamics and mechanics into teaching methodologies to meet academic objectives. Gamification has been commonly used in primary and secondary education to improve student engagement and motivation, but it has also been shown to be effective in higher education.

Escape rooms, which are immersive storytelling games, are one form of gamification. Educational escape rooms incorporate learning objectives into individual or team-based games, puzzles, and clues, and require students to demonstrate mastery of the material to progress through the storyline.

Summary of Work

A digital (online) escape room was created for oral health professional students at the University of Alberta incorporating the learning objectives of the skeletal anatomy of the head and the neck unit. The escape room served as a formative assessment for the students. The escape room was originally created as a hybrid escape room, with both online and in-person activities. However, with the shift to online learning due to the COVID pandemic, a fully online version was also created.

Summary of Results

Hybrid and fully online versions of the escape room were deployed and anonymous free-form feedback was collected. Students indicated that participating in the escape room allowed them to formatively evaluate their understanding in a stimulating manner that captured their interest. They generally found the activity engaging and enjoyable. There were also requests for more of this type of activity.

Discussion and Conclusion

The educational escape room has become popular amongst students and the transition to the online/virtual escape room has been similarly embraced. The asynchronous online virtual escape room removed some student access barriers by allowing them to work through the activity at their own pace, at the time and place of their choosing. However we recognize that the use of these technologies can restrict access for some students. Students who lived in more rural areas with more limited internet access, and those with older computers had difficulty accessing image-heavy webpages.

While transformative in education, such technologies should be used judiciously and with educational objectives in mind and with cognisance of the limitations.

Take-home Message

Students enthusiastically embrace the use of educational escape rooms in their classes.

7K2 (2830)

Date of Presentation: Tuesday 29th August
Time of presentation: 1115 - 1130
Location: Alsh 2, Loch Suite, SEC

Guidelines on the integration of virtual patients into curricula developed by the European project iCoViP

Joanna Fąferek1, Pierre-Louis Cariou2, Inga Hege3, Anja Mayer3, Luc Morin2, Zuzanna Oleniacz1, Joanna Ożga1, Daloha Rodriguez-Molina4, Bernardo Sousa Pinto5, Andrzej Kononowicz1

[1]Jagiellonian University Medical College, Kraków, Poland; [2]University of Paris-Saclay, Paris, France; [3]University of Augsburg, Augsburg, Germany; [4]Ludwig-Maximilians University, Munich, Germany; [5]University of Porto, Porto, Portugal

Background

Virtual patients (VPs) have become a mainstream tool in health professions education. Several systematic reviews confirmed their positive effects in clinical reasoning training, especially when compared with passive forms of education, but it is still unclear how to integrate them in the curricula. The two year's European project iCoViP was funded to develop an international, multilingual, and open-access collection of 200 VPs. To guide their integration, we took up the task of gathering recommendations on how to implement the developed VPs into the curricula.

Summary of Work

We systematically queried five research databases. From more than 2000 search results we selected over one hundred papers that were our base for extraction of recommendations. In a series of several bi-monthly online meetings and two face-to-face workshops with project partners, we developed an initial thematic framework and then refined it and filled it with statements extracted from the literature and project partners' experiences.

Summary of Results

We identified 14 themes that we mapped to the six steps of Kern's curriculum development cycle. These themes were: goal in the curriculum; phase of the curriculum when to implement; effective use of resources; VP alignment with curricular learning objectives; prioritisation of use; relation to other learning modalities; learning activities around VPs; time allocation; group setting; presence mode; VPs orientation for students and faculty; technical infrastructure; quality assurance, maintenance, and sustainability; assessment of VP learning outcomes and learning analytics. To enhance accessibility for less experienced educators, we supplemented the guidelines with a glossary of 61 related didactical and technical terms present in the recommendations, such as constructive alignment, curriculum mapping and spaced activation.

Discussion and Conclusion

We envision that our recommendations can serve like a first step instruction on how to engage with VPs for those who consider their use in the curriculum. Our guidelines highlight current developments and research endeavours in this field. The collaborative work on the guidelines creation enabled incorporation of diverse perspectives of partner medical schools across Europe. By this document we hope to meet faculty's expectations for advice on how to implement digital technologies in curricula.

Take-home Message

The VP curriculum integration guidelines are available on the iCoViP project website (https://icovip.eu/knowledge-base).

7K3 (2616)

Date of Presentation: Tuesday 29th August
Time of presentation: 1130 - 1145
Location: Alsh 2, Loch Suite, SEC

Implementation of Game-based And E-learning in Child Health Supervision Lessons During Covid-19 Pandemic

Chalinee Monsereenusorn1, Khemika Khemakanok Sudnawa1, Piya Rujkijyanont1, Chanchai Traivaree1

[1]*Phramongkutklao College of Medicine, Bangkok, Thailand*

Background

Child health supervision is a key component in maintaining competency for pediatric and adolescent care. During the COVID-19 pandemic, a well-child visit was limited due to social distancing, affecting the learning experience. E-learning has been demonstrated as an effective tool for self-directed learning. Also, game-based learning provides a positive impact on medical education. Therefore, an integration of game-based and E-learning aims to improve the competency and learning experience in child health supervision with satisfaction during the COVID-19 era.

Summary of Work

Transition from in-class didactic into self-directed by combining “Child Health Warrior (CHW)-The Supervisor of Child Health” game-based with E-learning was initiated. Reflection from students was performed in person. We conducted a study to evaluate students’ competency and satisfaction by using respective multiple-choice questions (MCQs) and questionnaire focusing on 10 domains to compare in-class didactic and self-learning by game-based and E-learning: enhancing knowledge, memory, communication skill, engagement, enthusiasm, assertiveness, joyful, simplified, appropriate timeliness and implementable. A total MCQs score was fifteen. A Likert scale from 0 to 5 was used to define levels of disagree to extremely agree.

Summary of Results

All thirty-seven students participated in this study. Students who underwent CHW game-based combined with E-learning had significantly higher MCQs scores (14.00±0.02) compared to those who attended in-class didactic (10.73±1.79) with a p-value <0.001. Students preferred CHW game-based combined with E-learning to in-class didactic in all domains except simplified and implementable (p=0.087 and 0.171, respectively). The communication skill and brainstorming process to encourage teamwork were enhanced in medical workplaces using CHW game-based learning.

Discussion and Conclusion

Medical students preferred self-directed learning, CHW game-based combined with E-learning to in-class didactic. Game-based and/or E-learning should be implemented to improve the learning experience of child health supervision in medical clerkship.

Take-home Message

Self-directed learning by game-based and E-learning might be good tools for digital enhanced medical education in medical clerkship.

7K4 (2862)

Date of Presentation: Tuesday 29th August
Time of presentation: 1145 - 1200
Location: Alsh 2, Loch Suite, SEC

Lecture sessions for next generations radiology residents: What to adopt and what to adapt?

Sira Vachatimanont1, Maythinee Chantadisai2, Chanan Sukprakun3, Surachai Leksuwankun4

[1]International Doctor of Medicine Program (CU-MEDi), Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand; [2]Nuclear Medicine Unit, King Chulalongkorn Memorial Hospital, Bangkok, Thailand; [3]Department of Radiology, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand; [4]Department of Internal Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Background

New generations of digital-native residents, who had experienced disruptions during the COVID-19 pandemic, might have different preferences on their learning. This study aimed to explore radiology residents' opinion on didactic teaching session format and implementation of audience response systems (ARS)

Summary of Work

Radiology residents responded to anonymous online questionnaires consisting of Likert items on their preference levels and the stressing effects of four teaching session formats: asynchronous recorded lectures (RL), live non-interactive traditional lectures (TL), live lectures with ARS, and live lectures with face-to-face directed questioning (DQ).

Summary of Results

Twenty-four of 26 residents (92.3%) responded. Regarding the preference, the preference level on the RL and the ARS were not different (U=169, p=.733), with 72.2% and 75.0% agreeing that they preferred each method, respectively. Only 29.4% agreed that they preferred the TL and only 11.1% agreed that they preferred the DQ. Significant larger

proportions of the respondents agreed that the DQ increased their mental stress, as compared to the ARS. (36.4% vs 6.67%, U=25.5, p<.001)

Regarding the implementation of the ARS, 54.2% thought it should be used at the end, and 41.7% thought it should be used throughout the lecture sessions. 4.17% that thought it should not be used. The respondents stated in the free text that they liked the anonymity of the ARS. They also thought that the ARS was engaging and could improve their comprehension.

Discussion and Conclusion

Our results suggested that residents did not despise interactivity during didactic sessions. However, face-to-face direct questioning might be challenging because it leads to psychological distress unless careful questioning strategies and hospitable environments are ensured. The RL and the ARS received comparable preference levels. While the RL has the benefit of flexibility, the ARS can enhance interactivity without causing mental distress. Further study may focus on the retention of knowledge to determine academic effectiveness of each style.

Take-home Message

Residents did not despise classroom interactivity.

Audience response systems might be the better methods to promote classroom engagement than direct questionings.

7K5 (3028)

Date of Presentation: Tuesday 29th August
Time of presentation: 1200 - 1215
Location: Alsh 2, Loch Suite, SEC

Health Science Educators' Perceptions of Using and Applying Virtual Reality in the Curriculum

Tak Wing Yu1, Michael Rowe2, Josè Frantz1, Simonë Titus 3

[1]University of the Western Cape, Cape Town, South Africa; [2]University of Lincoln, Lincoln, UK; [3]Community and Health Science University: University of the Western Cape, Cape Town, South Africa

Background

VR has been gaining attention for use in simulation and virtual environments. Studies have explored the outcome VR has on learning and teaching; some have proven to have better results than the traditional teaching method. The interest should be on how VR should be used in the curriculum. Even though iVR is not new and has been used in health professions education for some time, some aspects of the technology still need to be explored.

Summary of Work

The study explores the perceptions of fifteen health professions educators using multiple descriptive case studies. Thematic analysis was used to analyze the qualitative data collected after an interview.

Summary of Results

Participants suggested that iVR may be helpful in both clinical education and anatomy education. As VR can create a customized virtual environment for the scenario required, it is a valuable tool. However, they also described some critical challenges that will need to be overcome if VR-based HPE is to be successful. These included technical glitches, controller complications, new software development, and implementation in specific modules. More important is the access to lectures and the outcome when using VR compared to other modalities.

Discussion and Conclusion

Most participants suggested that VR would not be able to replace any existing tools but should be considered an augmentation. Lastly, challenges of VR were observed as some participants experienced fatigue and cyber-sickness; it had little impact on their reports of a positive and enjoyable experience. Participants in this study enjoyed being in VR, had a positive experience, and felt ready to incorporate VR into their teaching, but with some caveats and limitations. It is essential to note how VR should be implemented and what support is provided to the lecturers.

Take-home Message

Staff is ready for the integration of VR; however, they are not IT technicians.

Staff and the curriculum department need to work together to ensure VR is aligned with the outcome of the modules.

VR is not an advanced teaching tool, as it only uses repetitive controls, but it can enhance the learning experience for students.

Session 7L: Supporting Learners: Supportive Learning Environment

7L1 (5796)

Date of Presentation: Tuesday 29th August
Time of presentation: 1100 - 1115
Location: Boisdale 1, Loch Suite, SEC

Influences of coping and health-related behaviors on medical students' mental well-being and performance

Sophie SCHLATTER1, Noémie BARRET2, Théodore GUILLAUMEE3, Alexandre BERLAND3, Thomas RIMMELE4, Stéphanie MAZZA5, Coralie Dumoulin6, Antoine DUCLOS7, Gilles RODE8, Marc LILOT9

[1]Research on Healthcare Performance (RESHAPE), INSERM U1290, Université Claude Bernard Lyon 1. High-Fidelity Medical Simulation Centre (CLESS), SAMSEI, UCBL-Lyon 1, Univ. Lyon., Lyon, France; [2]Hospices Civils de Lyon, Département d'anesthésie-réanimation, Lyon, France, Lyon, France; [3]Université Claude Bernard Lyon 1, Faculté de Médecine Lyon Est, France Hospices Civils de Lyon, Departments of Anesthesia and Intensive Care, Lyon, France; [4]High-Fidelity Medical Simulation Centre (CLESS), SAMSEI, UCBL-Lyon 1. Departments of Anaesthesia and Intensive Care, Hospices Civils de Lyon, EA7426 "Pathophysiology of Injury-Induced Immunosuppression" (Pi3), Biomérieux-Hospices Civils de Lyon, UCBL-Lyo, Lyon, France; [5]Université Claude Bernard Lyon 1, CNRS, INSERM, Centre de Recherche en Neurosciences de Lyon CRNL U1028 UMR 5292, FORGETTING Team, F-69500, Bron, France; [6]Research on Healthcare Performance (RESHAPE), INSERM U1290, Université Claude Bernard Lyon 1,, Lyon, France; [7]Research on Healthcare Performance (RESHAPE), INSERM U1290, Université Claude Bernard Lyon 1. Health Data Department, Hospices Civils de Lyon. 7EA7426, Lyon, France; [8]Université Claude Bernard Lyon 1, Faculté de Médecine Lyon Est,, Lyon, France; [9]Research on Healthcare Performance (RESHAPE), INSERM U1290, Université Claude Bernard Lyon 1. High-Fidelity Medical Simulation Centre (CLESS), SAMSEI, UCBL-Lyon 1, Univ. Lyon., Lyon, France

Background

Before stressful exams, medical students engage in various coping and health-related behaviors. Differences in behaviors may have various influences on students' mental well-being and performance on the exam day.

Summary of Work

Undergraduate medical students answered a set of standardized questionnaires assessing their coping (Brief Cope Inventory) and health-related behaviors (sleep disturbance: PSQI, physical activity: GPAQ) engaged few weeks prior a major exam (Objective Structured Clinal Examination). Just before their exam, they also reported their instantaneous mental well-being on visual analogue scales (100 mm VAS stress and inner-confidence). This study determines how coping (positive thinking, active resolution, social support, avoidance) and health-related behaviors were associated with students' well-being and performance on the exam day. Associations were explored with Spearman correlations and a P value <.05 was used for significance level.

Summary of Results

Four-hundred-and-eighty-two students were included (Lyon-Est University, May 2022, NCT05393206). Positive thinking was associated with a lower level of stress (R=-.25, p<.001) and a higher level of confidence (R=0.30, p<.001). Active resolution was associated with a higher level of confidence (R=.09 p=.045). Conversely, social support and avoidance were both associated with a higher level of stress (R=.25 and .26, both p<.001) and a lower level of confidence (R=-0.12 and -.31, both p<.05). Concerning health-related behaviors, our findings showed that higher sleep quality and physical activity levels were associated with lower stress (R=-.28 and -.21) and higher confidence (R=.28 and .15; all p<.005). Finally, this study founded that poor sleep (R=-.11, p=.013) and avoidance (R=-.11, p=.015) were further associated with decreased academic performance.

Discussion and Conclusion

Coping and health-related behaviors engaged before an exam influence student's well-being and their performance. Social support and avoidance seem detrimental to students' mental well-being. On the contrary, active resolution, positive thinking, better sleep and high level of physical activity, were all associated with improved well-being.

Take-home Message

These findings highlight the need to promote physical activity and good sleep hygiene at universities, and support the development of stress managing programs focusing on

positive thinking and active resolution for medical students. As avoidance has a detrimental effect on both well-being and performance, identifying and helping students that engage in avoidance may be of crucial importance.

7L2 (3654)

Date of Presentation: Tuesday 29th August
Time of presentation: 1115 - 1130
Location: Boisdale 1, Loch Suite, SEC

Cultural diversity and multilingualism foster cultural competency in health professions students

Hakyoung Kim1, Keiko Ihara2, Sean McWatt3, Cecilia Brassett4, Carol Kunzel5, Alexander Green6, Geoffroy Noel7, Anette Wu1, Chang Lee5, Dana Stearns8

[1]Department of Pathology and Cell Biology, Vagelos College of Physicians and Surgeons, Columbia University, New York, USA; [2]Keio University School of Medicine, Tokyo, Japan; [3]Department of Anatomy and Cell Biology, Schulich School of Medicine and Dentistry, Western University, Ontario, Canada; [4]Human Anatomy Centre, Department of Physiology, Development and Neuroscience, University of Cambridge, Cambridge, UK; [5]Columbia University College of Dental Medicine, New York, USA; [6]Department of Medicine, Harvard Medical School, Boston, USA; [7]University of California San Diego, School of Medicine, La Jolla, CA, USA; [8]Harvard Medical School, Boston, USA

Background

During this time of globalization, intercultural competency (IC) skills are essential in the health professions. However, health professions students across the globe have different cultural characteristics, and IC learning varies among populations with diverse cultural backgrounds. This study explored demographic factors affecting IC learning to improve the integration of IC into global medical curricula.

Summary of Work

Health professions students (medical, dental, nursing, biomedical, and health sciences) from 20 universities in 20 countries across four continents participated in a four-month online exchange program. Students from different backgrounds networked with each other, sharing cultural values, comparing medical curricula, and discussing current healthcare issues with respect to diverse systems and cultures. Validated questionnaires assessing IC skills were provided, and the pre-program results were analyzed for demographic differences in IC skills and preparedness using R version 4.0.3.

Summary of Results

Analyses of pre- (n = 305) responses to the 40 self-graded questionnaire items targeting levels of cultural competency, attitudes towards varying cultures, IC preparedness, and IC skills revealed statistically significant differences among two demographic factors: 1) in ten of the questions relating to student attitudes towards cultural relevance in healthcare and IC skills, students from Asian countries scored lower in the pre-program questionnaire (range of $p < 0.001$ to $p = 0.041$), and 2) multilingual students scored higher on six of the questions related to IC preparedness and skills compared to monolingual students (range of $p < 0.001$ to $p = 0.045$).

Discussion and Conclusion

The lower pre-program scores among students from Asian countries could be due to the more homogenous populations in those countries and a lack of cultural diversity in their education. In such culturally homogenous countries with low intercultural exposure, IC should be further emphasized and widely integrated in medical curricula. Further, higher IC preparedness scores among multilingual students could indicate that learning additional languages can foster IC through exposure to those different cultures and is positively related to IC learning to some extent.

Take-home Message

Accounting for cultural and demographic differences in health professions curricula is central to improving cultural learning in future healthcare providers across the globe.

7L3 (0520)

Date of Presentation: Tuesday 29th August
Time of presentation: 1130 - 1145
Location: Boisdale 1, Loch Suite, SEC

Was Covid-19 pandemic matter and how was Inclusive leadership for junior doctors' burnout, compassion satisfaction, and occupational commitments

Yung Kai Lin1, Chia-Der Lin2, Blossom Yen-Ju Lin3

[1]Jen-Ai Hospital, Taichung, Taiwan; [2]China Medical University and Hospital, Taichung, Taiwan; [3]Chang Gung University, Taoyuan, Taiwan

Background

International studies have revealed numerous challenges (i.e., job demands) and opportunities (i.e., job resources, as protective factors) affecting the well-being of health care workers during the COVID-19 pandemic based on job demands-resources theory. Inclusive leadership, consisting of positive leadership behaviors, affords opportunities for voicing opinions, offers a sense of safety, and reduces the psychological distress of subordinates, thereby promoting mutual trust and respect in a demanding work environment during the pandemic. Our study was aimed to explore the variety of job demands and inclusive leadership as job resources and well-being for the junior doctors given the Covid-19 pandemic.

Summary of Work

This was a cross-sectional web survey conducted on July 2022 for junior doctors graduating from two medical schools in Taiwan. Eighty-two junior doctors (i.e., 53 male and 29 female) responded with the data covering their perceived job demands from physical, psychological and Covid-19 derived perspectives and inclusive leaderships from supervisors as job resources. In addition, the junior doctors' burnout, compassion satisfaction, and occupational commitment were recorded as job outcomes. The hierarchical regressions were performed.

Summary of Results

Our study revealed that the Covid-19 derived demands were related to the junior doctors' increased burnout. In addition, the junior doctors' perceived inclusive leadership from supervisors was related to their reduced burnout and increased compassion satisfaction and played a protective role on reducing the negative effects of psychological demands on their compassion satisfaction. In addition, only Covid-19 derived demands on job was related to the junior doctors' occupational commitment.

Discussion and Conclusion

Our study raises the Covid-19 pandemic as a critical scenario or event these years given the Covid-19 derived job demands as the ones for junior doctors' reduced occupational commitment, could be an important implication for trainees and the young's aspiration on medicine.

Take-home Message

The Covid-19 pandemic as a critical scenario or event these years given the Covid-19 derived job demands were the ones for junior doctors' reduced occupational commitment. Inclusive leadership has its value as job resource for medical trainees and should be trained as one of competencies for medical educators or clinical teachers in the workplaces.

7L4 (3473)

Date of Presentation: Tuesday 29th August
Time of presentation: 1145 - 1200
Location: Boisdale 1, Loch Suite, SEC

Does the workload enable learning? A four-year follow-up among Finnish doctors in post-graduate medical education

Sara Kaartinen1, Nea Meriranta2, Peppiina Saastamoinen3, Katariina Seittenranta1

[1]The Finnish Junior Doctor's Association, Helsinki, Finland; [2]The Finnish Junior Doctors Association, Helsinki, Finland; [3]The Finnish Medical Association, Helsinki, Finland

Background

Post-graduate medical education (PGME) is learning by working which may be both efficient and exhausting depending on the balance between learning and working. The emphasis in PGME should be by definition in learning. Interestingly, a previous study has found that a workload that enables learning is the most important factor for the willingness to recommend the training place for colleagues among Finnish doctors in PGME (Hetemäki et al., 2021).

Summary of Work

The Finnish Junior Doctors' Association and the Finnish Medical Association have conducted surveys among Finnish doctors in PGME every fall between 2018 and 2021 and received between 1014-1742 replies (on average one fourth of potential respondents). The surveys have included items on guidance, education, and working conditions after which respondents rated their willingness to recommend their training place. This study examined how the willingness to recommend the training place and the experience on workload that enables learning has evolved between 2017 and 2021, i.e. including the years of COVID-19 pandemia.

Summary of Results

The willingness to recommend a training place has ranged between 46% in 2018 and 49% in 2021, the four-year average being 48%. Nearly one third of the respondents have experienced that the workload does not enable learning in years 2018, 2019, and 2021. The

first pandemic year 2020 has been a positive exception as only one fourth had a negative experience on balance between workload and learning. Every year the willingness to recommend the training place and the positive experience on workload that enables learning has been the most common in smaller central hospitals and the lowest in university hospitals.

Discussion and Conclusion

Yearly too many doctors in PGME experience that the workload does not enable learning which may cause feelings of inadequacy, affect the duration of education, as well as diminish the willingness to recommend the training place.

Take-home Message

The willingness to recommend a training place and the experience of workload that enables learning have remained rather similar prior and during the COVID-19 pandemia

Constantly 25-30% of doctors in PGME experience that the workload does not enable learning

7L5 (5875)

Date of Presentation: Tuesday 29th August
Time of presentation: 1200 - 1215
Location: Boisdale 1, Loch Suite, SEC

What influences undergraduate pharmacy students in practising and developing empathy? A cultural historical activity theory (CHAT) perspective

Thao Vu[1], Amirreza Zobdeh[1], Andrei Cruz[1], Julie-Maria Noto[1], Huyen Nguyen-Doan[1], Thulsi Ranaweera[1], Suzanne Caliph[1], Daniel Malone[1], Kim Anh Dang[2]

[1]Monash University, Parkville, Australia; [2]Monash University, Clayton, Australia

Background

Empathy in health profession education (HPE) is not only shaped by what students learn in the HPE program, but also by students' various experiences inside and outside the program. From the perspective of cultural historical activity theory (CHAT), empathy outcomes are influenced by elements in an activity system in which the student (subject) uses different tools to achieve different goals (object). The activity system also involves rules (i.e. norms, regulations, and policies), community (i.e. family, work, university), and division of labour in a healthcare setting.

Summary of Work

In light of CHAT, this study explores what influences empathy in undergraduate pharmacy students' activity systems.This research adopts a qualitative inquiry methodology and is situated within an interpretivist paradigm. One-to-one in-depth semi-structured interviews were conducted with 19 fourth year students, who all have completed the required placements in community and hospital pharmacies. Data was analysed using thematic analysis, drawing on CHAT as a theoretical framework.

Summary of Results

The study found that the most significant facilitators influencing students' positive empathy outcomes are related to object (i.e. students' goal was to help patients achieve optimal health outcome), and community (i.e. role modelling of empathy from family, supervising pharmacists at work, and teaching staff). Furthermore, tools (i.e. understanding of empathy, knowledge about medical conditions, communication skills), and rules (professionalism) also helped students respond empathetically to patients' experiences. Hindrances to empathy were associated with division of labour in busy healthcare settings, and students' lack of adequate tools to respond to patients' distressing emotions whilst regulating their own emotional responses.

Discussion and Conclusion

The research findings in light of CHAT offer a novel and holistic view of what may facilitate and hinder students' empathy practice and development. The study highlights the importance of developing students' ability to make meanings of their various experiences and translate their interpretations and skills to show empathy and achieve their goal to provide patients with optimal health outcomes.

Take-home Message

We suggest an inclusive and structured approach to empathy training in HPE programs that involves reflective practice and feedback, hands-on experience, role plays and instructions on emotional regulations and skills to respond to patients' distressing emotions.

Session 7M: Postgraduate: Supervision

7M1 (4578)

Date of Presentation: Tuesday 29th August
Time of presentation: 1100 - 1115
Location: Boisdale 2, Loch Suite, SEC

System Strategies to Improve Teaching in the Internal Medicine Ambulatory Care Setting: A Qualitative Study

Leora Branfield Day[1], James Rassos[1], David Frost[1], Danny Panisko[1]

[1]*Department of Medicine, University of Toronto, Toronto, Canada*

Background

Education in the ambulatory care setting has become a key priority in internal medicine (IM) residency training programs in Canada. However, multiple barriers exist which can impair effective clinical teaching. There is a need to identify teaching strategies and organizational systems that adapt to learners' needs and to the complexities of new ambulatory IM models of care (e.g., rapid referral clinics, virtual care). An in-depth qualitative exploration of perceived effective system strategies and instructional techniques to teach learners in IM ambulatory care settings was conducted.

Summary of Work

We purposively sampled and interviewed 14 physicians from 9 Canadian universities who regularly supervise trainees and are leaders in ambulatory IM settings. Transcripts were analyzed using principles of constructivist grounded theory.

Summary of Results

Participants described different organizational systems for ambulatory care to enable effective teaching. Approaches varied based on setting (community vs. academic), type of clinic (perioperative, longitudinal, rapid referral, virtual), number of trainees, and rotation structure (longitudinal vs. block-based). Key strategies included provision of materials for trainees and patients before visits to improve clinic flow, acquisition of

effective administrative and technological support, and establishment of dedicated space and time for didactic or interactive group discussions and case-reviews. Participants also described multiple learning and teaching goals unique to the ambulatory setting that varied by trainee level. These focused on patient triage, managerial skills, and practice/resource management as learners advanced in their training. Instructional techniques, which helped to achieve these goals, included role modeling of professional behaviours, demonstration of leadership skills, and provision of graded responsibility. In addition, participants delivered instruction to manage clinical uncertainty, facilitate learner reflection to foster growth, and provide direct observation and feedback.

Discussion and Conclusion

Potential best practices for system organization and instruction within IM ambulatory settings, that adapted to the challenges and complexities of these environments in a multi-faceted approach, were identified.

Take-home Message

Careful attention to systems of organization and teaching techniques require further exploration, but have the potential to optimize ambulatory education in IM training programs. They were found in the clinical and teaching practices of numerous leading ambulatory care educators across Canada.

7M2 (5242)

Date of Presentation: Tuesday 29th August
Time of presentation: 1115 - 1130
Location: Boisdale 2, Loch Suite, SEC

What do clinical teachers address during feedback?

Noelle Junod Perron1, Matteo Coen1, Robin Luechinger2, Anne-Claire Brechet1, Sara De Oliveira1, Helene Richard-Lepouriel1

[1]Geneva University Hospitals, Geneva, Switzerland; [2]Geneva Faculty of Medicine, Geneva, Switzerland

Background

As part of our Faculty development program, clinical teachers attend objective structured teaching sessions (OSTEs), during which they are asked to give feedback to simulated residents on different tasks. The study aimed to analyse the feedback content provided during these OSTEs; to evaluate whether it changed according to the training phase, the medical discipline, or the type of task observed; to assess the alignment between feedback content addressed by the clinical teachers and content identified as key by experts.

Summary of Work

We conducted a multimethod study as part of this faculty development program. Clinical teachers from five departments were trained to supervise and give feedback to residents on several clinical topics in a six-month training program. Before and after the training, 91 of them completed four OSTE stations. OSTE stations focused on four tasks involving communication, interprofessional, physical or procedural skills. The feedback content was analysed descriptively according to the following categories: targeted (to the skills related to the task), other clinical content, learning strategies, and self-management. ANOVA test was applied to evaluate what factors influenced the feedback content. For each OSTE, we analysed the percentage of items identified as key by 3 experts (2-4 items per station) that were addressed by clinical teachers during the feedback.

Summary of Results

317 feedback sessions were analysed, and 5388 occurrences coded. Feedback content distribution was: targeted feedback (73%), other clinical content (20%), learning strategies (4%), and self-management/other (3%). Feedback was more often negative than positive (73%). The phase of the training did not influence the content addressed. However, the topic of the observed task and the clinical teachers' medical field somewhat influenced the feedback content. The percentage of alignment between content identified as key by experts and addressed by clinical teachers during OSTEs was low for all tasks (3-38%).

Discussion and Conclusion

Clinical teachers give mostly negative and targeted feedback according to the task during OSTEs. There is little alignment in selecting the key content to be addressed.

Take-home Message

Feedback content is usually targeted to skills reated to the task but remains highly variable. Reasons for choosing the feedback content should be further explored.

7M3 (5433)

Date of Presentation: Tuesday 29th August
Time of presentation: 1130 - 1145
Location: Boisdale 2, Loch Suite, SEC

Are surgical trainees ready to perform surgery independently? The supervisors' perspectives: a scoping review

Karen Busk Hesseldal1, Tora Haug1, Rune Dall Jensen2, Charlotte Paltved2, Anders Husted Madsen1

[1]Department of Surgery, Gødstrup, Denmark; [2]Corporate HR, MidtSim, Aarhus, Denmark

Background

Tensions between receiving efficient workplace-based education in surgery and providing high-quality patient care is often highlighted in educational literature. Hence, an immense amount of literature aims to enhance surgical learning outside the operating room. However, trainees must be entrusted with decisions and operative procedures to achieve proficiency. While structured assessment tools and frameworks exist for the trainee to achieve both technical and non-technical feedback, little is known about the thoughts and challenges the supervisors are facing when residents are trusted with surgical procedures. The aim of this scoping review was to comprehensively identify studies describing the supervisors' thoughts and their methods on how to identify surgical independency among their trainees.

Summary of Work

A systematic scoping review methodology was applied using the five-step framework by Arksey & O'Malley. A search string was built around the terms "Resident", "Autonomy" and "Surgery" and applied in five different databases. All empirical peer-reviewed publications of quantitative, qualitative and mixed-methods methodologies were included in order to consider different aspects of the phenomenon. All studies were screened individually by to authors.

Summary of Results

In total, 2699 publications remained after duplicates were removed. After title and abstract screening, 143 were assessed for full-text screening, from which 107 publications were eligible for review. Data was extracted using PRISMA-ScR guideline. The majority of the included studies were from North-America and within general surgery. From the results, 11 different assessment tools were identified with a wide range from objective ratio of supervisor interaction, combined summative evaluation of independency to supervisor gut feelings.

Discussion and Conclusion

From the results of our review, a great diversity can be seen in methods for assessing trust in the supervisor trainee relationship, from well-known objective technical assessment tools to subjective assumptions as a supervisors' gut feeling. Entrustable professional activities are widely used in the postgraduate assessment of young doctors and is a cornerstone in competency-based medical education. To achieve proficiency, trainees need to gain trust from their supervisors to operate independently. Further research is needed to unfold what it takes for a supervisor to trust their trainees.

Take-home Message

A great diversity can be seen in methods for assessing the independency of surgical trainees.

7M4 (1598)

Date of Presentation: Tuesday 29th August
Time of presentation: 1145 - 1200
Location: Boisdale 2, Loch Suite, SEC

Clinical supervision of Advanced Practitioners in Primary Care teams: a realist evaluation

Benjamin Jackson1, Chris Burton1, Steven Ariss1

1The University of Sheffield, Sheffield, UK

Background

Health service policy describes supporting the provision of primary care services through the introduction of advanced clinical practice (ACP) roles. Understanding what mechanisms support them to adapt to deliver generalist care remains a key research gap. A critical factor in this adaptation is clinical supervision from experienced general practitioners (GPs).

This realist evaluation identifies what mechanisms within clinical supervision work to enable advanced practitioner to adapt and develop their capabilities within new contexts of clinical care, and how and why these mechanisms work.

Summary of Work

An initial programme theory was developed with candidate Context-Mechanism-Outcome-Configurations (CMOCs) for advanced practitioner integration into primary care teams. Paired, realist semi-structured interviews were undertaken with 13 ACPs starting new roles in primary care and 12 supervising GPs. Half of participants were from practices serving communities in the most deprived quintile. Interviews were transcribed and qualitative data analysed to both test candidate CMOCs and identify new CMOCs. Refinement of the initial programme theory was undertaken to produce a new programme theory for effective clinical supervision.

Summary of Results

Important contextual aspects relating to practitioner background, supervisor training, supervision organisation and team structure were identified. Important mechanisms identified to sense-of-safety, mutual trust, communication of clinical reasoning, reflection, self-determination and collaborative care. Outcomes identifed through these mechanisms included increased confidence, job-satisfaction, practitioner development, and increased patient-centred care.

Discussion and Conclusion

This study contributes to the understanding of the mechanisms within clinical supervision that accelerate clinical learning, particularly during role transition. Understanding the key supervision mechanisms that support learning and development in primary care settings has relevance for learners from all professional groups and at all stages of training. Purposeful sampling ensures that findings are derived from, and relevant to primary care practitioners working in different contexts, including in the most underserved communities. Healthcare policy makes understanding key mechanisms that support the successful integration of new practitioners critical in supporting primary care services. .

Take-home Message

Understanding how and why clinical supervision works for developing practitioners in different contexts will help to develop effective multi-disciplinary teams that can deliver high-quality primary care. The mechanisms identified also inform how to effectively support learners in other clinical contexts through clinical supervision.

Session 7N: Points of View 2

7N1 (3337)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 11:12
Location of presentation: Dochart 1, Loch Suite, SEC

Mad in/at Medical School: Experiences and Reflections of a Mad—in both senses—Medical Student

Maryam Golafshani[1]

[1] *Faculty of Medicine, University of Toronto, Canada*

Riffing off Margaret Price's book titled "Mad at School: Rhetorics of Mental Disability and Academic Life," this Point of View presentation will explore my experiences and frustrations as a mad medical student with bipolar disorder. My use/reclaiming of the word "mad" is three-fold: (1) an ode to my investment in mad studies, (2) a push for the audience to critically reflect on the colloquial, sanitized use of the vague phrase "mental health challenges," and (3) a part of my feminist praxis as an "angry," "difficult" woman of colour.

I will share a few anecdotes that exemplify the ableism I have experienced throughout medical school, from being explicitly told I cannot pursue certain specialties to more subtle ableist language used on the wards. From here, I will offer my (sometimes controversial) suggestions for how medical training must change in order to be truly inclusive of disabled and mentally ill trainees. My suggestions not only address issues with disability accommodations, but also problems with the way "wellness" is leveraged in medical education.

7N2 (6238)

Date of presentation: Tuesday 29th August
Time of session: 11:12 - 11:24
Location of presentation: Dochart 1, Loch Suite, SEC

Patients as partners in curriculum development: sharing the curriculum space

Lisa Graves[1], Kristi VanDerKolk[1], Emily LevyKamugisha[2], Michael Donovan[3], Robert Mcclowry[4], Timothy Brown[4], Vicki Mckinney[5]

[1] Western Michigan University Homer Stryker M.D. School of Medicine, Kalamazoo, USA [2] UT Southwestern, Dallas, USA [3] Southampton Healthcare, St.Louis, USA [4] University of Georgia, Athens, USA [5] University of Georgia, Augusta, USA

Medical educators have traditionally developed curriculum content often with minimal input from persons with lived experience. During this point of view presentation, the process to develop curriculum with a co-creation model will be presented. The role of patient subject material experts will be reviewed in comparison to the role of clinical subject matter experts. This presentation will use a case study related to the development of trans* health care in family medicine to describe the process used. Two recent national surveys have identified family medicine physicians' willingness to provide trans* health education for both students rotating through family medicine clerkships as well as with family medicine residents. A gap exists between the willingness of family medicine teachers to include trans* health as part of the curriculum and the resources available to teach a trans*health curriculum. Review of the literature found few existing published examples of trans* health curricula and these curricula have been developed without explicit integration patient subject matter experts

The goal of this co-creation process is to seek input on the question "What from your experience of health care should be part of training of medical students and family medicine residents to provide trans*health care". This presentation will present the perspective that co-creation of curricula results in more authentic curricula better designed to meet both patient and learner needs. Participants will gain insight into a different perspective on curriculum development.

7N3 (2929)

Date of presentation: Tuesday 29th August
Time of session: 11:24 - 11:32
Location of presentation: Dochart 1, Loch Suite, SEC

Is ethnicity merely a risk factor in medicine? - A hidden curriculum story

Dowan Kwon[1], Ed Luff[2], Aidan Haslam[3], Emma Ferreira[2], Anna Ogier[4], James Hodgson[5], Gloriana Suri[1]

[1] Bristol Medical School, University of Bristol, Bristol, UK [2] University Hospitals Bristol and Weston NHS Foundation Trust, Bristol, UK [3] University Hospitals Birmingham NHS Foundation Trust, Birmingham, UK [4] Kingston Hospital NHS Foundation Trust, Kingston upon Thames, UK [5] University of Warwick, Warwick, UK

"A 72 year old man has had shortness of breath for 6 months with blood streaked sputum."

Is lung cancer crossing your mind? How about a little more information?

"A 72 year old man **from India** has had shortness of breath for 6 months with blood streaked sputum."

Is tuberculosis suddenly crossing your mind? Could it still be lung cancer? If so, is tuberculosis more or less likely to be lung cancer? Would you still investigate in the same way? Or does the patient's ethnicity change your management plan? If the words "from India" are not mentioned, is the patient not from India? Or could they still be from India? Might they be from India and from somewhere else at the same time? Is it possible that the patient's ethnicity has little to no significance to what the diagnosis is, even if this patient is from India and he has respiratory symptoms? What even is ethnicity?

Medical education trains us to recognise patterns. As unhelpful as some biases and stereotypes may be, some can be very helpful in aiding decision-making and managing acutely unwell patients. As to whether the unhelpful stereotypes translate from assessments in a multiple-choice question (MCQ) format to the clinical setting is not fully known. But anecdotes exist.

Medical educators need to be conscious that a system that directly attaches an ethnicity (or any other characteristic) to a pathology and vice versa could be harmful. Very few things in medicine are truly pathognomonic. Ethnicity is not a pathognomonic risk factor. If not careful, we could enter a dangerous territory where our biases, what makes us human, could lead to very biased care where patients may be misdiagnosed and mistreated.

We need to find a way in which we can covey ethnicity information without minimising it as a mere risk factor. Yet, how do we do this in an MCQ? We are trained that only relevant information is mentioned in an MCQ so if ethnicity is mentioned, it is often (if not always) presumed that it is relevant to the answer. Huge hidden curriculum there. Let's discuss.

7N4 (6668)

Date of presentation: Tuesday 29th August
Time of session: 11:32 - 11:38
Location of presentation: Dochart 1, Loch Suite, SEC

The Importance of Being Human: The Conundrum of Bringing into Life Humanists in Modern Medical Education

Goran Stevanovski[1]

[1] *Department of Medical Education, Ss Cyril and Methodius University, Medical School, Skopje, The Former Yugoslav Republic of Macedonia*

A significant part of medical education consists of guiding students through processes of internalizing humanist values while simultaneously building their professional identities in anticipation of entering the field of medicine. Nonetheless, with the plethora of skills and information available students need to acquire during the limited time of undergraduate medical education, scientific knowledge, and skills often overshadow the human aspect of our profession. This leads to soft skills that add the "care" in healthcare being overshadowed in formal training, with many medical schools only mentioning soft skills under the "hidden curriculum" (Hafferty & O'Donnell 2015). In a reality where medical students and residents are unable to visualize learning outcomes from the hidden curriculum, every skill - soft skill or otherwise - needs to be deliberately, and explicitly taught. This opens up a few questions – What is the relationship between the humanist and professional identities? Can (or should) they be one and the same? If they are separate, how do we bridge these multiple, sometimes competitive identities? Furthermore, what is the responsibility of medical educators in promoting humanist values in their students? Are medical schools responsible for nurturing humanist identities alongside professional identities? Or should empathy and human dignity fall under the guise of common sense or a prerequisite for those looking to enter the profession? Should medicine go as far as introducing the philosophy of humanism in order to create a future workforce of humanists and humanitarians? If so, is deliberate professional identity formation the first step of this complex process?

In this talk, I argue that humanist values can transform a good physician into a great one. In so doing, I discuss ways to affix everyday medical practice with empathy, human dignity, and medical professionalism. The use of simulation, namely super simulated patients (SSP) utilizing symbiosis of drama and performance can be used as a tool to both assess and refine the humanist approach in the patient encounter.

7N5 (6583)

Date of presentation: Tuesday 29th August
Time of session: 11:48 - 12:00
Location of presentation: Dochart 1, Loch Suite, SEC

Navigating the Complex Student Journey in Health Professions: Using Student Journey Mapping to Improve Learning, Support and Administration

Janus Van As[1], Richard Cooke[1]

[1] *Department of Family Medicine and Primary Care, University of the Witwatersrand, Johannesburg, South Africa*

To foster a culture of learning excellence requires faculty to innovate around the dimensions of the student experience, including that involving learning, administration, and support. The student journey in health professions is multifaceted, moving between multiple and varied settings such as in-class, clinical, and online. Students need to deal with administrative processes in the faculty and the health system, while dealing with the additional burden presented by the always authentic but often toxic work culture in the clinical setting. “Touch and pain points” in the student journey can be identified as the focus for optimising the learning experience, even to aspire to a culture of learning excellence. At the root to any progress, however, is the understanding of the student experience to develop better learning strategies, support structures, and administration processes. In this presentation we will be discussing student journey mapping through their degree program, as described by the “touch and pain” points of positive support and negative obstacle respectively. Effective interventions and innovations can then be identified for trial implementation. We will be discussing some of the barriers to student journey mapping that we experienced, and lessons learnt from applying this to our South African context. This presentation is intended for educators, administrators, and researchers interested in improving the student learning experience in health professions. The intended outcome of this short communication is to provide an overview of the student journey in health professions and how student journey mapping can be used to improve learning, support, and administration. Participants will gain an understanding of the benefits of student journey mapping, the challenges of implementation, and the best practices that can lead to successful outcomes.

7N6 (5906)

Date of presentation: Tuesday 29th August
Time of session: 12:00 - 12:12
Location of presentation: Dochart 1, Loch Suite, SEC

The professional belonging of junior doctors is hindered most by imposter feelings in non-clinical contexts

Alison Zhu[1], Sarah Aitken[1]

[1] *The University of Sydney, Faculty of Medicine and Health, Concord Clinical School, Concord West, New South Wales, Australia*

Feeling like an imposter, with a pervasive sense of self-doubt, inadequacy, and intellectual fraudulence, despite objective measures of success, are well recognised in the psychological Imposter Syndrome (IS). Intersectional research demonstrates that people outside of male heteronormative white society are more likely to have IS, experiencing fear of evaluation, difficulties forming professional identity and navigating career transitions. It is therefore unsurprising that one in three junior doctors and up to 98% of surgical trainees are reportedly affected by IS. Imposter feelings are also correlated with decreased job satisfaction and increased rates of burnout.

Much of the research into IS has focused on attributes of the individual and workplaces, but I propose that non-clinical contexts have a more significant impact of the occurrence and severity of imposter feelings. For junior doctors, a well-supported, team-based clinical environment can be validating, diminishing imposter feelings through objective indicators of success, and positive feedback. Clinical roles and progression through training program competencies are clearly defined, facilitating trainee security. Indeed, imposter feelings in an environment of trust and security can prompt personal growth and learning. However, outside of the defined clinical team environment, especially for hyper-competitive specialties like surgery, imposter feelings can be detrimental. Non-clinical professional contexts such as conferences and courses are pivotal for upward networking, career stiving and promotion. However, these environments also heighten imposter feelings through competitive peer comparisons, social anxiety and ill-defined roles.

Reflecting on my own career as a woman of colour embarking on surgical training, I often lack a sense of belonging in the hyper-performative, male-dominated profession, especially when attending conferences or engaging with peers outside my clinical team. The need to belong, to break into the profession, can be a motivator to push harder and strive, proving my eligibility to belong in the surgical sphere. This need for validation is for myself, as well as to demonstrate my eligibility to others, but it also creates significant

stress and feelings of inadequacy. If we are to develop interventions aimed at improving inclusivity and decreasing imposter feelings, it is important to consider professional development contexts as well as clinical environments.

Session 70: Faculty Development: Developmental Skills: Training, Feedback and Support

701 (3893)

Date of Presentation: Tuesday 29th August
Time of presentation: 1100 - 1106
Location: Carron 1, Loch Suite, SEC

Is there a need to foster Continuing Professional Development Culture in Medical Education in Georgia?

Nino Chikhladze[1], Nato Pitskhelauri[1], Maia Bitskinashvili[1]

[1]*Ivane Javakhishvili Tbilisi State University, Tbilisi, Georgia*

Background

Continuing Professional Development (CPD) for teachers is an accreditation sub-standard in Georgia. In 2021 benchmarks of medical education were updated and a requirement for medical teachers to participate in CPD every 2 years was introduced. The culture of CPD largely depends on intrinsic motivation, appropriate regulation, supportive management, etc. The current study aimed to explore longitudinal evolution of perception of staff towards CPD before and after introducing the obligatory participation in CPD on the example of medical teachers at Tbilisi State University (TSU).

Summary of Work

Regular online survey of academic staff satisfaction is an integral part of TSU Quality Assurance activities. The survey is anonymous and staff involvement is voluntary. Questionnaire includes questions for evaluating staff satisfaction with the services offered by TSU and covers issues related to CPD. Based on the teaching experience gained during Covid-19 Pandemic, the content of questionnaire was updated considering remote opportunities which were not applicable at High educational system in Georgia prior to 2020.

Summary of Results

The sample consisted of data from surveys conducted in 2018-2022. The average annual number of respondents was 102 with an average response rate 57,9%. In all surveys female respondents dominated (on average 58,8%), staff in age group 56-65 (on average 24,8%) and with teaching experience of 6 years and more (on average 88,9%). The majority of staff (on average 79,2%) evaluated the opportunity for CDP with 3.8 points (from 5). On average half of the staff mentioned this factor as one of the attractive factors for working at TSU. Most respondents (on average 85,3%) expressed interest in CPD, especially via seminars with participation of the international experts and sharing experience/best practices. For the majority of staff, the most suitable way to deliver CPD is through hybrid method. The small changes in ranking across the items over study period are not statistically significant.

Discussion and Conclusion

This study gave insights into longitudinal evolution of perception of medical teachers towards CPD on the example of largest University in Georgia and identified most suitable patterns of CPD culture.

Take-home Message

Yes, it is.

Evaluating staff satisfaction offers avenue for advancing CPD culture in medical education at local and National levels.

702 (3627)

Date of Presentation: Tuesday 29th August
Time of presentation: 1106 - 1112
Location: Carron 1, Loch Suite, SEC

Professional identity as basis for the professional organisation of faculty.

Rien de Vos1, Marjolein Heemels2, Evelyn Finnema3, Jeanet Steenbruggen1, Jolanda Ter Sluysen4

[1]Amsterdam University Medical Center, Amsterdam, The Netherlands; [2]Maastricht University Medical Center, Maastricht, The Netherlands; [3]Wenckebach Institute for Education and Training, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands; [4]Radboud university medical center Health Academy, Nijmegen, The Netherlands

Background

The medical profession has a high degree of professionalization. Other healthcare professions have less. A lower degree of professionalization leads to reduced influence on quality of care, less attractiveness of the profession, and a lower position on the hierarchical ladder. To reverse this, a revaluation is needed. This is initiated by the development and re-enforcement of professional identity. However, there is still a lack of unequivocal model for shaping professional development. We designed a framework for this.

Summary of Work

The framework has been developed using literature and ongoing discussions with professional organizations in the healthcare professions, teachers and management of (nursing) schools, as well as representatives of boards of general and teaching hospitals in the Netherlands between January 2020 and December 2022.

Summary of Results

The model consists of nine sequential and interrelated characteristics. Professional identity, professional identity, professional development, professional career paths, professional functions and roles, professional responsibility, professional leadership,

professional control, and professional work environment. Each characteristic has been operationalized. Also two essential actors have been identified: the professionals themselves, and the hospital management with their HR departments.

Three unique features of the model are: the quality of the work is the starting point, it takes professional identity as the basis for leadership. Leadership and control are about the work, and not about hierarchy.

Presenting the model to target groups delivered three appealing elements: cohesion within the model, integration of separate concepts, and clarity about responsibilities of actors.

Discussion and Conclusion

Professional identity is a prerequisite for leadership. The model facilitates the discussion about ownership, autonomy, leadership and control and indicates how joint efforts of actors can be made to achieve higher goals.

With this framework, one can develop coherent and integrated policies for the improvement of the care and educational organization. The next step is to validate the model through scientific research.

Take-home Message

Faculty development is not about having a cafetaria-model of possibilities, but requires a distinct, integrated and well aligned model for professionalisation. Professional identity development is a prerequisite for leadership. Two responsibilties have to be adressed to allow professional development: that of health professions themself and that of the management of health care organisations.

703 (3410)

Date of Presentation: Tuesday 29th August
Time of presentation: 1112 - 1118
Location: Carron 1, Loch Suite, SEC

Associate professors' intention to pursue full professorship in academic medicine and dentistry

Manjula Gowrishankar[1], Nathalia Fagundes[1], Sudha Koppula[1], Geoff Ball[1], Arnaldo Garcia[1]

[1]*Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Canada*

Background

To enable professional opportunities and support the career advancement of academic faculty members, institutions need to understand what prevents associate professors (APs) from advancing to the rank of full professors (FPs). Contributing factors have been insufficiently examined. The purpose of this study was to describe proximal determinants of the intention to pursue full professorship among APs.

Summary of Work

This cross-sectional study was conducted from October to November 2022. A theoretically informed survey was developed, validated, and piloted to measure APs intention to become FP. Survey items were related to proximal determinants of behavioral intention (e.g., attitude, social norms, self-efficacy) according to the Integrated Behavior Model. Focus groups with APs, FPs, and chairs and literature on behavioral intention were used to develop survey items. All APs from the Faculty of Medicine and Dentistry at our institution were invited to participate. Survey was administered using REDCap and data analyzed descriptively.

Summary of Results

In total, 106/254 (42%) APs completed the survey. Mean duration at this rank was 7.5±0.48 years (range 1-20). Most were 41-60 years of age (73%). Most intended to pursue full professorship (84%), and something they should do (86%). Full professorship was perceived as advantageous (81%) and important (88%); however, 65% anticipated that it could increase faculty's expectation of their performance and 87% felt that application

process was not easy. Only 62% knew the requirements for promotion and 34% were confident in preparing their application package. Barriers reported were, lack of recognition of accomplishments by the faculty in teaching (68%), administration/service (76%), comparison of diverse colleagues (85%), family/personal circumstances limiting travel (59%) and academic productivity (60%). Reported enablers included mentorship--and guidance on promotion at the department and faculty levels.

Discussion and Conclusion

Most APs intend to pursue full professorship; however, several barriers and enablers were identified. Institutional level program is needed to coordinate multi-faceted interventions including changing standards to address equity/diversity, evaluation of teaching and administration/service, supporting/assisting APs in meeting promotion requirements, addressing barriers, and preparing application packages.

Take-home Message

Institutions need to re-assess and change their evaluation standards, provide onboarding and ongoing support to their faculty members to help them achieve their full protentional and career satisfaction.

704 (4475)

Date of Presentation: Tuesday 29th August
Time of presentation: 1118 - 1124
Location: Carron 1, Loch Suite, SEC

Tuesday's Teaching Tips: A Spaced Education Faculty Development Program Regarding Evaluation and Feedback- It's More than an Email

Colleen Kalynych1, Elisa Zenni1, Janice Hanson2

[1]*University of Florida College of Medicine-Jacksonville, Jacksonville, USA;* [2]*Washington University School of Medicine in St. Louis, St. Louis, USA*

Background

Faculty development is a critical component of strengthening faculty teaching skills across health professions education. However, multiple barriers to faculty participation persist globally, including limited time, difficulty scheduling in-person sessions for groups of faculty members, and challenges in practicing the skills taught during workshops. We created a faculty development program in evaluation and feedback, which utilized spaced education strategies and Cognitive Theory of Multimedia Learning (CTML) techniques to deliver skills-based content via email for faculty to implement in the clinical learning environment.

Summary of Work

Objective: Our study sought to 1) describe participants' experiences in a novel interprofessional spaced education faculty development program that addressed evaluation and feedback, and 2) identify faculty's perceived knowledge and skills gained and applied to their clinical teaching.

Methods: Faculty reviewed one micro-lecture, then received a weekly email with reinforcing skills-based tips designed with CTML to practice with learners regarding evaluation and feedback for 13 weeks between February and May of 2020. Participants were clinical teaching faculty representing five health professions at one academic institution. We applied qualitative methods to evaluate the program using conventional content analysis to inductively analyze post-course reflective narrative responses.

Summary of Results

Thirty-four physician faculty across 13 specialties and 10 non-physician faculty from four disciplines completed the program and participated in the study. Participant responses fell into three categories: effectiveness of the presentation of the material, applicability and feasibility of program content, and perceived improvement of teaching and learning. Most mentioned specific feedback skills and information they acquired, emphasized the importance of specific techniques, and identified overall approaches to delivering feedback.

Discussion and Conclusion

The results of this program evaluation suggest that a spaced education faculty development program across multiple health professions was well-received by faculty, overcame known barriers to participating in faculty development, and promoted short-term retention and application of skills in the clinical learning environment. Delivering the program by email enabled faculty to access the content at flexible times, and spaced education with CTML techniques facilitated application and practice.

Take-home Message

Approaches to Faculty Development beyond traditional methods and settings help overcome barriers to participation and can lead to enhanced learning and skills for faculty across the health professions.

705 (5520)

Date of Presentation: Tuesday 29th August
Time of presentation: 1124 - 1130
Location: Carron 1, Loch Suite, SEC

Training medical students as effective educators: Do training programs equip students to teach online effectively?

Josh Killilea[1], Safeer-Ul Islam[1], Aoife Madden[1], Yashvi Patel[1], Haider Nazerali[1], Renée Alejandra Servin Recio[1], Felyx Wong[1], Meghna Irukulla[1], Benjamin Preston[1], Daniel Huddart[1]

[1]*Imperial College London, London, UK*

Background

Peer-Assisted Learning (PAL) is a vital component in how medical students study the vast medical school curriculum. Nonetheless, it can be argued that the training of student-led teachers is somewhat poorly addressed, evident in the lack of formalised training programs geared towards training medical students as effective educators. To address this problem, the Medical Education society at Imperial College London has developed a 'Teaching Academy', which provides regular training for medical students over the course of the academic year. Training consists of both theory- and practical-based sessions. In the theory sessions, the students are taught effective pedagogical techniques from experienced older year tutors, and in the practice workshops, students can implement these skills by delivering short lectures and receiving detailed feedback on their teaching skills. In light of COVID-19 restrictions, teaching has transitioned from face-to-face to the online environment. As such, this years Teaching Academy was run remotely, and we sought to evaluate how well-equipped students felt towards teaching online.

Summary of Work

Forty-four students from years 1-4 of medical school were enrolled onto the 2021-2022 Teaching Academy Program, completing 5 theory-based sessions and 3 practical workshops. Upon completion of the program, students completed a post-course questionnaire which included a Likert-scale question on whether students felt more confident in teaching online following completion of the teaching academy, as well as compare to baseline rates.

Summary of Results

Thirty-four students completed the post course feedback. Twenty-one (61.7%) strongly agreed that the TA well prepared them for online teaching, with thirteen (38.2%) also somewhat agreeing with the statement. More generally, twenty-six (76.4%) strongly agreed that their teaching skills improved following the TA, with the remainder somewhat agreeing.

Discussion and Conclusion

Running the teaching academy remotely seemingly has no impact on the quality of the sessions delivered and appears to have the additional benefit of preparing students specifically for teaching remotely, an increasingly common mode of delivery. Future studies should explore deeper into which aspects of the course in particular help students prepare better for online teaching.

Take-home Message

Courses designed to train medical students as educators should bear some focus on equipping students with skills on teaching remotely,

706 (1242)

Date of Presentation: Tuesday 29th August
Time of presentation: 1130 - 1136
Location: Carron 1, Loch Suite, SEC

Best practices in small group facilitation, a thematic analysis of direct observation and feedback

Katherine Mason1, Jordan White1, Ken Lynch1, Kara Stavros1, Chris Merritt1, Emily Green2, Marguerite Rippy3

[1]Warren Alpert Medical School of Brown University, Providence, USA; [2]University of Massachusetts Chan Medical School, Worcester, USA; [3]George Mason University, Virginia, USA

Background

Faculty development is essential for quality educational practice. Many medical schools use volunteer clinical faculty to facilitate small-group sessions. These clinician educators bring invaluable perspectives, yet have highly variable formal training in instruction. Student ratings of small group facilitation are often taken as evidence of teaching skill, yet these ratings are rarely corroborated with other types of formative evaluation. The need for faculty development targeted at this group of medical educators provided the impetus for an observation and feedback initiative grounded in the conceptual framework of deliberate practice at one medical school. This initiative provided direct observation and feedback to facilitators of small groups in preclinical years of the curriculum to encourage reflection and improvement of educational practice. Iterative review of the written feedback from the trained observers revealed congruence across observers on best facilitation practices.

Summary of Work

Five experienced faculty educators were selected via an application process. These educators received 5 hours of training that were grounded in best practices of observation and feedback processes as described in the literature, as well as their own expertise with small group facilitation and evaluations. The trained faculty then completed 88 unique observations and written reports of small group sessions that were provided to small group facilitators. A thematic analysis was performed by two members of the study

team and themes relating to best practices were identified. Member checking was done with the remainder of the observers, and triangulation of findings via interviews with other key stakeholders (faculty and students) is in process.

Summary of Results

Predominant themes about best practices in small group facilitation included mitigating hierarchy, using affirmation and reinforcement to create a positive learning environment, ensuring full student engagement, encouraging risk taking and curiosity, incorporation of multimodal learning strategies, iterative student assessment, allowing silence, and good time management.

Discussion and Conclusion

Direct observation and feedback in small group sessions revealed common themes around best practices in small group facilitation that can be used to guide further faculty development.

Take-home Message

Direct observation and feedback revealed several key elements of best practice in of small group facilitation while also contributing to facilitators' iterative development of expertise.

707 (1262)

Date of Presentation: Tuesday 29th August
Time of presentation: 1136 - 1142
Location: Carron 1, Loch Suite, SEC

Not everyone is perfect - Struggling learners, Remediation and the Role of Faculty

Krithikaa Nadarajan[1], Shaikh Abdul Matin Mattar[1], Lourdes Ducusin Galang[1], Kavitha Garuna Murthee

[1]*Singapore General Hospital, Singapore*

Background

About 10% of trainees in healthcare are identified as 'struggling' or challenging learners. Early identification of these learners along with appropriate remediation interventions leads to better outcomes. However, Faculty often have inadequate training in this area and can be perplexed on how to support these struggling learners.

Summary of Work

We conducted a half-day Faculty Development Workshop to coach medical faculty on essential skills required in remediating struggling learners. During the workshop, participants were introduced to a useful framework that could be used to assess a struggling learner, develop and implement an individualised action plan, and conduct a focused reassessment of a struggling learner to ensure an acceptable level of competence has been met. These skills were taught via a combination of didactic lectures and small group interactive sessions utilising case studies and role plays.

Summary of Results

58 Faculty participated in the workshop. Pre- and post-workshop evaluation showed a significant increase in perceived self-confidence in the following aspects :1) creating a remediation action plan from an average of 2.5 to 3.5 , 2) Performing a focussed reassessment for a struggling learner from an average of 2.7 to 3.5 and 3) Meeting the needs of a struggling learner from an average of 2.7 to 3.5.

Discussion and Conclusion

This Faculty Development Workshop introduces to faculty a framework which equips them with the essential skills required in remediating struggling learners. Post workshop evaluations showed that participants who attended the workshop felt more confident in their ability to meet the needs of struggling learners. More large-scale studies with a longer follow up duration needs to be done to fully elucidate the benefits of these workshops.

Take-home Message

Faculty development workshops increase Faculty confidence in supporting struggling learners.

708 (3232)

Date of Presentation: Tuesday 29th August
Time of presentation: 1142 - 1148
Location: Carron 1, Loch Suite, SEC

"With great power comes great responsibility": Coaches' Experiences Supporting Students who Struggle

Andrew Parsons1, Martha Elster2, Sally Collins2, Karen Hauer3, Maryellen Gusic4

[1]University of Virginia School of Medicine, Charlottesville, Virginia, USA; [2]University of California San Francisco Hospital Medicine, San Francisco, California, USA; [3]University of California San Francisco School of Medicine, San Francisco, California, USA; [4]Lewis Katz School of Medicine, Philadelphia, Pennsylvania, USA

Background

Medical student coaches report high role satisfaction, but also more burnout than other educators, and cite working with struggling learners as distressing. Transformative learning theory suggests that coaches who reflect upon and grow from challenging, disorienting experiences can build resilience, gain knowledge and skills, and shift their perspectives to equip them for future coaching challenges. We conducted this study to explore coaches' experiences with struggling learners and how coaches may change as a result of these relationships.

Summary of Work

This qualitative study in an interpretivist paradigm used semi-structured interviews of medical student coaches at two large academic institutions with similar longitudinal coaching programs. Interviews explored coaches' experiences, learning, and challenges coaching struggling learners. We performed thematic analysis and continued interviews until we reached sufficient conceptual depth.

Summary of Results

We interviewed 15 coaches (average length 26 minutes). Themes (bold) identified were as follows: Coaches described profound personal responsibility, shame, and failure when learners struggled. Coaches endorsed high value of the longitudinal coaching relationship

as a safe space for open dialogue about the struggle and as an avenue to monitor for improvement but also surveil for additional struggles. Shared understanding between the coach and learner developed as they navigated the struggle and coaches described gaining a deeper appreciation of the learner and their experiences. Coaches described personal growth as they learned to adapt their response to individual learner struggles that were unfamiliar and unforeseen for coaches, access appropriate resources, and build skills and confidence in supporting learners through struggles.

Discussion and Conclusion

Coaching struggling learners leads to high distress and high reward. Because coaches are strongly invested in learner success, they may be challenged to maintain appropriate boundaries with learners and may feel responsible for present and future learner struggles. However, through navigating learner struggles, coaches can gain new perspectives and self-efficacy, learning to understand the struggle from the learner's point of view and better conceptualize their own responsibilities within the struggle. Coaches also learn to adapt their coaching approach and build skills to lessen the emotional burden of the struggle through time suggesting a need for faculty development focused on maintaining boundaries, potentially with experienced coach peers.

Take-home Message

Included

709 (5099)

Date of Presentation: Tuesday 29th August
Time of presentation: 1148 - 1154
Location: Carron 1, Loch Suite, SEC

The root cause analysis in clinical medical students training programs in non-university hospital

Chaowat Pimratana1, Bhuwadol Kittiwattanasarn2, Narin Chindavech3, Praewphan Ruangekawit3, Punnaphat Daraswang 3, Surasak Aumkaew3, Paweenuch Supawan3, Panomporn Junla-or3, Chutima Deesawat3, Pienlert Moonwiriyakit3

[1]Director of Medical Education Center, Buriram Hospital, Buriram, Thailand; [2]Director of Buriram Hospital, Buriram, Thailand; [3]Medical Education Center, Buriram Hospital, Buriram, Thailand

Background

Medical education center(MEC) in Thailand are based on government service hospital and physicians are also inevitably to be medical teachers in 4th-6th clinical years. The teaching works prioritized as latter compare to treatment service.

For sustainable solving and balancing both, root cause analysis is necessary to exploration for improvement.

Summary of Work

Online open-end-narrative 5 aspects-questionnaires including 10-point scales were sent to 140 medical-staffs: general individual information, work-loads, income and compensation, academic support, career path, internal and external problems in faculty development, medical student administration, education supportive teams and back office supporter arrangement, human resource, self-planning and solving problems ideas. Each aspect was monthly review by board of faculty committee conference and plan for SWOT analysis. The most concerning area in each aspect was explored in-depth interview. The final solutions and implement strategies were scheduled for next step.

Summary of Results

One hundred online questionnaires were replied (71.4%), medicine physician (22.0%), surgeon (18.0%), pediatrician (9%), obstetrics and gynecologist (8%), others (43%), female 58.2%, mean age 42.1 years. The top five concerning problems were delayed, inappropriate income (9.2/10), each individual back office supporter lack of experience in medical education (8.9/10), national budget and appropriate learning environment unmatched (8.7/10), attitude in medical teachers and low self-esteem in difficult students (8.6/10), staff service workload and lack of teaching mind (7.6/10) other is difficult steps across the threshold concepts (7.1/0).

In additional details, incomes from health service both in general and private practice was much more than another. Supported personnel in MEC were frequently changed or rotated into different position that specific knowledge and skills was limited.

In depth interview showed imprecise career path of the personnel caused low inspiration for themself development and the inappropriate organization environment.

Discussion and Conclusion

Many factors involved in teaching medical students included in modifying and non-modifying, individual and overall obstacles. Both non-faculty and medical-administrative staffs should plan together. Mindset of medical teachers and balancing between time-consumes in service and teaching are important. Informative technologies for academic support for their medical practice and teaching facilitate to overcome the problems.

Take-home Message

The root cause and SWOT analysis and PDCA (plan-do-check-act) circle should be integrated for sustainability quality improvement

7010 (3901)

Date of Presentation: Tuesday 29th August
Time of presentation: 1154 - 1200
Location: Carron 1, Loch Suite, SEC

The challenges of faculty development in Georgian Medical Education

Irine Pkhakadze1, Tamar Goderidze2, Mari Rodonaia1, Mariam Sturua1, Revaz Gvenetadze1

[1]Akaki Tsereteli State University, Kutaisi, Georgia; [2]University of Georgia, Tbilisi, Georgia

Background

The existence of a state-level health care system and patient safety has become a major challenge in the era of COVID-19, consequently, it is actual to develop and implement student-centered undegraduate educational program that provides preparation of a successful and competitive Medical doctor. Quality Assurance System develops internal quality culture that is guarantee for improvement of teaching and learning quality.

Summary of Work

The purpose of the study was to determine whether a culture of self-esteem among the implementers of the courses was introduced to identify their professional development and retraining needs, a survey was conducted with the staff of Medical Schools of Georgia.

The study involved 187 representatives of 11 institutions, 5 among these institutions represented state university and 6 private schools. From the 187 respondents surveyed, 47% were academic personnel, 41% - invited, 18% of respondents held administrative positions, while 2% are education experts.

Summary of Results

84% of respondents believe that the success of the educational program is determined by a consistent curriculum tailored to modern requirements, 79% - main thing is qualification of implementing personnel 72% - infrastructure is crucial, 76% need to share international experience. 83% of respondents expressed a desire to retrain in modern teaching methods, 78% believe that development is needed in order to introduce evaluation

methods, 29% believe the need to retrain in the field of development of research methods, and 57% wanted to retrain in the direction of the development of grant projects, 62% wanted to share foreign experience, it is important that 26% are interested in changing approaches to low academic performance students and only 12% believe that they do not need retraining.

Discussion and Conclusion

Results of the survey are evaluated by HEI and will be taken into consideration. As a result of our experience we are developing initiatives aimed at developing our educational processes. We are also seeking to retrain, or appoint faculty with experience or qualifications in medical education.

Take-home Message

Encouragement of various initiatives, continuous assessment, self-evaluation, teamworking, information sharing, taking care of the professional development of academic and invited staff, knowledge transfer and internationalization will further improve the current medical educational programs.

7011 (4676)

Date of Presentation: Tuesday 29th August
Time of presentation: 1200 - 1206
Location: Carron 1, Loch Suite, SEC

Impact of Ongoing Faculty Development Activities on Behavioral and Organizational Change: A 5-year Observation

Dusit Staworn[1], Sanitra Sirithangkul[1], Anusara Vattanajun [1], Anupong Kantiwong[1], Pongthorn Narongroeknawin [1], Thammanoon Srisaarn[1], Ram Rangsin[1], Mathirut Mungthin[1]

[1]*Phramongkutklao College of Medicine, Bangkok, Thailand*

Background

The focus of faculty development programs extends beyond individual teaching effectiveness and tends to yield behavioral and organizational changes, i.e., educational leadership and scholarship. We are interested in monitoring the impact of our ongoing faculty development activities, especially on the behavioral and organizational change.

Summary of Work

Over the last five years, we established ongoing faculty development activities focusing on the improvement of teaching performance, teaching conceptions and learning approaches, the acquisition of teaching skills, student assessment, instructional design and curriculum development, educational leadership, and educational scholarship. Multiple approaches were used including on-campus & off-campus workshops, just-in-time learning activities, after-action-review activities, and best-practice sharing activities. These activities are classified as planned activities and just-in-time activities as needed or per request from the faculty staff. We report a 5-year experience of monitoring changes in the behavioral and organizational change from our ongoing faculty development activities.

Summary of Results

There were changes in the teaching and learning activities as well as assessment tools used for formative and summative evaluation. Innovative educational approaches such as team-based learning (TBL), case-based learning (CBL), project-based learning (PrBL),

simulation-based learning (SBL), and workplace-based assessment (DOPS, EPA) were evident. All courses verified showed alignment of teaching methods and student learning outcomes. The annual educational policies were well implemented. A favorable trend of numbers of good practice (CQIs) identified during internal quality assurance (IQA) activity, numbers of abstracts submitted and presented at the national & international medical education meetings, the national & international awards received from the abstract presentation were reported. Employers' satisfaction on the performance of graduates of the years 2017-2021 showed favorable trends.

Discussion and Conclusion

The impact of our ongoing faculty development activities on behavioral and organizational change was demonstrated. The key drivers for positive changes were supportive leadership, a learning culture and faculty development activities that respond to the needs of faculty members.

Take-home Message

Ongoing faculty development activities have a positive impact on behavioral and organizational change.

7012 (4794)

Date of Presentation: Tuesday 29th August
Time of presentation: 1206 - 1212
Location: Carron 1, Loch Suite, SEC

"Teaching Up" Health Systems Science in Clinical Clerkships

Meredith Volle1, Tracie Johnson1

[1]*Southern Illinois University School of Medicine, Springfield, USA*

Background

The Department of Population Science and Policy (PSP) at Southern Illinois University School of Medicine (SIU SOM) aimed to integrate Health Systems Science (HSS) topics into clinical clerkships. Resident and faculty members reported low self-confidence in their own HSS knowledge, a known problem among US medical schools, so PSP developed a "teach up" curriculum to aid students, residents, and faculty in recognizing opportunities to incorporate HSS teaching during clinical encounters.

Summary of Work

During clerkship orientations, students complete self-assessment surveys to establish a basis of pre-clerkship knowledge, explore students' perceived confidence in identifying/address HSS topics in a clinical setting, and give feedback to the residents and faculty teaching these topics. Preceptors received coordinating information along with specialty specific guides to assist teaching clinically correlated HSS topics. Students were encouraged to discuss chosen topics with residents and faculty, utilizing a teach up method to help their clinical preceptors recognize daily clinical encounters that center around HSS.

Summary of Results

After clerkship, students were invited to share their experience during a group discussion led by a resident or faculty member in that specialty and complete a post-survey. Results among students demonstrated an increase in confidence among all groups, suggesting that integrating HSS topics into clinical clerkships helped students strengthen connections

between preclinical knowledge and what they see in practice as they apply these concepts in patient encounters. Results also demonstrated high engagement from resident and faculty teachers who had previously reported low self-confidence in their own HSS knowledge, further affirming the utility of this teach-up method.

Discussion and Conclusion

A seamless integration of the curriculum allowed students to apply HSS knowledge during routine patient interactions, while the teach-up method worked to identify and address hidden curriculum around HSS topics that residents and faculty encounter when discussing these subjects with students.

Take-home Message

Health Systems Science (HSS) is an essential component of comprehensive medical education, but many faculty did not receive formal training in HSS.

Utilizing a "teach up" method for students to help their preceptors recognize HSS in clinical encounters can address the hidden curriculum for residents and faculty who already apply HSS in their daily patient encounters.

7013 (5097)

Date of Presentation: Tuesday 29th August
Time of presentation: 1212 - 1218
Location: Carron 1, Loch Suite, SEC

AMEE International Networking Center in Georgia: Regional hub of medical education in South Caucasus

Salome Voronovi1, Gaiane Simonia1, Zurab Vadachkoria1, Zurab Orjonikidze1, Marina Mamaladze1, Khatuna Todadze1

[1]*Tbilisi State Medical University, Tbilisi, Georgia*

Background

In 2019 AMEE International Networking Centre was established in Georgia, based at Tbilisi State Medical University. The Center aimed to share modern medical education methodology, to deliver training courses and to provide higher education institutions and their academic and administrative staff, medical education experts and other health professionals with relevant information and materials. Center envisaged becoming a Regional International Medical Education Hub.

Summary of Work

Since it was opened 4 years ago, the Georgian AMEE Center has organized 16 face-to-face and online training courses. Professor Trevor Gibbs started the new enlightening era for medical educators in South Caucasus region. Well-known international medical education experts have conducted highly demanded courses and contributed to the development of high quality education. Faculty development meetings between courses enhanced the motivation of staff to gain and share best practices as often as possible and attend AMEE conferences.

Summary of Results

Since the center was founded there has been an increasing demand for ESME courses so far the Georgian center has organised: 5 ESME ; 3 ESMEA ; 3 RESME , 2 ESME Lead ,2 ESME EtT (evaluating the teacher). 160 medical educators attended the courses. 20 research

projects were elaborated between courses and results were presented at AMEE conferences and published in different medical journals.

Discussion and Conclusion

AMEE International Networking Center helped the health professions educators from 3 South Caucasus countries (Georgia, Azerbaijan, and Armenia) to obtain the essential and advanced skills in medical education. The number of participants from neighboring countries is gradually increasing. 45 candidates were awarded with AMEE specialist certificate that can be considered as a great success.

Take-home Message

AMEE Center in Georgia successfully achieved the intended outcome to gain the status of regional hub for the enhancement of medical education not only in Georgia but in whole South Caucasus region.

7014 (4877)

Date of Presentation: Tuesday 29th August
Time of presentation: 1218 - 1224
Location: Carron 1, Loch Suite, SEC

Asking the right questions to get useful (sometimes painful) information about the experiences of clinical teachers

Mia Lang[1], Shelley Ross[1], Rachel Hislop-Hook[1]

[1]*University of Alberta, Edmonton, Canada*

Background

A key component of continuous quality improvement in education is the measurement of teachers' engagement and satisfaction with teaching. We developed and administered an evidence-guided survey to capture our teachers' experiences and perspectives on teaching, as well as their concerns and suggestions for improvement across all training programs in our Faculty.

Summary of Work

We developed our initial survey using established measures of teaching engagement and satisfaction from multiple disciplines. Items included measures of self-efficacy, autonomy, altruism, and perceptions of levels of teaching stress, recognition, and perceived supports for teaching. Two open-ended questions asked about ways to improve teacher experiences. A group of education/teaching experts reviewed the full list of items until consensus was reached. The full questionnaire was piloted with a small group of teachers using a think-aloud protocol to identify ambiguous or discordant items. The finalized survey was distributed to all teachers in our Faculty.

Summary of Results

We received responses from 510 teachers representing all ranks and teaching areas in the Faculty (response rates by teaching area ranged 10% - 35%). Overall means from teachers across all types of teaching were high for enjoyment of teaching (3.7/4) and sense of satisfaction from teaching (3.5/4). Teachers felt that there was inadequate recognition of teaching (2.3/4), a lack of transparency in how the administration addressed concerns

from learners (2.4/4), and a lack of useful (2.9/5), timely (2.6/5), and actionable (2.8/5) feedback from learners about teaching. These quantitative trends were supported and elaborated in the open-ended items, and reflected anecdotal observations of low morale among teachers. Several actionable suggestions for improvement were provided by the teachers.

Discussion and Conclusion

Our evidence-guided and rigorously developed survey allowed us to get highly useful information from our teachers. The extensive narrative comments left by respondents offered insight into the trends seen in the quantitative items, and provided clear information about areas of concern that must be addressed. While some of the information was hard to hear, this project has resulted in actionable feedback from teachers that can be used for ongoing quality improvement in our programs.

Take-home Message

Both quantitative and narrative information are necessary for education quality improvement at the institutional level.

7015 (3400)

Date of Presentation: Tuesday 29th August
Time of presentation: 1224 - 1230
Location: Carron 1, Loch Suite, SEC

Preparing medical trainees to be future educators: what experiences stood out most during the medical training?

TingLan Ma1, Joseph Costello1, Ting Dong2, Steven Durning2, Lauren Maggio2

[1]*Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA;*
[2]*Uniformed Services University, Bethesda, Maryland, USA*

Background

In medical education, there is typically an emphasis to produce physician-scientists rather than physician-teachers (1-3). However, producing a pipeline of physician educators is essential in training the next generation of physicians (4). Given the limited attention to the path of physician-educator, gaps remain in the literature. For example, it remains unclear if the role of UME and/orGME contributes to a physician educator's feeling empowered to teach.

Summary of Work

This study explored what experiences physician educators feel have prepared them as teachers. In 2019, physician alumni of the Uniformed Services University in the U.S. were surveyed to include a section to understand teaching preparedness in medical schools and the various experiences across the continuum of their careers that prepared them for teaching. Content analysis was applied to extract themes across the text response.

Summary of Results

604 physician educators responded to this survey section. Findings showed that only 20% of participants felt that their time in medical school fully prepared them for teaching. Participants further identified multiple factors that contributed to their teaching capabilities. The top five contributing factors were: (1) Experiences during residency and fellowship (30%, e.g., being a chief resident, teaching during rounds as a fellow), (2) on-the-job training (28%, e.g., teaching as faculty in both classroom and clinical settings), (3)

teaching peers during medical school (26%), (4) observation of good vs. bad instructor examples (19%), and (5) clinic rotations during medical school (16%). Participants also reflected on the breadth of clinic experiences as a source of broadening their teaching knowledge. Faculty development, mentorship, and role models were mentioned, but were less prevalent.

Discussion and Conclusion

Overall, findings suggest that in addition to on-the-job training, the majority of physician educators recognized both residency and fellowship and UME period were crucial phases in preparing them as teachers. This finding echoed literature that suggests early success is essential in preparing them to be clinical teachers (5).

Take-home Message

Additionally, most participants seemed to rely on daily encounters during rounds or observations to enhance their teaching rather than formal educator training, suggesting formal educator training which we now offer at USU may be expanded to sustain physician educators.

Session 7P: Simulation

7P1 (4751)

Date of Presentation: Tuesday 29th August
Time of presentation: 1100 - 1106
Location: Carron 2, Loch Suite, SEC

Simulation improves medical students confidence and ability to deal with challenging communication scenarios.

Alice Bowen[1]

[1]*Royal Surrey County Hospital, Guildford, UK*

Background

Simulation is widely recognised in undergraduate medical education for assessing and managing an unwell patient but its utilisation for developing medical students communication skills is less common. Effective communication is a key requirement for junior doctors as stated by the GMC Good Medical Practice. UK medical schools provide some training in 'Breaking Bad News' scenarios but there is a lack of guidance when it comes to other difficult situations faced as a junior doctor. The main objective was to explore whether providing a safe space to practice communication skills in difficult situations improves medical students confidence.

Summary of Work

Communication skills focussed simulations were offered to final year medical students in groups of four or five. They would each be involved in a scenario and were encouraged to participate in debriefs. Scenarios were written according to faculty experiences and feedback collected from current FY1 doctors. Data was collected via pre-simulation and post-simulation questionnaire.

Summary of Results

Results demonstrate thus far from a total of three sessions involving 10 students an increase in confidence in dealing with scenarios such as ceiling of care discussions,

palliation discussions, breaking bad news and dealing with delirious patients including capacity assessments. The most beneficial element of the simulation to the majority of the students was being involved in a debrief. All students agreed that the session would help improve their communication skills with patients and would like more access to communication skills simulations.

Discussion and Conclusion

A lack of training has been identified as demonstrated by the pre-simulation questionnaire. In conclusion, using simulation to provide a safe space to practice communication skills in difficult situations improves medical students confidence in dealing with such scenarios. More sessions are timetabled involving other difficult scenarios as suggested by student feedback in the post-simulation questionnaire.

Take-home Message

More training is required to increase final year medical students confidence in dealing with complex communication scenarios. Simulation provides exposure to a number of difficult scenarios that the medical students may face working as junior doctors. Providing simulations focussing on communication skills during undergraduate training has the potential to improve the ability and confidence of junior doctors to deal with such scenarios.

7P2 (5849)

Date of Presentation: Tuesday 29th August
Time of presentation: 1106 - 1112
Location: Carron 2, Loch Suite, SEC

Virtual On-Call: preparing students for foundation training with simulation

Alicia Griffin[1], Chloe Pace[1], Aalia Pagarkar[1], Amanda Chang[1], Ellena Bournat[1], Amy Radcliffe[1], Rebecca Anson[1]

[1]*Maidstone and Tunbridge Wells NHS Trust, Tunbridge Wells, UK*

Background

Simulation is widely used in medical student training to prepare students for managing a sick patient and subsequently for life as a junior doctor. On-call shifts are a stressful part of being a Foundation Year 1 (FY1) doctor, and students are not commonly given a chance to practice this prior to their first day of work. We wanted to create a simulated environment where students could be 'on-call' in preparation for FY1.

Summary of Work

We created a 'Virtual-on call (VOC)' programme and recruited doctors to run this for 4th and 5th year undergraduate students from a UK medical school at a local NHS hospital trust. Students were given bleeps and allocated to a facilitator who bleeped them every 10 minutes over an hour with common on-call tasks which were found in simulated patient folders on the wards. Students then returned for handover and debriefing. Students completed pre- and post-session surveys with confidence levels.

Summary of Results

33 students filled out the pre-survey, and 11 students filled out the post-survey. They were asked to rate their confidence out of 10 using a Likert-scale. The average in confidence in being able to prioritise jobs increased from 6.3 to 7.9. Overall confidence in answering bleeps increased from 5 to 8.4. Confidence in note taking increased from 6.25 to 7.6. Confidence in handing over increased from 5.7 to 7.9. Finally, confidence in being able to

escalate to a senior increased from 5.7 to 7.8. This project is ongoing and further statistical analysis will be performed.

Discussion and Conclusion

Overall, the VOC programme has increased students' confidence in: prioritisation, answering bleeps, note taking, handing over, and escalation. All of which are essential skills required for foundation training.

Take-home Message

On-calls can be the most stressful shifts for junior doctors. Students are taught about the kinds of presentations they may be asked to review on an on-call shift, but rarely given the chance to carry a bleep. Allowing students to do this in a safe, simulated 'virtual on-call' setting has improved their confidence in several aspects including answering bleeps, note taking and prioritisation. This is an ongoing project, and further responses will be collected and analysed.

7P3 (5815)

Date of Presentation: Tuesday 29th August
Time of presentation: 1112 - 1118
Location: Carron 2, Loch Suite, SEC

Simulation of case-based scenarios to improve a medical student's knowledge, attitude, and self-confidence in clinical toxicology of acute cyanide poisoning

Punnaphat Daraswang 1, Worrayot Daraswang 1, Bungonrat Tianyanee1, Narin Chindavech1, Surasak Aumkaew1, Praewphan Ruangekawit1, Paweenuch Supawan1, Navakorn Ingkapairoj1, Pienlert Moonwiriyakit1, Natalie Rose Noisuwan 1

[1]*Medical Education Center, Buriram Hospital, Buriram, Thailand*

Background

Acute cyanide (CN) poisoning is one of life-threatening intoxication, but it is treatable by using antidotes (sodium nitrite and sodium thiosulfate). Graduated doctors should know the proper management in the toxicology curriculum, which is a new issue and challenging in teaching methods. Classroom learning may not provide sufficient competency and performance to transform into real practice. Simulation is one of the techniques that promote essential knowledge and enhance students to improve their clinical skills.

Summary of Work

This study aimed to determine the effect of simulation case-based scenarios on knowledge, attitudes, and self–confidence in managing acute cyanide poisoning among sixth-year medical students. A quasi-experimental study with pretest-posttest designs was carried out in 2022. All medical students completed the case conference in emergency toxicology, in which cyanide was included. The students were categorized into a group of five members by computer software. High-fidelity simulation included a 15-minute scenario of the case with acute cyanide poisoning and a 15-minute debriefing subsequently. The medical students were assigned the role of emergency physicians or other assistants and used closed-loop communication to manage the case. Before and after a simulation, pre-test and post-test of the same 10-MCQs to evaluate knowledge,

performance assessment by using direct checklists by medical teachers, and 5-Likert scale-based questionnaires to assess attitude and self-confidence were assigned. Pair t-test was analyzed.

Summary of Results

From 35 sixth-year students, they were divided into seven groups. The mean pre-test score was 5.6 (SD=1.38), and the mean post-test score was 8.29 (SD=1.23), with a mean difference (MD) of 2.68, p=0.004. The attitude scores increased after the program (3.94 vs. 4.71; MD = 0.77, p=0.013). The self-confidence scores after the program were also improved (2.17 vs. 4.37; MD = 2.2, p=0.128). The major potential improvements were recognized in emergency management algorithms and antidotes administration.

Discussion and Conclusion

Simulation is an effective alternative technique to improve knowledge and skill for managing acute cyanide poisoning. However, the medical students should be individually re-evaluated and debriefed after attending a real case in the emergency room.

Take-home Message

Simulation of case-based scenarios can apply to teaching modules in emergency toxicology and potentially enhance students' engagement.

7P4 (5429)

Date of Presentation: Tuesday 29th August
Time of presentation: 1118 - 1124
Location: Carron 2, Loch Suite, SEC

Acquisition and retention of non-technical skills in simulated cardiopulmonary resuscitation

RAFAELLA FRIEDLAENDER[1], Claudia Fernandes [1], Eduardo Gubert[1], Izabel Cristina Meister Martins Coelho[1], Rosiane Guetter Mello[1]

[1]*Faculdades Pequeno Príncipe, Curitiba-Paraná, Brazil*

Background

Learning non-technical skills is complex and requires training, ideally with short periodicity, since it demands frequent practice for its acquisition and retention. Simulation-based training is an effective method for teaching non-technical skills and has been one of the most used for this purpose. However, research on the learning curve, time to acquisition and retention of non-technical skills trained with simulation-based education is insufficient.

Summary of Work

This was a quasi-experimental study conducted at a simulation center of a Pediatric Hospital. A hundred one residents of pediatrics and nursing were divided into 16 interprofessional teams and participated in a pediatric cardiopulmonary resuscitation simulated scenario followed by a debriefing session. The scenario was conducted twice in the same day and repeated after a period of time that ranged from 107 to 161 days. The groups were evaluated for the acquisition and retention of non-technical skills (teamwork, leadership and task management) and global performance through a valid and reliable tool for measuring teamwork in medical emergencies.

Summary of Results

Our participants demonstrated an improvement in leadership, teamwork, task management and overall team performance after the first intervention. However, when

evaluated after an average interval of 131 days, retention of leadership and teamwork were noted, but not for task management and overall performance of the groups.

Discussion and Conclusion

Greater importance has been given to training non-technical skills, since patient safety and patient outcomes depend on optimal coordination and group performance, especially in emergency situations, since it requires urgent, accurate and cohesive team functioning. It is known that simulation-based training is an effective method for training non-technical skills, however there are not many studies that assess the time required for these skills to be acquired, as well as how long they are retained. There are also few studies that assess the complexity of teaching these skills to a population of novice students. Our research showed that non-technical skills can be acquired through simulation-based training. However, it was noted that the retention of these skills is more complex, requiring repeated simulations over a longer period of time.

Take-home Message

Non-technical skills are complex to learn and simulation-based training is an effective method for teaching these skills.

7P5 (5531)

Date of Presentation: Tuesday 29th August
Time of presentation: 1124 - 1130
Location: Carron 2, Loch Suite, SEC

Participants and observers during a simulation scenario: do they have the same performance and self-efficacy?

Renan Gianotto-Oliveira1, Danielle Rachel Carvalho1, Elaine Bueno Moraes1, Dario Cecilio-Fernandes1, Renata Vicente Soares1

[1]*Faculty of Medical Sciences, State University of Campinas Unicamp, Campinas, Brazil*

Background

Simulation facilitates preparedness for practice, increasing workforce capacity. One key aspect of the simulation is debriefing, which seems to increase learners' knowledge from those who participated in the scenario and those who observed. However, there is little evidence that debriefing also improves students' competencies and skills at the same level for learners who participated in scenario and those who watched it. Therefore, we compared learners' skill and knowledge retention as well as their self-efficacy, which is defined as a belief in one's own ability.

Summary of Work

We compared learners' knowledge, skills and self-efficacy between participants and observers in a simulation scenario. Final year medical students were randomly divided into 2 groups: those who participate in the simulation scenario (Group A); and those who participated as observers, using checklist (Group B). Data collection followed the following stages: in the first stage (pre-scenario) the participants answered a first questionnaire containing questions about the theme of the scenario; then they participated or observed the scenario followed by debriefing and soon after they answered a second questionnaire (post-scenario) and completed the self-efficacy scale. After 10 days, the same questionnaire and self-efficacy scale were applied. Both groups took the same scenario and was assessed by a checklist.

Summary of Results

Twenty-eight students were equally randomized in both groups. There was no difference in knowledge acquisition between groups [F(df, 78) = 0,394, p > 0.05]; between time [F (df, 78) = 2,413, p > 0.05]; and interaction between Group and Time [F (df, 78) = 1,681, p> 0.05]. However, Group A had a significantly higher self-efficacy score (28,85) than Group B (26,57). There was no difference between skills level.

Discussion and Conclusion

Although there was no difference between both groups in knowledge and skills, learners who participated in the scenario had a higher self-efficacy score. This may lead to learners performing procedures without having the adequate necessary knowledge and skills just because they participated in one scenario. This highlights the importance of debriefing in learners' beliefs and preparedness for practice.

Take-home Message

Although performance did not differ between both groups, learners who participated in the scenario believed they were more capable of performing that scenario.

7P6 (6014)

Date of Presentation: Tuesday 29th August
Time of presentation: 1130 - 1136
Location: Carron 2, Loch Suite, SEC

Simulation in Health Profession Education: A Literature Review of Augmented Reality, Virtual Reality, and Mixed Reality

Fatemeh Janesarvatan[1], Maryam Asoodar[1], Nynke de Jong[1], Sanne Rovers[1], Hao Yu[1], Peter van Rosmalen[1]

[1]*Maastricht University, Maastricht, The Netherlands*

Background

Since the introduction of Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR), there has been much interest in the medical and health community to adapt this technology into medical and health professions education. The skills and qualities that come with this technology aim to improve student learning and ultimately patient care; however, the usage and its potential benefits in health professions education, have not yet been systematically summarized in the literature. Therefore, this review seeks to update our knowledge about AR/VR/MR in Medical, Biomedical, and Health Sciences education and training.

Summary of Work

A systematic search of the literature was conducted using the Libsearch database at Maastricht University. This database provided us with access to electronic databases among which were PubMed, ERIC, EBSCO, IEEE, SCOPUS, etc. Following the PRISMA framework for systematic reviews, 184 papers out of 5629 publications were selected from a variety of disciplines over a 6-year time period (2015-2020).

Summary of Results

Several results were extracted from the studies, including the distribution over time, the domains of healthcare and types of participants, the instructional design/methodology used, the rationale behind the exposure to AR/VR/MR, the types of learning outcomes encouraged, and the effectiveness of the selected studies.

Discussion and Conclusion

This study reviews the application of AR/VR/MR based technologies and their potentials and limitations in promoting education and training in health professions education. With the help of this research, practitioners will be able to choose from a broader spectrum of training options in their field of practice by becoming familiar with new modalities of training and practice. We propose that several considerations should be taken into account and therefore we have made an attempt at mapping our findings against the instructional design model by Morrison et al. (2010).

Take-home Message

Overall, the use of AR/VR/MR in medical education has the potential to improve the quality and safety of patient care by providing learners with a safe environment to practice and develop their clinical skills and abilities. The results of this study are important for course coordinators and curriculum designers when considering to implement simulation in their educational programs.

7P7 (5743)

Date of Presentation: Tuesday 29th August
Time of presentation: 1136 - 1142
Location: Carron 2, Loch Suite, SEC

Self vs expert assessment of non-technical skills in simulated shoulder dystocia scenarios

Marja Kaijomaa 1, Outi Äyräs1

[1]*Helsinki University Hospital and University of Helsinki, Helsinki, Finland*

Background

The evaluation of teamwork and non-technical skills (NTS) after simulation or a clinical emergency is critical, because it enables experiential learning. In the simulation settings, the use of a facilitator is the "golden standard", but studies concerning the with-in team self-assessment have also shown promising results.

The regular use of debriefing after clinical emergencies is uncommon. The implementation of a standardized and structured self-assessment tool could increase the use of regular clinical debriefing and enable the improvement of teamwork and patient safety at the organizational level.

In this small study we evaluated the correlation of self versus expert assessment of NTS (teamwork, communication, situational awareness, decision making, role responsibility) in a simulation setting by using the 15-point Clinical Teamwork Scale (CTS).

Summary of Work

Four groups including midwives and doctors (n=18) volunteered to participate in the study in Helsinki University Women's Clinic. Each team managed two standardized shoulder dystocia scenarios. After the first scenario, the NTS were evaluated by the team and two experienced simulation trainers. The answers were sealed, and a trainer-led debriefing followed. Another equally difficult shoulder dystocia scenario was then conducted and the NTS were evaluated by the team and trainers.

Summary of Results

The self-assessment scores concerning the teamwork (p=0.003) and role responsibility (p=0.045) were significantly higher after the first scenario, but there was no difference in the other 13/15 CTS-scores (p=0.084-0.798). After the trainer-led debriefing, the differences in the self-and expert assessment concerning the second scenario disappeared (p=0.091-1.00).

Discussion and Conclusion

The CTS-guided with-in team self-assessment showed higher self-reported scores in teamwork and role responsibility but was otherwise comparable with the assessment of trainers. After the trainer-led debriefing and discussion of NTS all differences in assessment disappeared.

Take-home Message

The with-in team assessment of NTS is highly comparable with the trainer evaluation and the debriefings in simulation settings can further improve self-assessment skills. To improve patient safety and organizational learning, the use of CTS could be encouraged to evaluate teamwork after critical clinical events

7P8 (6407)

Date of Presentation: Tuesday 29th August
Time of presentation: 1142 - 1148
Location: Carron 2, Loch Suite, SEC

Stress response in medical students to different fidelity of simulation: impact for curriculum designers

Viktor Riklefs[1], Yelena Drobchenko[1], Aliya Bukeyeva[1], Gulshat Kemelova[1], Dinara Aimbetova[1]

[1]*Karaganda Medical University, Karaganda, Kazakhstan*

Background

Medical schools must decide whether to invest in high-fidelity equipment for realistic simulation. In theory, the realistic simulation provides better learning experience, but can lead to poor performance in overstressed learners. We studied the stress response of senior medical students to simulations of different fidelity and made recommendations for curriculum design. This research has been funded by the Science Committee of the Ministry of Education and Science of the Republic of Kazakhstan (Grant No. AP09260173).

