

Sunday, April 14th - 13:30-15:00

Dedicated Posters

DP 1-3

CaRMS Portfolio Evaluation: Are there any pearls in the oysters?

Kelly Dore McMaster University, **Donna Fedorkow** McMaster University, **John Lamont** McMaster University, **Joseph Azzam** McMaster University, **Nancy Dzaja** McMaster University

Background/Purpose: Increasing numbers of residency candidates and complicated candidate dossiers makes the portfolio review, often completed by program directors, difficult for one individual. This study assessed candidates more objectively, identify the utility of various components of the dossier and assessing the inter-rater reliability within and between Faculty and Resident evaluators. This project was taken on to determine the feasibility and reliability of a more objective process for evaluation of CaRMS portfolios.

Methods: Four raters, two faculty and two residents, independently reviewed all 103 applications received for a single residency program. Raters scored a single portfolio at a time, reflecting the traditional review process. This study evaluated 19-items across a 10-point Likert scale to assess candidates. Pilot surveys pre-determined the content to be assessed across all aspects of the CaRMS portfolio. Data was analyzed using SPSS and Generalizability Theory.

Results: A total of 103 applications were reviewed. Average review time was high at 30-minutes per applicant per evaluator. The inter-rater reliability coefficient found within levels and between levels of training was 0.93 and 0.58, respectively; suggesting discordance in perspectives. Faculty tended to provide high scores ($x=7.6/10$) compared to residents ($x=6.6/10$).

Conclusion: Including both faculty and residents into the evaluation process will result in a more robust assessment and lessen the burden on a small number of faculty. Some areas, previously deemed important, were determined to add little value. Overall, this process provided a framework to develop a more

objective assessment to ensure fairer evaluations of applicants across postgraduate programs.

DP 1-4

National Resident Selection Practices

Inge Schabort McMaster University, **Kelly Dore** McMaster University, **Glen Bandiera** University of Toronto, **Cathy Cervin** Northern Ontario School of Medicine, **Dana Russell** McMaster University, **Sharyn Kreuger** McMaster University

Background/Purpose: The Future of Medical Education in Canada and the Thomson Report have drawn increased focus in PGME regarding the need for increased transparency and rigor in the selection processes of trainees. Selection literature informs both psychometrics and other factors influencing selection decisions. To date, there was no detailed understanding of the decision-making processes for Canadian and International applicants into residency selection.

Methods: An online survey was developed through the use of literature and expert review determining key questions to illuminate the PGME selection process. The selection included the first and second iteration, and processes at the time of file review, interview and ranking for domestic and international applicants. The survey was administered through McMaster University, sent to all PGME Deans for distribution to program directors at their sites. REB approval was attained at all sites. If the PDs could not answer the questions they were asked to forward to a designate. Responses were anonymized.

Results: A total of 116 surveys were completed. Respondents identified key academic and non-academic factors and processes in file review, key academic and non-academic factors and processes during interview and ranking, as well as match rates, across domestic and international applications for both the first and second iteration. Both quantitative data and qualitative comments were collected.

Conclusion: The results of this survey can provide insights into both the overt and hidden programs of selection used in postgraduate training across Canada.

DP 1-5

Defining Applicant Attributes and a Brand for Child and Adolescent Psychiatry (CAP) Subspecialty Selection at University of Toronto (U of T)

Chetana Kulkarni University of Toronto, **Mark D. Hanson** University of Toronto, **Raj Rasasingham** University of Toronto, **Daniel Gorman** University of Toronto, **Nikki Woods** University of Toronto, **Kulamaken (Mahan) Kulasegaram** University of Toronto, **Peter Szatmari** University of Toronto,

Background/Purpose: In 2012, the Child & Adolescent Psychiatry (CAP) sub-specialty program at the University of Toronto (UT) was among the first in Canada to be fully accredited by the Royal College of Physicians and Surgeons of Canada. It is one of the largest CAP sub-specialty training programs in Canada attracting many excellent applicants annually. Over the years the members of the Admissions & Evaluations committee identified the desire to apply emerging best practices related to trainee selection to the admissions process. As such, this quality improvement (QI) project was developed with the aim of applying the best available evidence related to admissions and trainee selection. The goal was to define attributes being sought in applicants and to develop a brand within the admissions process for entry to the CAP sub-specialty training program at UT. The desired outcome was to identify the key applicant attributes that can then be used by the subspecialty program for future trainee selection.

Methods: A list of initial attributes was compiled by project team members and feedback then solicited through various venues. The project team categorized the large list of attributes into "end products," "branding attributes" and "generic attributes." The "end products" were removed as these were thought to represent the result of training rather than attributes for selection of applicants (e.g. researcher, academic psychiatrist, community-based

psychiatrist). Subsequent steps in selecting the final panel of key attributes involved only the attributes from the "branding" and "generic" categories. A consensus building exercise was then to pare down two lists of 10 attributes each and create a short-list of five attributes within each of the two categories. Finally, a paired-comparison forced choice methodology was used to determine the relative ranking of these short lists in order to prioritize their use.

Results: The final paired-comparison resulted in two lists of relatively ranked attributes. The relative ranking within the "generic attributes" was: 1. integrity/ethics/morality, 2. evidence informed/critical thinker, 3. compassionate clinician, 4. reflective practitioner, 5. culturally competent. The relative ranking within the "branding attributes" was: 1. clinical strength/expertise, 2. leadership/capacity for leadership, 3. capacity builder, 4. scholarly/scholarship, 5. advocate.

Conclusion: This project used a consensus building approach to develop a list of key attributes and then rank order that list in order to prioritize the key applicant attributes to assess in future trainee selection. In addition to applying these prioritized attributes to the admissions process, there are implications on other aspects of medical education within the program including curriculum and faculty development. Finally there is the potential for broader application including the overall vision of the Department Child & Youth Mental Health at UT.

DP 1-7

Beyond GPAs, MCAT scores, MMIs, and aspects of randomness: In pursuit of increased equity in the medical school admissions process at the University of Calgary

Christopher Doig University of Calgary, **Doug Myhre** University of Calgary, **Ian Walker** University of Calgary, **Gretchen Greer** University of Calgary

Background/Purpose: Admission to medical school is increasingly competitive, focused on academic and interview performance, and may favor those who have the financial resources to achieve the required

criteria. Ad hoc adjustments to the admissions process have been undertaken over the past 10 years, but no formal, comprehensive review has been undertaken to determine the degree to which our process was consistent with institutional goals. The UME Admissions Review Committee of the UofC Cumming School of Medicine (CSM) was created in 2017 to review admissions processes and practices, and consider alternatives based on evidence to inform an updated process.

Summary of the Innovation: Evidence from an internal review of the process indicated that it is achieving its goals and producing graduates who perform well in residency. A scan of recent admission process reviews in Canadian medical schools led to focused discussions on equity/diversity/social accountability issues, thresholds for GPA and MCAT scores, the MMI, and whether the overall process is following best practices. The CSM review considered these issues, and identified a recurring theme of inherent randomness in all stages of the process: file review, interview, and final decision. Contributing factors include assessor background/competences/implicit bias, variations in assessment approaches, and varying MMI content. Subsequent recommendations were made to modify the process in an effort to increase equity and reduce the false precision implied in admissions decisions.

Conclusion: Academic and interview performance continue to be cornerstones of admissions decisions. However, proposed process modifications have the potential to achieve increased equity and transparency for the large pool of highly qualified candidates.

DP 1-8 Carrying the Weight of Lower Childhood Socioeconomic Status into Medical School

Justin Lam University of Toronto, **Glenys Babcock** University of Toronto, **Mariela Ruetalo** University of Toronto, **David Latter** University of Toronto, **Ike Okafor** University of Toronto, **Anita Balakrishna** University of Toronto, **Lisa Robinson** University of Toronto

Background/Purpose: Increasing diversity is a priority for Canadian medical schools, with lower socioeconomic status (SES) applicants rising as a target group. Despite this institutional interest, little is known about the impact of childhood socioeconomic status, if any, on applicant preparedness for medical school.

Methods: From July 19 to August 10, 2018, incoming MD students were invited to participate in an online survey (91% response rate). This paper focuses on respondents who grew up in Canada and answered the question: "Until age 16, which of the following best describes your family's socioeconomic status in the country you lived?" (n=201).

Results: Among incoming MD students 25% identify as coming from lower/lower-middle, 35% from middle, and 40% from upper-middle/upper SES backgrounds. Students from a lower/lower-middle SES more likely than others to have worked in the past year doing academic research for a physician or healthcare professional in a healthcare setting (50% vs 29% vs 39%), or to have volunteered doing this work. They feel as prepared academically as others, but fewer feel prepared overall for medical school (39% vs 76% vs 73%). Students from a lower/lower-middle SES are more likely than others be 'first in family' graduating from university (44% vs 15% vs 9%), and to feel burned out (14% vs 0% vs 4%). They are less likely to agree they had networks growing up that helped them get into medical school (20% vs 61% vs 78%).

Conclusion: These findings suggest that medical schools need to re-conceptualize excellence in applicants and do more to level the playing field.

DP 2-2 An Innovative Course on Leadership to Enhance Students' Ability to Influence Practice Change

Patricia Gerber University of British Columbia

Background/Purpose: The provision of exemplar patient care requires leadership skills. This is an area currently recognized by health education programs as key to develop in health professional students to enhance readiness for the opportunities and

challenges they will face in practice. The Faculty of Pharmaceutical Sciences at the University of British Columbia (UBC) designed, developed, implemented, and rigorously evaluated a leadership course series ("LEAP", Leadership Experience Applied to Pharmacy), to equip entry-to-practice Doctor of Pharmacy (PharmD) students with leadership knowledge and skills.

Summary of the Innovation: Comprised of an in-class component delivered in the 3rd year of the program that covered foundational topics in leadership through interactive, self-exploratory activities, debates, and panel discussions, followed by an experiential component with hands-on experiences in collaboration with community partners in the 4th year of the program, LEAP provided a platform for the development of tomorrow's healthcare leaders. Innovative teaching and learning approaches, unique assessment strategies, creative class structure, a student-led leadership symposium, and a peer mentorship initiative contributed to the success of this new course. This poster presentation will bring to focus how leadership can be "taught as well as be caught" in both the in-classroom and experiential domains. Student testimonials about their leadership development journey will be shared. Session attendees will walk away with knowledge and appreciation for strategies and resources that can be used for teaching leadership in their own educational settings.

Conclusion: A new leadership course was designed, developed, implemented, and evaluated within an entry-to-practice pharmacy program. Unique and innovative teaching and assessment strategies were employed. Insightful student reflections and testimonials can teach us about how we can impart leadership skills on tomorrow's healthcare leaders.

DP 2-3

Transformative Learning: Global Health Observerships improve Cultural Sensitivity and Personal Advocacy

Eleftherios Soleas Queen's University, **Elizabeth Matzinger** Queen's University, **Guy Sheahan** Queen's University, **Linda Chan** Queen's University, **Jennifer**

Carpenter Queen's University, **Mikaila De souza** Queen's University, **Jessica Baumhour** Queen's University

Background/Purpose: Transformative learning (Mezirow, 1991) in global health settings has been credited as a force for psychological, convictional, and behavioural change of health professional students. To this end we have implemented a global health observership, as part of a Global Health Enrichment program, for health professional students that is designed to motivate transformative learning experiences and facilitate change in their lives and careers.

Methods: This study combines a mixed method program evaluation (Mertens, 2007) with a pre-post design using validated instruments measuring ethnocentricity (Neuliep & McCroskey, 1997) and advocacy (Stafford, Sedlak, Fok, & Wong, 2010). Thirty-six health sciences students across medicine and rehabilitation sciences completed surveys before and after their observerships as a measure of their worldview transformation. During the pre-departure and post-return debriefs, reflections were captured and thematically analysed (Fereday & Muir-Cochrane, 2008).

Results: Participants returned from their placements with a transformed understanding of their ethnocentrism and advocacy. Participants observed that ethical concerns often conflicted with their desired advocacy. Thematic analyses of reflections reveal that changes in worldview are palpable, and that, observerships are perspective-changing opportunities for students to become more globally-minded with an increased tendency towards advocacy while seeking opportunities for ongoing personal growth.

Conclusion: This study supports the belief that global health observerships are transformative learning experiences for students. Our findings show that completing a global health observership increases student tendency for advocacy while also increasing global-mindedness as measured inversely by ethnocentrism.

DP 2-4

How Learners in Diverse Contexts Conceptualize Health Advocacy: Implications for Practice and Education

Maria Hubinette University of British Columbia, **Renate Kahlke** The Royal College of Physicians and Surgeons, **Theresa van der Goes** University of British Columbia, **Jenn Clark** University of British Columbia, **Ian Scott** University of British Columbia

Background/Purpose: Many definitions of health advocacy (HA) exist in the literature and practice, making it difficult to teach and assess. However, HA skills are increasingly important as physicians are called on to participate in system improvements and be socially accountable. The purpose of our study was to map the different understandings of HA held among learners at different levels, geographic areas and practice settings.

Methods: Employing a constructivist grounded theory approach, we used learners' field notes and written reflections to sensitize us to concepts. We then purposively recruited medical students and residents to interviews to discuss their understanding of HA. Data were analyzed concurrently.

Results: The division between individual and systems HA present in known competency frameworks, is omnipresent in learners' definitions of HA. However, describing the HA behaviors that they actually observe and perform, this compartmentalization falls apart. Learners label most observed and performed HA work as individual-level, yet these behaviors are often inextricable from interventions in the micro-system of their practice. As an added complication, learners often define HA based on the additional effort or perceived risk associated, as opposed to the activity itself. As a result, a learner may label an activity as HA in one context and not another.

Conclusion: The omnipresence of binary definitions of HA appears to create a challenge for learners attempting to fit a range of complex behaviors in tidy categories. They struggle to label work that they see and do as "systems HA," which appears to be afforded a special and unattainable status in their conceptualizations. Additionally, the presence of

separate criteria for defining HA (perceived effort or risk) has made it more difficult to define consistently.

DP 2-5

Innovating with Advocacy: Evaluation of a Novel Advocacy Project in the Family Medicine Block Clerkship Curriculum

James Owen University of Toronto, **Dara Maker** University of Toronto, **Joyce Nyhof-Young** University of Toronto

Background/Purpose: Health advocacy is a challenging CanMEDS competency to teach and evaluate. In 2014, a 4-5 month advocacy project (AP) was introduced in the University of Toronto longitudinal clerkship. Students identified a patient for whom social factors impacted health and developed, implemented and presented a patient- and systems-level advocacy plan. 97% of faculty and students surveyed over two years described the AP as an effective advocacy learning tool. In 2016-17, the AP was piloted as an alternative to the EBM project in the six-week Family Medicine (FM) block, and 28 of 238 clerks (12%) completed an AP.

Methods: QI focus groups were held with FM block rotation clerks to evaluate the pilot. Discussions were transcribed and key themes descriptively analysed.

Results: In 3 focus groups, 3 of 14 students (27%) completed an AP and 11 an EBM project. APs were seen as rewarding. Students felt they made a direct positive impact on their patient and gained a better understanding of the social determinants of health. Several EBM students wanted an AP, but logistical challenges included short timelines, difficulty identifying a patient case, and greater familiarity with EBM projects. Recommendations to overcome barriers included distributing examples of prior APs, early project check-ins and reminders, preceptor faculty development to support early patient identification, and clarifying expectations and scope of advocacy plans.

Conclusion: An advocacy project is feasible and rewarding within the six-week FM clerkship block, and may allow the AP to fully replace the EBM project in the future. Student feedback was incorporated into

AP resources, and in 2017-18, 42 of 221 (19%) chose the AP. Our findings suggest that clerkship programs can provide formal patient-centred advocacy education within the block model.

DP 2-7 Leadership Education for Advancing Practice Simulation Course (LEAP-S): Design and evaluation methodology

Anupam Thakur Centre for Addiction and Mental Health, Toronto, **Diane Meschino** University of Toronto, **Latika Nirula** Centre for Addiction and Mental Health, **Laura Naismith** Centre for Addiction and Mental Health, **Tucker Gordon** Centre for Addiction and Mental Health, **Anika Saiva** Centre for Addiction and Mental Health

Background/Purpose: The CanMEDS 2015 'Manager' to 'Leader' role change and a shift to competency-based medical education created a need to update the existing Leader (Manager) curriculum for the psychiatry residency program at the University of Toronto. A key challenge when situating leadership training within a competency-based framework lies in providing sufficient opportunities for all trainees to develop, demonstrate and get feedback on their skills. Although promising in its scope, the role of simulation-based training in teaching of leadership competencies has not been studied widely. In this presentation, we aim to describe the collaborative design and evaluation methodology of a simulation-based leadership skills course for psychiatry residents.

Summary of the Innovation: Further to a targeted needs assessment, learning objectives were developed. The CanMEDS and LEADS frameworks were used to map curriculum content to leadership competencies. Workplace-based experiences and simulation-based training were identified as key methods in delivering the curriculum. Faculty members, simulation experts and residents worked collaboratively to design and develop a simulation-based course for leadership skills. The team developed practice-based scenarios for a day-long course. Team working, decision-making and managing patient safety incidents are some of the

competencies covered in the course developed for PGY4 psychiatry residents. Program evaluation adopting a mixed qualitative and quantitative analysis approach to explore process and outcome dimensions related to leadership development is planned.

Conclusion: We anticipate shared expertise and collaborative working to support simulation-based learning of leadership skills. Simulation principles and their application to leadership skills training will be discussed.