Summary of Work

The study enrolled 58 students who participated in five clinical scenarios delivered through different simulation technologies, including text-based virtual patients, screen simulators, virtual patient immersive trainers, high-fidelity simulations, and standardized patients. We measured heart rate variability and stress index during the training sessions using a wearable device, and conducted debriefing sessions after each session. Five-station final OSCE was used as the measure of academic performance.

Summary of Results

One-way ANOVA rrevealed statistically significant differences in average stress index during sessions and final grades between individual students. More successful students were characterized by medium or elevated stress levels, while less successful students displayed lowered stress levels. The text-based virtual patient and screen simulator were less stressful, while the immersive trainer, high-fidelity simulation, and standardized patient were more stressful.

Discussion and Conclusion

We found that more stress was caused by lack of initial theoretical preparation for the sessions, while less stressful sessions were considered 'boring'. Our study concluded that learning efficiency is largely dependent on individual abilities of learners, but stress response does play a role. The medium stress in learning is required for successful performance at the exam, and the lack of preparation before immersive experience overloads students, while the use of text-based simulations makes sessions too boring for learners.

Take-home Message

We recommend a balanced approach to virtual clinical education where each high-fidelity simulation is preceded by text-based virtual patients or screen simulations, preparing the learners for the following immersive experiences and decreasing the experienced stress. It is also advisable to survey the students on their trait anxiety before the simulation course to better select the individual learning methodologies and not to overload the more susceptible students with excessive stress during training.

7P9 (2398)

Date of Presentation: Tuesday 29th August
Time of presentation: 1148 - 1154
Location: Carron 2, Loch Suite, SEC

Teaching Efficacy for Mass Casualty Response between Simulation and Lecture-Based for 5th Year Medical Students

Noppadon Seesuwan

[1]*Lampang Hospital, Lampang, Thailand*

Background

Mass casualty incident response for medical students is complicated and takes time to understand. There are various methods of teaching and we would like to define which method is the best of teaching between simulation-based and traditional lecture-based learning.

Summary of Work

A cross sectional, prospective, non-randomized study was conducted in forty-five 5th year medical students. Two teaching methods were compared between simulation-based learning and lecture-based learning. The same teacher taught the same content to both groups. The teaching time for the simulation 30 minutes, and 60 minutes for the lecture. The MCQ and short assay post-test was used to measure the results by dividing into concept, triage and communication parts. Wilcoxon rank sum test and Gaussian process regression analysis were used for analysis.

Summary of Results

Forty-five 5th year medical students were included. The mean GPA of simulation-based and lecture-based learning group were 2.85±0.35 and 3.09±0.40 respectively. The results showed that the simulation-based learning had better post-test results. The mean post-test results of the simulation-based and lecture-based learning in concept part; triage part; communication part and total score were 16.8±1.59, 14.8±1.88 (95%CI=0.740-3.052 p=0.002); 17.7±1.83, 16.4±2.5 (95%CI=-0.158-2.706 p=0.080); 16.8±1.52,14.7±2.45 (95%CI=0.971-3.658 p=0.001) and 42.7±3.1,38.9±4.49 (95%CI=2.049-7.054 p=0.001)

Discussion and Conclusion

The simulation-based teaching method had better post-test results. It takes a little more time but the results are valuable.

Take-home Message

The simulation education is effective in improving student's perceived readiness for disaster response.

7P10 (3327)

Date of Presentation: Tuesday 29th August
Time of presentation: 1154 - 1200
Location: Carron 2, Loch Suite, SEC

Efficacy of Different Role-playing Shoulder Dystocia Management on Simulation-based Training in Medical Students

Morakot Suwanwanich1

[1]*Ratchaburi Hospital, Ratchaburi, Thailand*

Background

Is the emergency situation of prolongation head to body delivery time more than 60 seconds has also significant perinatal morbidity and mortality. The success of treatment depends on skills training for management and the team's cooperation. However, medical students often lack the opportunity to practice the shoulder dystocia with team. Therefore, the authors would like to teach the knowledge skills along with teamwork. This study aimed to study the effectiveness different role-playing shoulder dystocia management skills on simulation-based training in medical students.

Summary of Work

A prospective randomized controlled trial study was conducted in the 6th year of medical students who attended in department of obstetrics and gynecology. All participants were given pre-test and lecture then were randomized in two groups. The control group only one role as a doctor. The experimental group studied the different roles . Both groups were supervised by experienced obstetricians. After training, participants were evaluated knowledge skills by Objective Structured Clinical Examination (OSCE) which included the global rating scale and satisfaction survey using an assessment forms.

Summary of Results

Thirty-six medical students were enrolled. There was no difference in baseline participants' characteristics between groups. The mean of total OSCE scores in the group were 48.48±5.19 compared to 41.5in the control group, $p<0.05$. The global rating scale was significantly higher in the different role-playing group, 15.7±1.49 compared to

11.84±2.36,p<0.01). Students in the different role-playing group felt more satisfied than the only one role-playing group (96% VS 80%).

Discussion and Conclusion

A variety of learning methods have been introduced to help medical students learn knowledge skills. The important skills of shoulder dystocia are step-by-step practice and work together as a team.

The different role-playing group on simulation-based training has higher total OSCE scores, global rating scale and satisfaction compared to only one role.

Take-home Message

Simulation-based training with different play role model increase the efficiency of skills, confidence performance and promote collaboration with other health care workers.

7P11 (6688)

Date of Presentation: Tuesday 29th August
Time of presentation: 1200 - 1206
Location: Carron 2, Loch Suite, SEC

Using simulation to improve early-year medical student confidence and preparedness for clinical placement

Katherine Taylor1, Claire Spiller1, Nicola Buxton1

[1]*St George's University of London (SGUL), London, UK*

Background

Simulation is a technique that replicates real-world experiences through guided scenarios which permit learner-centred practice. It is most frequently used in undergraduate medical education in relation to learning procedural skills and/or emergency scenarios. We identified an important potential use in early-years medical education. Previous student feedback from the first hospital placement at SGUL showed students felt ill-prepared, specifically for how they participated in this environment, and the professional expectations required. We designed a simulation session to improve student confidence by supporting the rehearsal of simple ward-based tasks and familiarisation with this new learning environment.

Summary of Work: The simulation comprised ward-based scenarios from medical, surgical and senior health specialties. Each scenario was designed around ward tasks involving a simulated patient and an allied health professional. The session was run in a simulated ward environment with common hospital equipment encountered on placement. Scenarios presented students with authentic and stage-appropriate challenges, facilitated by experienced clinical tutors. Students were expected to role-model professional behaviour as if on placement, including appropriate dress. Given the early stage of the learners, multiple opportunities for timeout, reflection and debrief were provided.

Summary of Results

Evaluation was through two methods. Student reflections on key learning points were collected immediately after the session. Students were also evaluated by questionnaire

following their first placement. 55 students completed the learning points exercise. Common learning points included familiarisation with equipment, and themes of patient-centredness which aligned to the intended learning outcomes. 133 students completed the post-placement questionnaire. 94% agreed or strongly agreed that they felt more confident speaking to patients and staff. 100% agreed or strongly agreed that they understood the professional expectations on placement. Analysis of the qualitative data collected in this evaluation revealed themes of increased preparedness and reduced anxiety particularly in relation to speaking with patients and using equipment.

Discussion and Conclusion

The use of simulation in medical education is well established but appears underused in early-years teaching. This simulation demonstrates increased student confidence and preparedness for clinical placements, through the opportunity to rehearse authentic tasks and gain familiarity with equipment in a supportive learning environment.

Take-home Message

Simulation in medical education is well established but underused in early-years teaching.

7P12 (6716)

Date of Presentation: Tuesday 29th August
Time of presentation: 1206 - 1212
Location: Carron 2, Loch Suite, SEC

Junior doctor-led acute neurology simulation to address neurophobia in final year medical students

Joe Thompson[1], Joe Gleeson[1], Ashley Wragg[1], Tom Sharp[1]

[1]*The Mid Yorkshire Hospitals NHS Trust, Wakefield, UK*

Background

Neurophobia is a well-documented phenomenon amongst medical students. One of the major contributing factors to neurophobia is a lack of clinical integration of neurological knowledge. Simulation enables students to apply prior knowledge to clinical scenarios and may improve learner confidence and help combat neurophobia.

Summary of Work

This pilot study involved fifteen final year medical students attending a half-day of simulation teaching facilitated by Clinical Teaching Fellows (Foundation Year 3 doctors). Simulations included acute neurology presentations such as: seizure, stroke, meningitis and head injury with reduced consciousness. Each student had the opportunity to perform one simulation followed by a group debrief. Students received a randomised participant number and completed a pre- and post-course questionnaire.

Summary of Results: 93% of students reported that they had previously found neurology teaching intimidating and felt their neurology knowledge was not equal to that of other core medical specialties. 93% of students also reported that they would prefer to be taught neurology by junior doctors rather than consultants. Pre-course results also show that 93% of students did not feel confident dealing with acute neurology presentations as F1 doctors, whereas post-course, 100% of students felt confident that they could deal with acute neurology patient presentations as an F1 doctor. 93% of students felt learning about acute neurology presentations through neurology-specific simulation was more useful than classroom or lecture-based teaching.

Discussion and Conclusion

Neurology-specific simulation teaching, facilitated by junior doctors, improved student confidence in dealing with acute neurology presentations and may be a useful neurology teaching tool for tackling neurophobia.

Take-home Message

Medical students generally find neurology teaching to be intimidating (neurophobia).

Medical students would prefer to be taught neurology by junior doctors than consultants.

Acute neurology simulation taught by junior doctors could help to address neurophobia.

7P13 (5699)

Date of Presentation: Tuesday 29th August
Time of presentation: 1212 - 1218
Location: Carron 2, Loch Suite, SEC

Simulation-Based Multidisciplinary Teamwork Training of Physical Restraint in Psychiatric wards

Liang-Wei Wang1, Cheng-Heng Liu2, Chih-Wei Yang2, Yu-Chen Chiu3

[1]Department of Emergency Medicine, National Taiwan University Hospital, Taipei, Taiwan; [2]Department of Medical Education, National Taiwan University Hospital, Taipei, Taiwan; [3]Department of Emergency Medicine, Far Eastern Memorial Hospital, New Taipei City, Taiwan

Background

Physical restraint is inevitable in some situations for psychiatric emergencies. During the procedure, optimal multidisciplinary teamwork is crucial for preventing complications for both the staff and patients. We developed and evaluated the effectiveness of a simulation-based multidisciplinary teamwork training of physical restraint in psychiatric wards.

Summary of Work

This is a before-and-after study design. Medical staffs, including residents, registered nurses, and security guards, in psychiatric wards of National Taiwan University Hospital were all invited. Trainees, grouped of 5, were asked to deal with a standardized simulated psychiatric physical violence which required physical restraint. Each session lasted 10 minutes, followed by video-assisted debriefing. Assessments, including 10-point-scale self-efficacy of management (Score M) and teamwork (Score T), for each trainee were used before and after each simulation session. Changes of the scores were further analyzed using linear logistic regression to compare the learning outcomes of trainees of different wards, experiences of critical care, and disciplines (residents vs. registered nurses vs. security guards).

Summary of Results

During August 2016, totally 35 medical staffs (7 groups), including 5 residents, 24 registered nurses, and 6 security guards, were recruited. Assessments for each trainee improved significantly after simulation-based training (Score M 6.71 to 8.71 ($p < 0.001$), and Score T 6.6 to 8.6 ($p < 0.001$)). Linear logistic regression analysis revealed that self-efficacy of medical staffs without previous critical care experiences and security guards improved significantly more than others.

Discussion and Conclusion

After simulation-based multidisciplinary teamwork training of physical restraint, medical staffs in psychiatric wards improved the skill management and teamwork significantly. Furthermore, medical staffs without previous critical care experiences and security guards improve the scale of self-efficacy significantly more than others.

Take-home Message

Simulation-based multidisciplinary teamwork training of physical restraint in psychiatric wards is effective and highly recommended in psychiatric wards.

7P14 (5388)

Date of Presentation: Tuesday 29th August
Time of presentation: 1218 - 1224
Location: Carron 2, Loch Suite, SEC

Hand On! Simulation-based Training on Transporting the Newborn from the Birth Room to the Neonatal Unit

Mariana Xavier e Silva1, Jaqueline Perschin Santos1, Juliane Carretero Silva2, Maysa Alvarez Rezende1

[1]Faculdades Pequeno Príncipe, Curitiba, Brazil; [2]Faculdades Pequeno Principe, Curitiba - Paraná, Brazil

Background

According to the 2022 Guideline of the Brazilian Society of Pediatrics, entitled "Resuscitation of the newborn ≥ 34 weeks in the birth room", the transport of the newborn (NB) to the neonatal unit (NU) is performed in the neonate who required resuscitation maneuvers, but only after cardiorespiratory stabilization. Thus, this transport requires specific care, the use of appropriate materials, and teamwork. Therefore, it is crucial to carry out clinical simulations so that students understand how safe transport works

Summary of Work

This is a study based on a clinical simulation of the transport of the NB from the birth room to the NU, developed by monitors from the Pediatric Emergencies module and carried out with fifth-year medical students. The simulation involved two groups of three students each: the first group (FT) in the birth room and the second group (SE) carrying out the transport. The FT informed the SE about the overall situation of the NB, and then the SE accommodated the child in the transport incubator and took him to the simulated BU. Other students practiced in the scenario created, and the teachers gave feedback at the end of class.

Summary of Results

The clinical simulation enabled the consolidation of theoretical knowledge and the resolution of doubts. In addition, undergraduates reported less tension while performing

the dynamics due to group participation. Finally, academic training resulted in reports that described greater confidence and security to do appropriate health management and organizing the necessary team to transport the newborn.

Discussion and Conclusion

Simulation-based training is the foundation of medical education. In this case, this educational method aroused the students' interest in the subject and encouraged their participation in the class. In this way, it is expected that the dynamics carried out will contribute to the elucidation of the theoretical content and prepare the student for the Objective Structured Clinical Examination (OSCE).

Take-home Message

The transport of the NB to the BU is essential to ensure the improvement of the NB who underwent resuscitation. Therefore, it is important that educational institutions include, during medical training, practical support on this topic to prepare students for these situations.

Session 7R

7R (2996)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: Dochart 2

Reputation Management for Health Professions Educators in the Digital Era

Jeremy Branzetti[1], Linda Regan[2], Laura Hopson[3], Michael Gisondi[4]

[1] Geisinger Community Medical Center, Scranton, PA, USA [2] Department of Emergency Medicine, Johns Hopkins School of Medicine, Baltimore, Maryland, USA [3] Department of Emergency Medicine, University of Michigan Medical School, Ann Arbor, Michigan, USA [4] Department of Emergency Medicine, Stanford University School of Medicine, Palo Alto, CA, USA

Background

Reputation is defined as a widespread belief that someone or something has a particular habit or characteristic. Branding is the promotion of a product, program, or person based on distinguishing characteristics. In this digital era, control of our reputation can easily be lost. Strategic and honest cultivation of reputation through brand management can help return control of our reputation while also leading to career advancement for individuals and a positive image for educational programs. We believe that health professions educators can benefit from a practical application of branding science to their careers and their affiliated educational programs. This workshop will teach attendees how to develop their brand identity, manage their brand image, and enrich their brand experience in the workplace and the broader community of health professions educators.

Who Should Participate

This session is for any health professions educator looking to identify their career niche, build their professional brand, and promote that brand in a manner that generates a

positive reputation in the health sciences community. Reputation and brand management can be applied at the individual and programmatic level, both to significant effect.

Structure Of Workshop

The workshop will be divided into 5 sections. The 15-minute Introduction will be a mini-didactic lecture describing the key components of branding science and how it applies to health professions educators. Then, we will present three 20-minute small group sessions on the following topics: (1) Brand Identity: guided reflections on one's professional brand, talents, and niche; (2) Brand Image: understanding how and what other people think about you, with a focus on the role of social media; and (3) Brand Experience: determining how we experience and interact with one another's brands. Finally, the remaining few minutes will serve as a summary and closing for the session.

Intended Outcomes

After this session, attendees will be able to explain key concepts of branding science (identity, image, experience, auditing) and develop, cultivate, and promote their professional brand within HPE. They will be able to use these skills to proactively and positively shape their reputation and advance their career interests.

Session 7S

7S (5800)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: M3

What can you learn from student evaluations? How evaluations can contribute to educational improvement and teacher's continuing professional development

Carolin Sehlbach[1], Jill Whittingham[1], Diana H.J.M. Dolmans[1]

[1] *Maastricht University, Maastricht, The Netherlands*

Background

Across programmes and institutions, students are often asked to evaluate courses and teachers. The aim of these student evaluations is to hold programmes accountable and to continuously improve educational quality. While some consider student evaluations as problematic or biased, we consider them an untapped learning opportunity for teachers. Student evaluations should provide teachers with feed-up, feedback and feed-forward information. This implies that teachers are encouraged to use evaluation data to further develop their (teacher) competences. Reflection and dialogue are known to enhance the use of evaluative data, but how to organize this reflection and dialogue seems challenging. In this workshop we share theories, model and practical tips on how to enhance reflection and dialogue. We suggest promoting conversations in which teachers and students deal with questions as: How did you experience the education? How can we improve education? How can we collaborate? In what ways can a stronger commitment be made to use this input for growth and development? After all, teachers are expected to continuously develop these competences during their practice.

How can teachers be encouraged to reflect on student evaluations as to continuously improve their educational practice?

Who Should Participate

All interested in the development of teaching competences and evaluation: students, teachers and course/programme coordinators

Structure Of Workshop

We share our approach to student evaluations and faculty development based on theories and models related to feed-up, feedback and feed-forward, group reflection and goal-setting. Participants will then discuss their institute's approach in small groups and will gather ideas for how teachers and coordinators can be supported in their use of evaluation data.

Intended Outcomes

Gaining insight into organizing reflection and dialogue for teachers and students. Sharing ideas to reflect on student evaluations, reflect on their own teaching practice and exchange experiences with fellow teachers and students, with the aim of continuously improving their own teacher competence. Coordinators can be encouraged to support other teachers in using student evaluations for continuous improvement of courses. Sharing ideas on communicating and collaborating on evaluation data.

Session 7T

7T (2789)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: M2

Mitigating for the unintended and undesired consequences of transitions to programmatic approaches to assessment

Mike Tweed[1], Anna Ryan[2], Glendon Tait[3], Suzanne Schut[4]

[1] Otago Medical School, University of Otago, Wellington, New Zealand [2] Melbourne Medical School, University of Melbourne, Melbourne, Australia [3] Department of Psychiatry, University of Toronto, Toronto, Canada [4] Department of Science Education and Communication, Delft University of Technology, Delft, The Netherlands

Background

This workshop will focus on the unintended and undesired consequences arising from transitions to more programmatic approaches to assessment. We will present the existing evidence, our lessons learned, and provide a forum for participants to discuss and plan mitigating strategies.

A programmatic system of assessment is focused on authentic assessment for learning. The longitudinal design and collation of data by attribute is intended to address known issues with more traditional assessment approaches. Longitudinal use of multiple assessment data points with decreased focus on single high stakes assessments should increase student engagement. The approach focusses on assessment for learning, supports an individualised approach, and provides more timely relevant feedback. The rigour of progression decisions is improved with information from assessment data points collated over time and attribute, reflecting ongoing learner development and the holistic competencies required for clinical practice.

Such changes can lead to unintended and undesired consequences, including an increased assessment workload; student wellness impacts; feedback complexity overwhelming learners; data complexity overwhelming staff, and perceived devaluing of individual assessments and requirements.

Who Should Participate

Those currently using or contemplating programmatic approaches of assessment.

Structure Of Workshop

Following introductions, the presenters will highlight the principles of programmatic approaches to assessment and contrast the ideas of intended versus unintended and undesired consequences of change.

Participant groups will then discuss experienced or anticipated unintended and undesired consequence. These consequences will be grouped as evolving from: longitudinal use of multiple assessment data points, focus on authentic assessment for learning, collation of data by attribute for decision making, and other aspects.

The groups will discuss the nature of each of these consequences and explore the mitigating strategies that have been tried, or could be tried, sharing with the wider group.

To conclude the presenters will summarise participants' contributions including unintended and undesired consequences, mitigating strategies attempted (both successful and those less so), and potential strategies yet to be tested.

Intended Outcomes

The participants will discuss and share unintended and undesired consequences of moving to more programmatic approaches of assessment, tried and potential strategies to mitigate these consequences and develop an initial plan for their own contexts.

Session 7U

7U (2984)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: M4

Furthering the agenda: Insights into widening access to medicine in Scotland

Kathrine Gibson Smith[1], Colin Lumsden[1], Ellie Hothersall[2], Malcolm Shepherd[3], Rebecca Walmsley[4], Helen Richards[5]

[1] University of Aberdeen, School of Medicine, Medical Sciences and Nutrition, Aberdeen, UK [2] University of Dundee, Dundee, UK [3] University of Glasgow, Glasgow, UK [4] University of St Andrews, St Andrews, UK [5] University of Edinburgh, Edinburgh, UK

Background

Widening access (WA), or participation, to medicine refers to schemes which have been developed to support students who are typically under-represented in higher eduation and promote social mobility and diversity within the profession. Under-represented students may be the first in their family to consider higher education, from lower socioeconomic backgrounds or to have been educated at a school where progression rates to higher education are low. Promoting diversity in medicine is critical in ensuring fairness and representativeness, and in ensuring that healthcare systems are representative of those they serve.

Who Should Participate

Medical educators - particularly those involved in admissions and those with an interest in WA.

Structure Of Workshop

Furthering WA is resource intensive, and initiatives have received significant investment. It is imperative that we develop an understanding of what works to best ensure that WA directives meet their intended outcomes. Accordingly, we will demonstrate, using Scotland as an example, how WA has been developed to meet both local, and national, population needs. Workshop presenters, in their capacity as Leads for Undergraduate Medical Education in Scotland and Lead for the Scottish Widening Access to Medicine Network, will: highlight the novel strategies which have been utilised to further WA; explore the challenges and lessons learned about what works; and outline our intentions to develop a national information sharing network between the medical schools to promote best-practice in evaluation (Scottish Widening Access to Medicine Network). We also would seek to explore workshop participant's ideas in relation to the development of the research and evaluation agenda of the recently established Scottish Widening Access to Medicine Network.

Intended Outcomes

To facilitate understanding of:

- how WA can initiatives be operationalised to serve local, and national, population needs?
- why ongoing research and evaluation in WA so important?
- why collaboration in WA imperative to the broader widening participation agenda?
- how can we support information sharing across institutions in relation to WA?

Session 7V

7V (5642)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: Staffa

Antiracism Through the Lens of the Health Humanities: Training the Trainers

Kamna Balhara[1], Nathan Irvin[1]

[1] *Johns Hopkins University School of Medicine, Baltimore, MD, USA*

Background

Racism underlies many health care disparities faced by patients and is a persistent threat to achieving and maintaining a diverse and inclusive healthcare workforce. Health professions (HP) educators must have appropriate pedagogical tools to equip trainees to understand, critique, and dismantle racism within the structures of healthcare. Approaching this topic can be daunting for educators, and traditional approaches in HP education may be insufficient in creating open spaces for honest dialogue and in providing necessary historical, social, and cultural contexts for understanding racism. The health humanities, a transdisciplinary field that blends arts and humanities with a commitment to social justice, may represent an ideal pedagogical framework for anti-racist education in healthcare. However, opportunities for faculty development in this realm are limited. This “train-the-trainer” workshop will be led by two HP educators who created ShareTools.org, a freely-available online curricular resource for HP faculty who are seeking to integrate humanities-based anti-racist education for their learners. This highly interactive workshop will support HP educators in obtaining the knowledge, confidence, and comfort necessary to implement humanities-based anti-racist curricula at their respective institutions.

Who Should Participate

Health professions educators involved in the training of learners at any level

Structure Of Workshop

This hands-on experiential workshop will begin with an arts-based activity designed to create and model a psychologically supportive and inclusive learning environment and to spark critical reflection on racism in healthcare. We will then engage in a high-yield didactic session to define anti-racism and highlight the strengths of the humanities as a pedagogical tool for anti-racist education. Participants will be introduced to best practices in applying the ShareTools framework and will engage with two additional interactive visual art and narrative-based activities that demonstrate strategies that participants can use with their own learners.

Intended Outcomes

Participants will:

1) Develop an understanding of how and why the health humanities provide a scaffold for effective anti-racist education

2) Explore best practices in anti-racist education and strategies to mitigate common pitfalls

3) Gain enhanced comfort with facilitating conversations around anti-racism using humanities-based educational strategies

4) Learn how to use the ShareTools framework as a resource to plan and execute antiracist educational curricula at their own institutions

Session 7W

7W (4900)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: Jura

How can you make your educational innovations scholarly: Transforming and disseminating your innovation work in HPE

Laura Brereton[1], Ayelet Kuper[1], Rashmi Kusurkar[2], Bridget O'Brien[3], Aliki Thomas[4], Eeva Pyörälä[5]

[1] The Wilson Centre, University of Toronto, Toronto, Canada [2] Amsterdam UMC location Vrije Universiteit, Amsterdam, The Netherlands [3] Department of Medicine and Center for Faculty Educators, University of California San Fransisco, San Fransisco, USA [4] McGill University, Institute of Health Sciences Education, Montreal, Canada [5] University of Helsinki, Center for University Teaching and Learning, Helsinki, Finland

Background

Many health professions educators are innovators who become interested in studying teaching and learning. Educators often want to experiment with teaching innovations to improve student learning outcomes and then to share findings locally.

Exploring teaching and learning, and sharing educational innovations with colleagues, advances the educator's work into the realm of health professions education (HPE) scholarship (Boyer 1990; Cleland et al. 2021; ten Cate 2021). This is both beneficial to the HPE community and valuable to the educator's professional growth and career development.

Still, many educators find it challenging to turn their innovation into scholarship. Advancing HPE scholarship requires stepping outside of one's own discipline, adopting new theoretical frameworks and research methods, and communicating findings to the HPE community (Lingard 2015; Dine et al. 2016; Baker et al. 2020; Samuel et al. 2020; Varpio et al. 2020).

Members of the AMEE Research and Fellowship Committees offer this workshop for AMEE members who wish to advance HPE scholarship but find it challenging to move from being local educational innovators to HPE scholars.

Who Should Participate

The workshop will benefit all educators in HPE who wish to advance their careers as educational scholars. The content is suitable for clinical and non-clinical health professions educators at all career stages, including AMEE Associate Fellows.

Structure Of Workshop

This interactive workshop includes facilitator presentations, question and answer periods, and small group discussions. In small groups participants will 1) discuss projects they would like to turn into scholarship and publish or present to a wider audience; and 2) identify approaches and venues that align with their goals, capacity, and project scope. The workshop will close with a summary and take-home messages.

Intended Outcomes

At the end of the workshop, participants will be able to:

- Describe how educational innovations can be approached in a scholarly manner.
- Position educational innovations in the field of HPE (in its journals, conferences and other dissemination formats).
- Identify relevant avenues for publication (including manuscript types) and presentation in HPE.

Session 7X

7X (0807)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: Barra

How to Bring Near-Peer Mentoring to Your Institution

Mark Solinski[1], Yuliya Pomeranets[1]

[1] *Loyola University Chicago Stritch School of Medicine, Maywood, USA*

Background

The increasing level of competitiveness of matriculating into medical school has a profound influence on premedical students' mental health and well-being. Recent studies have found that premedical students are more likely to have greater depression severity, burnout, emotional exhaustion, and are more likely to meet the screening criteria for presence of major depressive disorder and exhibit more severe depression than non-premedical students. To combat the rising level of premedical student stress and anxiety, one can leverage the knowledge of near-peers through mentoring. Through research we have done on the efficacy of our own program, we have found that having a program that is rewarding to both mentees and mentors appears to help prevent medical student burnout and mentor attrition. This demonstrates that near-peer mentoring can have a profound impact on student well-being. Aside from having the benefits of utilizing a mentor's knowledge base, peer to peer mentoring has also been shown to increase psychosocial well-being in premedical students. This study shows that near-peer mentoring can be utilized to combat premedical student anxiety and improve their chances of success.

Who Should Participate

This workshop would be perfect for anyone interested in developing or improving a near-peer mentoring program at their institution. Faculty, administration, and students are all encouraged to participate and can

Structure Of Workshop

1. Why invest resources in mentorship and specifically near-peer mentorship?
2. Our program
3. How to build your own program
    1. Evaluate what already exists that can serve as a scaffolding
    2. Recruitment of mentors and mentees
    3. Mentor/mentee pairing process
    4. Training for mentees
    5. Setting up mentor-mentee meetings and working around complicated schedules
4. Sustainability of program
5. Special considerations
6. Challenges
7. Q&A

Intended Outcomes

Learners will be able to:

1. Build a successful mentorship program
2. Be comfortable and confident in recruiting eager mentees and committed mentors
3. Navigate around existing institutional structure and encourage collaboration between other student-run or faculty groups
4. Develop evidence based metrics to measure the efficacy of your program

Session 7Y

7Y (1626)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: Shuna

Gamification for learning; can we really learn through play?

Sarah Aynsley[1]

[1] *Keele University, School of Medicine, Keele, UK*

Background

Our understanding of and approach to teaching and learning is always expanding, from the predominance of didactic approaches to an array of different innovative techniques, including gamification. It has been growing in popularity since 2010 but the principles are not new, we have learnt through play throughout our development. Exploring, interacting and reflecting on experiences is how we learn from our first steps onwards. Indeed, gamification is embedded into our daily lives and in medical education elements of gamification are already implemented e.g., simulation and experiential learning. Rather than a fad perhaps we are tapping back into core concepts of learning, but there is a time and place for everything and thinking about how and when to implement elements is essential. Gamification has the potential to build intrinsic motivation, it can create a safe space to fail, be an immersive experiential learning experience and evidence shows that approaches can enhance retention of learning. Our guiding principle is 'Gamification for learning not gamification of learning'. In this workshop we will introduce gamification and take you on a design journey to develop your own gamification approach.

Who Should Participate

No prior knowledge of gamification is required, the workshop is suitable for any level of teaching experience. The approaches presented in this workshop would be suitable for

clinical and non-clinical staff in both undergraduate and postgraduate teaching. In particular individuals developing small group teaching or interested in enhancing student engagement and developing inclusive learning approaches will find the workshop of use. It is intended to give participants the tools to start developing their own gamification approach.

Structure Of Workshop

The workshop will take you through the process of developing a gamification approach. In the first part we will cover some of the basic theory and principles and give the opportunity to experience some existing games. We'll then spend the rest of the workshop working through a three-step process to develop your own gamification approach - Identifying your objective, mechanics and dynamics, using and evaluating.

Intended Outcomes

- Become familiar with the term gamification and the approaches it encompasses
- Examine what makes an effective gamification approach
- Explore potential applications in your own teaching.

Session 7Z

7Z (7046)

Date of presentation: Tuesday 29th August
Time of session: 11:00 - 12:30
Location of presentation: Shuna

How can surgical education be scaled in Low- and Middle-Income Countries (LMICs)

Catherine Mohr[1], Juan Carlos Puyana[2, 3], Naomi Amuron[4], Monica Ghidinelli[6], Marisa Louridas[7], Abebe Bekele[5, 8]

[1] Intuitive Foundation , Sunnyvale, CA, USA [2] Royal College of Surgeons in Ireland, Dublin, Ireland [3] Global Health - Surgery, University of Pittsburgh, Pittsburgh, PA, USA [4] Kumi Orthopaedic Centre, Kumi, Uganda [5] Addis Ababa School of Medicine, Addis Ababa, Ethiopia [6] AO Education Institute, AO Foundation, Duebendorf, Switzerland [7] Unity Health, Toronto, Ontario, Canada [8] University of Global Health Equity, Kigali, Rwanda

Background

There is a need to rapidly increase the number of competent surgeons who can provide quality care to underserved populations. Traditionally a surgeon's training is largely focused on the acquisition of technical skills in simulation-based settings that can vary from low- technology to high-technology solutions based on resources.

A crucial question is: How can surgical training be scaled in environments with limited resources, inadequate infrastructure, and a shortage of trained faculty?

In this interactive workshop we will discuss current challenges and strategies to increase the number of competent surgeons in LMICs.

Who Should Participate

1. Leaders of medical education institutes/organizations with active collaborations or programs delivered in LMICs
2. Educators involved or starting to be involved in LMICs educational programs
3. Curriculum developers/planners for LMICs educational programs

Structure Of Workshop

- Introduction (20 minutes): Current problem of scaling surgical education to meet demand for competent surgeons in LMICs (gaps in health care system and education, considerations on political, cultural, and economic environment)
- Small group discussion (30 minutes): Ideation of strategies that will take us from the current state to our desired state of scalability
- Report back from discussions and vote on generated ideas (15 minutes)
- Small group discussion (15 minutes): Finalize the strategy for scalability
- Report back and conclusions (10 minutes)

Intended Outcomes

At the end of this workshop, you will be able to:

- Identify the needs of surgical education in LMICs
- Develop strategies to scale surgical education in LMICs

Session 8A

8A (1236)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: Hall 2

Disability Inclusion and Anti-Ableism in Healthcare Education

Stephanie Van[1], Liz Bowen[2], Dorothy Tolchin[3]

[1] *Johns Hopkins School of Medicine, Baltimore , USA* [2] *The Hastings Center, Garrison, USA* [3] *Harvard Medical School, Boston, USA*

Background

Healthcare education has made a progressive shift, incorporating more diversity, equity, and inclusion concepts into standards and practices. This progress has often excluded a large and growing marginalized group: people with disabilities. There is a lack of understanding about people with disabilities amongst healthcare providers, and as a result, people with disabilities face many inequities when seeking healthcare.

Topic Importance

Healthcare is not as inclusive or accessible as it should be. Many existing healthcare spaces were not built with accessibility or universal design in mind. Many providers lack the knowledge and skills necessary to provide clinical care for people with disabilities. There is a paucity of disability-conscious education; a lack of recognition of the value of trainees, educators, and practitioners with lived experiences of disability; ongoing implicit and explicit manifestations of ableism. In turn, disabled people often do not feel comfortable, respected, or cared for when they seek healthcare. Healthcare training will continue to be incomplete and foster inequities unless students are uniformly taught to effectively navigate the care of and language around people with disabilities.

Format and Plans

First 45-minutes: an interactive presentation to introduce core elements of anti-ableist education, including identification of implicit biases; skills practice around inquiring about disability and preferred identifiers; replacement of stigmatizing terminology with accurate and respectful vocabulary; outlining of relevant clinical and advocacy skills. Second 45 minutes: small group work to engage participants in case-based reflection on representative interactions in the healthcare setting, leading into collaborative strategizing about opportunities to integrate disability/anti-ableism concepts into their home institutions' curricula and to foster strong positive presence of disability/allied community.

Take Home Messages

Healthcare systems need to proactively include anti-ableist education and practices to ensure truly equitable learning and working environments. Any individual can apply a disability lens to identify opportunities for enhancing inclusion and accessibility at their home institution. Learners can use content discussed during this session to form/join a working group of disabled and allied students, faculty, and staff to review and update healthcare curricula; advocate for greater accessibility of learning and working spaces; build alliances with a range of stakeholders to promote a culture of disability-conscious healthcare education and practice.

Session 8B

8B (1353)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: M1

Exploring the roles of students in health professions education

Evangelos Papageorgiou[1], Catarina Pais Rodrigues[2], Alexandra-Aurora Dumitra[3], Kosha Gala[4], Daniel Del Castillo Rix[5]

[1] Medical Student Alliance for Global Education (MeSAGE), Athens, Greece [2] Medical Student Alliance for Global Education (MeSAGE), Porto, Portugal [3] European Medical Students´ Association, Brussels, Belgium [4] International Federation of Medical Students' Associations (IFMSA), Copenhagen, Denmark [5] Universidad Del Norte, Barranquilla, Colombia

Background

Students' multiple roles in health professions education have yet to be appropriately explored. Professor Harden's publications on the roles of teachers have been instrumental in developing a deeper understanding of how they can shape the future of education. However, there are no similar flagship publications about the different parts that a student can take.

Student-led organizations like the International Federation of Medical Students Associations (IFMSA) and the European Medical Students' Association (EMSA) have been leaders of student empowerment and engagement. They are facilitating the development of their members' skills and helping them realize their potential as students.

One crucial student role is that of the partner in curriculum development. IFMSA and EMSA are part of the Medical Student Alliance for Global Education (MeSAGE). MeSAGE is a student-led curriculum alliance of 11 medical student organizations representing more than 1.3 million medical students worldwide. The mission of the alliance is to develop

educational content through a collaboration that conveys the unique perspective of students in the curriculum while reflecting the diversity of backgrounds of its members.

Topic Importance

Student engagement is one of the areas of excellence in ASPIRE awards. The criteria in that category have identified the importance of the multiple roles of the students. In this symposium, we would like to present different student roles and share successful examples of these unique roles in practice.

We will also highlight the importance of students as curriculum collaborators. Their efforts to bridge curriculum gaps can not be successful without support from institutions and medical education organizations. Therefore, this symposium will be a starting point for this.

Format and Plans

The symposium will include presentations from the contributors, as well as a moderated Q&A section after each intervention. The presenters will engage their audience and there will also be a chance for participants to exchange best practices.

Take Home Messages

Students should not be passive recipients of knowledge and could take multiple roles within the learning environment. Understanding and nurturing these roles will benefit the learning experience.

Session 8C

8C (0925)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: Argyll I

Psychological Safety in the Clinical Learning Environment: The Path to Learning, Belonging, and Growth for Trainees

Adelaide McClintock[1], Joshua Jauregui[1]

[1] *University of Washington School of Medicine, Seattle, WA , USA*

Background

Psychological safety (PS) is the perception that an environment is safe for risk taking, exposing vulnerability, and contributing perspectives without fear of negative consequences.1 Currently, there is a notable lack of PS in the clinical learning environment (CLE). Threats to PS in CLEs exist on a spectrum, with constant concern about grading on one end, and outright hostility and oppression on the other.

Topic Importance

PS supports trainee belonging, engagement, and wellbeing. Building psychologically safe learning climates would support these larger goals in medical education. PS frees learners from self-consciousness about image and reduces fear of asking questions, and the presence of PS supports the core components of self determination (autonomy, relatedness and competence), which are tied to intrinsic motivation and learning.

Format and Plans

This session will provide a synthesis of the current literature on psychological safety in medical education, and impart evidence-based strategies that can be implemented in a wide variety of educational settings. Mezirow's transformative learning theory will provide the underpinnings for the structure, choice of didactic content, and discussion prompts of the symposium. The session will begin by defining PS and demonstrating the ways that the

climate currently withholds psychological safety, and highlighting the benefits of a positive CLE. Presenters will then ask participants to reflect on their own teaching practices currently, and discuss how they align or might be changed to align with best practices for psychological safety. Next, presenters will describe the behaviors that create psychological safety and how they translate in the medical education setting based on a synthesis of existing evidence. Finally, participants will be given discussion prompts designed to cultivate change in their own learning environment. By the end of the session, attendees will be prepared to apply skills to their own teaching environments and create positive learning environments for trainees at all stages.

Take Home Messages

1. The current learning climate lacks psychological safety due to traditions of hierarchy, gatekeeping, and teaching by humiliation.

2. The presence of PS in the CLE supports trainees' ability to focus on learning, fosters a sense of belonging and underpins self-determination in trainees.

Session 8D: Research Papers: Equality, Diversity and Inclusivity

8D1 (1190)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 14:20
Location of presentation: Hall 1, SEC

Enacting inclusive learning environments in French mental health services for immigrants

David Ansari[1]

[1] *University of Illinois College of Medicine, Chicago, USA*

Introduction

In France, mental health services have been developed for immigrant populations who have been excluded from the healthcare system due to administrative barriers and linguistic differences. Transcultural psychiatry is a leading approach of supporting immigrant and minority patient populations by providing access to language interpretation and recognizing the socio-cultural dimensions of mental illness. Transcultural psychiatry is also an important training site for those learning to provide more inclusive mental health care, including psychiatrists and clinical psychologists, as well as other health professionals. Many of the clinicians and learners in transcultural psychiatry are also immigrants or have parents or grandparents who immigrated to France. Rather than simply relying on teams of diverse clinicians and learners, transcultural psychiatry requires that these individuals enact inclusivity. I use a conceptual model of situated learning and communities of practice (Lave & Wenger, 2009; Wenger, 1998) to examine how clinicians and learners create inclusive clinical and learning environments. This research presentation addresses the following questions: How do clinicians and learners enact inclusivity? What aspects of the hidden curriculum facilitate or challenge inclusive practices?

Methods

This presentation draws on ethnographic fieldwork conducted in four mental health clinics for immigrant populations in the greater Paris region, as well as 65 interviews with

clinicians and learners. An inductive analysis was conducted to examine themes that emerged from the ethnographic and interview data.

Results

Four major themes emerged concerning the enactment of an inclusive environment: selection, visibility, responsibility, and authenticity. Clinicians selected learners based on their migration experiences and race, and learners recognized that clinicians selected them based on the visible diversity they could contribute to therapy teams. Clinicians invoked their own and learners' origins during therapy sessions to make diversity and difference explicitly visible to patients. Learners played important roles in enacting inclusivity, including serving as language interpreters or cultural mediators with patients. These responsibilities transformed their learning experience and altered their roles as learners since they also inhabited roles as experts. Clinicians and learners also spoke about their experiences and origins to allow patients to feel more comfortable and open in therapy. Clinicians and learners could speak freely, but they also corrected and ignored each other's speech and questioned their authenticity.

Discussion And Conclusion

Creating an inclusive clinical and pedagogical setting involves more than just the presence of diverse clinicians and learners. Rather, it involves careful orchestrations among clinicians and learners, the latter of whom were navigating how to practice inclusivity while learning to become future clinicians. Learners expressed wonder and found it affirming to reflect on their own experiences and forms of belonging in therapy. But the policing of speech and valuing certain ways of belonging over others undermined efforts of promoting inclusivity.

References

Lave, Jean, and Etienne Wenger. 2009 [1991]. *Situated Learning.* Cambridge: Cambridge University Press.

Wenger, Etienne. 1998. *Communities of Practice: Learning, Meaning, and Identity.* Cambridge: Cambridge University Press.

8D2 (0961)

Date of presentation: Tuesday 29th August
Time of session: 14:20 - 14:40
Location of presentation: Hall 1, SEC

"It made a big difference to have *you* here:" A grounded theory study of identity safety in clinical medical students

Justin Bullock[1], Javeed Sukhera[2], Amira del Pino-Jones[3], Jonathan Ilgen[1], Tai Lockspeiser[3], Pim Teunissen[4], Karen Hauer[5]

[1] University of Washington, Seattle, USA [2] Hartford Hospital, Hartford, USA [3] University of Colorado, Aurora, USA [4] Maastricht, Maastricht, The Netherlands [5] University of California, San Francisco, San Francisco, USA

Introduction

Identity threat is any form of internal, interpersonal, or structural hostility toward one's identity. Social identity threats, such as stereotype threat and microaggressions, impair learning and hinder well-being.[1] Maslow's hierarchy of needs suggests that safety is a foundational construct necessary for students to achieve growth toward their full potential.[2] Juxtaposed with the concept of identity threat, the notion of identity safety appears central to understanding how health professions trainees experience thriving in their identities and optimal learning within a clinical environment. This exploratory study therefore aims to conceptualize the construct of 'identity safety' in the clinical learning environment.

Methods

This multi-institutional, qualitative interview study employed constructivist grounded theory. Participants were clinical students at three public medical schools: University of California, San Francisco; University of Colorado; and University of Washington. The investigators purposively and theoretically sampled students based on their responses to a 11-item survey with the racial/ethnic and gender Stereotype Vulnerability Scales (SVS) and a free response question requesting students' personal identities. The team openly discussed their personal and professional identities throughout the project and relied on their diversity of identities and experiences to enrich their interpretations of the data. The

investigators iteratively sampled, coded, constantly compared, and continued sampling until they understood the codes well enough to develop categories and then concepts and finally a resulting theory.

Results

Sixteen students were interviewed based on their survey responses. They represented a range of racial/ethnic and gender SVS scores and were diverse: eight identified as women, two as non-binary, six as men, five from racially underrepresented groups, five as LGBQ, and three with a disability. Students referenced multiple additional identities, from religion and parenthood to being a survivor of sexual assault. Participants described a spectrum of identity threat, identity mediation, and identity safety. Identity threat occurred when participants felt hostility toward their perceived identities, lacked a sense of belonging, felt reduced to one identity by others, or were compelled to conceal some aspect of their identity. Sociopolitical events raised the salience of some identity threats. Identity mediation reflected instances where students felt protected enough to continue to learn and perform yet felt identity threat. Mediation occurred, for example, after an attending spent time getting to know a learner personally but then later misgendered them. Learners, supervisors, and hospital staff helped shift from identity threat to identity mediation through anticipatory allyship before threats occured, interactional allyship via brief in-passing interactions, and reactionary allyship in the face of interpersonal threats. Participants described identity safety as being able to exist as their authentic selves without needing to monitor their external projection of their identities. Positive contributors to identity safety included holding privileged identities, identity concordance with patients, colleagues, or supervisors, and forming meaningful relationships where participants felt celebrated for their identities. Students fostered identity safety for themselves and their patients by productively leveraging their identities to improve patient care (e.g. learner with type 1 diabetes felt they advanced patient care and taught attending by advocating for a patient with poorly controlled diabetes to receive an insulin pump). Compared to the construct of belonging, identity safety proved more transient: brief actions by one individual could foster or harm students' sense of safety. Identity safe environments decreased students' cognitive load, influenced choice of their clinical rotations, and drove their ultimate specialty selection.

Discussion And Conclusion

Identity threat, identity mediation, and identity safety are dynamic states influenced by the learning environment. Identity safety may enhance learning by liberating students from self-monitoring and insulating them from consequential identity threats. Given the complex ways that students, patients, supervisors, and institutions may influence students' sense of identity threat, mediation, and safety, future efforts should focus on a deeper understanding of how students and educators can optimize identity safety. Identity safety provides direction for educators to combat identity threats and to optimize learning for students of all identities.

References

1. Bullock JL, Lockspeiser T, Del Pino-Jones A, Richards R, Teherani A, Hauer KE. They Don't See a Lot of People My Color: A Mixed Methods Study of Racial/Ethnic Stereotype Threat Among Medical Students on Core Clerkships. *Acad Med*. 2020;95(11S Association of American Medical Colleges Learn Serve Lead):S58-S66.
2. 2. Hale AJ, Ricotta DN, Freed J, Smith CC, Huang GC. Adapting Maslow's Hierarchy of Needs as a Framework for Resident Wellness. *Teach Learn Med*. 2019;31(1):109-118.

8D3 (0875)

Date of presentation: Tuesday 29th August
Time of session: 14:40 - 15:00
Location of presentation: Hall 1, SEC, SEC

Symbolic Access: Medical students' awareness of institutional culture and its influence on learning.

Dina-Ruth Lulua[1], Shirra Moch[1]

[1] *University of the Witwatersrand, Johannesburg, South Africa*

Introduction

The discussion of access in medical education commonly has its focus on physical and epistemological access, leaving a qualitative gap regarding sociocultural factors which may influence access in this context. This body of research introduces and defines symbolic access, a concept of access with a specific lens on sociocultural inclusion, and the impact it has on learning, for the student in medical education. The study aimed to explore medical students' awareness of symbolic access within a South African context, and their perceptions of how it impacted their learning.

Methods

A phenomenographic approach was used. Fifteen one-on-one in-depth interviews were conducted with final year medical students, interviews were audio recorded and transcribed. This group was selected due to their exposure to the entire medical programme. The interviews were analysed using the seven-step phenomenography model described by Sjöström and Dahlgren[1], using this method four Dimensions of Variation were discovered 1)Relationships with Educators, 2)Relationships with Peers, 3) Educational Environment, 4)Race, and three Categories of Description were induced 1)Rejection, 2)Disregard and 3)Invalidation. As a final step these categories and dimensions were integrated to produce an Outcome Space, a visual representation in phenomenographic research, which shows the relationship between the categories of description and dimensions of variation. The outcome space gave a holistic picture of the student experience of symbolic access.

Results

The overall picture of the outcome space was of student exclusion from the medical community as well as disconnected learning experiences. Findings in three of the four dimensions of variations: 1)Relationships with Educators, 2)Educational Environment and 3)Race, explicitly describe how students felt excluded from the medical community and how the experience of learning was isolated and considered irrelevant.

Two experiences which facilitated a sense of inclusion for the students were 1)Relationships with their Peers and 2)Clinical Skills, taught during their two pre-clinical years. Specific mention was repeatedly made of the strong relationships which developed between students and clinical skills educators during these learning sessions, as well as how the learning of skills fostered a sense of belonging within the community. Unfortunately these relationships and sessions were quickly overshadowed by experiences in the clinical years.

Discussion And Conclusion

Deep reflection of the text revealed that despite predominant exclusionary experiences students articulated an awareness of attaining symbolic access. This awareness was facilitated by the following five experiences which occur during the clinical years of the programme: (1) being within the hospital setting, (2) managing their own patients (3) performing clinical skills in the hospital, (4) working with future colleagues in the profession, and 5) hierarchy/initiation. Hierarchy and initiation were intriguingly considered as rites of passage for community inclusion by the students. These experiences are in keeping with available literature regarding the positive impact of clinical participation on the medical student, further they connected strongly to educational literature described by Lave and Wenger[2] regarding the importance, for the medical student, of community participation and the establishment of legitimacy for learning.

Further students expressed an awareness of meaningful, transformative, and important learning experiences during the same period they became aware of attaining symbolic access. These experiences starkly contrasted their description of learning during the pre-clinical years, which was explained as monotonous, isolated and disconnected. The attainment of symbolic access, therefore, is linked with the students' perception and experience of valuable learning experiences.

In conclusion the awareness of symbolic access occurs, for the medical student, through active participation within the community during the clinical years of the programme,

and attaining symbolic access is connected to significantly meaningful learning experiences. In light of these discoveries medical educationalists should design undergraduate curricula with early clinical engagement at the fore and further, explore concepts pertaining to sociocultural inclusion, such as symbolic access, as they facilitate important learning experiences for the medical student.

References

1. Sjöström B, Dahlgren L-O. Applying phenomenography in nursing research. J Adv Nurs. (2002) 40:339–45. doi: 10.1046/j.1365-2648.2002.02375.x

2. Lave J, Wenger E. Situated learning: Legitimate peripheral participation. Cambridge University Press; 1991 Sep 27.

8D4 (1219)

Date of presentation: Tuesday 29th August
Time of session: 15:00 - 15:20
Location of presentation: Hall 1, SEC, SEC

The Limits of DACA: Legal, Financial, and Symbolic Barriers in Pursuit of Health Professions Education

Nicole Perez[1], Laura Hirshfield[1]

[1] *University of Illinois College of Medicine, Chicago, Illinois, USA*

Introduction

The U.S. is currently facing a shortage of health professionals from underrepresented in medicine (URiM) backgrounds. The Deferred Action for Childhood Arrivals (DACA) program, a policy that provided temporary relief from deportation for individuals who migrated to the U.S. before age 16, increased access to postsecondary education, and thus, a potential pathway to increasing the number of URiM students. DACA and legal status critically shapes access to educational and workforce opportunities, however, there is limited prior research about how it has impacted access to the HPE (health professions education) pipeline. Using Gonzales' "master status" framework to guide our analysis, we ask the following research questions: How does legal status impact how DACA recipients navigate the HPE pipeline? How does the uncertainty surrounding DACA influence participants' medical education opportunities?

Methods

This study uses 15 life-history narrative interviews to investigate the experiences of undocumented young adults from Elkhart County, Indiana, U.S. (a new immigrant destination), pursuing health professions education or work (e.g., as nurses, medical or certified nurse assistants, and dental hygienists). Nine of the participants were DACA recipients, while the remaining six were second-generation (i.e., children of immigrants). Interview topics focused on educational transitions, ethnoracial identity, accessing resources, and understanding their "transition to illegality". The researchers analyzed the data using a constructivist, inductive approach.

Results

For all study participants, aspirations to pursue HPE were rooted in their experiences growing up in a new immigrant community context and barriers encountered by their families in accessing culturally and linguistically concordant healthcare. However, DACA participants faced additional barriers due to their precarious legal status and the uncertainty of the DACA program. In turn, access related barriers operated through legal, financial, and symbolic challenges that contributed to participants being prematurely pushed out of the HPE pipeline. For example, a nurse explained how legal barriers prevented her from considering medical school:

I wanted to be a doctor… Then with DACA, I was like, maybe I can do it. There's different laws and it just got really confusing and I don't know if I'm allowed to go to med school or not. And even if I am, if I'm allowed to practice or not. So that was scary to think about, having to worry about all that again.

Second, financial barriers also heightened the impact of legal status because a participant attempting to fulfill prerequisites to apply to nursing school demonstrated why he felt discouraged about not considering medical school:

Well, I don't know. I'm still kind of discouraged about [legal status]. Well, I guess it's more about financial, too…I can't get FAFSA [Free Application for Federal Student Aid], I can't get any government help, and I tried searching for private scholarships –and they were really hard to get.

Finally, symbolic barriers related to the DACA program were described by a dental hygienist who emphasized the policy's importance in lieu of a pathway to citizenship:

But without my DACA, I can't work. So I feel like that's my biggest obstacle to accomplish my dreams. People might be like 'oh it's just a permit,' but for me it's like the key that I need, and if you take the key away the door's going to lock and then there's no way I can open the door again because I need that key to open the door. If anything is my obstacle it would be that - if they take my [DACA] permit away.

Discussion And Conclusion

The findings demonstrate how the DACA program offers young adults semilegal status, which in turn creates liminality and uncertainty; as a result, legal status acts a "master status" throughout the HPE pipeline. The participants' "legal limbo" effectively shapes what options they perceive to be viable in the HPE pipeline given legal barriers and financial

resources (Gonzales & Ruszczyk, 2021). These findings demonstrate the limits of the DACA program, and highlight the barriers that contribute to the underrepresentation of an important demographic of potential physicians in the U.S.

References

Gonzales, R. G. (2016). *Lives in limbo: Undocumented and coming of age in America*. Univ of California Press.

Gonzales, R. G., & Ruszczyk, S. P. (2021). The Legal Status Divide among the Children of Immigrants. *Daedalus*, *150*(2), 135-149.

Research Papers: Topics in Undergraduate Medical Education

8E1 (1333)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 14:20
Location of presentation: Argyll II, Crowne Plaza

Learning by Doing: A Phenomenological Study of Medical Student Leaders

Henry Annan[1], Victor Do[2], Anna MacLeod[1]

[1] *Dalhousie University, Halifax, Canada* [2] *University of Toronto, Toronto, Canada*

Introduction

CanMEDS, an internationally recognized physician competency framework, recognizes leadership as a core physician responsibility. Similarly, both the Academy of Medical Royal Colleges and the National Health Service in the United Kingdom cite leadership as an important part of physicians' work. However, leadership development across the medical education continuum continues to be an area for improvement.[1] One way medical students may gain leadership skills is by serving in leadership roles during their time in medical school. Indeed, little is known about the experiences of medical student leaders and how these roles may facilitate leadership development both during their medical education and later as physicians. As such, we used phenomenology to study the essence of the experiences of individuals who served in elected, representative roles during their time in medical school.

Methods

This qualitative study engaged in a hermeneutic phenomenological investigation. We conducted in-depth, semi-structured interviews with 12 Canadian physicians—6 females and 6 males—all of whom served in elected medical student leader roles from 2015-2019. Using a historic but defined timeframe allowed us to account for the possibility of significant variation in the leadership experiences over time while optimizing participants' abilities to reflect on their leadership experiences. Interviews were conducted over the phone and were individually transcribed. Each transcript was coded using reflexive thematic analysis. Coding was performed inductively followed by a semantic approach to identify themes. All themes were arrived at by consensus amongst the three authors.

Consistent with the 3 + 1 phenomenology framework[2], our analysis focused on the particularity of participants' stories, reflexivity and interpretations of their overall experience.

Results

Our analysis identified the following five themes: (1) living with busy, (2) the role of faculty mentorship and support, (3) competing demands of leadership, (4) medical student leadership as enriching, and (5) creating better physicians. Overall, the medical student leader experience was characterized by significant administrative duties that at times took away from time spent fulfilling core representative responsibilities. The value medical faculties were perceived to place on medical student leadership also played a significant role in influencing the medical student leader experience. Medical school administrators who actively supported medical student leaders contributed to overall positive experiences compared to administrators who were perceived to be ambivalent or obstructionist towards their medical student leaders' responsibilities. Faculty mentorship was also identified as an area of improvement. Leaders often found that their leadership work came in conflict with their academics and personal lives. Despite this, medical student leaders felt that their leadership work connected them with a network of peers and provided them with a better understanding of the health and medical education systems. Consequently, they believed that their ability to care for patients was enhanced because of their leadership involvement. When asked whether they would do it over again if given chance, interviewees unanimously answered in the affirmative.

Discussion And Conclusion

In addition to describing the day-to-day life of a medical student leader, the competing demands leaders face and the ways in which leadership involvement creates better physicians, our study also highlights the critical role that faculties play in shaping the experience of medical student leaders. These findings suggest that involvement in leadership roles during medical school can provide medical students with essential skills in leadership as a core physician competency. A better understanding of and appreciation for the leadership roles that their students take on can inform faculty of medicine policies and procedures around leadership development at the undergraduate medical education level. For example, mentorship programmes and being flexible with time-off policies may be ways of supporting medical student leaders. To our knowledge, this is the first study to explore the essence of medical student leader experiences. Future research should examine how demographic characteristics may influence the overall leadership experience.

References

1. Blumenthal DM, Bernard K, Bohnen J, Bohmer R. Addressing the leadership gap in medicine: Residents' need for systematic leadership development training. Acad Med. 2012;87(4):513–22.

2. Hopkins RM, Regehr G, Pratt DD. A framework for negotiating positionality in phenomenological research*. Med Teach. 2017;39(1):20–5.

8E2 (0486)

Date of presentation: Tuesday 29th August
Time of session: 14:20 - 14:40
Location of presentation: Argyll II, Crowne Plaza

Objective Structured Clinical Examinations (OSCE) with patients with IDD early in medical education

Gilmar Gutierrez[1], Isis Lunsky[1], Olivier Rabu[2], Debra Hamer[1]

[1] *Queen's University Faculty of Health Sciences, Kingston, Canada* [2] *McMaster University, Kingston, Canada*

Introduction

Individuals with Intellectual and Developmental Disabilities (IDD) face higher rates of physical and mental health needs. Yet, they are medically underserved and face numerous barriers to accessing care, with some barriers arising from their interactions with medical professionals. Often medical professionals do not receive adequate training early in their careers serving individuals with IDD. Instead, simulated clinical encounters in the form of Objective Structured Clinical Examinations (OSCE) tend to include patient educators (PE) portraying individuals with IDD or another medical presentation. However, individuals with IDD may have unique care needs that cannot authentically be portrayed by someone without IDD, resulting in a detrimental learning gap. For instance, primary care providers often report the feeling of “operating without a map,” discomfort with patients with IDD", and "a need for more exposure with people with IDD" (1). To address this gap in medical training, this study developed and implemented an OSCE with individuals with IDD as the PEs. This OSCE was offered to first- and second-year medical students to promote person-centred communication, comfort, and competency when interacting with individuals with IDD.

Methods

This was a pilot observational study, with first- and second-year medical students (n=25), participating in a virtual OSCE with individuals with IDD as PEs. The students were recruited from the Queen’s University medical program (Kingston, Ontario, Canada). The PEs (n=5) were recruited across Ontario. Also, to help coordinate the OSCE, we recruited senior medical students and medical residents (n=5) across Ontario. They were each paired with

a PE and were present in all the student-PE interactions as objective observers (OOs). The OSCE was conducted over Zoom and consisted of five virtual stations back-to-back. The stations' simulated scenarios were prepared by our research team together with the PEs and included real PE experiences with healthcare, adjusted to ensure anonymity. Demographic information was collected from every participant in the study. During the OSCE, OOs assessed student's performance using a Prediger scale. Prior to and following the completion of the OSCE, the students completed a self-report scale and a Prediger scale. After the OSCE, the students participated in a semi-structured interview to collect qualitative data. The demographics data and assessment scale scores (self-report scale and Prediger scale) were analyzed using descriptive statistics and effect size using Cohen D (d) analysis. The qualitative data was analyzed using NVivo with two independent reviewers. The analyzed data was used to determine whether the OSCE had a beneficial effect at improving comfort, communication skills and competency of medical students interacting with patients with IDD.

Results

Students reported a significant large effect size ($d > 0.8$), comparing their post-OSCE to their pre-OSCE scores (Self-report: $d = 1.96$, $p < 0.0001$; Prediger: $d = 1.34$, $p < 0.0001$). OOs reported a significant large effect size when comparing their assessments to the students' pre- and post-OSCE Prediger scores (pre-OSCE: $d = 1.86$, $p < 0.0001$; post-OSCE: $d = 0.79$, $p = 0.0013$). Prior to this OSCE, 80% of students reported not having an experience interacting with a person with IDD. Qualitative analysis yielded the following common themes: positive experience, asking for curricular changes, development of personal awareness and limitations, changes in perspective, and future plans for improvement.

Discussion And Conclusion

Persons with IDD are more likely to have complex health needs and experience severe health inequities which cannot be portrayed by another population. Results from this pilot study showed that a significant portion of students lack sufficient experience interacting with individuals with IDD. Because of this lack of experience, students tended to rate themselves much lower in their ability to interact with this population, compared to the rating provided by more experienced medical trainees (OOs). Then, after this experience most students rated themselves significantly higher and reflected positively on this experience, mentioning several self-realizations and changes in perspective. Thus, these results should provide guidance for educators, curriculum developers and researchers

concerned about the need and benefits of including people with IDD into medical education.

References

1. Wilkinson J, Dreyfus D, Cerreto M, Bokhour B. “Sometimes i feel overwhelmed”: Educational Needs of Family Physicians Caring for People with Intellectual Disability. Intellect Dev Disabil. 2012;50(3):243–50

8E3 (0333)

Date of presentation: Tuesday 29th August
Time of session: 14:40 - 15:00
Location of presentation: Argyll II, Crowne Plaza

Perceptual learning in medical education - a Finnish cohort study of undergraduate dermatology teaching

Alexander Salava[1], Viljami Salmela[1]

[1] *University of Helsinki, Helsinki, Finland*

Introduction

Proficiency in interpretation of visual findings is a key objective of medical teaching. The process of recognizing entities contains a substantial proportion of implicit, non-analytical knowledge.

Visual pattern recognition and discrimination have been studied experimentally but studies concerning medical teaching are limited. We recently conducted a pilot study on digital perceptual learning modules (PLMs) in undergraduate dermatology teaching and observed significant improvements in learning outcomes. In this study our aim was to investigate modified PLMs and widen our understanding of visual perceptual learning.

Methods

The study included 105 students of four undergraduate dermatology courses. Online PLMs were carried out before, during and at the end of courses. Each trial consisted of three displays. First, eight clinical images were shown, and participants selected the right diagnosis. In the second display, the selected image was shown again, and participants selected visual features that the decision was based on and rated their confidence. Finally, the correct image was shown side-by-side with the chosen image as well as cumulative %-correct of all trials to provide immediate feedback. 47 different diagnoses were shown once in randomized order and each test was repeated twice. In total, every participant made 2*3*47=282 comparisons/decisions. Distractor images were chosen based on the highest pixel-wise correlation with the target image (increasing similarity and task difficulty).

We investigated four important outcome measures: 1) diagnostic accuracy (%-correct), 2)

fluency (decision duration), 3) key features of the diagnosis, and 4) self-perceived confidence. These were analysed by first averaging different tasks for every student, and then comparing them during PLMs repetitions. There was also a PLM questionnaire before and after the courses.

In addition, we sorted the diagnosis based on the overall learning outcome across subjects (%-correct) and classified them into four classes: easy, quite easy, quite difficult, very difficult. Finally, we investigated diagnostic errors and computed a confusion matrix, i.e., frequency of different incorrect answers separately for each diagnosis.

Results

Diagnostic accuracy ($p<.001$, effect size $\eta^2_p=0.82$), fluency ($p<.001$, $\eta^2_p=0.23$) and confidence ($p<.001$, $\eta^2_p=0.74$) increased significantly with successive PLMs. In line with these measures, the decision times reduced. All effects were statistically highly significant both in ANOVA and in post-hoc pair-wise comparisons. The data was collected during four undergraduate courses and the independent effect of courses was non-significant, as expected.

Students classified more visual features and based the diagnosis more on primary lesion. Accuracy increased in all tasks during the courses and reached over 90% in diagnoses of the 1st to 3rd task difficulty quartile. In the most difficult quartile accuracy reached to 60%.

At the 6-12 months follow-up, students' performance remained at high level ($p<.001$, $\eta^2_p=0.811$). The students that participated in the follow-up reached similar performance as in earlier courses ($p<.759$, $\eta^2_p=0.017$) suggesting long-term learning retention. Analysis of diagnostic errors showed that there were specific conditions which were systematically confused with each other.

Discussion And Conclusion

Digital PLMs enhanced diagnostic accuracy, fluency and self-confidence and there was also a long-term consistency in high performance suggesting effective learning retention. Finding relevant features and pattern recognition skills improved, and the basis of the correct diagnosis expanded to include multiple visual features. The group of unspecific features consequently decreased showing a diversification of recognized structures, an increase in the accuracy of pattern recognition and attention to location and context.

Thus, PLMs seem to facilitate diagnostic skills in skin-related conditions but also widen the spectrum of visual findings. The PLMs functioned well on the e-platform and were easily

integrated as student activating material into the courses and provided information on students learning progress.

Considering our current era of digital technologies, we believe that there is potential for a wider use of PLMs to improve visual skills and strengthen implicit learning in medical education.

References

Salava A, Salmela V. Perceptual learning modules in undergraduate dermatology teaching. Clin Exp Dermatol 2022;doi:10.1111/ced.15201. Epub ahead of print.

Kellman PJ, Krasne S. Accelerating expertise: Perceptual and adaptive learning technology in medical learning. Med Teach 2018;40(8):797-802.

8E4 (1760)

Date of presentation: Tuesday 29th August
Time of session: 15:00 - 15:20
Location of presentation: Argyll II, Crowne Plaza

The Portrayal of Female Anatomy in E-Learning, Are Stereotypes in Decline?

Dogus Darici[1], Agnes Yüeh-Dan Schneider[2], Markus Missler[3], Bettina Pfleiderer[4]

[1] Institute of Anatomy and Molecular Neruobiology, Westfälische Wilhelms-University, Münster, Germany [2] Westfälische Wilhelms-University, Münster, Germany [3] Institute of Anatomy and Molecular Neurobiology, Westfälische Wilhelms-University, Münster, Germany [4] Radiology Clinic, Medical Faculty, Westfälische Wilhelms-University, Münster, Germany

Introduction

Sex and gender bias in anatomy learnings materials present a “hidden obstacle” to gender equity in medical curricula and medical practice. Anatomy textbooks, atlases and e-learning platforms are the primary source of learning materials in modern undergraduate education, shaping what is considered “the norm”. Multiples studies have found a significant sex and gender bias in Aglosaxon anatomical textbooks since the 1980s (e.g., Mendelsohn et al., 1994). Even though these findings sparked a discussion in the Journal of the American Medical Association (JAMA) community, recent studies have found that the bias persists (Parker et al., 2017). This is troubling considering the importance of including aspects of sex, gender and diversity in learning materials. As digital learning tools have become increasingly more important to students all over the world, we posed ourselves the question if e-learning platforms display a less pronounced sex and gender bias than traditional atlases and textbooks.

Methods

Six atlases and three textbooks as well as two medical e-learning platforms were analyzed for sex and gender bias. We identified the most commonly used books by students based on the book holdings of three German university libraries. All images where sex or gender could be distinguished were included. Indicators of sex were based on physical attributes while gender was assessed by using socially constructed cultural indicators. In total, we

applied a predefined content analytic coding scheme to a total of N = 3767 images. Content analysis was applied to quantify the occurrence of certain categories in the images. Categories included: the method of illustration, internal or external viewing angle, whether the image was depicted in a sex-specific context, ethnicity, age, body type and health. The first and second author coded a sample of images with high interrater reliability exceeding 0.99. Additionally, a sample from the Anglosaxon textbooks was coded and compared to Parker et al. (2017) with an interrater reliability exceeding 0.9.

Results

Atlases and textbooks underrepresented females (n = 707/2355; 30%) and placed them in stereotypical sex-specific context ($\chi 2 = 348$, $P < 0.001$). In general, books presented their images with a wide variety of viewpoints, though females were shown more often from a caudal/inferior ($\chi 2 = 99$, $P < 0.001$) and internal ($\chi 2 = 132$, $P < 0.001$) perspective. In contrast, e-learning platforms presented more females (n= 932/1412; 66%), taking appropriate representation into account. These females were more frequently shown from a ventral/anterior ($\chi 2 = 26$, $P < 0.0001$), a whole-body perspective ($\chi 2 = 27$, $P < 0.001$) and less likely to have been represented in a sex-specific context. Ethnic diversity was neglected in all formats (3/3767; >0.001%) with mostly white people shown.

Discussion And Conclusion

The results extend the previous research by demonstrating that media-related differences exist in the portrayal of female anatomy. Furthermore, sex and gender bias in medical anatomy appear to be an ubiquitous, global issue. The findings underscore that unequal representation of women is a persistent part of an anatomical culture that is codified in structures. The anatomical community has failed to address the known problem over the past 35 years. Interestingly, e-learning platforms present the male and female body in a less biased way. The exact causes for this decline of sex and gender bias exceed the explanatory power of the study design and need to be explored more specifically. Potential reasons might be that illustrations are created from scratch without referring to historical, biased templates, e-learning environments can adapt their materials with greater flexibility than printed media, and that they have special working groups that address diversity issues. Studies like this one are important for instilling change by pointing out these biases and stereotypes and for raising awareness. Specially trained teams in journals, publishers, and distributors should help to identify biased content and review the number of female illustrations in recently published books.

References

Mendelsohn KD, Nieman LZ, Isaacs K, Lee S, Levison SP. 1994. Sex and gender bias in anatomy and physical diagnosis text illustrations. JAMA 272:1267–1270.

Parker R, Larkin T, Cockburn J. 2017. A visual analysis of gender bias in contemporary anatomy textbooks. Soc Sci Med 180:106–113

Session 8F: CPD: Strategies and Techniques

8F1 (3972)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1415
Location: Argyll III, Crowne Plaza

Empowering Health Sciences Educators: The Impact of IMET2000 Teaching the Teachers Program on Professional Development in Palestine

Motaz Daraghma1, Malik Zaben1, Fady Zaben1, Shahd Idais1, Alia Taradeh1

[1]*International Medical Education Trust 2000 - Palestine, Ramallah, State of Palestine*

Background

Healthcare professionals in Palestine are often expected to provide teaching and training to postgraduates and junior doctors, despite not having formal training in teaching. The IMET2000 'International Medical Education Trust 2000' Teaching the Teachers for Health Sciences Educators (ITTHSE) course in Palestine aims to equip healthcare professionals with the practical techniques, knowledge, skills, and confidence needed to design and deliver effective teaching sessions, thereby improving the quality of medical education in the region.

Summary of Work

The study design is a retrospective cross-sectional. A post-evaluation form was administered following the completion of the ITTHSE course The course covered four core themes: 1) characteristics of an effective health sciences educator, 2) fundamental educational principles specific to health sciences education, 3) teaching in large groups, and 4) teaching in small groups. The program has been conducted 11 times over the past three years and targeted a variety of participants, including postgraduates, doctors, teachers in universities, and last-year medical students. It was offered online and in-person, providing flexibility for participants.

Summary of Results

A total of 637 healthcare professionals completed the ITTHSE course. Evaluation form data analysis showed that 85% of participants reported an improvement in their teaching skills, while 80% reported increased confidence in their ability to design and deliver effective teaching sessions. The overall satisfaction rate was 90%, reflecting the positive impact of the program on the professional development of health sciences educators in Palestine.

Discussion and Conclusion

The ITTHSE program provides postgraduates and junior doctors with the necessary tools to develop their teaching skills, which is beneficial for both the prospective teacher and the individuals they go on to teach. Additionally, junior doctors will have the opportunity to lecture to an audience of doctors at all levels, providing useful training for grand rounds and interdepartmental presentations. This program serves as a model for future efforts to enhance teaching skills and promote excellence in healthcare education in Palestine and other countries.

Take-home Message

It is crucial to provide Palestinian health sciences educators with the necessary training and expertise to enhance their teaching abilities and advance their professional development.

8F2 (0376)

Date of Presentation: Tuesday 29th August
Time of presentation: 1415 - 1430
Location: Argyll III, Crowne Plaza

The program for training medical school teachers to write scenarios of clinical cases with branching

Nataliia Lopina1

[1]*Simulation Training Platform for medical education "The Global electronic database of clinical cases simulation scenarios - ClinCaseQuest", Kharkiv, Ukraine*

Background

There is a large number of medical errors in the world even in the courtiers with a high level of economic development. Continuing medical education is one of the tools to reduce the number of medical errors. However, it is necessary to improve the training system of medical school teachers on the ability to use new teaching technologies in medical education.

Summary of Work

We developed a program for medical school teachers to write scenarios of clinical cases with branching. The program is designed for 12 modules and 1 year of study. The result of the training was the writing of a training scenario with branching by each participant of the training course. After completing each module, the trainees had to complete homework assignments. The systematic completion of homework contributed to the implementation of the curriculum by each of the participants. The course facilitator checked the homework assignments and gave feedback on each module. Students received advice and advisory support. Participants study distance learning trends, methods of gamification in education, scenario-based Learning, branching technology in training scenarios, different classification of medical errors, taxonomy of learning goals by algorithm (Bloom's taxonomy), ways to control knowledge in learning branching scenarios, dialogue simulators in clinical case simulators.

Summary of Results

We include 10 teachers from medical schools and universities. The training lasted 1 year. All teachers noted the good thematic and practical content of the course. 9 out of 10 wrote scripts branching clinical cases according to course requirements. 6 out of 10 have implemented the acquired knowledge in their daily pedagogical work.

Discussion and Conclusion

Strengthening teacher training with the help of new technologies in education can improve the quality of teaching in medical schools and diversify teaching materials for medical students.

Take-home Message

Cognitive branching technology can be part of the educational training and development of teachers from medical schools to improve the practical training of medical students.

8F3 (6519)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1445
Location: Argyll III, Crowne Plaza

Tele-mentoring of Multi-Professional Maternity Teams in Kenya for the Improvement of Maternal and Newborn Care

Winnie Karwirwa Mwebia1, Simon Kigondu2, Francis Githae Muriithi3, Christine Murungi4, Grace Kanyi5, Charles Tungani6, Douglas Mwaniki7, Anthony Wanyoro8, Mary Njoroge9, Hellen Githaiga2

[1]Health Systems Collaborative, Centre for Global Health Research, Nuffield Dept of Medicine, University of Oxford, Oxford, UK; [2]Kigumo Subcounty Hospital, Kigumo, Kenya; [3]University of Birmingham, Birmingham, UK; [4]Outspan Hospital, Nyeri, Kenya; [5]Marimanti Subcounty Hospital, Matimanti, Kenya; [6]Maragua Subcounty Hospital, Maragua, Kenya; [7]Nazareth Mission Hospital, Kiambu, Kenya; [8]Kenyatta University, Nairobi, Kenya; [9]Embu County Referral Hospital, Embu, Kenya

Background

In Kenya, late referrals and substandard care contribute to 50% and 92% of maternal deaths respectively[1]. Obstetricians in Kenya are concentrated in urban areas, hence rural areas are mainly served by nurses, clinical officers, and medical officers, who hardly get any CPD or mentorship.

Leveraging Kenya's wide adoption of smartphones and good internet coverage, we harnessed the wide expertise of the Kenya Obstetric and Gynaecological Society (KOGS) via a digital platform to train Maternity Health Workers (MHW) countrywide. We aimed to enhance knowledge, skill, and self-efficacy, to improve the management of maternal and newborn complications, and facilitate early referral for those requiring a higher level of care. Additionally, by combining all cadres involved in maternity care in one forum, we hoped to foster cohesion and teamwork.

Summary of Work

The Curriculum was co-designed by KOGS and other MHW cadres. Topics included triage in maternity, Maternal Health overview, common complications during pregnancy and

childbirth, attitude, communication, and teamwork. Trainers were volunteer KOGS obstetricians and a pediatrician. Equalize Health, a global healthcare company partnered to provide digital and logistical support.

Two pilot series ran from September 2021 to December 2021, 12 sessions each delivered twice weekly over 6 weeks. Each session, 1.5 hours long, consisted of a pre-test, didactic lecture, case presentation/discussion, question and answer session, then a post-test. Continuous engagement between the trainees and trainers was offered through an interactive online forum via WhatsApp.

Summary of Results

Phase-I recruited 66 learners from seven Kenyan counties, while Phase II recruited 658 learners across the country, including Clinical Officers, Doctors, Nurses & Midwives. The majority had 1-3 years of experience. On average, the knowledge base improved from 58 to 64% in Phase I, and from 56 to 70% in Phase II. Most learners reported high training impact on knowledge, competence, performance, and patient outcomes.

Discussion and Conclusion

Tele-mentoring can efficiently deliver CPD to MHW across wide geographic regions. Knowledge base can be augmented through incorporation of skills workshops, as envisioned for Phase III.

Take-home Message

Tele-mentoring can enhance knowledge, skills and attitude of mutli-professional maternity teams.

8F4 (2807)

Date of Presentation: Tuesday 29th August
Time of presentation: 1445 - 1500
Location: Argyll III, Crowne Plaza

A framework for embedding equity, diversity and inclusion into education instructional design and delivery

Sanjeev Sockalingam1, Branka Agic2, Asha Maharaj3, Holly Harris3, Howard Fruitman3, Jessica Taylor3, Aamna Ashraf3, Jo Henderson3, Kwame McKenzie1, Natalia Ronda3

[1]Centre for Addiction and Mental Health, University of Toronto, Toronto, Canada; [2]Centre for Addiction and Mental Health, Toronto, Ontario, Canada; [3]Centre for Addiction and Mental Health, Toronto, Canada

Background

Continuing professional development (CPD) is an effective method to train health professionals on how to address health inequities in practice. Thus, equity and inclusion in practice starts with the design and development of CPD for health professionals.

Summary of Work

The Health Equity and Inclusion (HEI) Framework for Education and Training is an evidence-based practical approach developed through a rapid review of the relevant literature and stakeholder consultations. A team of subject matter experts, people with lived experience of health system encounters, clinicians, and educators engaged in a collaborative and iterative process to develop, disseminate, and continuously evolve the framework.

The HEI Framework provides guidance on creating equitable and inclusive learning environments and on how to embed a health equity lens into the planning, development and delivery of education and training initiatives. The HEI Framework provides a checklist of questions to consider at each stage the ADDIE (Analyze, Design, Development, Implement and Evaluate) model and practical examples.

The HEI Framework is applicable to online, blended, and classroom training and is intended for anyone involved in the design, development, and/or delivery of training and educational curricula for health professionals.

Summary of Results

The HEI Framework is accessible, practical, and easy to use. The framework has been adopted by many organizations across North America including academic hospitals, CPD programs, accrediting bodies and other national and international organizations. Users have reported high satisfaction with the framework and its practicality. User evaluation data indicates applicability in a range of education contexts.

Discussion and Conclusion

The framework fills a gap in CPD development to inform as well as other relevant areas such as Quality Improvement and Simulation development. The framework remains a living document that evolves based on new knowledge and user feedback.

Take-home Message

Learning environments and experiences should respect learner diversity, foster inclusion and be free of biases and stereotypes

Embedding health equity into CPD reinforces that health equity is a key component of quality care and should be the foundation of everything we do

The HEI Framework is a practical approach that guides the integration of equity, diversity and inclusion into CPD training design, development and delivery.

8F5 (3958)

Date of Presentation: Tuesday 29th August
Time of presentation: 1500 - 1515
Location: Argyll III, Crowne Plaza

Impact of quality improvement research (QIR) project on systems thinking habits - A pilot study in Thai medical students

Peerapass Sukkrasanti1, Setthanan Jarukasemkit1, Phanuwich Kaewkamjornchai2

[1]Faculty of Medicine Ramathibodi Hospital Mahidol University, Bangkok, Thailand; [2]Chakri Naruebodindra Medical Institute, Faculty of Medicine Ramathibodi Hospital, Samut Prakarn, Thailand

Background

Health System Science (HSS) has been introduced to be the third pillar of medical education since 2017. Faculty of Medicine Ramathibodi Hospital implemented four-year HSS courses to the current curriculum. In the final year, medical students are required to conduct a quality improvement research (QIR) in community hospitals as a part of learning about health systems in Thailand. Although the standard to evaluate HSS competency has yet to be well defined, systems thinking, a key linking domain in the HSS framework, is critical to be assessed among students. Therefore, we aim to evaluate the impact of conducting QIR on systems thinking competency.

Summary of Work

This pilot cohort study was done among Ramathibodi final-year undergraduates (n=16) who performed QIR projects in different community hospitals. To assess systems thinking competency, we applied 'The habits of a system thinker' by Waters Center. The questionnaire comprises 14 items rated on 4-Likert scales representing behavior frequency. The students responded to the questionnaire before and after finishing the course as a pretest-posttest design on a voluntary basis. The data were analyzed by paired one-tailed t-tests and subgroup analysis was defined as three groups based on three different learning contexts which meant three community hospitals.

Summary of Results

While pretest scores from each group show no difference, there is an overall improvement ($p<0.01$) in the mean score between the pre-test (2.24+- 0.49) and post-test (2.77+- 0.38). The most improved behavior is "Observes How Elements Within Systems Change Over Time, Generating Patterns and Trends" (mean pre-post difference 0.9375+-0.85). However, there is no statistical difference in the post-test between the three hospital groups.

Discussion and Conclusion

The result demonstrated that a hands-on QIR in community hospital context can improve students' system thinking behaviors in accordance with previous literature. Although, our previous study doing a community survey and qualitative data gathering showed the same result. It is interesting which form of projects will improve on HSS competencies more. However, due to the limitation of the pilot study, further study should be done in a larger cohort.

Take-home Message

Various kinds of hands-on projects can improve system thinking behaviors. It is interesting which can improve system thinking competencies the most.

8F6 (3324)

Date of Presentation: Tuesday 29th August
Time of presentation: 1515 - 1530
Location: Argyll III, Crowne Plaza

Patient- and family centred care: an educational program for nurses

Peter van Oort1, Jolanda Maaskant2, Marie Louise Luttik3, Anne M Eskes2

[1]Amsterdam University of Applied Sciences/Centre for Applied Research on Education, Faculty of Health, Amsterdam, The Netherlands; [2]Amsterdam UMC, University of Amsterdam, Amsterdam, The Netherlands; [3]Hanze University of Applied Sciences, Groningen, The Netherlands

Background

Patient- and Family Centred Care (PFCC) is a central tenet for the quality of healthcare nowadays. However, implementation of PFCC is hampered due to ambiguous attitudes and a lack of knowledge and skills among nurses. Therefore, we developed an educational program. In this study, we evaluated the effect of this educational program on nurses' attitude and feelings of competence, and explored their experiences.

Summary of Work

The educational program exists out of e-learnings, assignments and training sessions with actors. The program focuses on 3 topics: family conversation, supporting shared decision making and health literacy. A pretest–posttest design was used in which we compared self-reported scores on PFCC attitude and competencies of nurses. We used the Family Importance in Nurses Care – Nurses' Attitudes (FINC-NA) and an assessment of 12 essential PFCC competencies. Nurses completed the questionnaires 3 times during a 6 month period. Lastly, 4 nurses were interviewed.

Summary of Results

Twenty-six nurses followed the educational program and 58 nurses did not (control group). Nurses who followed the educational program developed a more positive attitude towards PFCC compared with the control group: total FINC-NA score increased significantly ($p<0.01$) over time. Nurses improved on all 12 competencies, and significantly

on: providing information in easily understood language ($p=0.03$), acknowledging patients and family members as partner in care ($p=0.04$), supporting shared decision making ($p<0.01$), and assessing family members' preferred level of participation ($p=0.04$). However, in the interviews nurses emphasized the whole team has to value PFCC:

It is important that this topic in the team is discussed very well, because then you create a supportive environment. (0004)

Discussion and Conclusion

The educational program has a positive effect on nurses' attitudes and feelings of being competent. Nurses participated in our educational program on a voluntary basis and are likely motivated to bring PFCC into practice. The next challenge is to educate interprofessional teams, and reach out to less motivated healthcare professionals.

Take-home Message

An educational program helps to improve individual attitudes and competencies, but is probably insufficient to implement PFCC in daily practice. Therefore, we feel that this program should be combined with team interventions to stimulate a PFCC environment.

Session 8G: Assessment: Objective Structured Clinical Examinations

8G1 (4531)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1415
Location: Castle I, Crowne Plaza

Influences of peer-to-peer trainings' on OSCE performances of fourth year undergraduate medical students.

Ali Chour1, Shams Ribault1, Juliette Antoine1, Pierre Nanette1, Ileana Ritou1, Lorraine Bouvet1, Melissa Hammoumraoui 1, Sophie Schlatter2, Marc LILOT3, Gilles RODE1

[1]Faculté de Médecine Lyon-Est, Université Claude Bernard Lyon 1, Lyon, France; [2]Research on Healthcare Performance (RESHAPE), INSERM U1290, Université Claude Bernard Lyon 1, Lyon, France; [3]Centre Lyonnais d'Enseignement par Simulation en Santé (CLESS, high fidelity medical simulation center), SIMULYON, Lyon, France

Background

Objective Structured Clinical Examinations (OSCEs) will be proposed for undergraduate students as a part of the French national ranking system for their choices of residency program. The preparation for this competence-based assessment is challenging for students, teachers and medical schools. To address these challenges, a "proof-of-concept" peer-led OSCE training initiative was evaluated at Lyon Est Medical School in May 2022.

Summary of Work

A team of medical students organized five different OSCE training sessions for fourth-year peer students. During each session, students could perform four different medical scenarios. Scenarios, that mimic the future exam, were created by residents. Second and third-year peer students were either playing standardized patients or doing the assessment. Immediate feedbacks were given after each OSCE station, followed by 30 minutes of debriefing with a resident. Students were selected on a "first-come, first-

served" basis and could be replaced if unavailable for a session. One month after the last training session, all fourth-year students were convened to the official annual OSCE. Student performances at the OSCE were assessed through their score (/40 points) and their rank (/484) at the exam. Results are reported in median [25th-75th]. Mann Whitney tests were used and a $p<0.05$ was considered as significant.

Summary of Results

Of the 484 students that participated at the OSCE finals; 11% of them had completed one or more OSCE training sessions, 8% had completed 3 sessions, 6% 4 sessions and 3% all 5 sessions. Median final score in the whole population was of 22 [19-25]. Compared to students who did not participate in any training session, students who realized at least 3 training sessions had a higher final score (23 [21-25] vs 21 [19-25]; p=0.041). Those students also had a better rank (median rank 184 [101-274] vs 251 [128-367]; p=0.039).

Discussion and Conclusion

In conclusion, participation in three to five peer to peer OSCE training sessions was associated with improved score and a better rank at the medical school's official annual OSCE.

Take-home Message

Autonomous peer to peer student training is efficient to improve performance and ranking at faculty's OSCE.

8G2 (6259)

Date of Presentation: Tuesday 29th August
Time of presentation: 1415 - 1430
Location: Castle I, Crowne Plaza

Student Readiness for Virtual OSCE Exam as an Indicator of Academic Achievement of Medical Student Clinical Skills

Mia Kusmiati[1], Rika Nilapsari[1], Miranti Kania Dewi[1], Annisa R.Furqani[1]

[1]*Bandung Islamic University, Faculty of Medicine, Bandung, Indonesia*

Background

The COVID-19 pandemic has caused various impacts, one of which is on the learning process in medical schools. The learning process is shifting to become more virtual. Students' perceptions of online learning can provide input to the study program in terms of achieving competencies. This study aims to determine the achievement of academic performance of clinical skills of medical students during the online method through virtual OSCE .

Summary of Work

An observational study through the questionnaire survey was conducted on 230 preclinical medical students in 2021. They were asked to fill out the 38 items in the instrument for 15–25 minutes on a 5-point Likert scale ranging from 1 (disagree) to 5 (strongly agree). The instrument consists of 8 domains, namely: transactional distance, teaching presence, experiential learning, student access to resources, learning platforms availability, student readiness, self-reflection, and independent learning. Research instruments are developed by the researcher and validated previously using factors analysis, and tested for reliability. The data measurement of students' perceptions is then correlated with the results of the percentage of passing the virtual OSCE at the first taker using SPSS version 24.0. The data analysis used Structural Equation Modeling (SEM) with AMOS Software version 24.

Summary of Results

The study found that factors that affect students' readiness in facing the virtual OSCE exam are access to learning resources, experiential learning, and self-reflection with p-values, respectively: 0.005, 0.000, and 0.029. In a structural equation model, it was found that there are 4 domains that affect the virtual OSCE pass rate. Those factors are independent learners, student readiness, learning platform availability, and transactional distance.

Discussion and Conclusion

The learning platform's availability affects the percentage of OSCE passes by 2.65 times greater than three other factors. The structural equation model is fit and accepted, as it meets the criteria of Cmin/df value <3 (2.186), CFI =0.887, and RMSEA value< 0.08 (RMSEA= 0.072). The learning platform during the online method is an essential factor in supporting the achievement of clinical skills competencies and student readiness in facing OSCE.

Take-home Message

Through experiential learning and the learning platform availability, clinical competence can be achieved, although the method is carried out virtually.

8G3 (5022)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1445
Location: Castle I, Crowne Plaza

The Objective Structured Clinical Evaluation (OSCE) in Physiotherapy: a 4-year experience.

Ana Ramírez-Adrados1, Luis Torija López1, Beatriz Martínez-Pascual1, MONICA DE LA CUEVA REGUERA 1, JUAN DEL RIEGO CUESTA1, ALBERTO BERMEJO FRANCO1, Beatriz Ruiz Ruiz1

[1]Faculty of Sport Sciences, Universidad Europea de Madrid, Villaviciosa de Odón, Madrid, Spain

Background

The Objective Structured Clinical Evaluation (OSCE) is a validated instrument that makes it possible to evaluate basic and specific competences of students in Health Sciences. European University of Madrid, was pioneer, implementing in 2017 the first OSCE in a bachelor's degree in Physiotherapy in Spain. The OSCE had 12 stations and taped in every aspect of practice (musculoskeletal, respiratory, neuromuscular and obstetrics).

Summary of Work

The following improvements have been made to the OSCE from 2017 to 2022: implementation of a 200-hour simulation program throughout the degree; training in competences for evaluators; revision of the stations and scenarios with modifications to the check-lists; moving from a paper-based assessment to the use of a digital platform; review of the competence levels and inclusion of new competences (Ethical Commitment) and introduction of qualitative feedback on the student's competences performance based on the quantitative result obtained.

Summary of Results

The number of students assessed and their academic performance over the years have been as follows: academic year 2017/18, 128 students average score of 6.57; academic year 2018/19, 154 students, average score of 7.06; academic year 2019/20, the test was cancelled due to COVID-19 pandemic; academic year 2020/21, 221 students, with an

average score of 7.03 and last academic year 2021/22, 253 students with an average score of 6.64.

Discussion and Conclusion

Despite the increasing complexity of the OSCE throughout these 4 years, the academic performance of the students assessed remains stable. Increasing the complexity of the test, with the revision of the competency levels and the inclusion of a new competence, has not had a negative impact on students´scores. The improvement in their course-by-course training with the simulation program could be having an impact on their self-confidence when facing the OSCE.

Take-home Message

OSCE is worldwide considered as one of the most rational and effective methods to assess clinical performance.

Simulation training could help students to improve self-confidence to face the OSCE

8G4 (4479)

Date of Presentation: Tuesday 29th August
Time of presentation: 1445 - 1500
Location: Castle I, Crowne Plaza

A paradigm shift from face-to-face OSCE to virtual-OSCE: experiences from a nationwide VP-based clinical contest on diagnostic reasoning

Tsuen-Chiuan Tsai1, Yaw-Don Hsu2, Feng-Cheng Liu3, Wei-Hsin Yuan4

[1]Landseed International Hospital, Taoyuan City, Taiwan; [2]Neurology, Department of Medicine, Tri-Service General Hospital, National Defense Medical Centre,, Taipei City, Taiwan; [3]Rheumatology/Immunology and Allergy, Department of Medicine, Tri-Service General Hospital, National Defense Medical Centre, Taipei City, Taiwan; [4]Division of Radiology, Yuan Taipei Municipal Gan-Dau Hospital, Taipei City, Taiwan

Background

High-stakes objective structured clinical examination (OSCE) had been facing great challenges during the pandemic crisis. Besides the preexisting problems of cost-consuming and lacking test feedback, the epidemic prevention measures made implementation of OSCE become very difficult. The advances of multimedia artificial intelligence technology introduced an alternative clinical examination for traditional OSCE in Taiwan.

Summary of Work

We developed a virtual patient (VP)-based nationwide contest on clinical reasoning, a large-scale interactive clinical examination, which adopted a high-stakes test development procedure. The procedure started with test objective, construction of case and scoring system, followed by piloting, validation and revision. The VPs (V-DxM) with natural language processing “recognize and understand” candidates’ text inquiry, and react with voice and text. The candidates gathered information from VPs by interviews, physical examination, and laboratory investigation, the candidates then established their clinical reasoning and concluded with diagnoses. The scores were based on the observed and expected performance items, and feedback was provided immediately after the examination.

Summary of Results

Between 2018 and 2022, annual VP-based clinical contests were held simultaneously in three different locations in Taiwan. There were 682 participants in total, including 485 medical students and 197 Nurse Practitioners. In pandemic years, adhering to infection prevention measures and checkerboard seating, two 90-minute sections of test were conducted in the morning, and winners were awarded in the next morning. Candidates reported via questionnaire they were satisfied with the cases, the virtual system and the digital performance (89 ± 5.7%). In 2022, there were only three (1.7%, 3/174) error scores reported and those were corrected soon. The errors were about the semantic equivalence of dialogue. The test were considered feasible, and and scores were valid and reliable.

Discussion and Conclusion

The results revealed an AI-enhanced virtual-OSCE can be well delivered remotely in lower cost, saving time and manpower, to a vast number of test takers, and further presented good test quality.

Take-home Message

The AI-enhanced virtual human, plus the design of system and cases are critical for implementing a successful virtual-OSCE. The virtual-OSCE was considered feasible, and the scores were valid and reliable. The virtual-OSCE can be a quality alternative for traditional OSCE.

8G5 (4696)

Date of Presentation: Tuesday 29th August
Time of presentation: 1500 - 1515
Location: Castle I, Crowne Plaza

Enhancing how authentically Objective Structured Clinical Exams (OSCE) assess students' preparedness for practice. A Realist Evaluation.

Peter Yeates1, Adriano Maluf1, Ruth Kinston1, Kathy Cullen2, Aidan Cole2, Rhian Goodfellow3, Sue Ensaff3, Ching-wa Chung4, Robert McKinley1, Geoff Wong5

[1]Keele University, School of Medicine, Keele, UK; [2]Queens University Belfast, School of Medicine, Dentistry and Biomedical Sciences, Belfast, UK; [3]Cardiff University, School of Medicine, Cardiff, UK; [4]University of Aberdeen, School of Medicine, Medical Sciences and Nutrition, Aberdeen, UK; [5]Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, UK

Background

Objective Structured Clinical Exams (OSCEs) are used extensively worldwide to assess students' preparedness to graduate into practice. Due to their simulated nature, the authenticity with which OSCEs replicate practice is critical to their chain of validity but has been criticised in prior work. In this study we tested whether "authenticity" principles could aid the perceived authenticity with which OSCEs test students' preparedness to work as doctors.