DP 2-8 Teaching Leadership in Medical School: A Challenging, yet Crucial Task

Samik Doshi University of Toronto, **Thuy-Nga Pham** University of Toronto

Background/Purpose: As the healthcare system changes rapidly, there is a growing need to teach leadership to emerging physicians. Accordingly, in 2015, CanMEDS revised its roles to change "Manager" to the more broadly defined "Leader". Currently, leadership is primarily taught didactically, in lecture-based format, which can be successful at teaching theoretical knowledge, but is less effective at building important skills needed in residency and in practice. Innovative methods are lacking, and current barriers include cultural and pragmatic factors. The purpose of this study was to explore current student perspectives on leadership training, and develop recommendations for improvement.

Methods: A survey was administered to medical students and residents who are currently attending, or recently graduated from medical schools across Canada (n=20). The survey included questions about experiences, concerns, and recommendations regarding leadership training. Key themes were extracted using content analysis, and recommendations were subsequently developed.

Results: Recommendations based on survey data include for medical schools to 1) change the culture of medicine more rapidly to emphasize leadership; 2) replace didactic material with workshops, discussions, and mock cases about leadership; 3)

utilize experiential learning to teach leadership; 4) provide students with tangible examples of what leadership looks like in healthcare; 5) form and strengthen institutional connections and develop intercalated degrees; and 6) survey students about preferred components of leadership training, and actively fill these gaps.

Conclusion: These recommendations can hopefully guide administrators as they design leadership curricula, with the goal of more effectively than ever before training students to be physician leaders.

DP 3-2

Educating for Lifelong Learning: Rendering explicit strategies/activities used in health science programs

Marianne Xhignesse Université de Sherbrooke, **Luc Mathieu** Université de Sherbrooke, **Diane Clavet** Université de Sherbrooke

Background/Purpose: The importance of lifelong learning (LLL) is well recognized. Competencies of a lifelong learner in the health professions have been described and are reflected in accreditation documents. Unfortunately, the question of how best to develop these is unclear and educators often lack concrete examples of strategies/activities to inspire them. Our goal was to encourage dialogue around LLL within our health sciences programs and to provide concrete examples ("pearls") used by colleagues.

Summary of the Innovation: To support programs, the CPD director tasked a working group to identify a framework for LLL competencies and to review accreditation and other pertinent documents for programs within our faculty as they relate to this framework. Three discussion groups with fifteen representative faculty members were held, the goal being to identify and share strategies/activities being used in accordance with the five LLL competencies identified in the chosen framework. Following each group, facilitators prepared a summary which was validated by participants. A table integrating strategies/activities discussed was prepared and organized according to four different learning situations: classroom setting, during rotations, individualized longitudinal follow-up and other

situations. The final report, including a focused literature review, was distributed faculty-wide.

Conclusion: Programs use a variety of ways to enhance LLL competencies in their students. The process described provided a means for faculty to share their best practices and culminated in a table of concrete strategies/activities that can serve to inspire other programs wishing to identify gaps or enhance the acquisition of LLL competencies in their students based on their specific types of learning situations.

DP 3-6

Developing a Framework of Integrated Competencies for Adaptive Expertise in Integrated Physical and Mental Health Care

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Background/Purpose: Given the recognized gaps in care for patients with co-occurring physical and mental health conditions (medical psychiatry) there has been a move towards more integrated care (IC) models. However, training to prepare for practice in IC settings is lacking. This study aimed to develop a competency framework for IC training in undergraduate medical education.

Methods: 25 clinician educators and education scientists participated in a half-day retreat where iterative facilitated discussions grounded in medical psychiatry patient cases were used to identify complex needs and the knowledge and skills required to address them. 7 interviews were subsequently conducted with interprofessional providers in IC settings. A thematic analysis of transcripts was performed using constant comparison.

Results: Four broad competency domains necessary for expertise in IC were identified: i) extensive integrated knowledge encompassing biopsychosocial aspects of disease (i.e. systems of care, social determinants of care); ii) skills to establish and maintain a longitudinal alliance with the patient and functional relationships with colleagues; iii) constructing an integrated understanding of individual patients' complex needs and their health

and social systems; iv) effectively meeting the patient's needs using IC models. These domains were linked by an overarching philosophy of care composed of attitudes such as proactively pursuing depth to understand patient and system complexity while maintaining a patient-centered approach.

Conclusion: Competencies in IC can be understood as capabilities that integrate multiple competencies from existing frameworks and are aligned with the development of expertise literature. These results expand existing recommendations for practice in IC that can be applied broadly throughout training.

DP 3-7

The Making of an MFM Specialist: How defining competency can improve fellowship training in Maternal Fetal Medicine

Monica Williamson University of Toronto, **Marie Czikk** University of Toronto, **David Rojas Gualdron** University of Toronto

Background/Purpose: Residency programs are increasingly adopting competency based medical education (CBME). To prepare for the transition to CBME in the long-term and improve training curricula in the short-term, it is essential to understand the concept of competence within individual programs. This study aims to define competence within the Maternal-Fetal Medicine (MFM) Fellowship Program at the University of Toronto to aid in achieving these ends for MFM training locally and across Canada.

Methods: This was a qualitative study that employed grounded theory methodology and data collection through semi-structured interviews of trainees in the MFM Fellowship Program and faculty from the MFM Division at the University of Toronto. The interview guide was developed based on a document analysis of current RCPSC Objectives of Training and program curriculum documents. Iterative data collection and analysis by various coding processes were used to develop a sensitizing concept of the construct of competence within the MFM Fellowship Program.

Results: Competence is characterized by increasing independence in the ability to fulfill the perceived roles of an MFM specialist. Formal assessment

criteria demonstrate the program's priorities but are not the sole inputs used by trainees or faculty to understand an individual's level of competence.

Conclusion: The concept of competence is evolving. Future research will focus on the refinement of tools that better assess the competencies that are of increasing importance to the MFM specialist.

DP 3-8

Research Productivity in Physical Medicine & Rehabilitation: Are Publications an Appropriate Metric for Evaluating Research Participation in CBME?

E. Ali Bateman Western University, **Robert Teasell** Western University

Background/Purpose: As Canadian residency training programs prepare to transition to competency-based medical education, peer-reviewed publications are an attractive metric for research competence. However, we need to understand the rate of resident research productivity to determine if this is an appropriate metric. Purpose: Describe the rate and type of peer-reviewed publications produced by residents during post-graduate training in Physical Medicine & Rehabilitation (PM&R).

Methods: Retrospective cohort study of residents who achieved fellowship of the Royal College of Physicians and Surgeons of Canada in PM&R in 2015, 2016, and 2017 (N=74). Outcome measures: number of peer-reviewed publications, type of publication, research methodology, study population, funding sources, authorship position and subsequent citations.

Results: Resident physicians produced 62 peer-reviewed publications during the study period. 43.2% of resident physicians had at least one peer-reviewed publication during the study period (n=32); 56.8% had none (n=42). 15 residents (20.3%) produced more than one publication. Reviews were the most frequent publication type (19.4%), followed by observational studies (16.1%) and case reports (16.1%). Musculoskeletal conditions (11.3%) and stroke (9.7%) . The resident physician was the first author for 51.6% of publications, and 28.4% (n=21) of residents were first author of at least one publication.

32.3% of publications reported receiving external funding. The funding source was not stated in 43.5% of publications. Publications had a median 4 citations.

Conclusion: Less than half of all residents in Canadian PM&R residency programs produce a peer-reviewed publication during their residency, suggesting this is not an appropriate metric for research competence.

DP 4-1

Complex Intrinsic Skill Competencies: A Fit-for-Purpose Multiple Component Assessment Tool

Debra Sibbald Touchstone Institute, **Sandra Monteiro** Touchstone Institute

Rationale/Background: Intrinsic skills are important, interdependent competencies, often demonstrated as integrated behaviours not measurable with traditional methods.

Instructional Methods: Interview formats are common but less reliable and limited in uncovering skill integration. Few studies use a multi-perspective measurement approach.

Target audience: An innovative screening tool evaluating non-expert CanMEDS roles in practice-ready family practitioners was designed using multiple components of standardized performance. The performance component consists of eight stations. In seven, candidates respond to objective and reflective questions related to scenarios assessing interpersonal, cognitive and decision-making skills. The eighth station uses an interview format. Physician, nurse and standardized client raters use global ratings for performance and entrustment. Written comments capture qualitative perspectives. A tablet questionnaire measured personal reflection ability and insights (Groningen Reflection Ability Scale: GRAS; Self-Reflection and Insight Scale: SRIS). A validation pilot test compared Canadian trained family medicine practitioners to residents. Scores were evaluated for inter-rater reliability, and internal consistency. Internal consistency was high ($\alpha = 0.93$) with acceptable means for overall 4.4/5 and entrustment scales 3.8/4. There were no meaningful differences between raters ($r > 0.7$). Written comments primarily highlighted

unprofessionalism. These candidates also received lower scores. Self-reflection scores were not correlated with station performance reflection scores ($r = 0.039$), suggesting unique constructs. The design shows promise as a screening assessment, providing evidence of complex competencies derived through multiple measures and multiple perspectives. This innovative tool of pattern-based intrinsic skills offers rich, multi-disciplinary assessments of intrinsic skills and will be implemented in the selection of practice-ready international family physicians.

DP 4-5

Using Borderline Regression Method (BRM) as Standard Setting in Objective Structured Clinical Examinations (OSCEs): Empirical findings from MD Program, University of Toronto

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Background/Purpose: This study compares two standard-setting procedures, absolute method by using a cutoff mark and BRM, in four OSCEs administered to Year 1, 2, and 3 MD classes ($n=260, 254, 251$ and 248) in 2017-2018 at the University of Toronto. It aims to assess the reliability and credibility of BRM and practical implications of using it as the standard setting method.

Methods: For each station, all four OSCEs, examiners directly observed each student performing clinical tasks and gave a checklist list score, a global rating score, and an overall rating score for Year 1 and 2 OSCEs, and a competency score and an overall rating score for Year 3 OSCEs. Individual station pass marks were calculated using a linear regression model, with station score as the dependent variable and the 5-point Likert scale overall rating as the independent variable when the scale cut-off set at 2. The BRM standard was defined as the average of all of the station pass marks plus 2 SEM.

Results: All four OSCEs showed an acceptable level of reliability, ranging from 0.35 for 6 stations to 0.66 for 10 stations. The fail rates were 0% to 2% as determined by the absolute method and 0.4% to 11.6% by BRM.

Conclusion: The absolute method failed to identify students with weaknesses in clinical skills as the conventional pass mark was too lenient in relation to the station difficulty level. Empirical evidence showed that BRM helped to set a higher pass-fail standard in three of four OSCEs and provided defensibility in standard setting.

DP 5-1

Factors influencing family physicians referral for bariatric surgery: A systematic review

Nicholas Cofie Queen's University, **Nardhana Sivapalan** Queen's University, **Linda Chan** McMaster University, **David Barber** Queen's University, **Nancy Dalgarno** Queen's University, **Boris Zevin** Queen's University

Background/Purpose: Five percent of the Canadian population is morbidly obese; however bariatric surgery is performed on only one percent of all eligible patients. A systematic review was conducted to identify the factors that influence family physicians' decision to refer patients for bariatric surgery.

Methods: Articles were identified through MEDLINE, Embase, PsycINFO, and the reference lists of included articles. Two reviewers independently screened 882 articles, appraised the quality of the included articles (using the CASP Qualitative Checklist and the AXIS tool), and extracted data on the study characteristics and factors that affect referrals. Disagreements were resolved through consensus.

Results: From 882 articles, 18 were included. Family physicians were hesitant to refer patients for bariatric surgery due to: fears of complications and side effects, costs and availability of the procedure, a perception that the procedure was a 'quick fix' or last resort, and negative experiences with patients who had the surgery. Factors that encouraged physicians to refer were direct requests from patients,

previously failed interventions, and patients with obesity-related co-morbidities. Overwhelmingly, physicians who were knowledgeable of the risks and benefits of bariatric surgery were more likely to refer patients.

Conclusion: Physicians' lack of knowledge about bariatric surgery is a barrier for referral. In addition to further research on health system factors that could affect referrals for bariatric surgery, continuing professional development programs should target educating family physicians on obesity management with a focus on bariatric surgery.

DP 5- 2

Integrating Continuing Professional Development to Support Team-based Primary Care

Christie Newton University of British Columbia, **Victoria Wood** University of British Columbia, **Brenna Lynn** University of British Columbia, **Bob Bluman** University of British Columbia

Background/Purpose: Globally there is a transition to team-based primary care (TBC) to meet the increasing needs of communities. Recognizing the importance of continuing professional development (CPD) in supporting new models of care and the importance of change management strategies that support transitions to TBC, many initiatives include an educational component. However, these CPD opportunities are limited in distribution and variable in content. There is no comprehensive picture of the different initiatives; CPD methods used; or practice impact. Purpose: University of British Columbia collaborated with the Ministry of Health to assess needs related to CPD for team-based primary care, and proposed recommendations for CPD that better supports emerging models of TBC care.

Methods: We conducted a comprehensive engagement strategy and needs assessment across BC to identify current TBC initiatives and associated CPD activities, using key informant interviews and a snowball technique. Regional focus groups were used to identify perceived CPD needs and potential synergies across initiatives. Results: This project

resulted in recommendations outlining an integrated approach to CPD that supports primary care transformation that is more effective, efficient and reduces duplication. As a result of this work we have enabled:

- Sharing of CPD content and delivery methods
- Promotion, access and provision of CPD
- Alignment of evaluation strategies across initiatives
- Collaborative ownership and commitment to an integrated approach to CPD

Conclusion: An integrated approach to CPD that supports TBC will enhance current learning opportunities; build economies of scale; create relevant opportunities that can be shared across initiatives and better support teams.

DP 5-3

Valuing Perspectives: streamlining CFPC and RCPSC accreditation requirements in a single user-friendly online application

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Background/Purpose: Continuing Professional Development (CPD) at UofT is an accredited provider for the Royal College of Physicians and Surgeons of Canada (RCPSC) and the College of Family Physicians of Canada (CFPC) maintenance of certification programs. In 2017-18, we accredited 385 programs with 40,505 learners. Our existing peer-review accreditation system was outdated and restrictive. Our aim was to develop a model that a) streamlined the RCPSC and CFPC accreditation requirements into a single application, b) clarified and simplified the experience for the end user, and c) shortened and automated the process for CPD staff and reviewers.

Summary of the Innovation: Using a QI approach and successive Plan-Do-Study-Act (PDSA) cycles, we

developed a new accreditation application process on the CADMIUM platform. Gathering multiple perspectives throughout the process was important. To reach the initial pilot phase, we centred our project around the end-user perspective. Team members from accreditation, planning, finance, research, communications, administration, and leadership were engaged and their perspectives were contributed and valued. A new accreditation application system was developed in 2018.

Conclusion: Streamlining CPFC and RCPSC requirements has proven to be time consuming but possible. Successive PDSA cycles have allowed us to bring in expertise across our whole team, incorporate many perspectives, challenge assumptions and ultimately change long-standing practices. Framing work with an end-user perspective in mind is valuable, as is gathering and valuing perspectives of all components of an accreditation application life-cycle, from application to implementation.

DP 5-4

Pigs' Feet and Oranges as Simulation Tools: Small Group Practical Learning of Basic Dermatological Procedures for Primary Care Providers

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Background/Purpose: Education programs in dermatology face an increasing demand for services as a result of increased patient awareness of dermatological symptoms such as skin cancer or dermatological procedures and more patients requiring dermatological care (Williams, 2013), an issue that is compounded by a lack of trained dermatologists (Chow and Searles 2010; Kimball and Resneck, 2008). Kingston is one such region facing a shortage of qualified dermatologists. We therefore created a program of bootcamps complemented by didactic learning sessions to develop the skills of primary-care providers and help effectively triage, alleviate, and manage demand.

Summary of the Innovation: Our dermatology events focused on developing practical skills through hands-on simulation activities including suturing, injections, excisions, and incisions. Standard tools used for clinical care were used on oranges and pigs' feet to simulate procedures on patients with the goal of making clinicians comfortable with these procedures on patients in their care. The simulation procedures were complemented with live coaching and feedback while practicing their techniques. Coupled with the simulation events in the morning, didactic learning occurred in the afternoon with a focus on emerging trends in dermatological practice.

Conclusion: Our events were well received by participants with approvals universally above 90% as well pre-post surveys showed that participant confidence increased significantly at 95% confidence. Participants had specific praise for the small group learning and the ability to practice cryotherapy and suturing. The main takeaway from this program is that small-group learning using simulation is an especially effective method of investing the teaching time of highly-specialized clinicians as it builds capacity and reduces strain and wait-times for needed services.

DP 5-5

Flipping a CPD class for active learning: Lessons learned from repackaging an ECG interpretation course for physicians

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Background/Purpose: The flipped classroom strategy enhances value of in-class time by promoting material relevance, augmenting knowledge retention and facilitating in-depth active learning. Application of flipped classroom in physician education may also provide insight into the impact on knowledge acquisition and skill competence. University of Calgary CME&PD and Cardiac Sciences previously ran a two-day ECG Interpretation Course, providing a

review of basic 12-lead ECG interpretation skills required for family physicians and hospitalists. The challenges included: participants' baseline knowledge varied; lack of time to absorb information from lectures before immediately applying it during ECG cases.