Summary of Work

Within a multi-centre formative OSCE, based on stations designed using these principles, we used Realist evaluation to determine how, why, when and for whom the principles increased the perceived authenticity of OSCEs. Data were collected from students, examiners and simulated patients using realist interviews and focus groups and were analysed using realist analysis methods to produce context-mechanism-outcome (CMOC) configurations and a mature programme theory.

Summary of Results

Authenticity was enhanced for most participants by station scenarios based on the typical work of new doctors, which drew from students' vicarious observation and patient experience, enabling testing of more advanced skills than those typically entrusted to students. Using complete clinical encounters avoided fragmentation by aligning with patients' presentations in practice. Resources (i.e. guidelines) and props (i.e. telephones) aided immersion, whilst demonstrating (rather than describing) the actions they would take further tested students' preparedness. Domain scoring provided examiners flexibility to weight and reflect authentic judgements. Allowing students sufficient time and requiring students to use judgement reduced reliance on rehearsed routines, enabling students to think through scenarios. This produced uncertainty for students which to some extent mirrored practice but enabled experienced students' opportunity to showcase their skills whilst causing less prepared students anxiety. Students perceived that by avoiding ritualized OSCE scenarios, the focus of their learning would be directed to clinical environments, which would lead to growth in performance and greater preparedness for practice.

Discussion and Conclusion

Increasing authenticity of OSCEs may require examiners and students to relinquish some examination traditions and accept lesser focus on standardisation. Replication in summative contexts would be beneficial.

Take-home Message

Using these principles may enable structured, comparable direct observation under exam conditions whilst authentically assessing and fostering development of students' preparedness for their future roles.

Session 8H: Designing and Planning: Patients' and Learners' Perspectives

8H1 (4035)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1415
Location: Castle II, Crowne Plaza

Understanding Medical Students' Perspectives Toward Knowledge of Ethical Research

Jullapong Achalapong1, Piti Phloenchaiwanit1, Thanutorn Wongthida2, Amornpan Tansombat2

[1]*Medical Education Center, Chiangrai Prachanukroh Hospital, Chiang Rai, Thailand;*
[2]*Research center, Chiangrai Prachanukroh Hospital, Chiang Rai, Thailand*

Background

Basic clinical research is a regular component of medical students' training and education. It is critical that they have a thorough understanding of research ethics, knowledge, and good clinical practice (GCP), as well as a favorable attitude toward these notions, in order to ensure that the research they conduct is moral and in conformity with regulatory regulations.

Summary of Work

This study aims to assess the level of knowledge and attitude towards research ethics and good clinical practice (GCP) among medical students, internships (PGY-1), and those in residency training. The study utilizes a two-phase approach. First, a questionnaire was administered to gather data on basic characteristics of the participants (7 items), their knowledge of ethical issues in research (16 items), and their attitudes towards ethical issues in research (10 items). In the second phase, in-depth interviews were conducted with a subset of participants to provide a more detailed understanding.

Summary of Results

59 participants (83.1% undergraduate) with an average age of 23 were surveyed, of whom 61% had no research experience and 80.3% had received GCP training. 81.3% knew the objective of research ethics, and 83.1% agreed informed consent should be given after all information is provided. However, 42.4% incorrectly believed retrospective studies required written consent, and 15.3% believed they could change their research proposal after ethics committee approval. 75.8% agreed research ethics should be taught, but 42.3% thought investigators need not inform participants of all risks and benefits. 76.2% believed ethical review caused research delays.

Discussion and Conclusion

The study found that medical students, despite having received online training in research and GCP, had gaps in their understanding of ethical issues that could potentially harm research participants. The students also held negative attitudes towards the ethical review process. The findings suggest a need for extensive training on research ethics, both before and during the conduct of medical research, to address these issues among medical students.

Take-home Message

Early and ongoing training in research methodology and ethics is crucial for medical students to conduct research in a competent and ethical manner.

8H2 (3244)

Date of Presentation: Tuesday 29th August
Time of presentation: 1415 - 1430
Location: Castle II, Crowne Plaza

Designing and implementing a coaching program: Lessons from an international collaboration

Svetlana King1, Shafeena Anas2, Naomi Low-Beer2

[1]Flinders University, Adelaide, Australia; [2]Brunel University London, London, UK

Background

Coaching to support learning has gained popularity and momentum in health professions education (HPE) in recent times. Much of the burgeoning literature in this area has been derived from disciplines such as business, sport, and music. Given the distinctive context of HPE, the application of coaching concepts has required adaptation.

The HPE literature offers general guidance about coaching and its intent. This is complemented by coaching approaches designed to facilitate self-regulated learning and reflective practice – key health professional capabilities. What is generally absent from this literature, however, is guidance on designing and implementating coaching programs. The absence of a coaching design and implementation framework can make it difficult for educators to be systematic, resulting in an ad hoc and potentially less effective approach.

Summary of Work

We draw on our experience of designing and implementing an academic coaching program for a new medical school at Brunel University, London (UK). This project is an ongoing collaborative endeavour involving academics from Brunel Medical School and Flinders University (Australia), where there is a well-established coaching program.

Brunel Medical School's first cohort of students commenced in September 2022, and the design of the coaching program commenced several months prior to this. Early in this project, we began documenting, mapping, and reflecting on our approach to designing and implementing the coaching program.

Summary of Results

We present several guiding principles that form the basis of a coaching program development and implementation framework. These include: establishing a coaching philosophy aligned with the institution's mission and values; integrating coaching within a structured learning and assessment program; recognising contextual factors, including resource implications; clarifying the scope of the coaching role and its relationship to student learning, health, wellbeing and professionalism; communicating expectations; scaffolding learner support; establishing a coaching community of practice with embedded professional development opportunities; and adopting an adaptable, flexible and responsive approach to implementation.

Discussion and Conclusion

This framework may have utility for health professions educators who are considering the establishment of a coaching program in their own contexts.

Take-home Message

These guiding principles provide structure to the design and implementation of the coaching program, aiding in ensuring that its aims are aligned with its processes.

8H3 (4706)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1445
Location: Castle II, Crowne Plaza

Close to the border - Resilience in healthcare

Leonie Loeffler1, Sophie Lambert1, Lea Bouché2, Saša Sopka1, Lina Vogt1

[1]AIXTRA- Competence Center for Training and Patient Safety, Department of anesthesiology, University Hospital RWTH Aachen, Aachen, Germany; [2]Aachen Institute for Rescue Management & Public Safety (ARS), Department of anesthesiology, University Hospital RWTH Aachen, Aachen, Germany

Background

Healthcare professionals are exposed to numerous stressors in their daily work, threatening well-being and mental health. This may result in high absenteeism (e.g., due to illness), job drop-outs and errors in patient care. Promoting resilience of healthcare professionals (i.e., the ability to withstand and overcome stressors) is paramount to maintaining the performance of the healthcare system and ensuring safe patient care.

Summary of Work

By means of a questionnaire survey, the current study assessed the status and needs regarding resilience in healthcare in the cross-border region Germany, Belgium, and the Netherlands (Euregio Meuse-Rhine). Using standardized and newly developed questions, stressors, psychological distress, individual/organizational resilience and needs regarding resilience education have been examined. All hospitals and emergency medical services in this region were approached for participation. Results were analyzed using IBM SPSS Statistics (29.0).

Summary of Results

A total of 2233 healthcare professionals responded to the online survey. Data from 808 healthcare professionals (mean age = 43.86 years, m/f/not indicated = 36/61.2/2.8%) were included in the data analysis.

Almost half of the participants indicated mild to severe psychological distress (PHQ-4). The most burdensome stressors included staff availability, followed by available time and workload. Individual and workplace-related resilience measures (BRS, R@W) were in the average range. Alarmingly, one third of the respondents tend to disagree that the organization they work in is able to plan for, respond to and recover from emergencies and crises (BRT-13, i.e., organizational resilience).

With respect to health professions education, only 23.3% of the respondents reported that resilience content was part of their own training, while 92.7% indicated that resilience content should be part of the curriculum. Stress management strategies, mindfulness, and measures to promote communication and teamwork were identified as important for everyday work.

Discussion and Conclusion

There is a high need for measures and (continuing) education on resilience, especially on stress prevention and (team) communication. In addition to promoting resilience at the individual level, healthcare institutions need to take action to strengthen organizational resilience.

Take-home Message

Resilience can counteract stressors and must increasingly be part of (continuous) medical education.

In addition to enhancing resilience of burdened healthcare professionals, healthcare institutions must be better prepared for challenges.

8H4 (3816)

Date of Presentation: Tuesday 29th August
Time of presentation: 1445 - 1500
Location: Castle II, Crowne Plaza

Returning Learning to Professional Identity Formation: A Theoretical Framework

Penelope Lusk[1]

[1]*University of Pennsylvania, Philadelphia, USA*

Background

Professional identity formation (PIF) is a hot topic in medical education and institutions globally are creating curricula and programs to support and measure trainees' PIF. While PIF is understood as an educational process, and as part of lifelong learning, there is no framework mapping approaches to PIF across major learning theories. The proposed framework aims to support the development and structure of PIF-related curricula or programs through alignment with learning theory.

Summary of Work

This conceptual argument describes major fields of learning theory, maps PIF scholarship and practice to these learning theories through article analysis , and suggests takeaways for educators interested in building PIF curricula or programs. PIF curricula, while broadly interested in supporting the PIF of future physicians, may have different or multiple goals better achieved by specific concepts from learning theory.

Summary of Results

The major fields of learning theory are here organized into theories that promote an individual perspective on learning (Behaviorism, Cognitivism, Constructivism), or a collective perspective on learning (Socioculturalism, Critical Theory, Poststructuralism). Scholarship in PIF (represented by published articles) exists in alignment with each theory: traditional professionalism curricula reflect more behaviorist theories of learning; current research approaches center critical frameworks. The cognitivist and constructivist perspective may be more useful for curricula and learning projects aiming to measure PIF

while critical and poststructural approaches may be more suited for curricula situating PIF in larger social identity development processes.

Discussion and Conclusion

As PIF becomes more explicit in curricula, tying PIF to theory clarifies if, how, and when PIF can be 'taught,' accounting for development through implicit learning. Situating PIF within learning theories ensures curriculum designers can align their PIF programming and evaluation with research in teaching and learning. The framework maps learning theories into more individually and collectively oriented theories. Attention to the affordances and challenges associated with each learning frame is a means to understand PIF in the curriculum. This work informs faculty and program leaders in supporting students' developing PIF through situating programming within existing learning theories and (re)centering learning in PIF.

Take-home Message

PIF can be understood as a learning process

Learning theory can scaffold PIF curricula

Distinct theories support different PIF constructs

8H5 (4688)

Date of Presentation: Tuesday 29th August
Time of presentation: 1500 - 1515
Location: Castle II, Crowne Plaza

Storytelling in a palliative care nursing education – is it the way to improve students' holistic perspective?

Lena Serafin1, Maria Wysocka2, Natalia Pawlak3, Maciej Pasek4, Bożena Czarkowska-Pączek4

[1]Medical University of Warsaw, Department of Clinical Nursing, Warsaw, Poland; [2]Hospice of St. Christoper, Warsaw, Poland; [3]Doctoral School, Medical University of Warsaw, Warsaw, Poland; [4]Medical University of Warsaw, Department of Clinical Nursing, Warsaw, Poland

Background

Storytelling helps students to think beyond the story about the insights, ideas, feelings, and experiences that were laid out in the story. The importance of storytelling in nursing is described in terms of patient-centered care and compassion which can influence attitudes toward caring for the dying people. Therefore, the aim of this study was to determine the effect of storytelling on the nursing students 'attitudes toward the care of a dying patients.

Summary of Work

Longitudinal qualitative study has been conducted during palliative care practical course (40 hours) among Polish nursing students. Study recruitment was performed using a purposeful sampling strategy. 28 in depth semi structured interviews were conducted. Fourteen students were asked to write a story (up to 700 words) depicting the care of a dying patient from a nurse's perspective, including, and describing their own feelings about care and identifying at least three nursing problems. Before and after this task data was collected. Data were analysed with a qualitative content approach using an inductive analytic approach. Data saturation was achieved when the next interviews did not add new information

Summary of Results

None of the students had used the storytelling technique in learning before. The following themes have been identified through the codes categorization process conducted by all authors: storytelling supports patient-centered care by the need to be attentive to the patient - to conduct an in-depth interview and observation, which allows seeing the patient in a holistic perspective; storytelling supports the development of reflexivity, creativity, decision making and communication skills; telling the difficult experience to other team members and talking about death are effective coping strategies; storytelling needs to be performed in a specific conditions.

Discussion and Conclusion

Storytelling is a supportive technique in nursing student learning and has the potential to develop key competencies to work in an interdisciplinary team, where talking about difficult experiences is an effective coping strategy. Storytelling can be a tool to improve students' patient-centered orientation.

Take-home Message

Nursing education programs should incorporate storytelling as one of the learning techniques that reinforces the key competencies needed for the profession.

Session 8I: Faculty Development: Professional Identity

8I1 (5602)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1415
Location: Castle III, Crowne Plaza

To Learn to See: A Mixed Methods Case Study on the Professional Identity Formation of Medical Educators

Delores Amorelli[1]

[1]*Kaiser Permanente Bernard J. Tyson School of Medicine, Pasadena, USA*

Background

While there is a wealth of research in medical education that addresses the professional identity formation of students, the literature concerning the development of medical school faculty's professional identities as educators has been sparser (Steinert, O'Sullivan, & Irby, 2019). Without a significant body of research exploring the formation of professional identities for medical school faculty, it is difficult for faculty and medical school administrators to determine what support, programming, or resources faculty need in order to truly see themselves as educators.

Summary of Work

This study utilized an explanatory, sequential mixed methods design to explore how undergraduate medical school faculty see themselves as educators, including what factors support or hinder these faculty in the development of their professional identities, and how faculty development might impact the process of their identity formation.

Summary of Results

37 faculty completed a researcher-designed survey, and 8 faculty participated in semi-structured interviews. The results that emerged from the study findings were: (a) undergraduate medical school faculty see themselves as educators, but this is not necessarily their primary professional identity; (b) the nature and requirements of

faculty's role contribute most significantly to the formation of faculty's professional identity; (c) medical school faculty's participation in faculty development makes them feel like educators; (d) medical school faculty feel most like educators when they are interacting with students.

Discussion and Conclusion

Medical school faculty should be encouraged by faculty developers, senior leaders, and other educational administrators to think of themselves as educators, so that their confidence in teaching and other educational practices can be strengthened. This can be achieved by spending more time orienting medical school faculty to their roles as educators as well as providing faculty, even those who are more engaged with writing curriculum than they are with teaching, more opportunities to engage with students.

Take-home Message

Faculty development initiatives in medical education should not focus solely on obtaining new knowledge or developing skills but should also focus on strengthening professional identity. Targeted faculty development offerings that actively engage faculty in consideration of their identities have the potential to impact faculty attainment of educator competencies as well as enhance their confidence in their skills.

812 (5832)

Date of Presentation: Tuesday 29th August
Time of presentation: 1415 - 1430
Location: Castle III, Crowne Plaza

There is no 'I' in team? The underrated role of personal identity in developing health professions educators

Tracey Collett1, Gayle Letherby1, Julie Browne2

[1]University of Plymouth, Plymouth, UK; [2]Cardiff University, Cardiff, UK

Background

Despite the prevalence of process issues in the health professions education literature there is little explicit consideration at the level of theory of the 'work of integration' as it takes place in practice: in real time. Thus, generally, integration is under operationalised and seen as unproblematic. This has implications for faculty development inasmuch as there is little consideration of the underlying issues or 'knot work' that hinders inclusive, interdisciplinary, teaching and learning.

Summary of Work

This communication is based on an ongoing qualitative synthesis of the literature on integration in medical education published between 1990 and 2022. Titles of published articles in 5 electronic data bases were searched using the algorithm (integrat* or interdis*) and (medica*) and (educat* or curric*). After removing duplicates, 1292 (internationally, representative, majority english language) papers were divided into groups. Papers including specific content on the 'process' of integration were imported into the qualitative data package nViVo (n = 120). Each article was analysed thematically and coded into categories of 'experience', 'solution', 'theory'. Further analysis yielded over 50 sub themes.

Summary of Results

Tensions surrounding the work of integration and integrating in healthcare education are implicit in the practice literature. Challenges include: structural or institutional 'road blocks' to incorporating new innovations or ideas; deep rooted cultural differences with

respect to ideas about ‘pedagogy’, ‘definitions of health and illness’, ‘disciplinary importance’, ‘medical specialities’, ‘integration and interdisciplinary working’ and 'career'.

Discussion and Conclusion

Integration is as much a personal, political, embodied experience as it is ‘a set of objective conceptual ideas’ to be adopted without question by persons involved in health professions education. Rather than denying the individuality and agency of educators, safely incorporating into faculty development programmes, an exploration of personal, professional background, values and orientations, may simultaneously 'be affirmative for those joining health professions education' and 'provide opportunities to explore as a team, how, when and why differing sociocultural positions inadvertently stifle progress'.

Take-home Message

Integration in health professions education is complex

The work of integration has a personal, political, embodied dimension

Acknowledgement and discussion of personal position in relation to the healthcare education role will assist in the process of integration

813 (3553)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1445
Location: Castle III, Crowne Plaza

How Organizational Culture Affects Internal Motivation to Shape Clinical Educator Identity

Wai Ching Deanna Lee[1], Chaoyan Dong[1]

[1]*Sengkang General Hospital, Sengkang, Singapore*

Background

The development of Educator Identity has a significant impact on well-being, motivation, productivity, and the quality of teaching. Research shows that the organization can negatively affect the development of Clinical Educator Identity, particularly through conflicting responsibilities and a challenging work environment. However, there is a lack of research that identifies the enabling and constraining factors affecting Clinical Educator Identity Formation (PIF) in organizations and provides guidance on how organizations can support the development, maintenance, and advancement of Clinical Educator Identity.

Summary of Work

Theoretical Framework:

Jarvis-Selinger et al (2012) described that the formation of professional identities happens simultaneously at two levels: (1) at the level of the individual involving psychological development of the individual and (2) at the collective level (extrinsic factors), which involves the process of socialization.

Based on Jarvis-Selinger's description, this study aimed to examine the interaction of relational and organizational factors in Clinical Educator Identity Formation.

Methods:

This study utilized an exploratory qualitative approach, grounded in the constructivist paradigm, to examine the phenomenology of Professional Identity Development in experienced Clinical Educators in Singaporean hospitals. The data was collected through one-to-one interviews, recorded, and transcribed verbatim. Four investigators analyzed the data using constant comparative analysis to identify relevant themes.

Summary of Results

Eleven senior educators participated in the one-to-one interviews. The results showed that personal, relational, and organizational factors influenced the development of Clinical Educator Identity. The relational aspect was a vital enabler, while organizational culture was a strong barrier. The study also identified several ways in which organizations can support Educator Identity development.

Discussion and Conclusion

The findings of the study provide insight into how organizations can support the development of Clinical Educator Identity. The findings will aid organizations in understanding the areas where they can channel resources to support Clinical Educator Identity development.

Take-home Message

Organizational factors play a crucial role in the formation of Educator Identity.

814 (6538)

Date of Presentation: Tuesday 29th August
Time of presentation: 1445 - 1500
Location: Castle III, Crowne Plaza

Addressing the limitations associated with teacher evaluations in clinical teaching. The University of Toronto case study.

David Rojas1, Nimaliny Krishnan 2, Katrina Chu2, Natasha Shaikhlislamova2, Samantha Inwood3, Caroline Abrahams2

[1]Wilson Centre, University Health Network, Toronto, Canada; [2]PGME, University of Toronto, Toronto, Canada; [3]MD Program, University of Toronto, Toronto, Canada

Background

The reliability of teacher performance evaluations has been a topic of discussion in education at large but is of particular interest in medical education due to the high-stake decisions associated with the evaluation results (i.e., promotions). Evidence shows that evaluations of teacher performance are affected by low responses, and gender and ethnicity bias. Unfortunately, suggestions to address these limitations, such as workplace peer-peer evaluations, self-reflections, and the development of teaching portfolios, are challenging to implement in the clinical environment due to the limited resources available and faculty competing demands.

Summary of Work

At the University of Toronto, we have standardized and implemented a new Learner Assessment of Clinical Teaching (LACT) form across clerkship and residency. The form was developed as a formative evaluation tool that can be deployed either as a pre-scheduled assessment (at the end of the rotation) or on-demand (initiated by the trainee). Furthermore, we developed an interactive dashboard system that facilitates access to this data at the individual, division, or departmental level.

Summary of Results

We implemented the LACT form in July 2020. Since then, allowing trainees to trigger their own form, and combining clerkship and resident data has increased the number of

evaluations received for individual teachers, which enhanced the reliability and reportability of the feedback received. The interactive dashboard has also allowed for the comparison of individual teacher performance to the greater clinical teaching cohort, which is more diverse and has helped address gender and ethnicity biases. The interactive dashboard and higher volume of evaluations allowed the development of a more accurate methodological approach to identify teachers "in difficulty," thereby allowing departments and programs to be more proactive in providing targeted faculty support.

Discussion and Conclusion

We have developed and standardized a lower-stakes, formative clinical teaching evaluation form, allowing our institution to offer more reliable, actionable and meaningful feedback to teachers, programs and departments. The development of the evaluation tool and associated reporting dashboard could serve as a potential solution in medical education to time and resource challenges whilst adhering to educational best practices for teacher performance evaluation.

Take-home Message

Design and technological solutions can help address bias and increase the reliability of teacher-performance evaluation data.

815 (2992)

Date of Presentation: Tuesday 29th August
Time of presentation: 1500 - 1515
Location: Castle III, Crowne Plaza

The Highpoints of Clinician-Educators' Career through the Lens of the Job Characteristics Model

Hossein Tcharmtchi[1], Shelley Kumar[1], Satid Thammasitboon[1], Jennifer Rama[1], Brian John Rissmiller[1], Danny Castro[1]

[1]*Baylor College of Medicine, Texas Children's Hospital, Houston, Texas, USA*

Background

Challenges to well-being are often the result of a suboptimal job environment. Hackman and Oldham's Job Characteristics Model (JCM) posits that certain job characteristics (Autonomy, Feedback, and Task Variety/Identity/Significance) are essential for promoting employee engagement and well-being. To address well-being challenges among clinician-educators (CEs), systematic interventions are needed to enrich job characteristics that support CEs' careers.

Summary of Work

As a groundwork to derive a strategic framework for guiding 'job redesign' interventions for CEs, we had gathered validity evidence of the JCM, a proof of concept for CE context, via a nationwide survey of pediatric CEs in the US. Using an 'appreciative inquiry' approach, we included three free-text questions to gather viewpoints related to CEs' values, career highlights and wishes. To gain contextual insights to what enriches CEs' careers, we conducted reflexive thematic analysis of survey comments, using the JCM as a sensitizing concept, and integrated with quantitative survey data to derive mixed insights.

Summary of Results

From 196 survey comments, we identified themes that enabled sustained commitment to fulfilling CE roles as integral parts of an academic institution: teacher identity as the essence and the omnipresence of CE career, making an impact on the lives of others and

towards larger purpose, varieties of responsibilities and learners' success as reward and fulfilment, recognition and accomplishment as career highlights, institutional commitment and support and interdependent growth of institution and Individuals.

Discussion and Conclusion

Imparting knowledge to trainees is integral to CEs' professional identity—the highpoint beyond roles/responsibilities. CEs are driven by the significance of their work—the unique capacity to make a difference in the lives of patients and trainees. Ownership over great responsibilities, pride in work outcomes (individual, program or population level), and recognition of accomplishments are job motivators. Organizational commitment and support to advancing the field through patient care and education are valued by CEs as they envision and strive for individual and programmatic growth to parallel this progression. We used these insights, contextualized with the JCM, to guide initiatives for 'job redesign' by a program and 'job crafting' by individual CEs.

Take-home Message

JCM is a useful framework to gain insight and understand what motivates CEs and their professional identity

816 (2399)

Date of Presentation: Tuesday 29th August
Time of presentation: 1515 - 1530
Location: Castle III, Crowne Plaza

Promoting Medical Student Professional Identity Formation Through Sense of Belonging and Shared Suffering

Helen Wang1, Chad Vercio2, Nikita Nagpal3, Chris Peltier4, Joseph Jackson5, Amal Khidir6, Caroline Paul3, Gary Beck Dallaghan7, Terry Kind8, Amy Creel9

[1]University of California San Diego, San Diego, USA; [2]Loma Linda University, Loma Linda, USA; [3]New York Univeristy, New York City, USA; [4]University of Cincinnati College of Medicine, Cincinnati, USA; [5]Duke University School of Medicine, Durham, USA; [6]Weill Cornell Medicine in Qatar, Doha, Qatar; [7]University of Texas, Tyler, USA; [8]George Washington University, Washington D.C., USA; [9]Louisiana State University Health Sciences Center, New Orleans, USA

Background

Professional identity formation (PIF) in medical education is a dynamic socialization process whereby students incorporate, reject, or compromise ideas, skills, and perspectives on their journey to becoming a physician. Both the individual's development and social contexts contribute to PIF, yet few investigations explore the influence of social interactions. Sense of belonging (SB), which can be described as an individual feeling esteem, connectedness, and efficacy, is a fundamental need spanning many psychological theories. Using the lens of social identity theory, the authors explored clinical experiences that senior medical students perceived to enhance and undermine SB and PIF.

Summary of Work

In this qualitative study investigators conducted one-hour focus groups between 2/2022-5/2022 with senior medical students at six institutions, to explore SB and PIF using a phenomenological approach. Prompted written reflections and demographics were collected using an anonymous online tool. Author teams coded transcriptions through an iterative process.

Summary of Results

Twenty-six students during six focus groups reported contributors to SB in clinical settings that were characterized as pre-existing identity (internal factors), perception of treatment by the medical team (external factors), and systemic structures. Internal factors included: first in medicine, underrepresented status, gender, and socioeconomic background. External factors included: shared suffering, communication of inclusion, relational closeness, and experiencing trust and autonomy. Systemic factors included: continued hierarchical nature of medicine, physical spaces, team diversity, and poorly communicated roles and expectations.

Discussion and Conclusion

This study affirms that SB influences medical student PIF, broadens understanding of the complex interplay of internal, external, and systemic contributors to SB, and highlights the previously underreported contributions of shared experiences of suffering. Findings offer insight into educator development strategies to promote SB and enhance PIF including: using communication of inclusion, prioritizing team relational closeness, supporting graduated autonomy, promoting diversity of teams, and utilizing a transformational learning framework after exposure to shared suffering.

Take-home Message

Resident and faculty development can focus on communicating with inclusion, developing relations within a team, fostering supportive autonomy, promoting diversity of teams, and utilizing transformational learning after shared experiences to improve students' sense of belonging on clinical rotations.

Session 8J: Interprofessional & Team Learning 2

8J1 (6432)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1415
Location: Alsh 1, Loch Suite, SEC

Enhancing Reflective Practice in Interprofessional Education in A Community Setting by Developing a Logbook: Design-Based Research

Fatikhu Yatuni Asmara1, Tri Nur Kristina2, Dian Puspita Dewi2, Diana Nur Afifah3, Marco Versluis1, Jan Jaap Reinders1, Agnes Diemers1, Nynke Scherpbier4

[1]LEARN, Research Institute SHARE, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands; [2]Department of Medicine, Faculty of Medicine, Universitas Diponegoro, Semarang, Indonesia; [3]Department of Nutrition, Faculty of Medicine, Universitas Diponegoro, Semarang, Indonesia; [4]Department of General Practice and Elderly Care Medicine, University Medical Centre Groningen, University of Groningen, Groningen, The Netherlands

Background

Experiential learning is one of the learning theories of Interprofessional Education (IPE) which is reflected upon. Reflection is considered IPE's learning strategy as in a reflection, students identified their learning experiences including achievement, problems, and solutions. A logbook is an instrument for reflective practice. However, most implementation of experiential learning including reflection and logbook is in a clinical setting. Therefore, the study aims to develop a logbook as an instrument for reflection on IPE in a community setting.

Summary of Work

The setting of the study was IPE implementation in a community setting involving students from three disciplines, namely medicine, nursing, and nutrition. Design-based research was used as an approach. There were three steps, namely analysis, and design; evaluation and re-design; analysis and re-design. In the first step, the research team designed a logbook based on the literature on reflective practice, IPE competencies, and

giving feedback. The designed logbook was evaluated by asking experts, students, and instructors to complete an open-ended questionnaire. During the pilot testing (step 2), students used a logbook in reflecting learning process and instructors gave feedback on it. Then, they were asked to complete a five-Likert scale questionnaire (5: strongly agree, 4: agree, 3: neutral, 2: disagree, and 1: strongly disagree). The result of step 1 and 2 was applied to re-design the logbook.

Summary of Results

The designed logbook included students' identity, introduction, IPE competencies, instruction on how to complete the logbook, and self-reflection. Evaluation of the logbook involved two experts, seven instructors, and 13 students. They suggested adding leadership, conflict management skills, and shared decision-making as IPE competencies. Sixty-six participants (33 instructors and 33 students) participated in the pilot testing. The perception related to the implementation of the logbook was good (mean: 4.34; SD: 0.44) and there was no difference in perception between instructors and students ($p = 0.527$)

Discussion and Conclusion

The logbook was feasible as an instrument for reflective practice in IPE in the community setting. It is suggested that further research is to implement the logbook and identify its effectiveness in interprofessional learning.

Take-home Message

A logbook is a feasible instrument for students' reflection on interprofessional learning in a community setting.

8J2 (2445)

Date of Presentation: Tuesday 29th August
Time of presentation: 1415 - 1430
Location: Alsh 1, Loch Suite, SEC

Using Individual Peer Assessment of Contribution Scores in Global Student Collaboration

Pak Yin Lam1, Tanvi Sharma2, Arisma Arora1, Mandeep Gill Sagoo1, Anette Wu3

[1]King's College London, London, UK; [2]Columbia University College of Dental Medicine, New York, USA; [3]Vagelos College of Physicians and Surgeons, Columbia University Irving Medical Center, Columbia University, New York, USA

Background

Collaboration and group work are strongly advocated in medical and Higher Education, for enhancing learning outcomes and fostering independent learning, teamwork and communication skills. However, there remains a paucity of research on teamwork conducted on an international level. This article presents an evaluation of international student collaboration in online group work from a peer assessment study.

Summary of Work

The investigation was part of the International Collaboration and Exchange Program (ICE), a global virtual networking program organized by Columbia University involving medical, dental and health profession students from 24 international universities. Students, in small groups, were asked to rate their peers and provide comments based on engagement in group activities. Student scores were calculated using the Individual Peer Assessment of Contribution (IPAC) methodology (developed by University College London), a tool that evaluates individual contribution through peer feedback to enhance fairness in marking for group work. Score distributions and student comments were analysed to study group cohesiveness and individual contribution levels over time, and whether these changes are influenced by group size. Statistical analysis was done in Excel.

Summary of Results

Overall group cohesiveness remained high throughout the program despite differences in cultural and educational backgrounds, language barriers and lack of face-to-face communication. However, disparities in individual contribution levels between peers were found to be greater compared to cohorts in previous literature. An increase in group size was linked to a rise in both group cohesiveness and equality in contribution levels over time. Thematic analysis of student comments revealed that the most discussed topics were 'quality of work and insightful ideas' and 'student engagement'. Least mentioned aspects were 'patience' and 'organization'. Students who received negative comments also received significantly lower IPAC scores than the cohort average.

Discussion and Conclusion

This is the first successful implementation of IPAC methodology in the study of international student collaboration. The findings provide an important insight for future research on group work dynamics in international training settings.

Take-home Message

In the age of globalization in healthcare, international collaboration is increasingly advocated among health professions. The IPAC methodology is an effective measure for assessing group work and investigating student collaboration on a global scale.

8J3 (2851)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1445
Location: Alsh 1, Loch Suite, SEC

Improving Learning Experience by Empowering Preclinical Year Medical Students to Co-create Learning Tools and Implement Them in Class Learning Activities

Piya Rujkijyanont1, Thanakrit Tanjararak2, Parit Prechachaisurat2, Parama Chaipackdee2, Bhranai Sammatat2, Patomthan Marknui2, Chalinee Monsereenusorn1, Chanchai Traivaree1, Wittawat Chantkran3, Pasra Arnutti4

[1]Division of Hematology-Oncology, Department of Pediatrics, Phramongkutklao College of Medicine, Bangkok, Thailand; [2]Phramongkutklao College of Medicine, Bangkok, Thailand; [3]Department of Pathology, Phramongkutklao College of Medicine, Bangkok, Thailand; [4]Department of Biochemistry, Phramongkutklao College of Medicine, Bangkok, Thailand

Background

Well-designed teaching and learning strategies are essential for student success. In the academic year 2022, clinical pathology course was moved to Year 2 of the revised Doctor of Medicine (MD) program at our medical school instead of Year 3 as outlined in the previous curriculum. Our challenge was to create an optimal teaching & learning strategy for Year 2 students to ensure a good learning experience and student success during this transition.

Summary of Work

Herein, we invited five representatives of Year 2 students of 2021 class of the MD program to co-design the learning strategies, develop learning tools and implement them in class learning activities. Gamifying the flipped classroom using game-based learning was chosen by five representative students and piloted in 4 clinical pathology classes: hematopoiesis, approach to anemia, hematopoietic stem cell transplantation and acute leukemia. Student satisfaction and self-confidence in learning using rating scales (0-10) were assessed before and after the class. Formative assessment using MCQ before and after the class were evaluated among Year 2 students and compared with the scores

from the same questions obtained from Year 3 students of the previous curriculum who attended in-class lecture. Reflection and feedback of learning experience was also performed at the end of the class.

Summary of Results

Significant improvements in student satisfaction and self-confidence were noted among ninety-six Year 2 students with P-value of <0.001 and <0.001, respectively. Interestingly, Year 2 students of 2021 class achieved significantly higher MCQ scores after the class (P-value <0.001) and higher mean difference of MCQ scores obtained before and after the class (P-value <0.001) comparing to Year 3 students of the previous curriculum. Good learning experience was expressed from Year 2 students and positive attitude towards learning were observed from the five representative students during reflection and feedback.

Discussion and Conclusion

Creating the “sense of belonging” in the classroom by empowering pre-clinical medical students to co-create learning tools and implement them in class learning activities could positively effect on their learning experience and attitude towards learning.

Take-home Message

Allowing pre-clinical medical students to create their own learning space could improve their learning experience and attitude towards learning.

8J4 (5760)

Date of Presentation: Tuesday 29th August
Time of presentation: 1445 - 1500
Location: Alsh 1, Loch Suite, SEC

Interprofessional education in a clinical setting: more than a feeling?

Tessa Verhoeff1, Jeroen Janssen2, Reinier G. Hoff1

[1]University Medical Center Utrecht, Utrecht, The Netherlands; [2]Utrecht University, Utrecht, The Netherlands

Background

Interprofessional education (IPE) is widely assumed to play an important role in preparing health workers for collaborative practice. So far, evidence is tentatively showing that IPE has a positive effect regarding collaborative attitudes, knowledge and skills, although quality of evidence is limited. The aim of this systematic review is to analyze results of studies that investigated effects of IPE interventions in a clinical setting (e.g., on quality of care, attitudes toward collaboration, etc.) and to identify components of the interprofessional learning environment contributing to positive effects.

Summary of Work

We searched multiple databases focusing on IPE in a clinical setting, with at least one of the participants being from the medical profession, yielding 13.270 studies published till November 2022. We performed title and abstract screening, followed by full text screening, leading to 195 studies that met our inclusion criteria. Reporting was done in accordance with the PRISMA statement. Included studies were critically appraised using the Checklist for Quasi-Experimental Studies. Meta-analysis was not possible due to heterogeneity in investigated outcomes. We therefore recorded whether the reported outcomes reflected a positive, mixed or negative effect of the IPE intervention.

Summary of Results

Included studies varied widely in study design, assessment tools employed and outcomes reported. The number of participants differed greatly, ranging from 7 to 919. Overall quality of studies was low to mediocre. A majority of studies utilized a pre- and post-assessment

study design. The outcome most often investigated addressed students' attitude towards interprofessional collaboration and/or education. Most interventions lasted a day or less. Factors associated with positive effects were e-modules combined with other types of education, assignments in the workplace and interventions lasting more than one month. Studies focusing on behaviour often yielded mixed outcomes.

Discussion and Conclusion

Students are generally enthusiastic about IPE and the exchange between different disciplines. However, we observed a discrepancy between the perceived value and the actual evidence that shows potential benefits of IPE.

Take-home Message

Further thorough research is necessary to evaluate IPE interventions and to guide time, energy and funding in the right direction.

8J5 (1531)

Date of Presentation: Tuesday 29th August
Time of presentation: 1500 - 1515
Location: Alsh 1, Loch Suite, SEC

Interprofessional Shared Decision-Making in Palliative Care for Undergraduate Health Professions Education

Lama Sultan1, Nynke de Jong2, Basim Alsaywid3, Jascha de Nooijer4

[1]School of Health Professions Education, Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, The Netherlands; [2]Department of Health Services Research, School of Health Professions Education, Faculty of Health, Medicine and Life Sciences, Maastricht University,, Maastricht, The Netherlands; [3]Education and Research Skills Directory, Saudi National Institute of Health, Riyadh, Saudi Arabia; [4]Department of Health Promotion, School of Health Professions Education, Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, The Netherlands

Background

Shared decision-making in palliative care is a highly complex process and depends on an interdisciplinary team. The lack of interprofessional training inhibits preparedness in team collaboration. Therefore, the aim of this study is to explore perceptions and practices of faculty members, health professionals and students toward Interprofessional Shared Decision-Making Education (IP-SDM) education in palliative care; and to explore stakeholders perspectives about implementing an IP-SDM education in palliative care.

Summary of Work

A mixed methodology was conducted at King Abdulaziz Medical City in Jeddah, Saudi Arabia. In the quantitative part, a self-administrated questionnaire based on validated tools was completed by health professions students, faculty members, and health professionals (n=249,54%). Mean and standard deviation were used to report quantitative data by SPSS. In the qualitative part, in-depth face-to-face individual interviews with policy makers and focus groups with health professionals and faculty members or students per discipline were conducted. Participants were policy makers (n=5); faculty members and health professionals (n=15); students (n=25). The interprofessional education for collaborative patient-centred practice model that describes the factors

influencing interprofessional practice was used to guide the interview which lasts one hour. A provisional thematic framework was developed by the analytical tool (QUIRKOS).

Summary of Results

Perceptions on IP-SDM did not differ between faculty members, health professionals and students. From those who had previous experience with IP-SDM, the practices score was slightly higher for faculty members and health professionals (M=83.1, SD=15.9) than for the students (M=74.15, SD=11.58). Differences were significant ($p<.05$). In the qualitative part, six major themes emerged as factors that facilitate or hinder the implementation of IP-SDM in undergraduate education in palliative care. Factors include culture, religion, gender, power issues, team hierarchy and respect. The results addressed the potential solutions to overcome the hindering factors.

Discussion and Conclusion

The perceptions of faculty members, health professionals and students toward IP-SDM in palliative carewere prominent, however, it was not coupled with adequate practice. All stakeholders indicated the high demand for IP-SDM education in palliative care, but also the complexity of implementation.

Take-home Message

It is recommended to start IP-SDM for palliative care in the early phases of undergraduate education.

RP1596/SC

8J6 (3633)

Date of Presentation: Tuesday 29th August
Time of presentation: 1515 - 1530
Location: Alsh 1, Loch Suite, SEC

How to make interprofessional education effective: a state-of-the-art review

Gerard Spaai1, Jan Tams1, Etienne Verheijck1, Janique Oudbier1

[1]*Academic Centre for Dentistry Amsterdam, Amsterdam, The Netherlands*

Background

Interprofessional education brings students of two or more professions together to learn with, about and from each other, enabling effective collaboration resulting in improvement of health outcomes (World Health Organization, 2010). This study aims to investigate factors that positively or negatively affect the effectiveness of interprofessional education and the mediating factors.

Summary of Work

A state-of-the-art review was conducted in which PRISMA guidelines were followed. In August 2022, the databases PubMed, MEDLINE, PsycINFO, Web of Science, and Scopus were consulted. The following search terms were used: (interprofessional learning) OR (interprofessional education) AND (higher education). The timeframe was limited by the last five years. Articles that meet these criteria were included: 1) study is published in English, 2) main didactical principle is interprofessional education, 3) population is students and/or faculty in higher education (undergraduate, graduate, and postgraduate), 4) domain is medicine and/or dentistry, 5) all types of publications, except contributions to conferences, validation studies, and pilot studies, 6) design of the study is mixed method, qualitative or quantitative, 7) full text of the study must be available, 8) purpose and/or research question contributes to answering the main question. The included articles were qualitatively analyzed and the methodological quality was assessed with the checklists by the Joanna Briggs Institute (JBI, 2020).

Summary of Results

In total 2637 records were retrieved, of which 60 were included in this review after screening the studies based on the inclusion criteria. The preliminary results of our review show that the use of active learning methods and a high degree of guidance during the learning activities positively affect the effectiveness of interprofessional education. Negatively affecting factors are poor logistical arrangements and organization, a low level of team diversity, and misalignment between learning goals, learning methods, and assessment. Intermediating factors are students' readiness for interprofessional education and student and teacher characteristics.

Discussion and Conclusion

This study provides insight into the factors that positively and/or negatively affect the effectiveness of interprofessional education and the factors that mediate this effect and can be used to make interprofessional education more effective.

Take-home Message

Preparing students to be ready for interprofessional education is the first step in enhancing the effectiveness of interprofessional education.

Session 8K: TEL: Innovative Technologies and Approaches

8K1 (2902)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1415
Location: Alsh 2, Loch Suite, SEC

The effects of utilizing a spherical video-based virtual reality learning approach in nursing students' maternity practicum training.

Pei-Chi Liu1, Gwo-Jen Hwang2

[1]Chang Gung Medical Foundation, Linkou Branch, Taoyuan, Taiwan; [2]Graduate Institute of Digital Learning and Education, National Taiwan University of Science and Technology, Taipei, Taiwan

Background

Technology-assisted learning has become more and more popular in teaching and learning, and many studies have indicated that Virtual reality technologies have recently been successfully integrated into many fields. Spherical Video-based VR (SVVR) is a low-cost VR that provides 360-degree panoramic vision, allowing learners to learn in a more immersive environment and facilitating students' learning. Even if it has been used in nursing education, there is no evidence that it has been used in maternity practicum. Therefore, this study aims to verify the effects of implementing the learning approach with SVVR to increase students' learning achievement, problem-solving, critical thinking, communication ability, and self-efficacy.

Summary of Work

This is a one-group pretest-posttest design. With this learning system, students were able to watch 360-degree childbirth videos through the Uptale VR training platform using Virtual Reality Glasses. Before the practicum, nursing students were taught an hour lesson for caring and supporting women in labor by a senior teacher. After that, they learned about maternity care via the SVVR approach for two hours and had two weeks of clinical maternity practicum. All students were surveyed before and after the experiment, and an interview was conducted about their experiences of using the SVVR.

Summary of Results

The quantitative results were that the SVVR learning approach could improve students' learning achievement, problem-solving, critical thinking, and self-efficacy, but no difference in communication ability. For the qualitative results, students indicated that they were in the real environment by using SVVR. Moreover, most students considered that this learning method could motivate them and help them make correct decisions.

Discussion and Conclusion

The SVVR learning method provided a sense of presence and allowed students to be more integrated into the clinical situation during the maternity practicum.It was an effective learning model so could be encouraged the consideration of using in other subjects of nursing practicum training or professionals' clinical training.

Take-home Message

The experiences of the SVVR-based learning approach allow students to grasp theoretical concepts faster and in greater depth and have better performances and achievements on practicum.

Moreover, through interaction with the learning system, it is clear that problem-solving and critical thinking abilities are improved.

8K2 (3523)

Date of Presentation: Tuesday 29th August
Time of presentation: 1415 - 1430
Location: Alsh 2, Loch Suite, SEC

Effectiveness of Cognitive Simulation in Emergency Medical Technician (EMT)'s patient assessment

Valerie Ho[1], Zhi Xiang Tan[1], Zhong Wei Mark Tan[1], Alfatah Abdul Karim[1], Ibrahim Hamzah[1]

[1]*Singapore Armed Forces, Singapore*

Background

Cognitive simulation have been introduced to improve the thought process and decision making skillsets of our healthcare professionals. The Singapore Armed Forces (SAF) Medical Training Institute (SMTI) therefore introduced the ISABEL (Interactive Scenatio Application Based E-Learning) application, which hones learners' decision-making skills through focusing solely on cognitive skillsets. Learners are given access to a web-based application, where they are encouraged to attempt the scenarios in their own time, and with multiple attempts allowed.The application specifically trains learners' decision making skillsets without the presence of interferences that learners might face in an actual practical assessment. These scenarios emulate actual scenarios learners might face as paramedics and focuses on protocols they learnt in their course.

Summary of Work

This study is a comparison between-subjects, where the theory and practical test results of two course-runs of Emergency Medical Technician (EMT) learners will be analysed. The two course-runs would include one with a conventional teaching method, and the other with introduction of the ISABEL application.Specifically, it evaluates the effectiveness of cognitive simulation in improving learners' theoretical knowledge and practical knowledge and additional qualitative feedback was garnered from the learners, to understand their perception of the application.

Summary of Results

The results are currently in the midst of analysis. The hypothesis is that learners would have an improvement in theorectical knowledge and practical performance of patient assessment as compared to learners without access to the ISABEL application.

Discussion and Conclusion

Introducing learners to such scenarios prior to practical assessments and other simulation efforts would serve to familiarise learners with the action steps to take during patient management. Having such applications encourages Self-Directed Learning, by allowing learners to take multiple attempts, without being limited by the availability of simulation equipment.

Take-home Message

Cognitive Simulation shouuld be considered by other paramedical courses that aim to primarily sharpen their learners' decision making skills and heighten efficiency of learning through bridging the gap between theoratical and practical aspects of a lesson. Beyond serving as a complementary tool to a wider suite of simulation toolkits, Simulation Scenarios could also be easily added and/or modified to cater to various critical and analytical thinking levels of the learners and should therefore, be encouraged.

8K3 (2970)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1445
Location: Alsh 2, Loch Suite, SEC

Effectiveness of telegram bots in improving tactical combat casualty care in a military setting

Valerie Ho1, Larry Yip1, MOHD HANAFI BIN MAKSOM1

[1]*Singapore Armed Forces, Singapore*

Background

Studies have delved into the use of messaging platforms such as Telegram in optimising learning in the medical education field. The study therefore studies the effectiveness of telegram bots in improving tactical combat casualty care (TCCC)in a military setting, for non-medically trained learners Specifically, we study the effectiveness of telegram bots in improving knowledge acquisition of theoretical and practical skill sets tactical combat casualty care in a military setting, for non-medically trained National Service (NS) Men who have served in the conscript army prior to returning for Operationally Ready NS (ORNS) training.

Summary of Work

The study will be guided by the following research question: Does the Combat Casualty Aid Course (CCAC) Edbot serve as a learning supplementary tool for learners?

The Telegram EdBot was launched out for CCAC learners prior to the conduct of the course, and it can be accessed at any time, and as many times as the learners deem suitable. The study employs a between-subject method design, where theory and practical test results were retrospectively retrieved and analyzed for the 3 batches prior to and for 3 batches after the launch of the CCAC EdBot .

Summary of Results

An unpaired samples t-test showed a significant improvement in practical test results score between pre-CCAC EdBot Practical Test scores (M = 85) and post-CCAC EdBot

Practical Test (M = 91.7) t(df) = 6, p = 0. 0016. The unpaired samples t-test showed an improvement in theory test results for the batches who were granted access to the telegram bot, with pre-CCAC EdBot Theory test scores (M=68) and post-CCAC EdBot Theory scores (M=72.7), t(df)=6, p=0.144. This result was however statistically insignificant.

Discussion and Conclusion

Integrating telegram bots into the courses served as a bridge between the theory and practical implementation of the skillsets required. The telegram bot is a good revision tool that should also be utilised for learing theoratical aspects of various other paramedicine/ combat medicine educational settings.

Take-home Message

- Introducing learning supplementary tools for theoretical knowledge can assist in performance of practical skillsets.
- Teachers could explore using Telegram EdBots and learning supplementary tools for other paramedical or medical lesssons.

8K4 (6751)

Date of Presentation: Tuesday 29th August
Time of presentation: 1445 - 1500
Location: Alsh 2, Loch Suite, SEC

When new technology challenges medical education: a review of point of care ultrasound educational development in Australasia.

Carolynne Cormack1, Fiona Kent1, Jessie Childs2

[1]Monash University, Melbourne, Australia; [2]University of South Australia, Adelaide, Australia

Background

Point of care ultrasound (PoCUS) technology has evolved rapidly and is being adopted by many health professions. It is distinct from comprehensive ultrasound performed by imaging experts, being a limited scan performed by 'non-experts' using compact or handheld devices during patient care. Ultrasound is a complex psychomotor skill that requires dedicated training. There are obvious patient safety implications for the use of ultrasound without adequate education and competency standards. Integration of ultrasound training into the health professions is a current challenge worldwide.

Summary of Work

A scoping review was conducted of point of care ultrasound education within the medical, surgical, nursing and allied health professions in Australasia. The aims were to review the status of PoCUS education in Australasia; to investigate what was being taught and learned about ultrasound; and to identify potential gaps. The review included one hundred and thirty-six documents relating to ultrasound education, curricula, policy, competency requirements and clinical scopes of practise.

Summary of Results

The review found significant heterogeneity in ultrasound teaching and learning across the health professions. Several health disciplines lacked any defined scopes of practice, policies or curricula. Common themes were identified across the health professions of barriers to point of care ultrasound development that included a lack of suitably skilled faculty, lack of dedicated training time and lack of funding to address these issues.

Discussion and Conclusion

This is an example of new technology driving change and challenging existing medical education. Whilst this review highlighted educational needs in Australasia, similar challenges exist in the UK, Europe and USA. Future directions are incorporating ultrasound education into existing curricula; development of professional competencies and scopes of practise; integration of early ultrasound training into undergraduate courses; structured continuing medical education; and interdisciplinary approaches to share finite resources and expertise.

Take-home Message

New technology presents unique challenges within medical education. Complex new skills require multiple educational solutions and adequate resourcing to address.

8K5 (4649)

Date of Presentation: Tuesday 29th August
Time of presentation: 1500 - 1515
Location: Alsh 2, Loch Suite, SEC

Capitalizing the power of Gamification analytics to understand learner engagement in undergraduate Medicine

Nicolene Lottering[1], Sacha Kennedy[1], Joan Roehl [1], Helen Houghton[1], Suzanne Gough[1]

[1]*Bond University, Robina, Australia*

Background

Many educators face the challenge of having low visibility of real-time learning and delayed insights of learner understanding and knowledge retention. Digital exposure of generation Z learners and effects of varied instructional modes during the COVID-19 pandemic has impacted learner engagement, preferences, and attitudes. Mobile gamification has the capacity to generate extensive real-time analytics to quantify changing learner behaviours and digital habits.

Summary of Work

A mixed-methods evaluation of a gamification tool was undertaken to explore learner engagement and academic performance within two-years of an undergraduate medical program. Weekly formative assessment opportunities were deployed via a mobile app as a curriculum-adjunct, across multiple science and clinical practice teaching streams. In-app trace measures allowed academics to explore user access patterns, cumulative point aggregates, and completion for each quiz. A novel four-stage engagement tool explored the relationship between massed-versus distributed-practices and academic achievement. Multiple data sources were triangulated (learner analytics, surveys, assessment data) to gain insights into behavioural engagement across year-long subjects in preparation for high-stakes summative examinations.

Summary of Results

Learner enrollment in the gamification app increased each semester from 93.5% to 99%. User access patterns between two cohorts who received varying instructional modes

during the pandemic, showed marked differences in onboarding, progress, mastery and time played. Varied engagement habits, preferences, and app utilization were identified between cohorts, whereas collective academic performance increased across the three-trimesters. For individual learners, growth points and completion were significantly higher ($p<0.05$) in students who earned over 85% on exams. 'Highly engaged' learners scored 11% higher than 'just-in-time' learners, while students with no engagement fell below academic cut-scores.

Discussion and Conclusion

We provide valuable insights for the implementation of mobile-based gamification to allow educators to track real-time access patterns across multiple cohorts and provide unique insights to knowledge acquisition, accuracy, and retention. Triangulation of student perception data and quantitative analytics permits learner behaviour and digital habit exploration, as a measure of student engagement, to inform personalized interventional strategies for undergraduate learners.

Take-home Message

In-app trace measures provide educators with insightful data to quantify student engagement through real-time usage patterns, to gain a deeper understanding into digital learning behaviours and self-regulated tendencies of modern learners.

Session 8L: Teaching and Facilitating Learning: Creative Teaching Methods - From Theater to Escape Rooms!

8L1 (3807)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1415
Location: Boisdale 1, Loch Suite, SEC

A Serious Card Game for Trauma Resuscitation Education of Medical Students.

Osaree Akaraborworn1, Satid Thammasitboon2, Brian John Rissmiller2, Jennifer Benjamin2

[1]Prince of Songkla University, Hat-Yai, Songkhla, Thailand; [2]Baylor College of Medicine, Houston, TX, USA

Background

Serious games (SGs), games for educational purposes, have been increasingly used in health profession education (HPE) to enhance learner engagement and learning. The Model for the Evaluation of Educational Games (MEEGA) comprises essential components for SGs: Player Experience, Usability, and Motivation to learn. We developed and evaluated an SG for trauma resuscitation guided by MEEGA.

Summary of Work

We designed a card game to teach medical students about trauma resuscitation. The card game has 20 interventions with a score scaled to award points for desired interventions and deduct for interventions causing harm. Students play in teams, in which players receive a set of cards, shuffled and distributed to individuals. As a trauma scenario unfolds, players independently pick one card as the 'most useful' intervention for each scenario or skip their turn. The member's scores are summed in each scenario, and the new scenario begins. The team with the highest collective score at the end of all 5 scenarios wins. To evaluate this game, we developed an evaluation tool adapting the MEEGA for HPE and gathered validity evidence. We used descriptive statistics for evaluation of MEEGA for HPE items and domains.

Summary of Results

Total 117 students completed the evaluation. Students rated Player Experience highly (mean 4.66 out of 5, SD 0.68) across subdomains (autonomy, challenge, feedback, relevant, and social interaction), highest on the relevance of the topic (mean 4.74, SD 0.68). Students reported being satisfied (mean 4.68, SD 0.66) with Usability (aesthetics, accessibility, learnability, and operability). Students felt motivated and satisfied with the game (mean 4.69, SD 0.68), and intended to use the game again (mean 4.71, SD 0.7). The Cronbach's alpha ranged from 0.77 to 0.95.

Discussion and Conclusion

The trauma resuscitation card game engaged learners and highlighted the desirable characteristics of all three domains of MEEGA. Most students rated the usability of games highly and were motivated to learn more using SG. Assessing learning due to the card game is another important aspect to evaluate SG, so it should be done in the future for this trauma resuscitation card game.

Take-home Message

The essential components of a good SG design include player experience, usability, and motivation to learn.

8L2 (4176)

Date of Presentation: Tuesday 29th August
Time of presentation: 1415 - 1430
Location: Boisdale 1, Loch Suite, SEC

Educators' perceptions and learning needs regarding the application of educational escape rooms in teaching

Lucy Bray1, Peter Dieckmann1

[1]Copenhagen Academy for Medical Education and Simulation (CAMES), Center for HR and Education, Copenhagen, Denmark

Background

Game-based learning covers a broad-spectrum of educational approaches, based on exploiting the dynamics of gameplay to create learning opportunities. A growing form of game-based learning is educational escape rooms, having been used for a range of learning objectives across health professions education, with increasing evidence of their efficacy. However, educational escape rooms are a novel educational approach requiring experienced educators, to maximise the potential for learning. As such, targeted faculty development training, addressing the implementation of educational escape rooms in practice, should be available. However, to design such training, the learning needs of educators need to be identified. Therefore, this study aimed to explore the learning needs of health professions educators regarding the implementation of educational escape rooms in practice.

Summary of Work

This qualitative study consisted of health professions educators completing an educational escape room and participating in a focus group following the experience. The educational escape room comprised a 20-minute briefing, 1-hour escape room and 45-minute debriefing. The aim of the escape room was to train leadership skills, specifically focusing on prioritisation, communication and managing emotional challenges. Immediately after the experience, participants undertook a focus group. Focus groups consisted of 3-6 participants and lasted 25-50 minutes. Interviews were transcribed in-session and cross-checked with an audio-recording of the session. Responses will be thematically analysed.

Summary of Results

Twenty-five participants completed the escape room and participated in the focus groups. Complete thematic analysis of the responses is pending. However, a preliminary analysis revealed themes surrounding perceptions of escape rooms as an educational approach, potential applications of educational escape rooms, readiness and willingness to employ educational escape rooms in teaching and learning needs of educators wishing to implement this approach. The results will be presented as the themes and subthemes identified within the responses, along with an explanation of each theme/subtheme.

Discussion and Conclusion

The results of this study identify the learning needs of health professions educators regarding escape rooms and can be used to develop tailored faculty development training, to ensure an effective application of this educational approach.

Take-home Message

Faculty development is an essential element in the implementation of new educational approaches, especially novel approaches such as educational escape rooms.

8L3 (4685)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1445
Location: Boisdale 1, Loch Suite, SEC

Paediatric undergraduate medical education; is it all just fun and games?

Eleanor Clarke1, Eleanor Dodd1

[1]*Mid Yorkshire Hospital Trust, Wakefield, UK*

Background

There is an evolving body of evidence supporting the gamification of medical education, suggesting it fosters an environment that aids learning and improves recall.

The paediatric curriculum delivered to 4th year Medical Students involves a large volume of new content. As students are assessed, in part by single based answer MCQs, learning of conditions centres around recall of buzzwords and phrases. This content can be innovatively delivered by a gamified approach.

Summary of Work:

'A day at the paediatric arcade' interactive session was delivered to fourteen medical students over two cycles (with 18 more students scheduled to participate by May 2023).

The day was divided into two sections. Initially, well-known games were adapted to deliver teaching that focused on high-yield paediatric themes, including: breathlessness, abdominal pain and the limping child; the second cycle of eight students also included dermatology. Examples of games included; 'Breathless Battleships', and 'VACTERL' a linking game focused on surgical emergencies.

Students then participated in a multi-system escape room in which they worked as a group through clues to diagnose paediatric conditions, implement management plans and demonstrate knowledge of common paediatric concepts.

Students received a randomised participant number and completed pre- and post-session questionnaires via QR code, collecting both quantitative and qualitative data.

Summary of Results

Pre-course, the percentage of responding students who were confident listing differentials, investigations, and management of the (i)breathless child, (ii)limping child, (iii)abdominal pain and (iv)rashes were 71.4%, 42.9%, 28.6% and 21.4% respectively. Post-course, this increased to 92.3% in (i) and (iii), and 84.6% and 85.7% for (ii) and (iv) respectively.

100% of students agreed the format encouraged teamwork, and helped consolidate knowledge and recall of common concepts in paediatrics, and 92% agreed it facilitated application of communication skills.

Discussion and Conclusion

'A day at the paediatric arcade' demonstrated that gamified paediatric teaching not only improved student confidence in all considered paediatric domains, enabling consolidation of learning to augment their clinical placements, it also created a holistic learning platform which facilitated development of teamwork and communication.

Take-home Message

The use of gamification can provide an innovative approach to medical education which supports learning, whilst also developing wider clinical skills such as teamwork and communication.

8L4 (5428)

Date of Presentation: Tuesday 29th August
Time of presentation: 1445 - 1500
Location: Boisdale 1, Loch Suite, SEC

Move over ESPN! Introducing LSPN: Low budget interventions to brighten up the online conference!

Thomas Slater[1], Tami Benzaken[1], Catherine Longley[1], Parisut Kimkool[1], Nisha Patel[1]

[1]*London School of Paediatrics, London, UK*

Background

The online conference is here to stay. Although efficient in bringing professionals and learners together even across continents, the online format can be tiring and hard to love. Networking is challenging, and energy is difficult to sustain. With lower budgets compared to centralised events, trainee regional conferences are particularly affected.

Our team, running an annual educational event for 150+ speciality trainees aimed to enhance engagement and revitalise the online format using low budget interventions in March 2022.

Summary of Work

We rebranded our annual trainee Conference as the London School of Paediatrics Network, LSPN. Invited speakers and workshops remained our focus but we ran the conference in a daytime news television format. Two hosts presented the day from a central sofa "studio," allowing natural interaction between themselves, speakers and the audience. We introduced other topics using "reporters" in different settings, e.g. a 'weather' presenter, political correspondent and entertainment analyst each with appropriate backgrounds.

Visual interest was augmented by staging the sofa with a branded coffee table and by swapping camera angles. A pre-recorded musical video jingle, as expected from a news channel streamlined key transitions. To switch between camera angles and speakers, we utilised the spotlight function in Microsoft Teams. For audio, we combined multiple lapel microphones to create a single audio input using Loopback Audio.

Summary of Results

The format was well received. 180 people attended and 73 provided feedback. 98% agreed/strongly agreed that they would attend the conference again and 95% agreed/strongly agreed the conference kept them engaged. Many complimented the presenting style and daytime TV format. Others described the day as fun and interactive. However, 16% firmly preferred a return to face-to-face events.

Discussion and Conclusion

Although in-person events can be advantageous, online seminars and conferences are likely to continue. For those hosting low budget or regional events, our approach mitigates against many of the problems encountered and offers a successful and reproducible format for others to use.

Take-home Message

Whilst the online conference can be a limited substitute to in-person events, budgetary implications means they are here to stay. Creative, low budget ideas can enhance the experience for attendees.

8L5 (0670)

Date of Presentation: Tuesday 29th August
Time of presentation: 1500 - 1515
Location: Boisdale 1, Loch Suite, SEC

Learning medicolegal concepts through a unique team-based escape room experience

Ting Hui Yee1, Hao Sheng, Alvin Chng1, Kaveen Kumar S/O Suriakumaran1, Min Hui Ng1, Yu Hang Wang1, Xin Ying, Anastasia Chua1, Yuxiu Yang1, Shuenn Chiang Soo2, Li Feng Tan2, Joo Wei Chua2

[1]National University of Singapore, Singapore; [2]National University Health System, Singapore

Background

The changing medicolegal landscape invites a carpe diem review of existing medical education. To promote learning of commonly encountered medicolegal concepts in clinical practice through a safe and interactive learning environment, we propose a unique experiential and gamified educational curriculum integrating an escape room and a flipped classroom concept.

Summary of Work

A pilot study was conducted with 25 fourth-year undergraduate medical students grouped into 6 teams from the Yong Loo Lin School of Medicine, Singapore. Key medicolegal concepts involved included topics on mental capacity, consent-taking and doctor-patient communication. Before attempting the escape room, they were given pre-reading materials and encouraged to watch short video clips on the topics.

Various tasks were played out in the escape room through a modified patient journey, such as problem-solving, observing doctor-patient consultations and reviewing case notes. Students would be expected to apply what they had learnt to give an account and evaluation of their observations throughout the patient journey. The activity would conclude with a session debrief when students were invited to share their reflection and learning experience. Pre- and post-activity questionnaires were administered to assess outcome parameters.

Summary of Results

Feedback had been overwhelmingly positive, for example: 90.9% of participants now better understood the medicolegal concepts taught. Compared to other learning modalities, over 91% of participants ranked the escape room as their most preferred method of learning about medicolegal concepts, and would recommend the escape room as a learning activity. 96% of participants were more motivated to learn more about medicolegal concepts. Post-activity knowledge score was high at 11 out of 15 marks. An overwhelming majority (92%) also agreed that a team-based participation in the escape room had enhanced their learning.

Discussion and Conclusion

Through the promotion of critical thinking and collaborative learning, participants had found it to be an overall novel experience which brought alive important and relevant medicolegal concepts, the experience of which had enhanced learning as compared to traditional means of teaching and learning.

Take-home Message

The escape room can provide an effective, experiential and enjoyable mode of learning and teaching medicolegal concepts among medical students. Application of its concept in other aspects of medical education may be further explored.

8L6 (3717)

Date of Presentation: Tuesday 29th August
Time of presentation: 1515 - 1530
Location: Boisdale 1, Loch Suite, SEC

Participatory Theatre as a Pedagogical tool in Teaching Bioethics

Russell DSouza[1], Princy Palatty[2], Mary Mathew[3], Shrinath Baliga Manjeshwar[4]
[1] Chair, Department of Education, UNESCO Chair in Bioethics, Melbourne, Australia [2] Amrita Vishwa Vidyapeetham, Kochi, India [3] Kasturba Medical College, Manipal Academy of Higher Education (MAHE), Manipal, India [4] Bioethics SAARC Nodal Centre, Amrita Vishwa Vidhyapeetham, Kochi, India

Background

Lectures have been shown to be an ineffective pedagogical tool to inculcate moral values and bioethics in the medical curriculum. In this study, we have used participatory theatre (street play) as a novel method to impart the principle of Non Discrimination and Stigmatization in bioethics, as a prototype to teach the Universal Declaration of Bioethics and Human Rights (UDBHR) bioethical principles.

Summary Of Work

This study was conducted in two stages. Medical student volunteers were introduced to the principle of Non Discrimination and Stigmatization and then requested to prepare the script and perform a street play to demonstrate this principle. After the performance, the students were divided into three groups as follows:

1. Students who were observers
2. Student performers who participated in the focal group discussion
3. Student performers who participated in the qualitative reflection following their performance

A qualitative methodology was chosen with triangulation using Gibb's cycle to analyse the data. All students were provided validated structured questionnaires.

Summary Of Results

96% of the students agreed that street play was useful to learn the principles of bioethics. The overall assessment of usefulness of participatory theatre to teach these ethical principles was rated as excellent/very good by 78% of the students. The student expressed high approval for the questions pertaining to the theatrical aspects like depiction, relevance, impact, sensitivity, group dynamics, synchronization and clarity.

Discussion And Conclusion

Participatory theatre is an effective teaching tool in facilitating learning of bioethics principles for medical undergraduates. The students displayed attitudinal change over the period of preparing the script, they were confronted with opinions, customs and beliefs that were previously not known to them. Learning, unlearning and the evolution of new behaviour as an attitude is the common outcome observed in this study. The students are obligatorily exposed to situations that compel them to think and contend with a myriad of issues that impact them. This method could be a creative alternative to the traditional teaching techniques of teaching bioethics.

Take Home Messages

Participatory theatre brings a purposive experiential learning of the bioethical principles which has a long lasting impact on the student and is a fun and novel method which is acceptable to the students.

Session 8M: Postgraduate: Trainees Well-being

8M1 (2441)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1415
Location: Boisdale 2, Loch Suite, SEC

Evaluating medical residency satisfaction in Portugal - a cross-sectional national survey

José Durão[1], Ana Isabel Pereira[1], Ana Rita Fradique[1], Carlos Mendonça[1], Catarina Leuzinger Dias[1], Diana Gonçalves[1], Inês Garcia Moreira[1], Maria Inês Neri[1], Rafael Inácio[1], André Fernandes[1]

[1]*Portuguese Medical Association, Lisbon, Portugal*

Background

In recent years, the Portuguese Medical Association has strived to update the curricula of the current 48 specialities that newly graduates can choose from to become attendings. We aimed to evaluate medical residents' satisfaction with the Portuguese residency, identify features in need of improvement and recommend steps to boost medical residency quality and residents' overall satisfaction.

Summary of Work

We used an adaptation of the Postgraduate Hospital Educational Environment Measure in the Portuguese language as baseline for the survey. An e-mail containing a unique link to the survey was sent to every medical doctor in the country who had been a medical resident in 2021. Participants were asked to rate their agreement with 31 statements on a five-point Likert scale across 6 domains: autonomy and responsibility, learning supervision, scientific activity, work environment, training quality and global residency satisfaction. Demographic information was also collected.

Summary of Results

A total of 2018 responses were obtained. The five specialties with the highest satisfaction level were Nuclear Medicine, Angiology and Vascular Surgery, Ophthalmology, Dermatology and Neuroradiology, while Infectious Diseases, Immunohemotherapy, Internal Medicine, Stomatology and Occupational Medicine were the five that showed the lowest level of satisfaction. On average, participants reported a 4.12 satisfaction level with their specialty, 4.15 with their supervisor and 3.57 with their institution. Highest satisfaction was related to support from residency supervisor (4.26), resident-supervisor ratio (4.13) and a residency plan adjusted to each specialty (4.07). Lowest satisfaction was related to lack of weekly time for individual study (1.99), lack of support for scientific (2.08) and extracurricular (2.55) activities and absence of an incidents' reporting system (3.15).

Discussion and Conclusion

While there is room for improvement, Portuguese medical residents are satisfied with their speciality and supervisor. Attention should be given to lower satisfaction with the institution, as it can reflect on future residents' choices and endanger quality of care in institutions with worse evaluation. Recommendations for improvement center on planned weekly periods for individual study in every curriculum, increased accessibility to physical and digital biomedical literature archives during residency, robust internal mechanisms for incidents' report and response in every institution and increased institutional support to scientific research and activities.

Take-home Message

8M2 (3205)

Date of Presentation: Tuesday 29th August
Time of presentation: 1415 - 1430
Location: Boisdale 2, Loch Suite, SEC

Junior doctors' quality of work life: educational and managerial implications from a 3-year cohort study

Yung Kai Lin1, Chia-Der Lin2 Blossom Yen-Ju Lin3

[1]Jen-Ai Hospital, Taichung, Taiwan; [2]China Medical University and Hospital, Taichung, Taiwan; [3]Chang Gung University, Taoyuan, Taiwan

Background

Junior doctors function simultaneously as trainees from an educational perspective and employees from the human resource management perspective: they continue to receive training to improve their clinical abilities while also delivering performance and maintaining well-being in healthcare organizations. We used ability–motivation–opportunity (AMO) framework to explore the factors affecting junior doctors' quality of work life longitudinally after their graduation from medical schools.

Summary of Work

This 3-year prospective cohort study included junior doctors graduating from two medical schools in June 2019 in Taiwan (Asia). Web-based, self-administered structured questionnaires were administered at 3-month intervals from September 2019 to July 2022 to collect data on ability indicators (medical school GPA and perceived clinical preparedness for practices), motivation indicators (training support from clinical teachers and mentors), opportunity indicators (training/work climate), and quality of work life indicators (work performance, compassion satisfaction, and burnout). In total, 107 junior doctors (926 responses) were included. Univariate analyses and structural equation modelling were performed.

Summary of Results

The junior doctors' preparedness for practice of medical education outcomes was related to their quality of work life at their early medical career (after 1 year of graduation). The clinical staff support as motivation aspects and work climates of flexibility and discretion

clinical staff support as motivation aspects and work climates of flexibility and discretion as opportunity aspect of healthcare management, play critical roles on their quality of work life at their later medical career (after 2–3 years of graduation).

Discussion and Conclusion

Our study findings differentiate the different critical factors to junior doctors' socialization in the workplaces across three consecutive individual career years from quality of work life perspectives. It can provide a guide for medical educators and healthcare managers about the junior doctors' workplace socialisation progress and provide them with stepwise assistance.

Take-home Message

The critical factors across the progress of the junior doctors' medical career on their workplace quality of life were identified.

The junior doctors' medical school preparedness was related to their quality of work life at their early medical career (after 1 year of graduation).

The clinical staff support and work climates of flexibility and discretion play critical roles on their quality of work life at their later medical career (after 2–3 years of graduation).

*previous reviewed code: RP0519/SC

8M3 (4631)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1445
Location: Boisdale 2, Loch Suite, SEC

Association between Work Stress and Performance of Pharmacists under Postgraduate Year Training

Hsiang-Yi Pan1, Cheng-Yi Chao1, Sen-Yeong Kao2, Li-Ting Kao2, Chin-Sheng Lin3

[1]Department of Clinical Pharmacy, Tri-Service General Hospital, Taipei, Taiwan; [2]National Defense Medical Center, Taipei City, Taiwan; [3]Divison of cardiology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan

Background

Although certificated, post graduate year (PGY) pharmacists still need training and learning to become a qualified pharmacist. With work overloading, PGY pharmacists might make mistakes at work, leading to catastrophic outcomes. This study aims to explore the association between work stress and performance in PGY pharmacists in a medical center in Taiwan.

Summary of Work

This is a cross sectional study, which was conducted by questionnaire and performance evaluation. Totally 11 PGY pharmacists were included. Questionnaires regarding the stressors, the Job Content Questionnaire (JCQ), and Perceived Stress Scale (PSS14) were applied. The baseline characteristics of the participants, and their current work contents and work stress were examined. Work stress is measured by the JCQ and PSS14 scales. High score indicates heavy work stress. The performance of the participants was evaluated using directly observed procedural skills (DOPS), Mini-CEX (mini-clinical evaluation exercise), and working accomplishment, rated by senior supervisors, with the scales ranging from 0 to 6. Data were analyzed by using t-test and ANOVA , and level of significance was 0.05.

Summary of Results

The baseline characteristics of PGY pharmacists were no statistically significant difference. The top three stressors of the participants were fear of making mistakes (73%), heavy workload (73%), and coping with patients' emotions (64%). There is no statistically significant difference between the work content and work stress scales. ($p>0.05$). Interestingly, the PGY pharmacists who learned in the same medical center during their internship had greater pressure (97.00±6.08 vs 85.75±8.94, $p=0.048$) than those did not. Furthermore, we showed that the scales of CJCQ and PSS14 were negatively correlated with their academic performance ($r=-0.272$, $r=-0.288$), although no statistical difference($p>0.05$).

Discussion and Conclusion

Our study points out the work stress and stressor of PGY pharmacists in a medical center. Fear of making mistakes accounts for the most important stressor, which partly explained the fact that the PGY pharmacists who learned in the same medical center during their internship had greater pressure. Further work to support the PGY pharmacists with reducing stressors and enhancing performance is warranted.

Take-home Message

Our study showed the critical stressor with fear of making mistakes and indicated their inverse correlation between work stress and performance of PGY pharmacists.

8M4 (2426)

Date of Presentation: Tuesday 29th August
Time of presentation: 1445 - 1500
Location: Boisdale 2, Loch Suite, SEC

Beyond Burnout: Uncovering the Hidden Link Between Personality, and Well-being in Medical Education

Chatuthanai Savigamin 1, Sekh Thanprasertsuk2, Sithiporn Agthong3, Pasakorn Watanathada2, Puchong Laurujisawat4, Saknan Bongsebandhu-phubhakdi2

[1]Department of Parasitology, Faculty of Medicine Chulalongkorn University, Bangkok, Thailand; [2]Department of Physiology, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand; [3]Department of Anatomy, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand; [4]Department of Psychiatry Faculty of Medicine Chulalongkorn University, Bangkok, Thailand

Background

Burnout is commonly used to evaluate one's emotional assessment in medical students, with the aim of providing proper psychological consultation to prevent serious disease. However, burnout is a one-time point condition, which is different from personality and well-being, both of which are dynamic and constantly changing conditions. This study aims to explore the use of burnout scores to infer both personality and well-being as a relationship between dynamic and cross-sectional values in human psychology.

Summary of Work

In this cross-sectional-descriptive survey study, second-year medical students at Chulalongkorn University in Bangkok, Thailand, were evaluated using a standard questionnaire, including the General Habitual Well-being Questionnaire (Fragebogen zum habituellem Wohlbefinden ; FAHW-12), the Big Five Inventory 10-items version (BFI-10), and the Maslach Burnout Inventory (MBI-SS) to evaluate burnout scores (cynicism, academic efficacy, emotional exhaustion). Statistical analysis included One-way repeated measures analysis of variance (ANOVA) for continuous variables.

Summary of Results

The results showed that severe cynicism was associated with low well-being and decreased extraversion, agreeableness, and conscientiousness, while increasing neuroticism ($p < 0.05$, one way ANOVA). Emotional exhaustion was also significantly distinct in well-being scores and almost all the scores of the Big Five personality traits ($p < 0.05$, one way ANOVA). On the contrary, academic efficacy had a significantly opposite effect toward well-being by increasing conscientiousness and extraversion and partiality of the Big Five personality compared with cynicism and emotional exhaustion ($p < 0.05$, one way ANOVA).

Discussion and Conclusion

The study suggests that burnout scores can be used as a predictor of changes in both personality and well-being in medical students, highlighting the importance of addressing burnout in medical education. Early detection and proper management of burnout can prevent potential malfunctions in personality and low well-being. Further qualitative study is needed to evaluate the causative effect of burnout toward changes in personality and well-being.

Take-home Message

The study suggests that burnout scores can be used as a predictor of changes in both personality and well-being in medical students. Early detection and proper management of burnout can help prevent potential malfunctions in personality and low well-being, highlighting the importance of addressing burnout in medical education.

8M5 (5412)

Date of Presentation: Tuesday 29th August
Time of presentation: 1500 - 1515
Location: Boisdale 2, Loch Suite, SEC

Implementation and Evaluation of the Well-being Program TopFitTopCare for Surgical Health Care Professionals

Marije Zwakman1, Lenny Lases1, Maarten Van der Laan1

[1]*university medical center groningen, Groningen, The Netherlands*

Background

Well-being of health care professionals has been under pressure for quite a while and is tested even more due to the recent COVID-19 pandemic. Impaired well-being has a negative impact on the health care professional as well as on the quality and safety of patient care. Well-being can be positively influenced in various ways, such as with well-being programs. However, literature mostly describes temporary programs that does not correspond to daily practice. The aim of this study was to describe, implement and evaluate our well-being program TopFitTopCare (TFTC).

Summary of Work

All 94 surgical healthcare professionals were invited to participate in our TFTC-program between January 2021 and January 2022. This annual program comprises 12 month themes, for example 'Energy', 'Compliments', and 'Mind Fitness'. It broadly consists of 3 pillars; 1) creating awareness, 2) offering tools, and 3) evaluating. Every month started with a presentation on the topic, followed by a monthly action, informative reminder e-mails and ended with a wrap up. At the end of the overall TFTC-program, evaluation was performed by an 13 item-questionnaire, based on the training evaluation inventory and the four levels of the Kirkpatrick Evaluation Model. Mean and median scores on training outcome were calculated. To additionally evaluate the healthcare professionals experiences, a structured coding and thematic analysis of the qualitative data was performed.

Summary of Results

In total, 7 (26.9%) surgical residents, 2 (25%) physician assistants, and 17 (28.3%) surgeons participated in the evaluation. The statement 'I think the TFTC-program is relevant' was rated highest with a median score of 4.85. All levels of Kirkpatrick's training criteria could be met. The TFTC-program was received positively by almost all participants, created awareness of the importance on well-being and a positive effect on teamwork, but no effect on patient care was reported.

Discussion and Conclusion

The TFTC-program was positively received by healthcare professionals, can be easily implemented into daily practice and improves the awareness of the importance of well-being among healthcare professionals. Furthermore, it can lead to positive changes in lifestyle and more connection at work and home.

Take-home Message

Future studies should focus on long-term outcomes to assess the effect on the quality of patient care.

Session 8N: Teaching and Facilitating Learning: Supporting Learners 1

8N1 (4180)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1415
Location: Dochart 1, Loch Suite, SEC

Joys and sorrows of coaching in specialist physician training in Occupational health – trainees' and trainers' views

Asta Antila1, Elina Ruotsalainen2, Marianne Rytkönen2, Tuula Oksanen3

[1]University of Helsinki, Helsinki, Finland; [2]University of Eastern Finland, Kuopio, Finland; [3]University of Eastern Finland, Kuopio, Finland

Background

In Finland, the 6-year specialist physician training in occupational health (OH) is coordinated by the five universities offering medical education. The trainees work at least 2.5 years in university approved training units at OH services where the trainers support the trainees' professional growth with personal coaching two hours weekly. We explored the trainees' and trainers' experiences on challenging and rewarding factors concerning coaching.

Summary of Work

We conducted an online survey in the spring of 2022 to all the trainees and trainers in specialist physician training in OH in Finland. In the questionnaire, we used both multiple choice and open-ended questions. We received answers from 106 participants, 42/957 trainees and 64/295 trainers. This presentation focuses on the qualitative data concerning the challenging and rewarding factors in coaching. In the analysis, we used inductive content analysis.

Summary of Results

Both trainees and trainers reported challenges and rewards regarding coaching. Challenges for both included time-management and not being always able to prepare for coaching sessions. The trainers found it difficult to conduct feedback discussions and providing assessments for the trainees. Trainees' lack of motivation was sometimes a challenge for the trainers. The trainees considered rewarding reflective discussions, their own learning experiences and perceived support in learning. The trainers enjoyed the dialogues and being able to follow their trainees' professional growth. They appreciated learning themselves in the process. The motivation of trainees´ was mostly a rewarding factor.

Discussion and Conclusion

Coaching is an essential part of specialist physician training. Both trainees and trainers consider it rewarding. There are challenges related to coaching that universities should address when further planning the curricula for learning at workplaces. There must be enough time allocated for training. Furthermore, universities should develop education concerning assessments and coaching competencies for both the trainees and the trainers.

Take-home Message

The coaching supports daily work and the professional growth of the trainees in OH services.

Sorrows of coaching relate to the assessment and time constraints on the workplaces.

Joys of coaching include the joint reflection of work and observed learning during the process.

The trainees and trainers need more educational support in time management and assessment practices.

8N2 (6268)

Date of Presentation: Tuesday 29th August
Time of presentation: 1415 - 1430
Location: Dochart 1, Loch Suite, SEC

Transitioning from basic science to clinical science: Easing the transition for Undergraduate medical students

Sadaf Khan[1], Kauser Jabeen[1], Inam Pal[1], Saira Fatima[1], Amber Sultan[1], Rahila Ali[1], Salman Siddiqi[1], Naila Nadeem[1], Fozia Asif[1], Zohra Jetha[1]

[1]*Aga Khan University, Karachi, Pakistan*

Background

An in-depth review of our 5-year undergraduate medical program identified that students transitioning from pre-clinical to clinical domain faced difficulties negotiating the new environment productively and had limited formal instruction in quality and patient safety (QPS) and nursing skills. Faculty raised concerns about under-developed clinical reasoning skills, under-confidence dealing with patients, and timidity engaging as active members of the healthcare team. Additionally, exposure to cross-cutting disciplines like radiology, pathology, and pharmacology was variable and opportunistic.

Summary of Work

We developed Bench to Bedside, a comprehensive multi-stream, interdisciplinary 6-week program at the beginning of Year 3. This included one week each of QPS and simulation-based nursing skills modules; didactic and practical instruction for clinical pharmacology, radiology, and laboratory medicine; clinical reasoning skills development sessions utilizing faculty-led small-group case-based discussions; and patient and intern shadowing to enhance understanding of the health system and develop empathy.

Summary of Results

The first iteration in 2021 was online due to COVID restrictions, the second version was hybrid, and the 2023 version was face-to- face. The average rating of the module on a scale of 1-6 was 4.3 in 2021, 4.2 in 2022 and 4.8 in 2023 (p-value: <0.0001). Approximately 83% students agreed that they will be able to apply the knowledge and skills learnt in the

module in the clinical environment. Students reported “Module eased our transition into the clinical rotations” and “I got comprehensive experience regarding different aspects of quality and patient safety”.

Discussion and Conclusion

This module addresses critical issues in the development of a physician, providing an excellent primer as students enter clinical training. Interprofessional collaboration is in the forefront through the nursing module. The QPS module provided insight into an essential element of healthcare. Guided practice for clinical reasoning as a keystone of diagnosis and management was appreciated by students. Structured exposure to cross-cutting themes is unique and adds to student preparedness. Finally, the patient shadowing experience nurtures the empathy that forms the core of the profession. Face-to-face delivery was appreciated more than the online and hybrid learning approach.

Take-home Message

This novel module facilitates acquisition and practice of knowledge and skills required for students transitioning from the classroom to clinical spaces.

8N3 (6693)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1445
Location: Dochart 1, Loch Suite, SEC

"Every song has a story behind it!" A music-based pedagogy can nurture medical students` emotional development

Marcelo Rivas1, Agnes Cruvinel2, Daniele Sacardo3, Daniel Schubert1, Mariana Bteshel, Marco A. de Carvalho Filho4

[1]Rio de Janeiro State University - UERJ, Rio de Janeiro, Brazil; [2]South Border Federeal University - UFFS, Chapecó, Brazil; [3]Campinas State University - Unicamp, Campinas, Brazil; [4]Wenckebach Institute for Education and Training, Lifelong Learning, Education and Assessment Research Network (LEARN), , University Medical Center Groningen, Groningen, The Netherlands

Background

Emotions are an intrinsic part of medical practice. However, medical curricula fall short in addressing the role of emotions in medical practice. Besides, the hidden curriculum is known for preaching emotional detachment as fundamental to professional care. In this study, we explore how a music-based pedagogy may create a safe space for medical students to express, identify, regulate, reflect on and learn from their emotions.

Summary of Work

We conducted an observational multicenter qualitative study involving 3rd and 4th year medical students of three universities enrolled on a four session's weekly workshop using music auditions to evoke emotional reactions. The workshops addressed different dimensions: emotion expression, identification, and regulation, and the impact of emotions in clinical care. The sessions followed similar structures. First, students listened to pre-selected songs and were oriented to share their reflections. Next, students reflected on clinical situations charged with different emotional components. Finally, students shared personal clinical experiences that were particularly emotional. Some of the sessions were videotaped (23 hours) and after the workshop, 25 students were interviewed. The transcribed interviews and videos were analyzed following a Thematic Analysis protocol

Summary of Results

Four main themes emerged: A: Emotional Experimentation – music audition evoked emotional responses, facilitated active listening, and offered students an opportunity to understand how similar experiences can culminate in different emotional responses depending on the person and the context. B: Emotional Connection – the shared emotional experiences enhanced the connection among students and with the facilitator, creating a safe and constructive learning space. C: Emotional reflection – feeling connected and heard, students reflected on their emotional responses, exploring the impact of emotions on their personal and professional development. Some students conceptualized a personal way of embedding their emotional self into their professional roles D: Emotional naturalization – students naturalized emotions as an integral and welcome dimension of being and becoming a doctor, capable of creating meaning and a sense of purpose.

Discussion and Conclusion

Our music-based pedagogy legitimized emotions as a way to enrich communication and increase self-knowledge. It created an opportunity s to explore the role of emotions in medical practice.

Take-home Message

Music evoked emotions can be used to foster emotional competences

8N4 (4265)

Date of Presentation: Tuesday 29th August
Time of presentation: 1445 - 1500
Location: Dochart 1, Loch Suite, SEC

In the end, it's what you make of it: A qualitative study of medical students' experiences of early clinical placement.

Malin Sellberg1, Riitta Moller2, Per J. Palmgren3

[1]Department of Neurobiology, Care Sciences and Society, Karolinska Institutet, Stockholm, Sweden; [2]Department of Clinical Science Intervention and Technology, Karolinska Institutet, Stockholm, Sweden; [3]Department of Learning, Informatics, Management and Ethics, Karolinska Institutet, Stockholm, Sweden

Background

Clinical training is a fundamental part of health professions' education. The clinical learning environment, where the training and supervision take place, influences students' satisfaction, and also the achievement of learning outcomes. In this study, we aimed to explore medical students' experiences of early stages of training and supervision.

Summary of Work

Individual semi-structured interviews were conducted with 18 medical students between May and June 2021. An interview guide was constructed based on our previous findings from the Undergraduate Clinical Education Environment Measure (UCEEM). The audio recorded interviews were transcribed and analyzed using qualitative content analysis. Nvivo was used to assist with the coding of the transcripts. The categories were firmly grounded in the participants' experiences.

Summary of Results

One overarching theme—balancing acting and adapting—and three categories were identified: the clinical learning environment—a big leap from the campus, personal relationship influenced learning, and suboptimal organization of clinical placement. The students were encouraged to take initiative and push themselves forward to be able to practice clinical skills. This did not suit all the students; the cautious ones risked becoming

passive spectators. The intended learning outcomes were not frequently used to guide the learning activities, rather, the supervisors asked the students what they had learned, or the students focused on what seemed to be important on the ward. The students tried to adapt to their supervisors' working situation and not to be a burden to them.

Discussion and Conclusion

The conditions for learning were perceived as tough and favored students who were able to push themselves forward. The students reported that their supervisors were not always familiar with the learning outcomes. This needs attention, considering the central role that learning outcomes play in modern education. Ad hoc solutions in supervision occurred, which contributed to the experience that educational responsibilities were downgraded and the opportunities for clinical training varied.

Take-home Message

The transition from campus-based learning seems to be a challenge for some students. Embarking clinical education is like entering a new world for undergraduate health profession students; therefore, it is necessary to pay attention to supervisors' preparation for the students' arrival.

8N5 (4851)

Date of Presentation: Tuesday 29th August
Time of presentation: 1500 - 1515
Location: Dochart 1, Loch Suite, SEC

ACADEMIC GOOD-TREATMENT SCALE: A SURVEY-BASED RESEARCH ABOUT THE EVIDENCE OF ITS VALIDITY AND RELIABILITY IN CHILEAN HEALTH STUDENTS.

Cristhian Pérez-Villalobos[1], Nancy Bastías-Vega[1], Juan Ventura-Ventura[2], Soledad Armijo-Rivera[3], Marcela Hechenleitner-Carvallo[4], Renato Martínez-Cifuentes[5], Bárbara Inzunza-Melo[1], Mary Jane Schilling-Norman[1]

[1] Universidad de Concepción, Concepción, Chile [2] Universidad de Tarapacá, Arica, Chile [3] Universidad Católica del Norte, Coquimbo, Chile [4] Universidad Católica de la Santísima Concepción, Concepción, Chile [5] Universidad San Sebastián, Concepción, Chile

Background

Scientific publications have discussed the presence of mistreatment in the training of health students for 40 years. And beyond the controversy, empirical evidence shows that it is a phenomenon present in the healthcare professionals' training of various degrees and countries in the world. Research shows that medical, nursing, dental, and midwifery students are suffering demoralization, deregulated demands, and even physical violence. However, little evidence proposes alternative behaviors: i.e., good treatment. In this context, the present study offers the Academic Good-Treatment Scale (EBTA), developed from a previous qualitative study, and evaluates its psychometric properties.

Summary Of Work

We performed a survey-based study. We surveyed 1009 students from five universities and twelve different grades. They answered the 40-item Academic Good Treatment Scale and a sociodemographic questionnaire. We carried out the application after informed consent within the framework of the FONDECYT 1221913 project.

Summary Of Results

We proposed nine factors for good-treatment: Class agility, Openness to dialogue, Mastery of discipline, Contextualized teaching, Motivating participation, Teaching passion, Flexible planning, Concern for the student as a person, and Effective feedback. The Confirmatory Factor Analysis showed good fit indicators: CFI=0.959, TLI=0.955, RMSEA(CI 90%)=0.053(0.051-0.056), and SRMR=0.038. Its reliability ranged from ω=0.80 to ω=0.95.

Discussion And Conclusion

The factorial proposal identified in theory agrees with the behavior of the data in the sample studied, providing evidence of the validity of its measurement. Likewise, the reliability has a good performance in two factors and excellent in seven, evidencing adequate measurement precision. Thus, the evidence supports that EBTA is a proper tool for further research on academic good-treatment.

Take Home Messages

Mistreatment is a long-term illness in the training of new health professionals. Previous research about mistreatment clearly shows us how not to behave, but it is not clear how to behave instead. Good-treatment behavior offers us an alternative path for changing teacher-students relationships.

Session 80: Designing and Planning Learning 1

801 (4139)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1406
Location: Carron 1, Loch Suite, SEC

Assessment of implementation of active teaching methods and new assessment methods at Tbilisi state University (Georgia) last 4 years

Maia Bitskinashvili 1, Nino Chikhladze1, Nato Pitskhelauri2

[1]Ivane Javakhishvili Tbilisi State University, Faculty of Medicine, Tbilisi, Georgia; [21]Ivane Javakhishvili Tbilisi State University, Faculty of Medicine, Tbilisi, Georgia

Background

The aim of our program of Medicine is to produce qualified doctors to deliver high quality healthcare in the region. All essential competencies must be developed and assessed during the program. For this purpose appropriate teaching and assessment methods are required.

Summary of Work

The aim of this study was to identify the progression of implementation, active teaching and assessment methods during last 4 years in our new competence-based curriculum. The 42 compulsory courses were revised; 18 basic and 24 clinical and assessed which teaching and learning methods were used after the accreditation. We compared the obtained data with the results of an identical study conducted 4 years ago.

Summary of Results

The results identified that Case-based learning(CBL) which was used in only 20 % of courses, increased up to 40%, Problem-based learning(PBL) – from 5%- to 10%, TBL(team based learning) – from 5%- to 10%, or flipped classroom - 4% - to 15%. Simulator based learning increased from 12% - to 24%. Role playing method - from 5%- to 20%. For assessment methods; OSCE- which was used only in 4% of clinical courses, usage

increased up to 25%. Oral exam- decreased from 30% - to 5% in all courses. written papers from 40% decreased to 10% and instead of this we increased Clinical case-based MCQ questions. OSPE- was implemented in 15% of basic courses. Neither MiniCEX nor-Portfolio were used as a methods of learning and assessment were used 4 years ago. Now a portfolio is used in 15% of clinical courses.

Discussion and Conclusion

According the obtained data we have made significant progress in usage of CBL, portfolios, Role playing and Simulator based learning. But we still need to actively implement PBL, which requires more material and human resources. Also flipped classrooms and TBL. Regarding the assessment methods, we have important progress in implementation of OSCE. But we still need to work on implementation of Portfolio and MiniCEX. These results showed that we have significant progress in implementation of some active teaching and new assessment methods. We are gradually replacing old methods with new ones.

Take-home Message

Implementation of new methods of teaching and assessment are significant for program development.

802 (4991)

Date of Presentation: Tuesday 29th August
Time of presentation: 1406 - 1412
Location: Carron 1, Loch Suite, SEC

Defining Medical AI Competencies for Undergraduate Medical Education in Korea

Suyoun Kim1, Young-Mee Lee1, Young-Hee Lee1

[1]*Korea University College of Medicine, Seoul, The Republic Of Korea*

Background

As the practice of medicine is rapidly transitioning to the age of AI, there has been growing needs for AI to be integrated across the medical curriculum. Defining medical AI competencies is a cornerstone for developing a curriculum which can equip medical school graduates to possess a necessary knowledge and skills in AI. While there have been previous studies identifying medical AI competencies, findings are mainly derived from expert opinions, and large-scale, nationwide studies have been limited.

Summary of Work

Initially, 53 medical AI competencies were explored by two-round e-Delphi with 30 medical AI experts. Students and professors from entire 40 medical colleges in Korea were invited to online questionnaires to collect their opinions on what are necessary AI competencies for medical graduates. An exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) were conducted. Finally, 26 medical education specialists with clinical backgrounds participated in an online survey to differentiate core or optional competencies.

Summary of Results

A total of 1,955 including 1,174 students and 781 professors responded. The results revealed 6 domains with 46 competencies: (1) Recognizing the transforming role of doctors and hospitals in advancing the medical AI environment (D1); (2) AI Ethics and Law (D2); (3) Basic knowledge and technology in medical AI (D3); (4) Application of medical AI in the clinical practice (D4); (5) Medical data literacy (D5); (6) Research and development

medical AI (D6). D5 consisted of three sub-domains including 'understanding the structure and characteristics of medical data', 'medical data collection, extraction, pre-processing, and labeling', and 'medical data analysis and presentation'. D1, D2, D3, and understanding the current clinical application of medical AI with strengths and limitations in D4 were identified as core graduation competencies. However, competencies in D5 and D6 were considered optional.

Discussion and Conclusion

To our knowledge, this is the first nationwide survey exploring AI competencies for medical graduates. It could be used as a reference for integrating AI into the medical curriculum. Further investigation is needed to validate our results in other contexts.

Take-home Message

Incorporating AI into already oversaturated medical curricula is challenging. Developing well-defined AI competencies for medical graduates requires collaboration nationally and internationally with a variety of stakeholders.