Summary of the Innovation: The curriculum of the Course was flipped in 2018. It now consists of required pre-course self-learning activities - podcasts with related online ECG interpretation exercises, and in-class activity - a full day learning event including three short lectures and a rotation of five small group, case-based discussions. What we learned: 1) In order to effectively engage physician learners and inform in-class teaching, there has to be formative feedback mechanisms built in the pre-course activities which is coherently linked to in-class activities. 2) There needs to be a balance of time and effort between pre-course and in-class learning activities.

Conclusion: There is great potential in the facilitation of physicians' active learning using flipped classroom. The planning and implementation of CPD programs will benefit from this approach in terms of shifting the expectation of demonstration of participation in learning activities to motivated physician learners, increased engagement in learning and enhanced learning outcomes.

DP 5-6

Building Competencies for CPD Providers: An innovative approach to CPD faculty development

Suzan Schneeweiss University of Toronto, **Jane Tipping** University of Toronto

Background/Purpose: CPD developers need an in-depth understanding of adult learning principles, program development and dissemination strategies not only to support learners in acquiring knowledge and skills, but to ensure knowledge transfer and practice change. CPD providers and developers need to acquire specialized skills and competencies to develop effective educational programs based on CPD best practices to facilitate improvement in health professional performance and patient care. However,

there is no standard of such skills and competencies, limiting CPD capacity building and leadership opportunities. While faculty development programs build on this need, there is a gap in the availability of CPD-focused faculty development opportunities.

Summary of the Innovation: CPD at the University of Toronto developed 4 diverse faculty development initiatives designed to build competencies in CPD providers and developers, and enhanced online communications and peer-review processes for accreditation. The Certificate Program in CPD Foundations is an introductory 10-session interprofessional synchronous webinar series designed to provide fundamental theory and skills training in the field of CPD. Thus far, four cohorts have completed the program. The Essential Skills in CPD program is a 2-day pre-conference course designed to achieve a wider reach and global CPD perspective and offered through the Association of Medical Education in Europe. This program has been delivered annually over 6 years. Leading and Influencing Change in CPD is a 2-week advanced certificate program which aims to provide a broad range of management and leadership skills as well as tools necessary to lead CPD initiatives in today's complex health environment. Three iterations of this program have been delivered with a broad interprofessional audience. Additionally, series of online 'quick tip' resources and a robust peer review process for accreditation were developed and contributed to the development of CPD competencies.

Conclusion: Establishing formal CPD faculty development training programs will help standardize the knowledge and skills required for CPD providers and developers and build leadership capacity in CPD.

DP 5-8

A Pan-Canadian Survey of CPD Research Activity

Tanya MacLeod Dalhousie University, **Francesca Luconi** McGill, **Morag Paton** University of Toronto, **Meron Teferra** McGill, **Elizabeth Wooster** University of Toronto

Background/Purpose: The Association of Faculties of Medicine of Canada Continuing Professional

Development Research Sub-committee conducted a survey to describe the current landscape of research at CPD units across Canadian Medical Schools.

Methods: An online survey was sent to CPD Associate/Assistant Deans at the 17 Canadian medical schools. Only one response per school was accepted. Quantitative data were analyzed using descriptive statistics and qualitative data were analysed using thematic analysis.

Results: The response rate was excellent; 88% (15/ 17 offices). CPD Associate/Assistant Deans were viewed as primarily responsible for CPD research, followed by research directors and managers. There were great disparities among CPD sites in terms of funding, research staff, and scholarly activity. The most commonly reported areas of research and scholarship were performance assessment (e.g., audit and feedback, personal learning plans), teaching and learning related to specific medical expert topics (e.g., arthritis, opioid prescribing), theories and research methods (e.g., needs assessments, systematic reviews), knowledge translation and simulation. Most sites (9/15), had conducted research involving patient health outcomes in the past five years, however, data were mostly limited to self-report.

Conclusion: The current research and scholarship activity in CPD units across Canada is diverse. The members of this field often serve dual roles in the theoretical advancement of the science of teaching and learning and the practical study of educational impact. The findings also suggested that research often serves as an educational innovation for medical topics. The implications of these findings for the field of medical education research will be discussed.

DP 6-1

An Evaluation of Geriatric Psychiatry Education in Canada

Melissa Andrew Queen's University, **Maria Hussain** Queen's University, **Colin Zarzour** University of Ottawa, **Melissa Andrew** Queen's University, **Heather Braund** Queen's University, **Nancy Dalgarno** Queen's University, **Rylan Egan** Queen's University

Background/Purpose: The first cohort of Geriatric Psychiatry subspecialty residents commenced accredited training in 2012. Given that this relatively new subspecialty is now transitioning to a Competence by Design (CBD) model, we aimed to capture the perspectives of recent graduates to inform Entrustable Professional Activity (EPA) development for the transition to CBD at Queen's (2018) and followed by the national cohort (2020).

Methods: A qualitative case-study was completed during 2017-2018. Four semi-structured interviews with surveys integrated between questioning were conducted with subspecialty graduates who had transitioned to independent practice within the last 5 years. The interviews focused on participants' confidence in, and relevancy of, specific competencies, and their perceptions of how well the overall program prepared them for practice

Results: Residents cited need for additional development of their specialized communication and collaboration skills, such as relating to administrators and community collaborators in conflicting circumstances. Gaps were found in specific Medical Expert competencies such as providing Electroconvulsive Therapy to seniors and managing aging patients with Severe Persistent Mental Illness. Residents also require greater experience directly supervising junior trainees working in diverse practice settings, and in application of medical legal knowledge, including capacity assessment and involuntary certification for complex geriatric patients. Strengths included multidisciplinary care and family interventions.

Conclusion: This study shares perspectives from residents on the strengths and gaps in their Geriatric Psychiatry training. Emphasis on developing advanced collaborative skills across various practice settings, and addressing particular niche topics, is requested. Our findings will be used to iteratively revise Queen's EPAs and inform EPA development nationally.

DP 6-5

A framework for incorporating discussion of social identities into Case-Based Learning

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Background/Purpose: The MD Program at the University of Toronto recently adopted a student-developed tool entitled "Portraying Social Identities (SI) in the Medical Curriculum: A Primer" to guide curriculum development and discussions around 14 SI (e.g. gender, race).¹ Students recognized opportunities in their Case-Based Learning sessions for deeper and meaningful exploration of SI and set out to examine the extent to which the 14 SI were mentioned and addressed as part of learning activities.

Summary of the Innovation: A case analysis framework and process were developed in consultation with faculty and piloted for 27 cases from two pre-clerkship courses, representing 38% of cases. Each case was reviewed by an independent reviewer who recorded all social details and identities and suggested changes that would expand the representation of SI and/or would deepen discussion and learning (e.g. adding an assignment question, modifying part of the patient history). All suggestions were reviewed by the group to ensure balance in how all fourteen SI were mentioned and addressed. Suggested discussion points were provided for tutor guides. Findings and suggestions were brought forward for consideration to curriculum developers and the Curriculum Committee.

Conclusion: Analysis revealed that across 27 cases, 12/14 SI were mentioned (no mention of religion and indigeneity) but only 5/14 identities were addressed (health status, neurodiversity, physical ability, socioeconomic status, and mental health). A total of 21 changes were suggested such that the 27 cases now mention all 14 SI and address 13/14. This process enabled students passionate about social justice to

engage in and impact curriculum development. The framework and process have implications for introducing SI topics across medical curricula and faculty development.

References:

1. <http://ofd.med.utoronto.ca/resources/portraying-social-identities>

DP 6-6

ReCAPTCHA my Curriculum: Internet-inspired methodology to identify curricular gaps using student performance with off the shelf examinations.

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Background/Purpose: Use of off-the-shelf examinations (OTSE) in undergraduate medical curricula provides a standardized and convenient method of performing assessment. At the University of Manitoba, an OTSE is used formatively in all core clerkships. The Pediatric Clerkship (PC) was noted to have high failure that existed prior to and persisted post-initiation of curriculum renewal, but the OTSE student reports provided limited information on examination content and the examination content changed frequently.

Summary of the Innovation: We adopted a methodology inspired by ReCAPTCHA technology that is commonly used to block non-human access from websites. This technology uses multiple user responses to questions that cannot be easily resolved by a computer, and in finding the most common response, identifies the most correct response to the question. We assembled a team of scorers to examine the student reports for the OTSE, identifying the highest and lowest performing subject areas. We were able to identify key pediatric areas with relative specificity that under-performed in our medical school. The identified targets of curricular content

was either absent or only partially covered in the clerkship curriculum, and a secondary validation using LMCCQE Part 1 results supported similar subject areas as being problematic. Curricular changes were then implemented and OTSE pass rates were audited for the ensuing year.

Conclusion: We were able to achieve a significant reduction in the Pediatric OTSE failure rate that was not paralleled in other clerkship rotations or explainable by curriculum renewal. We propose that our methodology is a valid approach to curricular audit using OTSE.

DP 7-2

Stigma in medical education: student experiences and insights

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Background/Purpose: In medicine, stigma of mental illness directly inhibits access to care for medical students and their patients. Outcomes improve in patients with stigma eradication. We wanted to explore the perspectives of senior medical students on stigma education.

Methods: We interviewed senior medical students, seven at the College of Medicine, University of Saskatchewan and five at the John A Burns School of Medicine, University in Hawaii, about their experiences with and opinions on their mental illness stigma education. Transcripts were analyzed by at least two of the authors using semantic and latent thematic analysis and open coding. Consensus was reached through discussion.

Results: Most students had trouble defining stigma and most could not recall direct instruction in medical school. Mental illness stigma was found in personal, professional, and structural aspects of the health care system. Most medical students in Saskatoon identified personal or peer struggles with mental illness while in Hawaii only one of the five students did so. Often stigma was created by the words and/or behaviours of their senior staff and residents. Reflection seemed to be the most transformational

learning opportunity to most students. All students advocated for experiential learning opportunities based on authentic contact with patients and positive role models along with facilitated reflection on their own biases.

Conclusion: Medical students need more opportunities to learn about mental illness stigma and how to avoid stigmatizing patients and peers. They identified authentic contact with patients and learning from role models as the most effective ways to prevent stigma.

DP 7-3

Student outcomes of service learning activity within undergraduate medical curriculum

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Background/Purpose: Service learning (SL) is a type of active learning in which a student demonstrates knowledge and understanding through service to the community and reflection. The purpose of this qualitative study was to explore the learning outcomes of medical students, Thammasat university from patient education project about diseases and drug in Primary care unit and Applied Thai Traditional Medicine, Thammasat university.

Methods: The 35 third-year-medical students who enrolled an elective course were recruited to this study. The medical students were divided into small groups. Each group educated patients about diseases (e.g. diabetes mellitus, hypertension) and rational drug use in these disease. The students were individually assigned to write a reflection paper based on their own learning experience from this activity. The reflective essays were analyzed by content analysis technique.

Results: Strengths and limitations of the SL project have been noted. The 4 major strengths of this project were reported similarly by students. (1) An excellent doctor needs to be knowledgeable and have good communication skills (2) The students gained a deeper insight into their development as clinicians (3) The service learning project encouraged growing sense of social responsibility. (4) The students learned to work together as a teamwork. The limitations of this activity were identified. The numbers of students in each groups were greater than the numbers of patients. There was no time to increase frequency of performing activity.

Conclusion: These findings suggest that the SL significantly increases in students' attitudes, knowledge, skills (e.g., communication, teamwork) and social responsibility to community health. The service learning project is a potential active learning model that can enhance students' awareness and perspectives of excellent doctor

DP 7-4

"Equity and Diversity in CME and CPD: demographic assessment as a tool to identify disparities."

Laura Plens Shecaira McMaster University, **Khalid Azzam** McMaster University, **Angela Silla** McMaster University

Background/Purpose: Leading roles in scientific events are known to contribute to professional and academic advancement while diversity in education enhances learning outcomes. The number of female physicians in Canada has increased significantly over the past forty years, however women still encounter barriers to their professional and academic advancement.

Summary of the Innovation: This study investigated the role of demographic assessment in identifying possible sex imbalances in the percentage of physicians and health science scholars as presenters, planning committee members and attendees at thirty-one accredited activities in Continuing Professional Development (CPD) and Continuing Medical Education (CME) at the Continuing Health

Sciences Education Program (CHSE) at McMaster University from 2017 to 2018. While women were the majority of the attendees (61.22% in 2017 and 59.98% in 2018), the percentage of female presenters and members of planning committees was significantly smaller. In 2017 the rate of female presenters was 39.15% to 60.84% of male presenters, female planning committee members corresponded to 40.24% to 59.75% of males. In 2018 the disparity persisted with 35.29% of female speakers to 64.70% of males, women composing 36.70% of the planning committees and men 63.29%.

Conclusion: Sex-disaggregated demographic assessment supported the identification and measurement of the sex imbalance within CPD and CME activities. While the results of this study are particular, the disparities are visible across the country. With the standardization of this process, the author encourages other programs to identify possible sex imbalances, in order to propose guidelines that increase female representation, promoting equity and enhancing learning outcomes.

DP 7-5

Fit In, Don't Fit in: An Exploration of What MD Students Are Feeling

Mariela Ruetalo University of Toronto, **Glenys Babcock** University of Toronto, **Lisa Robinson** University of Toronto

Background/Purpose: With increasingly diverse student bodies, medical schools are paying greater attention to inclusion so that all students feel accepted and a sense of belonging. This paper explores students' feeling of fitting in, or not.

Methods: From May 9 to 30, 2018, we conducted an online survey of all University of Toronto first year medical students, which yielded a 62% response rate (n=159). Sample data were weighted by gender nested in year to match population data. This study focuses on two questions: "Thinking about the past academic year, how would you rate each of the following?... Feeling like you fit in with your peers" and "What specifically made you feel like you do/don't fit in with your peers?" Open-ended responses were coded using thematic analysis.

Results: At the end of the academic year, 41% of first year MD students rate their feeling of fitting in with peers as excellent (9%) or very good (31%). Students say they do not feel like they fit in because of: imposter syndrome, cliqueness, lack of connection with peers due to differing values, interests and priorities, and being an outsider due to ethnicity or socioeconomic background. Those who do fit in attribute it to being able to make friends early on, the opportunity to join school-related extracurricular activities, and getting to know others through in-class small group activities.

Conclusion: The students' powerful words provide tremendous insight into inclusion, particularly when viewed by socio-demographic groups. This can help us better facilitate the student transition into first year of medical school.

DP 7-6

An Appreciative Inquiry to Social Accountability in Canada

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Background/Purpose: In 2001, Health Canada in conjunction with national medical organizations, developed and published Social Accountability: A Vision for Canadian medical Schools. Since then the vision of social accountability has evolved into an expectation of Canadian Medical Schools to play an integral role in the health of their communities. With leadership from the Association of Canadian Medical Colleges (now the AFMC) this expressed intent has played out over Canada's now 17 medical schools-the most recent school developed and built on the principles of social accountability.

Methods: In 2017-18, the AFMC conducted a formal appreciative inquiry of how social accountability has developed in the lives and careers of faculty as well as the institutions themselves. Key informant interviews and focus groups were engaged using formal appreciative inquiry approaches. These were

recorded and transcribed and the results have been subjected to thematic analysis.

Results: This poster provides a summary of thematic analysis and its implications for the fostering of social accountability in both existing and new medical schools. It also demonstrates some aspects of national level strategies (accreditation, educational development, credentialing, etc) that might foster engagement and social accountability between medical schools and their societies.

Conclusion: Social accountability is now an established expectation of medical schools in Canada. However, medical schools have taken on this challenge in different ways and have progressed to varying degrees. This study defines the crucial strategies emerging from key achievements and strategies across Canada to date.

DP 8-3

Competence in Context: Building InSIGHTful Global Health Learning Opportunities

Jill Allison Memorial – University of Newfoundland, Shree Mulay Memorial – University of Newfoundland

Background/Purpose: Increasing numbers of Canadian medical learners are travelling to LMICs in search of experiential learning opportunities in global health. While pre-departure training is often mandatory, very little time is given to understanding the social determinants of health through experience prior to clinical learning in host communities. The InSIGHT program aims: 1) To encourage deep understanding of both cultural and structural competence as a foundation for effective global health engagement 2) To cultivate appreciation of local partner skills, innovation and capacity with a focus on continuous learning and co-created projects rather than service provision alone.

Summary of the Innovation: InSIGHT has taken six cohorts of pre-clerkship medical learners to Nepal for a month long program with two weeks exclusively in community and two weeks in a clinical setting. Community partners shape learning opportunities and provide deep insights into the impact of socio-economic status, gender, religious and family values,

education, urban-rural disparities, living conditions and access to services. Regular discussions during clinical components help draw links between community and clinical experiences. The program is shaped by the WEIGHT Guidelines, emphasizing community context and partnership, respect and reciprocity as part of engaged medicine and good global health practice.

Conclusion: InSIGHT highlights the value of understanding cultural and social conditions as part of cultural humility in practice. Students report that they are better prepared for clinical experiences with awareness of upstream causes. Community-based experiences thus serve as the grounds for learning exchange in global health, encouraging collaboration rather than parachuting solutions into LMICs with little or no understanding of the problems involved.

DP 8-5

Identifying strengths and challenges within surgical programs: An exploration of learning environment and learning culture

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Background/Purpose: The aim of this project was to assess the learning culture (LC) and learning environment (LE) within surgical training programs to inform program improvement efforts.

Methods: Residents (n=66) in surgical disciplines completed an on-line survey assessing their LE, LC and program strengths and challenges. Descriptives, between group comparisons, correlations and content analysis were carried out to examine responses.