803 (2653)

Date of Presentation: Tuesday 29th August
Time of presentation: 1412 - 1418
Location: Carron 1, Loch Suite, SEC

Instigate medical technology curriculum for undergraduate medical students: A preliminary experience

Chin-Sheng Lin1, Chin Lin2, Chun-Ho Lee2, Yu-Feng Lee1, Feng-Yee Chang1, Tai-Lung Cha2

[1]*Tri-Service General Hospital, National Defense Medical Center, Taipei City, Taiwan;*
[2]*National Defense Medical Center, Taipei City, Taiwan*

Background

Nowadays, advanced technologies have been extensively applied in medicine, such as artificial intelligence (AI), Internet of Things (IoT), and blockchain. Technology has become indispensable in the healthcare system, leading to the urge of initiating medical technology (MeT) curriculum for undergraduate medical students. This study aimed to evaluate the process of developing MeT curriculum, emphasizing on the students' response and curriculum establishment.

Summary of Work

Since the year of 2020, the novel MeT curriculum, designed by medical educators, technology industry experts, government officials, and AI masters, was launched for first-year medical students. The curriculum contents included background knowledge and applications of medical AIs, and the concepts of big data, blockchain, immersive technologies, IoT, and 5G wireless systems. The curriculum was conducted by lectures initially. After the year of 2022, the course was carried out by lectures, exhibition tours, and students' presentations. The students' performance was evaluated by written test and oral presentation. Logistic regression was performed to examine the association between students' performance and their baseline characteristics. The curriculum outcome was evaluated by satisfaction rate and qualitative analysis.

Summary of Results

Students who entered the university with higher mathematics and nature science scores had significantly better performance in the curriculum. The curriculum satisfaction rate was 6 out of 10 in 2020. By qualitative analysis, lack of background knowledge contributed to the most critical challenge in the curriculum. After curriculum reformed in 2022, the satisfaction rate increased to 8.4 out of 10. The students addressed that the curriculum was interesting, advantageous for future career development, and inspiring with contemporary technology development for medicine. However, heavy intrinsic cognitive load might be the Achilles' heel of the curriculum.

Discussion and Conclusion

We commenced the MeT curriculum to create inclusive learning environment for medical students for the future. Although students were interested in diverse medical knowledge, substantial cognitive load might attenuate their learning motivation. Strategies including using prepared learning materials, application of active learning theory and real-world practice, and construction of an interacting learning environment may promote the course outcomes.

Take-home Message

MeT curriculum is the unmet need for medical students, which requires comprehensive organization to reduce cognitive load, intensify learning motivation, and enhance curriculum outcomes.

804 (1246)

Date of Presentation: Tuesday 29th August
Time of presentation: 1418 - 1424
Location: Carron 1, Loch Suite, SEC

Rethinking Substance Use Disorders Practitioner Learning and Teaching (Project RESULT): A two-year pilot study of online, competency-based training

Karen McDonnell1, Reamer Bushardt2

[1]Milken Institute School of Public Health at the George Washington University, Washington, DC, USA; [2]Mass General Brigham, Boston, USA

Background

In the US, there are more than 20 million adults with substance use disorders (SUDs), and many of these adults also experience mental illness. Despite how prevalent SUDs are, many health professionals (HCP) lack the confidence, knowledge, and skills to perform evidence-based screening and treatment.

Summary of Work

Through grant funding from SAMHSA, an interprofessional team developed an online training program, Project RESULT (Rethinking Substance Use Disorder Practitioner Learning and Teaching to expand the number of HCP that are competent to deliver high-quality, evidence-based SUD treatment and referral. Pre- and post-surveys were used in the program evaluation assessing participants comfort and confidence with screening and management of common SUDs, including knowledge, confidence, helpfulness, satisfaction, benefit, and likelihood to recommend the training. All scale items were formulated on a 5-point Likert format with increasing scores indicating higher levels of the concept assessed.

Summary of Results

Participants (n=333) that completed the pre-test, all four training modules, and the post-test were included in the analysis. Over half had earned a master's degree (53%) and 35% a bachelor's degree or less, including both licensed HCP (66%) and students enrolled in a

HCP training program (34%). Post-training scores demonstrated ($p<0.05$) increased for confidence and comfort in screening and development of treatment and management plans. A vast majority of respondents (ranging from 87%-97%) reported increases in 14 areas of knowledge about SUD's (biology, SBIRT and harm reduction). Overall participants were highly satisfied with the training rating the quality of training (4.14) usefulness of training (4.25), helpfulness (4.32), and beneficial to professional practice (4.12) and 97% would recommend the training to a colleague.

Discussion and Conclusion

The public health crisis of SUDs and mental health has necessitated how we engage in health profession training. Project RESULTS met this challenge in building an online interactive, asynchronous tool using QM standards and competencies in the module design. The overall design made it feasible to efficiently provide an engaging training environment to provide substantial formative assessment and practical guidance for practitioners and students to meet our changing health care needs.

Take-home Message

Project RESULTS is an online tool that increases health care providers confidence, knowledge, and skills for SUD.

805 (6123)

Date of Presentation: Tuesday 29th August
Time of presentation: 1424 - 1430
Location: Carron 1, Loch Suite, SEC

A scoping review of health professional courses on Indigenous Peoples' experiences with colonialism

Carolyn Melrol, Kimberly Matheson2, Jyllenna Landry2

[1]Dalhousie University, Halifax, Canada; [2]Carleton University, Ottawa, Canada

Background

Educational curriculum has been implemented in health professional programs to address commonly held false beliefs, negative social attitudes, and care behaviours in relation to Indigenous Peoples. It is important to map and analyze the current literature on educational initiatives that teach about historical and ongoing colonialism as a determinant of health.

Summary of Work

A scoping review was performed to identify commonly used theoretical frameworks applied in program design and evaluation and the outcomes assessed. A search strategy involving six databases was applied, with grey literature included through hand-searching of Indigenous journals and citations. In total 2731 records were identified and screened; full text was assessed for 72 articles; 14 articles were identified as meeting all of the inclusion criteria for the final review. Narrative and thematic analyses were completed.

Summary of Results

Commonly used theoretical frameworks were cultural safety and transformative learning within course design; frameworks were less likely to be reported in the evaluation design. A variety of evaluation tools were used, and post-intervention outcomes across the studies were diverse (i.e., knowledge, beliefs, attitudes, behaviour and general learner feedback). The most commonly measured outcome was short-term self-reported knowledge. The course theory often influenced the framing of course material. For instance, cultural safety courses often focused on what was lost by colonialism rather

than a reflection on power and privilege, which was the focus within transformative learning.

Discussion and Conclusion

This literature is characterized by heterogeneity in the design, evaluation, and outcomes measured, and largely lacks a theoretical frame to weave the findings into a larger story over time and across outcomes. These findings can inform efforts to integrate and evaluate curriculum regarding Indigenous Peoples in health professional programs.

Take-home Message

Indigenous education interventions require greater consistency in the measurement of outcomes and longitudinal designs to evaluate the effects of teaching about colonialism. It is critical that we identify and monitor the intended and unintended consequences of such curriculum as we look to develop solutions to changing health professional learners' false beliefs and attitudes, in hopes of improving care practices.

806 (3450)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1436
Location: Carron 1, Loch Suite, SEC

Evaluating changes following the implementation of a Quality Improvement Module in a Medical School Curriculum

Kareem Omran1, Gulshan Cindy Sethi1, Duaa Faruqi1, Martha Martin1

[1]*King's College London, London, UK*

Background

Quality improvement (QI) is the use of methods to continuously enhance quality of care and patient outcomes, and is mandated by the General Medical Council for qualified doctors.

Summary of Work

Longitudinal retrospective qualitative analysis of anonymised student feedback was performed from 2016-2021 following improvements to a QI module in a London medical school. Data were included from 720 responses over 4 cohorts. Changes included: increased supervisor support, ensuring feasible projects, reducing timetabling clashes and Virtual Learning Environment (VLE) changes. Inductive thematic analysis of white-space questions was performed; comments were tabulated as positive or negative. Two-sided proportions z and chi-square tests were conducted to compare the overall proportion of positive to negative feedback across years, and for themes where changes occurred. Analyses were conducted using R(version:4.2.2).

Summary of Results

Several themes demonstrated meaningful improvements. Proportion of positive comments significantly increased from 2016/17-2017/18 by 26% ($p<.001$) and further improved by 19% in 2018/19 ($p<.001$). There was an absence in positive comments regarding support in 2016, however as years progressed appreciation for the support in the feedback became evident. Students reported increasingly favourable views regarding supervisor involvement in 2018/19 compared to 2016 ($p=.04$). Logistical challenges and VLE

issues still persisted across the years. Workload standardisation was suggested to require further revision and although decreasingly, VLE disorganisation was consistently noted.

Discussion and Conclusion

This evaluation demonstrates that iterative enhancements to a QI module following feedback is successful in achieving its aims. Whilst most changes yielded obvious results in over the first three cohorts, the COVID pandemic led to feedback generally declining in the final year analysed, biasing results. However, when analysing the effect of improvements, change in question syntax year-on-year led to significant difficulties in data analysis and rendered comparisons between academic cycles challenging. This limits the ability to attribute changes to the module to corresponding feedback. Therefore it is recommended that consideration be given to maintenance of question syntax on feedback forms when implementing a new module for successful evaluation.

Take-home Message

QI module implementation in medical curricula provides numerous benefits, particularly when recommendations for improvements are taken into account, but careful consideration of feedback form structure is essential to enable long-term success.

807 (4944)

Date of Presentation: Tuesday 29th August
Time of presentation: 1436 - 1442
Location: Carron 1, Loch Suite, SEC

Integrating A Diagnostic Reasoning Curriculum into an Internal Medicine Residency Program

Seth Politano1, Nida Hamiduzzaman2, Kay Kalousek3, Jenna Collins4, Adriana Pollack-Lazzaro1, Hieu Nguyen5

[1]College of Osteopathic Medicine of the Pacific, Pomona, CA, USA; [2]Keck School of Medicine of USC, Los Angeles, USA; [3]College of Osteopathic Medicine of the Pacific, Pomona,CA, USA; [4]College of Osteopathic Medicine of the Pacific-NW, Lebanon,OR, USA; [5]College of Osteopathic Medicine of the Pacific, Pomona. CA, USA

Background

Diagnostic error is the failure to establish the explanation for a patient's health problem. Incorrect reasoning and cognitive errors are the contributing factors to this error approximately 66% of the time. This designed curriculum can be introduced in training programs to enforce necessary skills for residents

Summary of Work

A progressive curriculum is introduced into a residency training program, building on topics as experience develops. In the Post-Graduate I year, interactive case-based high yield presentations of diseases (ie heart failure) are used in a small group setting to teach the topics of evidence based history and physical examinations. In this first phase of the curriculum, Bayesian theories are also introduced for diagnostic tests, once again rooted in case-based discussions (ie anemia and renal failure).

In the second year of training, the curriculum continues to introduce the concepts of shared decision making, The dual-process model and debiasing. Frequently encountered diagnostic biases are reviewed. Case examples are given for each of the eight most common biases that lead to diagnostic error. The cases in this phase stimulate discussion, and the idea of debiasing is introduced. In a series of small group sessions,

the trainees then progress through a problem solving curriculum, introducing concepts such as uncertainty and refining illness scripts.

In the final year, residents explore the dual process theory in detail, learning how to apply all previous concepts train them into using Type II thinking to solve clinical problems. Important in this phase of the curriculum is empowering the residents to teach key concepts to students and other junior residents.

Summary of Results

Residents progressing though the curriculum will learn topics to improve their patient care,

Discussion and Conclusion

We believe this curriculum can be adapted and integrated into most residency training programs to improve the clinical reasoning skills of trainees.

Take-home Message

Diagnostic biases and errors in reasoning are significant contributors to medical errors

Even though diagnostic reasoning is an important skill for trainees to learn and master, a curriculum in such topics is not present in most post-graduate programs

An Interactive case-based curriculum has been used successfully, and can be applied to most training programs

808 (0149)

Date of Presentation: Tuesday 29th August
Time of presentation: 1442 - 1448
Location: Carron 1, Loch Suite, SEC

A study of the results of teaching and learning by comparing between the normal learning and the blended learning of the medical students at the clinical level in provincial hospital.

witaya prathinthong1, Adisak Nartthanarung2

[1]Phichit Medical Education Center of naresuan university, phichit province, Thailand; [2]HRH Princess Chulabhorn College of Medical Science Chulabhorn Royal Academy, bangkok, Thailand

Background

Research on the education of health workers in Thailand found that the lack of clinical diagnosis reasoning skills was present in both current and new graduates medical students . We reviewed the literature and found that online lessons are integrated with classroom or blended learning. Which the medical students will be able to study and practice on their own before attending classes and teachers can spend limited time teaching analysis and decision making as well as spending more time in giving advice to medical students due to education. There is little information about blended teaching in medical students.Therefore, the researcher and the team would like to study and develop a teaching model of the diagnostic process that uses the conceptual framework of integrated teaching and learning to assess the effectiveness of the promotion of medical reasoning in diagnosis among medical students in Thailand.

Summary of Work

45 people of of the medical students participating in the research .This research was a two-group quasi-experimental study. These are normal learning groups and blended learning groups. By using data collection tools the diagnosis clinical reasoning self-assessment test which evaluates four skills following clinical diagnosis process :The important information, Identifying important problems ,differential diagnosis and diagnosis

Summary of Results

The results showed that the blended instruction group had average scores for diagnostic reasoning after studying, the score was statistically higher than the pre-study average at.05 level of significant and the reasoning average score In the medical diagnosis, it was significantly higher than in the normal study group at .05 level of significant.

Discussion and Conclusion

Therefore the model of blended learning is effective in promoting the medical students at the clinical level are skilled in reasoning for medical diagnosis. Should be balanced between normal learning and blended learning and the correspondence in which they must be able to meet the needs of learners and support teachers under the educational environment of that society

Take-home Message

Therefore the model of blended learning is effective in promoting the medical students at the clinical level are skilled in reasoning for medical diagnosis. Especially small medical education centers or in the situation of the Covid outbreak.

809 (5338)

Date of Presentation: Tuesday 29th August
Time of presentation: 14:48- 14:54
Location: Carron 1, Loch Suite, SEC

Development of a new elective subject for third-year students on navigating medical guidelines

Trygve Skonnord[1], Louise Emilsson[1], Anja Maria Lyche Brænd[1], Tonje Rambøll Johannessen[1], Mina Piiksi Dahli[1]

[1]*Department of General Practice, University of Oslo, Oslo, Norway*

Background

Navigating medical guidelines constitute a major part of future professional workload for medical students. The importance of prioritisation and measuring time needed to implement guidelines into clinical practice has recently been advocated. However, most traditional medical education is offered topic by topic, with less emphasis given to patient-centred care, grading of recommendations and conflicting guidelines.

Summary of Work

We aimed to construct a new two-week elective subject for third-year medical students in Oslo, titled "The medical profession – navigating medical guidelines". The subject and its curriculum were developed through an intense version of the nominal group technique (NGT), based on mutual consensus, including five experienced primary care physicians and teachers, who met during a two-day session.

We had some concerns about whether the topic would apply to students at this level of study due to limited clinical experience. The examination was decided to include a reflection note and a group presentation. Fourteen of 16 students gave consent to include their reflection notes for educational research purposes.

Summary of Results

The NGT process resulted in a subject consisting of interactive lectures, group and plenary discussions and clinical rotation. The main topics were: 1) research and guidelines, 2)

sensible choices and sustainability, 3) patient-centred care, medical uncertainty and risk tolerance, 4) multi-morbidity and overdiagnosis, and 5) navigating guidelines. These topics were illustrated through a longitudinal patient case video presentation, with increasing complexity and a medical challenge for each daily group session. Students were divided into two groups: a) out-of-hour and b) nursing home. They were scheduled for a clinical day in groups of 2-4 students at corresponding facilities, plus received literature suggestions and related tasks to be presented in the final examination.

The attendance of two of the five teachers each day allowed personal development of educational skills and facilitated discussions.

Student evaluations were, in general, positive, and they particularly appreciated the early career reflection on their future professional role.

Discussion and Conclusion

The NGT process resulted in an elective subject that both teachers and students appreciated. We encourage others to try similar models when creating new curricula.

Take-home Message

The nominal group technique (NGT) can be very useful when creating new curricula.

8010 (2939)

Date of Presentation: Tuesday 29th August
Time of presentation: 14:54- 15:00
Location: Carron 1, Loch Suite, SEC

The UMCG Guild; an alliance regarding an innovative training course for nursing students in clinical practice

Annita van Wijlen1, Martine Vrieling2, Pepijn Roelofs1, Evelyn Finnema1

[1]Department of Health Science, Section of Nursing Science, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands; [2]Wenckebach Institute for Education and Training, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands

Background

The University Medical Center Groningen (UMCG), an academic tertiary hospital in the North of the Netherlands, joined efforts with three Vocational Secondary Schools in the city of Groningen to form a guild and expand the number of trainees positions for nurses at the UMCG. This alliance has multiple objectives: educate more UMCG-specific trained nurses, address the shortage of nurses in the region, reduce the dropout rates in nursing training and improve healthcare. But are these realistic? A small exploratory study was set up to evaluate the process and results of this significant innovation in the education of vocational nurses.

Summary of Work

The main aims of the UMCG Guild are 1) to offer an appealing, sustainable and high-quality training course for secondary vocational students, complying with the UMCG values as guiding principles, 2) increase the number of trainee positions in the UMCG and 3) decrease dropout rate. The research question was: How do stakeholders assess the UMCG-Guild learning program?

A joined innovative practice-oriented curriculum for nursing students was developed, transferring the overall training from school to the hospital. Also, the number of trainee positions was increased. Intensive cooperation between lecturers and nurses encourages knowledge sharing, which has created safe and challenging learning environments.

Didactic frameworks like workplace learning (Arets,2015), boundary-crossing (Akkerman & Bakker, 2011), principles of reciprocity (Zuidersma, 2012), and Self Determination Theory (Deci & Ryan, 2017) were used.

Data were collected through classroom evaluations, an open questionnaire among all stakeholders (students, nurses, management, lecturers) and tracking and evaluating dropout.

Summary of Results

In 2021 the first 32 students graduated. Dropout during the two-year program was 8.6% (previous years 20-40%).

All stakeholders experienced benefits: schools obtained more trainee positions, teachers experienced more commitment to the internships, students experienced more connection between theory and practice, and the UMCG trained and retained more nurses. Over 90% of the graduates have obtained a job at the UMCG.

Discussion and Conclusion

The objectives of the UMCG-Guild have been achieved. Follow-up research studying didactic components and satisfaction of all stakeholders is planned for the coming years.

Take-home Message

Intensive cooperation between the UMCG and Vocational Secondary Schools increased the number of clinical placements and decreased dropout.

Session 8P: Surgery Education

8P1 (3709)

Date of Presentation: Tuesday 29th August
Time of presentation: 1400 - 1406
Location: Carron 2, Loch Suite, SEC

Short procedure video enhanced PBA level in surgical residency training program

Wararak Aranyapooti1, Sirima liukititharal, Jiratchaya Polprateep 1

[1]*MEC HATYAI, SONGKHLA, Thailand*

Background

Procedure-based assessment(PBA) to assess in surgical resident training helps to increase the confidence of surgery. Learning surgical methods from observation,textbooks and practices in patients by experiences senior teaching novice ones is often time limitation for surgery.This study was made using short videos to enhance practice assistance and evaluation using the level of PBA.

Summary of Work

Short procedure video features 2 methods: 1.open appendectomy 2.Laparoscopy cholecystectomy. Each of them includes the contents:1.Asking for consent 2.Operation planning 3.Pre-operation preparation 4. Intraoperation method 5.Post operation care. The study was conducted among at Hatyai Hospital in 2022 by assessing 1st- 2nd year using open appendectomy and 3rd-4th year ones using laparoscopy cholecystectomy. There is a using a short procedure video.

Summary of Results

The study includes14 surgical residents,8 males(57%),6 females(43%).The mean assessment levels pretest and posttest are 3.3(range 3- 4) and 5 (range4-5), respectively. The follow-up assessment at 1 and 3 months based on the supervisor's feedback indicated a marked improvement in the surgical resident procedure in a brief

period of time. The recommendations of the surgical resident who is more confident and takes briefer time to learn. They would like to add a short procedure video for other more complicated surgical procedures, such as colectomy, etc.

Discussion and Conclusion

Surgical evaluation with PBA level increased when learning by using the short procedure video.This achieved the objectives of the study in almost all patients. This study begins with an easy-to-use video, and selection of cases to be evaluated relied on ones that are not difficult beyond the capabilities of the surgical resident. Therefore, the study may be the origin of very good study results. Nonetheless, for the procedure in complexed surgical cases, it is still a challenge for practice. Moreover, long-term evaluation is still important and requires continuous practices. In summary, the use of short procedure videos helps improve learning, shorten time, increase confidence and increase safety for training of surgery.

Take-home Message

Practice is a key to training of surgery. Using short procedure videos is promote knowledge and confidence of learners. It also reduces the learning curve in surgical procedures, while basically resting under the patient safety.

8P2 (3841)

Date of Presentation: Tuesday 29th August
Time of presentation: 1406 - 1412
Location: Carron 2, Loch Suite, SEC

Gauging the Impact of International Educators on Vascular Surgery Foundational Knowledge in Nepal

Colleen Flanagan1, Danielle Wilson1, Swechha Bhatt2, Robert Treat1, Jonathan Bath3, Loay Kabbani4, Brian Lewis1, Satish Vaidya2, Robin Karmachryna2, Michael Malinowski5

[1]Medical College of Wisconsin, Milwaukee, WI, USA; [2]Dhulikhel Hospital, Dhulikhel, Nepal; [3]University of Missouri, Columbia, USA; [4]Henry Ford Health, Detroit, MI, USA; [5]John Hopkins University School of Education, Baltimore, USA

Background

The goal of global health outreach is to bridge gaps in medical, procedural, and treatment content knowledge in low- and middle-income countries (LMICs), which can be more pronounced in subspecialty surgical work. With advances in technology and increased recognition of the impact of global health in academic centers, opportunities to impact LMICs are increasing. The intent of our education pilot project was to determine if international educators can overcome knowledge gaps in diagnosis and treatment of core vascular surgery topics that are necessary to provide emergency surgical care in LMICs. To date, no prior studies in vascular surgery have confirmed this impact of international education on foreign trainees.

Summary of Work

Expert educators in the field of Vascular Surgery created a 30-question multiple choice test (MCQ) on the topics of peripheral vascular, aortic, and carotid artery diseases. Medical students (3rd, 4th year) and interns at Kathmandu University School of Medical Sciences in Dhulikhel, Nepal, were given identical pre- and post-examinations across a two-hour in-person lecture by a vascular surgeon from the USA. The MCQ was checked for content validity prior to dissemination and local IRB approval was granted by supporting institutions in the US and Nepal. Dependent t-tests, Cohen's d effect sizes, and Pearson correlations reported with IBM SPSS 28.0.

Summary of Results

Forty-eight students participated in the study with 38 fourth-year medical students accounting for 79.2% of participants. A statistically significant (p=0.001, Cohen's d=2.3) increase in pre- (46.5±14.3) and post-mean (83.1±9.3) percentage scores was reported. All three subsections, PAD (d=0.7, r=0.5), Aortic Disease (d=3.0, r=0.4), and Carotid Disease (d=3.4, r=0.5), reported significant increases and pre-post correlations after the lecture.

Discussion and Conclusion

Our results show that despite cultural and language differences, effective transfer of medical knowledge by an international lecturer can occur. This is important as medical knowledge continues to expand and the transfer of the knowledge to trainees is of utmost importance for patient care. As LMICs gain more resources to care for complex medical conditions, the knowledge to recognize and provide treatment can make a lasting impact on international patient care.

Take-home Message

International medical education can be bolstered by surgeons, especially in subspecialty areas.

8P3 (4214)

Date of Presentation: Tuesday 29th August
Time of presentation: 1412 - 1418
Location: Carron 2, Loch Suite, SEC

Postgraduate Medical Students' Perspective of Duration in Subspecialty Surgery Wards Rotation

Vatachanont Jiramaneel, Ginthasuphang Wangsapthawil

[1]*Medical Education Center, Chiangrai Prachanukroh Hospital, Chiang Rai, Thailand*

Background

The Surgery Wards rotation program for medical students has been devised by medical professors to meet the practical requirement of medical internships. The program is implemented across all three campuses of Chiang Mai University and provides students with 22-weeks rotation, comprising 12 weeks of General Surgery and 1 week in each subspecialty, including Trauma. Additionally, there is a 4-week selective subspecialty rotation that is assigned randomly to students, which may not always align with their preferences and may not always result in optimal preparation for their internship. Understanding the Postgraduate medical students' perspectives regarding this program can help inform future improvements and management of the curriculum.

Summary of Work

In order to gather insights on the program, online questionnaires were distributed to 46 postgraduate medical students, who were mostly interning in rural hospitals. The survey questions aimed to explore their perspectives on the impact of ward rotation duration on the number of patients they encountered per week, and the ideal duration for rotation in each department.

Summary of Results

The majority of the 46 surveyed students (84.8%) believed that the duration of the ward rotation has a significant impact on their learning. For the number of patient cases seen per week, General surgery had the highest number (16.3), followed by trauma (13.4), neurosurgery (10.1), and urology (8.9). Other subspecialty surgeries had fewer than 5

cases per week. According to the students, the ideal duration of rotation in general surgery was 12 weeks (52.2%), while the majority of opinions were in favor of increasing the duration of rotation in trauma (78.3%), neurosurgery (60.9%), and urology (54.3%).

Discussion and Conclusion

The results indicate that the duration of the ward rotation program should be re-evaluated to provide students with the best possible education and training. The majority of postgraduate students believe that the ideal duration of rotation in general surgery should be 12 weeks. The findings suggest that the current 4-week selective subspecialty rotation should be modified from a random allocation to one that is based on student preferences in trauma, neurosurgery, and urology.

Take-home Message

Postgraduate medical students' perspective can reflect the appropriateness in managing the curriculum based on real-life patient care experiences.

8P4 (4285)

Date of Presentation: Tuesday 29th August
Time of presentation: 1418 - 1424
Location: Carron 2, Loch Suite, SEC

Exploring Learning Barriers and Facilitators in General Surgical Rotations: Insights for Students and Teachers

Robin Krauss[1], Roshit Bothara[1], Tim Wilkinson[1], Jeremy Simcock[1], Rebecca Pascoe[1]

[1]*University of Otago, Christchurch, New Zealand*

Background

This study explored learning barriers and facilitators medical students encountered during their General Surgical rotation in a variety of clinical settings. This will help to inform both teachers and students to enhance learning in these environments.

Summary of Work

This study utilised a questionnaire with Likert scale and open-ended questions that were specific to students and teachers in the general surgical rotation. Students were asked mid-way through the rotation how and what made them comfortable and familiar in the various general surgical environments, and both students and teachers were asked what they identified as facilitators and barriers to learning. Data from students and teachers were thematically analysed to explore common themes and those that were specific.

Summary of Results

Both teachers and students were generally in agreement regarding what constitutes barriers and facilitators to learning within various surgical environments with overarching themes including active engagement in patient care, expressing energy and enthusiasm by asking questions and preparing for each session. Discrepancies in perceptions were attendance being prioritized by teachers yet infrequently acknowledged by the students. Effective communication within the team was deemed essential by students for optimal learning experiences but sometimes lacking due to clinical urgencies and staffing change. Students and teachers cited lack of active patient care involvement as a barrier to learning but there were varying perspectives regarding the causes of this.

Discussion and Conclusion

This study provides insights for students and teachers in surgical teams on ways to enhance learning and improve student experience in various surgical team settings. The findings were used to create surgical orientation videos that show multi-disciplinary team members orientating students to the various environments and how to optimise their learning. This study also suggests that further research is necessary to elicit the potential barriers to effective communication between teachers and students.

Take-home Message

1) Active engagement in patient care is an essential facilitator to optimal learning during general surgical rotations

2) Students and teachers have varying views regarding the causes resulting in a lack of active patient care involvement

3) Students considered inclusion in team tasks and good communication as facilitators to learning

8P5 (2744)

Date of Presentation: Tuesday 29th August
Time of presentation: 1424 - 1430
Location: Carron 2, Loch Suite, SEC

Prospect of AI real-time surgical workflow and anatomical structure recognition system application in operating room for minimally invasive surgery learning

Tzu-Chi Liu1, Yu-Tien Chang1, Je-Ming Hu2

[1]National Defense Medical Center, Taipei, Taiwan; [2]Tri-Service General hospital, Taipei, Taiwan

Background

We are developing an AI real-time surgical workflow and anatomical structure recognition system in the operating room to improve students' learning efficiency and enhance their interest in surgery.

Summary of Work

In the operating room, it's a burden for operators to explain the process in detail to students while performing surgery at the same time. Meanwhile, medical students may feel confused and frustrated if there's no one guiding, especially during minimally invasive surgery, such as laparoscopic or robotic assisted surgery, since it shows three-dimensional anatomic structure in a two-dimensional view. Thus, we are developing an AI real-time surgical workflow and anatomical structure recognition system based on YOLO v7, 3D CNN structure. The system is designed to recognize and show ongoing surgical steps, anatomical structures on the monitor. Medical students are able to learn the process of surgery by the system and then make further discussion with the operators after surgery. A questionnaire, which includes qualitative and quantitative questions regarding the recognition system, has been delivered to both instructors and students.

Summary of Results

A total of 39 replies were collected from senior medical students who had started internship less than two years. The overall expectation score was 4.3 out of 5.

Approximately 88% of students scored more than 3 out of 5. Meanwhile, 94% and 82% of students had more than 80% confidence that the system would promote knowledge acquisition and learning efficacy respectively. Compared to original instruction method, students' motivation in learning surgery significantly increased. Both students and instructors suggested that the novel AI assisted instruction method was attractive and highly expected.

Discussion and Conclusion

AI assisted instruction method has the power to transform learning environments through promoting students' interests and easing the workflow of instructors at the same time.

Take-home Message

We are optimistic about the long-term result of AI real-time surgical workflow and anatomical structure recognition system application in surgery education.

8P6 (4873)

Date of Presentation: Tuesday 29th August
Time of presentation: 1430 - 1436
Location: Carron 2, Loch Suite, SEC

Banana Peels for Suturing Practice in Clinical Dental Students

Natalie Rose Noisuwan 1, Narin Chindavech1, Surasak Aumkaew1, Praewphan Ruangekawit1, Vittawin Fagcharoenpol1, Chutima Deesawat1, Punnaphat Daraswang 1, Paweenuch Supawan1, Pienlert Moonwiriyakit1, Panomporn Junla-or1

[1]*Medical Education Center, Buriram Hospital, Buriram, Thailand*

Background

Silicone is a well-known material used in suturing practices in the medical field. However, biological materials offer a better understanding for mobile, fixed and traumatized soft tissues in the dental field. Oral mucosa is fragile, delicate tissue attached to bone, which students should practice manipulating. Bananas are good example of a biological material as they can easily be undermined under the peel and are readily available in many countries.

Summary of Work

A total of 24 clinical dental students assigned to practice handling both conventional silicone and banana peel for suturing in procedural classroom. The outcomes assessment (total 10 points each item) were knowledge, suturing skills and satisfaction scores, in feeling like true oral mucosa, from feedback of students.

Summary of Results

The results were comparable both knowledge and suturing skill (8.0 vs. 8.2 and 9.0 vs. 9.3, respectively). Satisfaction scores were difference (9.6 vs. 9.0, p=0.05). The students reported that they increased soft tissue handling skills and improved to prevent crush injuries. An excessive force can cut through or traumatize soft tissues of banana peel compared to silicone.

Discussion and Conclusion

Soft tissues may be cut through or traumatized if excessive force is used. Dental students should learn how to first pick up the mobile flap, then the fixed one. They should gently elevate the flap with forceps, insert the needle at a right angle, and finally place the knots properly from the wound edges. These techniques can be effectively practiced using a banana peel as compared to conventional silicone materials.

Take-home Message

Using a banana peel, in dental suturing practice, helps students develop a careful technique. Bananas are inexpensive, biodegradable and useful for creating a realistic gingival texture feeling.

8P7 (0556)

Date of Presentation: Tuesday 29th August
Time of presentation: 1436 - 1442
Location: Carron 2, Loch Suite, SEC

Effects of Cadaveric Workshop on Improving Basic Surgical Skills in the 5th Year Medical Students: MEC LPH

Sasithun Plengvittaya 1

[1]*Medical Education Center Lampang Regional Hospital, Lampang, Thailand*

Background

The Cadaveric workshop has been held to improve the basic surgical skills in 5th year medical students at Lampang Medical Education Center for 5 years. However the effectiveness of the workshop is as yet unknown.

Summary of Work

This retrospective cohort study was carried out in the 5th year medical students participating either the workshop or the conventional simulation training between July 2021 to October 2021. Data about the comprehensive skills and confidence level in performing basic emergency procedures were retrieved from the questionnaire which was completed by the students after finishing the training. Data analysis was performed using Independent T-test and Gaussian regression.

Summary of Results

Of 44 participants, 12 (27.3%) participated in the Cadaveric workshop, whereas 32 (72.7%) were in the conventional simulation. No statistical significance in comprehensive skills, level of confidence and SIM day scores was found between groups. Students in the Cadaveric workshop group had a higher score for the confidence level in performing Basilic venous cut down (P-value=0.005), Cricothyroidotomy (P-value=0.005), and in identifying location of Saphenous vein (P-value=0.008) and basilic vein (P-value=0.032), compared with that of their peers.

Discussion and Conclusion

There was no statistical significance in comprehensive skills and SIM DAY Score between the Cadaveric workshop-participating 5th year medical students and the simulation alone group. But cadaveric workshop helps to improve confidence level in performing Cricothyroidotomy and to identifying the location of Saphenous vein.

Take-home Message

Cadaveric workshop does not improve the outcome of the basic surgical procedure itself, but can improve the level of confidence in performing the procedures.

8P8 (3269)

Date of Presentation: Tuesday 29th August
Time of presentation: 1442 - 1448
Location: Carron 2, Loch Suite, SEC

Implementation of Escape Room as an educational strategy to strengthen the practice of Safe Surgery

Renata Vicente Soares[1], Pamêlla Simões Barel[2], Camila Canhoella Leite[3], Loiane Letícia dos Santos[1], Francisco Carlos Specian Júnior[1], Enderson Rodrigues de Carvalho[1], Renan Gioanotto-Oliveira[1], Dario Cecilio-Fernandes[1]

[1]University of Campinas, Campinas - São Paulo, Brazil; [2]Complex of the Hospital de Clínicas of the Federal University of Paraná, Curitiba - Paraná, Brazil; [3]Instituto de Responsabilidade Social Sírio Libanês - Hospital Regional de Jundiaí, Jundiaí - São Paulo, Brazil

Background

Implementation of the Safe Surgery protocol is associated with reduced morbidity/mortality and complications in postoperative. However, adherence by health professionals faces many barriers, such as failure to recognize the importance of implementing all stages of the protocol and lack of communication between teams. Escape Room is an educational strategy in a game format where participants enroll in a series of playful activities designed to acquire knowledge or skills, by solving puzzles. Escape room can provide an enjoyable experience that immerses participants and provides an opportunity to engage in an activity that rewards teamwork, creativity, decision-making, leadership, communication, and critical thinking. This study describes the use of escape room for training safe surgery protocol.

Summary of Work

We developed a scenario that represented a surgical room and the performance of a surgical procedure. The escape room consisted of 05 puzzles related to the different moments of the safe surgery protocol. The objective of the activity was to go through the time-out stages by solving the puzzles and guaranteeing a safe surgery. Resources such as padlocks, safe, hidden messages written with a black light pen and hidden clues in the setting were used to create the puzzles. When unraveled, the puzzles reinforced important

stages of the protocol, such as confirming the patient's identification, administering antibiotic prophylaxis, confirming the packed red blood cells reserve before the start of the procedure, complete nursing and medical records in the patient record, and instruments traceability before and after surgery.

Summary of Results

67 staff members participated in the escape room activity, including doctors, nurses, nursing assistants, medical residents and interns. During the debriefing, we noticed a positive reaction from the participants, including that training was playful, offering an opportunity for the development of non-technical skills, such as communication between professionals, teamwork and problem solving.

Discussion and Conclusion

During the training, participants worked together and were able to think critically, while having fun and learning. We identified promising results, which broadens the perspective for further studies using this style of game for training the multidisciplinary team.

Take-home Message

The escape room was positively assessed by health professionals as a training activity for Safe Surgery protocol.

8P9 (3499)

Date of Presentation: Tuesday 29th August
Time of presentation: 1448 - 1454
Location: Carron 2, Loch Suite, SEC

The "Surgical Knot Challenge" competition: A novel strategy for motivating knot-tying instruction

Tipsuda Tangsriwong1, Thipsumon Tangsiwong1, Sontara Pinanusorn1

[1]*Buddhachinaraj Phitsanulok Hospital Medical Education Center, Phitsanulok, Thailand*

Background

The most fundamental of all essential skills is the ability to tie a surgical knot. Most medical students and surgical trainees acquire it as their first technical skill, and it is also the first skill they use in actual practice. Any basic surgical education program should aim to optimally prepare students to perform basic surgical skills like knot tying. Our institution, therefore, developed extracurricular programs to improve the knot-tying skills of postgraduate trainees and undergraduate medical students.

Summary of Work

In 2020–2022, the "Surgical Knot Challenge" competition was open once a year to all fourth- through sixth-year medical students, interns, and residents with one month of independent practice. Every participant has previously practiced knot-tying techniques as part of the 4th-year curriculum. We evaluated the participants' hand knot-tying performance for both one-handed and two-handed square knots with three tasks: tying at the surface, tying at depth, and atraumatic tying. Competitors engage in equal-level competition during each round, which lasts one minute. The surgical staff also looked at the knot's configuration, degree of tightness, and mechanism of failure. Following the contest, they were given feedback and evaluated using a checklist for knot-tying.

Summary of Results

Throughout the competitions for the last three years, these competitions had 112 participants, including 68% undergraduates. Most of them, including surgical residents, admitted they lacked surgical knot-tying experience. 90% of competitors were adequately

prepared before the competition to complete their goals by themselves or with assistance from the senior doctors. Their proficiency scores improved after the activity as they felt more competent and confident in their ability to tie knots.

Discussion and Conclusion

This activity encourages students to practice ongoing self-learning while also assisting them in realizing their potential with the assistance of the medical staff and an attractive prize. Even though their proficiency scores might not accurately reflect how well a person performs in a clinical setting or how well they retain their skills over time, we think they can improve with exposure and practice.

Take-home Message

Enjoyable extracurricular activities can be used to inspire lifelong self-learning. Gain the fundamental medical knowledge required to create futuristic, successful teaching strategies.

8P10 (3236)

Date of Presentation: Tuesday 29th August
Time of presentation: 1454 - 1500
Location: Carron 2, Loch Suite, SEC

Setting the tone for collective competence in the operating room: a constructivist grounded theory study

Melanie Hammond Mobilio1, Carol-anne Moulton2, Frank Rudzicz1, Hillary Lia1

[1]University of Toronto, Toronto, Canada; [2]University Health Network, Toronto, Canada

Background
The tone of the operating room (OR) is an under-studied construct which may shape team dynamics and performance. Tone has the potential to promote or hinder a sense of cohesion and adaptability among team members, particularly in response to intraoperative challenge and stress. Although tone may be an important aspect of team functioning, there does not currently exist a framework which clearly defines how tone emerges and is experienced in the OR to shape team performance.

Summary of Work

We conducted fifteen semi-structured interviews and analysed them using a constructivist grounded theory methodology. Study participants included surgeons, nurses, anesthetists, and perfusionists with varying levels of experience and subspecialty, sampled using a purposive strategy. Interviews were coded by two members of the research team and reviewed together line-by-line. Data were analysed iteratively so emerging concepts could be explored in subsequent interviews. Data collection and analysis remain ongoing.

Summary of Results

The tone of the OR is a dynamic construct that emerges from interpersonal interaction in a team. These interactions are moderated by power, culture, familiarity, and personal factors including personality and confidence. The tone has implications for team performance by affecting key team constructs, including shared mental model ("I think the tone … indicates 'OK, this is something serious we need to just concentrate.'" N2), psychological safety ("If…there's a positive atmosphere, people will speak up more…If

there's something going wrong, or…if they've done something wrong, they'll actually own up to it" P1), and resilience ("I think mentally [tone] helps when you're having those really long days, you're working overtime, you had a really stressful situation, if you lose a patient or that kind of stuff…I think that it helps to feel valued." P3).

Discussion and Conclusion

By studying the tone of the OR, we integrate factors of power, familiarity, and relationships to understand how important team constructs interact for the emergence of collectively competent teams.

Take-home Message

The tone of the operating room is an interpersonal construct that may allow us to integrate our understanding of key team factors with the contextual factors in the operating room to better understand how teamwork emerges.

Session 8R

8R (3326)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: Dochart 2

Show me the money! Exploring business strategies and techniques to secure education resources

Tanya Horsley[1], Vicki LeBlanc[2]

[1] *Royal College of Physicians and Surgeons of Canada, Ottawa, Canada* [2] *Department of Medicine & Department of Innovation in Medical Education (DIME), University of Ottawa, Ottawa, Canada*

Background

Educators are continuously developing innovative approaches to advance education and training. These innitiatives often require money, people, time, or products (e.g., websites, simulation modalities) within resource-constrained systems. As a result, the business of education – securing critical resources - is competitive. Physicians, educators and administators often report struggling to secure the necessary buy-in and resources for their initiatives. We introduce a well-known business framework aimed at increasing the likelihood of investment by articulating a compelling ***value proposition;*** the promise of value that the initiative or innovation will bring to current and future end users. Using a multi-disciplinary approach, the goal of this workshop is to introduce strategies, frameworks, and tools historically found in the business literature to support participants with articulating the value of their initiative. Through evidence informed and experiential perspectives, facilitators will guide participants through how to a) identify the needs of their interested partners, b) articulate the unique advantages of their activities in addressing interested partners, c) leverage persuasive marketing strategies, and c) develop key partnerships.

Who Should Participate

Any learner, educator and/or leader looking to further develop knowledge and skills for how to increase the likelihood of securing resources for their initiatives

Structure Of Workshop

The session will begin with a discussion about the challenges participants face in securing resources for their activities. This will be followed by a brief presentation drawing on business literature, frameworks, strategies, and tools that participants can use to make a case for a value proposition. Participants will then engage in small-group work to articulate the value of their initiative guided by a value proposition framework. Once they have articulated their initial value propositions, they will present persuasive 'mini-pitches' to the larger group for feedback and input. This will be followed by feedback from the facilitators, aimed at developing a compelling message.

Intended Outcomes

At the end of this session, participants will be able to:
a) Define 'value proposition'; the importance of aligning their activity to interested partner needs;
a) Describe frameworks and tools that shape and support efforts to mobilize resources needed for initiative;
c) Begin to articulate a clear and compelling value proposition aligned to their initiative.

Session 8S

8S (1530)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: M3

Using Design Thinking in Medical Education: A Collaborative Approach to Problem-Solving

Roberta Preston[1], Anne Mahalik[1]

[1] *Faculty of Medicine, Dalhousie University , Halifax, Canada*

Background

Understanding the specific needs of faculty within medical education is complex. Traditional assessments, surveys and evaluation frameworks look at the big picture (i.e., what is best for the majority). They typically do not focus on the lived experiences and needs of individuals. The Design Thinking (DT) approach is a problem-solving framework traditionally used in technology and business but has gained increasing attention in medical education (McLaughlin, et al., 2019). DT is an innovative and inclusive process focusing on the users first, rather than the problem being solved. By generating a deeper understanding of individuals' needs, this approach effectively addresses the challenges and concerns, particularly those whose needs are often overlooked. It encourages reflective practice and creative idea generation. Researchers and users work together to develop solutions that fit users' specific needs in a real-life context (McLaughlin, et al., 2019).

This workshop aims to introduce the DT process, providing participants with a new way of thinking about problem-solving that focuses on the users' experience. Participants will have the opportunity to practice and feel more confident applying DT principles to problems/situations.

Who Should Participate

Individuals interested in learning an innovative and inclusive approach to understanding and collecting information about the realities, feelings, and needs of users, which can be used to design, implement and find solutions to “wicked problems” in medical education. Additionally, anyone interested in building deeper engagement and overcoming resistance to programming and initiatives.

Structure Of Workshop

Using principles of active learning, this interactive, evidence-based workshop will introduce the DT approach; review the literature on how DT is used in medical education; provide a demonstration and opportunity to practice the five steps in the process, and brainstorm potential solutions within small and large groups. Participants can bring their problems or challenge or use the examples provided by facilitators.

Intended Outcomes

Describe Design Thinking, including the five-stage process
Discuss how Design Thinking is used in medical education to create more inclusive environments, with more engagement
Apply principles of Design Thinking to their projects

Session 8T

8T (5030)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: M2

Assessing the Accreditors: Context Matters. Lessons learned from the WFME Recognition Programme

Ricardo León-Bórquez[1], Geneviève Moineau[1], Jana Cohlová[1], Barbora Hrabalová[1]

[1] *World Federation for Medical Education (WFME), Ferney-Voltaire, France*

Background

The purpose of accreditation of basic medical education is to evaluate the quality of medical education programmes and encourage continuing quality improvement. This enables medical students to experience the best educational opportunities to prepare them to become competent physicians who will meet the needs of the population in their context. The World Federation for Medical Education (WFME) Recognition Programme evaluates the accreditation agencies against criteria based on the consensus of international experts.

While universal best practices can be formulated in accreditation, solutions that are tailored and unique to the local context need to be respected and supported as they are usually most effective.

Who Should Participate

Anyone with an interest in the accreditation of basic medical education is invited to participate.

Individuals involved with accreditation agencies, regulatory organisations, accreditation scholars and medical students are especially encouraged to attend.

Structure Of Workshop

The workshop will include a brief introduction of the WFME Recognition Programme, followed by group activities using real scenarios aimed at encouraging discussion about critical and creative approaches to context-appropriate solutions to typical challenges in the accreditation of medical education. Emphasis will be given to strengthening the mindset that while respecting the global pool of knowledge, the local context needs to be embraced. Feedback from students will be greatly appreciated. The groups will independently use their judgement and experience and report back to the larger group for feedback and discussion.

Intended Outcomes

At the conclusion of this workshop, participants will have gained the mindset of analysing the needs and tailoring the solutions in the accreditation process to the unique context while maintaining the awareness of the trends at the global level.

Session 8U

8U (5141)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: M4

Advancing assessment in practice – contributing to the Ottawa Consensus Statements

Ronald Harden[1], Katharine Boursicot[2], Richard Hays[3], Gary D Rogers[4], Pat Lilley[1]

[1] Medical Teacher, Dundee, UK [2] Health Professional Assessment Consultancy , Singapore, Singapore [3] James Cook University, Mount Isa, Australia [4] Deakin University, Geelong, Australia

Background

The Ottawa Consensus Statements reflect on and review key themes relating to the assessment of competence in the health professions. The reports published in Medical Teacher provide recommendations and describe best practice in relation to assessment. Themes addressed to date include: Criteria for good assessment; Performance assessment; Assessment of professionalism; Assessment for selection; Research in assessment; Technology enabled assessment; Programmatic assessment; Interprofessional assessment; Big data and assessment.

Groups of individuals with expertise in the topics of the consensus statements work both remotely and face to face to draft the statements which are then disseminated for wider input by the health professions education community before being finalized for publication.

Who Should Participate

This workshop with its assessment theme is applicable to teachers, researchers, administrators and students in the health professions, irrespective of their level of

experience. We hope for wide geographical representation and from all phases of education from preclinical through to clinical, postgraduate and CPD. Participants have the opportunity to become involved in development of consensus statements and to help shape best practice in assessment in the health professions.

Structure Of Workshop

The workshop will be interactive with short opening presentations followed by discussions in small groups relating to the consensus statement approach; how the guidelines can be used in practice; review of the current statements and identification of areas for update and topics for future statements. The session will close with a summary of the conclusions relating to the production and use of the Ottawa Consensus Statements with the aim of improving practice in assessment in the health professions.

Intended Outcomes

Participants will:

- Gain an understanding of the consensus statement approach
- Consider how the guidelines can be used in practice to improve assessment
- Review the statements already produced and consider if updates are required
- Identify potential topics for additional consensus statements

Session 8V

8V (2887)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: Staffa

Conflict and Resistance: Framing Healthy Responses to Systemic Harm and Injustice

Tasha R. Wyatt[1], TingLan Ma[1], Quentin Eichbaum[2], Susan van Schalkwyk[3], Rachel Ellaway[4]

[1] Uniformed Services University, Bethesda, USA [2] Vanderbilt University School of Medicine, Nashville, USA [3] Stellenbosch University, Cape Town, South Africa [4] University of Calgary, Calgary, Canada

Background

Physicians who experience distress, tend to bear the weight of health disparities for marginalized populations, policies that restrict access to quality healthcare, and demanding work environments that require compromise with their values and ideologies. Physicians encountering systemic injustice have two options: accept the system as it is, and in doing so, accommodate its injustices, or seek to challenge the system through intentional acts of resistance. Ellaway and Wyatt define professional resistance as: "Individual and collective expressions of condemnation of social harms and injustices, with the intent of stopping them, preventing them from recurring, and/or holding those responsible to account." Resistance is important when sanctioned solutions to injustice is no longer effective. Drawing on this definition, this workshop introduces conflict as a healthy response to systems of harm and injustice and resistance as a way to create necessary change. After a brief overview on the importance of conflict in HPE, this workshop will guide participants through Ellaway and Wyatt's 4 principles of resistance before moving into small and large group discussions on how to resist with integrity.

Who Should Participate

HPE Educators and Trainees

Structure Of Workshop

5 min Overview

30 min Introduction to Conflict/4 Principles of Resistance

15 min Small Group Activity

- Using the 4 principles, discuss a moment when you have engaged in or witnessed acts of resistance.

20 min Whole Group Discussion

- In applying the principles, where did you identify tension? Which principles were most challenging? What does this say about HPE in different contexts?

15 min Whole Group Discussion - Supporting clinical educator and trainees in resistance

- What are the roles of a clinical educator in professional resistance?
- How might we help trainees use the 4 principles in their resistance efforts? How do we move beyond conflicts and bring forward resistance to make adaptive change to the system?

5 min Closing Questions

- What did you learn? What will you do differently?

Intended Outcomes

1. Identify resistance as a health response to systems of harm and injustice
2. Apply 4 Principles of resistance to uncover tensions, boundaries, within different scenarios and subjectivities
3. Create a community interested in legitimate acts of resistance in medical education and practice

Session 8W

8W (5624)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: Jura

Student Led Learning in Undergraduate Patient Safety Education

Diane Levine[1], Htet Htet[2], Chris Gillette[3], Anne Patterson[1], Sohini Pandit[1], Kendall Brothers[1], Kuashik Ilango[4] , David Bai[1], Youstina Abdallah[1]

[1] Wayne State University, Detroit, MI , USA [2] International Medical University, Kuala Lumpur, Malaysia [3] Wake Forest University School of Medicine, Winston-Salem, USA [4] Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore

Background

Patient safety education is necessary to prepare medical and health professional students to improve patient safety and health care quality (Wu 2019). Education has traditionally been developed and delivered by faculty. However, student-led learning has been shown to be beneficial for both learners and teachers (Bulte 2007, Bene 2014, Catte 2007). Student led initiatives and peer education complement traditional teaching paradigms and provide inclusive, innovative, and effective methods to deliver patient safety education (Adrian 2014, Walpola 2018, Shah. 2020).

This workshop is a collaborative effort between faculty and students. Undergraduate medical students will serve as facilitators and share their perspectives on student led patient safety education.

Who Should Participate

Educators, faculty, students, clinicians interested in patient safety education

Structure Of Workshop

1. Overview of patient safety education in medical school (10 minutes)
2. Active Participation and Experience Sharing (10 min): Participants will share experiences at their institution with student education in patient safety and quality improvement (QIPS) with a focus on student led educational initiatives and peer teaching/tutoring.
3. Didactic (30min): Brief introduction to conceptual framework of learners as teachers. Discussion of impact of peer teaching on learners and peer teachers. Presenters will then share examples of student-led patient safety curricular initiatives and student led teaching from their institutions.
4. Theme-based interactive discussions (20 min): Participants will breakout in predefined theme-based groups (see below) and brainstorm how to engage students in curricular development and what role students can play in delivery of the curriculum (students as educational collaborators and leaders, peer educators, patient safety champions).
5. Shared Learning (10min): Groups report on initiatives developed in small groups.
6. Concluding remarks and Questions and Answers (10 minutes)

<u>Patient safety themes for group discussion</u>

- Patient safety principles
- Communication techniques
- Diagnostic bias
- Errors and adverse events
- Handoffs
- Medication safety
- Procedural safety
- Quality improvement
- Reporting
- Response to errors

-
- Safety tools
- Speaking up
- Teamwork

Intended Outcomes

1. Identify opportunities in the undergraduate (medical school) curriculum to engage students in patient safety education

2. Develop a plan to engage students in curricula development and utilize students as near peer educators and teachers/tutors of patient safety and quality improvement

Session 8X

8X (2554)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: Barra

Postgraduate Health Professions Education Supervision and Mentorship

Veena Singaram[1], Vishna Devi Nadarajah[2], Diantha Soemantri[3], Diana H.J.M. Dolmans[4]

[1] University of KwaZulu-Natal, Durban, South Africa [2] International Medical University, Kuala Lumpur, Malaysia [3] Universitas Indonesia, Jakarta, Indonesia [4] Maastricht University, Maastricht, The Netherlands

Background

Attraction and retention of healthcare professionals into postgraduate health professions education (HPE) research programmes is a multifaceted challenge in higher education. Postgraduate supervision directly influences the success of master's and doctoral researchers' progression, attrition rates and quality of experiences. Clinical educators hold a high degree of structural power over students and junior colleagues. Postgraduate supervisors must become more conscious of how this may impede the supervisor relationship and feedback-seeking behaviour in HPE postgraduate research. We need to advocate for aspects of psychological safety that include trust, relationship building, and supervision alliances and create more inclusive 'safe' neutral supervision spaces that dismantle the negative impact of the power dynamics.

This interactive workshop aims to provide insights into the supervisor's role as a mentor at different stages of the master's and doctoral HPE journey. Practical and educational strategies will be shared to enhance the knowledge, skills, and attitudes of postgraduate supervisors in HPE. Participants will also be introduced to the latest frameworks, theories, tools, and strategies to enhance their supervision and mentorship styles to facilitate the success and wellbeing of postgraduate HPE master and doctoral students.

Who Should Participate

Novice and intermediate educators interested or involved in postgraduate supervision in HPE.

Structure Of Workshop

This interactive workshop will include presentations, group work and role plays

- Introduction/Icebreaker (20mins)
- Define Goals and expectations (20mins)
- Presentation 1 (10mins) (Perspectives from the Postgrad student)
- Small group activity based on scenario1 and report back (30mins)
- Presentation 2 (10mins) (Perspectives from the Postgrad supervisor)
- Small group activity based on scenario 2 and report back (30mins)
- Presentation 3 (10mins)
- Small group activity based on scenario1 and report back (30mins)
- Closing Reflections (10mins)

Intended Outcomes

- Introduce master and doctoral supervision and mentorship models and pedagogies
- Identify styles, attributes, and skills needed for effective supervision and mentorship in HPE.
- Explore how informal online and face to face spaces can be used to create and foster supportive supervisory environments and relationships
- Develop and enhance the mentorship skills of HPE postgraduate supervisors through interactive activities, and role plays.

Session 8Y

8Y (6556)

Date of presentation: Tuesday 29th August
Time of session: 14:00 - 15:30
Location of presentation: Shuna

Generational Artificial Intelligence (AI): The impact of ChatGPT and Gen AI applications on Health Professions Education

Daniel Salcedo[1], Michelle Aebersold[2], Andrea Bryner[1], Deborah Lee[2], James Thomas[3], Eric Gantwerker[4]

[1] Case Western Reserve University School of Medicine, Cleveland, OH, USA [2] University of Michigan School of Nursing, Ann Arbor, USA [3] Oxford University, Oxford, UK [4] Zucker School of Medicine at Hofstra/Northwell, New Hyde Park, USA

Background

As technology continues to advance at a rapid pace, healthcare education must evolve to keep pace with the changing needs of the healthcare industry. One such technological innovation that has the potential to revolutionize or disrupt healthcare education is Generational AI (Gen AI), a new form of artificial intelligence designed to generate content in a wide range of formats using Natural Language Processing (NLP).

ChatGPT and other Gen AI applications have raised serious concerns about the impact of these technologies on higher education in general, and these publicly available tools have the potential to affect the effectiveness of educational methodologies such as Problem-Based Learning (PBL) frequently employed in Health Professions Education (HPE).

Responses to this new technology have varied dramatically at the national and institutional levels, highlighting the need for learners, faculty, and leadership to understand the potential ramifications of the widespread use of AI chatbots and other Gen AI applications.

This session aims to provide a hands-on analysis of the design and functionality of ChatGPT and similar Gen AI to understand the potential threats and opportunities of adopting this technology into HPE programs.

Who Should Participate

This workshop is aimed at health professions educators interested in gaining a more in-depth understanding Gen AI and hands-on experience with ChatGPT and its functions

Structure Of Workshop

1) Introduction to Gen AI: Interactive presentation on Gen AI

2) Leaning ChatGPT: Hands-on exercises to learn how to use the different functions of ChatGPT and other Gen AIs

3) Gen AI Pros and Cons: Small group discussion on benefits and risks of Gen AI in education

4) Impact of AI on HPE: Facilitated large group discussion

5) Rethinking Education in the age Gen AI: Small group presentations of new or modified educational methodologies integrating Gen AI to HPE

Intended Outcomes

- Understand Gen AI design features.
- Examine ChatGPT's design, functions, and operation.
- Analyze the potential threats of ChatGPT to educational programs.
- Evaluate the potential applications of ChatGPT to education.
- Discuss future directions of Health Professions Education in the face of a changing technological environment

Session 9A

9A (0920)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: Hall 2

Every Voice Matters: Inclusive Faculty Development

Yvonne Steinert[1], Subha Ramani[2], Olanrewaju Sorinola[3], Patricia O'Sullivan[4], Ardi Findyartini[5]

[1] McGill University, Montreal, Canada [2] Brigham & Women's Hospital , Boston, USA [3] Univeristy of Warwick, Warwick , UK [4] UCSF, San Francisco, USA [5] Faculty of Medicine Universitas, Jakarta, Indonesia

Background

Calls for diversity, equity and inclusion (DEI) are increasingly highlighted in health professions education. However, it is unclear how these concepts have been incorporated into faculty development and how professional development activities have advanced equity and inclusion. During this symposium, we will address core definitions; reflect on how the intersection of personal and social identities can inform inclusion; present a framework for engaged pedagogy to implement inclusive excellence that can inform faculty development programs in a variety of contexts; highlight the importance of inclusion in faculty development and articulate how DEI can inform faculty development initiatives; describe a faculty development initiative designed to advance DEI among faculty members and their learners; and discuss the application of these principles to cross-cultural faculty development.

Topic Importance

As globalization in health professions education continues to grow exponentially, open-mindedness of stakeholders involved in health professions education is integral to the incorporation of DEI into faculty development practices. Thus, it is essential that faculty development initiatives move beyond a focus on how-to recipes for skill development to include a focus on how-to approaches that can raise awareness about inclusion, enhance psychological safety, and respond to the diverse needs of participants worldwide.

Format and Plans

This symposium will include brief presentations of the core content described above; outline a case for discussion adn audience participation; offer multiple opportunities for reflection and sharing of experiences; and conclude with audience questions and comments for the panelists.

Take Home Messages

Take-home messages include the following: (1) Every voice matters in FD; just being present at the table is inadequate; (2) FD must take advantage of engaged pedagogy to implement inclusive excellence, be aware of recent initiatives to promote DEI at all levels of the educational spectrum, and apply these principles to cross-cultural faculty development; and (3) Faculty development initiatives need to move beyond educational skill development to include approaches that can raise awareness about and inform initiatives that are inclusive and responsive to diverse participant needs.

Session 9B

9B (0736)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: M1

Developing Competent District Health Care Doctors in the Least Developed Countries: Continuous Glocalization of an Education Program

Jae Hoon Lee[1], Young-Mee Lee[2], Hanitriniala Sahondranirina Parquerrette[3], Hyunmi Park[2], Heeyoung Han[4]

[1] Africa Future Foundation - Madagascar, Antananarivo, Madagascar [2] Korea University College of Medicine, Seoul, The Republic Of Korea [3] Miarinarivo Public Health Service, Antananarivo, Madagascar [4] Southern Illinois University School of Medicine, Springfield/Illinois, USA

Background

Madagascar is one of the poorest countries in the world. Its weak public healthcare system lacks governmental financial support and suffers from physician shortages and inequality in health, social and economic resources distribution. Approximately 55% of the population travels more than 5 km to medical services and more than 80 km for surgical procedures. District hospitals run to meet the healthcare needs in rural areas, yet only 29 out of 119 are assigned a surgeon. To address this healthcare workforce shortage issue, we developed an educational program to train district healthcare doctors to be competent in several basic surgical procedures desperately needed in the communities. Embracing the Malagasy context, we continuously negotiated between global standards of healthcare and medical training quality and local contexts, stakeholder needs, and capacities to optimize the educational program goals and administration.

Topic Importance

Developing a medical education program is a way to address systematic healthcare issues, yet following general rules defined in Western developed countries might be inapplicable. The program is strategically embedded in the Madagascar national

healthcare system to maximize its sustainability, which is unique compared to other NGO programs. We will share how this glocalization process becomes vital in creating a medical education program that serves Madagascar's immediate local healthcare needs.

Format and Plans

The audience will have opportunities to provide their experiences/thoughts and discuss with the panel on the topic.

- Introduction (5 min)
- Background of Healthcare in Madagascar (15 min)
    - Gathering audience's global health experiences using Slido.com, an audience interaction tool.
    - Stories from Malagasy doctors
- Glocalization of Educational Program (45 min-Presentations)
    - Process-Product-Implementation
    - Lessons Learned
- Discussions (20 min)
    - Questions for the audience
        - How can medical education be more authentic to meet global health needs?
        - How can medical education tackle health inequity in developing nations?
- Wrap-up (5 min)

Take Home Messages

- Redefining doctors' competencies for local communities is an ongoing process to negotiate between global quality standards and local capacities.
- Glocalization requires interdisciplinary collaboration among Malagasy doctors, the government, NGOs, and medical educators.
- Medical education needs to be responsive to authentic healthcare needs.
- To ensure the program's sustainability, empowering the local(Malagasy) government and physician educators to develop as change agents is essential.

Session 9C

9C (1490)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: Argyll I

EPAs in Undergraduate Health Professions Education: An International Perspective

Michael Ryan[1], Prashant Jhala[2], Chih-Wei Yang[3], Severin Pinilla[4], Nguyen Vu Quoc Huy[5], Dorothy Andriole[6]

[1] University of Virginia School of Medicine, Charlottesville, USA [2] University of New South Wales , Sydney, Australia [3] National Taiwan University College of Medicine, Taipei City, Taiwan [4] University Hospital of Psychiatry and Psychotherapy, Bern, Switzerland [5] Hue University of Medicine & Pharmacy, Hue, Viet Nam [6] Association of American Medical Colleges , Washington DC, USA

Background

An entrustable professional activities (EPAs) framework is increasingly used to operationalize competency-based medical education (CBME). In 2005, ten Cate described the concept of EPAs as a means for translating competencies into clinical practice. Initially considered in the context of graduate medical education, the feasibility and utility of implementing EPAs in undergraduate health professions education (UHPE) is being explored internationally (symposium proposed on behalf of the International CBME [ICBME] collaborators).

Topic Importance

The premise of implementing EPA-oriented programs of assessment to ensure that medical students were prepared for post-graduation training has expanded to the implementation of EPAs in a range of UHPE programs internationally. Opportunities to compare and contrast approaches taken by different UHPE programs in development of EPAs, and implementation of curricula, programmatic assessment and entrustment decision-making, can inform a collective understanding of shared implementation

successes and barriers in this work as well as locale-specific challenges in educational and health care delivery systems.

Format and Plans

The core components framework for CBME program evaluation, described by van Melle and colleagues in 2019, will be adapted as the template for speakers' presentations. In the first half of the session, speakers will describe the development and current state of EPA-implementation efforts in their countries' UHPE programs. Speakers are engaged in a wide range of maturity of efforts, types of HPE programs included in these efforts and extent of "all in" adoption nationally, informed by system-specific considerations impacting implementation in their respective countries. The second half of the session will be a panel-discussion format, with speakers addressing questions and comments from session participants, who will be encouraged to share key aspects of their UHPE EPA-implementation work.

Take Home Messages

UHPE implementation of EPAs remains a "work in progress" with many unanswered questions about impact. Consistent aspects of UHPE implementation of EPAs include their link with longitudinal programs of assessment to substantiate entrustment and the need for a shared mental model about the meaning of entrustment vis-à-vis progression. Context-dependent aspects of UHPE implementations of EPAs include (among others) consistency of assessment tools between sites, stakes of entrustment decisions and level of autonomy afforded to entry-level clinicians upon graduation.

Session 9D: Research Papers: Learning Experiences

9D1 (0666)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 16:20
Location of presentation: Hall 1, SEC

Operationalizing agentic engagement in medical education PBL groups

Alexandra Androni[1], Joke Fleer[2], Johanna Schönrock-Adema[3]

[1] University of Groningen, University Medical Center Groningen, LEARN, Groningen, The Netherlands [2] University of Groningen, University Medical Center Groningen, Department of Health Psychology,, Groningen, The Netherlands [3] University of Groningen, University Medical Center Groningen, Center for Education Development and Research in Health Professions, LEARN, Groningen, The Netherlands

Introduction

Student engagement is a useful perspective for educators seeking to understand how and why students react and learn in diverse learning activities. Until recently, the student engagement construct was conceptualized as being three-dimensional, containing a behavioural (implying students' effort and attention), a cognitive (students' sophisticated learning strategies) and an emotional (presence of interest/enthusiasm) dimension. This tri-fold conceptualization failed to represent the extent to which students contribute to, modify and enrich their learning. Such disparity between reactive and proactive learning prompted the addition of agentic engagement as a fourth component of student engagement (Reeve & Tseng, 2011). Agentic engagement is defined as the proactive, constructive and intentional contributions students make to the flow of instruction they receive in order to optimize their learning. Although agentic engagement was initially developed in secondary education, it also seems to be a relevant practice for benefitting optimally from problem-based learning (PBL) in higher education. In this study, we aimed to operationalize agentic engagement in higher medical education small PBL groups.

Methods

First, we developed a draft list composed agentic engagement acts that have been used in literature to operationalize agentic engagement in different educational levels. We complemented this list with relevant acts that we sourced from proactive behaviour characteristics, PBL practices and adult learning literature. We then performed exploratory observations to adapt the draft list of potential agentic engagement acts to our second-year pre-clinical medical student study group at the University of Groningen. To facilitate the operationalization process, we built an observation scheme following the guidelines of an existing observation reporting tool.

In the pre-clinical phase of the medical education programme, students meet twice a week in tutor group meetings to discuss patient-related complaints related to the week's theme. Using video recordings of seven different tutor groups (7 first and 7 second meetings in total), we analyzed which acts from the initial scheme were observed in our context and which additional, unique acts of agentic engagement could be identified in our higher education PBL context.

Results

We initially identified 10 distinct agentic engagement items that can be used to measure agentic engagement in small-group PBL teaching sessions. When tailored to our study population, only 8 acts were observed in our pre-clinical medical tutor groups. These were when a student: asks/answers clarifying questions, expresses expectations in line with the learning material, tells the teacher what they (dis)like, makes learning as interactive as possible, suggests co-operation with another student, creates alternative ways of going through the learning material, corrects the given content and enriches others' insights.

Further analysis showed that agentic engagement behaviours covered three main themes: (1) choosing the content to be studied (34.9%, 15 contributions), (2) complementary additions (46.5%, 20 contributions), and (3) correcting content shared by peers (18.6%, 8 contributions). In addition to the three main themes, we identified agentic engagement that involved both individual students (unilateral contributions, 48,.8%) and multiple students (transactional contributions, 51.2%). Apart from student-initiated agentic engagement (65.2% of all contributions), we also observed student agentic engagement as a result of tutors' encouragement to change the flow of the instruction (34.8% of all contributions).

Discussion And Conclusion

When observing behaviour in higher education PBL groups, we identified unique agentic engagement behaviours that have not previous been described in higher education literature and are distinctive to our medical education population (i.e., students correcting their peers, students suggesting co-operation and students creating alternative ways of going through the learning material). Such student-initiated behaviour supports the conceptualization of agentic engagement in PBL pre-clinical medical education being one where students create the content and steer the flow of instruction (most commonly without the help of their tutor); rather than merely contributing to the instruction they receive. Our study adds to the literature by operationalizing agentic engagement in a higher education PBL context. Gaining insight into how students exhibit agentic engagement during the learning process is important for teachers to adjust their instructional mode and support student agentic engagement more effectively.

References

Reeve, J., & Tseng, C.-M. (2011). Agency as a fourth aspect of students' engagement during learning activities. *Contemporary Educational Psychology, 36*(4), 257–267.

9D2 (1512)

Date of presentation: Tuesday 29th August
Time of session: 16:40 - 17:00
Location of presentation: Hall 1, SEC

A Critical Discourse Analysis of Death and Dying in Case-Based Learning (CBL): A Call for Ontological Fidelity

Anna MacLeod[1], Paula Cameron[1], Victoria Luong[1], Olga Kits[1], Sarah Burm[1], Simon Field[1], Stephen Miller[1], Wendy Stewart[2]

[1] *Dalhousie University, Halifax, Canada* [2] *Dalhousie University, New Brunswick, Canada*

Introduction

The cases at the heart of CBL are philosophical artefacts that reveal traditional positivist orientations of medicine through their centering scientific knowledge and objective fact. This positivist orientation, however, leads to an absence of the human experience of illness in many CBL cases.

CBL aims to allow for learning in context by representing aspects of real-life medical practice in controlled environments. Cases are, therefore, a form of simulation. Yet issues of fidelity, widely discussed in the broader simulation literature, have yet to enter discussions of case-informed learning. We propose the concept of *ontological fidelity* (MacLeod et al., 2022) to approach fidelity in cases, so that they might centre narrative and experiential elements of medicine.

Methods

We conducted a critical discourse analysis of death and dying in medical school, exploring how dying was discursively constructed in the formal, planned curriculum. We used two key methods:

1. Document Analysis: We developed a template to analyze 127 cases featuring the following guiding questions: Which elements of the patient's death were discursively constructed as *real*? Which (and whose) reality were centred in the case? Were there

essential elements of the death that made it feel real (or not)? Is there another way to tell the clinical story in case format? We followed CARDA guidelines for conducting and reporting document-based research in health professions education (Cleland et al. 2022).

2. Longitudinal Interviewing: We conducted semi-structured interviews with a cohort of 12 medical students, at regular intervals (2 times/year) throughout their undergraduate experience, yielding 69 transcribed interviews. Interviews focused on experiences of death and dying in their first two years of medical school, with a specific focus on how death was represented in cases.

Analysis: We collectively analyzed data using a critical discourse analysis approach. Specifically, we centered the concept of "ontological fidelity" as a theoretical orientation, attuning to how the format, content, and purpose of each case discursively reinscribed ideas about death and dying. We used ATLAS.ti to manage analysis.

Results

We identified five prevalent discursive constructions of death and dying in cases as: 1. A plot device—a way of moving the case forward to the autopsy phase; 2. Inevitable—the case title emphasizes death, or the case jumps decades to describe a patient death; 3. An end to a gradual decline—a slow decline in health with periods of remission and illness recurrence; 4. A cautionary tale—a biomedical focus on substance misuse ~~alcoholism~~ with few patient details; and 5. Epilogue—as the conclusion to a case, literally occurring in the last sentence and without elaboration.

Discussion And Conclusion

Cases discursively portrayed patient death in a dispassionate and sterile manner. Rarely did we hear from a patient in their own voice, asking questions, or expressing physical emotions. Despite our best efforts to write cases that lead to rich conversation and inspire deep thinking, cases often served primarily to impart information. Consequently, cases could be seen by students as a type of checklist—even those that portrayed complex experiences including death.

We noted the *format, content*, and *purpose* of each case influenced its ontological fidelity. The standard *format* of cases, with their prescribed order (learning objectives, short scenario, discussion questions) served to decontextualize information rather than centre experiences. Case *content* featured a two-dimensional patient who served mainly as a vehicle for relaying biomedical or clinical information. The *purpose* of a case, despite

its construction in the literature as a means of inspiring deep learning, seemed to be about imparting information. This undermined critical reflection and emotional engagement with death and dying.

The ontological foundations of medicine, reinforced through cases, implicitly taught students about what they need to concern themselves with, and what they could ignore. Examining discursive constructions of death in CBL cases enabled us to consider ontological fidelity: a crucial component of maintaining the humanness of the patient in cases.

References

Cleland, J., MacLeod, A., & Ellaway, R. H. (2022). CARDA: Guiding document analyses in health professions education research. Medical Education. Published online 29 October 2022 at https://doi.org/10.1111/medu.14964

MacLeod, A., Cameron, P., Luong, V., Kovacs, G., Patrick, L., Fredeen, M., Kits, O., & Tummons, J. (2022). Negotiating humanity: an ethnography of cadaver-based simulation. *Advances in Health Sciences Education*, 1-23.

9D3 (0108)

Date of presentation: Tuesday 29th August
Time of session: 17:00 - 17:20
Location of presentation: Hall 1, SEC

A lag-sequential analysis of teachers' and students' discourse moves in problem-based learning

Binbin Zheng[1], Qing He[2], Junru Lei[2]

[1] *Uniformed Services University of the Health Sciences, Bethesda, USA* [2] *The University of Hong Kong, Hong Kong, Hong Kong*

Introduction

Problem-based learning (PBL) has been widely adopted in medical schools as part of competency-based medical education. In line with the social-constructivist perspective, PBL supports collaborative knowledge construction, in which expertise is distributed among the tutor and all learners. For collaborative knowledge construction to occur, however, students need to take responsibility for collective knowledge advancement, engage in collaborative discussions focused on ill-structured problems, and applying their pre-existing knowledge to the set problem or task. Prior literature has addressed the critical role of discourse in PBL. However, the dynamics of discourse moves in time sequences during such learning remain underexplored. This study investigates discourse moves by PBL tutors and tutees to facilitate collaborative knowledge construction and uses sequential analysis to unpack the temporal dynamics of such moves during PBL knowledge construction.

Methods

This study was approved by the Human Research Ethics Committee of the university where it was conducted: a medical school in Hong Kong that has incorporated PBL into its undergraduate medical-education curriculum since 1997, with the aims of encouraging interdisciplinary enquiry and fostering lifelong-learning skills. Two PBL groups, each including one tutor and 11 students, were invited to participate in this study in January 2022. Both tutors and all the students gave written consent to be included in the study and videorecorded. The two 2-hour PBL tutorials were video-recorded and transcribed, with

notes about the participants' non-verbal behaviors including but not limited to body language and technology use. Descriptive statistics and visual representations were used to discern participation patterns as they evolved over time, and discourse analysis to identify specific types of teacher- and student-discourse moves within knowledge construction. Lastly, lag-sequential analysis using the program GSEQ was adopted to understand the sequential patterns of those discourse moves. In addition, a discourse-transition diagram was drawn to visually depict the discourse patterns of the tutorials as they evolved through time.

Results

The PBL tutors mainly used probing questions, explanation and clarification, compliments, encouragement, affirmation, and requests when facilitating PBL discussions. Within the questioning category, teachers used probing questions the most, often after the students made explanations, with the apparent aim of triggering more student thinking. Student talk could be summarized into three categories: lower-level thinking, higher-level thinking, and facilitation-oriented talk. Most student talk comprised in-depth clarification of their own opinions on specific topics, which was usually classed as lower-level thinking. In higher-level thinking, students were more likely to express ideas by drawing conclusions, making generalizations, making connections, citing outside information, making judgments about statements made by other students or the tutor, and testing or defending solutions.

Lag-sequential analysis revealed that discourse moves had the following four major paths. Teachers' questioning elicited both lower- and higher-level thinking from students; teachers' statements mediated between student thinking levels and teachers' questioning; there were relationships among teachers' social-related discourse, students' thinking modes, and teachers' statement; and there was a sequential relationship among teachers' statements, students' facilitation, teachers' process-related discourse, and students' silences.

Discussion And Conclusion

This study revealed the importance of using probing questions to facilitate students' knowledge construction as they proceed from lower-level to higher-level thinking. In addition, the finding confirmed the importance of social congruence in creating a positive

and open atmosphere in which students can freely express their ideas. Tutors' social talk – including compliments, encouragement, and affirmation, as well as non-verbal cues such as nodding – could enhance students' psychological safety, making them feel more

comfortable about taking risks, exposing their areas of weakness, and sharing their areas of expertise. Our study also suggested that, while silence is commonly perceived as a sign of non-participation, it could serve an important function in PBL, as students use silent time to recall previous information, digest new information, look for additional information, or generate new ideas. This study also provided methodological innnovations and practical implications in terms of what discourse moves should be used to facilitate collaborative knowledge construction.

References

1. Hmelo-Silver CE, Barrows HS. Facilitating Collaborative Knowledge Building. *Cogn Instr*. 2008;26(1):48-94. doi:10.1080/07370000701798495
2. Sun Z, Lin CH, Lv K, Song J. Knowledge-construction behaviors in a mobile learning environment: a lag-sequential analysis of group differences. *Educ Technol Res Dev*. 2021;69(2):533-551. doi:10.1007/s11423-021-09938-x

9D4 (1666)

Date of presentation: Tuesday 29th August
Time of session: 17:20 - 17:40
Location of presentation: Hall 1, SEC

The experiences of healthcare professionals caring for unvaccinated Covid-19 critically ill patients

Dominique Piquette[1], Candice Griffin[2], Phil Shin[3], Andrew Helmers[4], Christie Lee[5], Csilla Kalocsai[1], Wendy Ye[2]

[1] Sunnybrook Health Sciences Centre, Toronto, Canada [2] University of Toronto, Toronto, Canada [3] North York Hospital, Toronto, Canada [4] The Hospital for Sick Children, Toronto, Canada [5] Mount Sinai Hospital, Toronto, Canada

Introduction

The Covid-19 pandemic has placed immense pressure on healthcare systems and resulted in unprecedented challenges for practitioners. Operating with limited resources in understaffed environments, being redeployed to new areas of medicine, and striving to treat critically ill patients with respiratory failure has left many practitioners with burnout, compassion fatigue and moral distress.[1] Certainly, vaccines against Sars-CoV-2 introduced a sense of hope for an end to the pandemic for many clinicians, and while vaccination has been instrumental in reducing viral transmission, it has simultaneously been accompanied by public resistance against vaccination mandates. This resistance has subsequently placed additional pressure on frontline healthcare workers. Providers have faced new challenges providing care to unvaccinated patients with severe, yet potentially preventable, respiratory failure. This study explored the experiences of practicing and in-training clinicians caring for unvaccinated patients admitted with Covid-19 infections in the intensive care unit (ICU). Our ultimate goal was to gain insight into unique moral or ethical challenges faced by healthcare workers during the pandemic to help inform educational initiatives that focus on the professional navigation of similar situations and on healthcare wellbeing during future healthcare crises.

Methods

This constructivist grounded theory[2] study used semi-structured interviews to develop a theoretical framework for how healthcare workers experience and navigate the provision of care for severely ill unvaccinated patients with Covid-19. We used purposive and convenience sampling of nurses, physicians, fellows, residents, respiratory therapists, and allied health practitioners in the intensive care units at two academic and one large urban community hospitals in Toronto, Canada. Interviews were transcribed and coded, and data was analyzed using grounded theory methods[2]. Constant comparisons within/between individual interviews, and within/between institutions assisted in identifying predominant themes that informed the development of the overarching theoretical framework. Our research team consisted of seven co-investigators with expertise in qualitative methodology, moral distress in healthcare, medical education, and bioethics. Research meetings between team members were conducted regularly to analyze data, modify the semi-structured interview guide to explore emerging themes, and develop the theoretical framework. Reflexivity was employed at each stage of the project. Research Ethics Board approval was obtained through participating institutions.

Results

Twenty four interviews were conducted. Healthcare professionals' responses to unvaccinated critically ill patients evolved throughout the pandemic as the healthcare and societal contexts changed. Unanimously, respondents upheld a strict ethical responsibility to provide standard of care for all Covid-19 patients throughout the pandemic, regardless of vaccination status. To do so, participants had to manage their therapeutic relationships with their patients and families, their interactions with other individuals at work and at home, and the evolving societal responses to the pandemic. When caring for unvaccinated Covid-19 patients, clinicians reported managing their spontaneous emotional responses towards patients (evolving from frustation to sadness as the disease progressed) by using deliberate strategies to maintain positive therapeutic relationships (e.g., rationalizing patient's vaccination decision), which came at a personal cost. As healthcare professionals, participants also reported struggles managing relationships with non-patient unvaccinated persons at work and at home, which added to their daily burden. Finally, participants expressed frustration and anger towards movements of anti-vaxers that were predominantly showcased in media, and concerns that their reactions could lead to additional bias towards their patients and negative effects on their wellbeing. All respondents mentioned learning to prioritize

wellness and self-care during the pandemic, which meant, for some, stepping back from clinical responsibilities or leaving critical care altogether.

Discussion And Conclusion

ICU practitioners experienced a range of emotions providing care to unvaccinated Covid-19 patients, managed their own biases during patient and family interactions to preserve therapeutic relationships, navigated resistance towards vaccination, and have noted a shift in public appreciation towards healthcare workers during the pandemic. Despite these challenges, the perceived ethical and moral obligations of providers remained constant regardless of vaccination status. While coping with burnout, emotional exhaustion and fatigue, ICU providers proactively maintained adherence to the highest standard of care while navigating complex interactions with unvaccinated Covid-19 patients and their families.

References

1. Sheather J, Fidler H. Covid-19 has amplified moral distress in medicine. *BMJ*. 2021;372:n28.

2. Charmaz K. Constructing Grounded Theory. 2nd Ed. SAGE Publication. 2014; 416.

Session 9E: Doctoral Reports: Power

9E1 (1702)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 16:20
Location of presentation: Argyll II, Crowne Plaza

Out of the Shadows: A Qualitative Exploration of Shame in Medical Learners

Will Bynum[1], Lara Varpio[2], Pim Teunissen[3]

[1] *Duke University School of Medicine, Durham, USA* [2] *University of Pennsylvania Medical School, Philadelphia, USA* [3] *Maastricht University, Maastricht, The Netherlands*

Introduction

Shame is a self-conscious emotion that results from a negative evaluation of the global self and can induce significant suffering and emotional distress. Shame may be particularly salient during medical training, which is an inherently risk-laden endeavor as individuals put themselves on the line amid public, rigorous, and high-stakes learning. The psychology and medical education literatures point to myriad ways that shame may function in medical education, including maladaptive response to medical error, impaired learner well-being, declines in learner empathy, and mistreatment and incivility in medical learning environments. However, despite its ubiquitous and potentially destructive nature, little is known about the experience of shame in medical learners. Thus, this program of research—conducted through four peer reviewed research studies—asks: *How do medical learners experience shame across the continuum of medical education?*

Methods

We conducted this research program in residents (study 1), medical students (studies 2 and 3), and pre-medical students (study 4) from institutions in the United States. We used Tracy and Robins's Theory of Self-Conscious Emotion as the theoretical framework. In each study, we collected data in a single session with three parts: an elicitation technique about an experience of shame (e.g., a written narrative or rich picture), a 60-minute semi-structured interview, and a debriefing session, and we enrolled a total of forty participants across the four studies. We utilized hermeneutic phenomenology for data analysis. Hermeneutic phenomenology is a qualitative methodology from the interpretive paradigm that seeks to communicate the nature and meaning of a phenomenon by elucidating the

structures of lived experience that give it shape. It requires researchers to bring their own experiences of the phenomenon into data collection and analysis, and it takes into consideration not just the nature of the phenomenon but also how the environment and context influence that nature. We utilized the six steps of hermeneutic analysis described by Ajjawi and Higgs in each study in this research program.

Results

Shame in learners across the continuum of medical education could range from a fleeting emotion to a "sentinel emotional event" that caused profound emotional and psychological distress, isolation, and impaired empathy, among other negative effects. Shame was triggered by events related to patient care (e.g., medical error), learning (e.g., struggling to present a patient), assessment (e.g., low standardized test scores), and interpersonal interactions (e.g., mistreatment by a supervisor), and it was fueled by contributing factors such as perfectionism, comparisons to others, underrepresentation, and lack of psychological safety. Performance-based self-esteem was a particularly conspicuous contributing factor whose origins were found in early education and whose effects projected well into residency training. In considering the relationships among its phenomenological elements, we came to understand shame as a destabilizing emotional state that, in the presence of powerful ideological forces, challenges self-concept, fuels identity negotiation, and expends identity work in learners across the continuum of medical education.

Discussion And Conclusion

Learning medicine is a risk-laden endeavor, and, as this program of research suggests, it is also a shame-laden endeavor. This research program both examined shame as a phenomenon and utilized shame as a window to explore complex identity processes in medical learners. In shining a light on its hidden presence, this research highlights phenomenological structures of shame that will aid in greater recognition of—and constructive engagement with—this emotion during medical learning. In addition to equipping students, educators, and institutional leaders with information to advance shame resilience in medical education, this research program emphasizes the central role of self-concept in the professional development of medical learners. Self-concept comprises an individual's identities and self-esteem, the latter of which is underemphasized in current conceptualizations of professional identity formation. Building upon these conceptualizations and incorporating data from this research program, we conclude by presenting a novel theory of self-concept formation that incorporates personal and professional identity formation, self-esteem and its contingencies, and the environmental factors in which these formation processes occur.

References

Ajjawi R, Higgs J. Using hermeneutic phenomenology to investigate how experienced practioners learn to communicate clinical reasoning. The Qualitative Report 2007;12(4):612-638.

Tracy JL, Robins RW. Putting the self into self-conscious emotions: A theoretical model. Psychological Inquiry. 2004;15:103-125.

9E2 (1229)

Date of presentation: Tuesday 29th August
Time of session: 16:20 - 16:40
Location of presentation: Argyll II, Crowne Plaza

Dying to Stay Alive in Residency and Beyond: A Critical Discourse Analysis of 'Burnout'

Rabia Khan[1]

[1] *The Wilson Centre, University of Toronto, Toronto, Canada*

Introduction

In 1974, Dr. Herbert Freudenberger 'coined' the term 'burnout'. With the creation of the Maslach Burnout Inventory (MBI) in 1984, 'burnout' went from a term used in pop psychology to a highly studied phenomenon of academic interest in the helping professions, including medicine[1]. Exponential growth in the study of 'burnout', culminated in its adoption into the International Classification of Diseases (ICD)-11 in 2022. Yet, despite awareness of this issue, and the many efforts aimed at addressing 'burnout' in physicians, in many studies the rates of 'burnout' continues to rise[2]. Why does 'burnout' persist in medicine despite efforts to ameliorate it? The purpose of this thesis was to identify different discourses that legitimate or function to mobilize 'burnout' in post-graduate medical education (PGME).

Methods

In this doctoral dissertation, a Foucauldian discourse analysis was used to investigate 'burnout', during PGME, between 1974 to 2019. The archive from which the discourses were constructed included 10 review articles, over 500 academic articles, numerous policy documents, autobiographies, videos, documentaries, materials from conferences and discussions in forums including Reddit. Each discourse was analyzed for associated images, statements of truth, signs and signifiers, roles that individuals play within the discourse, and different institutions that gained visibility as a result.

Results

The majority of articles investigating PGME were: (1) published after 1998, (2) from the United States, (3) quantitative in nature, and (4) intervention studies. This thesis identified

three discourses of 'burnout': burnout-as-illness, burnout-as-occupational stress and burnout-as-existentialism. In burnout-as-illness, Burn-Out is seen as fatigue or frustration brought about by devotion to a cause that failed to produce the expected result. As such, Burn-Out is seen as a problem that any individual can experience, and self-assessment is seen as a means to determine if the inidividual is 'burned out'. In burnout-as-occupational stress, the ICD's definition of the construct is emphasized, thereby limiting 'burnout' to the occupational space only and in rhetoric requiring a health systems approach to address 'burnout'. However, many interventions in this discourse are aimed at individuals, through self-care and resilience as the primary solutions. Finally, burnout-as-existentialism views burnout as a failure to find meaning and as loss of 'the self', where this loss is not considered negative, but rather part of making meaning. The acknowledgement of 'burnout' in this construct sees 'burnout' not as an end point, but a beginning for reconnection, rebirth and renewal.

Discussion And Conclusion

The analysis of these discourses revealed socio-historical dimensions of their occurrence, which included an undefined medicalization of the term 'burnout' and a neo-liberal capitalism that is depoliticizing health at the expense of wellness. The notable lack of qualitative studies in 'burnout' in PGME, has created a clear epistemic injustice in 'burnout' research. Furthermore, the ICD's definition of 'burnout' draws directly from the MBI, thus creating a construct that is being universalized, but very much rooted in the North American image of 'burnout'. Finally, in the artistic expressions of 'burnout', there is a clear difference in description of the experiences of 'burnout' as a crisis of meaning making which is based on the competency of professionalism as the core to individual identity in medicine.

Conclusion: Thus, 'burnout' persists despite efforts to ameliorate it because at present medicine does not understand the problem of 'burnout' well enough. In its current form, there is a depoliticization of the issues that contribute to the existence of 'burnout', epistemic injustice in 'burnout' research, and the subsuming of all of an individual's identity into a professional identity, such that one cannot make meaning between what it means to be human, a physician and more importantly both.

References

1. Schaufeli, W., & Enzmann, D. (1998). *the burnout companion to study & practice a critical analysis.* Padstow, UK: Taylor & Francis Ltd.

2. Verma, S. (2018). *Report on Mental Health Activities: focus on physician health.* The Association of Faculties of Medicine of Canada.

9E3 (0439)

Date of presentation: Tuesday 29th August
Time of session: 16:40 - 17:00
Location of presentation: Argyll II, Crowne Plaza

Empowerment of Residents for Intraprofessional Collaboration: the Role of Context, Culture and Power Dynamics

Natasja Looman[1]

[1] *Radboud university medical center, Nijmegen, The Netherlands*

Introduction

The growing number of patients with multimorbidity and its associated complexity is leading to a shift in demands on the healthcare system as these patients may be treated by different physicians both in the hospital setting and in the primary-care setting. This requires physicians not only to be proficient in their own professional work but also to have knowledge of the roles and expertise of other physicians and how to collaborate with them. The need for learning intraprofessional collaboration (intraPC learning) among residents is, therefore, high. Worldwide, primary care residents (PC-residents) undertake hospital placements where they work in proximity of medical specialist residents (MS-residents). IntraPC can be formally taught during these hospital placements. Guidelines on how to realize and operationalize these ambitions are, however, lacking as evidence of the characteristics and the process of designing and developing intraprofessional learning activities, is not available. The overall goal of this research project was to illuminate current intraprofessional learning during hospital placements and to uncover opportunities for stimulating intraPC learning by residents. The three aims of this thesis were (i) To gain insight into the potential of hospital placements for intraPC learning. (ii) To enhance our understanding of context, culture and power dynamics on hospital wards. (iii) To develop evidence-based recommendations for designing postgraduate hospital placements and design-principles for intraPC learning among medical residents during hospital placements and to develop intraprofessional learning activities.

Methods

A design-based research approach is conducted to, first, formulate theoretical design-principles, and, second, to enrich and align these design-principles with practice contexts in close collaboration among researchers and stakeholders with different specialties (1). Within design-based research, three phases can be distinguished: (I) a preliminary phase, (II) a prototyping phase and (III) an assessment phase(1). I) We conducted a scoping

review to explore the factors that are relevant for the learning of postgraduate medical residents during hospital placements. A non-participatory ethnographic research was conducted to investigate facilitators and barriers to intraPC learning between residents at six hospital departments. We conducted observations and in-depth interviews with the observed PC and MS-residents and supervisors. A template analysis method was used to analyze the interviews, and subsequently, a critical theory paradigm and discourse analysis were employed to explore power dynamics in intraPC learning. II) Thereafter, the research group developed concepts of design-principles. In multiple sessions with various stakeholders, these principles were subsequently enriched and refined into a final set of validated theory-driven and context-sensitive design principles. III) In work-conferences prototypes of learning activities were developed based on the design-principles(2).

Results

This project resulted in a final set of twelve theory-driven and practice-informed design-principles for intraprofessional learning among medical residents, categorized into three clusters: 1) Culture: building collaborative relations based on equity in a psychologically safe context where patterns or feelings of power dynamics between primary care and medical specialty physicians can be discussed; 2) Connecting Contexts: connecting and aligning primary and specialty care by making residents and supervisors mutually share and understand each other's work contexts and activities; and 3) Making the Implicit Explicit: consciously addressing intraPC in learning objectives, assessments and during work activities by having supervising teams act as role models demonstrating intraPC and continuously pursuing improvement in intraPC to make intraPC explicit (2). The design of intraprofessional learning among residents is ideally a deliberate process in which a distinct focus on culture is a prerequisite to facilitate intraPC learning

Discussion And Conclusion

We found that as hospital placements are very rich in opportunities for intraPC learning between PC and MS-residents. Learning during hospital placements, however, will be more advanced if attention is paid to the relevance, connection and transfer of the acquired knowledge to the residents' own or future specialty contexts. To take advantage of the abundant opportunities for mutually beneficial intraPC learning, adjustments in the design of hospital hospital placements are needed. Founded on our design-based research, twelve design-principles have been developed, categorized into three clusters: Culture; Connecting Contexts; and Making the Implicit Explicit(2).

References

1. Dolmans DH, Tigelaar D. Building bridges between theory and practice in medical education using a design-based research approach: AMEE Guide No. 60. Medical teacher. 2012;34(1):1-10.

2. Looman N. Empowerment of Residents for Intraprofessional Collaboration: the Role of Context, Culture and Power Dynamics [Doctorate thesis]. Nijmegen: Radboud University Nijmegen; 2022.

Session 9F: AMEE Fringe 1

9F1 (5101)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 16:20
Location of presentation: Argyll III, Crowne Plaza

Advances in Medical Education? A perspective on the pandemic

Claire Hemingway[1]

[1] *Imperial College School of Medicine, London, UK*

The COVID19 pandemic provided new challenge for medical educators. This spoken word piece explores the impact of the pandemic on undergraduate medical education, doctors graduating early in practice and begs the question - did COVID19 create disruption or innovation in medical practice?

This presentation is a spoken word delivered by a junior doctor who was part of the "2020 cohort" of early graduating doctors into the pandemic. The performance is 4 minutes long and will be spoken over the video recording of the words. The aim of this surprising and stimulating piece is to provide a thought provoking and fresh way of looking at the impact of the COVID pandemic on education.

9F2 (5608)

Date of presentation: Tuesday 29th August
Time of session: 16:20 - 16:40
Location of presentation: Argyll III, Crowne Plaza

Connection, communication and miscommunication. Does it make sense?

Robert Hage[1]

[1] *St. George's University, True Blue, St. George's, Grenada*

Nobody will deny that connecting and communicating are key elements of life, especially in education and the workplace. There are many existing devices that assist in retrieving information from internet sources and sorting and storing data. Software packages and applications (apps) are available for a multitude of functions and are coupled with hardware aimed at easing tasks, sharing information, and/or making virtual meetings possible.

However, the reality is that connecting and communicating is a challenge. Connection starts with different wall outlets and charging cables that differ, further complicated by varying hardware and software. From the perspective of plain communication among healthcare professionals, the expectation would be that all persons in healthcare use a language to facilitate an effortless, and efficient exchange of information. This could not be farther from the truth. In a playful way, disconnection and miscommunication are demonstrated to encourage everyone, from now on, to engage in meaningful ways of connecting and communicating.

9F3 (4654)

Date of presentation: Tuesday 29th August
Time of session: 16:40 - 17:00
Location of presentation: Argyll III, Crowne Plaza

Long-Term Art Workshops at Medical School and Their Impact on Enhancing Clinical Students' Emotional Wellbeing

Özge Emre[1], Mehmet Ali Gülpınar[1]

[1] *Marmara University School of Medicine, Istanbul, Turkey*

I would like to take you on a journey within my experience with an ongoing series of art workshops designed and held for medical students.

Studies have shown that art activities within medical humanities can positively impact medical students' emotional well-being by fostering mindfulness, empathy, and creativity. As artistic encounters are known to trigger seminal developments both individually and socially, relevant activities of several kinds like museum visits, workshops and electives have been in curricula at medical schools for a few decades. However, extended art education is a rare experience in medical training.

This project is significant because medical students in their clinical training often face overwhelming emotional challenges in complex environments. Relatedly, the participants in this study were expected to make progress in terms of addressing their lives and feelings in clinical settings in depth, making sense of their own feelings, improving their reflective and narrative competence and establishing a professional identity.

Our journey highlights the results of the year-long Art Workshops project that involves 23 clinical period medical students. These volunteers were given painting and story creating classes by experts for 7 months, a period which was backed up with reflection sessions and one on one interviews with each participant. The art workshops project then was crowned with an exhibition of paintings and stories created by the participants. The exhibition took place in one of the most established state hospitals of the country and hosted medical students, faculty, health care staff and patients. The huge interest of the visitors in the exhibition as well as the accounts of the participants of the project illustrate their appreciation of such a project and the obvious need for artistic activities in medical schools.

This interactive and narratively flowing presentation will consist of excerpts from stories, poems written by the participant students as well as their paintings and drawings. Participants' reflective accounts that accompany the artistic products will also be shared.

9F4 (6442)

Date of presentation: Tuesday 29th August
Time of session: 17:00 - 17:20
Location of presentation: Argyll III, Crowne Plaza

Health Professions Education: The Musical! The Sequel!

Shelley Ross[1], Lyn Sonnenberg[1], Keith W Wilson[2], Roshan Abraham[1]

[1] *University of Alberta, Edmonton, Canada* [2] *Dalhousie University, Halifax, Canada*

Competency-based medical education (CBME) has taken hold in health professions education around the world. With all of the change as programs are transformed to CBME, many educators and education scholars feel a little lost as they try to keep up. Never fear – Health Professions Education: The Musical! The Sequel! is here to help, just like we did at AMEE 2019 with the original musical. This time, we will take you on a musical journey through matters old and new that are critical to health professions education in the CBME era: decision-making, helping learners who are running into trouble or failing to progress, figuring out the best ways to assess competence, teaching during a pandemic, doing direct observation, and the best ways to give feedback. Back in 1994, Dr. Wanda Wallace demonstrated that music and melody can help with learning and recall. We take advantage of that phenomenon to use familiar melodies from popular musicals to share useful information. Can't remember Miller's Pyramid? You will when you hear about it to the tune of "Let it Go!" The choreography may not be helpful to your learning, but seeing the words so that you can follow along will activate neural pathways critical to forming memories that are easily recalled. Follow the bouncing ball, sing along to the words on the screen, engage your inner Dancing Queen, and hopefully walk away with a new perspective, or some new ideas about how to integrate workplace-based assessments into a busy clinical day. Our goal is to educate our audience while they have fun. It's not just teaching – it is medutainment. The advice and information that we will share through our lyrics is all based on current research, so you can be assured that the song lyrics that get stuck in your head are useful and evidence-informed.

Session 9G: Competency Based Medical Education

9G1 (6076)

Date of Presentation: Tuesday 29th August
Time of presentation: 1600 - 1615
Location: Castle I, Crowne Plaza

Assessing correlations between competency ratings and global rating scores across core clinical clerkships at University of Michigan Medical School

Korynne DeCloux1, Greg Hoy2, Seetha Monrad2, Gifty Kwakye2, Joel Heidelbaugh2, Jocelyn Schiller2, Cyril Grum2, Elizabeth Holman2, Maya Hammoud2

[1]Yale University School of Medicine, New Haven, USA; [2]University of Michigan Medical School, Ann Arbor/Michigan, USA

Background

Assessing competency development across clerkships is a major challenge to implementing CBME within UME. Different learning environments and specialties may emphasize certain competencies over others, regardless of desired assessment frameworks and tool design, and/or faculty development initiatives. To optimally implement CBME, identifying most-valued and/or best-assessed clerkship competencies is important. We speculated that different clerkships variably-assessed certain competencies. This study investigated how competency assessments correlated with assessment-specific global rating scores (GRS) across and within core clinical clerkships at University of Michigan Medical School.

Summary of Work

Clinical assessment forms assess 9 competencies within 6 UMMS competency domains (5 ACGME + 1 institutional) using a 3-point Likert scale, and solicit a 9-point GRS. Completed forms from 524 students who concluded seven core clinical clerkships from 2018-2021 were analyzed (n=25,995 assessments) using linear mixed models. GRS was regressed, per assessment form across all clerkships on 1) average competency score

and 2) nine individual competency scores, and on 3) interaction between nine individual competency scores and individual clerkships.

Summary of Results

Average competency score was positively associated with GRS across all clerkships (β = 2.41, $p < 0.0001$, $r2 = 0.49$). Notably, differences in relative strength of association between individual competencies and GRS existed. Across all clerkships, Medical Knowledge/knowledge of basic and clinical sciences (MK-SM) was most strongly associated with increases in GRS ($\beta = 0.4162$), whereas Professionalism/responsibility and accountability to patients, co-workers, and profession (PR-RA) was most weakly associated ($\beta = 0.1307$). Across clerkships, specific competencies were variably-associated with GRS. Strongest associations with GRS existed between MK-SM in Internal Medicine and Surgery, Practice-Based Learning and Improvement/Self-Directed Learning (PBLI-SM) in Surgery and Obstetrics and Gynecology, and Communication/patients and families (C-PF) in Pediatrics and Psychiatry.

Discussion and Conclusion

Findings demonstrate competencies' unequal contribution to GRS, with some (MK-SM) having greater contributions regardless of clerkship. Some competencies vary significantly in their correlation to GRS between clerkships, suggesting they may be valued differently within clerkships. Patient Care competencies are similarly correlated across all clerkships, suggesting these may be universally-important.

Take-home Message

These results illustrate how various specialties may value competencies differently which can aid CBME implementation by providing students with clear expectations regarding competency assessment in different clerkships.

9G2 (4317)

Date of Presentation: Tuesday 29th August
Time of presentation: 1615 - 1630
Location: Castle I, Crowne Plaza

Developing Entrustable Professional Activities in Occupational Therapy-Same or Different from Medicine?

Chung-Pei Fu1, Ching-Kai Huang2, Nung-Chen Kuo3, Yi-Chiun Yang4, Yi-Ju Chen5, Hsin-Yu Chi6, Chia-Yi Lee7, Wang-Ying Chang8, Yu-Lan Chen9, Tzu-Hung Liu10

[1]Department of Occupational Therapy, College of Medicine, Fu Jen Catholic University, New Taipei City, Taiwan; [2]Occupational Therapy, Department of Rehabilitation, Chang-Gung Medical Foundation Linkuo Chang-Gung Memorial Hospital, Linkuo, Taiwan; [3]Department of Occupational Therapy, Taoyuan General Hospital, Ministry of Health and Welfare, Taoyuan, Taiwan; [4]Department of Rehabilitation, Lotung Poh-Ai Hospital, Yilan, Taiwan; [5]Department of Rehabilitation, Kaohsung Chang Gung Memorial Hospital, Kaohsiung, Taiwan; [6]Department of Rehabilitation, Sijhih Cathay General Hospital, New Taipei City, Taiwan; [7]Department of Rehabilitation, Cathay General Hospital, Taipei, Taiwan; [8]Department of Rehabilitation, Taipei Hospital, Ministry of Health and Welfare, New Taipei City, Taiwan; [9]Department of Physical Medicine and Rehabilitation, Taipei Veterans General Hospital, Taipei, Taiwan; [10]Department of Family Medicine, Taipei Tzu Chi Hospital, New Taipei City, Taiwan

Background

Competency-based medical education (CBME) has become the trend in medical education in recent years. Entrustable professional activities (EPAs)-based assessment is one of the most widely and easily used strategies in evaluating the learning outcomes of the CBME. However, the core competencies in occupational therapy differ from those in medicine. Moreover, the EPAs in occupational therapy have not been developed. Therefore, the purpose of this study was to establish EPAs in occupational therapy and examine their quality and structure.

Summary of Work

This study contained two stages: the first was to develop EPAs in occupational therapy, and the second was to examine the quality and structure of 6 EPAs. In the first stage, 6 topics of the EPAs in occupational therapy were identified in the expert meetings by using the nominal group technique and survey questionnaires sent to 131 teaching hospitals in Taiwan. Each EPA description was written by senior occupational therapy clinical teachers from 2 teaching hospitals and revised by an expert committee composed of 24 occupational therapy clinical teachers and 2 occupational therapy university teachers. In the second stage, 16 committee members and 3 external experts watched the online training module of the EQual rubric evaluation and then rated the 6 EPAs using the EQual rubric.

Summary of Results

The 6 EPAs developed in occupational therapy included: EPA1, Performing evaluations in occupational therapy; EPA2, Performing evidence-based interventions in occupational therapy; EPA3, Providing education and consultation in occupational therapy; EPA4, Writing occupational therapy medical records; EPA5, Engaging in transdisciplinary teamwork in healthcare; EPA6, Management of assisting devices/ splints. The average EQual scores of 6 EPAs ranged from 4.21 to 4.68, higher than the cut-off point of 4.07. Considering the 3 domains of the EQual rubric, only the “discrete units of work” domain score of EPA2 (4.11), EPA3 (3.90), and EPA5 (3.99) was lower than the cut-off point of this domain (4.17).

Discussion and Conclusion

This study provides evidence that the 6 EPAs were well-constructed and aligned with the EPA constructs. They represent a promising initial framework of EPAs for occupational therapy education.

Take-home Message

A national EPA framework with 6 EPAs has been developed for occupational therapy education in Taiwan.

9G3 (4602)

Date of Presentation: Tuesday 29th August
Time of presentation: 1630 - 1645
Location: Castle I, Crowne Plaza

Comparison of Pass and Fail decisions by Conventional and Competency-based assessment Models in Medicine Clerkship

Dr Pankaj Lamba1, Venkatramana Manda1

[1]*Gulf Medical University, Ajman, The United Arab Emirates*

Background

There has been a shift to competency-based medical education and assessments. Our MBBS program is aligned with ACGME competencies. We use various assessment tools during clerkship. Traditionally, we averaged scores from the various constructs in these tools and made a pass decision if the student achieved a predetermined score. We felt that averaging scores could lead to poor performance in one domain being compensated by good performance in another, so we wished to compare our Pass/Fail decisions using a competency-based approach with the traditional approach.

Summary of Work

The 4th-year MBBS students in Medicine Clerkship were included in the study. We aligned the constructs of our assessment tools to our competency domains and decided the minimum expected performance level. The scores obtained by students in the competency domains were summated to obtain an overview of their performance.

A pass/fail decision was based on the student achieving an acceptable performance level. Students who met the minimum expected performance level in all competencies were declared passed, and students not meeting the minimum acceptable level were declared failed.

Summary of Results

A total of 77 students participated in the study. 97% of the students met performance requirements in patient and population care, 52% in knowledge for practice, 97% in

Interpersonal and communication skills, 100% in Evidence-based medicine and lifelong learning, and Ethics and Professionalism domains. Using conventional criteria, 54 students (70%) passed, and 23 (30%) failed. Using competency criteria, 40 (51%) passed, and 37 (49%) failed. This showed that 14 additional students had failed as they did not meet the knowledge for the practice domain, the scores of which were compensated by better performance in other domains.

Discussion and Conclusion

The conventional method of averaging scores across constructs resulted in some students passing clerkship despite lower performance in the knowledge due to compensation by other constructs.

The competency method ensures that the student meets the required level of performance in all domains and provides us with better information for making high-stakes decisions.

Take-home Message

Medical schools should align their assessment tools with their program competencies and adopt a competency-based assessment approach to make high-stakes pass-fail decisions.

9G4 (0963)

Date of Presentation: Tuesday 29th August
Time of presentation: 1645 - 1700
Location: Castle I, Crowne Plaza

Practical Challenges for Competency-based Medical Education Implementation in Cambodia

Sengkhoun Lim1, Sambath Cheab 1

[1]*University of Health Sciences, Phnom Penh, Cambodia*

Background

Competency-based medical education (CBME) has gained momentum as the premier curricular model worldwide. Moving toward a competency-based medical curriculum comes with implementation challenges. Resource constraints may exacerbate these inherent challenges. Contextualization plays a crucial role in curricular change. Adopting the CBME model, originating from the Western world, requires the acceptance of both instructional design and social organization. CBME implementation efforts have been ongoing in Cambodia for almost a decade now. However, significant barriers persist, and progress is limited. This study aims to explore practical challenges of CBME implementation in a resource-limited, non-Western context.

Summary of Work

The study used a qualitative case study design. Information was collected through document reviews and semi-structured interviews. First, grey literature, public documents, strategic plans, project outputs, and pertinent reports were examined. Second, 13 participants were interviewed: 10 faculty members from all five medical schools and three international technical consultants in Cambodia. Data were analyzed using inductive and thematic analysis.

Summary of Results

The study identified 12 themes and numerous sub-themes. Several issues were directly related to the curriculum, including conceptual understanding, the national curriculum standard, clinical training, and assessment. Challenges in stakeholder engagement,

resources, teachers, and students affected the process of implementing curricular change. Contextual factors also hampered CBME, such as policy, culture and organization, accreditation, and leadership.

Discussion and Conclusion

Study results reveal interrelated factors that can facilitate or hinder the implementation of CBME. Some of the challenges faced are similar across countries, while others are specific to Cambodia, including pragmatic approaches to CBME adoption, conceptual misconception, the prescriptive national curriculum, resource constraints, and contextual barriers. Relevant stakeholders must find collaborative strategies to overcome these challenges, turn them into opportunities, and learn from successful examples.

Take-home Message

Pre-service medical education reform toward CBME is an upstream strategic intervention to improve health outcomes by producing doctors that are compentent and relevant to the current and future needs of the population. Cultural and contextual factors must be appropriately considered for the implementation of CBME, particularly in a resource-limited, non-Western context.

9G5 (4273)

Date of Presentation: Tuesday 29th August
Time of presentation: 1700 - 1715
Location: Castle I, Crowne Plaza

A UME Coaching Program with Guided Reflection on CBME Dashboards Promotes Self-Regulated Learning

Delphine Taylor1

[1]*Columbia University Vagelos College of Physicians and Surgeons, New York, USA*

Background

As competency-based health professions education programs increase their emphasis on developing self-regulated, adaptive learners, there is an emergent need to examine factors within the learning environment that support life-long learning. Longitudinal coaching is one strategy to provide students the opportunity to engage in meaningful interactions and reflections with others to support learning. However, there is little information on how students' guided reflection on assessment data supports adaptive learning and growth.

Summary of Work

We launched the coaching program at the Vagelos College of Physicians in 2016 as an AAMC Core Entrustable Professional Activities (EPA) for Entering Residency Pilot school. Coaches meet with students individually 2-3 times a year. Each meeting includes debriefing a narrative medicine informed professional identity portfolio reflection and a joint review of learner assessment dashboards. In preparation for their meetings, students reflect on surprises, patterns, and strong emotional responses to the data, and how this impacts their learning moving forward.

Summary of Results

Since the launch of the program, 26 coaches have worked with 700 students. 96% of students were “satisfied” or “very satisfied” with the program. Strengths include regular meetings with a faculty member who knows the student well and whom they trust, and the encouragement provided while reviewing evaluation data together. Qualitative

analysis of the students' reflections on their dashboards reveals two primary themes: (i) an appreciation for recognition of their efforts to improve and (ii) a desire to continue to develop clinical skills and professional behaviors.

Discussion and Conclusion

We have found that a coaching program anchored in narrative medicine, utilizing CBME dashboards, with reflection guided by trusted faculty members, supports self-regulated learners toward becoming competent physicians-to-be. Evidence that this program encourages adaptive learning exists in the students' reflections themselves. As we increase competency-based data in their portfolios, such as workplace-based assessments, we hope to identify the types of feedback students find most useful so that they may thrive in an evolving competency-based landscape.

Take-home Message

A coaching program anchored in narrative medicine and utilizing CBME dashboards, with reflection guided by trusted faculty members, supports self-regulated learners toward becoming competent physicians-to-be.

Session 9H: Teaching and Facilitating Learning: Near Peer Teaching and Learning

9H1 (2542)

Date of Presentation: Tuesday 29th August
Time of presentation: 1600 - 1615
Location: Castle II, Crowne Plaza

Peer-led versus conventional teacher-led methodological research education sessions; an initiative to improve medical education research teaching

Maria Anna Bantounou1, Niraj Kumar2

[1]School of Medicine, University of Aberdeen, Aberdeen, UK; [2]National Medical Research Association (NMRA), London, UK

Background

To enhance doctors' engagement with research, the National Medical Research Association (NMRA) developed a research teaching series, delivering peer-led (PL) sessions by medical students and conventional teacher-led (CL) sessions by licenced physicians/lecturers. We assessed the effectiveness of the series and compared the PL and CL approaches.

Summary of Work

A thirteen-session online research education series was delivered virtually via Zoom weekly either PL or CL. Feedback was provided by participants on completion of every session using a 10-point Likert scale assessing their knowledge pre- and post-training.

Summary of Results

87 participants were included generating 782 feedback forms, 367 (47.1%) for PL and 412 for CL sessions. The median knowledge scores significantly increased following each session (p-value<0.05) independent of teaching approach. An overall improvement in the

median knowledge score from all sessions from 5/10 to 8/10 was reported. There was no significant difference between knowledge gained from the CL or PL teaching.

Discussion and Conclusion

To the authors knowledge this is the first study to show that didactic PL sessions on key research methodological topics were as effective as CL. We hope that this will empower student-led bodies to improve existing research training in conjunction with medical student curriculum.

Take-home Message

- Medical students that participated in the study were found to have limited prior research experience
- An extracurricular research teaching series significantly improved medical students' knowledge on key methodological research topics
- Didactic research peer-led sessions were as effective as sessions delivered by licenced physicians/lecturers

9H2 (5854)

Date of Presentation: Tuesday 29th August
Time of presentation: 1615 - 1630
Location: Castle II, Crowne Plaza

Can a Clinical Skills Learning Zone, as part of the Flipped Classroom Model, aid skill development and progression?

Helen Box1, Tom Heathcote1

[1]*University Of Liverpool, Liverpool, UK*

Background

This study explored whether a dedicated Learning Zone for clinical skills could enhance learning amongst undergraduate medical students to effectively aid skill development and progression.

Following an initial literature review of best practice, the Clinical Skills Flipped Classroom (FC) model was designed, incorporating components of pre-class and a classroom phases, with the addition of the "Learning Zone" (LZ). The LZ is a student-led learning space, facilitating regular continuous practice of clinical skills such as histories, examinations and procedures.

This study aimed to establish if the LZ enhances students' learning and to explore whether the LZ was an effective model for skill development.

Summary of Work

An instrumental case study was used, with data being collected through focus groups. The views of Undergraduate Medical Students who had experience of using the LZ through the FC model were sought to ascertain if the LZ could aid skill development and progression

Summary of Results

Four key themes were identified. Each was identified as essential by the students to their learning in the LZ. These themes were: (i) personalised flexible learning, providing the

learner with greater choice (1) (ii) student-centred model, student is active in the learning process (2) (iii) accessibility, equal opportunities and choice (3) and (iv) deep learning, high order cognitive thinking (1).

Discussion and Conclusion

The FC and LZ methodologies operate within the same pedagogic paradigm. Students identified an enhancement in clinical skills development and progression through practise outside the classroom. With use of the LZ strengthening the FC model within core teaching.

Take-home Message

A student led LZ aide's skills development and progression through peer learning (4) and deliberate practice (5) and strengthens the FC model for clinical skills.

9H3 (5464)

Date of Presentation: Tuesday 29th August
Time of presentation: 1630 - 1645
Location: Castle II, Crowne Plaza

The impact of a near-peer OSCE preparation programme for fourth year medical students

Callum Eley[1]

[1]*University Hospitals of Derby and Burton NHS Foundation Trust, Derby, UK*

Background

Objective structured clinical examinations (OSCE) are simulated in a high pressure environment that scrutinises both knowledge and clinical skills. The aim of this scheme was to simulate the pressure of an OSCE to adequately prepare fourth year medical students by developing their confidence when approaching OSCE examinations.

Summary of Work

The formative OSCE programme ran for eight weeks, consisting of once-weekly two hour teaching sessions involving simulated OSCE stations, finishing with a mock OSCE in the final week. Sessions were supported by final year peer mentor medical students, each responsible for two mentees. Mentors and mentees were all members of the Nottingham Medics Rugby Club. Likert scores and free-text feedback were collected pre- and post-programme. Likert scores ranged between one and ten.

Summary of Results

11 fourth year students enrolled in the formative OSCE development programme.

Mean pre-programme confidence for OSCE completion was 4.8 (σ=1.68).

Pre-programme qualitative feedback demonstrated that students were least confident with management plans and most confident in history taking, physical examinations, communication and rapport-building.

Mean post-programme student confidence for OSCE completion was 8.5 (σ=1.37).

Post-programme qualitative feedback demonstrated students felt that skills including time management, explanation and presentation skills, structuring consultations and creating management plans improved the most.

Students felt physical examinations and time management could have been focused on more.

Discussion and Conclusion

The programme achieved its main aim of making students feel more confident when approaching OSCE stations due to the high-fidelity of the programme.

As mentors, it was easier to provide good quality feedback as a near-peer than perhaps it would be for a consultant.

We are running the programme again this year, with more emphasis on improving time management and practising physical examination, areas which the students felt could have had more focus.

Take-home Message

High-fidelity simulations improve student confidence in preparation for OSCEs.

Near-peer mentoring allows for honest constructive criticism and greater student development.

9H4 (5208)

Date of Presentation: Tuesday 29th August
Time of presentation: 1645 - 1700
Location: Castle I, Crowne Plaza

Near-peer education, a powerful tool for clinical skills development

Noelle Junod Perron[1], Andre Silva[1], Victor Taramarcaz[1], Bernard Cerutti[1], Stephane Genevay[1], Eduardo Schiffer[1]

[1]*Geneva Faculty of Medicine, Geneva, Switzerland*

Background

Formative objective structured clinical examinations (OSCE) are used to acquire clinical skill during undergraduate medical education. The aim of the study was to create a new near peer led formative OSCE and assess its feasibility, usefulness as well as its impact on students' performance during summative OSCE.

Summary of Work

The formative OSCE consisted of a 2 hour session during which 3rd year students (junior) could practice clinical skills on 3 clinical situations focused on systems often poorly mastered under the supervision of a tutor (4th-6th year medical student). The tutor facilitated a group of 3 students playing successively the roles of the clinician, the observer or the patient for different complaints. Both groups of students were asked to respond to an online survey evaluating their self-perceptions regarding the usefulness of the OSCE for clinical skills training, and the tutor's teaching skills (Likert scale 1-5). Students' scores at the summative 3rd year OSCE scores were collected.

Summary of Results

Out of 159, 115 3rd year medical students and 26 tutors participated. Response rates to the online survey were 33% and 61%. Junior students considered that attending the near peer formative OSCE improved their clinical history taking (mean 4.55 SD 0.64), physical exam (mean 4.60 SD=0.63) and clinical reasoning skills (mean 4.60 SD 0.69). Junior students highly valued tutors' feedback (mean 4.81;SD=0.82) and facilitation skills (mean 4.42 SD 1.02). They considered the formative OSCE to be useful (mean 4.77 SD=0.52). Junior

students who attended the near peer formative OSCE had higher global scores (mean 79.0±7.2 vs 75.5±6.1 at the summative OSCE (p=0.015) after adjustment by gender and type of stations attended during the exam.". Tutors perceived that they improved their clinical skills (mean 3.98 SD 0.94) and learned teaching skills during this OSCE (mean 4.80 SD 0.41).

Discussion and Conclusion

Near peer OSCE are not only perceived a valuable way to improve junior students' clinical skills but they improve their performance at summative OSCEs. It also allows senior students to improve their own clinical skills and develop teaching skills.

Take-home Message

Near peer teaching should be more constantly used during undergraduate medical training.

9H5 (2645)

Date of Presentation: Tuesday 29th August
Time of presentation: 1700 - 1715
Location: Castle II, Crowne Plaza

To teach is to learn twice – and then some! What and how medical students learn from teaching peers

Idun Grimstad Skjærseth[1], Monika Kvernenes[1], Thomas Mildestvedt[1], Satya Pal Sharma[1]

[1]*University of Bergen, Bergen, Norway*

Background

Peer teaching is a commonly used educational strategy in undergraduate medical education that is beneficial for student-teachers, student-learners, and faculty. Myriad learning outputs have been described for student-teachers in the literature. However, many studies describing such outputs base their findings on results from a single, newly created, peer teaching programme. Few studies combine data from several well-established programmes and across contexts to investigate how peer teaching experience might result in generic skills and competencies. Thus, we aimed to investigate learning outputs for student-teachers in undergraduate medical education in different programmes and contexts, and the circumstances that lead to these outputs.

Summary of Work

Data was collected through focus group interviews with medical student-teachers at four Scandinavian medical schools. The students taught different subjects, but all participants had clear and formalized roles as educators within the medical program. They were asked about their experiences with teaching and what they had learned. Transcripts of the interviews were analysed using reflexive thematic analysis.

Summary of Results

Student-teachers reported improved pedagogical skills. Their understanding of the teacher's role changed from a knowledge provider to a facilitator of learning. Some also described how they learned to adapt their teaching to different learners' needs. Furthermore, student-teachers reported improved social skills. Through teaching they got

to practice relationship-building with various people and designing supportive environments for student-learners and fellow student-teachers alike. Finally, student teachers described learning about their own strengths and comfort zones. Providing pedagogical support and space for reflection seemed to stimulate the student teachers' learning. Additionally, a certain amount of teaching exposure, a sense of being trusted with responsibility and feeling significant to the student learners, were found to be important prerequisites.

Discussion and Conclusion

Medical students who teach peers experience many unique learning outputs related to facilitating learning, adapting their teaching, relationship-building, designing supportive environments and awareness of their own strengths. These are all important skills in their future careers as physicians.

Take-home Message

Student-teachers are likely to benefit from peer teaching programmes if they are provided with pedagogical support and entrustment.

Session 9I: Surgery Education

9I1 (6655)

Date of Presentation: Tuesday 29th August
Time of presentation: 1600 - 1615
Location: Castle III, Crowne Plaza

Structured Oral Examinations on Zoom: a feasible option for postgraduate surgery examinations

Vanessa Burch1, Jessica McGuire2, Eric Buch3, Johannes Fagan2

[1]Colleges of Medicine of South Africa, Cape Town, South Africa; [2]University of Cape Town, Cape Town, South Africa; [3]Colleges of Medicine of South Africa, Johannesburg, South Africa

Background

Prior to the Covid-19 pandemic the Colleges of Medicine of South Africa (CMSA) offered in-person oral examinations as part of postgraduate specialist certification. The pandemic necessitated transition to Structured Oral Examinations (SOEs) conducted on Zoom. A review of our experience was undertaken to support ongoing post-pandemic use of this novel assessment method in the surgical disciplines.

Summary of Work

A document review (planning notes, timetables and incident reports) was undertaken to determine the format and technical challenges of SOEs conducted on Zoom for 12 surgical specialties (June 2020 - November 2022).

Summary of Results

742 of 855 candidates (83.6%) were successful in the online written examinations of General Surgery, Orthopaedic Surgery, Paediatric Surgery, Neurosurgery, Otorhinolaryngology, Ophthalmology, Plastic Surgery, Urology, Vascular Surgery, Trauma Surgery, Colorectal and Hepatobiliary Surgery, and Cardiothoracic Surgery. Candidates undertook SOEs on Zoom at 14 Southern African examination venues. Examiners

participated in SOEs on Zoom from home or places of work. 2699 Zoom calls were reviewed. Results are reported as median (range) values. A SOE consisted of five (1-14) Zoom calls of 30 (10-75) minutes each, yielding an online examination time of 135 (30-120) minutes. Three disciplines added 80 (45-120) minutes of offline preparation time. A total of 10/12 disciplines used two examiners per Zoom call. Examiners conducted four (2-12) case- and two (1-12) topic-based discussions using PowerPoint to "screen share" examination material with candidates. Less than 3% of SOEs reported technical challenges: internet connectivity, Zoom disconnect, hardware problems, electricity loadshedding or audiovisual problems. All Zoom calls were successfully concluded; no candidates required re-examination for technical challenges. 581 of 742 candidates (78.3%) were awarded surgical fellowships after the SOEs were concluded.

Discussion and Conclusion

Structured Oral Examinations on Zoom require about two hours of online time per candidate, comprise six PowerPoint-supported examiner-candidate dialogues and yield acceptable pass rates. This novel assessment method is a feasible and attractive option for postgraduate surgery examinations.

Take-home Message

- Structured Oral Examinations on Zoom offer postgraduate surgery education
- a feasible alternative to in-person examinations
- travel and accommodation savings for participants
- acceptable pass rates

912 (6017)

Date of Presentation: Tuesday 29th August
Time of presentation: 1615 - 1630
Location: Castle III, Crowne Plaza

The Effects of Pre-Operative Warm-Up on the Performance of Live Dog Laparoscopic Ovariectomy by Veterinary Medicine Students

Shane Forman[1], Ohad Levi[1], Maria Fahie[1], Paul Gordon-Ross[1], Dominique Griffon[1]

[1]*Western University of Health Sciences, Pomona, USA*

Background

To determine the effect of warm-ups on the performance of laparoscopic ovariectomy on a live dog by veterinary medical students. We hypothesized that students who warm-up using a simulator and a laparoscopic video game before surgery, perform a laparoscopic ovariectomy on a live dog more quickly with fewer mistakes and complications than those who compete the procedure without warming up.

Summary of Work

Fifteen fourth-year veterinary students received a standardized four-day laparoscopic surgery training course before performing live dog ovariectomy on the last day of the course. The participants were randomly assigned to two groups. On the final day, Group A performed laparoscopic ovariectomy on a live dog without any warm-ups prior to surgery. Group B engaged in a 20-minute warm-up before surgery using a laparoscopic simulator and a video game. A board-certified surgeon evaluated video recordings of each student's performance using a previously evaluated grading rubric.

Summary of Results

Surgery time was lower for the students who had completed the warm-up activity before performing the laparoscopic surgical procedure (Group B – mean= 63 minutes) compared with students who directly performed the surgery without warm-up (Group A – mean= 84 minutes). Scores were higher for the students who completed the warm up activity before performing the procedure (Group B – mean= 138.4) compared with students who directly performed the surgery without warm-up (Group A – mean= 121.5). A

T-test was used to compare the performance of the two groups and found that there was a statistically significant difference in the average time of procedure and score of the two groups, at p=0.045 and p=0.027, respectively.

Discussion and Conclusion

The results suggested that veterinary medicine students who did warm-ups on a laparoscopic simulator and video game before laparoscopic surgery effectively decreased surgical time and increased efficiency than students who performed surgery without warm-ups. The results also indicated the need for additional studies.

Take-home Message

Using this study, surgeons and educators may be able to more safely and effectively provide training of laparoscopic procedures than previously before by incorporating the use of warm-ups in their training design.

913 (4522)

Date of Presentation: Tuesday 29th August
Time of presentation: 1630 - 1645
Location: Castle III, Crowne Plaza

To Speak or Not to Speak: Factors Influencing Medical Students' Speech and Silence in the Operating Room

Gary Sutkin1, Kashif Javid1, Tariq Said1, Margaret Brommelsiek2, Austin Bachar1

[1]University of Missouri Kansas City School of Medicine, Kansas City, USA; [2]University of Missouri Kansas City School of Nursing, Kansas City, USA

Background

Medical students are vital members of the operating room (OR) team yet are rarely taught when to speak in the OR. Understanding why students hesitate or are encouraged to speak up will help identify behaviors that improve their assimilation and OR pedagogic experience.

Summary of Work

Our objective was to explore why medical students speak up or remain silent in the OR. This qualitative study utilized Constructivist Grounded Theory, building on our previous research on OR silences. Using semi-structured interviews, we interviewed 37 participants from 4 groups (medical students, resident surgeons, attending surgeons and OR nurses) about expectations for medical students' speaking up and behaviors that encouraged or discouraged students' speaking up. Transcripts were iteratively team-coded and analyzed to develop a conceptual model. These were triangulated to generate a list of speech-encouraging behaviors for each group.

Summary of Results

Students' decisions to speak or remain silent depended on their perception of the OR as a safe space and was influenced by three themes: consciousness of being evaluated, situational awareness, and interpersonal engagement with OR team members. Increased preparation helped students feel safer concerning evaluation and encouraged dialogue with OR team members. Awareness of critical surgical moments, evidenced by the

attending's mood, also helped students identify appropriate times to speak. Informal communication with OR staff and tasks also encouraged speaking, whereas fear of exhibiting a lack of knowledge, unawareness of critical moments, or attendings with negative reputations suppressed speaking. Reluctance to speak up was viewed as a threat to patient safety.

Discussion and Conclusion

Medical students are challenged finding safe times to speak up despite lack of experience and training in the OR. A conflict exists between encouraging student engagement and their fear of evaluation. Our findings suggest that better preparation for a case will accelerate student perception of safety in the OR. Surgeons and staff can encourage students to speak up by establishing interpersonal relationships, self-awareness of their moods, and assigning students case-related tasks. Improving students' sense of safety will encourage speaking up, improve learning, and engage them in advocating for patient safety.

Take-home Message

OR behaviors that create a safe space will encourage students to speak up.

914 (2975)

Date of presentation: Tuesday 29th August
Time of session: 16:45 - 17:00
Location of presentation: Castle III

Back to the suture - how to maximise student's theatre experience using technology enhanced learning

Claire Crewe[1]

[1] *North Cumbria Integrated Care NHS Foundation Trust , Carlisle , UK*

Background

Placements in theatre are a vital aspect of experiential learning in undergraduate education, but current pressures and curriculums are negatively impacting students' experiences[1]. The prospect of drastically increasing medical student numbers nationally[2] may result in difficulty gaining in-theatre opportunities. Could live-stream surgery act as an adjunct to support undergraduate in-theatre placements and surgical teaching? Prior to commencing a project using live stream technology it is imperative that we assess the feasibility of this research with a pilot study. With the intention to guide future research we will use existing video resources as a surrogate for live-streaming.

Summary Of Work

Our work will be based on a post-positivist theoretical stance and utilise a survey methodology. A pre-recorded freely available online video of a common surgical procedure will be shown to a seminar group of students. A facilitator familiar with the procedure will be present.

We will use a questionnaire to address the following:

- How useful this tool is in meeting students' learning outcomes
- How engaging is this format of learning
- How this compares to the students' previous theatre experience
- Whether this impacts students' interest in surgery as a future career pathway

- How (if any) technical issues impact on the learning experience

Outcomes will be assessed using Likert scale questioning.

Summary Of Results

We would be honoured to present the results of this small-scale project with AMEE 2023.

Discussion And Conclusion

To include:

- Live stream and pre-recorded surgery have been widely used in postgraduate education[1]; however there is currently under-utilised[1] in undergraduate education.
- Could this act as an adjunct or an alternative to in theatre placements?
- Given ethical concerns, patient consent[5] and patient safety[4] issues we feel it important to trial out this potential solution with a pilot study.
- Can this effectively represent the in theatre surgical experience?

Take Home Messages

With increasing student numbers and pressure on surgical theatre placements the medical education community will need to look to alternative tools to ensure undergraduate medical students receive the same high quality learning experience. Live streaming is one potential however currently more evidence is required to validate its use, this study hopes to go some way to aid with this.

Session 9J: Equality, Diversity and Inclusivity 5

9J1 (3827)

Date of Presentation: Tuesday 29th August
Time of presentation: 1600 - 1615
Location: Alsh 1, Loch Suite, SEC

Intrinsic Inequity in Programs of Assessment: A Critical Discourse Analysis

Hannah Anderson1, Layla Abdulla2, Dorene Balmer1, Marjan Govaerts3, Jamiu Busari3

[1]The Children's Hospital of Philadelphia, Philadelphia, USA; [2]Perelman School of Medicine at the University of Pennsylvania, Philadelphia, USA; [3]Maastricht University, Maastricht, The Netherlands

Background

Intrinsic inequity in assessment refers to sources of harmful discrimination inherent in the design of assessment tools and systems. This study seeks to understand intrinsic inequity in assessment systems by studying assessment policies and associated procedures in residency training, using general pediatrics as a discourse case study.

Summary of Work

Adopting a paradigm of critical theory, Foucauldian discourse analysis (FDA) was conducted on 47 assessment policy and procedure documents. Two authors independently prepared structured analytic notes using guiding questions. Documents and structured analytic notes were subsequently reviewed independently by all authors; notes were refined based on discussion within the team. Taking all notes together, the authors then constructed truth statements (i.e., interpretations of what the discourse establishes as true about the construct under study) and sub-strands (i.e., themes) that were repeated and legitimized across the documents via iterative discussion.

Summary of Results

The authors constructed two truth statements from analysis. The first truth statement, "good assessment is equitable assessment," was built by repeated statements suggesting that high-quality assessment, i.e., continuous, comprehensive, and uniform surveillance of learners' behaviors, would equitably benefit all learners. The second truth statement, "everyone is responsible for inequity," was built by repeated acknowledgements that inequity was an individual issue (e.g., an assessor with rater bias) that could be corrected if individuals took responsibility for addressing that inequity (e.g., assessors participated in assessor/faculty development or learners reported discrimination). Both truth statements were supported by three sub-strands: assumptions of homogeneity in learners, assessors, and programs; conflation and dilution of inequity; tension between espoused values and suggested procedures.

Discussion and Conclusion

Although documents conceptualized inequity in assessment as an isolated, individual issue in an otherwise neutral assessment system, closer examination of the truth statements and sub-strands suggested that inequity may actually be an inherent feature of assessment systems. "Good" assessment as it was defined in the documents resulted in a type of surveillance that may foster inequity by enabling a power-imbalanced system; an emphasis on individual responsibility for inequity could exacerbate this power imbalance.

Take-home Message

Addressing intrinsic inequity in assessment requires critically analyzing the assumptions underpinning our assessment systems.

RP0350/SC

9J2 (3598)

Date of Presentation: Tuesday 29th August
Time of presentation: 1615 - 1630
Location: Alsh 1, Loch Suite, SEC

A high-fidelity simulation to uncover associations between racial implicit bias and communication skills

Cristina Gonzalez1, Tavinder Ark2, Marla Fisher3, Paul Marantz4, Diana Burgess5, Felise Milan4, Malika Samuel6, Carlos Rodriguez4, Adina L. Kalet2

[1]New York University Grossman School of Medicine, New York, USA; [2]Medical College of Wisconsin, Milwaukee, USA; [3]Mount Sinai Morningside- West, New York, NY, USA; [4]Albert Einstein College of Medicine, Bronx, NY, USA; [5]University of Minnesota Medical School, Minneapolis, USA; [6]New York University Tisch School of the Arts, New York, NY, USA

Background

Implicit bias contributes to health disparities through physician communication; its impact on medical decision-making is less clear. To date, no published simulations study the association of racial implicit bias with either communication or medical decision-making. Without such simulations, the development of interventions striving for equitable patient outcomes will be stymied. To address this gap, we developed and studied the feasibility of a high-fidelity simulation calibrated with cognitive stressors designed to precipitate conditions under which physicians rely on heuristics, including racial implicit bias.

Summary of Work

Subjects were physician volunteers with up to eight years of clinical experience in internal or family medicine recruited to pilot educational simulations; racial bias was not mentioned. Cognitive stressors included time constraints, clinical ambiguity, and interruptions. Subjects saw a 52-year-old male SP (either Black or White) presenting with nausea, vomiting, and epigastric pain, explained their diagnosis and treatment plan to the SP, wrote an assessment and management plan, and completed a post-encounter survey. Subjects subsequently completed two Implicit Association Tests (IATs)- Race and Race Medical Cooperativeness. Procedures were conducted over Zoom from March-September, 2022. The primary study outcome was the association of subjects' IAT score

with SP ratings on communication skills checklists (SPs were blinded to the purpose of the study); linear regression was conducted on SP ratings with SP race, each of the IAT scores, and all interactions as predictors.

Summary of Results

In N=60 subjects the interaction of subjects' Race IAT score and SP race was significant for overall communication and all subdomains of communication. As subjects' Race IAT scores increased, (indicating preference for White versus Black people), White SP ratings increased and Black SPs ratings decreased.

Discussion and Conclusion

A high-fidelity simulation to further study implicit bias is feasible; our simulation calibrated with cognitive stressors was able to elicit the expected influence of racial implicit bias on subjects' communication skills. Therefore, it provides a model for investigating the association of implicit bias and medical decision-making, the next step in our program of research. This model can inform development and evaluation of educational interventions seeking to reduce the negative impacts of physician implicit bias on clinical practice behaviors and patient outcomes.

Take-home Message: RP1207/SC

9J3 (6408)

Date of Presentation: Tuesday 29th August
Time of presentation: 1630 - 1645
Location: Alsh 1, Loch Suite, SEC

Supporting Student-led Development of Primary Care Learning Resources in an Inclusive Learning Environment

Edward Lau1, Macky Padilla2, Ammar Kisat2, Tanzil Rujeedawa2, Erin Fitz-Simons West2, George Nishimura2, Aiman Aslam1, Zaki Arshad1, Richard Darnton2, Charlotte Tulinius1

[1]University of Cambridge School of Clinical Medicine, Public Health Education Group, Department of Public Health and Primary Care, Cambridge, UK; [2]University of Cambridge School of Clinical Medicine, Cambridge, UK

Background

At the University of Cambridge, we found general uncertainty amongst year four medical students as they started their primary care placement. One of the issues was a lack of learning resources that the students found relevant and useful at their level. Our aim was to therefore systematically support the development of new learning resources in an inclusive and self-directed learning environment. This presentation primarily looks at the process by which students were supported to develop learning resources.

Summary of Work

We used empowerment evaluation (EE) as a developmental tool that engages students to participate in collecting, analysing and sharing data in the development of a product, thereby facilitating student ownership. It promotes sustainability by equipping students with skills and medical education values that will support them in becoming more experienced medical educators. A cyclical five step approach was followed. Critical friends consisting of faculty members were invited to collaborate and support the students in their development. Data was collected through focus groups, developmental workshops and participants' reflective pieces and Malterud text condensation as thematic analysis was performed.

Summary of Results

Students gained skills in resource development and evaluation and generated a community of self-directed learners with access to the evidence-based developed resources. In addition, multiple participating students expressed interest to build on the knowledge they had developed by functioning as research leads for the following year's students. This demonstrated the sustainability of the model in equipping students with skillsets to become the next generation of student educationalists and researchers.

Discussion and Conclusion

EE facilitated student-led development of learning resources and has generated a community of student educators where evidence-base and reflective practice is a cultural norm. It has led to a cascading model which empowers students to, once supported, take on the role of supporters to lead as the new generation of student medical educators. Equipping them with the skills developed through EE encourages their further engagement in medical education development, promoting inclusivity and faculty-student collaboration.

Take-home Message

Empowerment Evaluation can be used to support student-led development of learning resources and through this, facilitate capacity building and inclusivity.

9J4 (4337)

Date of Presentation: Tuesday 29th August
Time of presentation: 1645 - 1700
Location: Alsh 1, Loch Suite, SEC

Equity, diversity, and…exclusion? A mixed methods study of "belonging" across medical schools in Canada.

Priatharsini (Tharsini) Sivananthajothy1, Adibba Adel2, Shima Afhami1, Nina Castrogiovanni1, Kannin Osei-Tutu3, Allison Brown4

[1]University of Calgary Cumming School of Medicine, Calgary, Canada; [2]University of Calgary Department of Community Health Sciences, Calgary, Canada; [3]University of Calgary, Cumming School of Medicine, Calgary, Canada; [4]University of Calgary Department of Medicine, Calgary, Canada

Background

Equity, diversity, and inclusion remain a prominent focus in medical schools, yet the phenomenon of "belonging" has been overlooked. Little is known regarding how learners from groups that face systemic oppression and exclusion experience belonging during medical school.

Summary of Work

A sequential mixed-methods design explored how medical students from and within equity-deserving groups (EDGs) perceive and experience belonging, including those who are: women, racialized, Indigenous, disabled, or gender and sexual minorities. First, an online cross-sectional survey measured four constructs – belonging, imposter syndrome, burnout, and depression – across a national sample of medical students in Canada (N=480). Analysis of variance and multiple regression was used to analyze potential between and within-group differences, and further inform sampling decisions in our subsequent qualitative phase. Structural equation modelling examined statistical relationships between constructs. In the second phase, we sampled and interviewed 16 students from the EDG whose belonging scores were significantly lowest in phase 1.

Summary of Results

Belonging scores were lower for students from EDGs and more specifically, significantly lowest amongst racialized students. Poor sense of belonging precedes imposter syndrome, and exacerbates burnout and depression. Interview participants described belonging as the ability to exist as their "true self" with emphasis placed on feelings of acceptance, comfort, and safety as well as being valued and seen as an equal; yet described how routine experiences of "othering" inhibited a sense of belonging. Poor sense of belonging was further exacerbated by differences in structural privilege including limited financial resources and social capital. Poor sense of belonging has substantial impact on their well-being and career trajectory.

Discussion and Conclusion:

Students from EDGs are less likely to feel like they belong in medical school, particularly those who are racialized. Poor sense of belonging can lead to a range of negative psychological and academic consequences.

Take-home Message

To promote the well-being and success of their students, medical schools need to prioritize belonging as a key component of their equity, diversity, and inclusion efforts, particularly for racialized medical students who experience the lowest levels of belonging due to othering, differences in structural privilege, and exclusionary institutional cultures.

9J5 (3908)

Date of Presentation: Tuesday 29th August
Time of presentation: 1700 - 1715
Location: Alsh 1, Loch Suite, SEC

Exploring Medical Schools' Admission and Support Policies for People with Disabilities in Various Nations

Mathanee Yongsaroj1, Nitchanun Kuptanon1, Panrak Thongnuesuk 1, Winitra Kaewpila2

[1]Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand; [2]Chakri Naruebodindra Medical Institute, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Samut Prakarn, Thailand

Background

To reflect the diversity of the medical communities, achieving the inclusion of individuals with disabilities in the profession is a top priority. This helps reduce stigma and stereotypes, lessen healthcare disparity, and create better health outcomes. The policies regarding admission and disability support might play a crucial role in the under-representation of medical students with disabilities. This study aims to explore and compare medical schools' different admission and supporting policies for people with disabilities in various countries.

Summary of Work

The admission and supporting policies regarding people with disabilities from the official medical board exam websites, medical schools' official websites and accreditation bodies' websites of sixteen countries from various regions and income distribution were selected for documentary analysis. Data unavailable in English were excluded. Four critical questions from the "Self-Assessment of Technical Standards" were used to determine the characteristics and the level of inclusivity.

Summary of Results

Three domains were analyzed; 1) accessibility of data, 2) inclusivity of selection, and 3) offering and types of disability support. The majority (n=10) of admission policies were classified as inclusive, eight of which are partly inclusive and two fully inclusive. Of the five

Asian countries' policies, two are exclusive and tend to be based on the medical model of disability and two are hard to access. Supporting policies could be categorized into five areas: facility & equipment (n=7), service (n=4), financial support (n=4), evaluation & testing adjustment (n=4) and others (n=2).

Discussion and Conclusion

Most of the admission policies are considered partly inclusive, but very few align with current best practices. There is also a considerable number of exclusive policies, characterized by discouraging language, unacknowledged accommodations and strong statements concerning patient safety. Numerous kinds of support for disabled students are offered in most countries. Regarding accessibility, many of the admission and supporting policies are hard to locate, possibly adding extra barriers for potential applicants.

Take-home Message

Admission and supporting policies for people with disabilities in medical schools should be reviewed and revised regularly, based on both medical and social models of disability, to improve access and representation of individuals with disabilities in order to cultivate the diversity of the medical communities.

Session 9K: Patient Safety

9K1 (6163)

Date of Presentation: Tuesday 29th August
Time of presentation: 1600 - 1615
Location: Alsh 2, Loch Suite, SEC

Exposure and comfort with patient safety behaviors remains low: 5-year survey of incoming interns to our institution

Christine Beltran 1, Deepak Pradhan1, Donna Phillips1, Joanne Agnant 1, Katherine Tame 1, Brielle Blatt 1, Lynn Buckvar-Keltz1, Jeffrey Manko1, Sondra Zabar1

[1]*New York University Grossman School of Medicine, New York City, USA*

Background

Transition into residency is stressful for incoming interns as they assume more responsibilities and arrive with heterogeneous experiences with patient safety processes. NYU Grossman School of Medicine developed a patient safety orientation to prepare interns to address common patient safety issues and establish a culture of safety.

Summary of Work

Each year during orientation, incoming interns report their previous experiences with patient safety activities on an entrance survey, including whether they previously participated in a formal patient safety curriculum, witnessed and reported a medical error, escalated a situation, learned to perform a structured handoff, and utilized a structured handoff tool. They also rated comfort with these skills, donning and doffing personal protective equipment (PPE), and caring for COVID-19 patients (asked 2020-2022), on a 4- or 5-point scale.

Summary of Results

990 interns participated across five years (2018=199, 2019 =184, 2020=182, 2021=212, and 2022 =213). Interns reported few prior experiences with witnessing a medical error (mean 38%; range 33-44%), escalating (mean 19%; range 14-24%), and reporting a medical error

(mean 5%; range 2-10%). Many learned to do a structured handoff (mean 75%; range 68-81%), but only half felt comfortable using the structured handoff tool (mean 48%; range 42-53%). Few previously participated in a formal patient safety curriculum (mean 27%; range 24-30%). A majority felt comfortable escalating to a supervisor (mean 56%; range 50-59 %), while less felt comfortable reporting a medical error (mean 34%; range 27-36 %) and escalating (mean 34%; range 38-44%). Interns during COVID-19 (2020-2021) reported increasing comfort over time with donning/doffing PPE (mean 62%, 60% to 63%) and caring for COVID patients (mean 26%, 22% to 31%).

Discussion and Conclusion

Results from the past five years demonstrate interns' previous experiences and areas of discomfort with patient safety processes remain relatively stable year-to-year. Our patient safety orientation provides all incoming interns with the opportunity to gain experience and comfort in these areas, and integrating it as a dedicated and well-integrated part of residency orientation establishes a community and culture that prioritizes patient safety.

Take-home Message

A patient safety orientation can address resident preparedness and establish a shared mental model around patient safety.

9K2 (5443)

Date of Presentation: Tuesday 29th August
Time of presentation: 1615 - 1630
Location: Alsh 2, Loch Suite, SEC

PICC blood sampling – a high risk procedure frequently performed by junior doctors, not taught at undergraduate or postgraduate level

Alex Schlindwein1, Nat Quail1, Carla Stevenson1, Kwong Tsang1, Catie Paton1, Karen McKie2

[1]NHS Lanarkshire Medical Education Department, Bothwell, UK; [2]NHS Lanarkshire, Lanarkshire, UK

Background

Accessing central lines has well-established associated risks to patients, including infection, and thrombosis. We are aware of recent significant adverse events reported in our health board relating to junior doctors and medical students accessing central lines. The use of Peripherally Inserted Central Catheters (PICC) is identified, in national surveys, as an activity of a junior doctor. However, it is not recognised as a core procedure and is therefore not formally taught within most undergraduate or postgraduate curricula. Education of staff has been shown to be a key factor in reducing patient complications when using PICC lines.

Summary of Work

Across three acute hospitals in Lanarkshire, 59 Foundation Year 1 (FY1) junior doctors were surveyed to assess their confidence in performing various practical skills. PICC blood sampling was identified as the skill FY1s felt least confident about in all three sites. Practical teaching sessions for the safe use of PICCs were devised and delivered by Clinical Teaching Fellows, allowing for individual practice, observation and feedback of PICC sampling on models. Participants were asked to rate their competence for the undertaking the skill before and after the teaching session, using a 5-point Likert scale.

Summary of Results

34 FY1s attended the sessions across the three sites. None of the FY1s reported having prior formal teaching about PICC blood sampling. Some had been shown techniques informally

on the wards. They rated their competence at PICC blood sampling before the session as '4=Poor' (median 3.9), and '2=Very Good' (median 1.8) after the session. Qualitative data was overwhelming positive for the utility of the session.

Discussion and Conclusion

This work highlights a significant gap in clinical procedural skills education, which could compromise patient safety. Further work is needed to identify the true extent of PICC blood sampling undertaken by junior doctors. Guidance is needed from local and national organisations on whether the current modus operandi, of junior doctors performing this practical skill, is appropriate. We recommend that PICC skills are formally included in undergraduate and postgraduate training curricula.

Take-home Message: NA

9K3 (2711)

Date of Presentation: Tuesday 29th August
Time of presentation: 1630 - 1645
Location: Alsh 2, Loch Suite, SEC

Learning systems for reducing medical error in a medical school affiliated community hospitals

Suthee Rattanamongkolgul1, Anantapat Seeherunwong1, Chawalit Chayangsu2, Praphan Yodnopaglaw2

[1]Department of Preventive and Social Medicine, Faculty of Medicine, Srinakharinwirot University, Nakhon-Nayok, Thailand; [2]Surin Hospital and Medical Education Center of Suranaree University of Technology, Surin, Thailand

Background

Medical error is the third leading cause of death in the United States, following heart disease and cancer, claiming 251,000 deaths annually. At the same time, under 10 percent of medical errors are reported; this program aimed to improve patient safety strategy by encouraging undergraduate teaching medical students in error reporting, recognizing untoward events that occur, and learning from them via affiliated community hospitals.

Summary of Work

The program consists of topics about cognitive and system errors. The teaching and learning strategies for cognitive error used interprofessional team conferences. In addition, system error applied assignment of developing patient safety innovations, which derivate situations from community hospitals. Data were collected from 89 final-year medical students of Srinakharinwirot University from August 2022 to January 2023. Quantitative data were collected by an online questionnaire pre and post of the program to assess their knowledge regarding medical errors. Descriptive statistics were used to analyze 70 responses to the questionnaires. Qualitative data were analyzed by content analysis of the reflection papers.

Summary of Results

Content analysis of the reflections was a positive attitude to reducing medical error; all of them reported improving their skills for systematic thinking to recognize and manage medical error problems (100%). Additionally, 26.25% suggested learning from error can decrease the medical error problem in the future. In comparison, 14.28% said communication skill was important. Finally, quantitative results revealed that post-test knowledge scores rose 28.75% compared to pre-test scores, with more than 90% scoring more than 80%.

Discussion and Conclusion

A medical error is a preventable adverse effect of medical care; these include failure to diagnose, delayed, and incorrect diagnosis. Learning through case scenarios within interprofessional team guidance and improving communication are essential aspects of preventing error and developing a culture of patient safety goal.

Take-home Message

The clinical medical curriculum should include the topic of cognitive and systematic error to improve patient safety strategies.

9K4 (4993)

Date of Presentation: Tuesday 29th August
Time of presentation: 1645 - 1700
Location: Alsh 2, Loch Suite, SEC

An inter-professional student-run medication review programme: A controlled clinical trial

Michael Reumerman1, Rowan Sultan1, Milan Richir1, Michiel van Agtmael1, Jelle Tichelaar1, Hester Daelmans2, Els Grijmans3

[1]AmsterdamUMC, location VUmc, Amsterdam, The Netherlands; [2]Amsterdam UMC, Research in Education, Faculty of Medicine, Vrije Universiteit, Amsterdam, The Netherlands; [3]Inholland University of Applied Sciences, Amsterdam, The Netherlands

Background

As the population ages, more people will have comorbid disorders, polypharmacy and adverse drug reactions (ADRs). Medication should be reviewed regularly, however this is often forgotten. As part of our student-run clinic project, we investigated whether an Interprofessional Student-run Polypharmacy (ISP) team added to standard-care at a geriatric outpatient clinic leads to better prescribing and reduction of ADRs 1 and 3 months after the patient visit.

Summary of Work

Using the lens of social constructivism theory, this clinical controlled trial investigated the clinical effects of an ISP-team on medication safety. Patients visiting a memory outpatient clinic were allocated to standard-care (control-group) or standard-care plus the ISP-team (intervention-group). The medications of all patients were reviewed by a review panel, clinic physicians, and in the intervention arm also by an ISP-team consisting of a group of medicine, pharmacy and advanced nursing practice students. For both groups, the number of STOPP/START-based medication changes and ADRs mentioned in general practitioner (GP) correspondence and the implementation of these changes about 1 and 3 months after the outpatient visit were investigated. The ISP-team also performed a follow-up telephone call to the GP office 1-month after the outpatient visit to inform the status of the medication advice and to nudge when advice were overlooked. Three months after the outpatient-visit, a clinical pharmacologist who was blinded for

allocation, performed a follow-up telephone interview to determine which ADRs were still present.

Summary of Results

The data of 216 patients were analyzed. More recommendations for STOPP/START-based medication changes (43% vs. 24%, P=<0.001) and detected ADRs (n=48 vs n=10, P=<0.001) were described in the GP-correspondence in the intervention-group than in the control-group. After 1-month, a significantly higher proportion of the medication changes were implemented in the intervention-group (19% vs. 9%, P=<0.001). Three months after the outpatient visit, significantly fewer ADRs related to benzodiazepine derivatives and antihypertensive causing dizziness were detected in the patients of the intervention-group.

Discussion and Conclusion

The ISP-team is an effective intervention for optimizing pharmacotherapy, reducing ADRs and improving medication-safety in a geriatric outpatient clinic on top of standard-care.

Take-home Message

ISP-teams are effective and low-cost interventions that could optimize medication safety in a clinical and outpatient setting.

9K5 (4132)

Date of Presentation: Tuesday 29th August
Time of presentation: 1700 - 1715
Location: Alsh 2, Loch Suite, SEC

Exploring medical students' behavioral change after assertive communication training for medical error.

Jen-Chieh Wu1, Hui-Wen Chen2, Yi-No Kang3, Yi-Chun Chen1

[1]TAIPEI MEDICAL UNIVERSITY HOSPITAL, Taipei City, Taiwan; [2]National Yang Ming Chiao Tung University, Taipei City, Taiwan; [3]National Taiwan University College of Medicine, Taipei City, Taiwan

Background

To prevent and minimize patients from harm, healthcare providers' timely and adequately speaking up behavior to stop a medical error which is about to happen is crucial. Assertive communication training has been used to improve medical students' speaking up behavior. We explore the speaking up behavioral change of medical students after structure assertive communication training.

Summary of Work

We conducted a quasi-experimental study in Taipei involving 146 clerkship medical students who participated a medical error simulation course. Before simulation course, students had to pass written test to ensure they had adequate background knowledge of the medical error scenario. After the test, students would participate an unexpected medical error scenario related to a critical patient management. Faculty would facilitate a structural personalized debriefing session which was constructed based on published assertive communication protocol from Teamstepps to assist students to develop and improve their speaking up behavior to address their concern about medical error. The students would participate another medical error simulation scenario after intervention. The reaction and behavior of the students in the simulated medical error scenario were recorded by trained faculty for analysis.

Summary of Results

146 participants completed the simulation course including 81 male and 65 female medical students. After structural personalized debriefing session, the overall speaking up rate in the event of medical error significantly increased (from 43.8% during preintervention scenario to 95.2% during postintervention scenario, P=0.015), more students used certain sentences instead of ask questions to address their concern regarding medical error (from 20.5% during preintervention scenario to 67.1% during postintervention scenario, P<0.001), more students directly expressed their concern of medical error (from 34.2% during preintervention scenario to 78.8% during postintervention scenario, P<0.001), and more students were polite when they address their concern (from 30.1% during preintervention scenario to 88.4% during postintervention scenario, P<0.001).

Discussion and Conclusion

Faculty-led structural personalized debriefing not only increased the medical students' speaking up rate in the event of medical error but also improved their behaviors. Students became more confident and specific and could address their concern more politely after the training.

Take-home Message

Structural personalized speaking up training could develop adequate speaking up behavior for medical student to face medical error events.

Session 9L: Supporting learners: Vulnerable Learners

9L1 (4541)

Date of Presentation: Tuesday 29th August
Time of presentation: 1600 - 1615
Location: Boisdale 1, Loch Suite, SEC

How can medical school support students with mental health and wellbeing issues: the students' view

Siobhan Cooke1, Ann Griffin2, Catherine O'Keeffe2

[1]Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London, UK; [2]UCL Medical School, Faculty of Medical Sciences, University College London, London, UK

Background

High levels of stress and burnout among medical students globally is likened to a "public health crisis". Yet medical students are reluctant to seek help from medical school to manage their stresses and particularly for mental health issues. Previous research has identified barriers; mental health issues viewed as weakness with future career implications, lack of confidentiality, stigma, fear of regulatory fitness to practice proceedings with possible expulsion, reputational damage and failure to meet parents' expectations. Despite extensive literature over 20 years, evidence-based strategies to optimize the mental health and wellbeing in medical students are lacking.

Summary of Work

This institutional case study aimed to develop an understanding of the current barriers for medical students in seeking support from medical school from students' perspectives. Medical students' understanding of wellbeing, their major stressors, their sources of support and barriers to seeking support were the research questions explored. I used qualitative case study methodology and purposive sampling to select participants. Data was collected using individual semi-structured online interviews and analysed using interpretative phenomenological analysis.

Summary of Results

21 medical students from Years 1 – 5, from diverse backgrounds were interviewed and included students with mental health and learning disabilities. Key findings included that students define wellbeing according to physiological needs and having safe accommodation. Their wellbeing was closely linked to academic studies. Isolation was a major stressor and negative factors on wellbeing included examination stress, lack of motivation and comparing themselves to other students. Positive influences on wellbeing included good experience on clinical placements. Support from peers and tutors was protective. Lack of a clear personal tutor system was identified as detrimental to accessing student support services in medical school.

Discussion and Conclusion

Students viewed learning to seek support as a developmental process. My findings suggest that personal and professional identity formation are central to student wellbeing in medical school. Points of transition; on entry to medical school, learning in the clinical environment and becoming a Foundation Programme doctor are critical learning points for identity development.

Take-home Message

Understanding how medical students develop personal and professional identity through social interaction in different years has future implications for developing effective medical school student support policies.

9L2 (4554)

Date of Presentation: Tuesday 29th August
Time of presentation: 1615 - 1630
Location: Boisdale 1, Loch Suite, SEC

Staring down the barrel": A qualitative study of underperforming surgical trainee perspectives on remediation processes

Kathryn McLeod1, Robyn Woodward-Kron1, Prem Rashid2, Julian Archer3, Debra Nestel1

[1]University of Melbourne, Melbourne, Australia; [2]University of New South Wales, Sydney, Australia; [3]Griffith University, Gold Coast, Australia

Background

Surgical trainees with serious underperformance issues are required to undergo formal remediation processes. However, there is a "very apparent gap in the lived experience" (1) of these trainees and their perceptions of remediation processes. The aim of this study is to explore trainees' perspectives of remediation processes. Understanding these processes should help training regulators better support underperforming trainees and improve remediation outcomes.

1. Davenport R et al . Struggle and failure on clinical placement: a critical narrative review. International Journal of Language & Communication Disorders. 2018;53(2):218-27.

Summary of Work

In this qualitative study, semi-structured interviews were used. A constructivist approach using reflexive thematic analysis methodology guided data collection and analysis. Ethics approval was obtained. To be eligible, participants must have been accredited surgical trainees who have direct experience of formal remediation.

Summary of Results

Semi-structured interviews of 11 participants were undertaken. At the time of interview, the cohort included 3 current trainees, 1 fellow and 7 consultants. Interviews lasted approximately 50 minutes. Three major themes were identified. The first theme of "a harrowing experience" showed that there were overwhelming emotions that were long-

lasting. The emotions of feeling unfairly treated and unheard were prominent. Feeing "blindsided" was very common, along with being "tarred" and experiencing a change in identity. The second theme of "a state of confusion" focused on the lack of clear explanation of their underperformance, as well as lack of clarity regarding remediation goals and a lack of understanding regarding processes. The final theme of "the 'performance' of remediation" focused on the superficiality of remediation plans, the contributory factors of underperforming supervisors and training posts, and the need to prove remediation.

Discussion and Conclusion

While remediation is a necessary part of training, trainees' experiences shows that the current processes need to be significantly improved. The emotional impact of undergoing remediation was long-lasting. Improving all aspects of communication before, during and after remediation processes is likely to yield better outcomes. Additionally, specific attention to remediation plan development is required.

Take-home Message

Surgical trainee persepctives of remediation processes have been remained unheard, until now. Their persepctive is vitally important if we are to successully improve remeditation outcomes in future.

9L3 (4755)

Date of Presentation: Tuesday 29th August
Time of presentation: 1630 - 1645
Location: Boisdale 1, Loch Suite, SEC

Varying depression vulnerability and protective characteristics in first-semester medical students

Sabine Polujanski[1], Thomas Rotthoff[1], Ulrike Nett[1], Ann-Kathrin Schindler[1]

[1]*University of Augsburg, Augsburg, Germany*

Background

Previous international meta-analytic data have shown high rates of depression among medical students, which are already prevalent in the first semester of medical school. However, there is a lack of person-centered studies examining medical students' varying depression vulnerabilities during the first semester of medical school and associated factors.

Summary of Work

This study aims to gain a better understanding of the development of depressive symptoms and associated factors in first-semester medical students. Especially, we were interested in individual protective factors that could be strengthened by medical schools. A total of 184 students from two German medical schools completed online questionnaires on depression (PHQ-9), self-efficacy (GSE), resilience (CD-RISC-10), and cognitive self-regulation twice, at the beginning of medical school (T1: November 2020) and at the end of the first semester (T2: January 2021).

Summary of Results

Latent profile analysis identified five distinct profiles of depression development: no depression (profile 1, 53.8%); mild depression (profile 2, 26.1%); depression increase I (profile 3, 9.2%); depression increase II (profile 4, 9.8%); and persistent depression (profile 5, 1.1%). Multinomial logistic regression analysis revealed that students scoring higher on self-efficacy, resilience, and cognitive self-regulation were more likely to belong to profile 1. Decreases in perceived self-efficacy and cognitive self-regulation were found to be

predictors of both profiles with increased depression (profile 3 and 4), whereas a decrease in resilience was only associated with profile 4.

Discussion and Conclusion

Students show varying levels of mental health when entering medical school, and they differ in their vulnerability to developing depressive symptoms during the first semester. Preventive measures should be implemented as early as possible, considering the needs of different vulnerable subgroups. For example, low-threshold support services for students who already enter medical school with elevated levels of depression. Promoting self-efficacy and cognitive self-regulation may be beneficial for all vulnerable groups and students within profiles 2 and 4 may additionally benefit from resilience-promoting measures.

Take-home Message

Strengthening resilience, self-efficacy, and cognitive self-regulation strategies may be key in preventing mental morbidity in first-semester medical students. Further research is needed to investigate how to reach the vulnerable students and how to effectively promote the identified protective factors through curricular adaptations.

9L4 (3994)

Date of Presentation: Tuesday 29th August
Time of presentation: 1645 - 1700
Location: Boisdale 1, Loch Suite, SEC

Challenges of medical students and their quality of life: a scoping review

Polathep Vichitkunakorn1, Monsicha Sittisombut2

[1]Department of Family and Preventive Medicine, Prince of Songkla University, Hat Yai, Songkhla, Thailand, Songkhla, Thailand; [2]Medical Student (Research Track), Faculty of Medicine, Prince of Songkla University, Hat Yai, Songkhla, Thailand, Songkhla, Thailand;

Background

Medical students confront tremendous workloads and experience competitive and stressful environments that may undermine their quality of life. This study was inspired by a previous unpublished study conducted by Polathep et al. on influencing factors in Thai rural medical students on health-related quality of life. Building upon their work, our ongoing scoping review study aims to investigate further and identify the existing studies on challenges affecting the quality of life of medical students.

Summary of Work

We have adopted Arksey and O'Malley's methodological framework. A comprehensive search of PubMed and Embase databases was conducted in July 2023. Studies were selected based on the following inclusion criteria: (1) population consisting of medical students in preclinical, clinical years, or both (2) focused on physical, mental health, or both aspects of quality of life (3) English language (4) published from the year 2000 onwards (5) study design including qualitative, quantitative, trials and reviews.

Summary of Results

Of 874 articles from the initial search, 152 were identified upon the screening of titles and abstracts. While study selection is still underway, preliminary findings suggest 4 categories of predominate factors: physical factors (e.g. sleep problems, dysmenorrhea), mental factors (e.g. depression, burnout), academic factors (e.g. support program), and socioeconomic background (e.g. financial status, religion).

Discussion and Conclusion

The study is currently in the stage of study selection, and we expect to finalize the results before the conference presentation. We look forward to the valuable feedback and constructive discussions from the academic community to enhance our interpretations and implications further.

Take-home Message

Our preliminary results suggest that numerous studies have been conducted on the influence of physical and mental factors on the quality of life of medical students.

9L5 (3753)

Date of Presentation: Tuesday 29th August
Time of presentation: 1700 - 1715
Location: Boisdale 1, Loch Suite, SEC

Suicide prevention: Let's make noise about it

Raquel Solís-Peña[1], Aniela Méndez-Regueral[1]

[1]*Tecnologico de Monterrey, Monterrey, Mexico*

Background

Suicidal ideation is a highly-prevalent concern in medical students (Coentre & Góis, 2018), high levels of stress and adverse learning environments act to detriment of students' well-being during the formative years (Moutier et al., 2012). This raises concern among institutions about identifying students at risk and creating interventions to ensure students' safety.

Summary of Work

This work occurred in the School of Medicine and Health Sciences of Tecnologico de Monterrey in Mexico. We made a two-step intervention to integrate a mandatory suicide prevention program into our curriculum. These two actions took place during the fall semester of 2022. First, the QPR course was added to the syllabus of the Health Basis module. This course aims to enable students to identify, persuade, and refer peers at risk. Secondly, protected time was intended to allow students to optionally answer the Healthy Mind Study (HMS), a screening tool designed by the Wellbeing Department to identify students with signs of mental affection and suicidal risk.

Summary of Results

The QPR course was taken by 600 students from different health careers (medicine, psychology, dentistry, nutrition, and biosciences) all of which ended their semester with the proper certification. The HMS study was answered by 439 students from the four different campuses with the identification and close follow-up of 16 students at risk, 2 of which showed signs that put them at suicidal risk.

Discussion and Conclusion

Suicide amongst health professionals is an alarming concern. There is a lot to do regarding this subject, a first, and big step is bringing it forward, not only creating awareness but educating on it. These interventions enable institutions to not only identify students at risk but also to educate the rest of the students to work as a community and identify peers that may be struggling with mental health issues.

Take-home Message

Making noise and awareness about sensitive topics such as suicide prevention is a first and powerful step towards eliminating stigma and prejudice around them. The integration of interventions around its prevention should be included in all institutions to ensure our student's well-being.

9L6 (1301)

Date of Presentation: Tuesday 29th August
Time of presentation: 1715 - 1730
Location: Boisdale 1, Loch Suite, SEC

Medical students' fears and concerns for the future

Constantina Constantinou1, Johanna Bratu2, Jacqueline van Wijngaarden3, Mini Ruiz4, Marjo Wijnen-Meijer5

[1]University of Nicosia Medical School, Nicosia, Cyprus; [2]Technical University of Munich, School of Medicine, TUM Medical Education Centre, Munich, Germany; [3]Faculty of Medicine, Head of the Clinical skills department Department of Clinical Skills Training, University Medical Center Utrecht,, Utrecht, The Netherlands; [4]Karolinska Institutet, Stockholm, Sweden; [5]Technical University of Munich, School of Medicine, TUM Medical Education Center., Munich, Germany

Background

In addition to imparting medical expertise, medical schools must prepare students for the professional life by giving them as realistic a picture as possible of it as well as the challenges involved. In this context, it is especially important to know what the students' fears and concerns for their future profession are.

Summary of Work

We conducted a study at medical schools in Utrecht (Netherlands, 2017-2021), Nicosia (Cyprus, 2018-2021), Stockholm (Sweden, 2019-2021) and Munich (Germany, 2019-2021).

During the first week of medical school, students are asked to complete a questionnaire with four questions. In this abstract we focus on the question "What do you not look forward to in your future profession as a doctor?"

A total of 2,042 students responded. The result of the open and axial coding was a list of 17 themes which were quantified by location.

Summary of Results

We found the following themes:

'bad news', 'boredom', 'career', 'demanding patients', 'failures', 'finances', 'health system', 'hierarchy', 'infection', 'lawsuits', 'nothing', 'nursing shortage', 'sexism', 'stress', 'undesirable disciplines', 'working conditions' and 'work-life balance'.

Our analysis reported similarities among the themes reported across medical schools in all countries, for example 'Stress' was among the top three themes at all sites.

We also found many differences, for example:

- The theme ´health system´ was in first place in Munich, followed by 'working conditions´, while in the other countries these topics ranked much lower.

- In both Utrecht, Stockholm and Nicosia, the theme 'failures' ranked first or second, whereas in Germany it is ranked 6th.

- In Nicosia the topic 'work-life balance' ranked second, but much lower in the other countries.

- The topic 'bad news' ranked 3rd in Utrecht; at the other sites it was ranked clearly lower

Discussion and Conclusion

Possible influences on the expectations include observations of health professionals; conversations with older medical students, friends, or family members; media reports, perceived stereotypes, and medical teaching experienced to date. These sources of influence come with both benefits and risks.

Findings of this study can be used to improve curricula and student guidance.

Take-home Message

Understanding the students' fears and concerns for their future profession is vital to improve curricula and student guidance.

9M1 (6208)

Date of Presentation: Tuesday 29th August
Time of presentation: 1600 - 1615
Location: Boisdale 2, Loch Suite, SEC

A Targeted Assessment Tool to Guide Coaching for GME Learners Struggling with Clinical Reasoning

Jessica Dreicer1, Andrew Parsons1, Karen Warburton1, Greg Young1

[1]*University of Virginia School of Medicine, Charlottesville, Virginia, USA*

Background

In the literature and our internal data, 25-33% of graduate medical education (GME) trainees referred for remediation are found to struggle with clinical reasoning. Identifying the specific clinical reasoning microskill these trainees are struggling with helps to facilitate targeted coaching to improve clinical reasoning in these trainees.

Summary of Work

We designed a tool to utilize a systematic process for assessing trainees who struggle with clinical reasoning. Our approach is grounded in the master adaptive learner model where expertise is developed through metacognition and self-regulated learning, a conceptual framework associated with improved clinical reasoning. In case-based think-aloud sessions, coaches utilize the tool to identify specific struggles with clinical reasoning microskills.

Summary of Results

Between 2016-2019, 57 out of a total of 820 (7%) trainees from 14 different Departments at our institution were referred for coaching. Clinical reasoning was identified as a primary or secondary deficit in 19/57 (33%) of referrals. 16/19 of these trainees underwent clinical reasoning remediation. Initial assessment with the tool revealed deficits in the following clinical reasoning microskills: hypothesis generation (12/16); data gathering (7/16); problem representation (14/16); hypothesis refinement (5/16); and selection of a working diagnosis (6/16). After implementation of coaching with the targeted exercises, learners were independently reassessed by their Clinical Competency Committee. The majority of

trainees improved their performance based on clinical evaluations. At last assessment, 74% (14/19) of trainees struggling with clinical reasoning were in good standing in their respective programs.

Discussion and Conclusion

For trainees struggling with clinical reasoning, this practical tool effectively identifies specific clinical reasoning microskills to target in coaching. The tool can be used with a variety of cases making it versatile for different specialties. Utilizing think-aloud methods, this tool aids in metacognition about diagnostic reasoning allowing for improved goal setting consistent with self-regulated learning.

Take-home Message

25-33% of graduate medical education learners referred for remediation are found to struggle with clinical reasoning.

Our tool aids in identification of struggles with specific clinical reasoning microskills

Identifying struggles with specific clinical reasoning microskills allows for utilizing individualized coaching exercises and may assist in successful remediation of graduate medication education learners.

9M2 (3843)

Date of Presentation: Tuesday 29th August
Time of presentation: 1615 - 1630
Location: Boisdale 2, Loch Suite, SEC

Evaluating the reliability of the MMI for specialist Sport & Exercise Physician trainee selection (2019-2021)

Kylie Fitzgerald1, Brett Vaughan1, Jane Fitzpatrick1

[1]*The University of Melbourne, Parkville, Australia*

Background

Evaluating selection methods informs best practice in specialist medical selection. Applicants undertake a Multiple-Mini-Interview (MMI) for trainee selection at the Australasian College of Sport and Exercise Physicians (ACSEP). The MMI marks achieved contribute 70% of the score used to rank candidates, thus they must achieve high marks to be successful. The ACSEP MMI ran face-to-face in 2019, then online from 2020 due to COVID restrictions and retained to increase equity of access and mitigate costs for Australasian candidates. We report the MMI reliability for 2019-2021 and describe the improvements made to support high stakes selection decisions and inclusivity to transform the future of selection for applicants to Sport & Exercise Medicine.

Summary of Work

A prospective observational design was used. Candidates participated in MMIs each September/October 2019-2021. Station themes were aligned with CANMEDs domains, which map directly to the ACSEP curriculum domains. Expected knowledge was assessed at CANMEDs entry to specialty level. All stations were developed by education and content experts together and reviewed annually, based on evaluation data of the previous year. Interviewers participated firstly in general MMI training in 2019, then online training session for their specific MMI station in 2020-21. Generalisability analysis evaluated reliability and internal consistency of each stations marking using Cronbach's alpha for each MMI iteration in 2019-2021.

Summary of Results

The seven-station 2019 MMI overall reliability was (α=0.43) resulting in a major review. Changes for 2020 included adding an extra station for the domain of cultural safety, a shift from two to one interviewers per station, and station specific training for interviewers. The 2020 overall reliability was (α=0.8), however several stations were reviewed to increase their internal consistency (stations 2,3 and 4, α<0.7). The 2021 overall reliability was α=0.84, with 7 of 8 stations reporting reliability of greater than α=0.7.

Discussion and Conclusion

Cyclical review and evaluation over three years resulted in substantial improvement in the reliability of the ACSEP MMI for high-stakes trainee selection. The “Marks” achieved by candidates likely reflect abilities across the curriculum domains, and may be utilised for high-stakes selection decisions.

Take-home Message

Specialist selection processes benefit from blending medical education expertise with content expertise in development, review and evaluation

9M3 (2128)

Date of Presentation: Tuesday 29th August
Time of presentation: 1630 - 1645
Location: Boisdale 2, Loch Suite, SEC

Stakes of assessments in residency: influence on current SRL and CRL in transitioning residents

Indra Ganesan1, Breana Cham2, Jamiu Busari3, Pim Teunissen4

[1]1 PhD student at School of Health Professions Education, Maastricht University. Paediatrician, KK Women's and Children's Hospital., Singapore, Singapore; [2]Genetic Counsellor, KK Women's and Children's Hospital, Singapore, Singapore; [3]School of Health Professions Education, Maastricht University. Consultant Paediatrician and Dean of Health Professions Education at the Horacio Oduber Hospital, Aruba, Aruba; [4]School of Health Professions Education and Professor of workplace learning in healthcare at Maastricht University, Maastricht, The Netherlands

Background

As assessments drive learning, the influence of the stakes of the assessments on self-regulated (SRL) and co-regulated learning (CRL) during residency and after residency is unknown. The answer to this is important as early career specialists need to continue learning independently to keep up with new knowledge in clinical practice.

Summary of Work

Methods

A constructive grounded theory methodology was utilized to explore the perspectives of eighteen early career specialists on the influence of stakes of assessments within residency program on their current SRL behaviors. The semi-structured interviewed were conducted and analysed in a reiterative fashion looking for emerging themes.

Summary of Results

We present our findings in two interrelated aspects of our enquiry. First, how the stakes of the assessments (high-stakes and low-stakes) influenced learning in residency and

second, how their studying and learning behaviors during residency morphed into different ways of learning as an ECP. With reiterative analysis, it became apparent that SRL was embedded in CRL in preparation for the various assessments in residency. For low-stakes assessments, the learner engaged in less CRL, taking cues from a few others. As stakes increased, the learner engaged in more CRL activities to prepare for these assessments. Secondly, CRL behaviours in residency had a knock-on effect in practice as early career specialists in: 1) developing clinical reasoning, 2) improving doctor-patient communication and negotiation skills, and 3) self-reflections and seeking feedback to deal with expectations of self or others.

Discussion and Conclusion

Our study supports the idea that the stakes of assessments within the residency program reinforces SRL and CRL behaviors with a continued longitudinal effect on learning after graduation from residency. In residents, self-regulated learning behaviour is best understood as part of a co-regulatory learning (CRL) process. Our study adds that co-regulated learning is occurring all the time. Learners take varying amounts of cues from others to regulate their learning.

Take-home Message

In residents, self-regulated learning behaviour is best understood as part of a co-regulatory learning (CRL) process.

With higher stakes of assessments, learners employ more CRL activities with peers and faculty.

CRL behaviours in residency continue into clinical practice.

9M4 (5944)

Date of Presentation: Tuesday 29th August
Time of presentation: 1645 - 1700
Location: Boisdale 2, Loch Suite, SEC

Implementation of a checklist for structuring ward rounds to improve healthcare teams' adherence to standard-of-care procedures

Sara Isabel Gironda Cuellar[1], Victoria Ando[1], Matteo Monti[1], Anne-Hélène Colleaux[1], Virginie Claivaz[1], David Gachoud[1]

[1]*Division of internal medicine, Lausanne University Hospital, Lausanne, Switzerland*

Background

Interprofessional ward rounds (WRs) represent central activities in residents' workday. It has been shown that residents might lack sufficient training and experience of WRs during undergraduate studies. This can lead to omissions and errors with potential negative impact on patient outcomes. The implementation of structured tools, such as checklists, could improve the WR process, increase patient safety by avoiding omissions and improve communication within the healthcare team as well as with patients.

Summary of Work

Based on literature review and standard-of-care (SOC) protocols, we developed a new approach to WRs built on four main pillars: 1) a checklist which structures the WR, lists key clinical items to address daily, and encourages dedicated patient time; 2) a prompting system to consolidate checklist use; 3) protected time to prepare for WRs; 4) personalized bedside white-boards to facilitate communication with patients. The checklist underwent an iterative multidisciplinary validation process. The final version includes 18 clinical items. Our project involves the implementation of a set of interventions supporting the introduction of a checklist to guide WRs with the aim to increase the number of SOC protocols and patient safety issues discussed by the healthcare team.

Summary of Results

The pre-implementation phase (February 2023) of our study based on 172 patient encounters showed significant variability in practice during WRs with a mean of 9/18 key

items omitted. These included items such as the evaluation of intravenous catheters, thromboembolism prophylaxis or the presence of pressure sores. Post-intervention data with a similar sample size will be collected 6 weeks after the implementation of our interventions (April 2023). Following our intervention, we expect the mean number of items discussed to increase by 3. We will be able to present the complete results at the AMEE conference in August 2023.

Discussion and Conclusion

We hypothesize that the interventions described, aimed at implementing a checklist to guide WRs, will increase the number of items discussed during WRs and increase the adherence to SOC protocols, potentially improving patient safety.

Take-home Message

WRs lack structure despite their critical role in decision-making process

Structured tools and interventions encouraging their use should increase adherence to SOC protocols and improve quality of care and patients safety

9M5 (2656)

Date of Presentation: Tuesday 29th August
Time of presentation: 1700 - 1715
Location: Boisdale 2, Loch Suite, SEC

Mental models during the feedback exchange between residents and preceptors: Using a macrocognitive lens

Zeenat Ladak1, Gabrielle N. Pelletier2, Manahil Shariff2, Rita Song2, Nur El huda Abu saris2, Xavier Penetrante3, Trinity Thai3, Deena M. Hamza2

[1]University of Toronto, Toronto, Canada; [2]University of Alberta, Edmonton, Canada; [3]Alberta Innovates High School Youth Researcher Summer Program, University of Alberta, Edmonton, Canada

Background

The implementation of Competency by Design (CBD) in postgraduate medical education across Canada aims to enhance training by fostering a personalized, learner-centered approach. The potential impact of CBD is disrupted by challenges and uncertainties during implementation, such as resident and preceptor roles and expectations. We examined the complex interactions during the provision and acquisition of workplace-based feedback to develop mental models that illustrate points of convergence and divergence between participant groups.

Summary of Work

Posters and email listservs were used to recruit participants from November 2019 - October 2021; 51 preceptors (n=25 traditional, n=26 CBD) and 94 residents (n=68 traditional, n=26 CBD). Through qualitative interviews, we utilized cognitive task analysis to capture complex cognitive processes of participants as they recalled how they engaged in the feedback exchange. We analyzed data through inductive thematic analysis to extract themes of the feedback process. We deductively mapped themes to macrocognitive functions (what) and processes (how) to describe how residents and preceptors think under complex conditions, in natural settings.

Summary of Results

Macrocognitive themes include functions (decision making, sensemaking, insight, complex learning) and processes (detecting problems, monitoring, managing risk, managing uncertainty, coordinating). Positive experiences involve all macrocognitive functions across both traditional and CBD curricula. The process of detecting problems is commonly identified in negative experiences, which compliments the recurrent identification of managing risks in positive experiences. Managing risks was also a recurrent theme in preceptors' negative experiences compared to residents'. There was little to no difference in macrocognitive themes between CBD and traditional curricula across participants.

Discussion and Conclusion

The preceptor and resident macrocognitive patterns from this study contribute to the existing literature exploring early impact of CBD. This study presents mental models as perceived differences between preceptor and resident roles and the potential impact on feedback exchange. Future directions include exploring the stability (and malleability) of mental models over time as CBD becomes embedded and integrated further in contexts.

Take-home Message

To achieve the potential impact of CBD, a culture shift is necessary for residents and preceptors to better understand each other's roles and expectations. This change in cognitive thinking is plausible if the system and innovation adapt alongside mental models.

Session 9N: Teaching and Facilitating Learning: Supporting Learners 2

9N1 (6609)

Date of Presentation: Tuesday 29th August
Time of presentation: 1600 - 1615
Location: Dochart 1, Loch Suite, SEC

Is the 'Educational Alliance' a Sufficient Framework for the Student - Supervisor Relationship When Conducting a Master Thesis in Medicine?

Jan Breckwoldt1, Michael Brenner2, Anja Nikola Weiss-Breckwoldt3, Flurin Condrau4

[1]University Hospital of Zurich, Zürich, Switzerland; [2]Kantonal Hospital Chur, Chur, Switzerland; [3]Ambulatorium Roemerhof, Zürich, Switzerland; [4]University of Zurich, Faculty of Medicine, Zürich, Switzerland

Background

Completing a master thesis (MT) is mandatory in many undergraduate curricula in medicine. To facilitate the MT process and to more effectively reach the learning goals related to science education in medicine, it could be helpful to provide a specific educational framework for guiding the supervisor-student relationship. Such a framework has not been published yet. An attractive model for this purpose is the 'Educational Alliance' (EA), which focusses on the 'clarity and agreement on (a) goals, (b) tasks and (c) relationship & roles'. This study investigated the views of students and supervisors to explore factors and supervisory approaches that can either facilitate or hinder the process of MTs. In a second step, we related these factors to the three components of the EA.

Summary of Work

We conducted separate semi-structured interviews with 20 students and 20 corresponding supervisors, after the MT had been accepted. The interviews included open questions on factors facilitating or hindering the success of the MT, and Likert-type

questions on overall satisfaction and supervision quality. We audio-recorded, anonymized and transcribed the interviews and then analysed them by qualitative content analysis.

Summary of Results

From the 40 interviews, related to 20 MTs, we extracted 469 comments and categorized these into the four main categories (a) 'Preparation', (b) 'Process', (c) 'Atmosphere', (d) 'Value of the MT'. Interviewees highlighted the importance of a careful preparation phase, clear expectations, a clear research plan, thorough and timely feedback, mutual agreement on timelines, and a positive working atmosphere. Each of these factors could be brought in line with the three components of the EA framework: agreement and clarity of goals, tasks, relationships & roles.

Overall satisfaction with the thesis and supervision quality was rated 'high' to 'very high' by students and supervisors.

Discussion and Conclusion

We propose the EA framework is a useful guidance for students, supervisors, and the university towards conducting successful MTs in medicine. Based on the findings, we provide specific recommendations for students, supervisors, and the university.

Take-home Message

The Educational Alliance is a valuable framework to support a successful Master Thesis process.

9N2 (6420)

Date of Presentation: Tuesday 29th August
Time of presentation: 1615 - 1630
Location: Dochart 1, Loch Suite, SEC

Learners-as-Educators: Education through comprehensive community outreach clinics

Naira Chobanyan[1], Arie Szeinfeld[1], David Jetha[1], Taylor Newsome[1], Grant Schroeder[1], Earl Best[1], Pedro Delgado[1]

[1]*American University of the Caribbean School of Medicine, Cupecoy, Sint Maarten (Dutch part)*

Background

The Breast Screening Project arose from identifying limitations in the data of breast pathology of Sint Maarten women. Clinical Medicine Fellows (Fellows), recent graduates of AUC awaiting residency placement, organize and direct student-run clinics under the guidance of a board-certified oncologist. This learners-as-educators model prepares Fellows to sharpen both teaching and leadership skills, as they educate medical students to measure vital signs, conduct patient interviews, obtain informed consent, perform blood draws, present patients, and document patient-encounters through direct supervision.

The project is multifactorial; an educational tool to cascade medical knowledge from Fellows to medical students and to collect data for a prospective study. In collaboration with Sint Maarten's Ministry of Health, our study aims to analyze risk factors and prevalence of breast abnormalities to guide screening protocols for the local population, akin to the U.S. Preventative Services Task Force guidelines.

Summary of Work

Fellows train medical students for roles on clinic day through stations including informed consent, breast and health questionnaire, blood glucose, cholesterol, vitals, education of breast cancer risk factors, and scribing the oncologist's breast examinations. Qualitative data collected from pre- and post-clinic surveys from students assessing comfort levels within procedural skills (PS), patient interview skills (IS), and clinical knowledge (CK) aims

to identify key learning objectives fortified through engagement in the clinical outreach project. Grade 1 signifies not comfortable at all; 2 signifies intermediate comfort; 3 signifies very comfortable. Concurrently, patients attend a brief, student-run seminar outlining risk factors for breast cancer, recommendations for prevention, and assessment of personal risk using the Gail model.

Summary of Results

Pre-event surveys (n=69) average PS: 2.39, IS: 2.86, and CK: 2.47. For post-event surveys (n=69) average comfort with PS: 2.73, IS: 2.95, and CK: 2.72.

Discussion and Conclusion

AUC has identified community-based research as an invaluable tool for medical education through tutelage between Fellows, medical students, and the community; all benefit from the learning experience provided by these outreach clinics. Qualitative data demonstrates students' comfort with all 3 categories improved between pre-clinic and post-clinic grading as per student surveys. This improvement gives credence to the learners-as-educators learning model.

Take-home Message

Learners-as-educators is an invaluable teaching model for young physicians-in-training and medical students.

9N3 (4795)

Date of Presentation: Tuesday 29th August
Time of presentation: 1630 - 1645
Location: Dochart 1, Loch Suite, SEC

Critical Review of the Evaluation Process of the Innovative Activity "Interview With A Health Professional"

Álvaro Díez-Revuelta[1], Inés Fernández-Linsenbarth[1], Rosa M. Beño-Ruiz-de-la-Sierra[1], Antonio Arjona-Valladares[1], Natalia Jimeno-Bulnes[1]

[1]*University of Valladolid, Valladolid, Spain*

Background

The activity "Interview with a healthcare professional" is part of the teaching innovation project "Humanising healthcare (humanizAS)", is carried out by second-year medical students in the subject of psychology, and accounts for 10% of its final mark. The content of the interviews is related to obtaining a more “humane” doctor-patient interaction. Students should present the result in class and deliver a document including the main questions and answers, a critical reflection and a "phrase to remember". Our satisfaction surveys have been highly rated by students and professionals (4.4 and 4.9 scores out of 5, respectively).

Summary of Work

After three years of experience, we believe it is important to analyse and critically review the way in which the activity was carried out and assessed. The main dimensions of evaluation were: 1) quality of the questions, 2) quality of the critical commentary, 3) bibliography use, and 4) formal aspects of the text. A total of 474 students in 93 working groups (33 in 2020, 29 in 2021 and 31 in 2022) interviewed 78 experienced professionals (mainly family doctors 20.4%, psychiatrists 18.3% and paediatricians 6.5%). The interview was mainly conducted by videoconference (66.7%).

Summary of Results

The average final mark obtained by students was 8.5 out of 10 points. Our statistical study revealed significant differences between years for: 1) the way the activity was carried out

($\chi 2=34.4$, $p<0.001$), due to the gradual opening to face-to-face interviewing after COVID-19 restrictions; and 2) the final evaluation mark ($F=5.2$, $p=0.008$), higher in 2020 and 2021, compared to 2022, mainly in quality of questions, bibliography, and formal aspects ($F=17.0$, $p<0.001$; $F=5.5$, $p=0.005$; $F=8.6$, $p<0.001$, respectively).

Discussion and Conclusion

After three editions of the activity, both the rating and the satisfaction of the medical students was high. However, we envisaged ways to improve the stability of the evaluation (e.g., by including more detailed criteria through rubrics), as well as the possibility of including new criteria (e.g., a rating by the interviewed professional).

Take-home Message

An innovative activity such as "Interview with a healthcare professional" requires periodic re-evaluation of its elements. However, we believe it has great potential for application in a variety of health education contexts.

9N4 (5365)

Date of Presentation: Tuesday 29th August
Time of presentation: 1645 - 1700
Location: Dochart 1, Loch Suite, SEC

Reflect to interact – Fostering medical students´ communication competence through reflection-focused e-learning

Laura Janssen1, Kristina Schick1, Tiziana Neurohr1, Sylvia Irene Donata Pittroff1, Sabine Reiser2, Laura Schacht2, Johannes Bauer2, Pascal O. Berberat1, Martin Gartmeier1

[1]Technical University of Munich, School of Medicine, TUM Medical Education Center., Munich, Germany; [2]University of Erfurt, Educational Research and Methodology, Erfurt, Germany

Background

Self-reflection and e-learning are promising teaching approaches in medical education. This study examined how reflection processes can be promoted in an e-learning course to foster learning, considering the characteristics of online learning environments.

Summary of Work

We developed three didactically different variants of an e-learning course on clinical communication with different proportions of reflection tasks and compared students´ reflections on course content and their own learning processes. 114 medical students in their first clinical year completed one of the variants video modelling (VM, n=39), video reflection (VR, n=39) or a variant merging both approaches (VMR, n=36). Each student wrote a total of nine reflections at three occasions embedded in the course, based on the same guiding questions. Students´ levels of reflection were measured using an adapted version of the REFLECT rubric (scale 0-18). Results were analysed by ANOVA and post-hoc tests.

Summary of Results

Students´ levels of reflection improved significantly in VM, $F(1{,}58, 60{,}00) = 23.96$, $p < .001$. There were no statistically significant differences in the variants VR, $F(1{,}65, 62{,}69) = 0.133$, $p = 0.836$ and VMR, $F(1{,}78, 62{,}55) = 1.40$, $p = 0.253$. While students of all variants achieved

good levels of reflection, beyond the descriptive level, students in the variant VM developed the highest reflective ability (M=14.22, SD=2.23) compared to VR (M=13.56, SD=2.48) and VMR (M=13.24, SD=2.21). There was a statistically significant interaction between time and variant, Greenhouse–Geisser $F(3.65, 202.51) = 5.98$, $p < .001$, partial $\eta^2 = .33$.

Discussion and Conclusion

In our comparison of three didactically different e-learning variants, students reached the highest levels of reflection in the learning environment based on video modelling. They significantly increased their ability to reflect. The reflection prompts developed for the present study demonstrably promote high-quality reflections within a short time in all variants.