Results: Positive aspects of their LC included affiliation (e.g., interactions), accomplishments (e.g., performance standards), and overall low levels of dissatisfaction; residents were less than satisfied with

recognition within their program. Positive aspects within the LE included, e.g., independence, responsibility, team spirit, accessibility of preceptors, organization attuned to learner needs, and adequate resources; concerns such as teaching style, appraisal and feedback, relations and atmosphere were mentioned. Open-ended responses revealed various program strengths such as resources (e.g., quality of teaching, learning opportunities) and aspects concerning structure and organization of the program (e.g., environment, scheduling and organization). Challenges were also identified within the environment (e.g., intimidation and harassment) and with service demands affecting learning. Experiencing and witnessing intimidation/harassment/abuse over the last six months and resident burnout had significant negative effects on how residents viewed both their LC and LE.

Conclusion: Identifying strengths and challenges within programs can help bolster physician training by enhancing different aspects of the environment and culture. Explicit attention and deliberate improvement efforts to address the link between LC, LE, resident learning, and outcomes are essential to identify and cross pollinate practices that will enhance learning in postgraduate medical education.

DP 8-6

Campus décentralisé de l'Université de Montréal en Mauricie : Mission sociale accomplie après les 10 premières cohortes diplômées

Marie-Hélène Girouard Université de Montréal

Contexte: Le Campus de la Mauricie de l'Université de Montréal a vu le jour en 2004. Un des objectifs lors de sa création était d'améliorer l'accès aux médecins en région non métropolitaine. Nous avons cherché à savoir si l'objectif était atteint après les 10 premières cohortes diplômées.

Méthodes: Compilation prospective des choix de résidence et lieux de pratique des diplômés du Campus Mauricie.

Résultats: Depuis la diplomation de notre première cohorte en 2009, 335 étudiants ont diplômé. La

majorité s'orientent en médecine de famille à la résidence (63 %). Les choix en spécialité sont diversifiés (médecine interne, pédiatrie, psychiatrie,...). 193 ont terminé leur résidence : 148 en médecine de famille et 45 en spécialité. La répartition des médecins (de famille/spécialistes) selon les régions administratives du Québec se traduit en résumé par : - Mauricie et Centre-du-Québec : 25 % (30 %/22 %) - Régions métropolitaines : Montréal, Laval et Québec : 22 % (19 %/31 %) - Autres régions : 53 % (51 %/47 %)

Conclusion: Le Campus de l'Université de Montréal en Mauricie remplit donc sa mission sociale de former des médecins qui choisissent majoritairement de pratiquer dans des milieux hors des grands centres urbains.

DP 8-8

Empathy erosion in medical training: A qualitative study of trainee perspectives

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Background/Purpose: In an effort to improve the patient-physician relationship, empathy among medical trainees has been a topic of profound study. The vital role of empathy in medicine has been studied extensively in recent years - it has been found to improve the quality of patient care, physician satisfaction and even health outcomes. Due to the benefits, medical education has been keen to see empathy training integrated into the curriculum by means of patient shadowing, communication skills training, and wellness programs. However, there is a scarcity of literature evaluating the role of empathy in non-Western medical curriculum. In this study, we provide a detailed account of Chinese medical student perspectives on the role of empathy in medicine and its utility for them as future clinicians.

Methods: Two focus group sessions, recruiting sixteen medical students from the Shanghai Jiao Tong University School of Medicine and the Shanghai-Ottawa Joint School of Medicine were conducted. Each session, lasting an average of 90 minutes, was

led in a semi-structured interview style to explore perspectives in an in-depth manner. Following data collection, thematic data analysis was applied for thematic coding, and visual thematic data maps were constructed using Leximancer thematic software.

Results: Thematic data analysis presents results in four main themes, organized as follows: (i) defining empathy; (ii) establishing the role of empathy in medicine, (iii) empathy erosion and its associated factors, and (iv) empathy training.

Conclusion: As the physician-patient relationship becomes increasingly strained in many countries worldwide, an exploration of the role of empathy in medicine in relation to sociocultural factors is of paramount importance. This study expands the current body of literature examining the role of empathy in medicine, as well as the novel concept of artificial empathy, from a unique cultural and student-focused perspective.

DP 9-1

Apprentissage des habiletés d'entrevue : former des patients simulés formateurs comme tuteur d'apprentissage

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Background/Purpose: L'enseignement avec des patients simulés (PS) est efficace pour améliorer les habiletés cliniques des étudiants de médecine au pré-externat. Les étudiants rapportent toutefois un manque d'uniformité quant aux rétroactions des médecins-tuteurs, lors des séances de cliniques simulées. Par ailleurs, le recrutement de tuteurs francophones s'avère difficile et le coût associé à leur service est très élevé.

Summary of the Innovation: But : Ce projet pilote vise à décrire l'intégration de patients simulés à titre de patients simulés formateurs (PSF) dans les cliniques simulées. Méthodes : Une étude multi-cas comportant deux volets : une formation de cinq PS et une mise en situation de ceux-ci dans les cliniques simulées a été conduite par les chercheuses auprès d'étudiants en 1^e année de médecine. Les méthodes

de collecte de données utilisées sont l'enquête par questionnaire auprès des étudiants, l'observation directe avec une grille d'observation par le chercheur et des questionnaires d'autoévaluation par les PSF. Résultats : Les étudiants ont évalué les médecins-tuteurs et les patients simulés formateurs de façon égale quant à leurs habiletés à donner de la rétroaction. Un besoin de formation accrue des PSF sur l'utilisation du langage médical et sur la pratique de la rétroaction est ressorti de cette étude.

Conclusion: Les patients simulés formateur ont un potentiel certain à agir comme tuteur de cliniques simulées du pré-externat. Leurs commentaires ont permis d'identifier certaines mesures vis-à-vis du recrutement et la formation des patients simulés appelés à jouer ce rôle.

DP 9-5

Mapping key competencies in sustainability : a case study of Université Laval's doctoral degree in medicine

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Background/Purpose: At Université Laval, sustainability is reflected by its marked presence in numerous action plans and long-term objectives. Based on Wiek, Withycombe and Redman's "Key competencies in sustainability : a reference framework for academic program development" (2011), a mandated work group at Laval produced evaluation grids for courses and programs. A list of courses and programs related to sustainability was then produced, following teachers and heads of programs' participation. The mapping of KCS also helped faculty members foster a better understanding of the scope of sustainability and how KCS can be developed in any discipline.

Summary of the Innovation: The internalization of sustainability education has been especially visible in Université Laval's medical faculty. A faculty "Strategic Plan 2015-2019" was developed, centered on delivering a medical program in the pursuit of

"sustainable health." But how has the tools for sustainability assessment been applied? What steps have been involved in its implementation? What are the results so far? And how can these initiatives be improved and replicated in other universities?

Conclusion: More than merely producing a list of courses and programs in sustainability, Laval's unique and global approach helps to better understand the scope of sustainability and allows a wider implementation of sustainability competencies in the classroom. This unique case study illustrates the operationalization of Wiek et al.'s work, and proposes an innovative method of mapping KCS in both courses and programs in medicine.

DP 9-6

Une démarche de conception d'activités d'enseignement en partenariat étroit avec des patients sur leur expérience vécue

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Background/Purpose: Comprendre l'expérience du malade et intervenir en conséquence est un défi pour les étudiants en médecine. Or ces apprentissages développent le professionnalisme. Sera décrite une démarche de conception innovante d'activités d'enseignement en partenariat avec des patients sur leur expérience.

Summary of the Innovation: Une équipe de professeurs et patients-proches partenaires ont coconstruit une démarche de conception d'ateliers sur l'expérience-patient, pour des groupes de 35 étudiants, portant sur maladie chronique/handicap, douleur et fin de vie. Cette démarche repose sur 4 éléments : 1) développer le partenariat; 2) coconstruire les contenus d'apprentissage : partage et réflexion sur l'expérience-patient, suivis de

comptes rendus (CR); analyse de contenu des CR et identification et priorisation de thèmes; formulation de messages-clés; 3) produire un modèle d'atelier basé sur le témoignage d'un patient et d'échanges des étudiants avec lui sur l'impact du témoignage; 4) soutenir les patients pour produire le témoignage. La première prestation, réalisée en duo professeur-patient en 2018, pour 208 étudiants a été évaluée par questionnaire : 85% des étudiants étaient fortement en accord qu'ils pouvaient témoigner de l'importance de comprendre l'expérience/vécu du patient et l'importance du partenariat; 82% de reconnaître des manifestations concrètes du souci envers le patient et 77% de démontrer son engagement à agir avec sollicitude et responsabilité envers le patient.