Take-home Message

Our study offers a teaching strategy proved to foster good levels of reflection. The developed reflection prompts can be embedded easily into various e-learning variants and enable high-quality reflections even if little teaching time is available.

9N5 (4235)

Date of Presentation: Tuesday 29th August
Time of presentation: 1700 - 1715
Location: Dochart 1, Loch Suite, SEC

Being free to fail: a novel approach to developing confidence and competence in practical skills

Sarah Aynsley[1], Nazim Ali[1], Rebecca MacKenzie[1]

[1]*Keele University, Stoke-on-Trent, UK*

Background

Medical curricula aim to support the development of critical thinking and problem solving skills However, whilst we provide hands-on experience for teaching scientific and clinical skills, the approach can be quite didactic leading students to develop a sense of dependency rather than attempting to work through a problem. This study investigated a novel approach to developing skills, by providing an opportunity to use techniques already taught and new skills in response to a challenge.

Summary of Work

Central to the design was creating a supportive space where students could solve problems without worrying about failing. Students were provided with a brief clinical history, the equipment needed and basic instructions. To complete the task they had to apply practical skills already taught- blood smear, drug dilution and microscopy and 3 new skills not previously taught – using a micropipette, urinalysis, using a colorimeter. For evaluation purposes, students were asked to rate their confidence in practical skills and their competence in each of the specific skills before and after the session.

Summary of Results

Before the session self-reported confidence for the cohort was mixed, 68% - unconfident. This increased significantly with all students expressing at least some confidence and 79% quite or very confident. Self-reported competence in all skills increased; e.g. pipetting 58% to 94%, urinalysis 36% to 90%, microscopy 88% to 92%. Analysis of free text comments indicated that students found the practical an overwhelmingly positive learning

experience enabling them to utilize problem solving skills, think independently and identify their own weaknesses.

Discussion and Conclusion

This approach puts the emphasis on students to assimilate information, apply it to a given task and learn from mistakes. Whilst some initially found this approach to be unnerving, all expressed positive statements around the benefits of allowing them the space to try and fail. Being given the opportunity to apply and learn skills independently allowed students to self-identify weaknesses and enhanced their understanding of the 'why' of the skill.

Take-home Message

Providing students with a challenge in a safe space allows them to feel more confident to be independent thinkers and approach skills learning with an inquiring and inquisitive mind.

9N6 (6152)

Date of Presentation: Tuesday 29th August
Time of presentation: 1715 - 1730
Location: Dochart 1, Loch Suite, SEC

Implementation of the Developmental SSM (student selected module) for struggling learners in undergraduate medical education.

Keiron Lord[1], Kat Telford[1], Ifunanya Ikhile[1], Isaac Barnes[1]

[1] *University of Nottingham, Nottingham, UK*

Background

Remediation is an essential part of medical education, yet successful remediation remains a challenge, not only for struggling learners, but educators and institutions alike. Globally, key stakeholders in remediation grapple with lack of resources.

Whilst there has been growing focus on remediation in recent years, what remains lacking is a theoretical basis for remediation and an understanding of how remediation within the curriculum.

Without intervention, struggling learners become struggling physicians, carrying through maladaptive learning strategies into post-graduate life.

Remediation requires an individualised approach. However common themes across the cohort can be fedback and targeted within the curriculum.

We introduce the '**Developmental SSM'**, a placement dedicated to remediation – drawing remediation out of the Hidden Curriculum into the forefront of the Intended Curriculum. We consider its effectiveness in aiding struggling learners, based not only on subsequent exam performance, but on students' perception of preparedness prior to resit exams.

Summary Of Work

SSM placements are situated between mainsit & resit exams during the clinical phase of the degree, allowing students to explore niche interests. Consequently, resitting students must balance remediation around SSM time. This creates unnecessary cognitive burden resulting in heightened student anxiety.

The developmental SSM addresses this issue providing an optional module for remediating students, instead of a traditional SSM. The Developmental SSM incorporates both content and strategy teaching e.g. exam technique workshops.

Summary Of Results

Results showed **90%** of students who engaged with the developmental SSM **passed** their resit exam.

100% of students either **agreed or strongly agreed** that they felt **better prepared** following the developmental SSM

All aspects of the developmental SSM were viewed as **constructive** by students.

Discussion And Conclusion

Medical literature shows that remediation should involve a series of prescribed, officially sanctioned episodes of additional corrective training & learning prior to repeat assessment (Kalet et al 2019).

Engagement with the developmental SSM not only improved students subjective feelings of preparedness for the resits, but also resulted in improved student performance, with 90% of students taking part passing the resit.

Take Home Messages

We believe that remediation should not be an assessment afterthought, but an imbedded element of the curriculum cycle. The '**Developmental SSM'** displays such course commitment to remediation.

Session 90: Designing and Planning Learning 2

901 (1885)

Date of Presentation: Tuesday 29th August
Time of presentation: 1600 - 1606
Location: Carron 1, Loch Suite, SEC

Preparation for Medical Students going Abroad for Internship: Learning to Interview Patients in Different Languages and Cultures through OSCE

Hao-Yu Chen1, Hung-Chen Chen1, Yu-Mei Dai1, Che-Wei Lin 1, Ting-Yu Lin2

[1]Center for Education in Medical Simulation, Taipei Medical University, Taipei, Taiwan; [2]Taiwan ICDF, Taipei, Taiwan

Background

Medical students need to learn about how to take patients' medical history, perform physical examination (PE), conduct effective communication and show empathy during their training. In Taiwan, medical students have opportunity to abroad on their fifth grade of medical school for internship. However, some students are in lack of confidence in their English ability during their time in other country, so we arrangement an innovative course to assist them.

Summary of Work

We design a Long Station OSCE, with 6 stations, and 15 minutes each. Students need to conduct an inquiry of patients' medical history and PE for Standardized Patients (SP). Each SP is staffed by native English speakers with different colors and races. After each station, a 15-minute medical notes taking and differential diagnosis are required.

We use The Consultation and Relational Empathy (CARE) Patient Feedback Measure (Mercer SW. et al. ,2005) to understand the patients' feeling and USMLE Spoken English Proficiency (SEP) Scale to evaluate students' English proficiency in communication.

Summary of Results

CARE Measure Scale scored average at 3.8 out of 5. The qualitative feedback from the SPs was that students are polite and speak English fluently, but they were a bit nervous and rusty.

SEP Scale scored each categories average at 2.6 out of 3, which once again proves that medical students can speak English well.

At note taking for differential diagnosis, they scored average at 82 out of 100, which shows that students can collect plausible diagnosis with current medical knowledge.

Discussion and Conclusion

1. This pioneering approach applys both formal and informal curriculum strategies. We adopt traditional skills with personalized interpersonal strategies, which allows students to practice communication skills through OSCE, and receives personalized feedback from each SP and teacher.

2. Through the course, we can see that medical students hold English proficiency above the average level. "Idioms" and "cultural difference" might be the key issues for them.

Take-home Message

This revolutionary curriculum extends OSCE from a testing tool to an educational experience that helps students to be more perceptive and skillful in dealing with patients with different backgrounds.

902 (2722)

Date of Presentation: Tuesday 29th August
Time of presentation: 1606 - 1612
Location: Carron 1, Loch Suite, SEC

Z Generation ！Research on learning motivation and work values of new-generation physicians.

Chih Hung Chen1, Ling-Yin Kuo1, Chin Wei Chen1, Chia-Te Kung1

[1]*Kaohsiung Chang Gung Menorial hospital, Kaohsiung, Taiwan*

Background

The new generation of physicians is living in an environment of advanced digital information. Compared with the previous generations, they have unique values, ability development, interpersonal interaction, and solution mode. This research project hopes to understand the learning motivation and work values of the new generation of highly educated physicians.

Summary of Work

This research invite the new generation of physicians, relevant scholars, teachers, and enterprise administrators to conduct focus group interviews to form a conceptual composition of the new generation of physicians' learning motivation and work values, and then according to PGY to account for Taiwan's northern, central, and Self-compiled questionnaires are distributed in South and East proportionately, total number of questionnaires is expected to 500, and descriptive statistics, independent sample single-factor multivariate variance analysis, multivariate regression analysis.

Summary of Results

Result show that to arouse the learning motivation of the new generation of doctors, we must pay attention to their learning autonomy, attract their attention, and hope to apply what they have learned; and the work they agree with Values are maintaining space for learning and growth, liking teamwork, maintaining work-life balance, etc. The work values they agree with are keeping room for learning and growth, liking teamwork, maintaining work-life balance.

Discussion and Conclusion

The way the new generation interact with others and establish a network is through virtual social networks, such as: Facebook, Instagram.When encountering a problem, look for answers through Internet messages.Known as the "multi-tasking" generation, although they handle multiple tasks at the same time, they have limited attention span and are easily distracted.The learning of the new generation of young people is very pragmatic , and they prefer learning methods rich in action, experience and practice.At work, they are independent and flexible, and they know that they have to work hard. Just prefer a relaxed work environment because they want to maintain a work-life balance.

Take-home Message

If the individual's interests, abilities, and characteristics can be consistent with the organizational environment, it is human environment adaptation, which will make the individual feel satisfied, stable, and have better results; may cause injury. Therefore, understanding them is of positive benefit to clinical teaching and personnel training.

903 (6021)

Date of Presentation: Tuesday 29th August
Time of presentation: 1612 - 1618
Location: Carron 1, Loch Suite, SEC

Challenge of Teaching Rational Drug Use (RDU) for Generation Z!

Chutima Cheranakhorn1, Komsai Suwanno2, Sorawat Sangkaew2, Boonyarat Warachit2

[1]Hatyai Medical Education Center, Hatyai Songkhla, Thailand; [2]Hatyai Medical Education, Hatyai, Thailand

Background

Rational use of medicine was integrated into the core curriculum of undergraduate training because it directly relates to patient safety and quality of treatment. However, teaching this topic is challenging, especially for the unique learning styles of Generation Z students. Therefore, this study aims to evaluate the student's achievement and perspective on a new teaching module.

Summary of Work

Fourteen common RDU topics, such as sore throat, acute diarrhea, acute febrile illness, polypharmacy, RDU hospital, medical error, etc., were modified to a well-constructed teaching OSCE (objective structured clinical examination). The new teaching module is designed to promote generation Z students' motivation and engagement through three strategies. First, Gamification concept, students are divided into five to seven team members. The team earns points after completing each station task, and the highest score team wins the reward. Second, digital interactive enhances learning by using kahoot®, electronic visual-based content, and online resources. Third, the learning process was a brief scenario and shortcut within 15 minutes per station, interactive problem-solving, and immediate feedback. Online pre-and post-test multiple-choice questions and questionnaires were used to assess the student's knowledge and perspective. Long-term knowledge retention was evaluated after six months period.

Summary of Results

Thirty 6th-year medical students responded to both pre-and post-test (75% of all class attendants). The mean post-test score was significantly higher than the pre-test ($p<0.001$, mean difference score 1.83). The long-term retention means score (12 students responded to all three tests) was higher than the pre-test ($p <0.001$) and immediate post-test ($p = 0.04$). All the students had a positive attitude toward the new teaching method with a score of 3.8 (rating 0-4), learning material at 3.9, varieties of topics at 3.8, and benefit for clinical use at 3.8 scores.

Discussion and Conclusion

The new module of RDU teaching, customized for the nature of generation Z students, shows the effectiveness of achieving learning outcomes and satisfaction. Surprisingly the mean score of 6 months post-test was significantly higher than the immediate post-test. The hypothesis was that students developed self-directed learning, the essential key for continuous professional development.

Take-home Message

The challenge in teaching RDU for generation Z students is adjusting methods to their unique attribute

904 (2527)

Date of Presentation: Tuesday 29th August
Time of presentation: 1618 - 1624
Location: Carron 1, Loch Suite, SEC

Widening access to ultrasound-guided peripheral cannulation for Foundation Year doctors

Steven Ellis[1], Ruth Perkins[1], Hasanali David Walji[1]

[1]*University Hospitals Coventry and Warwickshire NHS Trust, Coventry, UK*

Background

The understanding of safety around invasive procedures evolves in response to new techniques, clinical pressures and learning from patient safety events.

The National Safety Standards for Invasive Procedures 2 was released in January 2023 highlighting the goals of improving patient safety, better team working and enhanced efficiency.

There has been an increasing shift towards the use of ultrasound guidance to improve patient safety for invasive procedures, such as central line and chest drain insertion. Junior doctor's first experience with ultrasound-guided procedures is often while learning these invasive procedures.

Introducing early access to simple ultrasound-guided procedures, such as cannulation, can increase confidence of ultrasound use, decease future procedural learning curves and improve patient safety.

Summary of Work

The aim of this project is to understand the current exposure and desire for foundation doctors to learn simple ultrasound-guided procedures such as cannulation.

Summary of Results

We surveyed Foundation Doctors at a university teaching hospital. Only 4% of respondents had formal exposure to ultrasound training at medical school. Concurrently, 75% of these

doctors had to escalate peripheral access issues in the month preceding. In view of this poor exposure prior to qualification and lacked exposure during training, 98% of respondents expressed an interest in attending an ultrasound course; to maximise confidence, minimise delay in patient care and improve efficiency.

Discussion and Conclusion

Developing an efficient service and improving patient safety is often seen as a top-down model, despite much of the direct patient interaction and care being delivered by the more junior staff. The results of our survey highlight the desire from the most junior medical staff to improve their technical skills as a platform to develop and provide better and more efficient care.

Services need to provide more robust training on emerging technologies and adoption of safer approaches. We aim to roll out an organisational-wide ultrasound course and evaluate the learner's confidence and preparedness to safely undertake procedures.

Take-home Message

Widening access of ultrasound skills will improve patient care as it will translate to safer and more timely interventions. The introduction to the principles of safe procedural skills at an early stage should provide robust practices for doctors progressing in training.

905 (6063)

Date of Presentation: Tuesday 29th August
Time of presentation: 1624 - 1630
Location: Carron 1, Loch Suite, SEC

Empowering Medical Students with AI Literacy: A Curriculum Development Journey

Ming-Yuan Huang[1]

[1]*Department of Emergency, MacKay Memorial hospital, Taipei, Taiwan*

Background

Medical students need AI literacy to apply AI in their future clinical practice. However, limited AI education can lead to a lack of understanding of key issues such as transparency, accountability and bias. A comprehensive AI education must include ethics and social implications and prepare students to develop technically sound and socially responsible solutions.

Summary of Work

A 16-hour AI curriculum for medical students was designed by identifying learning objectives, selecting content, incorporating experiential learning opportunities, teaching ethical considerations, and encouraging collaboration. The course includes lectures, project workshops and review sessions. Students work with interdisciplinary experts on AI projects to consolidate their knowledge, while feedback sessions focus on critical evaluation. Student feedback has been used to improve the course.

Summary of Results

Two batches of MacKay Medical College students receive AI course in 2020 and 2021. 23% of second-year medical students took the course in the first batch. Feedback from the first batch prompted the course to be modified for the second iteration, including replacing the dialectic component with case studies to illustrate AI technologies, adopting existing AI code suites to reduce the programming burden, and inviting healthcare providers to collaborate on AI projects. The curriculum has also been modified to target fifth-year medical students, who will reflect more deeply on the impact of their AI projects on real-

world clinical rotations. In the 2021 academic year, 33% of fifth-year medical students participated and rated the course highly. Student feedback after the second iteration demonstrated a significant level of AI literacy.

Discussion and Conclusion

AI education faces challenges such as technical complexity, time and resources constrains, lack of standardization, and unfamiliarity with ethical and regulatory considerations. Our approach suggests using strategies such as specialized training programs, hands-on experience, encouraging collaboration, using case studies, and addressing ethical and regulatory considerations to educate medical students about AI. A comprehensive approach that includes both the technical and practical aspects of AI, as well as its potential risks and limitations, can be effective.

Take-home Message

The article recommends the use of specialized programs, hands-on experience and case studies to provide medical students with a comprehensive approach to both the technical and ethical aspects of AI.

906 (2449)

Date of Presentation: Tuesday 29th August
Time of presentation: 1630 - 16365
Location: Carron 1, Loch Suite, SEC

Improving essential qualities in medical students through in-person and online art-observation experiences

Schoen Krusel, Sarah Getch2, Marissa Roffler3, Anshul Kumar4

[1]Texas Tech University Health Sciences Center, Lubbock, USA; [2]Kansas City University, Kansas City, USA; [3]Rockhurst University, Kansas City, USA; [4]MGH Institute for Health Professions, Boston, USA

Background

Medical education is challenged to develop curriculum that addresses ambiguity, empathy, and perspective-taking. Kansas City University (KCU) has developed a required art-based curriculum for all first-year medical students to address this need. Within this course, students use art observation and the Visual Thinking Strategies (VTS) question framework to explore interprofessional collaborative practice, ambiguity in healthcare, and perspective-taking. The purpose of this study was to examine if the art-based curriculum was associated with changes in tolerance for ambiguity, perspective-taking, and empathy in medical students between in-person, emergency remote, and planned remote sessions.

Summary of Work

794 first-year medical students from two campuses participated in a two-hour art observation session where VTS was used to prompt discussion. All participants were surveyed pre- and post-art observation activity in tolerance for ambiguity, empathy, and perspective-taking. A linear mixed effects regression model was used to measure pre/post changes for each learning modality (in-person, emergency remote, planned remote).

Summary of Results

The two-hour art observation activity using VTS was associated with an increase in tolerance for ambiguity of 0.19 (95% CI: 0.15 to 0.23) average TFA scale points. We observed no difference in outcomes across academic years, museums, emergency remote, or planned remote experience. We did not detect significant differences in either perspective-taking or empathy.

Discussion and Conclusion

We have developed curriculum that improves qualities that are essential for practice in complex and evolving health systems independent of learning modality (in an art museum, emergency remote teaching, or planned remote teaching), creating an opportunity to engage with students and programs across the spectrum of health professions education independent of location. Providing access to educational programming that addresses essential qualities and behaviors of healthcare providers has the potential to improve patient outcomes through team-based healthcare and interprofessional collaborative practice.

Take-home Message

A remote VTS activity produces comparable outcomes to changes in ambiguity tolerance as the in-museum setting.

A live, online visual arts activity can serve as a model IPE event to bring learners across the health professions together to explore qualities that are essential of strong, collaborative multi-disciplinary teams.

907 (6614)

Date of Presentation: Tuesday 29th August
Time of presentation: 1636 - 1642
Location: Carron 1, Loch Suite, SEC

Medical Curriculum Development: Electives implementation and students satisfaction

Latifa Lassoued1, Zahra Kmira2, Amel Khsiba3, Samia Tilouch4, Imen Chabchoub5

[1]Université de Sousse, Faculté de Médecine de Sousse, Hôpital Farhat Hached, Service de Gynécologie Obstétrique, Centre Pédagogique, Sousse, Tunisia; [2]Université de Sousse, Faculté de Médecine de Sousse, Hôpital Farhat Hached, Service d'hématologie, Centre Pédagogique, Sousse, Tunisia; [3]Université de Sousse, Faculté de Médecine de Sousse, Hôpital Farhat Hached, Sousse, Tunisia; [4]Université de Sousse, Faculté de Médecine de Sousse, Hôpital Farhat Hached, Service de Pédiatrie, Centre pédagogique, Sousse, Tunisia; [5]Université de Sousse, Faculté de Médecine de Sousse, Hôpital Farhat Hached, Service d'oncologie médicale, Centre pédagogique, Sousse, Tunisia

Background

The elective courses represent a new experience at the Faculty of Medicine of Sousse-Tunisia, imposed by the accreditation guidelines but above all launched with enthusiasm by the faculty.

Students and teachers find a space reserved for the deepening of a theme, a technique, the expression of a curiosity and an occasion to customize learning experiences.

Summary of Work

Our institution offers 34 electives to students in year 4 and 5.

An observational study was conducted to assess the 5th year students' satisfaction (n=221) with electives through a web-questionnaire sent at the end of the academic year 2021-2022.

Summary of Results

The participation rate was of 93%, which shows the students interest in electives. The rate of satisfaction rate was of 86.4% encouraging to continue this experience with more enthusiasm.

The awareness of the electives purpose, the availability of the needed learning resources and students and tutors commitment were the points of strength of electives with a satisfaction rates exceeding 80%.

The workload and the evaluation methods were the least satisfactory and needed to be improved with satisfaction rates of 59% and 70% respectively.

Discussion and Conclusion

To improve the students' satisfaction regarding electives in our faculty of medicine, we revised the electives learning outcomes in terms of targeted competencies and professional skills, adjusted the workload by reviewing learning supports and references and encouraged reporting and reflective practices as part of assessment strategy.

Take-home Message

- Electives Implementation and conduct were enjoyable experiences for Faculty and students
- It can draw the road between learning and future professional activity

908 (6483)

Date of Presentation: Tuesday 29th August
Time of presentation: 1642 - 1648
Location: Carron 1, Loch Suite, SEC

A quick screening method for an overcrowded pre-clerkship curriculum

Jiratchaya Loypipon1, Nattacha Srithawatpong1, Chanya Mittrakulkij1, Artima Songaurailam1, Danai Wangsaturaka1

[1]*Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand*

Background

Since Abrahamson first described “curriculomegaly” or “curriculum hypertrophy” in 1978, this disease is still a pandemic in medical schools, particularly in the pre-clerkship years. Sometimes, it also causes morbidity for those trying to cure it. To promote student well-being at the Faculty of Medicine, Chulalongkorn University, the extent of curriculomegaly was evaluated in a multidisciplinary pre-clerkship curriculum (Year 1-3).

Summary of Work

All clerkship students (Year 4-6) were invited to identify the degree of the overcrowded curriculum in 13 pre-clerkship disciplines using the 7-point rating scales ranging from extremely inadequate to extremely excessive. The participants were classified into four groups according to GPAX. The Kruskal-Wallis test was used to compare the responses between the four groups.

Summary of Results

The response rate was 84.12% (768 out of 913 students). The following disciplines are the most excessively taught: biochemistry (47%), embryology (41%), and cell biology (39%). Whilst, the disciplines most inadequately taught in the curriculum are pharmacology (15%), physiology (14%), and laboratory medicine (12%). For each of the 13 disciplines, there is no statistically significant difference between the perception of the four groups of students who had various academic performance.

Discussion and Conclusion

The perception of curriculomegaly is independent of academic performance - not visible only by students with lower GPAX. This may be indicative of systemic causes. The disciplines with the most severe perceived hypertrophy may have less clinical relevance themselves or students have been in a clinical environment where these basic sciences are underappreciated.

As this study only depicts the perception of the learners, our medical school then establishes a physician-scientist committee to examine all pre-clerkship content with support from a group of recent graduates. This committee will also align the pre-clerkship curriculum with the national professional standards. These are to provide more comprehensive views from stakeholders.

Take-home Message

We recommend using a quick and simple screening tool as an initial step in managing curriculum hypertrophy, an ever-lasting pandemic in medical schools.

909 (6562)

Date of Presentation: Tuesday 29th August
Time of presentation: 1648 - 1654
Location: Carron 1, Loch Suite, SEC

Place based health professions education as a "whole-of-society" engagement strategy

Tomlin Paul1, Aimable Uwimana1, Olivia Clarke2, Callixte Cyuzuzo 1, Abebe Bekele1

[1]University of Global Health Equity, Kigali, Rwanda; [2]University of Global Health Equity, Kigali, Rwanda, Kigali, Rwanda

Background

The University of Global Health Equity (UGHE) is focused on building capacity among health professionals for transforming health services to deliver more equitable, quality care for all. Its two flagship training programs, the Masters of Science in Global Health Delivery (MGHD) and the Bachelor of Medicine, Bachelor of Surgery/MGHD are delivered largely in a remote rural district in Rwanda. This context recognizes and applies the multi-dimensional aspect of place-based education. The approach seeks joined-up action across many sectors ,with all actors working together, recognizing and having respect for each other's contributions with the university providing coordination through a coherent plan for curriculum delivery. We examine the place-based strategy from a “whole-of-society" perspective looking at relationships with multiple stakeholders.

Summary of Work

The authors reviewed partnerships across the University connected to the delivery of its academic programs and identified the range of partnerships within a whole-of-society framework – civil society, community actors and private sector.

Summary of Results

UGHE’s flagship programs have been anchored across a wide range of partnerships. In support of academic program delivery, the university benefits from 45 signed MOUs with wide ranging institutions across government, private sector and NGOs. Thirty-five (71%) of these are directly connected to academic delivery. UGHE’s community engagement is

driven through a Community Advisory Board which brings civil society to the table. Partnerships with private sector and NGOs have also fostered entrepreneurial and community development projects. Such engagement integrates with teaching and learning as seen in the Community Based Education (CBE) for medical students, the relationship with District Hospitals and participation in community development activities such as the monthly Umuganda. The place-based approach therefore fosters multi-stakeholder engagement.

Discussion and Conclusion

The University of Global Health Equity's academic programs operate within a place-based strategy which employs a relationship building process with multiple stakeholders and partners consistent with a whole-of-society approach.

Take-home Message

We should take advantage of a whole-of-society approach to build out place-based education.

9010 (1944)

Date of Presentation: Tuesday 29th August
Time of presentation: 1654 - 1700
Location: Carron 1, Loch Suite, SEC

Good start, Go faster : making the move from preclinical to clinical years

Amorn Sankhaanurak1, Piti Phloenchaiwanit1

[1]*Medical Education Center, Chiangrai Prachanukroh Hospital, Chiang Rai, Thailand*

Background

The transition period between the preclinical and clinical years is a significant challenge for medical students. Several important activities should be made available to help them with their academic growth.

Summary of Work

We created five workshops for medical students to develop basic clinical skills and assessed them with game-based formative evaluation.The workshops covered a range of topics, such as simulated patient scenarios for practicing history-taking and physical examination, procedures skill like electrocardiograms, arterial blood gasses, injections techniques, and needle aspiration using mannequins, bedside laboratory testing, basic life support (BLS), and workshops with senior medical students. Finally, we used a game-based scenario to evaluate the medical students' performance. The assessment consisted of a quiz in which students were eliminated as they went along, similar to a tournament. The final winner was selected based on their performance in the final test, which was a simulation of a real-life case scenario.

Summary of Results

In this activity, 43 fourth-year medical students participated, and 58% of them answered a survey. The three most preferred workshops are procedural skills, BLS, and workshops with senior medical students. 24% of the students expressed a desire for more time to be spent on each activity, especially the procedural skills workshop. Although the game-based formative assessment is great, some students (16%) didn't like the knockout-style because they couldn't participate up until the final exam. Procedural skills and BLS workshops had a

strong correlation with student satisfaction and new knowledge acquisition (r=0.88 and 0.82 respectively) but workshops with senior medical students had the least correlation (r=0.59).

Discussion and Conclusion

Activities focused on procedural skill, basic life support, and simulated patient scenarios allows students to apply their knowledge and gain practical experience in a controlled environment before transitioning to real-world practice. The other hand, workshops with senior medical students may not provide the same level of hands-on practice and simulation. The learning outcome will be improved by entering the clinical year with confidence and preparedness.

Take-home Message

A well-designed curriculum incorporating activities focused on hands-on practice can effectively prepare students for the transition from preclinical to clinical years.

9011 (2342)

Date of Presentation: Tuesday 29th August
Time of presentation: 1700 - 1706
Location: Carron 1, Loch Suite, SEC

Evaluation of educational needs of students of 5,5 – years Pharmacy programme

Jan Sobczyński1, Aleksandra Szopa1, Kamil Torres2, Agnieszka Ludwiczuk3

[1]Department of Clinical Pharmacy and Pharmaceutical Care, Medical University of Lublin, Lublin, Poland; [2]Chair and Department of Didactics and Medical Simulation Medical University of Lublin, Lublin, Poland; [3]Department of Pharmacognosy with the Medicinal Plant Garden, Medical University of Lublin, Lublin, Poland

Background

The first OSCE exam for Pharmacy students will be introduced in Medical University of Lublin in the spring semester of 2027. In order to assess the content authenticity of the planned OSCE exam and to design a proper exam blueprint, Pharmacy students' educational needs were determined.

Summary of Work

A two-stage approach was employed. Firstly, a small group of experienced pharmacists working in both community and hospital pharmacies was interviewed. 8 open-ended questions were used in order to determine the most useful abilities in their every day pharmacy practice.

Secondly, an on-line survey for pharmacists belonging to two local Pharmaceutical Chambers was performed in the period of March to May 2022. The questionnaire consisted of 8 questions. Three questions were used to characterize the study group in respect to their experience and the workplace. The others listed various skills highlighted in the previously performed structured interviews.

Summary of Results

83 pharmacists answered the questionnaire. Professional activities related to the fulfillment of prescriptions and the dispensing of drugs were considered the most important in the work of a pharmacist. Similarly, more than ¾ pharmacists pointed out skills related to pharmaceutical counselling, self-medication counseling and pharmaceutical care. Equally important, according to the respondents, was the ability to conduct drug reviews or drug conciliation in an outpatient and inpatient settings. Communication skills related to conducting a pharmaceutical interview and overcoming communication barriers were also considered relevant. About 90% of the interviewees indicated the necessity of effective communication with patients with cognitive deficits, hearing problems, etc. and, to a lesser extent, foreigners. Indicating the correct way to use medicines and reporting adverse drug reactions were considered important only by about 1/3 of interviewees.

Discussion and Conclusion

Following the closing of the survey, the skills reported by interviewed pharmacists were aligned with learning outcomes in order to prioritize outcomes during the OSCE exam. Furthermore, Pharmacy practice and Pharmaceutical care courses were redesigned in order to provide students with opportunities to acquire the prioritized skills.

Take-home Message

The evaluation of educational needs proves useful in assuring content authenticity of an OSCE exam. It can also be useful in planning educational activities in the Pharmacy programme.

9012 (6425)

Date of Presentation: Tuesday 29th August
Time of presentation: 1706 - 1712
Location: Carron 1, Loch Suite, SEC

Preparing Students to Deliver Patient Care: The Value of Integrating Basic, Clinical, and Health Systems Sciences

Amy Wilson-Delfosse1, Karen Mulloy1, Oliver Schirokauer1, Anastasia Rowland-Seymour1, Elizabeth Painter1, Kathryn Miller2

[1]Case Western Reserve University School of Medicine, Cleveland, OH, USA; [2]Rainbow Babies and Children's Hospital, University Hospitals Cleveland Medical Center, Cleveland, OH, USA

Background

As medical education expands methods of integrating basic science with clinical medicine, the growing field of health systems science (HSS) must also be incorporated. Core clinical rotation represent an arena in which students should integrate all three. They experience the value of basic science as they learn clinical medicine and see the impact of HSS throughout a wide variety of patients and specialties. We created a course to address the need to integrate basic and HSS with clinical medicine.

Summary of Work

Core clinical rotation students work in groups through a patient from presentation to delivery of care. Students integrate basic and HSS with clinical medicine using specific integration tools. They utilize a Context of Illness Tool to record patient details pertaining to biological, psycho-emotional, social, and systems/society domains. Students then integrate basic science by creating a Mechanism of Disease Map. This map requires students to research the clinical features and causal mechanisms of a disease and provides a scaffold for students to justify work-up and treatment. Groups conclude by using a Care Delivery Tool to address how to deliver care. The Care Delivery Tool presents additional patient details specifically chosen to encourage students to explore the domains of HSS. Students identify patient details that will potentially support the treatment goal and which may be barriers to care delivery. Groups develop a detailed

care plan to successfully deliver the desired treatment by bolstering supports and overcoming barriers.

Summary of Results

Our course and its integration tools guide students to make clinical decisions justified by basic, clinical, and HSS. Students must ultimately be specific and patient-focused in identifying how to deliver successful care. Students (68%) indicate that the final care delivery process helps them consider the complex nature of treating patients.

Discussion and Conclusion

Successful patient care is multifaceted. Basic science and clinical medicine help students learn the “why” of treatment. The next step, “how” to deliver this treatment, requires considering the specific patient context and the system around them, the HSS.

Take-home Message

We have successfully created a pedagogical approach to model optimal decision-making from diagnosis to targeted treatment utilizing the integration of all three pillars of medical education.

9013 (3282)

Date of Presentation: Tuesday 29th August
Time of presentation: 1712 - 1718
Location: Carron 1, Loch Suite, SEC

Expectations versus the reality of anatomy courses for Generation Z nursing students - a pilot study in Poland

Malgorzata Witkowska-Zimny1, Anna Stangret2, Patryk Rzońca1, Agnieszka Kempinska-Podhorodecka2

[1]Department of Human Anatomy, Faculty of Health Sciences, Medical University of Warsaw, Warsaw, Poland; [2]Department of Medical Biology, Pomeranian Medical University, Szczecin, Poland

Background

How to adapt teaching methods and strategies to the needs of Generation Z is an immense challenge for medical educators. It is important to validate approaches to learning and learning preferences of students on a regular basis. Anatomy is one of the basic sciences of medicine and the knowledge of the human body is essential in the training process of any healthcare professional. However, nursing students struggle with anatomy because of the complicated terminology and difficulty handling large amounts of information. Hence, we are interested in exploring the topic of learning anatomy from the student's perspective.

Summary of Work

There is much debate over suitable methods of delivering anatomical knowledge. In our study, we have asked nursing students about their needs and expectations as regards anatomy classes. A cross-sectional study involving Polish first-year nursing students was carried out at two biggest medical universities in Poland. Data were collected using an original questionnaire designed based on the review of the literature and a focus group discussion among authors. Students' opinions at the beginning and after completing the anatomy course were compared.

Summary of Results

First-year nursing students are aware of the fact that anatomical knowledge supports the examination of the patient, the formation of a diagnosis, and communication with other medical professionals; nonetheless, they consider anatomy to be a very difficult subject (81% of respondents). Although they used new technologies, e-learning, and mobile applications in anatomy learning - a surprisingly large number of students indicated that elements of physical examination (88% of respondents) and dissection classes (76% of respondents) should be included in the nursing curriculum. The results of the survey demonstrated that the flipped classroom teaching method improved Polish nursing students' performance and engaged them in learning anatomy.

Discussion and Conclusion

Changing anatomy education for the Generations Z and Alpha is indispensable to successfully training, and retaining nursing students. Engaged teachers, face-to-face learning, and practical classes cannot simply be replaced by technology. Nevertheless, the teaching of new generations of students requires significant time and effort as well as creativity on an ongoing basis.

Take-home Message

Engaged teachers, face-to-face learning, and practical classes cannot simply be replaced by technology.

9014 (3310)

Date of Presentation: Tuesday 29th August
Time of presentation: 1718 - 1724
Location: Carron 1, Loch Suite, SEC

Development of an anatomy education program to consolidate learning content

Kumiko Yamaguchi1, Nobutoshi Nawa1, Mitsuyuki Numasawa1, Keiichi Akita1

[1]*Tokyo Medical and Dental University (TMDU), Tokyo, Japan*

Background

Empirical studies of learning and memory before the COVID-19 pandemic have suggested that retrieval practice, spaced practice, and elaboration are effective for the retention of learning. We developed an education program that incorporates them in a human anatomy course in Japan during the COVID-19 pandemic. In addition, we examined how effectively it worked by students' feedback.

Summary of Work

We introduced the new education program in 2021 and 2022. We prepared 133 short lecture videos with quizzes to encourage retrieval practice. The students took the quizzes of range they have learned so far once a week as a spaced practice. The students engaged in group work to submit assignments 16 times in the course to implement elaboration. The students gave feedback about the program by questionnaire after the course. We compared the students' feedback in 2021 and 2022 with the former students' feedback in 2019 by chi-squared test.

Summary of Results

The study participants were 317 students in 2019 (pre) and 2021 and 2022 (post) who responded to the questionnaire. Regarding the provision of active learning, the number of "Not agree" responses decreased from 11% to 2% ($P<0.01$) and the number of "Strongly agree" responses increased from 22% to 38% ($P<0.01$) in this program. Regarding the learning content "strongly agree" responses increased from 17% to 23% ($P=0.059$) in this program. Regarding the clarity of instructors' explanations, "strongly agree" responses

decreased from 38% to 31% (P=0.12) for the former program. The ratio of students increased who felt that they learned more actively and thought that the program was optimized to achieve the learning objectives after the introduction of this program.

Discussion and Conclusion

The students' feedback suggested that the new education program in a human anatomy course was effective in the Japanese educational settings in the COVID-19 pandemic. Qualitative analyses are warranted to clarify the reasons for these quantitative results.

Take-home Message

Methods recommended from empirical studies of learning and memory, such as retrieval practice, spaced practice, and elaboration were also effective in teaching anatomy.

9015 (6913)

Date of Presentation: Tuesday 29th August
Time of presentation: 1724 - 1730
Location: Carron 1, Loch Suite, SEC

Developing a novel leadership and management curricular module for global medical education

Aliye Runyan1, Evangelos Papageorgiou2, Catarina Pais Rodrigues3, Tao Le4

[1]Medical Student Alliance for Global Education (MeSAGE), New York, USA; [2]Medical Student Alliance for Global Education (MeSAGE), Athens, Greece; [3]Medical Student Alliance for Global Education (MeSAGE), Evora, Portugal; [4]University of Louisville, Louisville, USA

Background

The ScholarRx global medical curriculum initiative aims to provide a framework to teach a holistic approach to medical education in the 21st century. To achieve this goal, ScholarRx established a consortium of international student organizations called MeSAGE - Medical Student Alliance for Global Education to create interactive digital learning modules ("Bricks") which address gaps within the traditional curriculum. One of the critical needs identified by MeSAGE is helping medical students to develop Leadership and Management skills.

Summary of Work

Students do not typically learn formal leadership, management, and team dynamics skills within medical education. Physicians are often in positions of leadership, encountering situations where understanding group dynamics are essential and being called upon to utilize effective communication strategies in patient care, with trainees, and colleagues. To address this gap, we recruited students from MeSAGE to author the curricular content. These authors collaborated with the ScholarRx Editorial team, expert faculty and peer reviewers that provided support to ensure quality of the content.

Summary of Results

The bricks are self-contained, integrated modules consisting of learning objectives, illustrated narrative text, and interactive self-assessment items delivered through the

ScholarRx platform. The modules include: leadership development, emotional intelligence, techniques for innovative thinking, effective communication, strategic planning, leading and managing change and organizational culture. We will use a Kirkpatrick program evaluation model to measure student utilization and satisfaction with the Bricks and report our findings.

Discussion and Conclusion

The leadership and Management modules were developed through a peer and expert faculty development process which references published leadership models, as well as thought leaders on emotional intelligence, growth mindset, communication strategies, and project planning processes. There will also be opportunities to expand the collection to include more modules, as well as work with students and medical schools to adapt the collection to fit their unique needs. The collection can assist in standardizing how these important topics are delivered in medical schools.

Take-home Message

MeSAGE could serve as a model for a shared curricular ecosystem that can be implemented within medical schools across the globe, addressing important topics such as leadership and management skills.

9P1 (2431)

Date of Presentation: Tuesday 29th August
Time of presentation: 1600 - 1606
Location: Carron 2, Loch Suite, SEC

The Video contest: learning by the process of video production

Methas Arunnart1

[1]*MEC Songkhla hospital, Songkhla, Thailand*

Background

Advanced trauma life support (ATLS) is a training program for medical providers in the management of acute trauma cases. Students usually had poor clinical application because of lacking chances to apply knowledge in a real situation. Moreover, there were few online ATLS primary survey demonstration videos, especially in the Thai language.

The video contest encouraged students to learn through the process of video production. Students were encouraged to work as a team to construct their own concepts, practiced repeatedly to create the best video, and passed on knowledge to colleagues through E-learning videos.

Summary of Work

After learning the basic principle, 5th-year medical students were assigned to work as a team to create 10-15 minutes video that demonstrated how to do the primary survey according to ATLS 10th edition. Each team had 4-6 students and one preceptor to support video production and feedback. The team that created the best video would receive the video contest award.

Summary of Results

The OSCE scores were significantly higher compared to the last academic year (mean difference 17.26, SD = 3.48, $p < 0.001$). 80% of the participants thought the video contest was an effective way to learn. 92% had more confidence to apply knowledge in a real situation. 78% preferred this method for learning over didactic lectures with case-based discussion.

Focus group analysis shown the advantage of video contest such as students knowing about pitfalls in each step, learning to perform procedures correctly, practiced team working skills. However, the disadvantage was time-wasting for video making and editing (approximately 15 hours) and students should have video editing skills.

Discussion and Conclusion

The video contest improved clinical application skills, confidence, and teamwork. Students mainly preferred video contest more than didactic lectures. However, the disadvantage was time-wasting.

Take-home Message

The video contest encouraged students to construct their own concepts, practiced repeatedly to create the best video, and passed on knowledge through E-learning videos.

9P2 (4042)

Date of Presentation: Tuesday 29th August
Time of presentation: 1606 - 1612
Location: Carron 2, Loch Suite, SEC

The 'Flipped Placement': can blended learning alleviate capacity issues in general practice placements?

James Curtis1, Catherine Neden1

[1]*Kent and Medway Medical School, Canterbury, UK*

Background

Placements in general practice play an important role in undergraduate medical education and have a strong influence on students and junior doctors choosing careers in general practice. However GP educators report that practice workloads and lack of space are major challenges impacting medical student placements. Without increasing capacity these issues are expected to worsen as increasing numbers of learners compete for limited space.

Summary of Work

Kent and Medway Medical School (KMMS) students undertake six one-week-long placements in general practice in their first and second years termed 'immersion weeks'. Each immersion week has a theme which corresponds with on-campus learning for systems-based modules. In the 2022/23 academic year the immersion week structured was changed, with one day of the week replaced with a half day of campus teaching and a half day of 'asynchronous learning'. The asynchronous learning comprises an e-learning lesson created using the Xerte Online Toolkit and hosted on the university virtual learning environment. The content is designed to complement students' learning on placement while referencing their on-campus learning in systems-based modules. Each lesson includes a mixture of case-discussions, multimedia and interactive elements which students can complete at their own pace.

Summary of Results

All year one and two students were invited to provide feedback after the third immersion weeks. 78/131 (60%) year one and 85/106 (80%) year two students responded. On a 5-point Likert scale 52/78 (67%) of year one students and 63/85 (74%) year two students either agreed or strongly agreed with the statement 'the asynchronous material was helpful in supporting my learning'. Students found the asynchronous lessons to be a useful way of consolidating knowledge ahead of the placement and found it beneficial that it could be completed at their own pace. However issues with technology caused frustration for some.

Discussion and Conclusion

Most students found asynchronous learning helpful in supporting their learning. This highlights the potential for a blended learning approach utilising e-learning to enhance undergraduate general practice placements and to ease pressures on capacity in primary care.

Take-home Message

A 'flipped placement' approach utilising e-learning can complement undergraduate primary care placements and assist in easing the pressures of capacity for teaching practices.

9P3 (2972)

Date of Presentation: Tuesday 29th August
Time of presentation: 1612 - 1618
Location: Carron 2, Loch Suite, SEC

Use of virtual reality situated learning to improve the learning performance of nurse practitioners

Hui-Chen Lin1, Chia-Kuang Tsai2, Yun-Qian Lin2, Yaw-Don Hsu2

[1]School of Nursing, College of Nursing, Taipei Medical University, Taipei, Taiwan; [2]Department of Neurology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan

Background

Nurse practitioners (NPs) require logical thinking skills to manage clinical cases and achieve health goals for their patients. This includes timely diagnosis and appropriate treatment. Clinical practice training presently utilizes simulation learning. However, traditional simulation learning is costly and difficult to reconstruct and standardize. An increase in technology use in medical education has enabled the creation of clinical scenes using virtual reality (VR) applications. Thus, learners can interact with avatars virtually and consider virtual patient symptoms and laboratory data, to think of possible diagnoses and give appropriate clinical management. The VR application gives feedback immediately, allowing learners to reflect on their treatment's suitability. Repeated VR exercises can enhance learners' self-efficacy and problem-solving skills.

Summary of Work

In this study, based on situated learning, a VR application was developed. To verify the effectiveness of the proposed method, a quasi-experiment was conducted. The experimental group used a VR app for learning, wherein the learner conducts an interactive conversation with the VR-simulated patient. The control group used a traditional simulation learning approach using standardized patients for the exercises. Before and after learning, both groups completed a knowledge test, a self-efficacy assessment, and a problem-solving questionnaire for evaluation.

Summary of Results

A total of 65 NPs were recruited for this study. The analysis of covariance (ANCOVA) was used to analyze the pre and post-test scores between the two groups. The experimental group's knowledge, self-efficacy, and problem-solving significantly improved.

Discussion and Conclusion

We demonstrated the potential of VR-situated learning in clinical training. The VR app effectively promoted NPs' logical thinking ability. These findings can guide medical education researchers and teachers. Future studies should follow up by introducing expanded effective VR-situated learning strategies.

Take-home Message

Successful VR-situated learning provides a safe and effective learning environment. Learners are trained to perform clinical tasks using realistic clinical cases designed for them. VR learning can provide NPs with challenging clinical experiences by which to increase their competencies. It can enhance NPs' learning, clinical practice, and performance.

9P4 (3743)

Date of Presentation: Tuesday 29th August
Time of presentation: 1618 - 1624
Location: Carron 2, Loch Suite, SEC

Comparison of medical undergraduate teaching in a virtual reality metaverse, online, and face-to-face.

Surina Mittal1, Jamie Murphy1, Shafi Ahmed1, Yanna Zhu2, Sam Fields2, Jeremy Dalton2

[1]School of Medicine, Imperial College London, London, UK; [2]PricewaterhouseCoopers, London, UK

Background

Virtual reality (VR) has been shown to lead to greater student satisfaction and knowledge-acquisition compared to conventional teaching modalities. However, there is inadequate research comparing VR to both face-to-face (F2F) and online teaching. VR was compared to F2F and online teaching sessions to evaluate whether there were differences in knowledge-acquisition and student satisfaction.

Summary of Work

This was a single-centred, prospective, non-randomised pilot study. 17 participants were allocated through quasi-randomisation to either F2F (n=5), online (n=6) or VR (n=6) teaching sessions on the clinical management of appendicitis. Pre-session and post-session examinations were administered to all participants to assess knowledge-acquisition. A modified validated satisfaction with simulation experience scale (mSSES) survey was used to explore student satisfaction.

Summary of Results

There were no differences in baseline (p=0.0609) or post-session scores (p=0.8758) across the three groups. All three groups experienced a significant change in MCQ scores, with F2F having the greatest median increase (5.000, p=0.0002), followed by VR (4.000, p=0.0312), and lastly online (2.500, p=0.0029). The median change in MCQ scores differed significantly across the three groups (p=0.0028). VR led to the greatest student satisfaction, followed by F2F and then online with median mSSES scores of 108.8, 106.0 and

91.00 respectively. The mSSES scores across the three groups differed significantly ($p=0.0404$), with no further differences found on post-hoc analysis ($p>0.05$).

Discussion and Conclusion

Existing literature supports our findings that VR is at least as good as conventional teaching modalities for knowledge-acquisition and student satisfaction. This study is limited by sample size and non-random participant allocation. Practical limitations must be considered to assess feasibility of VR implementation into medical education.

VR is an effective modality which is equivalent to F2F and online teaching for knowledge-acquisition and may be superior for student satisfaction. This pilot study justifies further work on a larger, randomised scale to further investigate these differences.

Take-home Message

VR is likely to be important in many domains of life in the future, including education.

VR is at least as effective as online and F2F methods for medical teaching.

Further research must evaluate the efficacy and enthusiasm for VR in the undergraduate setting.

9P5 (3778)

Date of Presentation: Tuesday 29th August
Time of presentation: 1624 - 1630
Location: Carron 2, Loch Suite, SEC

The Effectiveness of Online Game-based Learning in Immunology

Sirachat Nitchaphanit[1], Tanit Boonsiri[1], Pongthorn Narongroeknawin[1], Pimwan Thongdee[1], Passara Wongthai[1], Nitchatorn Sungsirin[1], Arunee Suvarnajata[1], Piyanate Kesakomol[1], Veerachai Watanaveeradej[1]

[1]*Department of Microbiology, Phramongkutklao College of Medicine, Bangkok, Thailand*

Background

Game-based learning (GBL) is an active learning method that has been shown to increase student engagement, motivation, and enjoyment while also improving problem-solving, leadership, and interpersonal skills. However, its effectiveness in medical education during the COVID-19 pandemic remains unclear.

Summary of Work

In 2021, 94 third-year medical students at Phramongkutklao College of Medicine in Bangkok, Thailand participated in an online GBL in the immunology course. The students were divided into two teams and played an online competition game using Kahoot, Microsoft PowerPoint, and ZOOM video meetings. The game was designed with adventure and game show themes, including quizzes, quests, points, ranks, a leaderboard, and rewards. The instructors provided knowledge and feedback during gameplay. After the course, a questionnaire survey was conducted using a 5-point Likert scale.

Summary of Results

All 94 students voluntarily participated in the survey, and the student engagement was 100%. The overall participant satisfaction was 87.6%. The improvement in motivation, content understanding, learning skills, relationships, and clinical knowledge was 89.8%, 87.0%, 87.0%, 91.0%, and 86.4%, respectively. All open-ended questions received positive feedback on the online GBL experience.

Discussion and Conclusion

The results of the study show that online GBL was successful in improving immunology learning. This method can be applied to an online setting, although preparation and implementation may require more time and resources than traditional lectures.

Take-home Message

Online GBL is an effective method of medical education.

9P6 (3782)

Date of Presentation: Tuesday 29th August
Time of presentation: 1630 - 1636
Location: Carron 2, Loch Suite, SEC

Project-based Learning (PrBL) In Infectious Diseases: The Facilitators Perspective

Pimwan Thongdee1, Tanit Boonsiri1, Arunee Suvarnajata1, Nitchatorn Sungsirin1, Sirachat Nitchapanit1, Piyanate Kesakomol1, Passara Wongthai1, Phattarawadee Nilphet1, Pongthorn Narongroeknawin1, Veerachai Watanaveeradej1

[1]*Department of Microbiology, Phramongkutklao College of Medicine, Bangkok, Thailand*

Background

Project-based learning (PrBL) is a teaching method in which students learn by actively engaging in current problems and performing purposive projects. PrBL entitled “Innovation to combat COVID-19” was conducted in third-year medical students of Phramongkutklao College of Medicine in 2020, 2021 and 2022. The objective of this presentation was to evaluate the effectiveness of this learning type.

Summary of Work

There were 97, 94 and 94 students in 2020, 2021 and 2022 respectively. They were divided into 10 teams of 9-10 people with an advisor. The project assignments were innovation in concept sheets in the first two years and in real-world use in the recent year. Therefore, we assessed the product outcome and learning effectiveness only in the year 2022. Learning effectiveness was evaluated by multi-disciplinary facilitators using a 5-point Likert scale questionnaire.

Summary of Results

97.87% of the 94 students in 2022 rated the program as excellent or very good. The mean score (standard deviation) evaluated by facilitators were as follows: accuracy with evidence support 4.72 (0.45), critical thinking skill 4.90 (0.30), creative and interesting 4.85 (0.36) and applicable in real-world use 4.65 (0.48). Most of the product outcome can be

reproduced and used in resource limited countries and some can be preceded by commercial manufacturers.

Discussion and Conclusion

The observations from facilitators about the advantages of PrBL included deeper engagement, communication skill and problem solving. The limitations were time-consuming, work burden and budget requirement. PrBL is an effective learning method in promoting creative skill, critical thinking and evidence-based learning and we suggest that PrBL should be further explored and utilized as a powerful active learning approach.

Take-home Message

Project-based learning (PrBL) is an effective teaching method of medical education.

9P7 (3733)

Date of Presentation: Tuesday 29th August
Time of presentation: 1636 - 1642
Location: Carron 2, Loch Suite, SEC

Line application Used for Assessment and Feedback in writing a disability certificate

Thiti Thoowadaratrakool1

[1]*Medical Education Center Phayao Hospital, Phayao, Thailand*

Background

Writing a certificate of disability is a part of medical law that Thai medical students have to learn in physical medicine and rehabilitation. But most newly graduated doctors feel under-prepared to perform it. To improve this competency, writing in a real certificate and practicing with various case scenarios may help the medical students have more experience and confidence to write it in real life. By the way, Thai medical students increasingly use social media such as Line nowadays. So, we would like to use Line as a part of learning in our classroom.

Summary of Work

The 4th year medical students were divided in 2 groups. One group, after a lecture about the assessment of disability,to write a certificate of disability from the case scenario then took a picture and turned in it to teacher via Line. After that, the teacher gave a feedback to them directly. Another group are only traditional lecture. Questionnaire to evaluate medical student's satisfaction was applied. We also evaluated the students' OSCE scores and compared them with traditional lectures by using the independent t-test.

Summary of Results

All 15 the 4th year medical students in feedback via line group; average satisfaction score was 41.6/44 (94.5%). Most of them (90%) stated that this process was enhanced them to understand and write certificate of disability correctly.All of them (100%) passed a MPL score of the OSCE.Mean percentage of OSCE scores were 96.67% (SD5.59) and 89.67%

(SD9.86) in traditional lecture and lecture with using Line for assignment , respectively. There is no statistical significant difference between two groups (p-value = 0.07).

Discussion and Conclusion

Line application can provide a convenience to the students for their assignments. The teacher can assess and give feedback to them easily within a day. This learning method does not make them feel burdensome to perform and most medical students were impressed with it. If they cannot remember how to write it, they can open Line to read our comments and feedback all the time.

Take-home Message

Social media is a proper teaching method to the new generation of medical students' lifestyle, it also makes a good competency.

9P8 (3783)

Date of Presentation: Tuesday 29th August
Time of presentation: 1642 - 1648
Location: Carron 2, Loch Suite, SEC

Online Digital Slides: The Alternative Way for Microbiological Laboratory Learning

Passara Wongthai1, Pimwan Thongdee1, Nitchatorn Sungsirin1, Ketsara Khamsaen1, Tanit Boonsiri1, Sirachat Nitchapanit1, Arunee Suvarnajata1, Piyanate Kesakomol1, Pongthorn Narongroeknawin1, Veerachai Watanaveeradej1

[1]*Department of Microbiology, Phramongkutklao College of Medicine, Bangkok, Thailand*

Background

Due to the COVID-19 pandemic, educational institutions worldwide have been forced to adopt online learning platforms. Our previous study showed that virtual learning fails to compensate for psychomotor skills in the pre-clinical curriculum, particularly the microscopic examination skill, which is a requirement for medical professionals. To address this issue, online digital slides were developed for third-year medical students as a virtual learning tool in the microbiological laboratory.

Summary of Work

The microscopic staining slides were created based on case-based learning and were quality checked before being scanned and converted into digital image files using a glass slide scanner. The files were uploaded to a cloud server for student access. The students were tasked with identifying the organisms and reporting their findings using Google Slides. A questionnaire was designed to evaluate both the improvement in microscopic examination skills and student satisfaction with the digital slides.

Summary of Results

Most of the questions received a satisfaction rating of over 80%, with students finding the digital slides realistic, supportive, motivating for practicing organism identification and reporting, and suitable for use during the COVID-19 pandemic.

Discussion and Conclusion

Our results showed that the online digital slides effectively supported laboratory skills in microscopic examination, specifically in organism identification and interpretation. Despite this, our study indicated that the virtual format did not fully restore microscopy handling skills.

Take-home Message

The online digital slides can effectively facilitate microscopic examination skills for students.

9P9 (2826)

Date of Presentation: Tuesday 29th August
Time of presentation: 1648 - 1654
Location: Carron 2, Loch Suite, SEC

A Preliminary Study on the Effectiveness of Online Gamification Teaching under COVID-19-taking a Nursing College as an Example

Tsai Yu Mei1

[1]*Mackay Memorial Hospital, New Taipei City, Taiwan*

Background

Affected by the covid-19 epidemic, many teachers in Taiwan have encountered challenges in implementing distance learning. For online teaching, students feel insecure and psychologically anxious, and feel that compared with physical courses, there is a lack of teacher-student interaction and socialization activities among peers.

Summary of Work

"gamification" does not mean "playing games", but to apply game elements to non-game fields. , using a total of 4 gamification elements

1. "Team-based": group competition mechanism to motivate participation

2. "Opening the camera and raising hands to show the results": Arrange activities that can only be participated in when the camera is on, such as selection method, handwriting option, so that students need to hold signs or gesture in front of the camera.

3. Points, Benefit, Leader Board (PBL): Plan the point mechanism (Points), encourage the group through the method of scoring, link with the reward mechanism (Benefit), and maintain motivation through the stimulation of ranking.

4. "No risk of failure": Any answer will be positively encouraged by the teacher, giving students a "reason to participate".

Summary of Results

According to the "Online Teaching Gamification Learning Evaluation Form" prepared by the literature, 42 students participated in the questionnaire, which was divided into five dimensions. The results are as follows 94.44% agree with "learning motivation"; 92.38% are satisfied with "learning effect"; 90.48% are satisfied with "student interaction"; 90.16% are satisfied with "classroom participation" and "teacher-student interaction"; analysis results , online gamification teaching applications can increase learning motivation and effectiveness.

Discussion and Conclusion

Minimize the need for information and maximize the teaching effect. The use of online gamification elements is to achieve the best teaching effect! Improve the richness of online classes, improve online interaction effects and participation motivation, and achieve learning goals

Take-home Message

Integration of reality and reality will be the mainstream learning model in the future.", No matter when you return to school for class, online teaching is no longer just a temporary replacement tool, but can assist physical teaching and enrich learning outcomes. Novice teachers in online teaching can use gamification to improve online interaction and enhance performance to increase learning effectiveness.

9P10 (3333)

Date of Presentation: Tuesday 29th August
Time of presentation: 1654 - 1700
Location: Carron 2, Loch Suite, SEC

Critical Review of the Uses of Technology Enhanced Learning (TEL) in Distance Undergraduate Medical Education

Adam Borland1, Andrew O'Malley2

[1]*University of Aberdeen, School of Medicine, Medical Sciences and Nutrition, Aberdeen, UK;*
[2]*University of St Andrews, St Andrews, UK*

Background

This review assessed how TEL is implemented in undergraduate medical curricula and how it is best used to support distance learning. This aim was significant during the COVID-19 pandemic and remains relevant given the trend towards decentralised clinical education and the need to support learning in remote and rural locations.

Summary of Work

A critical review was conducted to answer the following three research questions: 1) How is distance TEL incorporated into medical school curricula and is this affected by curricular format?, 2) What are medical students' perceptions of TEL in relation to distance learning?, and 3) What is the effectiveness of TEL in relation to distance learning?

67 original research articles published 2011-2021 were subjected to title and abstract screening to assess their suitability, and 14 were deemed valid for inclusion after full text screening. These articles were then quality assessed using JBI checklists.

Summary of Results

The articles described five broad categories of TEL implementation: e-lecturing, online small group teaching, online clinical activities, asynchronous non-clinical online activities, and as part of blended curricula.

Entirely virtual activities were positively received by students but viewed as comparatively inferior to in-person learning. Blended learning was the exception to this, as the combination of in-person and online learning was considered superior to purely virtual or purely in-person learning.

Evidence for the effectiveness of TEL is varied. Blended learning is reported to be the most effective use of e-learning. However, other virtual learning activities show only mixed success pre-clinically, and no reports exist of effective clinical phase education which takes place in entirely virtual settings.

Discussion and Conclusion

This critical review suggests that blended learning, I.e., a combination of TEL and traditional in-person learning, may be the best method of implementing TEL in clinical and pre-clinical medical education because it is perceived positively by students and most effectively enables learning.

Take-home Message

Medical schools should consider pursuing a blended approach to learning by introducing learning technologies into traditional in-person sessions and vice versa. The combination of a return to pre-COVID delivery and the existence of virtual resources developed during the pandemic may represent an opportunity for medical educators who wish to implement blended learning.

9P11 (5040)

Date of Presentation: Tuesday 29th August
Time of presentation: 1700 - 1706
Location: Carron 2, Loch Suite, SEC

SeeMe: A Serious Gaming as an opportunity for improved medical education in clinical pharmacology

Laura Bell1, Ingmar Bergs2, Katja S. Just2, Sebastian Fedrowitz1, Julia C. Stingl2, Martin Lemos1

[1]AVMZ - Audiovisual Media Center of the Medical Faculty RWTH Aachen University, Aachen, Germany; [2]Institute of Clinical Pharmacology, University Hospital RWTH Aachen, Aachen, Germany

Background

Every patient is different, and so is their reaction to certain medicine. While a certain drug may show good efficacy in one person, another patient may show adverse effects when taking the same drug. Training future health care professionals to recognize such highly individualized adverse reactions is therefore crucial for patient health.

Summary of Work

103 medical students of the Medical Faculty at RWTH Aachen University were recruited to evaluate the online serious game "SeeMe", which was developed to improve knowledge and recognition of adverse drug reactions in clinical practice. "SeeMe" is a case-based serious game, in which the player takes on the role of a physician trying to understand fictional patients with adverse drug reactions. To evaluate the effectiveness of the game in improving the identification of adverse drug reactions, an exam and an online questionnaire were evaluated before and after the 8-week game phase.

Summary of Results

A majority of 81.7 percent (n = 98) described the game content as realistic and transferable to their daily work. In addition, the game made the topic "adverse drug reactions" more interesting for the participants (81.67%, n = 99). 71.7 % (n = 86) felt that their level of knowledge had improved after the game. On average, twice as many

examination questions on the contents of the presented cases were answered correctly after successful completion of the game.

Discussion and Conclusion: SeeMe thus enabled students to learn the course material in a playful way.

Take-home Message

Conclusively, serious gaming can improve pharmacological education of medical students and increase knowledge about the presentation of adverse drug reactions in clinical practice.

9P12 (6548)

Date of Presentation: Tuesday 29th August
Time of presentation: 1706 - 1712
Location: Carron 2, Loch Suite, SEC

Mobile-Virtual Patients: Usability and learning effect

Eleni Dafli[1], Evangelia Romanopoulou[1], Anastasia Moisiadou[1], Panagiotis Antoniou[1], Panagiotis Bamidis[1]

[1]*Medical Physics and Digital Innovation Laboratory, School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece*

Background

Virtual Patients (VPs) have been increasingly used as educational resources in modern medical education. Most of the platforms utilized for the VP design, creation and navigation have not a user-friendly interface for mobile devices.

Summary of Work

The purpose of this work was to evaluate a) the usability of a mobile-VP (mVPs) platform specially designed for use of virtual patient simulation cases from mobile devices and b) the learning effect of the 60 VP cases that were specially designed for mobile learning and were included in the platform. The System Usability Score (SUS score) was used for the evaluation of the mobile-VP platform. Concerning the evaluation of the learning experience with m-VPs an online questionnaire based on the electronic Virtual Patients toolkit (eViP toolkit) was used. Moreover, demographic data were collected. Forty-eight undergraduate medical students (48) from all over Greece who tested the application during their practice in their hospitals and university laboratories participated in this evaluation process.

Summary of Results

The results from the structured evaluation of the m-VP platform and the overall learning experience were very positive and encouraging as far as the usability and the learning outcome of VPs are concerned. The SUS score was equal to 85,42 that corresponds to a high usability of the system. Participants tend to agree/totally agree with the

positive evaluation statements and most of the attendees suggested the incorporation of m-VPs in the curriculum.

Discussion and Conclusion

The medical students who participated in the evaluation of the m-VPs highlighted that the simulations of virtual patient cases on portable devices (mobile phones and tablets) are important tools for their education and suggested their incorporation into the medical school curriculum alongside students' practice in the laboratories and hospital clinics.

Take-home Message

Mobile-VPs have a high usability and may be effective learning tools for contemporary medical education.

Session 9R

9R (3817)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: Dochart 2

Navigating difficult conversations in academic medicine: theories and practice

Sookyung Suh[1], Nutan Vaidya[2], Debra Klamen[1]

[1] *Southern Illinois University School of Medicine, Springfield, USA* [2] *Rosalind Franklin University of Medicine and Science, North Chicago, USA*

Background

Engaging in difficult conversations is an essential part of life, and academia is no exception. The ability to engage in difficult conversations is especially important in academia. Navigating difficult conversations allows people to engage in meaningful dialogue, build relationships, and develop solutions. Difficult conversations, if done right, allow people to express their ideas more clearly, discuss difficult topics openly, and often arrive at creative solutions. Avoiding conflicts and not engaging in difficult conversations can lead to misunderstandings, miscommunication, and unresolved issues. This can cause tension and frustration in relationships and a lack of trust. Additionally, avoiding difficult conversations can lead to a lack of growth and development opportunities, both personally and professionally.

Practicing and learning skills can build confidence to engage in difficult conversations. In this interactive workshop, the facilitators will share types of difficult conversations, the psychology behind common causes of conflicts, and strategies for difficult conversations and conflict resolutions, which serve as guidance to prepare for difficult conversations. The participants will use guided questions, case analysis, and templates to practice during the workshop. The facilitators are excited to share their wisdom and lessons from years of leadership and faculty development, coaching, and management consulting experiences.

Who Should Participate

Residency program directors

Clerkship directors

Department chairs

Associate deans

Deans and Provosts

Medical educators

Anyone who wants to learn about difficult conversations

Structure Of Workshop

- Introduction (5 mins)
- Check-in and expectations (5 mins)
- Difficult conversations theory: (25 mins)
    - Neurology of engagement
    - Three types of difficult conversations
    - Conflict resolution process
- Practice: (45 mins)
    - Checklist: How to plan a difficult conversation? - Interactive discussion through chats or polls
    - Case analysis: What would you do? - Large group discussion
    - Template for difficult conversations: - Small group exercises
- Q&A (10 mins)

Intended Outcomes

- Participants will be able to:
    - Recognize common causes of conflicts and three types of difficult conversations
    - Identify steps to plan and engage in difficult conversations
    - Apply theories of difficult conversations to effective conflict resolutions

Session 9S

9S (6198)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: M3

Designing Inclusive Assessments for Health Professions Programmes

Vishna Devi Nadarajah[1], Gabrielle Finn[2], Viktoria Goddard[3], Hui Meng Er[1]

[1] International Medical University, Kuala Lumpur, Malaysia [2] University of Manchester, Manchester, UK [3] University Of Liverpool , Liverpool , UK

Background

Equitable, Diverse and Inclusive (EDI) initiatives for Health Professions Education has continued to evolve from ensuring students accessibility into higher education to designing curricula that reflects the diversity of the both the healthcare and student community. While these initiatives have resulted in significant impact, findings are showing that EDI initiatives need to be interlinked and be part of the continuum of education, including inclusive assessments. The complexity of systems of assessment and the mandate to quality assure warrants careful design and considerations for the practice of inclusive assessments.

This workshop will highlight the why and how for incorporating inclusivity in assessment planning and implementation. The why will conceptualize Inclusive Assessments with stakeholder perspectives while the how will align principles of assessment and examples in practice. As context matters for relevance and buy in, activities will include hands on opportunities for participants to evaluate assessment programmes and provide feedback from an inclusivity perspective. The workshop will be further enriched by participants who are from various health professions programmes with diverse socio-cultural backgrounds.

Who Should Participate

· Early-career to senior health professions educators who wish to enhance and advance EDI in curricular delivery and assessment

· Educators and clinician interested in developing communities of practice on inclusive assessments across the continuum of UG, PG and CPD activities.

Structure Of Workshop

- Conceptualisation
    - Audience brainstorming
- Didactic presentation
- Small group exercise
- Group reports and putting it together
- Large group reflections

Intended Outcomes

by the end of the session participants will be able to:

1. Describe the impact and relevance of Inclusive Assessments in HPE
2. Identify contextual strengths and gaps in relation to Inclusive Assessments
3. Critically appraise HPE assessment programmes with consideration of inclusivity

Session 9T

9T (3272)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: M2

Create, Curate, and Educate: How to Build Cost-Effective CPD With Limited Resources

Lawrence Sherman[1], Craig Fitzpatrick[2], Vaibhav Srivastava[3]

[1] Meducate Global, LLC, Tierra Verde, Florida, USA [2] World Continuing Education Alliance, Hertsforshire, UK [3] Insignia Learning, Mumbai, India

Background

Continuing professional development (CPD) is the longest, and arguably, the most challenging portion of the lifelong learning journey for healthcare professionals (HCPs). Research has shown that although most HCPs are aware of the need to participate in CPD, there is great heterogeneity in the available content, relevance to individual environments, capacity of appropriate eductors, and in the systems responsible for overseeing CPD.

HCPs in resource-challenged areas have even greater difficulty accessing CPD that is relevant to their needs for many reasons, including: cost, access, availability, time constraints, lack of systemic resources, lack of appropriately trained CPD professionals available to design, deliver, and evaluate, and diversity, equity, and inclusivity regarding faculty and learners the impact of educational activities.

Who Should Participate

Health professions educators (HPEs) who design and deliver CPD, primarily in areas with limited resources

Structure Of Workshop

This workshop will guide participants through innovative, creative, and cost-effective strategies for providing CPD to HCPs in geographies where access to high quality CPD is either non-existent or impractical. The session will begin with an in-room needs assessment allowing for content to be focused on the needs of participants. The chairman/moderator will then use specific questions/examples from the needs assessment to outline strategies for approaching building of either comprehensive strategies or individual tactics. Participants will use small group learning at round tables to come up with strategies to address the challenges presented. This will be followed by expert commentary by the panelists, who will also use examples of arranging CPD access for HCPs in Africa, South Asia, and the Middle East will be used to reinforce the strategies developed. A closing session following a TV interview format will provide practical take-home points for participants. The audience will be actively engaged throughout the session to comment on the examples, and to share similar experiences and challenges. Slides and will be used to reinforce the points made during the session.

Intended Outcomes

Participants will be better able to address systemic, organizational, or individual needs for developing or identifying relevant CPD activities in areas of limited resources.

Session 9U

9U (3301)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: M4

Global Diversity, Equity, and Inclusion in Health Professional Education Publishing–What Could Work

Anna Cianciolo[1], Gail Sullivan[2], Grace Huang[3], Rashmi Kusurkar[4], Ronald Harden[5], Richard Hays[6], Peter de Jong[7], Dujeepa D. Samarasekera[8], Rola Ajjawi[9], Zareen Zaidi[10]

[1] Southern Illinois University School of Medicine, Springfield, Illinois, USA [2] University of Connecticut School of Medicine, Farmington, USA [3] Harvard Medical School, Boston, USA [4] Vrije Universiteit Amsterdam, Amsterdam, The Netherlands [5] Medical Teacher, Dundee, UK [6] James Cook University, Townsville, Australia [7] Leiden University Medical Center, Leiden, The Netherlands [8] Yong Loo Lin School of Medicine, Singapore, Singapore [9] Deakin University, Melbourne, Australia [10] George Washington University School of Medicine, Washington, DC, USA

Background

Most health professions education (HPE) publications originate from the Northern Hemisphere. Editorial board members and peer reviewers are similarly concentrated in the Global North. Diversity gaps such as this hinder advancement of education science. As resource constraints tighten, publication diversity, equity, and inclusion (DEI) introduces a growth opportunity requiring insight, humility, and creativity to seize. Several international HPE journals are piloting DEI initiatives, including demographic data reporting, diversification of editorial boards, reviewers, and authors, and mitigating bias in the publishing process. Personal stories from Global South authors regarding publication, from manuscript submission through technical checks, reviews, and editorial decisions, may inspire deeper discussions that promote change.

Who Should Participate

Scholars eager to join international HPE journal editors (i.e., the workshop facilitators) in brainstorming strategies to promote DEI in HPE publishing. Global South authors with publishing stories to share.

Structure Of Workshop

Context setting (15 minutes): After introductions, facilitators will review the current state of HPE publishing, as it relates to global DEI, and participants will hear publishing stories from Global South authors, including Vishna Devi Nadarajah, MHPE, PhD, International Medical University and Ardi Findyartini, MD, University of Indonesia.

Small-group breakouts (20 minutes): Participants will examine experiences of the early submission process (manuscript submission and peer review) using personal stories, sample abstracts, and other materials to brainstorm at least one potential inclusion strategy. Journal editors will facilitate these discussions.

Large-group report-out (15 minutes): Small-group leaders will report out potential strategies, moderated by facilitators.

Small-group breakouts (20 minutes): Building on case materials and personal experiences, participants will analyze systemic barriers and opportunities in publishing, including editorial board composition, editorial decisions, and social media reach, to consider more inclusive processes.

Large-group report-out (20 minutes): Small-group leaders will report out these discussions, moderated by facilitators. Proposals will be interwoven with editors' accounts of pilot DEI initiatives at several HPE journals.

Intended Outcomes

Participants will:

1. Describe how bias in HPE publishing prevents publications from the Global South.

2. Identify systemic barriers to global DEI in HPE publishing

3. Identify reviewing, editing, and dissemination practices inclusive of authors from diverse backgrounds, countries, and institutions

Session 9V

9V (6211)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: Staffa

The road towards a medical curriculum in which planetary health is integrated

Janique Oudbier[1], Niek Sperna-Weiland[2], Anne Timmermans[3], Erik Beune[4], Jeanine Suurmond[1]

[1] Amsterdam UMC, location AMC, Dep. of Public and Occupational Health, Amsterdam, The Netherlands [2] Amsterdam UMC, Dep. of Anesthesiology and Centre for Sustainable Healthcare, Amsterdam, The Netherlands [3] Amsterdam UMC, Dep. of Obstetrics and Gynaecology, Amsterdam, The Netherlands [4] Amsterdam UMC, Teaching and Learning Centre, Amsterdam, The Netherlands

Background

Climate change is considered as one of the most urgent issues of our time and many warnings show the importance to take action. The World Health Organization estimated an additional 250.000 deaths per year between 2030 and 2050 worldwide as a result of climate change (Hales et al., 2014). Planetary health is *the health of human civilization and the state of the natural systems on which it depends* (Whitmee et al, 2015, p. 1978). Despite the urgency, planetary health education is barely implemented in medical educational curricula (Walpole et al., 2015). Many educators and deans experience challenges regarding the integration of planetary health in the medical curriculum (Brand et al., 2021; Shea, 2020). This workshop aims to increase the confidence of educational actors in medical education regarding the integration of planetary health.

Who Should Participate

This workshop is targeted to educational actors who already have affinity with planetary health and consider planetary health as an urgent issue. The target audience for our workshop is thus educators, deans, policy makers, and students related to the bachelor and master of the faculty of medicine.

Structure Of Workshop

First of all, we explain what planetary health is and which issues should be considered as planetary health. Then we introduce the evidence-based roadmap we created to integrate planetary health education into the medical curriculum, which consists of ten steps in four phases. Our main focus will be on the step 'curriculum scanning'. We will explain how you can construct your own curriculum scan and we will guide you through the process of curriculum scanning. We will shortly discuss how the scan be used to guide further integrate planetary health into the curriculum.

Intended Outcomes

After this workshop, you know the ten steps to integrate planetary health into a medical curriculum. Furthermore, you understand how to make a curriculum scan and you have made a draft of your own curriculum scan to take home. The abstract construct planetary health will be more tangible for you and your medical faculty.

Session 9W

9W (6071)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: Jura

Design and development on an innovative multiprofessional simulation course

Charleen Liu[1], Maria Christou[1], Helen Johnson[1], Thirza Pieters[1]

[1] *Health Education East of England , Cambridge , UK*

Background

Our newly-launched Multiprofessional Foundation School in East of England (EoE) links Pharmacists, Physician Associates, Dentists and Foundation School. We aim to develop unique and innovative learning opportunities, focussing on commonalities in terms of learning objectives and professional competencies across programmes.

We have developed a regional Multiprofessional Simulation (MPS) course: 12 courses are running between December 2022 and March 2023 across EoE. A faculty handbook with simulation scenarios of acute medical conditions with debrief guide is developed, and pre-course briefing meetings are held with local medical and pharmacist faculties.

This simulation course has received extremely positive feedback from trainers and trainees, 100% trainees feel they would benefit from MPS after the course, and 100% would recommend this course to their peers. It creates a realistic and effective setting for which trainees develop collaborative working in a safe learning environment. It provides trainees better understanding of everyone's roles, increase their confidence in managing unwell patients and raise awareness of non-technical skills.

We would like to share our journey in developing this MPS course; discuss potentials and overcoming barriers in multiprofessional session design, and future opportunities for MPS.

Who Should Participate

Foundation Training Programme directors

Simulation faculties

Structure Of Workshop

Introduction of multiprofessional learning

Discussion of benefits of multiprofessional learning

Multiprofessional Simulation course material design and adaptation from evaluation of our first pilot course

Demo sim (snapshot)

Demo Debrief (snapshot)

Debriefing adaptation to multiprofessional groups

Trainees' feedback

Overcoming barriers

Where do we go from here?

Q&A

Intended Outcomes

Increase awareness on benefits of multiprofessional simulation

Raising importance of non-technical skills learning

Increase understanding on multiprofessional educational programme design

Recognise adaptation on simulation facilitation and debriefing for multiprofessional groups

A platform for interactive discussion and experience-sharing on Multiprofessional course design amongst audience

Session 9X

9X (4293)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: Barra

A Framework to Support Success and Well-Being in Health Sciences Education

Margaret Rea[1], Michael Wilkes[1], Andres Sciolla[1], Karl Jandrey[2], Cara Sandholdt[3], Elizabeth Rice[3]

[1] UC Davis School of Medicine, Sacramento, USA [2] UC Davis School of Veterinary Medicine, Davis, USA [3] Betty Irene Moore School of Nursing at UC Davis, Sacramento , USA

Background

High rates of burnout, anxiety and depression have been documented among health professions students (HPS), including veterinary, medical and nursing students. In response, health science schools need to look at both pre-matriculation and learning environmental factors that can support or be barriers to the well-being and academic success of students. To this effort, an interdisciplinary team has developed a model of resilience that describes the role of intrapersonal, interpersonal, and systemic factors in student wellness and success. This model is being evaluated in a longitudinal study of medical, veterinary and nursing students with the goal of promoting diversity and inclusion and supporting systems interventions to improve student well-being. This workshop will present the model, preliminary findings, and provide participants the opportunity in small break out groups to use the model as a roadmap to improve the chances for student success addressing both admissions and learning environment.

Who Should Participate

Anyone involved in undergraduate medical education including students.

Structure Of Workshop

Participants will be introduced to a multi-dimensional model of resilience and evidence-based resilience related tools with the goal of leaving the session with potential interventions that could be incorporated at their home institutions.

1. Large group discussion of our model using case examples: (15 mins) .

2. Small groups: (30 mins)

i. Half the groups will focus on health science ADMISSIONS. Using pre-matriculation variables/metrics this group will brainstorm ways in which ways to build a diverse and resilient class.

ii. Half the groups will focus on the LEARNING ENVIRONMENT. This group will look at interpersonal, intrapersonal and systems issues to create a more inclusive and well student body.

2. Large group discussion: (30 Mins)

3. Final comments and summation: (15 mins)

Intended Outcomes

At the end of the workshop, participants be able to discuss a multi-dimensional model of resilience (and related measurement tools) that describes the role of intrapersonal, interpersonal, and systemic determinants of student wellness and success. Participants will be able to describe barriers and challenges in admissions to health science schools that limit student diversity and then describe interventions that could improve the process to make it more inclusive.

Session 9Y

9Y (5219)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: Shuna

Giving Effective Feedback: A Relationship-Centered Approach

Lars Osterberg[1], Christine Schirmer[1], Bahij Austin[1]

[1] *Stanford School of Medicine, Stanford, USA*

Background

Feedback is a critical learning tool in medical education and giving effective feedback is an important life skill that helps to create positive learning environments and work cultures, as well as more highly functioning teams. When done effectively, feedback can be a motivator, but when done poorly, it can demoralize and discourage. Yet it can be difficult to know how to deliver feedback in a way that can be received and applied, especially in challenging situations. The humanistic mentoring model (Schirmer and Osterberg 2021), based on principles of relationship centered care, emphasizes empathic connection with the mentee, and translates well into effective feedback delivery. Empathic rapport and concern are keys to the effective delivery of feedback, especially in difficult feedback situations (Hewson 1998, Milan 2006). This humanistic feedback approach relies on the ARTful feedback formula–ask, respond, tell–and emphasizes the importance of active listening and honest communication in the feedback interaction.

Who Should Participate

This feedback method is effective for giving feedback in any context: peer-to-peer, faculty-to-learner, and even across hierarchy. As such, this workshop is appropriate for faculty, trainees, and staff.

Structure Of Workshop

We will teach the relationship-centered, ARTful feedback model, discuss providing feedback across identity differences, and provide participants the opportunity to practice applying the model to real-life scenarios covering a range of feedback contexts in which participants may find themselves.

15 minutes: Introductions and Active Listening

Didactic and pair share activity to introduce key concepts of active listening.

30 minutes: Relationship-Centered Feedback Model

Didactic focused on ARTful feedback model, pair share, and group discussion. Participants also practice applying feedback model via role play in pairs.

30 minutes: Working Across Identity Difference

Didactic on bias and stereotype threat and pair work, role playing feedback in cases where identity difference is at play.

15 minutes: Whole Group Discussion

Participants share their own challenging feedback experiences and workshop as a group.

Intended Outcomes

- By the end of this workshop, participants will be able to:
- Demonstrate active listening skills
- Enumerate the steps of giving relationship-centered feedback using the ARTful model
- Demonstrate the principles of giving relationship-centered feedback
- Identify at least one strategy for giving effective feedback across identity difference

Session 9Z

9Z (5894)

Date of presentation: Tuesday 29th August
Time of session: 16:00 - 17:30
Location of presentation: Orkney

Strategies for developing open education resources (OER) in medical education

Tao Le[1], Teresa Chan[2], Poh-Sun Goh[3], Tomlin Paul[4]

[1] University of Louisville School of Medicine, Louisville, USA [2] McMaster University Faculty of Health Sciences, Hamilton, Canada [3] National University of Singapore Yong Loo Lin School of Medicine, Singapore, Singapore [4] University of Global Health Equity, Kigali, Rwanda

Background

Historically, hiqh-quality medical education has been proprietary and expensive to develop. New digital platforms have accelerated the development of open education resources (OER) which evolved to address critical cost and accessibility issues in education globally. The United Nations and UNESCO identified OER as a global priority and developed guidelines and policies supporting OER development at the country and institutional level. In medical education, OER are also known as Free Open Access Medical education (FOAM) and include learning and teaching materials that are freely and legally available for educators to reuse. Students and trainees can also now access OER/FOAM and create peer-to-peer (P2P) learning experiences. Finally, novel shared curricular ecosystem platforms can standardize and facilitate the management of OER/FOAM to empower a global community of medical educators to share, collaborate, and go further together.

Who Should Participate

Health professional education leaders, educators, learning designers in medical, nursing and allied health fields who are interested in sharing and collaborating with others, especially in low middle-income countries.

Structure Of Workshop

This hands-on, interactive workshop will provide participants with an introductory overview of OER and FOAM, including UNESCO guidelines. Participants will be able to explore best practices for leveraging OER/FOAM in existing curricular development processes. The facilitators will demonstrate a variety of free or low-cost tools for the development, management and sharing of OER/FOAM.

In small group breakouts, participants will have an opportunity to experiment with selected tools to develop OER/FOAM and share with each other. Potential pitfalls such as quality, critical appraisal and copyright issues will be addressed, and finally, the workshop will explore strategies for engaging learners in creating and leveraging OER/FOAM for P2P learning experiences.

Intended Outcomes

- Upon completing this workshop, participants will be able to:
- Explain the history, goals and impacts of OER and FOAM
- Discuss best practices for the development and implementation of OER/FOAM
- Identify and use free or low-cost tools to develop, manage and share OER/FOAM
- Discuss and implement appropriate policies and processes for quality assurance, critical appraisal, and copyright compliance
- Guide learners to develop OER/FOAM for P2P learning experiences

Session 10A

10A (0770)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: Hall 2

East Meets West: Experiences of Two AMEE ASPIRE Awardees for Excellence in Student Engagement.

Céline Marmion[1], Muirne Spooner[1], Sarah Ghobrial[1], Anant Khonsitseth[2], Pongtong Puranitee[3], Chawisa Teansue[3]

[1] Royal College of Surgeons University of Medicine and Health Sciences, Dublin, Ireland [2] Faculty of Medicine Ramathibodi Hospital, , Mahidol University, Bangkok, Thailand [3] Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Background

Student engagement broadly refers to the time and energy invested by students to collaborate with its institution for mutual benefits by participating in academic and non-academic activities including learning, teaching, research, governance, and community-based initiatives.

The School of Medicine, RCSI University of Medicine and Health Sciences, Ireland and the Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand are the 2022 ASPIRE-To-Excellence Awardees for Student Engagement. The ASPIRE programme transcends traditional accreditation processes, serving to 'identify, recognise and reward world-class excellence in education'.

- RCSI is a transnational university with undergraduates from 95 countries, ranked **top 50 for International Outlook and top 250 universities worldwide (2023 Times Higher Education World University Rankings)**.
- Mahidol University is a single-site university, ranked in the top 3 in life sciences and medicine in ASEAN and top 14 in ASIA (the QS World University Rankings by Subject 2022).

Topic Importance

Student engagement is well-established as a crucial marker of a quality educational experience, enhancing the academic environment and boosting students' personal and professional growth. Student engagement, as such, has the capacity to truly transform the future of medical education.

Format and Plans

This symposium will uniquely explore how two different institutions at opposite sides of the world made student engagement work within their individual contexts. The interactive panel discussion will delve into barriers and enablers common to both, and those specific to each institution. We offer a symposium that celebrates diversity, integration and the power of student engagement, transferable to many contexts. We will use polling, PowerPoint, tossable microphone, QR codes to key content and will play videos.

Take Home Messages

By combining theoretical background with our practical experience of student engagement implementation, we will demonstrate how a “can do” attitude and innovative thinking can transcend challenges at diverse sites with differing resources. In doing this, we will promote a culture of student engagement as an essential goal for educators worldwide.

Session 10B

10B (0894)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: M1

Medical Education Escape Rooms; Love them, but am I learning? A critical discussion on contemporary serious gaming.

Panagiotis Bamidis[1], Subha Ramani[2], Peter Dieckmann[3], Rachel Ellaway[4]

[1] Prof of Medical Physics, Medical Informatics, Medical Education, Director, Medical Education Innovation & Research Unit, Special Unit for Biomedical Research and Education, School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece [2] AMEE President, Harvard Medical School, Boston MA, USA [3] Copenhagen Academy for Medical Education and Simulation (CAMES), Center for HR and Education, Copenhagen, Denmark [4] Professor of Medical Education in Community Health Sciences and Director of the Office of Health and Medical Education Scholarship, University of Calgary, Calgary, Canada

Background

Today's students request different forms of learning. From their inception, escape rooms, with their full sensory immersion emerged as a highly engaging and useful modality for facilitating active learning in the field of healthcare. One of the first systematic reviews that was published in 2020 about serious, non-entertainment-focused escape rooms (https://doi.org/10.1016/j.edurev.2020.100364) identified, 21 studies involving medicine or healthcare, among 39 overall.

Topic Importance

While the engagement potential of escape rooms is undisputed their learning efficacy is still under scrutiny. The overwhelming majority of research demonstrates that participants are very excited and very engaged with the experience. However moving from perceived to observed learning efficacy, the data become rather scarce. It is this disparity that this symposium aims to focus on. Through a panel of medical education experts, the goal of

this event is to kick off a discussion about immersive game based media and their transformation from novelty research to curriculum worthy educational artifacts.

Format and Plans

The symposium will comprise 4 rounds of panel-audience interaction. In the first round, the moderator will kick off the discussion with the audience (using audience response systems) after a brief contextualization introduction. Then each of the panelists will highlight a certain facet of the topic through their own unique viewpoint and bring the discussion to the audience. Each round is expected to last 20 minutes with the speaker using less than half of this for an interactive presentation (using menti-meter or similar audience engaging tools) of their perspective and the rest dedicated to audience discussion. Finally, the panel moderator will summarize the discussion at the end of the symposium with a closing remark.

Take Home Messages

Escape rooms, as well as all immersive educational media modalities, require both explicit and implicit integration of learning objectives in all aspects of their design (narrative, challenges, rewards, debriefing, and assessment). Adherence to such good design practices can make them curriculum worthy additions to the arsenal of healthcare educators.

Session 10C

10C (1752)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: Argyll I

Decluttering Programmatic Assessment

Chris Roberts[1], Priya Khanna[1], Lambert Schuwirth[2], Sylvia Heeneman[3], Dario Torre[4]

[1] University of Sydney, Sydney, Australia [2] David Prideaux Scholarship Centre- School of Medicine, Flinders, Adelaide, Australia [3] School of Health Professions Educations, Maastricht University, Maastricht, The Netherlands [4] University of Central Florida, College of Medicine , Florida, USA

Background

This symposium is for those wishing to conceive, build, and study programmatic assessment (PA) to advance practice as an alternative to traditional assessment. Whilst its impact could be radical, major concerns remain amongst stakeholders in appearing to let go of high stakes summative assessments. Differing models of PA implementations can be problematic: logistic burdens, evidence for validity claims, stakeholders' perceptions of the assessment, clarity of language used to describe key principles, lack of student agency, and the challenges of changing assessment culture. Stemming from a theoretical critical realist prospective, the symposium will provide ideas and theoretical insights to educators that wish to understand and resolve some of the tensions in reforming a traditional system to programmatic assessment.

Topic Importance

There is major debate on assessment reform, amplified by the impacts of COVID on clinical and large scale summative assessments. A critical realist systems approach applied to PA can provide deeper and more meaningful ways of providing an aligned vision for implementing a program of assessments within institutions using (more) traditional approaches to assessment.

Format and Plans

An international team of authorities on the theory and practice of PA will advocate for a philosophically informed theoretical lens in designing and integrating programmatic approaches to assessment and learning. Short presentations will encourage participants to consider: the utility of a critical realist systems thinking approach, the need for a shared language in describing the daily use of assessment systems, the need for an argument-based validity framework, and consideration of the impact of the learning culture and the structure of assessment on student agency. Stimulated by challenging scenarios, participants will interact through the chair (for those present) and by conference e-platform for those afar in the plenary discussion.

Take Home Messages

In PA, students' choice in learning (agency) may be influenced by their interactions with rigid assessment structures (rules) and the learning culture.

Purposeful and eclectic evidence-based assessment tasks are a key part of establishing argument-based validity frameworks in PA

Developing a shared narrative promotes reflexivity in staff and students to appreciate the complex relationships between assessment and learning and trust the new assessment practices in PA.

Session 10D

10D (1619)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: Hall 1

Enhancing patient safety through Simulation based education

Balakrishnan Ashokka[1], Sophia Ang [2], Douglas Paull[3], Viktor Riklefs[4], Alfred Kow[2], Sayaka Oikawa[5]

[1] National University Hospital, Singapore, Singapore [2] National University of Singapore Yong Loo Lin School of Medicine, Singapore, Singapore [3] Accreditation Council for Graduate Medical Education (ACGME), Michigan, USA [4] Karaganda Medical University, Karganda, Kazakhstan [5] Fukushima Medical University, Fukushima, Japan

Background

Patient safety education is not consistently taught in many curricula. The topic is generally addressed through didactic lectures or by scattered avenues of small group teaching. Undergraduate education teaching and learning tend to be within the various specialities. But achieving a coherent and cohesive learning is not well established.

Topic Importance

Simulation when planned as an educational intervention needs to be matched with the curricular intent and by well-articulated learning outcomes, that are outlined across the available educational platforms. Range of platforms exist such as high technology simulations, game-based platforms, virtual, wearable and augmented realty and other learning environments. Educators need to understand the strengths of each educational platform and improvise the content delivery in line with intended outcomes. The symposium is designed to provide an overview of the chief areas of concern when designing, implementing, and operationalising patient safety education in an interprofessional setting for undergraduates.

Format and Plans

The symposium is planned in two segments of 45 minutes each. The first half includes short overview of various aspects of patient safety education, the second half includes interactive discussions on four main themes with audience participation and voting.

First half:

7 minutes mini presentation per speaker / panellist (6*7min= 42 mins)

- Ashokka Balakrishnan: Scope of simulation and patient safety education
- Sophia Ang: Developing patient safety simulation- continuum from preclinical to practice readiness
- Courisse Knight: Matching educational platforms to learning outcomes
- Viktor Riklefs: Focus of virtual clinical simulations: high fidelity or student wellbeing or learning outcomes?
- Alfred Kow: Game-based simulation: improving learner engagement and retention
- Sayaka Oikawa: Psychological safety of leaners & cultural considerations in an interprofessional context

Second half:

Theme-based interactive (mentimeter voting) discussions: 4 themes of 10 minutes each

1: Find a sim or fit a content to a sim?

2: Conducting: method in the madness

3: Virtual Simulations: Are we all speaking the same language

4 Are we content with the intent?

Take Home Messages

- Patient safety education is not uniformly and consistently addressed in undergraduate medical education
- Curricular intent and content need to be matched with simulation-based educational platforms
- Understanding the learners and the learning environments is paramount in achieving optimal learning outcomes

Session 10E: Doctoral Reports: Learning

10E1 (1768)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 09:20
Location of presentation: Argyll II, Crowne Plaza

The social construction of clinical education: being and becoming in clinical teams

Peter Cantillon[1], Tim Dornan[2], Willem de Grave[3]

[1] University of Galway, Galway, Ireland [2] Queens University Belfast, School of Medicine, Dentistry and Biomedical Sciences, Belfast, UK [3] School of Health Professions Educations, Maastricht University, Maastricht, The Netherlands

Introduction

Hospital-based postgraduate clinical education has encountered many problems including chaotic learning environments, tensions between service provision and teaching and various contextual impediments to the full and effective implementation of the requirements for CBME. The faculty development response, i.e. credentialing clinical teachers and standardising clinical education, has struggled to achieve effective learning transfer and sustainability in clinical workplaces. This has led to a growing interest in repositioning faculty development from classrooms into clinical workplaces, but the relationship between teacher identity, teaching practice and workplace contexts is poorly understood. This programme of research set out to develop a theoretically informed framework to facilitate a situated approach to faculty development in postgraduate medical education, by exploring how clinical education is co-created between teachers and learners through shared work practices in clinical teams.

Methods

Using sociocultural, constructionist and critical perspectives a programme of research was assembled comprising four studies:

1. A scoping review that explored the relationship between the development of clinical teacher identity and the clinical workplace environments in which clinical teachers are situated?

2. A qualitative study that used a developmental timeline and interviews to examine how clinicians develop teacher identities in relationships of accountability to clinical communities and institutions? The analysis employed a communities of practice frame of reference to derive insights about the relationship between participation in clinical communities and becoming a teacher.
3. An ethnographic study of how clinical education is realised in the context of the day-to-day
4. work of clinical teams in medicine and surgery. Using fieldnotes, interviews, photographic
5. images and video, a large dataset was assembled. The dataset informed two studies
    a. A Dramaturgical analysis that looked at how clinical education is co-constructed between postgraduate trainees and their supervisors in the context of hospital based clinical teams.
    b. A Figured World's analysis of how postgraduate learners and clinical teachers negotiate identity through mutual positioning and self-authoring in the cultural worlds of internal medicine and surgical teams.

Results

The scoping review employed a qualitative synthesis which demonstrated how clinicians had to juggle researcher, clinician and teacher identities in the course of their work. Clinicians privileged their researcher and clinical identities over teaching because they usually attracted greater social capital. The synthesis also found that teacher identities were contingent on how they were acknowledged and supported by clinical peers. Using Wenger's planes of accountability, the second study showed that physicians reproduced teacher identities congruent with dominant features of the regimes of competence that applied in clinical teams. Teacher identities were also shaped by their accountability to the norms, goals and contracts of host institutions. The research showed how clinical education practices within clinical teams were conserved by the inequalities of power that prevailed there. Using the dramaturgical sensitising concepts of impression management and face work, the third study analysed the large ethnographic dataset to demonstrate how clinical teaching and learning are informed by the implicit curriculums that apply within clinical teams. The study also showed how practices of impression management and face work conserve current practice and render it somewhat resistant to change. The fourth study demonstrated how teacher identity, teaching and learning practices are all shaped by particularities of the cultural worlds of surgery and internal medicine.

Discussion And Conclusion

This programme of research showed how teacher identity and teaching practice are shaped by teachers' relationships of accountability to communities of clinical practice such as clinical teams and hospitals. The work also showed how teacher identity, teaching practice and learning were informed by implicit curriculums within clinical teams and dominant discourses pertinent to the cultural worlds in different clinical specialties. Together, these studies have shown how clinical education is strongly influenced by social and cultural features of clinical workplace. Insights from this work can be used to facilitate significant beneficial change in on-the-job clinical education as well as providing important foundational understandings for the development of future novel, situated faculty developing approaches.

References

Cantillon, P; De Grave, W and Dornan, T The social construction of teacher and learner identities in medicine and surgery. 2022 Medical Education. 56 (6), pp.614-624

Cantillon, P; De Grave, W and Dornan, T. Uncovering the ecology of clinical education: a dramaturgical study of informal learning in clinical teams. Advances in Health Sciences Education. 2021 26 (2), pp.417-435

10E2 (1865)

Date of presentation: Wednesday 30th August
Time of session: 09:20 - 09:40
Location of presentation: Argyll II, Crowne Plaza

Physician Roles in Addressing IPV: Stakeholder Perspectives to Inform Medical Education and Policy

Alice Cavanagh[1], Stacey A. Ritz[1], Melissa Kimber[1], Harriet L. MacMillan[1], Meredith Vanstone[1]
[1] *McMaster University, Hamilton, Canada*

Introduction

Experiencing intimate partner violence (IPV) is associated with a wide range of mental and physical health conditions that can have profound and enduring consequences in the lives of people, families and communities who are affected (1). Many of these health concerns can be mitigated with timely access to medical care that addresses patient safety and needs for support, leading health policymakers and other professional stakeholders to frame IPV as a "health issue" within the purview of medical practice and expertise. Research suggests, however, that many physicians are ill-equipped to respond to patients who have experienced IPV with requisite sensitivity and skill (2). This gulf gives rise to the research question that guided this dissertation - how do physicians learn to think about IPV and their professional roles in addressing it in the course of their professional training? The resultant work is comprised of three original studies that lie at the nexus of health policy and health professions education scholarship.

Methods

Each of the studies that comprise this dissertation deploy a different qualitative health research methodology. Study 1 proffers a novel combination of environmental scanning and critical discourse analysis to parse the construction of physicians' roles related to IPV in Canadian education materials. Study 2 draws on semi-structured interviews with 57 Canadian physicians to present a qualitative description of physicians' *own* perceptions of their roles related to IPV. Finally, Study 3 integrates key informant method and interpretive description to elicit perspectives of stakeholders with expertise and experience related to IPV about the knowledge, skills, attitudes, and behaviours that physicians need to address IPV effectively.

Results

Study 1 – Roles for physicians portrayed in Canadian education materials were constructed through a medicalized, interventionist lens: physicians were encouraged to conceive of IPV as a "medical issue" and to become attuned to myriad "symptoms" of violence, evoking the act of diagnosis. Identifying and supporting patients experiencing IPV were framed as connected components of physicians'

roles: physicians were instructed to help patients "name and frame" experiences as IPV, and to provide patients with support to leave their relationships.

Study 2 – By contrast, physicians themselves perceived their roles in addressing IPV as focusing narrowly on identifying and then connecting patients who were currently experiencing IPV to resources, services, and supports (rather than providing that support directly). Learning experiences that involved directly interacting with people affected by IPV were highly valued by participants, who reflected that the emotional dimensions of these interactions were core to their impactfulness, vivifying constraints that made it challenging to connect patients with support.

Study 3 – Finally, analysing interviews with key informants, "attending to power" developed as a key principle for medical practice related to IPV, encompassing understanding interactional, organizational, and structural power dynamics and purposefully engaging with these dynamics to empower patients. Participants proffered guidance for physicians in attending to power in four focal contexts – namely between partners in relationships in which IPV occurs, between patients and providers, between providers, and in social systems and structures.

Discussion And Conclusion

Taken together, findings from these studies tessellate to produce a broader picture of how physicians in Canada perceive their roles related to IPV, how these perceptions evolve, and how interested stakeholders might endeavour to intervene in medical training to improve care for people subjected to IPV in the future. Although the experiences, insights, recommendations, and resources that served as data for this dissertation shared a common sense of the importance of improving medical care for people who experience IPV, the disjuncture between what these studies imagine as necessary to enact that improvement are an important challenge for medical education and health policy stakeholders working to reshape how physicians address IPV. These findings gesture towards the importance of continuing efforts and inquiry in medical education that examine how best to cultivate critical consciousness and reflexivity in physicians, while

also reckoning directly with systemic resource constraints that shape what support physicians can offer.

References

1 - Potter LC, Morris R, Hegarty K, García-Moreno C, Feder G. Categories and health impacts of intimate partner violence in the World Health Organization multi-country study on women's health and domestic violence. Int J Epidemiol. 2021;50(2):652-62.

2 - Tarzia L, Bohren MA, Cameron J, Garcia-Moreno C, Doherty L, Fiolet R, et al. Women's experiences and expectations after disclosure of intimate partner abuse to a healthcare provider: A qualitative meta-synthesis. BMJ Open. 2020;10(11):e041339.

10E3 (0148)

Date of presentation: Wednesday 30th August
Time of session: 09:40 - 10:00
Location of presentation: Argyll II, Crowne Plaza

Abandoning the Path of Least Resistance: Struggle in Health Professions Education

Naomi Steenhof[1], Nicole N Woods[1], Zubin Austin[2], Maria Mylopoulos[1]

[1] *The Wilson Centre, University of Toronto, Toronto, Canada* [2] *Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto, Canada*

Introduction

The inevitable moments of complexity, novelty and ambiguity that characterize the healthcare workplace pose a significant challenge for health professionals. Thus it's imperative to prepare future experts in the health professions to handle that challenge. To do so requires systems of assessment and instruction that include development and measurement of how adaptive students can be when facing novelty, ambiguity and uncertainty.[1] However, current cycles of instruction and assessment are largely aimed at developing and assessing only the routine dimension of expertise; that is, the application of known solutions to known challenges. To address this gap, this dissertation draws on theories from cognitive psychology and the learning sciences to explore systems of instruction and assessment that support the development of adaptive expertise by preparing students for future learning.[1]

We designed the studies in this dissertation to achieve the following research aims: 1) to better characterize the cognitive mechanisms of productive failure as an instructional strategy that supports preparation for future learning, 2) to study whether manipulating the sequence of test questions by difficulty can support performance on assessments of preparation for future learning, and 3) to examine the role of conceptual knowledge during active generation of possible solutions when learning through failure.

Methods

Study 1 compared the effectiveness of productive failure with indirect failure to characterize the underpinning cognitive mechanisms of productive failure. Year one pharmacy students (N=42) were randomly assigned to a productive failure or an indirect

failure learning condition. Immediately thereafter all participants completed a series of tests designed to assess acquisition, application, and preparation for future learning. The tests were repeated after a one-week delay.

Study 2 explored the extent to which we may use productive struggle to structure tests to support preparation for future learning. Year one and year two students (N=99) were randomly assigned to one of three learning conditions: high-struggle, low-struggle, and a control condition. During the learning phase, participants answered a series of questions where the order was manipulated dependent on condition. Regardless of the chosen answer, each participant was given an in-depth explanation as to why each answer was correct or incorrect. Subsequently, all participants completed an initial assessment phase, a new learning phase, and a future learning assessment.

Study 3 analyzed the participant's written artifacts using a conceptual knowledge classification framework to clarify what was occurring during the process of learning through failure.[2] Year one pharmacy students (N=42) were randomized to one of two learning conditions – productive failure and indirect failure. Quantitative, conceptual content analysis was performed on the participants' problem-solving artifacts while they were learning through productive failure.

Results

The results from our first study revealed that participants in the productive failure condition outperformed those in the indirect failure condition, both on the immediate preparation for future learning assessment, and after a one-week delay. These results emphasize the crucial role of active generation in learning. The results of our second study demonstrated that we can leverage testing using theories of productive failure to support the development of expertise and that the quality of the struggle experienced by the learner depends on the learner's prior knowledge. The results from our third study established that productive failure allows students to develop conceptual knowledge that facilitates transfer.

Discussion And Conclusion

This research has led to theoretical, methodological, and practical advances in the field of health professions education through investigating how learning through failure relates to conceptual knowledge development and preparation for future learning. These experiments contribute to a broader theoretical discussion about performance versus learning, adaptive expertise, and learning through failure. Productive failure is an instructional design strategy that has the value of accentuating the difference between

performance and learning and ensuring that measures of learning are central to assessing learners' success. Practically, this research lays the groundwork for designing educational interventions and curricula to develop trainees who can be adaptive and flexible with their knowledge to solve future, unforeseen problems that will inevitably arise in their work.

References

1. Mylopoulos, M., Brydges, R., Woods, N. N., Manzone, J., & Schwartz, D. L. (2016). Preparation for future learning: a missing competency in health professions education? *Medical Education, 50*, 115-123.

2. Crooks, N. M., & Alibali, M. W. (2014). Defining and measuring conceptual knowledge in mathematics. *Developmental Review, 34*(4), 344-377

Session 10F: CPD: Interprofessional

10F1 (2841)

Date of Presentation: Wednesday 30th August
Time of presentation: 0900 - 0915
Location: Argyll III, Crowne Plaza

Learning to collaborate in healthcare across borders: a design-based research

Juliët A. Beuken [1], Mara E.J. Bouwmans [1], Daniëlle M.L. Verstegen [1], Diana H.J.M. Dolmans [1]

[1]*Department of Educational Development and Research, School of Health Professions Education (SHE), Faculty of Health, Medicine and Life Sciences (FHML), Maastricht, The Netherlands*

Background

In geographical border regions, healthcare professionals both figuratively and literally cross borders in landscapes of practice. They collaborate with colleagues from other professions, disciplines and countries. Education does not prepare healthcare professionals to collaborate in this challenging context and little is known about how professionals learn to collaborate across borders. We investigated the challenges of cross-border healthcare collaborations from the professional- and patient perspective, and how professionals in border regions could learn to collaborate across borders.

Summary of Work

Following a design-based research approach (Dolmans & Tigelaar, 2012), we sought practical insight and theoretical understanding of learning in cross-border healthcare. First, we analyzed educational problems by interviewing professionals (N=43) and patients (N=8) in cross-border healthcare about their experiences. Second, we designed two workshops about cross-border healthcare for residents, both of which applied contextual, collaborative and reflective learning principles. We evaluated how these principles contributed to learning with participanting residents (N=16) in the first workshop and experts in healthcare and education (N=11) in the second workshop.

Summary of Results

Professionals have little insight in differences in the roles of their colleagues in cross-border healthcare, which challenges constructive communication and collaboration. Patients, too, indicated it is often unclear 'who does what'. Because roles of professionals differ largely between countries, education should stimulate discussions between professionals about the specifics of collaboration in their setting. The learning principles applied in the two workshops facilitated this, but learning principles may not 'work' in the same way in different settings.

Discussion and Conclusion

Our insights in learning in cross-border healthcare (education) contributes to theoretical understanding of learning in context. Intersection of interprofessional and international differences in cross-border healthcare hamper collaboration and collaborative learning. Seeing cross-border collaborations as working in landscapes of practice, means that learning objectives may differ according to the lay-out of the landscape. Thus, we need to consider how professionals collaborate in each setting, and attend to specific challenges. Learning principles can serve as a guideline and should be adjusted to each setting.

Take-home Message

Education designed for cross-border healthcare should take into account specific needs of different settings.
The differences that challenge cross-border healthcare, also challenge education for cross-border healthcare.

10F2 (3936)

Date of Presentation: Wednesday 30th August
Time of presentation: 0915 - 0930
Location: Argyll III, Crowne Plaza

The Canadian Measurement and Monitoring of Safety Learning Collaborative

Joanne Goldman [1], Leahora Rotteau [1], Virginia Flintoft [2], G. Ross Baker [2]

[1]Centre for Quality Improvement and Patient Safety, University of Toronto, Toronto, Canada; [2]Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, Canada

Background

The Measurement and Monitoring of Safety (MMSF) Framework offers a conceptual model for healthcare organisations to develop a more comprehensive approach to safety compared to isolated safety interventions. The MMSF consists of five dimensions critical to safe care focusing on past harm, reliability, sensitivity to operations, anticipation and preparedness, and integration and learning. An 18-month Canadian Learning Collaborative with eleven healthcare teams was implemented in 2018-2020 to support the learning and translation of the Framework into practice. The Collaborative consisted of three in-person interactive learning sessions, a closing congress and coaching; in between sessions teams worked to advance the sharing and implementation of the MMSF.

Summary of Work

We conducted a qualitative study to examine the perspectives and experiences of Collaborative participants to increase understanding of the learning and adaptive work of implementing the MMSF in diverse healthcare contexts. We conducted interviews with 36 participants, observations of 5 sites and learning sessions, and documentary analysis.

Summary of Result

Collaborative sessions and coaching allowed participants to explore concepts of safety beyond addressing past harm. Participants noted the importance of time dedicated to engaging local stakeholders in learning about MMSF concepts and their significance to their settings, prior to implementing the Framework into practice. While participants generally started with a small number of ways of integrating the MMSF into practice such as rounds or huddles grounded in MMSF language, the learning process involved processes of experimentation with incorporating the MMSF into a range of practices. Participants reported changes in thinking about safety, discussions and behaviours, that were perceived to impact healthcare processes.

Discussion and Conclusion

While more traditional safety education programs focus on knowledge transfer, the education processes in the Collaborative had a constructivist orientation, focusing on knowledge as something that learners actively construct, based upon prior knowledge, in order to solve novel problems. Key to constructivist learning is the active engagement by learners in activities that allow them to discover new ways of thinking and acting.

Take-home Message

The Learning Collaborative and coaching enabled participants to think about safety in broader terms than past harm and bring these new lenses to discussions and interactions across a range of healthcare processes and contexts.

10F3 (2706)

Date of Presentation: Wednesday 30th August
Time of presentation: 0930 - 0945
Location: Argyll III, Crowne Plaza

Crossing boundaries to promote interprofessional collaborative practice and teamwork in child safeguarding: A design-based research approach

Michelle O'Toole [1], Walter Eppich [1], Clare Sullivan [1], Naoise Collins [2], Angeline Traynor [1], Anastasija Simiceva [1], Claire Mulhall [1], Andrea Doyle [1]

[1]RCSI SIM Centre for Simulation Education and Research, Dublin, Ireland; [2]Dundalk Institute of Technology, Dundalk, Ireland

Background

Worldwide, over 1 billion children/year experience violence and abuse, causing 40,000 deaths/year. Even after children at-risk are identified, systemic failures persist, mostly due to communication breakdowns between professionals from health/social care including first responders. Unfortunately, child safeguarding education typically occurs in professional siloes, viewing collaboration as a technical problem rectified through "best practice" or online modules. This approach neglects unpredictable contextual situations, triggering conflict and mistrust within interprofessional teams. This study explores learning across professional boundaries to explore individual and others' roles and valuable contributions to child safeguarding in emergency department settings.

Summary of Work

Informed by sociocultural learning theory and a design-based research (DBR) approach, we designed, implemented, and evaluated three iterations of a 1.5-day simulation-based interprofessional child safeguarding course. In DBR, researchers involve key stakeholders to design authentic learning environments with the intention of both creating and studying learning within specific contexts. We recruited key stakeholders from paediatrics and social work to (a) co-design the course and (b) serve as co-faculty. We collected quantitative and qualitative data: (a) ethnographic observations (b) semi-structured interviews with participants, faculty and simulated parents and (c) quantitative questionnaires related to perceived psychological safety; the Interprofessional

Collaborative Competencies Attainment Survey (ICCAS); and a previously published case-based tool to rate likelihood of reporting possible child abuse.

Summary of Results

Key themes highlighted fundamental aspects of boundary crossing during the course, including:

- Interprofessional collaboration allowed participants to learn about respective roles and responsibilities
- Negotiation of issues surrounding psychological safety enabled voice behaviour to share concerns
- Use of precise language and approach to interprofessional communication were key successes
- Transfer of learnings to the workplace required expansive thinking, using strategic silence, and asking better questions to foster collaboration.

Discussion and Conclusion

Using DBR, we demonstrated the importance of interprofessional training in child safeguarding and the benefits of bringing together physicians, nurses and social workers to enhance collaboration and effective information sharing in the emergency department setting.

Take-home Message:

Speaking up to share concerns requires psychological safety across teams.
Profession specific language is often a barrier to optimal care.
Interprofessional collaboration is fundamental in keeping children safe.

10F4 (6589)

Date of Presentation: Wednesday 30th August
Time of presentation: 0945- 1000
Location: Argyll III, Crowne Plaza

Online Versus Classroom Palliative Care CPD At A National Level: What do Net Promoter and Relevance Scores Report?

Jose Pereira [1], Jeff Moat [2], Jonathan Faulkner [2], James O'Hearn [2], Diana Vincze [2]

[1]*University of Navarra, Pamplona, Spain;* [2]*Pallium Canada, Ottawa, Canada*

Background

Gaps in access to palliative care (pallcare) have prompted calls for all clinicians who care for persons with serious illnesses to have core pallcare competencies. Pallium Canada (non-profit) addresses this gap through its suite of pallcare interprofessional courseware, called Learning Essential Approaches to Palliative Care (LEAP). There are different LEAP versions for different specialty areas and disease groups. LEAP Core targets primary care providers. In March 2020 (start of COVID-19 pandemic), it pivoted its interactive classroom courses (1 to 2 days) to fully online delivery (self-learning plus four interactive, case-based learning webinars). We compared participants' learning experiences between these two versions.

Summary of Work

Participants complete standardized knowledge, attitudes and comfort surveys pre- and post-course, a course evaluation immediately post-course (quality assurance and improvement) and commitment-to-change statements and reflections post-course and 4 months later. The evaluation includes, among others, responses to the statements , "I would recommend this course to my peers?" (Net Promoter Score), "The course was relevant to my practice?", and "The course was a good learning experience" with a 5-point Scale (1=Totally disagree, 5= Totally agree). We compared these between the LEAP Core classroom (LEAP-cl) and the LEAP Core virtual (LEAP-v) course versions.

Summary of Results

From April 2014 to January 2023, 902 LEAP-cl sessions were delivered to 16 656 learners (of which 2248 were physicians). From April 2020 to January 2023, 458 LEAP-v were delivered (731 were physicians). Mean Net Promoter score for LEAP-cl was 4.77 (all learners) and 4.63 LEAP-v (all learners). For "Relevance of the course", mean for LEAP-cl was 4.69 (all learners) and 4.52 for LEAP-v (all learners; 4.65 for physicians). For "Overall learning experience", mean for LEAP-cl was 4.76 (all learners) and 4.64 (all learners; 4.55 for physicians). The differences between the LEAP-cl and LEAP-v, and between the different professions for the two course versions, were not significant.

Discussion and Conclusion

Practising professionals across professions, including physicians, rated the classroom and the virtual versions of the interprofessional LEAP Core CPD course highly as learning experiences. Further analyses are underway, including impact on competencies and commitment-to-change.

Take-home Message

Learner experiences of classroom and online learning can be similarly positive if designed well.

10F5 (2966)

Date of Presentation: Wednesday 30th August
Time of presentation: 1000 - 1015
Location: Argyll III, Crowne Plaza

The effect of interprofessional patient discussions on interprofessional learning of healthcare teams

Lisa-Maria Van Klaveren[1], Arianne Ten Klooster[2], Vincent G.M. Geukers[1], Rien de Vos[1]

[1]AmsterdamUMC, location AMC - University of Amsterdam, Amsterdam, The Netherlands;
[2]AmsterdamUMC, location VUmc, Amsterdam, The Netherlands

Background

Interprofessional collaboration (IPC) has been put forward as a means to adapt healthcare practices to increasingly complex and continuously changing patient, family and community needs. In IPC, expertise and perspectives of all team members including patients and their families are integrated into one care plan. To date, professional practices often run in parallel and/or sequentially, which frequently leads to inefficiencies and dissatisfactions for patients and professionals. In order to encourage healthcare teams to integrate practices and to strengthen IPC, effective training interventions that foster interprofessional learning (IPL) in ongoing professional development need to be designed and evaluated.

Summary of Work

In a pilot study at the urology ward, we implemented interprofessional patient discussions (IPPDs) involving doctors, nurses, and patients. Following a conversation structure based on the International Classification of Functioning, Disability and Health (ICF), and the Positive Health (PH) framework, participants shared and integrated their respective perspectives into one care plan for discharge during IPPDs. The effect of the intervention on IPL was examined quantitatively by using the Interprofessional Collaborative Competency Attainment Survey (ICCAS), and qualitatively by focus group discussions with professionals. Moreover, patient experiences were explored using a questionnaire.

Summary of Results

Ten IPPDs were performed with patients and professionals participating once. Self-reported interprofessional skills significantly increased from 3.7 to 4.1 on a Likert-scale from 1 to 5 ($n = 34$, $p < .001$, $d = 1.16$). Based on focus group discussions we extracted three important themes for IPL: the search for a new balance as healthcare team, the exploration of boundaries, and the explication of team members' input and roles. Moreover, professionals valued IPPDs as opportunity to gain insights into each other's expertise, and recognized the importance of patients' perspectives in integrated care planning. Patients appreciated IPPDs as they felt seen and heard. Finally, we identified two key factors in the implementation of IPPDs: clear structure and shared leadership.

Discussion and Conclusion

Implementation of IPPDs that were structured on ICF and PH proved to be effective and feasible in fostering IPL by sharing perspectives and co-creating an integrated care plan for discharge.

Take-home Message

ICF/PH-based IPPDs lead to better inclusion of patients' perspectives and higher satisfaction of healthcare teams.

Session 10G

10G (7043)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: Castle I

Core Competencies of the 21st Century Physician. An Iberoamerican Vission

Marcos A. Núñez Cuervo[1], Jorge Pales[2], Juan V. Lara[3], Miguel F. Farfan[4], Alison Whelan[5], Alvaro Romero[6]

[1] AFAMS / Universidad Iberoamericana (UNIBE), Santo Domingo, The Dominican Republic [2] Fundacion Educacion Medica, Barcelona, Spain [3] Universidad Autónoma de Guadalajara, Guadalajara, Mexico [4] Universidad Católica de Santa María, Arequipa, Peru [5] Washington University School of Medicine in St Louis, St Louis, USA [6] Universidad de la Sabana , Bogotá Chía, Colombia

Background

Competencies are vitals in the process of a doctor's training; can be classified as general, specific, soft... During time they are submitted to change in relevance and importance according to the new challenges to be afford.

Topic Importance

It will give the audience a wide vision of the main competencies a doctor of this century requires and needs to be competitive, it doesn't matter where live or work.

Format and Plans

- Moderator and Speakers (4)
- Lectures / PowerPoint format
- Audience response system (mobile via Menti®)

Take Home Messages

There is a group of competencies, skills, and attitudes that the new generation of doctors require to achieve to be competitive in our world today.

Session 10H: Designing and Planning Learning: Technology

10H1 (1468)

Date of Presentation: Wednesday 30th August
Time of presentation: 0900 - 0915
Location: Castle II, Crowne Plaza

A Novel, Clinically Applied Visual Pathway Teaching Resource

Ifeoluwa Agbeja[1], Lily Evans[1], Siobhan Moyes[1], Leo Donnelly[2], Okezi Ononeme[3]

[1]Plymouth University, Plymouth, UK; [2]University College Dublin, Dublin, UK; [3]University of Aberdeen, Aberdeen, UK

Background

The visual pathway is a key anatomical concept required by health professionals in order to properly understand, diagnose and treat visual field defects – pathologies of high prevalence, especially in the elderly. There is, however, little literature available that shares good practice on how to teach this topic. Due to the complexity of dissecting this pathway students often struggle to visualise it in three dimensions (3D). While computer-animated resources are available, there are very few physical models available to demonstrate the pathway in 3D, particularly for those that require a more haptic approach. While 3D printing is increasingly viable, it remains an expensive outlay for many teaching departments, and even so, does not immediately separate the different elements proceeding from the retinal quadrants within the visual system.

Summary of Work

At Peninsula Medical School, Plymouth, a novel and inexpensive resource was created, that can be easily constructed by anyone with access to basic arts and crafts materials. Construction of this model allowed students to learn the visual pathway haptically, as well as demonstrating the 3D arrangement of the optic radiations and the physical locations of lesions that can cause visual loss. Taking a constructivist approach to learning that is constructively aligned with clinical application, students were supplied with two approaches to understand this pathway. One highlighted the lesion and asked how it

would affect the visual field and the other started with the visual field defect and asked how this could be used to identify the location of the lesion.

Summary of Results

Feedback from students indicated that the resource was enjoyable and useful, and helped them transfer knowledge from a two-dimensional representation of the visual pathway to a 3D model. It also allowed them to identify where in the visual pathway lesions could occur and relate this to the proper clinical terminology for each visual field defect.

Discussion and Conclusion

This study presents student and staff assessment of this approach, compared with 2D teaching.

Take-home Message

Introducing a 3D haptic resource for the teaching and learning of the visual pathway and its application to common visual field defects.

10H2 (0757)

Date of Presentation: Wednesday 30th August
Time of presentation: 0915 - 0930
Location: Castle II, Crowne Plaza

The impact of online pre-recorded neurology mini-lectures on medical student assessment

Hani BenAmer[1], Adrian Stanley[1]

[1]*College of Medicine, Mohammed Bin Rashid University of Medicine and Health Sciences, Dubai, The United Arab Emirates*

Background

eLearning has become an essential part of medical education. However, there is a lack of published research on student engagement with online pre-recorded mini-lectures and its impact of assessment.

Summary of Work

The engagement of 34 Year 5 medical students with 48 online pre-recorded neurology mini-lectures was assessed and correlated with their neurology assessments, internal medicine grade and annual grade point average (GPA) using the Pearson correlation Coefficient.

Summary of Results

The mean student engagement is 3.9/5. There is a significant positive correlation between engagement and internal medicine grade (r=0.35, p=0.044). There is a moderate correlation between engagement and neurology OSCE (r=0.23), annual Year 5 GPA (r=0.23), neurology knowledge-based score (r=0.22) and composite neurology knowledge/OSCE (r=0.27). The knowledge-based assessment included short answer and multiple-choice questions: there was a moderate correlation with short answer (r=0.30), but a weak negative correlation with the multiple-choice questions (r =-0.11). Sub-groups

analysis comparing the top- and low- or non- engaging students made these weaker correlations stronger.

Discussion and Conclusion

To the best of our knowledge, this study is the first to investigate medical student engagement with a pre-recorded online mini-lecture series accompanying a clinical clerkship and determine its impact on assessment performance. This pilot study indicates a high engagement rate and a positive correlation between engagement and better assessment outcomes.

Take-home Message

Online pre-recorded neurology mini-lectures are an effective method for delivering the core curriculum as part of a clinical clerkship medical sub-specialty
The impact of online pre-recorded neurology mini-lectures on student assessment suggests a trend towards better student outcomes
Further studies are needed to assess the effectiveness of online pre-recorded mini-lectures in undergraduate medical education

10H3 (1660)

Date of Presentation: Wednesday 30th August
Time of presentation: 0930 - 0945
Location: Castle II, Crowne Plaza

Self- drawing after flipped classroom effectively improves electrocardiogram (ECG) reading skills of residents.

Chun-Wei Lee[1]

[1]*Mackay Memorial Hospital, New Taipei City, Taiwan*

Background

Although the training course of electrocardiogram (ECG) interpretation was started early in medical school, the accuracy in interpretation of 12-lead ECG is always a challenge issue. We conducted a pilot teaching program for comparing the effectiveness of conventional didactic lecture and self- drawing after flipped classroom (SDFC).

Summary of Work

We divided the post-graduated year residents into 2 groups, one is the conventional control group and the other is the SDFC group. The conventional control group will receive a didactic lecture. On the other hand the SDFC groups we will provide the same learning material in advance, and then the students were given paper and markers. The cognitive process of interpretation was reversed by asking students to draw the patterns of an ECG characteristic of certain pathologies, rather than recognize and define a preexisting trace. Differences between the self-drawing ECGs and reference were discussed to reinforce understanding.

Summary of Results

The feedback was positive, emphasizing the benefits of SDFC in combining theory and practical steps to approach ECG reading. The results of the written summative examination item were better and excellent in the SDFC group.

Discussion and Conclusion

FC would reverse traditional information transmitted lectures into learner-centered active learning. The addition of self-drawing provides more cognitive, impressive. The combination of these two could bring out more innovation in learning engagement and teaching efficacy. Test scores show marked improvement however this is expected after any sort of teaching intervention: A case-control study is necessary to elucidate this further. Teachers interviewed, reflected that the method allowed them to identify and target weaknesses in understanding more effectively. SDFC is shown to be better than the conventional didactic lecture in this pilot program in teaching ECG interpretation. Resident felt more satisfied and confident in the learning of ECG.

Take-home Message

Our study demonstrated the promising effects of SDFC on the recognition of ECG presentations, which could make up for the inadequacies of traditional classroom teaching. It can be incorporated into routine teaching if proven successful in a larger cohort.

10H4 (5579)

Date of Presentation: Wednesday 30th August
Time of presentation: 0945 - 1000
Location: Castle II, Crowne Plaza

A Novel Post-COVID Curriculum Using Flipped Classrooms for In-Person versus Livestream Continuing Education

Michael Mueller[1], Ravindra Ganesh[1], Thomas Beckman[1]

[1]*Mayo Clinic, Rochester, USA*

Background

The COVID-19 pandemic poses challenges that require novel methods for disseminating rapidly evolving curricula. Few curricula address post-COVID syndrome, which afflicts nearly 30% of patients who have recovered from acute COVID-19 and who may experience long-term functional limitations. Flipped classrooms (FC) represent a flexible, dynamic, and accessible teaching method. Previous studies at the Mayo Clinic have described the utility of FCs in Mayo continuing medical education (CME) and resident education courses.

Summary of Work

We created a novel post-COVID curriculum using FCs for in-person versus livestream continuing education among attendees, which we have presented at several large Mayo Clinic CME courses. We conducted a cross-sectional survey with pre/post-test analyses of all participants at multiple large Mayo Clinic Continuing Medical Education (CME) conferences. Before each conference, participants received a multiple choice post-COVID knowledge questionnaire which was reviewed and revised by content experts, as well as the Flipped Classroom Perception Inventory (FCPI), which was designed to measures baseline knowledge and perceptions of flipped classroom curricula. After each conference, participants again received the multiple choice questionnaire. They also received the FCPI, the CME Teaching Effectiveness instrument (CMETE), and Learner Engagement Inventory (LEI).

Summary of Results

22 participants have completed the study. Overall, participants showed significant improvements in post-COVID knowledge following the presentations (46.7% precourse to 61.1% postcourse, $p = 0.02$), and a nonstatistically significant trend toward improved perception of the flipped classroom as measured by FCPI among in-person learners (3.72 to 3.49, $p = 0.06$). The in-person flipped classroom curriculum, versus the livestream curriculum, was significantly higher rated via the CMETE (4.53 to 4.143, $p < 0.01$) and the LEI (4.45 to 4.19, $p < 0.01$).

Discussion and Conclusion

Preliminary data indicates that our post-COVID Flipped Classroom curriculum is feasible and effective in the context of large CME courses. FC models are associated with improved knowledge of post-COVID syndrome and are better received through in-person didactic sessions, as compared to livestream sessions.

Take-home Message

Flipped Classroom models are associated with improved knowledge of the post-COVID syndrome and are better received through in-person didactic sessions, as compared to livestream models.

10H5 (2675)

Date of Presentation: Wednesday 30th August
Time of presentation: 1000 - 1015
Location: Castle II, Crowne Plaza

Electronic Information-Seeking Behavior at the Point-of-Care: A Concept Analysis

Christina St-Onge[1], Vincent Dion[1], Timothy J. Wood[2], Kevin Eva[3], Rose Hatala[3], Kulamakan Kulasegaram[4], Beth Cummings[5], Tim Dube[1], Sawsen Lakhal[1], Rola Ajjawi[6]

[1]Université de Sherbrooke, Sherbrooke, Canada; [2]University of Ottawa, Ottawa, Canada; [3]University of British Columbia, Vancouver, Canada; [4]University of Toronto, Toronto, Canada; [5]McGill University, Montreal, Canada; [6]Deakin University, Deakin, Australia

Background

The increasing volume of knowledge and evolution of information and communication technologies have changed the nature of professional practice. For example, electronic-information seeking behaviors (e-ISBs) have become essential components of health care delivery. However, despite their prevalence, we have yet to define e-ISBs explicitly enough to guide training or assessment. A better understanding of e-ISBs would enable better preparation for the realities of modern practice.

Summary of Work

We employed Rodgers' concept analysis methodology to define and make explicit e-ISBs at the Point of Care. We identified five key articles and then used snowball sampling to construct the archive. Excerpts were extracted from the articles by one team member, and categorized as antecedents, attributes, or consequents as per Rodgers' approach. Antecedents are meant to represent what happened to make the concept possible. Attributes are the defining and distinguishing characteristics of the concepts. Consequents are a direct result of the concept. Extractions were revised iteratively by two team members to generate codes and, subsequently, themes. Findings were presented and discussed iteratively with other team members. Analysis continued until team consensus regarding data interpretation was achieved.

Summary of Results

Identified antecedents are: Increasing volume of information and knowledge to practice MD; Developments in Information and Communication Technologies; Personal pre-dispositions. Identified attributes are: Having a question that requires an answer at the PoC; Gauging the feasibility, utility, consequences of accessing electronic source of information; Choosing an electronic source of information; Consulting electronic source of information; Integrating findings in decision making process/patient encounter. Identified consequents are: Perceived increase in confidence and life-long learning opportunities; Increase in the quality of patient care and patient outcomes.

Discussion and Conclusion

E-ISBs at PoC are complex and most likely require significant cognitive resources from health care practitioners. While adopting e-ISBs can potentially positively contribute to the health care provided, practitioners need to navigate potential pitfalls such as communication with colleagues and patients.

Take-home Message

The defining characteristics identified in this analysis could be used by program administrators and educators as a starting point for the development of educational approaches aimed at preparing health care professionals to effectively use e-ISBs.

Session 101: Sustainability

1011 (6938)

Date of Presentation: Wednesday 30th August
Time of presentation: 0915 - 0930
Location: Castle III, Crowne Plaza

A Planetary Health Curriculum for medical schools

Evangelos Papageorgiou[1], Catarina Pais Rodrigues[2], Aliye Runyan[3], Tao Le[4]

[1]Medical Student Alliance for Global Education (MeSAGE), Athens, Greece; [2]Medical Student Alliance for Global Education (MeSAGE), Evora, Portugal; [3]Medical Student Alliance for Global Education (MeSAGE), New York, USA; [4]University of Louisville, Louisville, USA

Background

The Medical Student Alliance for Global Education (MeSAGE) is an alliance of 11 international medical students organizations that envisions the development of a global shared medical curriculum. MeSAGE members create “bricks”, which are individual digital learning modules in the ScholarRx platform, to address gaps in their medical education. One of the priorities of MeSAGE was to develop a proposed Planetary Health curriculum, a topic that is not part of traditional medical education.

Summary of Work

Planetary health was one of the areas that was highlighted in a survey within the MeSAGE organizations to identify gaps in their medical education. MeSAGE members understand the need of the future healthcare professionals to know more about planetary health and how it is interconnected with the health of their patients. For this reason, students from MeSAGE worked with experts, as well as the editorial team of ScholarRx to author the content of the planetary health bricks. The support from educators that have expertise on the topic was essential to ensure the quality of the published curriculum.

Summary of Results

The MeSAGE planetary health curriculum consists of 14 bricks and includes topics such as environmental justice, climate change and health, severe weather events and their impact on health and sustainable healthcare. The content of the bricks is designed in a way that will be possible for students and schools to adjust in their local context. We will use a Kirkpatrick program evaluation model to measure student utilization and satisfaction with the Bricks and report our findings.

Discussion and Conclusion

Planetary health has gained more and more attention worldwide. AMEE has also highlighted the topic on a special issue of Medical Teacher. Understanding basic concepts about planetary health is essential for any healthcare professional of the future, as the impact to patients will become more apparent over the next few years. Therefore, medical schools need to integrate this topic to their basic undergraduate curriculum.

Take-home Message

The proposed MeSAGE planetary health curriculum could be a tool to integrate the topic in medical education, equipping the students with the necessary knowledge and skills as future health care professionals.

1012 (6505)

Date of Presentation: Wednesday 30th August
Time of presentation: 0915 - 0930
Location: Castle III, Crowne Plaza

Amazon: medical education room without walls

Lena Vania Carneiro Peres[1], Rodrigo Nunes[2], Flávia Guimaraes[3], Sheila Mello[4], Silvia Segura[1], Aldenize Xavier[5], Guilherme Soarez[1], Daniel Castanho[1], Marcelo Bueno[1], José Lúcio Martins Machado[1]

[1]Inspirali/Ânima Educação, São Paulo - SP, Brazil; [2]Universidade do Sul de Santa Catarina, Palhoça/Santa Catarina, Brazil; [3]Inspirali/Ânima Educação, Salvador/BA, Brazil; [4]Universidade Salvador, Salvador/BA, Brazil; [5]Universidade Federal do Oeste do Pará, Santarém/Pará, Brazil

Background

Life expectancy in the Amazon is below the Brazilian average. This situation has been largely impacted by communicable diseases among children, external causes of mortality among young adults, and non-communicable diseases among the elderly, as well as diseases associated with illegal mining activities in the region. It should be possible for medical schools in Brazil to incorporate Amazon into their curriculums. Amazon Mission has been doing this since 2022, in an ecosystem that manages fourteen medical schools in Brazil.

Summary of Work

Amazon Mission's main objective is to give back to Brazilian society the health care that it offers students during their medical training. This is a curricular extension initiative for 14 medical schools with approximately 10,000 medical students. In each mission, 30 students from the seventh semester of the medical course and 10 preceptors provide care for 10-15 days to the riverside population that lives along the Tapajós River in the Amazon. Activities began in 2022 and were incorporated into the curriculum in 2023.

Summary of Results

In partnership with West Federal University, thirty students and ten professors develop ongoing One Health activities. The first mission, in 2022, provided 2123 patients with primary health care, school health, immunizations, minor surgery, and gynecology, obstetrics, and pediatrics care. All consultations were recorded for the municipality on the Unified Health System (SUS) or the Brazilian public system. Teachers and students evaluated this first experience with an NPS of 97%.

Discussion and Conclusion

The experience taught an immersive experience of collaboration, team action, contact with the local reality, the challenging conditions that inhabitants of the Amazon face, and the recognition of the value of this population for the maintenance of the forest standing and clean water.
In addition to learning about collaboration, teamwork, and interacting with local reality, the experience taught the students and preceptors the importance of this population in preserving forests and clean water. Additionally, it shed light on the challenges Amazonians face.
According to the evaluation, students were able to learn in-depth in this classroom without walls.

Take-home Message

All school curricula should incorporate One Health and sustainability concepts.

1013 (0453)

Date of Presentation: Wednesday 30th August
Time of presentation: 0930 - 0945
Location: Castle III, Crowne Plaza

Integrating sustainable healthcare in student quality improvement projects

Sabia Dayala[1], Grace Turya[1]

[1]*University of Manchester, Manchester, UK*

Background

Quality Improvement (QI) and sustainable healthcare education are ubiquitous across UK medical curricula, being mandated by the General Medical Council's (GMC) Outcomes for Graduates report (2018). However, integration of these two allied disciplines is not, varying widely across medical schools.

NHS England's "Net Zero" carbon footprint target by 2040 is ambitious and requires a multidisciplinary approach across all organisational levels and clinical settings if it is to be realised. Medical students are an enthusiastic and underutilised resource that could be leveraged to lead impactful project work, combining high priority areas of QI and sustainable healthcare, thus endeavouring to improve medical practice.

This study aims to increase the design and delivery of student Quality Improvement Projects (QIPs) that link to clearly defined principles of sustainable healthcare, thus promoting lived experience of integrating these disciplines in a community setting.

Summary of Work

A bespoke, optional toolkit was created to facilitate students and supervisors to design and deliver sustainable healthcare community QIPs. We will evaluate uptake of projects linked to principles of sustainable healthcare. Additionally we will outline the stages of QIPs at which sustainability was considered beyond evaluation of the sustainable value of the project outcome, known as "SusQI" practice.

Summary of Results

From April 2023, approximately 250 student community QIPs will be delivered. We will report on the uptake of sustainable healthcare community QIPs, how they align to sustainable healthcare principles and the stages at which principles were incorporated into QIPs.

Discussion and Conclusion

We will reflect on the impact of the toolkit in achieving the aim of sustainable healthcare community QIPs. Additionally, we will understand in greater detail how QIPs align with sustainable healthcare principles and the stages at which integration can occur beyond the practice of "SusQI". This knowledge will be used to further our understanding of how students engage in the practical application of QI and sustainable healthcare simultaneously, via structured opportunities for project work. Further work will be needed to determine the impact of these community QIPs on sustainable healthcare goals.

Take-home Message

We will reflect on the impact of the toolkit in achieving the aim of sustainable healthcare community QIPs.

1014 (4330)

Date of Presentation: Wednesday 30th August
Time of presentation: 0945 - 1000
Location: Castle III, Crowne Plaza

Experiences and challenges in home-based palliative care programs in undergraduate medical students

Vittawin Fagcharoenpol[1], Narin Chindavech[1], Punnaphat Daraswang[1], Surasak Aumkaew[1], Paweenuch Supawan[1], Pienlert Moonwiriyakit[1], Natalie Rose Noisuwan[1], Thanatpong Thienwuttiwong[1], Chaowat Pimratana[2], Bhuwadol Kittiwattanasarn[3]

[1]Medical Education Center, Buriram Hospital, Buriram, Thailand; [2]Director of Medical Education Center, Buriram Hospital, Buriram, Thailand; [3]Director of Buriram Hospital, Buriram, Thailand

Background

In Thailand, palliative cares for all terminal ill-patient has been recently endorsed in undergraduate medical curriculum in the past few years. Family medicine course for 5th-year medical students has been integrated and immersed in palliative care teaching through a home-based palliative care programs (HbPCP). The home visiting program has arranged for medical students in two-way communications to empathized and engaged with the patient family in real life situation.

Summary of Work

We conducted semi-structured focus group interviews with 32 5th year medical students for 3 years-consecutive of palliative care curriculum. The students were divided into 5 groups to give an opportunity that every students can answer and express their own opinion with no time limitation in narrative styles. Contents were recorded and transcribed via the digital recorders and content and thematic analysis had been group categorized and in-depth analysis by medical teachers.
The aims were to know student's experiences and attitudes in psychosocial-economic aspects of palliative care patient and to address challenges to improve in HbPCP.

Summary of Results

Four themes had emerged in which medical students learned new experiences (1) Encounter real-life situations (2) Realized in health care inequity, especially in socioeconomic contexts (3) Learning to personalized treatment based on patient-centered care (4) Recognize caregiver potency to care terminally ill patient. And four core challenges were interestingly found (1) Insecure feeling when performing medical practice at the patient's home (2) Limitation of medical resources and investigations (3) Lack of palliative medical knowledge especially in palliative prognostication (4) Difficult conversations such as truth-telling, a conspiracy of silence among family members.

Discussion and Conclusion

Home-based palliative care programs provide new insight to medical student, translation of knowledge into practice, and individualized palliative care in a realistic context but a gap of knowledge and communication issues in palliative care still be the challenges for medical student.

Take-home Message

HbPCP may applied for medical students to open their new point of view in holistic care of patient as a whole human especially in psycho-economics aspect beyond the patient disease only.

1015 (1420)

Date of Presentation: Wednesday 30th August
Time of presentation: 1000 - 1015
Location: Castle III, Crowne Plaza

Reflective portfolio to promote critical thinking, ethics and leadership in a Pretoria School of Medicine

Yvette Hlophe[1], Sumaiya Adam[1], Astrid Turner[1], Werner Cordier[1]

[1]*University of Pretoria, Pretoria, South Africa*

Background

In designing the new medical curriculum student attributes were selected that will facilitate a Day 1 doctor to excel in any environment. The day one doctor emanating from the University of Pretoria should have the ability to reflect, think critically and should understand how to incorporate principles of medical ethics, social justice, clinical skills, lead themselves, display empathy, communicate to their patients in a clear manner and be able to work in group environment. Literature has shown the benefits of using portfolios as a tool to promote longitudinal, continuous learning. An online portfolio will promote easy access to students to allow them to reflect at their convenience.

Summary of Work

The aim of the study is to implement an online reflective portfolio to teach critical thinking. Introduce concepts of medical ethics and leadership to undergraduate medical students, BSc Honours students in the Physiology Department and promote Machine Learning as a tool to interpret reflective data. A journal rubric will be used to assess the student reflections.

Summary of Results

Results on reflections of the third year medical students indicated the following: prior to clinical exposure some students mentioned that they were anxious because of the hospital horror stories shared from students in 4-6 yearsome feared they would not be

able to communicate adequately to patients. Post clinical exposure students mentioned the importance of theoretical work taught in year 1-2 of medical degree, the importance of languages skills;

Discussion and Conclusion

Hopefully, after the three pilot studies and consultation with all the relevant stakeholders the implementation of a functional online reflective portfolio will re-emphasize a student centered medical program in which students will take responsibility for their learning and teaching staff will promote the student centered environment with continuous activities therefore promoting longitudinal learning.

Take-home Message

In addition the contribution of the reflection data towards a better understanding of machine learning will promote intra disciplinary and faculty research.

Session 10J: Interprofessional & Team Learning 3

10J1 (1926)

Date of Presentation: Wednesday 30th August
Time of presentation: 0900 - 0915
Location: Alsh 1, Loch Suite, SEC

Faculty perspectives, barriers and enablers to Interprofessional Virtual Reality Simulation

Nebras Alghanaim[1], Gabrielle Finn[1], Joanne Hart[1]

[1]*University of Manchester, Manchester, UK*

Background

Interprofessional education (IPE) has been defined as "when two or more professions learn with, from and about each other to improve collaboration and the quality of care" (Freeth, Savin-Baden and Thistlethwaite, 2019, p.191). IPE is considered key area of good practice, which can lead to better interprofessional working and collaboration. Virtual reality (VR) simulation researchers suggest that using avatars and virtual simulators is feasible method for healthcare professionals' training (Pottle, 2019). VR allows real-life experiences and rapid feedback, accessible synchronously by multi-users, and not constrained to specific location or time (Turkelson et al., 2020).

Summary of Work

This study, based at the University of Manchester, explores academic stakeholders' perspectives, including potential barriers and enablers to IPE using VR. The qualitative study utilised two methods: interviews and audio-diaries. Main research question: What is the faculty stakeholder perception and perspectives towards interprofessional virtual reality and simulation during the project implementation, and its challenges and barriers?

Summary of Results

16 people participated in (15) semi-structured interviews, with a sub-set providing additional (12) audio-diary entries. Participants included range of healthcare professions and VR expert. Intelligent verbatim transcription and Inductive Reflexive Thematic Analysis (Braun and Clarke,2006; Nowell et al., 2017) were used to generate themes.

Discussion and Conclusion

Two main themes, with additional sub-themes, were identified (1) faculty internal drivers and (2) external enablers. Participants described a knowledge gap in developing complex IPE cases as barrier, also technical challenges associated with VR into implementing cases. Additionally, issues arose related to co-dependencies and teamwork when developing cases. This also includes their ability to teach IPE utilising VR and availability based on their protected time and workload. In terms of VR features, faculties took advantage of VR since it provides safe, deliberate practice. Faculties showed their readiness to overcome VR challenges such as consistency good internet connection, cost of VR sets, and motion sickness. The absence of clear vision and strategy was a barrier. Participant discourse highlighted the need to develop coherent strategy, as well as maintain resources for sustainability. Resources cover human and financial resources - mainly focused on manpower, leadership, and funding.

Take-home Message

Interprofessional virtual reality is worthwhile modality to invest time and money in.

10J2 (4557)

Date of Presentation: Wednesday 30th August
Time of presentation: 0915 - 0930
Location: Alsh 1, Loch Suite, SEC

Negative experiences, positive points: Medical students' reflections on interdisciplinary shadowing

Yaw-Wen Chang[1], Yi-Cheng Li[2], Ya-Ling Chang[3], Fang-Yih Liaw[1], Chih-Chia Wang[1]

[1]Tri-Service General Hospital, National Defense Medical Center, Taipei City, Taiwan; [2]Hualien Armed Forces General Hospital, Hualien, Taiwan; [3]Tri-Service General Hospital Penghu Branch, National Defense Medical Center, Penghu, Taiwan

Background

Successful Transitional care requires cooperation among team members. Discharge planning case managers coordinate work across disciplines and settings and between care providers and patients. Interdisciplinary shadowing provided students with opportunities to understand the roles of different professionals and learn about the importance of communication in discharge planning. This study aimed to explore medical students' experiences in shadowing discharge planning case managers.

Summary of Work

The discharge planning curriculum is a 4-hour course for penultimate-year medical students during their Family Medicine rotations at a tertiary teaching hospital in Taiwan. The course begins with a 30-minute introduction, followed by the students shadowing discharge planning case managers as they visit patients on the wards. After patient visits, the students engaged in a 1-hour case discussion. We conducted qualitative focus group interviews to gain insight into students' learning experiences. In total, 29 students participated in focus groups and were divided into three groups of 9 to 10 members each. Interviews were transcribed and analyzed by researchers using thematic analysis.

Summary of Results

The focus group interviews revealed that medical students learned several aspects of discharge planning through the curriculum, including gaining an understanding of various aspects of discharge planning, the importance of early discharge planning, the roles of doctors and case managers, and the challenges faced in the process. During their visits, some students observed that other medical staff or patients treated the case manager disrespectfully. The students believed it was the doctor's responsibility to introduce the healthcare team members to patients for patients to better understand what their domain of expertise is.

Discussion and Conclusion

During inpatient visit shadowing, medical students observed that the case manager was not treated respectfully by patients and that the relationships among healthcare team members were not strong. In focus groups, medical students reflected on their negative experiences. They learned about collaborating in an interdisciplinary team, including about team members' roles and how they work together, and gained a deeper understanding of their responsibilities as a professional healthcare provider.

Take-home Message

Medical students reflected on their negative experiences in interdisciplinary shadowing and learned their roles as healthcare team members in discharge planning.

10J3 (3385)

Date of Presentation: Wednesday 30th August
Time of presentation: 0930 - 0945
Location: Alsh 1, Loch Suite, SEC

Debrief practices in a tertiary paediatric Emergency Department: an exploratory study

Maria Neocleous[1], Calum Semple[1], Meriel Tolhurst-Cleaver[2], Shirley Mulvaney[2], Melanie Georgina D'Costa[2], Jeremy Brown[3]

[1]University Of Liverpool, Liverpool, UK; [2]Alder Hey Children's Hospital Foundation Trust, Liverpool, UK; [3]Edge Hill University Medical School, Ormskirk, UK

Background

Debrief has been described as 'facilitated or guided reflection in the cycle of experiential learning' but in reality, it can have multiple dimensions and points of focus: quality improvement, education, psychological processing. New evidence reveals the utility of debrief in acute settings such as Intensive Care and Emergency Departments. Yet, debrief is not a formal part of clinical training or everyday clinical practice. This is the first piece of research, to the best of our knowledge, exploring the wider multi-disciplinary perceptions on debrief practices in a paediatric Emergency Department setting.

Summary of Work

18 semi-structured interviews were conducted in a tertiary paediatric Emergency Department in North West England. Participants included consultants, trainee doctors, sisters, staff nurses and healthcare assistants. A purposeful sampling approach was followed. Data collection stopped once data saturation was achieved. Thematic analysis was applied.

Summary of Results

Four themes were identified: 'features of debrief', 'difficulties of debrief', 'benefits and learning from debrief' and the need for 'change in culture'. Participants reported informal

discussions with their colleagues forming part of their personal debrief process. Barriers to debrief were time pressures and differences in individual processing time following traumatic events. The majority of participants felt debrief was beneficial to them. More senior members of the team described the debrief as something that they do for the benefit of the team. Most of their own debrief was conducted informally with other senior colleagues. Notably, all participants saw the benefit of clinical psychologists running cold debriefs.

Discussion and Conclusion

One single approach to debrief will not address all team members' needs. Healthcare professionals have their own methods for formal and informal debrief. There was a strong emphasis on the need for changing the culture, to incorporate formal and informal debrief as an everyday part of clinical practice.

Take-home Message

Debrief is perceived as important by healthcare professionals for their learning, reflective process and clinical understanding.
Debrief can occur in a variety of formal and informal ways, both of which complement each other.

A change in culture is vital to incorporate debrief in our everyday practice.
The professional skills of clinical psychologists were recognised to be valuable in facilitating cold debriefs.

10J4 (2207)

Date of Presentation: Wednesday 30th August
Time of presentation: 0945 - 1000
Location: Alsh 1, Loch Suite, SEC

Designing, Implementation and Evaluation of a Gamified Pharmacotherapy Course Based on Interprofessional Teamwork

Fakhrosadat Mirhosseini[1], Najmeh Ghasemi[2], Farima Raeesi[1], Maryam Aalaa[3], Zahra Rezaei[4], Atiye Faghihi[1], Fatemeh Atoof[1], Shoaleh Bigdeli[5], Madalena Patricio[6]

[1]Kashan University of Medical Sciences, Kashan, Islamic Republic Of Iran; [2]Shahrekord university of Medical Sciences, Shahrekord, Islamic Republic Of Iran; [3]Department of e-Learning in Medical Education, Tehran University of Medical Sciences, Tehran, Islamic Republic Of Iran; [4]School of Pharmacy, Tehran University of Medical Sciences, Tehran, Islamic Republic Of Iran; [5]Center for Educational Research in Medical Sciences, Department of Medical Education, School of Medicine, Iran University of Medical Sciences (IUMS), Tehran, Islamic Republic Of Iran; [6]Faculty of Medicine, University of Lisbon. Portugal, Lisbon, Portugal

Background

Attention to Interprofessional education (IPE) has grown over the past decade. Interprofessional teamwork is effective in reducing errors and improving patient outcomes.It is important to teach it during education period. Therefore, this study is an attempt to prepare students for interprofessional teamwork and to improve their knowledge of pharmacotherapy.

Summary of Work

The ASSURE and Competency-based Interprofessional models were integrated. A 4-week voluntary gamified course was developed and conducted in an E-learning platform in 2022. In this study, ninety-nine nursing, medical and pharmacy students participated. Students were divided into 23 groups including a student from each major, and a facilitator.

Forty-six micro learning contents, six scenarios on diabetes treatment and care in outpatient clients, and four synchronous Q and A sessions were developed. Participants were to challenge the cases and solve problems. Before and after the course, learners were assessed via Readiness for Interprofessional Learning Scale (RIPLS), and TeamSTEPPS Teamwork Attitudes Questionnaire (T-TAQ). Four scenarios and a scape-room were used as a gamified assessment of the participants' knowledge. Satisfaction of the learners and facilitators were assessed about the program.

Summary of Results

Satisfaction mean score of students were 120.9 out of 145(83.37%). Responses to the questions of each sub-domain of the study indicated that students were mostly satisfied with the program's goals, contents, course instructional design, and learning motivation(46.98%). The least satisfaction was related to facilities, internet connections, and limited access to social media due to filtering (6.94%).
IPE attitude increased from 81.64±7.20 to 85.73±5.033 and teamwork attitude increased from 127.10±11.56 to 130.92±10.18 in the participants before and after attending the course($P<0.001$) and their knowledge score improved from 65.15% to 76% in scenarios and 81% in the scape-room, respectively.

Discussion and Conclusion

The ASSURE-based gamified course improved teamwork attitude, readiness for interprofessional learning, and diabetic knowledge of the participants; however, they were not satisfied of the time of the program, because it was parallel to the semester final exams.

The results indicated that with the course progress while the complexity of the scenarios increased, students responded more effectively.

Take-home Message

This gamified course, supervised by a facilitator increased the pharmacotherapy knowledge and readiness to learn via interprofessional teamwork.

10J5 (5717)

Date of Presentation: Wednesday 30th August
Time of presentation: 1000 - 1015
Location: Alsh 1, Loch Suite, SEC

Using an Advocacy Framework to Prepare Medical Students for Collaborative Interprofessional Teamwork

Shelene Stine[1], Leanna Lewis[1], Indhu Subramanian[2], Jyothi Marbin[1]

[1]UC Berkeley UCSF Joint Medical Program, Berkeley, USA; [2]Highland Hospital, Alameda Health System, Oakland, USA

Background

Students train in clinical environments in which a hidden curriculum communicates problematic stereotypes and reinforces traditional hierarchies in interprofessional relationships. An intensive course was designed to equip preclinical students on the verge of clinical clerkships with strategies to deliver collaborative interprofessional care.

Summary of Work

An initial classroom session titled “Power Mapping the Wards,” challenged students to consider pre-existing assumptions about the roles of the professionals who comprise clinical teams. The class discussed hierarchy and power differentials on interprofessional care teams, analyzed power dynamics in clinical interactions, and discussed how these dynamics impact personal development, learning, and patient care. Using the concept of power mapping, students reconsidered the medical hierarchy from the perspective of advocacy in service of interprofessional collaborative practice, patient care, antiracism, and optimal learning. Following this, students spent one week at a safety-net hospital shadowing inpatient teams, including interprofessional members, pairing this experience with reflection and faculty-mediated debriefing.

Summary of Results

The experience was highly rated by students over two years. During verbal debriefs, students highlighted the value of experiencing this learning in a low stakes setting. Themes that emerged included: the importance of positive interpersonal relationships for effective patient care; a deeper appreciation for the scope of work of other health professionals; recognizing the complexity of care implementation; and acknowledgment of the ways in which racism and sexism in the patient provider dynamic may be experienced at increased intensity by colleagues who spend more time at the bedside. Several students reported key takeaways for future practice, including expressing appreciation, respecting the expertise of colleagues, responding to messages in a timely fashion, and working to better understand care implementation.

Discussion and Conclusion

A power mapping framework can enhance medical students' understanding of interprofessional team dynamics and readiness to engage in collaborative practice in service of patient care. Pairing this discussion with clinical exposure was key to internalization. Creating a low stakes experience allowed students the bandwidth to seek and internalize advice from their interprofessional coworkers.

Take-home Message

Exposing students to these experiences during the transition to clerkships has the potential to improve their working relationships in clinical spaces.

Session 10K: Postgraduate: Diversity

10K1 (3317)

Date of Presentation: Wednesday 30th August
Time of presentation: 0900 - 0915
Location: Alsh 2, Loch Suite, SEC

Impact of faculty development in Medical Education on educational identities of health professionals

Mahwish Arooj[1], Khadijah Mukhtar[2], Ahsan Sethi[3], Haleema Imran Malik[2]

[1]University College of Medicine and Dentistry, Lahore, Pakistan; [2]The University College of Medicine and Dentistry, Lahore, Pakistan; [3]QU health, Qatar University, Lahore, Pakistan

Background

The roles of medical teachers have evolved from being an information provider to facilitator, mentor, resource developer, assessor, evaluator, role model and planner. These evolving roles of medical teachers demand advanced training in various aspects of teaching, learning, assessment and curriculum. The University College of Medicine & Dentistry, initiated a series of workshops for faculty development in Health Professions Education attracting participants from all over Pakistan. This program has a blended delivery with 10 on-campus sessions with work-integrated learning over six months. They were assessed through assignments, reflective portfolios and an exit exam. In this study, we explored the longitudinal impact of the program through 'reflection in action' using audio diaries.

Summary of Work

Qualitative Longitudinal Research underpinned by communities of practice theory was conducted. The current study included a purposive maximum variation sample of 35 health professionals. Participants were asked to record structured audio diaries of 3 to 5 minutes each, documenting any significant event during the sessions that may have impacted their beliefs as an educator. The audio diaries were shared with the researchers through WhatsApp and Email. A smaller sample of 12 participants were also interviewed

six months after the course to explore the translation of learning to practice. All the data was transcribed, deidentified and a thematic analysis was conducted.

Summary of Results

The participant enrolled in the workshop series for various intrinsic and extrinsic motivations. They reported becoming self-aware regarding their teaching practices. They learnt theoretical foundations in educational practices, with increased self-efficacy and transformational changes as a teacher, leader, and learner. Many participants also reported increase in educational roles and responsibilities in their institution. Some initiated faculty development in their own institutions. The graduates were able to discuss and initiate various educational changes in the workplace. Some also reported professional inclusiveness and enrolled for Masters in Medical Education courses.

Discussion and Conclusion

This is the first longitudinal study exploring the impact of series pf wprkshop on health professionals from various specialties and workplaces in Pakistan. Participants reported significant improvement in their teaching self-efficacy,

Take-home Message

Faculty development is a continuous process which is important for professional inclusiveness and identity development of faculty members.

10K2 (1479)

Date of Presentation: Wednesday 30th August
Time of presentation: 0915 - 0930
Location: Alsh 2, Loch Suite, SEC

Effects of Rater and Ratee Gender on Trainee Evaluations of Physician Faculty

Michael Cullen[1], You Zhou[2], Paul Sackett[2], Taj Mustapha[1], Jessica Hane[1], Susan Culican[1]

[1]University of Minnesota Medical School, Minneapolis, USA; [2]University of Minnesota–Twin Cities, Minneapolis, USA

Background

Female faculty remain underrepresented in academic medicine departments. In this study, we examine the role of gender differences in medical trainees' (i.e., medical residents' and fellows') evaluations of physician faculty as a contributing factor to this phenomenon.

Summary of Work

We conducted a single institution retrospective cohort analysis of all evaluations completed by 9,350 trainees for 855 faculty in 17 clinical departments over a three-year period. We employed a measure of clinical teaching effectiveness measuring four dimensions: (a) overall teaching effectiveness, (b) role modeling, (c) facilitating knowledge acquisition, and (d) teaching procedures. Using both between- and within-faculty samples, we conducted analyses to examine gender differences among the trainees making ratings (i.e., a rater effect), the faculty receiving ratings (i.e., a ratee effect), and whether faculty ratings differed by trainee gender (i.e., a rater x ratee interaction effect).

Summary of Results

There was a significant rater effect for the overall teaching effectiveness and facilitating knowledge acquisition dimensions; female trainees rated male and female faculty lower

than did male trainees on both dimensions (B = -.28 and -.14, [CI] [-.35,-.21] and [-.20,-.09], P = .000 and P = .000, respectively, medium corrected ES between .34 to .54). There also was a significant ratee effect for the overall teaching effectiveness and role modeling dimensions; female faculty were rated lower than male faculty on both dimensions by male and female trainees (B = -.09 and -.08, 95% confidence intervals [CI] [-.16,-.02] and [-.13,-.04], P = .013 and P = .000, respectively, small to medium corrected ES between .16 to .44). There was no interaction effect.

Discussion and Conclusion

Female trainees rated faculty lower than male trainees and female faculty were rated lower than male faculty on several clinical teaching dimensions. Although implicit bias is one potential explanation, the role of differences in opportunities to teach and the presence of female role models should be investigated.

Take-home Message

Results contribute to a growing body of evidence that implicit bias in faculty ratings may be one of many factors contributing to the leaky pipeline in academic medicine. We encourage researchers to explore explanations for the observed ratings disparities and whether implicit bias interventions could help address them.

10K3 (6269)

Date of Presentation: Wednesday 30th August
Time of presentation: 0930 - 0945
Location: Alsh 2, Loch Suite, SEC

"Disadvantaged from the Start": An Intersectional Exploration of Experiences of Inclusion and Exclusion in Residency Training Programs

Justin Lam[1], Han Yan[2], Ryan Giroux[3], Adelle Atkinson[4], Christopher Forrest[4], Abhaya Kulkarni[4], Tina Martimianakis[1]

[1]The Wilson Centre, University of Toronto, Toronto, Canada; [2]Faculty of Medicine, University of Toronto, Toronto, Canada; [3]St. Michael's Hospital, Toronto, Canada; [4]The Hospital for Sick Children and University of Toronto, Toronto, Canada

Background

Postgraduate medical education programs across North America are increasing resources to support equity, diversity, and inclusion (EDI), yet inequities persist. Identifying mechanisms contributing to ongoing discrimination is critical for ensuring alignment between institutional priorities, learner experiences, and patient care. Our study explored factors reinforcing inclusion or exclusion in paediatrics, neurosurgery, and plastic surgery residency training programs.

Summary of Work

We recruited 12 participants across all years of training to identify issues that either cut across or were unique to each program. We conducted semi-structured interviews that explored participant social and professional identities, their relevance to training, and experiences of inclusion, exclusion, and discrimination. Intersectionality theory was applied analytically to identify resident experiences of inclusion, exclusion across a matrix of social and professional issues.

Summary of Results

All participants reported non-dominant identities relevant to their training experiences, with some participants also sharing ways they perceived they fit in with dominant culture. Participants across all programs identified that their exclusion experiences mostly stemmed from taken-for-granted ideologies and practices grounded in a patriarchal, Eurocentric medical culture. At the individual level, these ideologies manifested as unintentional microaggressions rather than explicitly exclusionary discourse and practice and were linked to difficulties being perceived as legitimate experts. At the systemic level, participants could identity normative assumptions integrated into program policies and practices, such as scheduling for holidays and religious observances, and social events. Exclusion experiences were related to degree of discordance between the participant's identities and the dominant identities in their program. For example, women of colour from non-dominant religious backgrounds reported exclusion experiences along all three identity axes and contrasted their experiences with trainees from dominant backgrounds. Participants also noted dissonance between programs' formal commitment to EDI values and their learning environment experiences. However, many participants reported that their marginalized identities advantaged them in caring for patients with similar identities.

Discussion and Conclusion

Our study empirically demonstrates that aversive racism, through social dominance, implicit bias, and in-group favoritism, mechanistically accounts for much of the ongoing discrimination experienced by trainees in learning environments. Addressing these mechanisms are important for improving equity and inclusion in learning environments.

Take-home Message

Aversive racism mechanistically accounts for ongoing discrimination experienced by trainees

10K4 (2501)

Date of Presentation: Wednesday 30th August
Time of presentation: 09:45 - 1000
Location: Alsh 2, Loch Suite, SEC

Factors affecting nurses' decision to undergo a specialist education and to choose a specialty

Annika Tiliander[1], Caroline Olsson[1], Susanne Kalen[1], Sari Ponzer[1], Ann-Mari Fagerdahl[1]

[1]*Department of Clinical Science and Education, Södersjukhuset, Karolinska Institutet, Stockholm, Sweden*

Background

The shortage of specialist nurses (SN) is an acute and growing problem. The demand for SNs has increased because of the greater need of advanced chronical disease management. Thus, the increasing shortage of SNs is affecting the quality of the health-care worldwide. Therefore, it is necessary to get further knowledge of the nurses' reasons for choosing to specialize and choosing a specialty.

Summary of Work

A survey was conducted among specialist nurse students in three nursing colleges in Sweden (n=227). Instruments such as Big Five Inventory and RAND-36, and items earlier used by Bexelius and Olsson were included. Survey data were analysed by using descriptive and analytical statistics, and for open-ended question qualitative content analysis was used.

Summary of Results

Wage benefit during the education was regarded by 47 % as an incentive to start studies. Most of the specialist nurse students considered an opportunity for new tasks (75%), new areas of responsibility (75%), intellectual challenges (72%) and higher wages (71%) to be of high importance when choosing a specialty. However, the students in specialization areas with transitory care rated challenges regarding the practical skills (84%) and the

occurrence of acute events (82%) higher. The choice of specialization area was not fully determined, instead, many nurses considered more than one specialist area as a possible alternative. Gender had had an impact on the choice of specialist education. Age and time worked as a nurse may also have had an impact on the choice.

Discussion and Conclusion

Although higher wages were important to make nurses feel that they will get value from the education, there were also other important aspects, such as opportunity for new tasks, new areas of responsibility and, intellectual challenges that influenced nurses' willingness to undergo a specialist education. Our findings provide employers with the useful information to guide and influence nurses' decisions to enter specialist education and their choice of specialist area.

Take-home Message

It is possible for the employer to influence and guide the nurses' choice to start a specialist education and choice of specialist area by adapting the organisation to the nurses' preferences.

10K5 (5831)

Date of Presentation: Wednesday 30th August
Time of presentation: 1000 - 1015
Location: Alsh 2, Loch Suite, SEC

Perceived clinical challenges when treating patients from another culture: a study among doctors training in psychiatry in Norway

Reidar Tyssen[1], Morten Sandbu[2], Suraj Thapa[3], Karin Isaksson Rø[4], Valjbona Preljevic[5], Cecilie Jávo[6]

[1]Department of Behavioural Medicine, Institute of Basic Medical Sciences, Faculty of Medicine, University of Oslo, Oslo, Norway; [2]Oslo University Hospital, Oslo, Norway; [3]Division of mental health and addiction, Institute of Clinical Medicine, Faculty of Medicine, University of Oslo, Oslo, Norway; [4]Institute for studies of the medical profession, Oslo, Norway; [5]Institute of Psychotherapy, Oslo, Norway; [6]Sámi National Competence Center for Mental Health (SANKS), Finnmark Hospital Trust, Karasjok, Norway

Background

There is increased migration of patients and physicians worldwide. In Norway, psychiatry is the medical discipline with highest proportion of foreign doctors (24%). We need empirical studies on transcultural clinical challenges among doctors training in psychiatry. Objectives of this study: (I) What perceived clinical challenges do foreign and native Norwegian young doctors meet when they treat patients from another culture, and (II) what independent factors are associated with such challenges?

Summary of Work

We developed a new 6-item instrument (alpha=0.80), Perceived Clinical Challenges (PCC), with items about assessing psychosis, risk of suicide, violence etc. The doctors were recruited at mandatory training courses, and they filled in questionnaires about individual factors (age, gender, foreign/native) and work-related factors (training stage, frequency of transcultural meetings, number of working hours, work stress). Associations with PCC were analyzed by linear multiple regression.

Summary of Results

The response rate was 93% (216/233), of whom 83% were native and 17% were foreign doctors, 68% were women. Native doctors reported higher levels of PCC than did foreign doctors, 28.8 (6.2) vs 23.8 (7.2), $p<0.001$, Cohen's $d=0.73$. Both native and foreign doctors rated “assessing psychosis” and “lacking tools in cross-cultural consultations” as most demanding. Independent factors associated with PCC were being a native doctor, Beta 3.9, $p<0.01$, and high levels of work-home stress, Beta 0.29, $p<0.05$.

Discussion and Conclusion

Native doctors training in psychiatry report higher levels of cross-cultural clinical challenges than foreign doctors do. Both groups of doctors may need more training in assessment of psychotic disorders in patients from another culture. They also report needs for more helping tools, and we should explore this further. Work-home stress may influence clinical assessment work among trainees in psychiatry.

Take-home Message

Foreign trainees in psychiatry reported lower leves of cross-cultural clinical challenges, even when controlled for other factors.
Assessing psychotic disorders and provision of aiding tools should be emphasised when training in cross-cultural psychiatry.
Work-home stress among the trainees may even impact their clinical work.

10K6 (5303)

Date of Presentation: Wednesday 30th August
Time of presentation: 1015 - 1030
Location: Alsh 2, Loch Suite, SEC

New Approaches and Practical Recommendations to Reduce Differential Attainment in Specialty Selection Tests

Lana Delic[1], Charlotte Lambert[1], Fiona Patterson[1], Geoff Smith[2], Clare Wright[2]

[1] *Work Psychology Group, Derby, UK* [2] *NHS England, London, UK*

Background

A selection test (comprising clinical problem solving and situational judgment test) is used across several UK medical specialties as part of selection into specialty training. Equality and diversity issues are considered throughout the current design and implementation process, with numerous stages in place to support fairness (e.g. English language review). Nevertheless, analysis suggests differential attainment (DA) remains present, consistent with other selection assessments (Tiffin & Paton, 2021). Our research objective focused on enhancing the current methodology to consider practical amendments to the end-to-end test design and implementation process, to minimise differential performance based on protected characteristics, such as ethnicity.

Summary Of Work

Building on recent research (Robinett et al., 2021; Seo, 2021), a holistic, systematic process review methodology was employed, considering each stage of the selection test with a focus on reducing DA.

An extensive literature review explored practical approaches to improve DA outcomes in assessments. Interviews were conducted with stakeholders who provided extensive feedback on the recommendations from the literature, alongside additional practical suggestions. Stakeholders included experts in assessment (n=5), equality and diversity

(n=4), language (n=1), test developers (N=3) and past applicants (N=23). Findings were analysed using template analysis to draft 59 practical recommendations.

Summary Of Results

The draft recommendations were independently reviewed and data for all results were triangulated, to create 40 final practical recommendations, presented across 11 core themes. Example themes include: provision of educational and preparatory materials, stakeholder communication, review of test specification and diverse stakeholder involvement.

Discussion And Conclusion

This research builds upon existing methodologies for designing selection tests to minimize adverse impact for certain sub-groups, providing new insights into practical approaches to improve equality and diversity outcomes. Analysis highlights that initial activities in the test development process (resources, preparation, communication) are anticipated to have the greatest impact on reducing DA. Adopting a more holistic, end-to-end approach focusing on DA leads to significant improvements on outcomes for minimizing with DA and adverse impact.

Take Home Messages

A systematic, holistic evidence-based approach to provide practical recommendations across the design, evaluation and implementation of the selection tests can significantly reduce DA and ultimately improve the diversity of applicants appointed. These important learnings can be applied across high-stakes assessments internationally.

Session 10L: Supporting Learners: Supporting Learning

10L1 (2988)

Date of Presentation: Wednesday 30th August
Time of presentation: 0900 - 0915
Location: Boisdale 1, Loch Suite, SEC

Using self-regulated learning microanalysis for feedback in clinical skills: a pilot study

Dario Cecilio-Fernandes[1], Danielle Rachel dos Santos Carvalho[1], Mário Henrique Franco[1], John Sandars[2], Thiago Martins Santos[1]

[1]School of Medical Sciences, University of Campinas, Campinas, Brazil; [2]Edge Hill University, Ormskirk, Lancashire, UK

Background

The development of clinical skills requires the appropriate use of self-regulated learning (SRL). Microanalysis can identify students' use of key SRL processes as they perform a clinical skill but this has not been previously used to provide feedback in clinical skills. The aim of this pilot study was to investigate whether SRL microanalysis feedback could be used improve students' use of key SRL processes and also their clinical skill performance.

Summary of Work

Twenty-three final year medical students with no experience in the clinical skills required for mechanical ventilation participated in this pilot study. Key SRL processes and clinical skills performance were measured before and after SRL microanalysis feedback. Data analysis was conducted using descriptive analysis, Wilcoxon signed ranks test for the key SRL processes and repeated measures analysis of variance for the clinical skills.

Summary of Results

Overall, we found an improvement in the key SRL processes: goal setting, monitoring of performance and adaptive changes to performance. The Wilcoxon test demonstrated a significant difference in the monitoring of performance ($Z = -2{,}309$, $p = .021$). We found an increase in students' clinical skills ($F(1.869, 41.717) = 24.481$, $p < .001$) with a large effect size (partial $\eta 2 = .494$).

Discussion and Conclusion

This pilot study, which is the first in clinical skills, demonstrated that SRL microanalysis feedback can improve both students' key SRL processes and their clinical skills performance. An important aspect was the improvement of self-monitoring of their performance, with increased self-awareness of how they were performing the clinical skill. Further studies are recommended with a great number of students and across a variety of clinical skills.

Take-home Message

Self-regulated learning microanalysis feedback can improve both students' key SRL processes and their clinical skills performance

10L2 (3192)

Date of Presentation: Wednesday 30th August
Time of presentation: 0915 - 0930
Location: Boisdale 1, Loch Suite, SEC

'Been there, done that, got the T-shirt': A near-peer mentorship programme for final year medical students.

Natalie Eraifej[1], Carys Gilbert[1], Phil Davies[1], Abigail Samuels[1]

[1]*University of Bristol, Bristol, UK*

Background

Clinical mentorship programmes for final year medical students have shown to increase student confidence, academic support, and overall enjoyment. However, previous research has not focussed on near-peer mentoring. A mentor being closer in professional expertise, age and social standing can be more approachable and relatable which can help facilitate a deeper relationship between mentor and mentee.
We created a mentorship program between final year students and Foundation Year 1 (F1) doctors. The aims of this study were to assess the effectiveness of a near-peer mentor and determine areas for future improvements.

Summary of Work

Final year students (n=30) at Gloucestershire NHS Hospital Trust were allocated an F1 mentor at the start of their 7 month assistantship. Mentors attended a virtual induction session which outlined the mentorship scheme, their role, and suggested activities they could do with their mentee. A mixed-methods questionnaire was delivered to students two months into the scheme which 19 students completed. A mix of qualitative analyses and descriptive statistical analyses on quantitative data were performed.

Summary of Results

Pastoral support was the key benefit identified. All mentees agreed the scheme increased their enjoyment of their assistantship. 95% (n=18) of students agreed that the scheme improved their confidence about starting F1 and increased their sense of belonging, as well as confidence, within the clinical environment.

The scheme also provided academic support. 84% (n=16) agreed that the scheme improved their clinical competence including history, examination and procedural skills. The mentor's recent experience of final year was highlighted as especially useful by the mentees.

Discussion and Conclusion

Overall, near-peer mentoring was well received and felt to better addresses the 'hidden curriculum' within the transition from student to doctor. This is especially important when we consider the turbulent healthcare climate tomorrow's doctors will graduate into. The scheme is ongoing and will continue to be evaluated. Possible improvements include scheduling or providing a structure for meetings between mentor and mentee.

Take-home Message

We recommend near-peer mentorship schemes for final-year students at all medical schools.

10L3 (3600)

Date of Presentation: Wednesday 30th August
Time of presentation: 0930 - 0945
Location: Boisdale 1, Loch Suite, SEC

Unveiling the influence of feedback valency and achievement emotions on students' feedback use

Yang Yann Foo[1], Mark Gan[2]

[1]Duke-NUS Medical School, Singapore; [2]National University of Singapore, Singapore

Background

The on-going challenge to improve students' variable feedback uptake (Jonsson & Panadero, 2018) has prompted calls to understand how emotions (Goetz et al., 2018) affect the way students process and use feedback (Lipnevich & Smith, 2022). Our study was underpinned by Pekrun's (2006) control-value theory of achievement emotions, and was guided by this question: How does feedback valency and achievement emotions influence graduate medical students' processing and use of feedback?

Summary of Work

We conducted 14 focus groups interviews with 23 medical students aged between 18 to 35 and older (with or without work experiences) at a graduate medical school in Singapore to find out how emotions affected they way they processed and made use of feedback given by medical educators. The transcribed data were analyzed using reflexive thematic analysis (Terry et al., 2017).

Summary of Results

We constructed two themes: 1) valency mattered less than whether feedback message offered opportunities for improvement; and 2) learning culture influences the construction of emotions. We found in theme one that, counter-intuitively, negative feedback was valued if it offered opportunities for improvement. On the contrary, positive feedback actually elicited skepticism when deemed incongruous with poor examination results because such feedback did not enhance students' control of future learning. Theme two explained why students valued feedback regardless of valency. Primarily, in a learning culture where medical educators had to contend with providing safe patient care and

teaching, most students have come to expect feedback to be scarce or of variable quality. Thus, they appreciated actionable feedback that offered them opportunities to improve.

Discussion and Conclusion

Our findings suggest that in the context of more mature learners, valency is less important than the perceived value of feedback that could help them gain control of future learning. This implies that students may accept negative feedback so long as it clearly provides opportunities for improvement.

Take-home Message

Unpacking students' feedback processing through the theories of achievement emotions and learning culture may enable researchers and educators to support students' effective use of feedback.

10L4 (3355)

Date of Presentation: Wednesday 30th August
Time of presentation: 0945 - 1000
Location: Boisdale 1, Loch Suite, SEC

The benefits of mental health workshop on medical students

Winrada Khomate[1]

[1]*Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand*

Background

Burnout is a state of physical and mental exhaustion related to work and is especially prevalent among medical students, making it a potential area worth addressing. According to a needs assessment conducted on Ramathibodi medical students, 87 (95%) reported that they have experienced burnout at least once a year; 57 (63%) would like support through the provision of workshops. Although most students believe that this form of assistance would be beneficial, it remains unexplored what students gain from attending. This study aims to see what participants learned and whether they feel their knowledge of the topic and coping skills have improved after the session.

Summary of Work

A burnout workshop, which involved active and passive activities, was hosted. In the session, attendees participated in a test of knowledge on burnout myths, an informative session by the guest speaker and a discussion panel. For the discussion, attendees were introduced to a case study, elaborated on the signs of burnout together and shared personal techniques to combat the condition. We then conducted a descriptive cross-sectional study to see what participants picked up from the session and how their comprehension and management of burnout changed. A thematic content analysis later followed.

Summary of Results

The main benefits of attending the session were that the attendees grasped a deeper understanding of burnout, learned the causes of burnout, can self-reflect and realised that adjusting their mindset could help. From the discussion, attendees learned new ways to handle burnout and recognised that other people are dealing with similar conditions.

Alongside that, most participants claim to acquire more knowledge about the topic and predict that they can now handle burnout better in the future.

Discussion and Conclusion

Overall, the workshop benefitted medical students as it enabled participants to understand, detect and learn new ways to manage burnout. As this project initially started to satisfy the wants of students, perhaps more projects like this one should be encouraged for the sake of attendees. Regardless, the study experienced barriers to validity; further studies, perhaps on a larger scale, might be needed.

Take-home Message

Hosting well-being workshops could be a way to support students with burnout.

10L5 (5005)

Date of Presentation: Wednesday 30th August
Time of presentation: 1000 - 1015
Location: Boisdale 1, Loch Suite, SEC

The role of self-regulated learning in the relationship between learning climate and clinical learning outcomes

Malou Stoffels[1], Andries Koster[2], Stéphanie van der Burgt[1], Anique de Bruin[3], Hester Daelmans[1], Saskia Peerdeman[1], Rashmi Kusurkar[1]

[1]Amsterdam UMC, Amsterdam, The Netherlands; [2]Utrecht University, Utrecht, The Netherlands; [3]Maastricht University, Maastricht, The Netherlands

Background

Self-regulated learning (SRL) can enhance students' learning process. The social nature of SRL in the clinical setting is increasingly acknowledged. However, the effect of learning climate on SRL behavior and its ultimate effect on learning outcomes remain poorly understood. A better understanding of these relationships and underlying mechanisms may help design clinical learning environments and define realistic expectations for students. Given its association with both learning climate and learning behavior, we used Self-Determination Theory to explore these relationships. We tested two hypotheses within the context of clinical nursing education: A) A positive learning climate contributes to more SRL behavior, which can be explained by basic psychological needs (BPN) satisfaction. B) A positive learning climate contributes to self-reported clinical learning outcomes which can be explained by more SRL behavior.

Summary of Work

Nursing students (years 2-4) were invited to take a survey about their last clinical placement. The survey included questionnaires on SRL behavior (SRLWQ, 30 items), perceived clinical learning outcomes (NCQF-LO, 8 items), perceived learning climate (Cles+-PA, 8 items) and BPN satisfaction (BPNSFS WD- S, 12 items). Hypotheses were tested using Structural Equation Modeling (SEM). RP0145/SC

Summary of Results

The response rate was 35% (N=244). The tested model had an adequate fit (RMSEA=0.080, SRMR=0.051; CFI=0.972; TLI=0.950). Perceived learning climate contributed to SRL behavior, which was fully explained by BPN satisfaction. Perceived learning climate contributed to perceived clinical learning outcomes, which was mediated by BPN satisfaction and SRL behavior respectively. The contribution of SRL to this relationship was only moderate.

Discussion and Conclusion

A learning climate that satisfies students' BPN contributes to their SRL behavior. SRL behavior plays a positive but modest role in the relationship between climate and outcomes. The current study increases our understanding of what students need from staff to regulate their learning: outlining choices (autonomy), providing self-confidence (competence), and showing interest (relatedness). Future research could provide insight into qualitative differences in SRL behavior and its subprocesses, and their effects on long- and short-term outcomes.

Take-home Message

SRL behavior contributes to students' learning in the clinical setting. However, in the absence of a safe and supportive environment, providing tools and training for SRL behavior will not be effective.

10L6 (3387)

Date of Presentation: Wednesday 30th August
Time of presentation: 1015 - 1030
Location: Boisdale 1, Loch Suite, SEC

Can timetable changes with didactics adjustment increase the sense of belonging and thus increase study success?

Daphne Vogel[1], Suzanne Thompson[1], Jos Dobber[1], Saskia van der Plas[1], Kris Laan[1]

[1]*Amsterdam University of Applied Sciences, Amsterdam, The Netherlands*

Background

Student lack of engagement with their educational programmes, is a regularly reported on phenomenon. In the bachelor of Nursing programme at Amsterdam University of Applied Sciences student engagement is of concern. In recent years, the numbers of students wishing to pursue a degree in nursing has grown exponentially. A lack of teaching spaces for growing student numbers is an issue that has led to sub-optimal scheduling: Student evaluations highlight learning schedules with large gaps between teaching sessions. Student dissatisfaction with these gaps cause students to opt out of attending classes, this hinders a sense of belonging.
Solutions to address this this problem is to consider both the length and didactic design of on-campus teaching sessions with the aim of creating satisfactory student schedules.

Summary of Work

We redesigned on campus teaching sessions, increasing contact time from 50 minutes to 150 minutes teaching. A crucial didactic design aspect was ensuring an educational blend in order to encourage active learning and participation. Educational packages were developed in order to integrate varying didactic approaches, all aimed at increasing student participation and ensuring attendance was rewarded with learning not obtainable off-campus. We considered that this approach would foster the creation of learning communities, a vital step to boosting student's sense of belonging within our Bachelor program.

We administered a pre- and post-intervention measurement in order to quantify student sense of belonging and satisfaction with the schedule among our first and second year Bachelor students.

Summary of Results

Satisfaction about the schedule before and after the intervention is comparable, however students indicate that the new schedule is better to combine with work or social activities. An increase in sense of belonging of the students is measured after the multi-invention. Further analysis of the data to unravel possible differences in student success will be performed.

Discussion and Conclusion

To boost the student's sense of belonging and satisfaction of the schedule in the bachelor of nursing a multi-intervention can be considered. Whether it increases educational student's success will be investigated in the near future.

Take-home Message

Timetable changes with didactics adjustment can increase the sense of belonging of students of the bachelor of nursing.

Session 10M: Postgraduate: Curriculum

10M1 (3909)

Date of Presentation: Wednesday 30th August
Time of presentation: 0900 - 0915
Location: Boisdale 2, Loch Suite, SEC

Lessons Learned From 20 Years of Experience With Three Nationwide Cbme Curricula

Merel de Heer[1], Fedde Scheele[1], Erik Driessen[2], Pim Teunissen[2]

[1]Vrije Universiteit Amsterdam, Amsterdam, The Netherlands; [2]Maastricht Univeristy, Maastricht, The Netherlands

Background

Since the introduction of competency based medical education (CBME) in postgraduate education, curricula for postgraduate medical education have transformed. Over the past years, critical views on CBME have been shared on the potential fallacies, rigorous examination and clash with the practicality in the workplace. There is a need for a better understanding of how the evolving concept of CBME has been translated to curriculum design and implemented in the practice of postgraduate training. The aim of this study is to gain insight in trends on CBME curriculum design.

Summary of Work

We performed a case study with National Dutch gynaecology and obstetrics curricula spanning 20 years. We performed a document analysis on 3 consecutive curriculum (re)designs (2005, 2011, 2021).We used template analysis to identify changes over time with a specific focus on use of educational theory and design, curriculum aims and structures, and assessment.

Summary of Results

Over time, changes in CBME were seen in several domains. Assessment changed from a model with a focus on summative decision, to one with an emphasis on formative,

supposedly low-stakes, assessments aimed at supporting learning. The curricula evolved parallel to evolving educational insights, e.g. development of Entrustable Professional Activities and growing emphasis on wellness. The curricula focused on a competency-based concept by introducing training modules and personalized authorisation based on feedback rather than a set duration of internships. However, all three curricula provided limited possibilities for time-variable education. Other major change domains were the role of personal development and wellbeing of postgraduates and faculty development.

Discussion and Conclusion

The three curricula had changed remarkably over time. Changes could be seen in more attention for educational principles, in the assessment approaches and in more attention for trainees' personal development.

Take-home Message

CBME should not be perceived as a rigid concept

10M2 (6535)

Date of Presentation: Wednesday 30th August
Time of presentation: 0915 - 0930
Location: Boisdale 2, Loch Suite, SEC

Delivering Difficult News during PICU Bootcamp: A Novel and Effective Implementation of the Resilience Curriculum

Tanya Murtha[1], Elizabeth Wei[2], Roberta Hales[3], Kyle Redher[4], Vinay Nadkarni[3]

[1]Warren Alpert Medical School of Brown University, Providence, USA; [2]Dell Medical School at the University of Texas at Austin, Austin, USA; [3]University of Pennsylvania Medical School, Philadelphia, USA; [4]Duke University School of Medicine, Durham, USA

Background

Delivering difficult news to patients and families is an essential but challenging component of clinical practice. Pediatric critical care medicine (PCCM) fellows do not report being comfortable giving difficult news to patients and families.

Summary of Work

We sought to implement and evaluate a national program for training first year PCCM fellows to deliver difficult news. The American Academy of Pediatrics Resilience Curriculum (Part B) was used to teach PCCM fellows the SPIKES (Set-up, Perception, Invitation, Knowledge, Empathy, and Summary) framework with didactics, faculty role modeling, and role play with faculty mentoring. This curriculum was incorporated into all three Pediatric Intensive Care Unit (PICU) Regional Bootcamps for first year fellows, a multi-day simulation preparatory course at the start of fellowship. Pre- and post-test surveys assessed self-efficacy in delivering difficult information and were analyzed using the Student's t-test.

Summary of Results

130 PCCM fellows from across the country participated in the curriculum during the three PICU Regional Bootcamps. 108 fellows completed the survey, which was scored on 5-point Likert scale. The participants reported improved self-efficacy in the domains of knowledge, confidence, and comfort. Their knowledge increased from a mean of 3.5/5 to

4.1, confidence rose from 3.3 to 3.9, and comfort improved from 3.2 to 3.8 (Figure 1, all $P<0.001$). The fellows also reported increases in the skill categories of displaying empathy, conversation skills, and managing emotions, with the largest gain in managing emotions from a mean of 2.9 to 3.7 (Figure 2, all $P<0.001$).

Discussion and Conclusion

Pediatric critical care medicine fellows participating in the AAP Resilience Curriculum demonstrated significant improvements in their self-efficacy to deliver difficult news to patients and families. A “Bootcamp”-style venue was ideal for implementation of this curriculum, given the ratio of faculty to fellows and the trainee expectation for suspended disbelief and challenging scenarios.

Take-home Message

How to deliver difficult news is a teachable skill, and when incorporated into a "bootcamp"-style venue with a focus on procedures, is well received, utilizing exisiting faculty to trainee ratios, and is effective.

10M3 (2314)

Date of Presentation: Wednesday 30th August
Time of presentation: 0930 - 0945
Location: Boisdale 2, Loch Suite, SEC

Innovative pedagogy enhances care of older surgical patients

Janani Thillainadesan[1], Vasi Naganathan[1], Sarah Hilmer[1], Richard Kerdic[2], Sarah Aitken[1]

[1]University of Sydney, Sydney, Australia; [2]Concord Hospital, Concord, Australia

Background

Guidelines on the care of older adults undergoing surgery recommend routine performance of care processes that are based on the principles of comprehensive geriatric assessment and management (CGA). Junior doctors on surgical teams are responsible for the operationalisation of many care processes. Providing junior doctors with education and training on the assessment and management of older patients provides a major opportunity for improving patient care. Embedding a geriatrician within a surgical team (known as a geriatric comanagement model of care) provides a unique opportunity to upskill the team in the care of older adults. We evaluated the impact on care processes of an intervention that included targeted education of junior doctors as part of a new geriatric comanagement model of care.

Summary of Work

This was a prospective pre-post study comparing preintervention and postintervention cohorts of consecutively admitted vascular surgery patients aged ≥65 years at a tertiary academic hospital. The intervention was a new service that embedded a geriatrician into the vascular surgery team who co-delivered care and provided education for junior doctors. Educational intervention focussed on assessment of cognitive impairment, delirium and frailty using the emerging pedagogy of microlearning with experiential learning on ward rounds. Via medical chart audit we determined the impact this educational intervention had on the performance of care processes.

Summary of Results

There were 150 pre- and 152 postintervention patients. After implementing geriatric comanagement and targeted education for junior doctors, there was a significant

increase in the following processes performed by the junior doctors: screening for cognitive impairment (8.0% vs 76.3%, p<.001), delirium (2.0% vs 69.1%, p<.001) and frailty (0.0% vs 64.5%, p<.001), and documentation of functional (34.0% vs 75.7%, p<.001) and mobility status at admission (26.7% vs 78.3%, p<.001).

Discussion and Conclusion

Embedding a geriatrician who also delivered microlearning combined with ward-based experiential learning improves the surgical team's delivery of CGA-based care processes to improve patient care.

Take-home Message

Geriatric comanagement delivered with geriatrics education improves implementation of CGA-based care processes.
Key components of CGA can be taught to junior doctors using microlearning and ward-based experiential learning methods.
It is a priority for geriatric research and practice to implement and evaluate education for junior doctors.

10M4 (6451)

Date of Presentation: Wednesday 30th August
Time of presentation: 0945 - 1000
Location: Boisdale 2, Loch Suite, SEC

Design and Development of a Teaching Programme for Foundation Doctors and GP Trainees on Psychiatry Placements in Plymouth

Charlotte Turner[1], Tom Cuthbert[1], Mikaela D'arcy Smith[1]

[1]*Livewell Southwest, Plymouth, UK*

Background

Livewell Southwest (LSW) is a Social Enterprise providing NHS mental health services in Plymouth.
Around 35 foundation doctors and GP trainees rotate through LSW annually, on 4- or 6-month long placements. These doctors have mostly worked in General Hospital settings – with minimal postgraduate psychiatry experience– and have seldom undertaken community posts away from peers.
This teaching programme was originally created following feedback suggesting these doctors wanted 'basic formal psychiatry teaching'. It was re-designed in 2022 as educational experience had deteriorated over the pandemic.

Summary of Work

By incorporating educational theory and relevant social psychiatry with postgraduate curricula, the lead author created a basic programme comprising 7-8 sessions over 4 months. This was further developed using feedback from trainees and session facilitators. Dr D'Arcy-Smith (FY1) provided suggestions from a learner's perspective.
This programme has three main aims:
1) Contributing to professional identity formation of trainee doctors, both through role modelling 'effective education and training activities', and by facilitating their inclusion and contribution to mental health care within LSW
2) Revisiting prior learning about mental health, to complement experiential learning on placement
3) Adding knowledge of local provision

A handbook outlined aims, session plans with outcomes, and suggested interactive methods. Stock presentations were retained from each session, to reduce the oft-quoted time barrier for doctors wanting to teach.

Summary of Results

Trainees provided feedback after every session; this has been 100% positive since its commencement in August 2022.
In November 2022, the first rotation of doctors were surveyed about the teaching programme generally; everyone said they enjoyed the programme, and the majority agreed the sessions had increased their interest in psychiatry. One commented, 'Great teaching opportunities and lovely staff group!'
Further data will be collected in March 2023 and July 2023.

Discussion and Conclusion

Despite being a small teaching programme, this was designed with consideration to how educational theory can provide more than simply information about psychiatric conditions. Feedback is largely positive, with informal comments suggesting these sessions have helped these doctors feel more part of LSW.

Take-home Message

Well-designed small teaching programmes can have a positive impact on non-psychiatry doctors working transiently in mental health as part of their training.

Session 10N: Points of View 3

10N1 (6698)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 09:12
Location of presentation: Dochart 1, Loch Suite, SEC

Equality, Diversity and Inclusivity: My experience of training in Dentistry

Huma Aiman[1]

[1] *Dundee Dental Hospital and Research School, Dundee, UK*

Format: Walk through of my trainee journey

Introduction:

I am a dentist in training within the NHS. I came to university through widening participation schemes and was in receipt of a scholarship.

Discussion - What has shaped my experiences of training:

Being a woman, a person of colour, from an under-represented background?

I have always been aware that these things may in some way impact me as I progress through my career but reflecting on my years in training, there are definitely moments that stand out. For example, I never thought I'd be called exotic looking, let alone in the workplace, by a Consultant I was working with for the first time. I also didn't expect intrusive questions and jokes at the expense of religion. My reactions both times? A nervous laugh and a niggling feeling of discomfort.

Then there are things that are a little more subtle – being from an under-represented background, what does that actually mean? And how might it impact someone?

For me it means that sometimes training can be a lonely place, my peers may not have had the same life experiences or the same challenges at school. That's not to discount their personal challenges, but sometimes connecting can feel a bit of a struggle. Whilst in training I have learned that Imposter Syndrome is very much real.

Summary

So how do we promote equality, diversity and inclusivity?

One module of mandatory EDI e-learning isn't enough.

We begin by understanding that language is powerful and tells a story, we need to learn to recognise when words can cause discomfort or hurt.

Be curious – learn about your colleagues and their lives.

Be open to having a greater understanding of challenges that others face – whether they are visible

to you or not and whether you will ever be faced with those same challenges in your life or not. It should matter to us all. Inclusivity benefits us all.

Change is needed at every level to encourage social mobility, only then will we have educators, students and a workforce that is truly representative of our society.

10N2 (6336)

Date of presentation: Wednesday 30th August
Time of session: 09:12 - 09:24
Location of presentation: Dochart 1, Loch Suite, SEC

Incorporating Gender Medicine Education into Military Medical Schools: Advancing Gender Equality and Health

Chun-Lun Hsu[1], Chih-Chung Huang[2], Yu-Lung Chiu[3], Shu-Ling Hwang[1], Shu-Chen Kuo[1]

[1] Center for General Education, National Defense Medical Center, Taipei, Taiwan [2] Department of Psychiatry, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan [3] School of Public Health, National Defense Medical Center, Taipei, Taiwan

The establishment of the Taiwan Gender Medicine Society in the only military medical school in Taiwan is a significant step towards promoting gender equality in the military. In fact, its establishment is a milestone for Taiwan and other Asian countries in their journey towards gender equality.

However, gender issues in military medical schools are complex and require more attention. To address these challenges, it is important to train qualified educators in gender medicine who can teach medical professionals the knowledge and skills needed to address the unique health needs of men and women in the military.

Moreover, social media can be used to promote the importance of gender and health beyond the military medical schools. By utilizing social media platforms, such as Facebook, Instagram, and Podcast, the Taiwan Gender Medicine Society can share the latest research and best practices on gender medicine with a broader audience, including other military branches and civilian medical schools. This outreach can help to increase awareness of the unique health needs of men and women and promote the importance of gender-sensitive healthcare.

In addition to incorporating gender medicine education into military medical schools, medical education methods, such as case-based learning, simulations, and interprofessional education, can be used to teach gender medicine. Case-based learning allows students to apply knowledge and skills in a realistic context, while simulations provide opportunities to practice gender-sensitive clinical skills in a safe environment. Interprofessional education facilitates collaboration between medical professionals and enhances their ability to address complex gender-related health issues.

By training qualified gender medicine educators and promoting gender and health

through social media, we can advance gender equality and promote better health outcomes for military personnel and their families, as well as expand our efforts to other military branches and civilian medical schools, and eventually to general higher education institutions.

10N3 (5551)

Date of presentation: Wednesday 30th August
Time of session: 09:24 - 09:36
Location of presentation: Dochart 1, Loch Suite, SEC

Collaborative Health Sciences Education is Essential to Effective and Efficient Patient Care

Naledi Mohale[1]

[1] *University of Cape Town, South Africa*

One of the most important principles underpinning health sciences is that of the body working as a system. Even though each system can work independently, the body's work is more effective and efficient when the systems work together. The same principle is applicable to delivering healthcare – different healthcare professions can work separately, but the highest quality patient care is delivered in a multidisciplinary team (MDT). Sadly, there is a great missed opportunity by medical schools who expect this sense of teamwork to emerge once their students have entered the workplace, but fail to cultivate the culture of working in an MDT in the many years that students spend at school.

The last time the University of Cape Town affords medical students meaningful academic interaction with their colleagues in the health and rehabilitation sciences is at the beginning of first year – when no one really knows what their chosen career path entails. Even though we may work with the same or similar patients during university, we spend the rest of our training apart, not fully aware of the important roles that each of us play in patient care. This unawareness affects the referral system because one cannot refer to a certain field that may be able to address a challenge they are unable to address, if they do not know what that field does. Unfortunately, this lack of knowledge does not mean that the patient's problem disappears simply because their healthcare practitioner is unaware of who is best to solve it.

The current method of training is also counter-productive to the plans of the National Health Insurance, which is intended for implementation in South Africa. Under this policy, there are MDTs at district level. Therefore, a crucial part in ensuring its success would be shifting students' way of thinking towards being accustomed to working in an MDT. Collaborative student clinical experience and community engagement are just some of the ways that this can be achieved.

Doctors may save a patient's life but it is their colleagues in the health and rehabilitation sciences who add meaning to a patient's life.

10N4 (1280)

Date of presentation: Wednesday 30th August
Time of session: 09:36 - 09:48
Location of presentation: Dochart 1, Loch Suite, SEC

A Model to Address the Implications of Diverse Socio-Cultural Context on Delivery of Medical Ethics Education

M. Shahid Shamim[1]

[1] *Aga Khan University, Karachi, Pakistan*

Unlike medical science subjects where knowledge and 'facts' are similar all around the World, a professional's ethical and moral behaviour is highly contextual to the socio-cultural context. They are constructed through hereditary and environmental influences based on obligations and expectations between professionals and society. These should not be taken as a universally homogenous phenomenon.

Due to this intricate relationship between cultural context and demands of professional conduct, educators struggle to teach and assess ethics in different regions. This struggle is far more significant in regions like South Asia and the Middle East, where other social factors play their part in addition to cultural differences. According to Hofstede, people from these regions are generally collectivist in their cultural orientation and societies are tightly integrated. Although urbanisation and globalisation may have impacted the societal norms in some sections of the population, the majority relates themselves to communities or groups, such as their extended families (brothers, sisters, cousins, uncles, aunts, grandparents) casts, tribes or villages. Within the communities, people look after each other's interests. As a result, decisions are often taken collectively or by the community elders in the best interest of all.

Based on Hofstede's report and the works of Dewey and Mashman, this paper argues that morality and ethical behaviour are culture-specific, achieved through habits and customs. Therefore, effective ethics education in these regions has demands different from the developed Western World. To cater to these demands, the paper establishes the need for a customised novel strategy, guided by appropriate learning theories and educational models, and proposes the Contextually Relevant Ethics Education Model (CREEM). It is grounded in contemporary learning theories and educational frameworks and incorporates diverse cultural and environmental contexts in the delivery of medical ethics education.

10N5 (5223)

Date of presentation: Wednesday 30th August
Time of session: 09:48 - 10:00
Location of presentation: Dochart 1, Loch Suite, SEC

Selection and admission to medical school: let's do it fair – if you dare

Anouk Wouters[1]

[1] *Amsterdam UMC location Vrije Universteit Amsterdam, Amsterdam, The Netherlands*

Medical school selection serves to decide which candidates are allowed to enter the training towards becoming competent doctors. Because of the high stakes and many stakeholders involved, designing admissions can be considered a wicked problem, with no one solution being able to accommodate all expectations and demands.

The scarce seats in medical education are widely pursued by young individuals aspiring to what are considered highly fulfilling and respected roles in society. As a result, medical schools can select from a wide pool of suitable applicants. Traditionally, medical schools focus on identifying 'excellence' among applicants. Over the years the notion of excellence has evolved to include not only academic merit, but also a broader range of personal and interpersonal qualities. Recently, the field has become aware of the lens through which these merits and qualities are considered – which does not always rate qualities of underrepresented groups.

It has become evident that a diverse medical workforce is required to provide excellent healthcare to a diversifying patient population. It is therefore problematic that certain ethnic and sociocultural minority groups are underrepresented in medical education, partly because they have difficulty meeting existing criteria of excellence. Improving diversity and equity is generally attempted by making changes to the existing policies and criteria. Increasingly it is acknowledged that these students have acquired other experiences and qualities throughout life than majority students. These experiences and qualities are an asset to medicine, but are usually not incorporated in current definitions of excellence.

What keeps medical schools from really daring to make a difference and radically revamp their selection and admissions?

I will reflect on the values and struggles that are put across in the international literature, and that I have observed in the Dutch context through research on discourses and by watching recent political developments surrounding admissions. I will share my point of

view on the need for a radical change in mindset. I advocate changing the premise of admissions so that the societal need for a diverse workforce is put first, and excellence is considered within this.

10N6 (2483)

Date of presentation: Wednesday 30th August
Time of session: 10:00 - 10:12
Location of presentation: Dochart 1, Loch Suite, SEC

Co-producing Health Education Research: Working Equitably in a Hierarchical System

Sophie Soklaridis[1], Rowen Shier[1], Georgia Black[1], Gail Bellissimo[1], Anna Di Giandomenico[1], Sam Gruszecki[1], Elizabeth Lin[1], Jordana Rovet[1], Holly Harris[1]

[1] *The Centre for Addiction and Mental Health, Toronto, Canada*

The Canadian Institutes for Health Research (CIHR) has implemented a Strategy for Patient Oriented Research. This strategy's goal is to transform the role of patients in research from passive receptors to proactive partners with the aim of producing better healthcare outcomes for all. In this presentation, we will explore a Canadian case example which illustrates the ways an education research team, situated in a healthcare facility, has embodied the principles of patient-oriented research through co-production. Co-production is a process where people with lived experience (PWLE) are recognized as experts and collaborate alongside researchers with learned experience in the design, actualization, and dissemination of research.

Our team consists of people representing diverse disciplines, areas of focus and learned/lived expertise, each with intersectional and complex experiences. In this Point of View presentation, we will argue that co-producing health education research with service users is necessary for ethical research and essential in promoting epistemic justice. We will challenge the widespread assumption that engaging PWLE in health education research requires cumbersome unidirectional capacity building whereby PWLE must be 'brought up to speed'. When operating under this assumption, equitable partnerships become impossible and opportunities for multidirectional learning amongst all stakeholders are missed. We will issue a call to action for those in traditional positions of power to reflect on their positionality, make space for voices that have been historically marginalized, and explore the transformative value of equitable partnerships between those with learned and lived expertise.

In this presentation, we will draw from a feminist relational autonomy lens to describe how our team organically created the relational conditions that included all members' unique voices, experiences, and expertise in research and decision-making processes. Specifically, we will highlight the transformative educational approaches our team adopted that fostered multi-directional learning. We will elucidate the creativity, impact,

and innovation that comes with epistemic equity and meaningful engagement of stakeholders with various perspectives. We will discuss the ways in which our team navigates power and privilege dynamics to work towards research that is accessible, relevant and impactful to stakeholders.

10N7 (0696)

Date of presentation: Wednesday 30th August
Time of session: 10:12 - 10:24
Location of presentation: Dochart 1, Loch Suite, SEC

Intercultural Competence Education for Health Workers: A Tool for National and Global Health Equity

Matthew O'Bryan[1], Katie Clark[2], Wajeeha Aziz[1]

[1] *Brighton and Sussex Medical School, Brighton, UK* [2] *Queensland Health, Hervey Bay, Australia*

Intercultural competence (ICC) provides a strategic tool for healthcare systems to adapt and respond to the health needs of diverse groups. Communication difficulties and cultural barriers between providers and patients have been shown to contribute to adverse patient experiences. Here, we explore our contemporary understanding of intercultural competence and appeal for its inclusion in medical education as a tool urgently needed to overcome unacceptable health disparities, where few identified solutions exist.

ICC seeks to ameliorate the potential for miscommunication between those of non-overlapping cultural backgrounds, who may differ in their interpretation of the elements of communication. Education in ICC seeks to develop the attitudes, skills, and knowledge of practitioners to communicate in intercultural settings effectively and appropriately.

Several ICC models such as compositional, co-orientational, adaptational and causal process have been proposed. Common to most are three foundational components: attitudes, knowledge, and skills. Highlighted within each are subdomains – values of equality and anti-discrimination (attitudes), awareness of self as it relates to cultural identity and understanding of intersecting oppressions (knowledge), and the ability to challenge discriminatory acts and engage in self-reflection (skills).

We propose Deardoff's causal path model of ICC as an educational framework, chosen for its compatibility with a spiral medical curriculum and clear outcomes. Desired internal outcomes refer to a shift in students' frame of cultural reference, and development of their adaptability, flexibility, and empathy. The desired external outcomes are of effective communication and behaviours leading to competent intercultural communication. Deardoff's model recognises progressive IC, whereby a 'revolution' around the causal path cycle can be considered a distinct curricular phase.

In early phases of ICC learning, peer discussions and reflection workshops are appropriate.

Later educational phases should progress to simulation, and assessment of ICC skills as an OSCE station. The medical elective, a longstanding but increasingly controversial aspect of the British medical curriculum, can be transformed into a culminating experience of students' ICC development.

As unacceptable inequities within our health systems are further exposed, we propose the urgent inclusion of intercultural competence within medical education and suggest Deardoff's causal pathway model for ICC integration within the medical spiral curriculum.

Session 100: Postgraduate: Early Career

1001 (3346)

Date of Presentation: Wednesday 30th August
Time of presentation: 0900 - 0906
Location: Carron 1, Loch Suite, SEC

Using Cognitive Load Theory to Determine the Maximum Safe Number of Inpatient Consults for Trainees

Sam Brondfield[1], Alexander Blum[2], James Mason[3], Patricia O'Sullivan[1]

[1]UCSF, San Francisco, USA; [2]Stanford, Palo Alto, USA; [3]UC Berkeley, Berkeley, USA

Background

Effective inpatient consultation is crucial for training and patient care. However, the maximum safe number of consults for trainees is unknown. In 2018-2019, we developed the Consult Cognitive Load (CCL) self-assessment instrument to measure the mental effort required of residents and fellows during inpatient consults and gathered validity evidence to support the instrument's use. One component of the CCL measures extraneous load (EL), reflective of distractions. Here, we used EL data from the initial instrument development study to calculate the maximum safe number of consults for trainees.

Summary of Work

We analyzed EL data from 142 new inpatient consults performed by internal medicine fellows and psychiatry residents across 5 University of California hospitals. Consults were completed within 24 hours of CCL submission and were performed either on inpatient wards, in intensive care units, or in emergency departments. We constructed a Wright map comparing EL to the number of prior consults performed during the current consult shift and the novelty of the present consult to the trainee. Wright maps visually position estimated respondent locations and item response thresholds along a construct, in this case EL, using a logit scale.

Summary of Results

The highest threshold corresponded to 6 prior consults during the current consult shift when novelty was maximized and 10 prior consults when novelty was minimized. A highly novel consult was already above the second threshold even without any prior consults.

Discussion and Conclusion

On average, trainees with less subject matter familiarity (ie. new residents or fellows) may be able to perform up to 6 new inpatient consults before they are unable to provide safe care, while trainees with more subject matter familiarity (ie. senior residents or fellows) may be able to perform up to 10 new consults. However, even 1 highly novel consult can be challenging for any trainee. As these are averages, numbers may vary across specialties. A limitation of this study is its retrospective format using a dataset obtained without this specific research question in mind.

Take-home Message

Educators may use this study's quantitative guidance to construct inpatient consult rotations so as not to exceed trainees' capacity to provide safe patient care.

1002 (2629)

Date of Presentation: Wednesday 30th August
Time of presentation: 0906 - 0912
Location: Carron 1, Loch Suite, SEC

Using the IFFE framework to improve reflective practice in family medicine residents

Pawasoot Burgban[1], Chanon Nantawong[1], Saran Weerametachai[1], Kitti Tantrawiwat[2]

[1]Saraburi Hospital Medical Education Center, Saraburi, Thailand; [2]Pitsanuvej Hospital, Phitsanulok, Thailand

Background

The Family Medicine (FM) Residency Program requires competencies in learning from reflection but does not have concrete teaching. There are obstacles such as time, and reflective skills.

IFFE is an abbreviation of FM principles in understanding a patient's illness (I: Idea, F: Feeling, F: Impact on Function, and E: Expectation) which is widely known in Thai FM context. When IFFE is integrated with the reflection model of Gibbs, which has 6 steps: 1. description, 2. feelings, 3. evaluation 4. analysis 5. conclusion 6. action, the abbreviations have been changed to I: Index situation and Idea, F: Feeling, F: Evaluation and Analysis Function, and E: Expectation for the action plan.
So we decided to study the effect of teaching the IFFE framework on the level of reflective practice (RP) among FM residents in Health area 4 (Central region of Thailand).

Summary of Work

Study design: Retrospective study, Population: All FM residents in 2017. Inclusion criteria were residents who attended online academic activities and reflections pre (1st- 4th RP) and post (5th-9th RP) IFFE teaching, and participated in IFFE reflective teaching class (between 4th RP - 5th RP).

The independent variable was teaching the IFFE Reflection Model. Dependent variable was the reflective level after each academic activity presentation according to the level of Gibbs.

Presentation and reflection video clips had been reviewed and data retrieving from such records was collected consecutively. The dependent variable was analyzed qualitatively using 3 experts' opinions.

Summary of Results

There were 19 FM residents (165 online classes) who participated in this study. In the pre-teaching, most residents reflected at level 1: description (70.42%), followed by no reflection (22.54%). The post-teaching could reflect up to level 6: action plan (44.68%), followed by level 5: conclusion (22.34%). It was found that reflective levels were significantly different from the Friedman test ($p < 0.001$), especially in pre and post teaching RP was significantly different from the pairwise comparison test ($p < 0.05$).

Discussion and Conclusion

Teaching the IFFE reflective framework improved FM residents' reflective skill with a statistically significant level ($p < 0.001$).

Take-home Message

Reflective skills are necessary to teach and practice consistently.

1003 (4082)

Date of Presentation: Wednesday 30th August
Time of presentation: 0912 - 0918
Location: Carron 1, Loch Suite, SEC

The preference type and decision of specialty choice among new medical graduates - A longitudinal study using Q method

Chung-Hsien Chaou[1], Kuo-Chen Liao[1], Hsu-Min Tseng[2], Kung Chia-Te[3], Cheng-Ting Hsiao[4], Shu-Chen Liao[5], Shuan-ruey Yu[6]

[1]Chang Gung Memorial Hospital, Linkou, Taoyuan, Taiwan; [2]Chang Gung University, Taoyuan, Taiwan; [3]Chang Gung Memorial Hospital, Kaohsiung, Taiwan; [4]Chang Gung Memorial Hospital, Chiayi, Taiwan; [5]Chang Gung Memorial Hospital, Keelung branch, Keelung, Taiwan; [6]Chang Gung Medical Education Research Center, Taiyuan, Taiwan

Background

Modern medicine is divided into numerous specialties with distinct competency requirements. Choosing a suitable specialty remains a difficult and critical decision for most medical graduates. Clinical teachers may play important roles in guiding and supporting young doctors through these decisions. We aimed to investigate the common preference types using longitudinal qualitative analysis and Q methodology.

Summary of Work

All Taiwanese medical graduates enter a mandatory two-year rotatory training (PGY program) before entering residency. We recruited 60 new graduates in 2021 from four large teaching hospitals and conducted a two-year longitudinal study. Participants' specialty preferences and considerations were collected using biannual questionnaires and audio recordings. These qualitative data were thematically analyzed and used to develop a Q-set containing 40 statements. Then 30 of the participants took part in the subsequent Q-sorting activity. Factor analysis with varimax rotation method was used. Final specialty application results were also collected.

Summary of Results

The number of undecided participants rapidly declined after 1 year of rotatory training. Four distinct types of consideration preferences (factors) were loaded from the Q-sort: (1) working environment and flexibility in scheduling, (2) content of work and sense of accomplishment, (3) family and quality of life, and (4) income and future professional development. Surgical specialties were more often associated with a preference toward income and future professional development, while shift-based specialties (Emergency Medicine, Anesthesiology) were more associated with considerations toward future life quality.

Discussion and Conclusion

While medical education systems worldwide are not identical, most countries adopt a gradual transitional approach from uniformly trained medical students to specialized residents, emphasizing rotatory training programs integrated into undergraduate or/and postgraduate periods. During this short period of decision time, young doctors think about the most important influences and choose the path they will take for the rest of their lives. Clinical teachers should understand a learner's preference before providing constructive suggestions.

Take-home Message

Different considerations and preferences were shown during the period when new medical graduates decide their future specialties, including working environment, quality of life, sense of accomplishment, future income or professional development. Some of the specialties choices are associated with specific type of preferences.

1004 (5367)

Date of Presentation: Wednesday 30th August
Time of presentation: 0918 - 0924
Location: Carron 1, Loch Suite, SEC

The impact of the Roles of a Teacher in residency training program at Kamenge Teaching Hospital.

Jean Bertrand Irakoze[1]

[1]*University of Burundi/Faculty of Medicine/ Cardiology residency program, Bujumbura, Burundi*

Background

The role of the teacher is one of the best topics in medical education. Knowing these roles has largely transformed the field of teaching in medical schools worldwide. The aim of this study was to find out whether these roles have an impact on the study orientation and continuing education of residents trainees at Kamenge Teaching Hospital.

Summary of Work

We used a pre-designed google form and the link was sent to each resident via WhatsApp and we made a descriptive study on informations received automatically in google shit

Summary of Results

In Total , 54 residents accepted to respond to our survey. Our study reveals that most residents are between 33 and 36 years old and 16.7% are women. Internal medicine is represented by 35.2% of all respondents and surgery by 18%. Most of our respondents (27.8%) were in their third year of specialization and those in their final year were 9.5%. In terms of motivation for participating in this postgraduate programme, all 54 residents stated that they were not motivated by any of the roles of the teacher. 94.4% of them stated that they preferred the teacher-student contact method of teaching. Most of them preferred a good teacher and a teacher who teaches the right things, 58.5% and 60.4% respectively. Of these resident students, 29.6% are on external mobilty and 93.3% of them are in Europe. Those on external mobility describe the teaching method as more practical in 68.8% of cases, as opposed to the local method which is more theoretical. Those who are studying abroad say that the teachers there have more didactic resources than here in Burundi in 77.8% and that they are role models in 55.6% in contradiction to the local teachers.

Discussion and Conclusion

Even if the roles of the teacher are not a basic motivation for the students to choose their speciality here in Burundi, they are the basis of the appreciation if they are in external mobility and they continue to be the reference for the student to be satisfied with the teaching system.

Take-home Message

The roles of the teacher are essential in student environement

1005 (3510)

Date of Presentation: Wednesday 30th August
Time of presentation: 0924 - 0930
Location: Carron 1, Loch Suite, SEC

Comparing self-assessment by Endocrine trainees with faculties' assessment using ACGME milestones

Peng Chin Kek[1], Wei Peng Goh[2], Ling Zhu[3]

[1]Singapore General Hospital, Singapore, Singapore; [2]SingHealth Residency, Singapore, Singapore; [3]Singapore General Hospital, Singapore, Singapore, Singapore

Background

Self-assessment has been advocated as a tool for identifications of medical professionals' own learning needs in promoting life-long learning. Self-assessment allows exploration of one's weaknesses and strength, and the understanding the knowledge and performance gap helps to motivate self-directed learning to improve on these deficiencies. ACGME has determined that trainees are expected to conduct self-assessment and reflect on their performance with the milestones data and create learning plans for themselves. Usefulness of using Milestones as a tool for self-assessment have been reported in a few studies. However, physicians have been reported to have poor ability to self-assess accurately in systematic reviews, particularly worse in physicians with the least skill but with most confidence.

This study aimed to:
1) assess accuracy of self-assessment using ACGME milestones.
2) tracking accuracy of self-assessment with progression of trainees

Summary of Work

This was a descriptive study, adopting a cross-sectional, quantitative approach. Convenience sampling was applied for data collection in view of small numbers of trainees in SingHealth Endocrinology program, Singapore. All faculties that had worked with the trainees were invited to submit milestones assessment six-monthly. The mean scores of the faculties were discussed during the CCC (competencies committee

meeting). This score approved after the CCC will served as the “expert” score. Feedback was given to trainees after the CCC. Data that had been collected over the 1.5 years.

Summary of Results

Data from 12 trainees were collected, ten of whom were females. Only those with more than 2 time points were analyzed. Trainees tends to underestimate their self-assessment, with significant differences for medical knowledge in 1 occasion along the longitudinal time points (mean differences of -1.12 ± 1.21, p=0.034). Six trainees went through self-assessment over the 1.5 years. Five of them scores themselves better over time and the summations scores as compared to the faculties narrowed longitudinally.

Discussion and Conclusion

Similar to most reports, endocrine trainees were poor in self-assessment initially. However, their skills on self-assessment improved when they progress. This observation suggested that self-assessment skills can be improved with training. Providing feedback may be one of the reasons for the skill improvement.

Take-home Message

Self-assessment can be improved with training.

1006 (2592)

Date of Presentation: Wednesday 30th August
Time of presentation: 0930 - 0936
Location: Carron 1, Loch Suite, SEC

Supervisors' perspective on their talented trainees A qualitative interview study

Abdullah Khawar[1], Femke Frederiks[1], Marianne Mak-van der Vossen[1], Martin Smalbrugge[2], Agnes Diemers[3], Jean Muris[4], Nynke van Dijk[1], Mechteld Visser[1]

[1]Amsterdam UMC, location AMC, Amsterdam, The Netherlands; [2]Amsterdam UMC, location VUmc, Amsterdam, The Netherlands; [3]UMCG, Groningen, The Netherlands; [4]Maastricht Univeristy, Maastricht, The Netherlands

Background

It is unclear how General Practitioner (GP) and Elderly Care Medicine (ECM) supervisors recognize talented trainees (TTs) and support them in their development. We aimed to identify the characteristics, workplace learning of TTs, and (the nature) of the supervision, as perceived by their supervisors.

Summary of Work

We conducted an explorative study, using semi-structured interviews, with 18 GP and ECM supervisors took place. We did not provide a definition of talent to the participants. Interviews were audio recorded and transcribed verbatim. Two researchers analysed the transcripts in MAXQDA using an iterative process of data collection, coding and analysing. We reached consensus on results and data sufficiency through discussion in the full research team.

Summary of Results

Supervisors described TTs as above average competent, and at least excelling in medical knowledge, communication and professionalism, in order to be considered talented. TTs have good social skills. They distinguish themselves in the following learning activities: prepare learning, identify learning objectives, plan their learning, reflect on their performance, learn from presented opportunities and apply what they have learned. TTs

developed themselves continuously and were highly motivated. Supervisors often gave the label 'talented' to TTs at an early stage, after which this view did not change. Supervisors considered supervising a TT as challenging and motivating. Supervisors often recognized themselves in the TT and regarded them as an equal. They frequently were not able to mention any pitfalls of the TT and if they did, those pitfalls were often described as not disturbing. Finally, supervisors wondered whether they could teach and challenge TT sufficiently during the whole training period.

Discussion and Conclusion

We tentatively conclude that TTs are seen as highly motivated, socially adept and excelling in at least medical knowledge, communication and professionalism. TTs seem to be more capable of self-regulated learning in the workplace, compared to non-TTs. The quick recognition and not being able to describe pitfalls of TTs by supervisors, raises the question if supervisors are able to adequately assess their TTs, support them sufficiently and challenge them in such a way that the TT can develop optimally.

Take-home Message

Train talented trainees by multiple trainers to get a holistic judgement of their performance.

1007 (3551)

Date of Presentation: Wednesday 30th August
Time of presentation: 0936 - 0942
Location: Carron 1, Loch Suite, SEC

An Innovative multiprofessional simulation course for foundation trainees in East of England

Charleen Liu[1], Maria Christou[1], Helen Johnson[1]

[1]*Health Education England, East of England, Cambridge, UK*

Background

The new Multiprofessional Foundation School in East of England (EoE) aims to develop unique and innovative learning opportunities for trainee doctors, pharmacists, physician associates, and dentists. The focus is on commonalities in learning objectives and professional competencies across programmes.

Summary of Work

We developed an innovative multiprofessional high-fidelity simulation course (MPS) for foundation trainees in EoE. The course consists of six scenarios in acute clinical settings. Simulations incorporate activities and learning relevant to both foundation doctors and trainee pharmacists. The faculty handbook details each scenario and debrief guides covering technical and non-technical skills plus human factors considerations. Pre-course briefing meetings with local medical and pharmacy faculties precede each course. Trainees are required to complete pre- and post-course questionnaires for evaluation and certification purposes.

Summary of Results

Three MPS courses have run successfully to date, with 20 trainees (9 foundation doctors and 11 trainee pharmacists). 19 (95%) pre-course and 17 (85%) post-course questionnaires were completed. Completion of the course increased the proportion of trainees agreeing with following statements (Likert scores 4 and 5):

Confidence in managing acutely unwell patients: 36% vs 70%

Confidence in working within multiprofessional teams: 31% vs 94%
Awareness of roles of different healthcare professionals: 52% vs 88%
Awareness of impact of non-technical skills on patient safety: 57% vs 100%

After the course, 100% trainees felt they would benefit from multiprofessional simulation training, as it is “fun and effective”; “helps better understanding of the roles of other healthcare disciplines and improves communication”; 100% would recommend this course to their peers, and value more MPS learning opportunities with nurses and other healthcare professions. Trainee pharmacists stated that course is essential for their future roles as independent prescribers.

Discussion and Conclusion

Evidence so far indicates that this course provides safe and effective environment for foundation doctors and trainee pharmacists to learn together and from each other. We will continue to evaluate the nine remaining courses and aim to use collated feedback to inform improvements to the MPS course and rollout to other foundation trainees in EoE.

Take-home Message

Simulation courses can be tailored and delivered to a multiprofessional learner group to provide safe and effective learning opportunities for trainees.

1008 (4872)

Date of Presentation: Wednesday 30th August
Time of presentation: 0942 - 0948
Location: Carron 1, Loch Suite, SEC

Breaking the Cycle: A qualitative study of factors that mitigate impostor phenomenon among Internal Medicine trainees

Rachel Levine[1], Susan Mirabal[1], Scott Wright[1]

[1]*Johns Hopkins School of Medicine, Baltimore, USA*

Background

Imposter phenomenon (IP) is self doubt among individuals who struggle to acknowledge their own competence. Exposure to achievement-focused tasks triggers IP perpetuating negative thoughts and maladaptive behaviors. The cycle repeats with new exposures. IP is common among health professions education (HPE) trainees who face achievment-focused tasks on a daily basis. IP impacts learning and leads to burnout, anxiety, and depression.

Summary of Work

One-on-one interviews with 28 postgraduate trainees in internal medicine were conducted May-June 2020. Informants were invited to talk about IP. Investigators identifed factors mitigating imposterism using the IP cycle as a theoretical framework.

Summary of Results

Most informants were female (75%). Mean age 30 years.
Informants used language like “recurring,” “ebb and flow,” and “ever-present” to describe IP triggered by tasks such as "inserting a central line", "teaching" and "leading teams".
"..there's things I can do to correct it, but I flip back into old patterns of thinking when I'm seeing a patient and don't know the right thing to do, then I slip back into those feelings of inadequacy.” (PGY 1, male) (IP cycle)
Internal factors that ease IP: (1) IP is common, (2) reframing attribution beliefs, (3) acknowledging strengths.

"...it reminded me that even though I am not where I would like to be in terms of skill, I will get there eventually. So, I just want to feel comfortable with where I am now. Everything is a process." (PGY-3, Female.) (attribution beliefs)
Informants described external factors mitigating IP: (1) mentors and role models, (2) formal opportunities to share IP experiences, (3) growth-oriented learning environments.
"... talking to others about their experiences...those feelings of being an imposter come from you thinking that you are not as good as everyone around you. ... we have a support meeting where we all talk about our experiences, and it's really helpful to know everyone has those feelings of inadequacy, that you're not alone." (PGY-2, Female) (opportunities to share)

Discussion and Conclusion

Internal and external factors can mitigate the IP cycle. Understanding these factors is crucial for supporting trainees and targeting institutional changes to diminish imposterism.

Take-home Message

In HPE the IP cycle is common but it can be broken.

1009 (3905)

Date of Presentation: Wednesday 30th August
Time of presentation: 0948 - 0954
Location: Carron 1, Loch Suite, SEC

Fake it to Make it: High-fidelity Simulation in Post-Graduate-Year Training for Emergency Scenarios

Yi-Hsuan Tsai[1], Chun-wen Chiu[2], Chin-Yi Huang[3], Fu-Yuan Siao[4], Hsi-I Chen[5], Ming-Sheng Lee[6], Ya-Wen Lee[7]

[1]Clinical Skill and Simulation Center, Changhua Christian Hospital, Changhua, Taiwan; [2]Clinical Skill and Simulation Center, Changhua Christian Hospital, Changhua, Taiwan; [3]Department of Medical Education Changhua Christian Hospital, Changhua, Taiwan; [4]Department of Emergency Medicine and Critical Care Medicine, Changhua Christian Hospital, Changhua, Taiwan; [5]Department of Applied History, National Chiayi University, Chiayi, Taiwan; [6]Department of pediatric pulmonology and Critical Care Changhua Christian Hospital, Changhua, Taiwan; [7]Department of Nursing Changhua Christian Hospital, Changhua, Taiwan

Background

The combination of high-fidelity simulation and Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) in emergency and critical medicine education enables the simultaneous development of medical knowledge and team management skills. In immersive scenarios, students learn to make decisions and coordinate teamwork under stress, gaining valuable experience that can be applied to real-life situations. The following study assesses the effectiveness of our high-fidelity simulation program for post-graduate-year (PGY) junior doctors.

Summary of Work

Our quantitative research recruited volunteer PGY doctors who were on a one-month rotation in the emergency department from May 2020 to May 2022. They were evaluated by instructors at our Clinical Skills and Simulation Center using simulated scenarios provided by SimMan® 3G. Students were evaluated at three different points in time: after their first run, after their second run, and then three months later, after their third run. The evaluation materials included proficiency in basic life support (BLS) and advanced

cardiac life support (ACLS), as well as the four primary teamwork skills outlined in TeamSTEPPS. The effectiveness of the learning was assessed through self-made evaluation scoring sheets and qualitative feedback comments. The scores from the three sets were analyzed using a paired sample t-test in SPSS® software

Summary of Results

Thirty-four PGY doctors were recruited and divided into seventeen teams, each consisting of two PGY doctors and two nurses. In the BLS section, the average baseline score was 6.12, which increased to 6.71 after the second run and further to 7.59 after the third run. The average scores for ACLS were 5.94, 10.06, and 7.59, respectively. In the TeamSTEPPS section, the baseline average was 9.70, which rose to 16.29 after the second run and decreased to 14.12 after the third run. There were statistically significant improvements after the second and third runs ($p < 0.01$), with the greatest improvement observed in the "Leadership" parameter.

Discussion and Conclusion

Our study found that incorporating high-fidelity simulation with TeamSTEPPS was beneficial for PGY doctors, particularly in the ACLS and TeamSTEPPS sections, and they were able to retain the training outcomes.

Take-home Message

These results suggest that incorporating high-fidelity simulation into emergency medicine rotations is beneficial for PGY doctors.

10010 (6527)

Date of Presentation: Wednesday 30th August
Time of presentation: 0954 - 1000
Location: Carron 1, Loch Suite, SEC

Learning by Caring the Dying Moment of Terminal Residents in the Nursing Home: A pilot program

Yi Ping Tseng[1], Cheng Yen Chiang[2], Mei Chu Tasi[3]

[1]Nurse Educator, Department of Nursing, Taoyuan Chang-Gung Memorial Hospital, Taoyuan City, Taiwan; [2]Supervisor, Department of Nursing, Taoyuan Chang-Gung Memorial Hospital, Taoyuan City, Taiwan; [3]Director, Department of Nursing, Taoyuan Chang-Gung Memorial Hospital, Taoyuan City, Taiwan

Background

For majority of residents, nursing home maybe the last place for living until to meet natural death. However, caring for dying process, guarding the final moments, and witnessing the death of the resident are all stressful tasks and no practical training program for nursing home staff. The purpose of this program was to explore the key behaviors from the care experience and design these into in-service education courses for new staff training.

Summary of Work

The first stage was to reveal the key behaviors of providing end-of-life care from practical experience by a qualitative approach. From December 2020 to August 2022, a purposive sampled from two nursing homes in Taoyuan, and interviewed with a semi-structured questionnaire. Data was categorized by content analysis. The second stage is to design in-service courses with key behaviors as interventions. From September 2022 to September 2023, including lectures, simulation and debriefing, and it is expected to invite 30 participants to join and measure the impact.

Summary of Results

A total of 26 participants (14 nurses and 12 nurse assistants), based on their the care experience during the dying moment, 4 themes as key behaviors including "Leaving a

peaceful appearance (Appearance) ", "Creating a cultural atmosphere (Culture)", "Using language to say goodbye (Language) " and "Providing a private space (Space)" were found. 7 subthemes were discovered as " Preserve peaceful face of the resident", " Dress the resident decently ", "Guide family to say goodbye", "Send blessings and farewells by care team", "Allow family to be alone with residents", " Offer individualized custom care", "Use the cultural beliefs of helping others ". In the second stage, curriculum design will be carried out with four key behaviors.

Discussion and Conclusion

Therefore, for the nursing team, in addition to the daily restorative care, it is also necessary to learn the end of life care, and to leave a peaceful atmosphere for residents, lead family members to face the natural journey of life and accompany their loved ones to the end.

Take-home Message

Caring for residents during the dying moment, nursing staff need to learn 4 elements including appearance, culture, language and space as keys impacting quality of death.

10011 (3223)

Date of Presentation: Wednesday 30th August
Time of presentation: 1000 - 1006
Location: Carron 1, Loch Suite, SEC

Comparison of online versus in-person widening participation events for high school pupils in Scotland

Edward William Lawrence[1], Caitlyn Scott[2], Hannah McManus[3], Callum Cruickshank[4], Cory Dunnigan[5]

[1]Ninewells Hospital, Dundee, UK; [2]University of Edinburgh, Edinburgh, UK; [3]Royal Hospital for Children & Young People, Edinburgh, UK; [4]You Can Be A Doctor, Edinburgh, UK; [5]You Can Be A Doctor, Glasgow, UK

Background

There is significant disparity in the representation of many population groups - such as individuals from lower socioeconomic backgrounds, ethnic minorities, and with disabilities - within the medical profession, which has implications for these groups as patients and as healthcare professionals. The doctors of tomorrow directly correlate to the adolescents applying to study medicine today.

Online learning is advantageous in improving accessibility for individuals from rural areas or for whom transport is costly, but presents challenges for those with limited access to technology.

This study evaluates whether there is a significant difference in confidence scores for young people from WP backgrounds attending in-person and online UCAT and mock interview events.

Summary of Work

Post-session questionnaires completed by adolescents attending the YCBAD mock interviews and UCAT summer school from 2018 to 2022 were compared.

Summary of Results

Feedback on mock interviews was collated from 63%(n=19), 100%(n=23), and 67%(n=92) of pupils who attended sessions in 2018, 2019, and 2021 respectively. Events in 2018 and 2019 were in person while 2021 was virtual. 95%(n=18), 100%(n=23), and 72%(n=66) rated the mock interview as 'Very Useful' in 2018, 2019, and 2021 respectively. 90%(n=17), 91%(n=21), and 95%(n=87) felt that the session provoked a change in their preparation for the medical school interviews in 2018, 2019, and 2021 respectively.
For the UCAT, 60%(n=18) and 59.3%(n=16) of pupils who attended found the events "very useful", for in person and online respectively. 93.8%(n=15) ranked the final, interactive online group session as "very useful".

Discussion and Conclusion

Social diversity in the medical profession is key to producing a workforce which reflects the population it serves, whilst helping to reduce healthcare inequalities. Online WP events provide comparable alternatives to in-person that can allow enhanced accessibility in Scotland, however they can limit engagement from adolescents and present unique challenges for organisers.

Take-home Message

Online WP events provide comparable alternatives to in-person that can allow enhanced accessibility in Scotland, however they can limit engagement from adolescents and present unique challenges for organisers.

10012 (5282)

Date of Presentation: Wednesday 30th August
Time of presentation: 1006 - 1012
Location: Carron 1, Loch Suite, SEC

PILOT: Can FY2s improve their confidence in managing critically unwell patients from near peer teaching and simulation?

Ashley Wragg[1], Joe Gleeson[1], Hayley Boal[1], Leanne Lacey[1], Ian Todner[1], Courtney Johnson[1]

[1]*Mid Yorkshire Hospitals NHS Trust, Wakefield, UK*

Background

Foundation Year 2 (FY2) Doctors with limited exposure to critically unwell patients assume the role of a senior house officer (SHO) in their second year of training. The role of an SHO can be in many different specialities, of which many are new specialities to the FY2. As an SHO, they are often the first and only port of call for the acutely unwell patient. This can be very challenging as it is often wrongly assumed that FY2s have the same skills, knowledge and experiences as other more senior SHOs in a given speciality. Due to the gap between FY2s and more senior SHOs, FY2s feel out of their depth when dealing with critically unwell patients and require more support, guidance and training to overcome this discrepancy.

Summary of Work

Method: At Mid Yorkshire NHS Trust, we introduced an critical care day for the FY2 Doctors. The day consisted of a teaching sessions and four high fidelity simulations. The teaching topics included, assessment and management of the acutely unwell patient, and escalation to critical care. The course was taught on 8 days to small cohorts of FY2 trainees by Clinical Fellows in Medical Education in a near peer manner. FY2 trainees (N=55) completed questionnaires rating their clinical capabilities and confidence levels pre and post course.

Summary of Results

Results: Post-course 100% of FY2 trainees felt quite or extremely confident in escalating to critical care. Additionally, FY2 trainees felt more confident in assessing and managing a critically unwell patient on the ward, with na improvement of 70% in the confidence

intervals. There was a dramatic improvement in trainees knowledge of treatment options available in critical care, pre-course 80% of trainees where not confident or not confident at all and post course 75% of trainees were confident.

Discussion and Conclusion

Conclusion: FY2 Doctors benefitted from this course, which allowed them to develop their confidence in assessing, managing and escalating critically unwell patients. They were also able to develop their technical and non-technical skills during simulation, which can be directly transferred into their daily practise.

Take-home Message

Near peer teaching and simulation can improve the confidence of FY2s in managing critically unwell patients.

10013 (6343)

Date of Presentation: Wednesday 30th August
Time of presentation: 1012 - 1018
Location: Carron 1, Loch Suite, SEC

Well-equipped? Giving Foundation Year Doctors a Toolkit for 'Everyday' Teaching

Sophia Bashir[1], Sophie Masterson1[1], Laura Horseman[1]

[1]*Barts Health NHS Trust, London, UK*

Background

All UK doctors are expected to engage in teaching as stipulated by the General Medical Council's (GMC) Generic Professional Capabilities Framework. The guidance states trainees must "plan and provide effective education activities", as well as give constructive feedback and evaluate their own performance. However, training on how to teach is not delivered in a uniform way at medical schools and doctors may be underequipped to teach.

Summary of Work

We asked Foundation Year (FY) doctors at a London District General Hospital about: their prior training in teaching, their perceived confidence to teach, and desired areas for development. We delivered an hour-long session during mandatory FY teaching. This introduced the 'one minute preceptor' and feedback models aligned with the learners' needs identified through the pre-course survey. A post-course survey was used to gauge perceived usefulness and appetite for further sessions.

Summary of Results

The initial survey was sent to 76 FY doctors with a 42% response rate; 63%(n=20) had no training in how to teach at medical school and 97%(n=31) had none since graduating. The majority (69%) delivered teaching at least once a month (predominantly bedside/ward-based) and 94% wanted more training in how to teach. There were 35 attendees to the taught session with 32 responses to the post-session feedback. Of these, 22 (69%) trainees said they would incorporate an element of the teaching into their practice, and

84% felt that more sessions would be helpful. Before the session 31% of people disagreed with the statement "I feel well-equipped to teach", however afterwards, all responders either agreed or strongly agreed.

Discussion and Conclusion

Despite being an essential capability for doctors, our results suggest there is a discrepancy in training to teach at postgraduate level and that FY doctors would like this training. Our introductory session was well-received and associated with an increase in perceived confidence. We believe that training on how to teach can better equip junior doctors for their roles as educators, and hopefully increase the value of teaching interactions for everyone involved.

Take-home Message

Teaching is essential to a doctor's role

Junior doctors desire more training on 'how to teach', and perceived benefit from a session on ward-based teaching skills

Session 10P: Equality, Diversity and Inclusivity

10P1 (1334)

Date of Presentation: Wednesday 30th August
Time of presentation: 0900 - 0906
Location: Carron 2, Loch Suite, SEC

Attitudes Toward the Underserved and Implicit Bias in a Pathway Program for Students from Disadvantaged Backgrounds

Reamer Bushardt[1], Joyce Maring[2], Maranda Ward[2], Jessica To-Alemanji[2], Sonia Crandall[3], Marcia Firmani[2]

[1]Massachusetts General Hospital Institute of Health Professions, Boston, Massachusetts, USA; [2]The George Washington School of Medicine and Health Sciences, Washington, D.C., USA; [3]Wake Forest School of Medicine, Winston Salem, North Carolina, USA

Background

Healthcare workforce diversity is associated with health outcomes. Pathway programs can support recruitment and retention of healthcare trainees from underrepresented backgrounds. We explore attitudes toward underserved populations and unconscious bias among participants in a multidisciplinary pathway program for trainees from disadvantaged backgrounds.

Summary of Work

A multidisciplinary cohort (n=76) from regional colleges and universities were in healthcare majors and had educational/economic disadvantage. Scholarships, academic/professional enrichment, counseling, and mentorship were provided. Participants completed two studies examining attitudes toward underserved populations (HSATU) and implicit associations (IATs). After IATs, they addressed self-report measures and demographic questions.

Summary of Results

Preference was seen for thin over overweight people with higher IAT scores and lower self-reported weight attitude scores (all p-values <0.0001). Smallest effect was Cohen's d=0.53 and largest on explicit measures was d=0.79. The effect on IAT was large (d=0.97). Weight IAT scores were not correlated with self-reported weight attitudes (r=-0.23, p=0.098). There was no implicit preference between European-Americans and African-Americans on IAT (p=0.056); scores on Race IAT did not correlate with self-reported race attitudes (r=-.04, p=.74). IAT scores of Black people showed pro-African-American IAT scores (M=-0.15; p=.059; d=0.46). White participants evidenced significant pro-European-American IAT scores (M=0.23; p=.009; d=0.63). Asian participants showed pro-European American bias on the IAT without significance (M=0.14; p=.138; d=0.46). For Mental/Physical illness, participants did not differ in associations between Mentally vs. Physically Ill and Harmless vs. Dangerous (p=.88). IAT scores related to full HSATU scale (r=-.28; p=.022) and self-reports of who should have access to medical care regardless of ability to pay (r=-.25; p=.044). IAT scores did not related to self-reports related to responsibility of the medical profession for healthcare nor to how dangerous or harmless in mentally vs. physically ill people. Participants agreed that access to medical care is influenced by demographic factors (e.g., race/ethnicity).

Discussion and Conclusion

Gathering and analyzing baseline features, such as trainees' implict biases and attitudes toward underserved populations, can inform pathway program development and learning experiences to foster cultural competency and interest in serving medically underserved communities.

Take-home Message

A diverse healthcare workforce is associated with better health outcomes.

Pathway programs that provide enhanced support to students from underrepresented backgrounds are needed.

10P2 (4267)

Date of Presentation: Wednesday 30th August
Time of presentation: 0900 - 0912
Location: Carron 2, Loch Suite, SEC

A Learner-Focussed Teaching Strategy to Improve Refugee and Asylum Seeker Doctors' Reflective Writing.

Sophie Ashley[1], Nicola Pugh[1], Aisha Awan[1], Marie Monaghan[1]

[1]*REACHE Northwest, Manchester, UK*

Background

Reflective writing features in medical education and professional portfolio development as evidence of critical analysis. Although international medical graduates (IMGs) constitute a significant proportion of the workforce, they often have little to no experience of this prior to working in the United Kingdom which may explain differential attainment, however there is little evidence to date on which strategies are effective for teaching reflection to these learners. Reache, an organisation providing education to refugee and asylum seeker doctors, also IMGs, aimed to develop a reflection module using teaching and learning theory.

Summary of Work

The module was designed by educators at Reache between 2021 to 2022 with support from Health Education England, and comprised of pre-module reading, facilitator-led presentation and self-directed reflective writing handbook. Pre- and post-module surveys were undertaken which used a 7-point Likert scale for confidence level questions. Statistics were undertaken in GraphPad Prism Software. Normality tests were performed, and subsequent Wilcoxon matched pairs signed-rank tests determined differences in confidence levels pre- and post-module. Word clouds were generated to compare learner opinion of reflective writing pre- and post-module.

Summary of Results

There was a significant improvement in confidence of the knowledge of reflective practise ($p=0.0156$, $n=10$) and a significant improvement in understanding of the relevance of

reflective practise (p=0.0039, n=10). Following the module 100% of learners (n=10) felt confident using different models of reflection and opinion of reflective writing had positively transformed. Importantly, 100% of learners (n=13) had no experience of reflective writing prior to entering the United Kingdom.

Discussion and Conclusion

Whilst reflective writing is difficult to objectively assess given that it is a personal learning experience, a limitation of this study was the use of self-assessment surveys, which introduces bias. Furthermore, the response rates between pre- and post-module surveys were different (92.31% vs 84.62%) which introduces response bias. Although relatively small, this study represents an important population of IMGs, additionally future work could expand on this by developing the reflective writing handbook into a digital format to improve accessibility.

Take-home Message

This study is the first to target and successfully improve IMG confidence in knowledge and understanding of reflective writing, which may impact differential attainment.

10P3 (3564)

Date of Presentation: Wednesday 30th August
Time of presentation: 0912 - 0918
Location: Carron 2, Loch Suite, SEC

Feeling "non-existent": What patient lived experiences teach us about medical gaslighting

Marieke Kalkhove[1], Marguerite Roy[2], Debra Pugh[1]

[1]Medical Council of Canada, Ottawa, Canada; [2]Department of Medicine & Department of Innovation in Medical Education (DIME), University of Ottawa, Canada

Background

To address health inequities, medical education has focused on developing clinicians' cultural competence, cultural safety, and cultural humility. Recently, these frameworks have shifted from cultural competence to structural competence and anti-oppressive practice. The purpose of this study was to explore patients and healthcare advocates' lived experiences and to conceptualize how oppressive structures not only emerge but are also reproduced in clinical encounters.

Summary of Work

Five virtual focus groups were conducted. Using a snowball technique, five SMEs were asked to suggest organizations to target for recruitment. These organizations were sent email invitations along with inclusion criteria to send to their members. Adults who self-identified as having experienced health inequities based on gender, race, sexual orientation, disability, or other factors, as well as health professionals who advocate for equity-deserving patients met the inclusion criteria. Each session, consisting mostly of either patients or health professionals, focused on one theme (e.g., 2SLGBTQQIA+ care) and asked participants to share their experiences with the Canadian health-care system, describe barriers to care, and describe how they envision anti-oppressive care. De-identified transcripts of the sessions were coded for content using thematic analysis.

Summary of Results

Overall, participants described their experiences with the health-care system as negative. Both patients and health professionals encountered attitudinal or social barriers, system barriers, and difficulty accessing care when trying to navigate the health-care system as patients or patient advocates. Participants repeatedly described feeling dismissed in receiving care, "having to fight to have doctors believe [them]," "not [being] welcomed [when seeking help]," and feeling "invisible" and "non-existent."

Discussion and Conclusion

Patient experiences of feeling excluded and "non-existent" can be understood as medical gaslighting, which may include dismissing patients' sexual or gender identities, appropriate requests for investigations, or symptoms. Health education can encourage physicians to reflect on their own role in systems of power: having the ability to dismiss or validate patient experiences, physicians can push patients to the margins and (re)produce spaces of exclusion, thus reproducing structural barriers to care.

Take-home Message

Anti-oppressive care seeks to subvert the power dynamic between the physician as the holder of knowledge and the patient as the receiver of knowledge and work towards patient-partnered care.

Previous submission: RP1220/SC

10P4 (3851)

Date of Presentation: Wednesday 30th August
Time of presentation: 0918 - 0924
Location: Carron 2, Loch Suite, SEC

CASPER Preparation Program Innovation: Increasing Self-Perceived Competence & Confidence of Underrepresented Applicants on the CASPER Snapshot & CanMEDS Roles

Julianah O Oguntala[1], Farhan Mahmood[2], Claudine Henoud[2], Libny Lahelle Pierre-Louis[2], Asli Fuad[2], Ike Okafor[1]

[1]Temerty Faculty of Medicine, University of Toronto, Toronto, Canada; [2]Faculty of Medicine, University of Ottawa, Ottawa, Canada

Background

Underrepresented Minorities in Medicine (URMMs) may face financial and social limitations when matriculating into medical schools. Performance on situational judgment tests such as Computer-based Assessment for Sampling Personal Characteristics (CASPER) can be enhanced by coaching and mentorship. The CASPER Preparation Program (CPP) coaches URMMs to prepare for the CASPER test. During the coronavirus 2019 pandemic (COVID-19), CPP implemented novel curricula on the CASPER Snapshot and CanMEDS roles.

Summary of Work

Pre and post-program questionnaires were completed by the students, which assessed their: confidence in understanding the CanMEDS roles, and perceived confidence in performing well and their familiarity and preparedness with the CASPER Snapshot. With a second post-program questionnaire, participants' scores on the CASPER test as well as medical school application outcome were also assessed.

Summary of Results

Participants reported a significant increase in the URMMs' knowledge, self-perceived competency to complete the CASPER Snapshot, and their anxiety significantly decreased. The level of confidence in understanding CanMEDS roles for a career in healthcare

increased as well. The majority (91%) agreed that the feedback received from tutors was adequate and the virtual component of the program was beneficial during COVID-19. 51% of students scored in the highest quartile on the CASPER test and 35% received an offer of admission from CASPER-requiring medical schools.

Discussion and Conclusion

CPP targets URMMs to help them overcome financial barriers associated with preparatory CASPER courses, ultimately aiming to increase representation in healthcare. Increasing diversity in healthcare is necessary as healthcare representation of underrepresented groups allows for better patient care, access, and outcomes.
Introducing the CanMEDS roles to the course increased the confidence of CPP participants on how they apply to a career in healthcare. Most students felt more competent and more confident in taking the CASPER Snapshot following CPP. A significant proportion of CPP students progressed to write the CASPER test, apply to medical school, and receive offers of admission to both CASPER requiring and non-requiring medical school.

Take-home Message

Pathway coaching programs have the potential to increase confidence and familiarity amongst URMMs for the CASPER tests and CanMEDS roles. Similar programs should be developed with the aim to increase the chances of URMMs matriculating into medical schools.

10P5 (4199)

Date of Presentation: Wednesday 30th August
Time of presentation: 0924 - 0930
Location: Carron 2, Loch Suite, SEC

Inclusion in the university: who assumes responsibility?

María José Solis-Grant[1], María-José Bretti-López[1], Camila Espinoza-Parcet[1], Cristhian Pérez-Villalobos[1], Cristóbal Sepúlveda-Carrasco[2]

[1]Universidad de Concepción, Concepción, Chile; [2]Universidad de Las Américas, Concepción, Chile

Background

At a time of accelerated social changes, inclusion in education plays a fundamental role in thinking about a more sustainable development model. This scenario challenges higher education institutions to develop inclusive communities. Health careers must take responsibility and build inclusive learning environments.
In order to provide empirical and conceptual background to strengthen the process of implementing inclusive guidelines in higher education institutions, this research seeks to analyze how members of the educational community perceive who should take responsibility for generating inclusion in a higher education institution.

Summary of Work

This study aims to analyze who is responsible for generating inclusion according to community members from a traditional Chilean University. We carried out qualitative research based on the Grounded Theory. We collected data through focus group and semi-structured Interviews, involving 14 undergraduate students, two post-graduate students, 17 faculty members , five non-teaching staff members, and nine executives officers. All of thembelonging to the three campuses of the University. We analyzed data using ATLAS.ti 7.5.7, using the constant comparison method and reaching an axial codification level.

Summary of Results

From the data analysis, 25 subcategories emerged, grouped into six categories. Later we organized them under the codification paradigm. Results highlighted the perception of the interaction and influence of the social, institutional, and personal fields in the inclusion phenomenon. Also, that inclusive practices must be a responsibility shared among different educational community members.

Discussion and Conclusion

Concerning the interaction between the personal and institutional levels observed in this study, we can observe the diffusion of responsibility. Both parts expect that the other should first assume or be considered an inclusive Institution in a determined manner. The educational community members need to articulate the different levels of institutional action to continue advancing in the project of an institution that recognizes and takes charge of its existing wide diversity.

Take-home Message

We are all responsible for building a more inclusive future and society. From our teaching role, we must educate future generations of health professionals by example.

10P6 (6576)

Date of Presentation: Wednesday 30th August
Time of presentation: 0930 - 0936
Location: Carron 2, Loch Suite, SEC

Understanding the Evolving Cultural and Linguistic Understanding of Mental Illnesses from the 1930s to the Modern Day

Niyant Vora[1]

[1]*Southern Illinois University School of Medicine, Springfield, Illinois, USA*

Background

Medicine and medical education are intertwined with language and culture in a society. A historical review of linguistic and cultural treatment of medical conditions would disclose the nuances and biases toward a certain illness, e.g., mental illness, which would aid the improvement of medical education and patient care by reducing the stigma which continues to surround mental illnesses.

Summary of Work

A literature review on the linguistic and cultural treatment of people with mental illnesses was conducted utilizing Germany as a lens. The literature review included Auf der Spur des Morgensterns along with approximately 40 other literary, academic, and medical writings to analyze the growth and evolution of mental illness treatment in society—and in medicine—by focusing on the following three eras: 1) During and following Nazi Germany (1930s-to-1950s), 2) Pre-reunification (1950s-to-1980s), and 3) The modern-day (1990 onward). This analysis identified three major ideological transitions in each period.

Summary of Results

During the first period, people with mental illnesses were treated as pariahs—which led to sterilization and euthanization of "abnormal" patients. Euphemisms were used to hide cruel actions and medical treatment undertaken without patient consent. Next, as advancements were made following WWII, the notion that mental illnesses were primarily biological in nature became a prominent belief, and the use of clinical language presented a significant barrier to humanizing patients. In the modern-day, the literature

notes the growth and transition of mental illness perception from a biological to a humanistic viewpoint—and seeks to advance patient autonomy and inclusivity in society, with a focus on compassion in care.

Discussion and Conclusion

Understanding which linguistic modifications improve patient care is crucial to the treatment of mental illnesses. Future studies may include 1) analysis of word usage and their impact on patient perceptions of bias, or 2) Differences in perceived vs. observed bias with differing language use in acute mental health crises.

Take-home Message

By understanding the influence of linguistic changes on the treatment of patients with mental illnesses over time we are more able to understand biases. Furthering the linguistic adjustments to improve observed and perceived compassion of care for patients would also be helpful in reducing bias towards those with mental illnesses in society.

10P7 (0986)

Date of Presentation: Wednesday 30th August
Time of presentation: 0936 - 0942
Location: Carron 2, Loch Suite, SEC

Mobilizing for change: A case study for advancing LGBTQ+ inclusion in the medical education curriculum

Nicholas Weshinskey[1], Lisabeth DiLalla[1], Mikaela Thurber[1], Diana Sarko[1], Rod Weilbaecher[1], Amber Pond[1], Elizabeth Portugal[1], Karen Reynolds[2], Caleb Lay[2]

[1]Southern Illinois University, Carbondale, USA; [2]Southern Illinois University, Springfield, USA

Background

In 2021, the Year One Curriculum Advisory Committee (Y1CAC) at the Southern Illinois University School of Medicine (SIU SOM) charged a working group with studying, proposing, and developing strategies to increase LGBTQ+ inclusion in the first-year of the undergraduate medical education curriculum.

Summary of Work

The Y1CAC's LGBTQ+ Work Group was comprised of faculty, staff, and students across multiple medical school disciplines across multiple campuses. The group reviewed the first-year curriculum. They proposed opportunities for interacting with, and learning about, LGBTQ+ issues in existing problem based learning cases. They identified three cases, one in each system unit of the first-year curriculum, then developed and implemented the changes. Y1CAC approved the final changes.

Summary of Results

The first-year of the undergraduate medical education curriculum at SIU SOM now includes three LGBTQ+ problem based learning cases (i.e., a child patient of same-sex parents, a trans patient, a patient in a same-sex relationship), one for each of its three units. This expands upon prior elements of the curriculum - a LGBTQ+ panel discussion and a LGBTQ+ resource session - to create a more comprehensive approach to learning about, and working with, LGBTQ+ populations, one that extends across the full first-year.

Discussion and Conclusion

Too often, curricular additions feel disconnected from the curriculum proper; they are add-ons or afterthoughts with no meaningful integration in what already exists. Our approach was specifically focused on integration, creating a cohesive scope and sequence for LGBTQ+ medical education in the first-year. We have implemented the recommendations and materials developed by the LGBTQ+ Work Group. We have gotten positive feedback from faculty and students alike. We have also created a model with which to approach other kinds of curricular change. This work has ramifications for other institutions in both content creation (specific curricular changes) and process (how to mobilize for curricular change).

Take-home Message

This is a case study. We can share strategies for creating curricular content, mobilizing for change, building consensus, and making sweeping curricular innovations manageable.

10P8 (6628)

Date of Presentation: Wednesday 30th August
Time of presentation: 0942 - 0948
Location: Carron 2, Loch Suite, SEC

Student-Led Curricular Enhancements for the Incorporation of Diversity, Equity, and Inclusion into Medical School Education

Desiree' Brionne Dillard[1], Rewan Abdelwahab[2], Hanin Ali[1], Audrey Elegbede[3], Mira Keddis[4], Elizabeth Valencia[5], Sarah Atunah-Jay[5]

[1]Mayo Clinic Alix School of Medicine, Scottsdale, USA; [2]Mayo Clinic Alix School of Medicine, Rochester, MN, USA; [3]Mayo Clinic Comprehensive Cancer Center, Rochester, MN, USA; [4]Mayo Clinic, Phoenix, USA; [5]Mayo Clinic, Rochester, USA

Background

Globally, there has been a call for intentional efforts regarding diversity, equity, inclusion, and anti-racism (DEI-AR) within medical education. Structural racism, lack of representation, and inequitable access contribute to dire and disparate health outcomes. To cultivate a culture of inclusivity, medical education institutions must ensure that both educators and trainees are equipped to identify areas for improvement and actively refine curriculum for diverse exposure.

Summary of Work

At Mayo Clinic Alix School of Medicine (MCASOM), students are employed as part of the DEI-AR curricular enhancement program. Students undergo training as subject-matter experts and are responsible for educational material revisions through faculty partnerships. Revisions are centered around diverse and representative imagery, proper nomenclature and verbiage, health disparities, social determinants of health, and historical causes of structural racism within medicine. Faculty engagement allows for multi-level opportunities for growth and introspection, while addressing their time limitations and apprehension due to potential lack of background knowledge. Student employees provide up to six months of support for each course partnership.

Summary of Results

Students and faculty partnered for a DEI-AR curriculum review of 21 pre-clinical courses with 2-5 action items identified across tri-site campuses. Action items that were implemented included revising the course content to include more diverse representation of skin tones, proper nomenclature, and education on health inequities. Following revisions, post-course evaluations are ongoing to evaluate satisfaction with DEI enhanced curriculum.

Discussion and Conclusion

This program represents the creation of an ongoing cycle of monitoring, support, and improvement among the medical education curricular teaching and development teams. After course enhancements, student satisfaction with the content was analyzed through confidential post-course evaluations completed by the general student body, utilizing two questions on a five-point Likert scale. In the future, we may apply a similar approach to the clinical curricula in years three and four by forming partnerships with individual clerkship directors. All changes will be adopted with the long-term goal of compiling instructional DEI-AR best practices to contribute to interactive and learner-focused contemporary education.

Take-home Message

At MCASOM, compensated student DEI-AR subject-matter experts collaborate with faculty to enhance medical school curricula through informed integration of diverse imaging, verbiage, and dialogue specific to health inequities and disparities.

10P9 (4487)

Date of Presentation: Wednesday 30th August
Time of presentation: 0948 - 0954
Location: Carron 2, Loch Suite, SEC

Making Medical Education Equitable, Diverse and Inclusive: One student advocate at a time!

Mariem Galaaoui[1], Kosha Gala[1]

[1]*International Federation of Medical Students' Associations (IFMSA), Copenhagen, Denmark*

Background

Equity, Diversity, and Inclusion (EDI) are at the core of advancing healthcare worldwide and achieving health equity as the health workforce cares for an increasingly diverse patient population. Many curriculums in our time still lack EDI in educational components, as well as the experience of professionals to deliver them in an inclusive, culturally-sensitive non-discriminatory method.

The IFMSA initiated EDI work in 2019 with an intersectoral project to understand how medical education addresses discrimination and prepares future health professionals. The study has led to a series of initiatives by the federation to empower its members and call on concerned parties to advocate for EDI in Medical Education.

Summary of Work

The first project had a broad reach and assessed the general incidence of discrimination in medical education. Following this the IFMSA has started capacitating its members on EDI and its importance through sessions in general assemblies as well as the development of a policy document and a work on a declaration drafted by medical students to state their commitment to it.

Directly tackling medical education, throughout the past year, an international campaign on EDI in Medical Education was held to raise awareness and develop advocacy initiatives among medical students. A working group has initiated work on a toolkit to

constitutionalize the advocacy process based on a global assessment evaluating the status quo of EDI worldwide.

Summary of Results

The EDI in Medical campaign in its first edition has ensured a space for students from different countries to share their insights and initiatives. About 110 medical students from 37 countries have participated in the global assessments. The results have shown a 32.3% lack of an inclusive admission process, a 56.1% absence of educators trained in EDI and up to 50.4% unavailability of resources to approach health in diverse populations. The survey also aimed to assess the underrepresentation of minorities in the medical curricula.

Discussion and Conclusion

IFMSA recognises the diversity that characterizes our world alongside marginalisation and discrimination. So, it opens the floor for medical students to close the gap and advocate for assessing, addressing and implementing EDI.

Take-home Message

EDI is as a priority in medical education, curriculum development and patient care.

10P10 (4085)

Date of Presentation: Wednesday 30th August
Time of presentation: 0954 - 1000
Location: Carron 2, Loch Suite, SEC

Community perspectives on the collection and use of electronic health data to support health professional learning

Anna Janssen[1], Kavisha Shah[1], Melanie Keep[1], Tim Shaw[1]

[1]*The University of Sydney, Sydney, Australia*

Background

The abundance of digital technologies within modern healthcare organisations results in the collection of a large amount of health data. Digital technologies used by healthcare organisations to collect electronic health data include patient administrative systems and electronic health records. The data they collect can be used by stakeholders such as health professionals for primary uses such as service delivery, as well for secondary uses including professional learning and strengthened continuing professional development. Although policy is increasingly encouraging health professionals to use data for professional development, little research exists on consumer and community perspectives on the collection and use of health data in this way.

Summary of Work

The objective of this study was to understand the perspectives of members of the public about how electronic health data collected by healthcare organisations should be used, particularly to support training and continuing professional development. A purposeful sample of Australians interested in the collection and use of electronic health data were recruited for research interviews for the study. Interviews explored participants' understanding of data collected by healthcare organisations and their views on the secondary use of that data by health professionals to support learning and engage in reflective practice.

Summary of Results

15 individuals agreed to participate in the study. Preliminary data analysis indicates that consumers perceive healthcare organisations to be collecting a lot of data, but do not feel it is being well leveraged to improve care delivery or outcomes. Most interviewees trusted health professionals to use electronic health data responsibly Regarding secondary use of data for reflective practice, participants had varied beliefs about the extent to which this currently occurs but were unanimously supportive of it being harnessed for this purpose. Some interviewees did raise concerns about health professional workloads, and how data could be harnessed for learning without adding burden.

Discussion and Conclusion

Findings from the study indicate members of the general public are generally supportive of the use of electronic health data for learning. Healthcare organisations and health professionals have some level of social license to use data for this purpose.

Take-home Message

Consumers are generally supportive of health professionals using their data to support practice reflection and learning.

10P11 (4756)

Date of Presentation: Wednesday 30th August
Time of presentation: 1000 - 1006
Location: Carron 2, Loch Suite, SEC

Predictors of research engagement and career interest among UK medical students: a national survey

Anna Chiara Corriero[1], Temidayo Osunronbi[2], William Adeboye[1], Christine Mitoko[2], Deborah Inyang[3], David Faluyi[2], Ikenna Ibeansui[2], Agbolahan Sofela[4]

[1]Melanin Medics Research Network, Luton, UK; [2]Melanin Medics Research Network, Luton, UK; [3]Melanin Medics Research Network, Luton, UK; [4]Faculty of Health, University of Plymouth, Plymouth, UK;

Background

We hypothesised that the gender/ethnic disparities and the reduced academic clinician workforce stem from research experience in medical school. Hence, this study investigated the factors influencing research engagement and academic career interests among UK medical students.

Summary of Work

A national multicentre cross-sectional survey of medical students across 36 UK medical schools was conducted in 2021 (Ethics approval reference: 2570; University of Plymouth). A 42-item online questionnaire was utilised, and data was collected over nine weeks. Multiple binary logistic and zero-inflated negative binomial regressions were used to evaluate for associations between the predictor variables and research engagement (yes or no), number of research projects conducted, and academic career interest (yes or no). $p < 0.05$ was considered statistically significant.

Summary of Results

1573 students participated. No ethnic/gender differences in research engagement were observed. However, compared to men, women had a 31% decrease in the odds of being interested in an academic clinician career (OR: 0.69, 95% CI: 0.52 – 0.92). Positive predictors of interest in academia were being a PubMed-indexed author (OR: 2.19, 95% CI:

1.38 - 3.47) and having at least one national/international presentation (OR: 1.40, 95% CI: 1.04 - 1.88). Career progression was the primary motivating factor (67.1%) for pursuing research, while limited awareness of opportunities (68.0%) and time constraints (67.5%) were the most common barriers.

Discussion and Conclusion

There were no ethnic differences in research engagement or academic career intent. This finding suggests the existence of extrinsic barriers against ethnic minority students/clinicians, preventing their attainment of an academic career. Although there were no gender differences in research engagement, female students were less likely to be interested in an academic career. To tackle these disparities, we recommend that medical schools should: (i) facilitate good quality research mentorship to ensure that their students' works are published in peer-reviewed PubMed-indexed journals; and (ii) employ local research officers to increase students' awareness of research opportunities.

Take-home Message

We found that female students were less likely to be interested in an academic career, and this may contribute to the gender disparities in the academic clinician workforce. This could be tackled by providing targeted opportunities to increase research productivity and self-efficacy in medical schools.

10P12 (5595)

Date of Presentation: Wednesday 30th August
Time of presentation: 1006 - 1012
Location: Carron 2, Loch Suite, SEC

What kind of Doctor Am I Going to Be? The Perceptions and Stereotypes of Future Female Medical Professionals.

Afriza Umami[1], Éva Németh[1], Regina Molnár[1], Edit Paulik[1]

[1]*Department of Public Health, Albert Szent-Györgyi Medical School, University of Szeged, Szeged, Hungary*

Background

It is evident that women currently play an important role in the fields of medicine. Our study was aimed at medical students' opinion about their future professional and family roles, how they see a female doctor, focusing on gender differences.

Summary of Work

A cross-sectional study was conducted between January and March 2021. An anonymous self-reported questionnaire was distributed online among Hungarian and foreign medical students at the University of Szeged (n=688; 39% male, 61% female). Attitudes related to professional and family roles and to stereotypes associated with female doctors were assessed. Data analysis was performed with the SPSS 28.0, simple descriptive statistics, one way ANOVA and chi-square test were used. The results were considered significant when $p<0.05$. Research ethics license number: 4936.

Summary of Results

Students' attitudes were found to be different according to gender. Female medical students think that career, bringing up children, and family get along together while male students - although basically family oriented - meant that a woman is to bring up children and care about the family, and saw more the disadvantage of women building a career alongside with family. Among the 47 characteristics listed in the questionnaire, female doctors were most characterized as: disadvantaged in their career (51.5%, female: 60.2%, male: 37.7%, $p<0.001$), undervalued (43.9 %, female: 52.4 %, male 30.6%, $p<0.001$),

family oriented (31.3%, female: 35.0%, male: 25.4%, p<0.001), domesticated (30 .7%, women: 36.0%, men: 22.4%, p<0.001) and subordinate (23.7%, women: 29.0%, men: 15.3%, p<0.001).

Discussion and Conclusion

Overall, students perceived female doctors as disadvantaged. However, male students considered female doctors as more equal professionally, while female students associated them with an inferior career due to family responsibilities.

Take-home Message

By preparing for complex roles during the university, future female doctors may improve their ability to achieve family-career balance.

10P13 (3484)

Date of Presentation: Wednesday 30th August
Time of presentation: 1012 - 1018
Location: Carron 2, Loch Suite, SEC

How Thailand's new abortion access law effects medical clerkship's perceptions.

Thanita Somton[1]

[1]*Suratthani Medical Education Center, Suratthani, Thailand*

Background

Nowadays unplanned pregnancies caused illegalized termination of pregnancy increasing patients'complications and deaths. Since 2022, Thailand's Public Health Ministry launched new abortion law which allowed an extension termination from 12- week up to 20- week of pregnancy regardless patient's medical indications. The debate discussion both moral and legal consideration allow medical professionals decisions to refuse abortion procedure if it goes against their beliefs. Therefore the attitude from law change might impact clinical clerkships' experiences.

Summary of Work

Objectives: To evaluate the medical clerkship's perceptions on the new abortion law effect the medical study and their practices in the future.
Methods: Mixed methods study was conducted in 51 externships and internships in Suratthani Medical Education Center during October,17 2022 – November,13 2022. by using a questionnaire and a systematic random sampling 5 participants for an in-depth interview. Descriptive statistics and in-depth interview were used.

Summary of Results

Most of medical clerkships (98%) had a favorable attitude toward new law for safe abortion care. Some clerkships (60.8%) wanted to provide termination and some clerkships (56.9%) supported legal self-abortion. The factors impacted on the clerkships decisions were social problems, complications from illegal abortion and patient's autonomy 82.4%, 66.7% and 64.7% respectively, only 15.7% concerned moral belief. However

the confident on termination practice was moderately 43.1%. The influence factors would support their confidents were the availability of health care services, teams support, and abortion practice curriculum 80.3%, 78.4% and 72.5% respectively. The interviewing outcomes from their agreement, they need to gain more practice knowledge and medical ethics concerns.

Discussion and Conclusion

From medical clerkships' preference toward new law of pregnancy's termination, they concerned about ethical principles. Woman has right on her own body which they should respect patient's autonomy. As Beneficence aspect, they believed that health care provider should perform abortion to minimise the complications from seeking illegal abortion also improve woman's wellbeing and decrease further family and social problems.

Take-home Message

Heath care service and abortion practice curriculum which medical ethics application could increase student's potential on their practice, gain more skills and good decision for pregnancy's termination.

Session 10R

10R (3935)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: Dochart 2

The power of authentic demonstrations when training health professionals in the conduct of workplace based assessment

Josephine Boland[1], Rosemary Geoghegan[2], John Jenkins[3], Gozie Offiah[4]

[1] Medical Education Consultant, Galway, Ireland [2] School of Medicine, University of Galway, Galway, Ireland [3] RCSI University of Medicine and Health Sciences, Dublin, Ireland [4] National Doctors Training and Planning, Health Service Executive , Dublin, Ireland

Background

Programmatic assessment, with a focus on multiple low-stakes observations in the workplace, is a key element of competency based medical education and training. A strategy for the continuing professional development of assessors is a prerequisite to effective implementation, addressing skills needs as well as the fundamental change in culture, including in the supervisor-trainee relationship.

Authentic demonstration of good practice by credible peers, combined with the opportunity to practice, offers an important tool for faculty development in traditional workshop-based assessor training. They can also serve as accessible resources available, “just-in-time”, for self-directed learning.

A range of demonstration videos has been developed to support the implementation of the new Entrustable Professional Activities based curriculum for the internship in Ireland. This workshop models how some of these resources can be used for assessor training. These include conducting direct observations and case based discussions and providing feedback using the EPA supervision entrustment scale.

Who Should Participate

Those engaged in planning faculty development for health professionals responsible for conducting workplace based assessment in EPA and other competency based programmes.

Structure Of Workshop

(i) Introduction: Faculty development strategies

Presentation: Overview of strategies and approaches

(ii) Modelling a faculty development workshop

Activity: Viewing demonstrations of workplace based assessment in practice

Role-playing assessors providing feedback

Anticipating assessor questions and concerns

Debriefing the activity

(iii) Developing bespoke digital/video resources for faculty development

Discussion: The process of developing bespoke faculty development resources

(iv) Reflection and evaluation of how this model can be implemented in their respective institutions

Intended Outcomes

Participants should be able to:

- appreciate the value of demonstration and role play in the training of assessors
- adapt the practical workshop activities for their own context
- anticipate issues that arise for assessors
- consider options for developing their own resources

Session 10S

10S (3640)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: M3

Addressing insufficient introspection as part of unprofessional behaviour in residents

Judith Godschalx-Dekker[1], Sebastiaan Pronk[2], Pieter Barnhoorn[3], Marianne Mak-van der Vossen[4], Walther van Mook[2]

[1] Flevoziekenhuis GGZ Central, Almere, The Netherlands [2] Maastricht University Medical Center, Maastricht, The Netherlands [3] Leiden University Medical Center, Leiden, The Netherlands [4] Amsterdam University Medical Center, Amsterdam, The Netherlands

Background

In contemporary postgraduate medical education (PGME) based on the CanMEDS framework, competency-based assessment is increasingly used. One of the CanMEDS competencies is professionalism, a concept that is not univocally defined and gauged. Based on the literature, Mak – Van der Vossen et al. (2017; 2020) constructed the 4I's model (Involvement, Interaction, Integrity, and Introspection) categorizing unprofessional behaviours in medical students.[1][2] Introspection was defined as inappropriately handling one's own performance, including lacking self-awareness. The prior model was validated in PGME[3] indicating that lack of introspection was most relevant for residency discontinuation.[4] There is currently a lack of insight into whether and how clinical supervisors recognize, assess, address, and attempt to improve these insufficiencies of introspection in residents.

[1] Mak-van der Vossen MC, Mook W van, Burgt S van der, Kors J, Ket JCF, Croiset G, Kusurkar R. Descriptors of unprofessional behaviors of medical students: a systematic review and categorization. BMC Medical Education. 2017;17:164-176.

[2] Mak-van der Vossen MC, Teherani A, Mook WNKA van, Croiset G, Kusurkar RA. How to identify, address and report students' unprofessional behaviour in medical school. Medical Teacher. 2020;42:372-379.

[3] Barnhoorn PC, Nierkens V, Mak-van der Vossen MC, Numans ME, Mook van WNKA, Kramer AWM. Unprofessional behaviour of GP residents and its remediation: a qualitative study among supervisors and faculty. BMC Family Practice. 2021;22:249.

[4] Godschalx-Dekker JA, Pronk SA, Olthuis GJ, Mook WNKA van. Unprofessional residents who challenged dismissal lack self-reflection and self-awareness: Ten-year analysis of case law in hospital-based specialties. Submitted 2023.

Who Should Participate

Residents, clinicians, and education staff.

Structure Of Workshop

15 minutes: presentation of the 4I's model

15 minutes: participants discuss in pairs an example of resident behaviour lacking introspection: what behaviours were observed and why were they problematic?

15 minutes: plenary discussion

15 minutes: participants practice in small groups a conversation to address and promote introspection in residents

15 minutes: plenary discussion

15 minutes: summarizing and integrating learning profit

Intended Outcomes

To recognize, assess, address, and improve insufficiencies of introspection in residents.

Session 10T

10T (5432)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: M2

Leveraging Logic Models to Unify and Align Team Planning Efforts for Inclusive Teaching and Learning

Alana Newell[1], Nancy Moreno[1], Kimberly Brown Dahlman[2], Neil Osheroff[3]

[1] Baylor College of Medicine, Houston, USA [2] Vanderbilt University Medical Center, Nashville, TN, USA [3] Vanderbilt University School of Medicine, Nashville, TN, USA

Background

Logic models are useful visual tools for planning and evaluating change efforts. They depict relationships between underlying rationale and practical elements of programs, and help frame complex initiatives—such as institution-level plans to make learning environments inclusive. Development of logic models builds consensus and ensures that all efforts point toward outcomes. In this interactive session, we guide participants through the logic model process, including framing a theory of action, and aligning resources, activities and outcomes for learners and stakeholders. Participants will explore using logic models to plan enhancements for existing programs or design new programs that support inclusive teaching. They will gain experience with the logic model framework, develop insights into leading planning teams and consider how to include principles of inclusivity in the planning process itself.

Who Should Participate

Appropriate for educational leaders, curriculum planners and course directors, who will be or are engaged in developing strategies to support inclusive learning environments.

Structure Of Workshop

The workshop will be conducted using learner-centered, inclusive strategies.

- Warm-Up: Think-Pair-Share of current or future programs and plans at participants' institutions.
- Challenge: Groups create a problem statement and outcomes for a program-level focus on inclusive learning environments, followed by discussion. Groups may focus on enhancing an existing program or brainstorm a new one.
- Discussion: How to work backward in the logic model to connect resources and activities with intended outcomes for inclusivity.
- Completing the Challenge: Groups complete and depict their logic models on chart paper.
- Gallery Walk: Logic models are displayed, with opportunities for comments.
- Conclusion: Large group discussion of insights, including 1) challenges related to aligning resources and activities to intended outcomes for inclusivity and 2) strategies that worked within their group to achieve consensus. Facilitators will share experiences from their own institutions related to collaborative development of logic models in this context.

Intended Outcomes

Participants will be able to: 1) represent existing or future programs within a logic model to align activities, outcomes, and evaluations with their theory of action; 2) describe the utility of logic models for planning programs focused on inclusive teaching; and 3) apply strategies that lead to consensus-building, program alignment and inclusion of all planning team members.

Session 10U

10U (4472)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: M4

Global relevance in medical education scholarship: reckoning with the past and reconceptualising the future

Cynthia Whitehead[1], Dawit Wondimagegn[2], Ahmed Rashid [3], Thirusha Naidu[4]

[1] Temerty Faculty of Medicine, University of Toronto, Toronto, Canada [2] College of Health Sciences, Addis Ababa University, Addis Ababa, Ethiopia [3] UCL Medical School, Faculty of Medical Sciences, University College London, London, UK [4] University of KwaZulu-Natal, College of Health Sciences, Durban, South Africa

Background

When medical educators and scholars gather at international conferences and disseminate work in international journals, there is an expectation—or at least an aspiration—that we are engaging in conversations of global interest and relevance. These venues for scholarly dissemination of research, while explicitly positioning themselves as international, still disproportionately showcase work from Global North (GN) English speaking countries. In order for this to change, we must recognize ways the colonized history of our field perpetuates disparities in geographic representation and voice, and work together to find ways forward. Global South (GS) academics have significant lived experience of the Northern tilt in our field; many GN academics are less acutely aware of the ongoing colonial influences that position much GN scholarship as of general interest and much GS scholarship as only of locally contextual relevance. In this workshop, we aim to engage participants in dialogue around possibilities to reconceptualise how global relevance and local contexts are understood in our field and to identify activities and actions to promote change.

Who Should Participate

Anyone from any background and context (including educators, scholars, researchers, and learners) interested in positioning their work as internationally relevant and would like to question current assumptions, collectively explore and rethink criteria for global relevance in medical education scholarship, and consider how these dialogues might enrich our field.

Structure Of Workshop

The workshop will begin with introductions of facilitators and participants, including their experiences and interests in this area. This will be followed by a brief presentation outlining historical structures shaping the field and current literature that has begun to map various skews in the landscape of medical education scholarship and its dissemination. The majority of the workshop will involve small group discussions intermingled with large group conversations drawing on participants' experiences of positioning their work as globally relevant and ideas for reconsidering relevance to make the field more nuanced and equitable.

Intended Outcomes

To foster dialogue among medical educators and scholars to collectively explore notions of global relevance in our field;

For participants to identify opportunities for action and change in their specific areas of research.

Session 10V

10V (6923)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: Staffa

Engaging front-line faculty for CBME

Jan Breckwoldt[1], Jonathan (Yoni) Amiel[2], Kimberly Lomis[3]

[1] University Hospital Zurich, Zurich, Switzerland [2] Columbia University, New York, USA [3] American Medical Association, Chicago, USA

Background

Competency-based medical education is an approach to education that focuses on ensuring learners are prepared for their authentic roles in health systems. While educational leaders need to develop an in-depth theoretical grounding in CBME, front-line faculty may benefit from a more focused and pragmatic understanding of what this shift means for them. This workshop is designed for educational leaders who are supporting their front-line faculty in transitioning to CBME.

Who Should Participate

Curriculum planners and leaders, course and clerkship planners and leaders, faculty developers

Structure Of Workshop

- 20 minutes: Introduction - What makes up the essence of CBME and how is it different from traditional educational models?
- 20 minutes: Small group discussions - Who are the front-line faculty and what is the impact of a shift to CBME on them? Possible prompts:
    - Who are your frontline faculty and what are their constraints?
    - How do we reduce pressure on assessors to “judge” and improve support for reporting what they see?
    - How do we facilitate the shift from norm- to criterion-referenced thinking?
- 10 minutes: Large-group debrief
- 10 minutes: Small group discussions - What do front-line faculty need to succeed in CBME? Possible prompts:
    - How can you present CBME in a manner that acknowledges the conditions in which frontline faculty interact with learners?
    - What processes can you create to minimize burden on frontline faculty?
    - Which frequently asked questions do front-line faculty commonly face?
    - What training about the assessment do learners need to optimize their interactions with frontline faculty?
    - What data do front-line faculty need to understand their role in programmatic / longitudinal assessment?
- 20 minutes: Large group discussion
- 10 minutes: Wrap-up, Q&A, and dissemination of take-home resources

Intended Outcomes

- Describe the five core components of CBME and how they affect front-line faculty
- Name tensions for front-line faculty in embracing CBME
- Create tiered faculty development tools that acknowledge differences in "need to know" among various faculty roles
- Create a list of FAQs (with potential answers) which frontline faculty are likely to encounter

Session 10W

10W (3378)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: Jura

Interprofessional student-led clinics informed by entrustable professional activities

Hamde Nazar[1], Charlotte Richardson[1]

[1] *Newcastle University, Newcastle upon Tyne , UK*

Background

The pressure on healthcare systems demonstrates an acute need for a well trained and resilient workforce. The same pressures are however presenting a barrier to securing and facilitating training and learning environments for this future workforce.

In this workshop, we will outline an approach and outcomes from a series of collaborations to set up and operationalise interprofessional student-led clinics existing outside of conventional healthcare environments.

There has been some contention about the use of entrustable professional activities (EPAs) in the context of interprofessional education (IPE). We will demonstrate how EPAs can be successfully used in the design and development of student-led clinics and how existing work-based assessment/tools can be used to inform entrustment decisions about individuals.

Who Should Participate

Educators and trainers interested in work-based IPE for undergraduate healthcare students

Structure Of Workshop

The experienced moderators will encourage interaction and participation through small group based activities using a range of workshop and take home materials.

The introduction will cover the pedagogical theory around WBL, and EPAs in the context of IPE.

Activities will prompt participants to consider relevant EPAs that could be used in IPE WBL environments and appropriate assessment approaches.

Discussions will cover the barriers and facilitators to IPE WBL and explore the wider adoption of student-led clinics.

Intended Outcomes

Participants will gain understanding and appreciation of the value of EPAs in IPE WBL environments. Participants will be guided through an approach to design and develop a student-led clinic and consider appropriate assessment methods/tools to use in these environments.

Learning objectives:

- Explain the importance of WBL and IPE in the workplace for healthcare trainees

- Discuss the utility of EPAs to inform WBL in the context of IPE

- Explore the design, development and implementation of an IPE student-led clinic with assessments of students to support learning and development, and contribute to the care of service users

Session 10X

10X (2842)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: Barra

'Once upon a time'... Using storytelling to capture one's research in an abstract or synopsis

Susan van Schalkwyk[1], Diana H.J.M. Dolmans[2], Ayelet Kuper[3], Patricia O'Sullivan[4], Yvonne Steinert[5]

[1] Centre for Health Professions Education, Faculty of Medicine and Health Sciences, Stellenbosch University, Cape Town, South Africa [2] School of Health Professions Educations, Maastricht University, Maastricht, The Netherlands [3] The Wilson Centre, University of Toronto, Toronto, Canada [4] Research and Development Center for Faculty Educators, University of California , San Francisco, USA [5] Institute of Health Sciences Education, McGill University, Montreal, Canada

Background

While the foci of AMEE committees differ, the intention across committees is to strengthen the field of health professions education and scholarship. Both the Faculty Development and Research Committees offer grants to enable scholars, including emerging scholars, in the field to conduct research, and annually host calls for research submissions. Feedback from grant reviewers typically comment on the potential importance of the envisaged work and propose ways to optimize the work. Similarly, abstract submissions for research papers reflect opportunities to improve on focus, structure and argument.

In this workshop, members of these two committees will join attendees to explore how we might best present our research stories within the word limits imposed by grant application and abstract guidelines. Using storytelling as a heuristic, participants will work with a tool designed to tease out the essence of a particular study in a clear, coherent, and succinct manner. During the workshop, participants will have the opportunity to craft their

own abstract or research synopsis and to receive feedback to enable further refinement as needed.

Who Should Participate

Emerging researchers who have completed at least one research project. Experienced researchers are also welcome to join and try out the innovative storytelling teaching tool.

Structure Of Workshop

- Introductions and overview of the workshop
- Setting the scene/Rationale: Why is it important to be able to concisely synthesise the essence of my research?
- Group session: Why do submissions get rejected?
- Group session: Thoughts on good writing: coherence, rhetorical devices, constructing arguments for the relevance and rigour of your findings or claims, minding the gap.
- Guided individual activity: the 'once upon a time' story which includes:
    - *Once upon a time researchers believed that …*
    - *But I thought that maybe …*
    - *So what I did was …*
    - *And what I found is …*
    - *And this will change the way that we …*
- Group session: sharing of stories and group feedback
- Wrap up and reflection

Intended Outcomes

By the end of this workshop, participants will be able to:

- Identify elements central to describing their research
- Employ a framework to guide the development of an abstract or research synopsis

Session 10Y

10Y (4500)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: Shuna

Using gamified VR simulations to teach psychiatric emergencies: Suicide Risk Assessment and Opioid Overdose

Michael Mak[1], Stephanie Sliekers[1], Fabienne Hargreaves[1], Tucker Gordon[1], Rachel Antinucci[1], Sanjeev Sockalingam[1], Chantelle Clarkin[1], Allison Crawford[1], Ahmed Hassan[1], Petal Abdool[1]

[1] *Centre for Addiction and Mental Health, Toronto, Canada*

Background

Simulation-based education is an experiential type of learning that immerses learners in real-life scenarios in a safe, realistic environment (Issenberg et al., 2005). While simulation is well-established in other medical specialties, its use in psychiatry has primarily focused on the use of simulated patients (Thomson et al., 2013). The use of Virtual Reality (VR) in psychiatric education is an under-utilized though effective means of providing a safe environment for acquiring skills to manage high-risk events (Kyaw et al, 2019; Van Gaalen et al, 2021). This course offers participants the opportunity to engage in a novel, innovative approach to teaching management of psychiatric emergencies.

Who Should Participate

Healthcare professionals

Educators

Structure Of Workshop

Participants in this interactive and experiential course will learn how VR is used to improve clinical skills in high-risk scenarios within mental health. Participants will have the opportunity to engage in up to four scenarios with VR avatars in a virtual environment: two Suicide Risk Assessment scenarios (45-year-old male and 19-year-old female) and two Opioid Overdose scenarios (hospital setting and a community setting). Each participant will don a VR headset (which will be supplied by the team during the course) and select a scenario. All VR scenarios respond dynamically and in real-time to participant decisions, build on complexity, and provide immediate feedback to each participant. Participants will also actively engage in a facilitated debrief post-VR simulations, which will include an appraisal of the emerging literature as it relates to the use of VR in psychiatric education, lessons learned, limitations and best practices. Facilitators will share the results of their current VR research, and draw on the experience and expertise of all participants to stimulate a lively discussion on how to develop and implement VR simulations to support clinical skills and decision-making.

Intended Outcomes

By the end of this sessions, attendees will be able to:

1. Reflect on the use of virtual reality simulations to support clinical skill development in managing high-risk mental health situations.
2. Describe an approach to designing and delivering virtual reality simulations to develop competence in high-risk mental health scenarios.
3. Review the evidence for the use of virtual reality simulation in medical education.

Session 10Z

10Z (4850)

Date of presentation: Wednesday 30th August
Time of session: 09:00 - 10:30
Location of presentation: Orkney

Narrative medicine workshop: learn how to use narrative medicine as a teaching method in multiple educational settings

Elsemarijn Leijenaar[1], Megan Milota[1], Veerle Siebinga[1]

[1] *UMC Utrecht, Utrecht, The Netherlands*

Background

Literature and the arts are increasingly used in medical education to grasp the experiences of patients, colleagues, and ourselves. Narrative Medicine (NM) uses the structure of close reading, creative writing and group discussion to learn students to *"acknowledge, absorb, interpret, and act on the stories and plights of others."* (Charon 2001; 2006) Positive impact has been shown on a variety of skills, such as empathy, perspective-taking, relationship-building, communication skills and self-reflection. (Milota 2019, Reimein 2020) These skills are essential elements for patient-centered care, effective (inter)disciplinary collaboration and professional development. Adapting the methods developed, refined, and valorized primarily in the United States, we've created a variety of NM educational interventions tailored to our European medical students, residents, and professionals at the University Medical Center Utrecht. In this workshop we will describe the theoretical justifications for the activities we've developed to enrich our curriculum. We will demonstrate how NM can be used as a teaching method in different settings with multiple learning goals.

Who Should Participate

This workshop is intended for medical professionals and medical educators who are interested in learning more about NM as a didactic strategy by personally experiencing and reflecting upon a variety of NM activities.

Structure Of Workshop

- Introduction to the core tenets and didactic techniques of NM (15 minutes)
- Interactive NM exercises (55 minutes)
    - Minimal stories, pre-clinical medical education (10 min, entire group)
    - Book/film discussion, medical clerkship (25 min, small groups)
    - Creative writing, (young) medical professionals (20 min, small groups)
- Small group discussion on the application of NM in participants' educational settings (10 min)
- Plenary reflection and discussion (10 min)

Intended Outcomes

By attending this workshop, participants will:

- Gain a basic understanding of the core principles and practices of NM;
- Practice a variety of techniques for applying NM in different medical education settings;
- Reflect upon the personal impact of a variety of NM activities;
- Gather new ideas and inspiration for how to apply NM techniques in their own educational programs.

Plenary 11A

11A

Date of presentation: Wednesday 30th August
Time of session: 1100 - 1215
Location of presentation: Hall 2

Enabling Assessment for Inclusion in the Health Professions

Rola Ajjawi

[1]Deakin University, Australia

Background

Recognising that health professional graduates should reflect the diverse communities in which they are practicing, institutions in many parts of the world are increasing intakes of students from non traditional backgrounds and students with disabilities. Yet, these groups of students consistently underperform in our traditional assessment models. This forces us to question our overall approach to assessment. In theory, institutions seek to ensure their assessments are not discriminatory, but they continue to treat conventional assessment design as sacrosanct. For example, from a disability perspective, institutions often adjust peripheral aspects of exams such as timeframes or locations – tinkering rather than addressing the core issue at hand. Assessment for inclusion seeks to ensure that no student is discriminated against by virtue of features other than their ability to meet appropriate standards. In this plenary, I argue that exclusionary assessment is a fundamental threat to validity. I present research that shows how inequities in assessment intersect to derail student learning and achievement. Finally, I describe approaches to promote assessment for inclusion in health professions curricula.