Conclusion: En suscitant à la fois une expérience affective et cognitive chez les étudiants, les visées d'apprentissage ont été atteintes. Chaque élément de la démarche et l'animation en tandem de l'activité avec échanges entre le patient et les étudiants sur leurs expériences ont été cruciaux.

DP 9-8

The Face of Oasis: Understanding Youth Mental Health Issues through Portraiture and Narrative

Wendy Stewart Dalhousie University, **Mark Gilbert** Dalhousie University

Background/Purpose: There are significant concerns regarding the increasing prevalence of mental health issues in youth. Unidentified or unmanaged conditions like anxiety, depression, conduct disorder and attention difficulties in youth, can significantly impact adult functioning. Previous research has demonstrated that the creation of images humanizes, gives voice and empowers the people pictured. This innovative project combined portraiture and transcribed dialogue to explore the experience of youth attending KV Oasis Youth Centre.

Methods: Following REB approval, the researchers recruited 20 youth aged 13-25 years of age. Project data included: the artists field note journal chronicling the portraiture process; recorded interactions between the artist and participants; and

semi-structured interviews. The visual images and transcribed dialogue were analyzed using phenomenology. Analysis centered on their daily lives, the types of stresses and challenges that impact their sense of wellbeing and mental health, and identification of helpful programming and activities.

Results: The youth experiences centred around three themes: the Youth Centre itself; the daily mental health challenges they face; and the portraiture process. Mental health issues included: sleep issues, anxiety, depression, suicidal ideation, anorexia, abusive or unhealthy relationships, and online promotion of mental illness and eating disorders.

Conclusion: These data provide a unique perspective on youth mental health struggles. The portraiture process provided a safe space to share their life experiences and formed a sense of community on completion and display. The portraits and qualitative data are being used to engage stakeholders in expanding relevant programming aimed at prevention and early identification of youth mental health issues.

DP 10-2

Medical Assistance in Dying: A Resource Library for Practitioners

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Background/Purpose: With Parliament expected to table its final reports on Medical Assistance in Dying (MAiD) in the fall of 2018 and Canadian health practitioners still considering its practical implications for themselves and their patients, a resource library was created to inform health practitioners about precedents, cases, processes and stakeholder opinions.

Summary of the Innovation: Following a systematic review of Canadian grey literature of Palliative End of Life Care (PEOLC) and MAiD, these publicly available articles were organized into categories and subsequently smaller categories allowing users to

quickly narrow their inquiry to salient documents. For example, a user could choose to look at all the recent cases in the news related to MAiD in Ontario or choose to look at learning resources for pharmacists. The interface was constructed in Storyline and can be hosted on websites.

Conclusion: The library itself has undergone three distinct rounds of stakeholder consultations with health practitioners, education scientists, librarians, and healthcare leaders. As the Canadian healthcare landscape continues to adapt and evolve, a forum for gathering and hosting relevant materials will be crucial for ensuring continuing professional development. We offer our resource library as a transferable vehicle for storing and exhibiting resources for health practitioners.

DP 10-5

Development of Nationally-Validated Competencies for Medical Undergraduates in Palliative and End-of-Life Care

Anne Boyle McMaster University, **Shirley H. Bush** University of Ottawa, **Srini Chary** University of Calgary, **Amanda Roze des Ordon** University of Calgary

Background/Purpose: Recognizing that all Canadians should receive high quality end-of-life care (EOLC), a project called "Educating Future Physicians in Palliative and End-of-Life Care" (EFPPEC) was undertaken in 2004-2008 to develop national medical undergraduate competencies for palliative and EOLC. After adoption by the Deans of Canada's medical schools, the competencies were implemented to varying degrees in the schools' curricula. However, by 2017, the competencies required updating to reflect changes in practice environment, legislation and to align to the 2015 CanMEDS framework.

Summary of the Innovation: In 2017-2018, a core project team from the Canadian Society of Palliative Care Physicians (CSPCP) Undergraduate Education Committee, in collaboration with the original project partners, updated the original competencies and completed a multi-stage national validation process. Key changes in the updated national competencies:

Shift from 'palliative care' (which historically was provided primarily to individuals with cancer at the end of life) to an 'early, integrated, collaborative palliative approach to care' starting earlier in the course of a life threatening malignant or non-malignant illness, in addition to EOLC. Addition of competencies to address recent practice environment changes, e.g. opioid prescribing in the context of palliative care and the opioid crisis, role of cannabis in palliative care, legalization of Medical Assistance in Dying in Canada, and more robust inclusion of pediatric palliative care.

Conclusion: The updated competencies have been shared with all Canadian medical schools and some schools have already started implementation.

DP 10-6

Dynamically using rotation capacity to optimize our Clerkship Lottery scheduling method

Mike Paget University of Calgary, **Chaoji Liu** University of Calgary, **Pamela Veale** University of Calgary

Background/Purpose: Historically, students have entered a lottery to be assigned a clerkship track, which were a finite number of predetermined streams of clerkship rotations following a period of electives. At a three year program, this is a critical event as student portfolios are submitted to CaRMs halfway through their clerkship program. We previously reported on an alternate process for clerkship stream selection that generates optimized schedules based on student desires, expressed through tokens. Chaoji Liu et al. A New Algorithm For The Clerkship Rotation Selection. Poster presented at: Canadian Conference for Medical Education; 2016 April 29 - May 2; Winnipeg, MB)

Summary of the Innovation: We have now improved the algorithm to reflect flexibility in rotation capacity throughout the clerkship year. This maximizes capacity in popular rotations prior to the Medical Student Performance Record (MSPR) deadline. When dynamically allocating capacity on a per-block basis, the system calculates the relative popularity of any

given rotation and factors it into a capacity increment based on the minimum capacity within the departmentally defined range.

Conclusion: Over three years we have maintained a perfect track record in granting first choice discipline as well as highly optimized schedule for second, third and fourth choices, for three years. The algorithm balances the need to fulfill scheduling requirements for clerkship rotations and student desires in a fair and transparent mechanism.

DP 11-1

Supporting and Training Moderators of Online CPD Courses

Lara Hazelton Dalhousie University, **Susan Love** Dalhousie University, **Lisa Bonang** Dalhousie University

Rationale/Background: Online courses are increasingly used in continuing professional development. Discussion boards are often components of these programs. There is limited information regarding what constitutes effective discussion board moderation or how best to develop moderators.

Instructional Methods: Dalhousie Faculty Development offers online, asynchronous courses that feature moderated discussion boards to promote interactivity and enhance learning. Despite positive evaluations of the online programs by participants, comments from discussion course instructors led us to believe that additional resources and training in discussion board moderation would be welcomed.

Target audience: We surveyed previous online course participants and moderators, seeking to understand which qualities and actions of moderators were viewed as most helpful in facilitating learning, and to identify the moderators' perceived unmet needs. The information gathered was used to develop a workshop to support moderators and improve the overall quality of our programming.

Summary/Results: There were 20 responses from participants, and 9 from moderators. A variety of moderator behaviors were identified as helpful by participants, while moderators identified the

following needs: orientation to instrumental tasks (e.g. navigating the Learning Management System), advice on how to facilitate discussion, opportunities for mentoring by experienced moderators, and feedback. These findings informed the development of a workshop attended by 9 moderators. Feedback suggested the most useful aspects of the workshop were practical tips and hearing about experiences of other moderators.

Conclusion: Discussion board moderators for online courses may have unmet needs which can be addressed through additional training and support.

DP 11-2

MacAdemia: a novel faculty development program that meets the needs of distributed medical educators at McMaster University

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Background/Purpose: Faculty members in distributive medical education practice at varying distances from the university and face increasing clinical demands. They contribute voluntarily and may not prioritize academic promotion. As a result, the usual university-based incentives may not be as effective. Despite these constraints, institutions must ensure the quality of training by providing ongoing faculty development. Earlier this year, the McMaster University Program for Faculty Development (PFD) Team administered a perception and needs assessment survey to 17 highly engaged distributive campus faculty members. The results confirmed that faculty members are enthusiastic participants in a wide range of teaching activities. They believe that it is "worth it" to be a faculty member. However, they were not confident in their ability to teach, and identified a lack of feedback as a weakness in their current teaching practice.

Summary of the Innovation: In spring 2018, the MacMaster PFD team launched MacAdemia, a new faculty development certificate program for faculty

members affiliated with distributive campuses. This program provides a structured framework for improving various non-clinical professional skills in a self-directed manner. It consists of didactic, practical and mentorship components. It is adaptable to the learning needs of individual faculty members. Ten faculty members have since enrolled in the program. They anticipate that the program will have a positive impact on their teaching skills, career trajectory, educational outcome and patient outcome.

Conclusion: McMaster distributive campus faculty members have unmet learning needs. The McMaster PFD team works to address them through MacAdemia, a new structured and self-directed faculty development program.

DP 11-4

Edu-cafes - an opportunity for faculty development?

Sarah McClennan University of Toronto, **Jana Lazor** University of Toronto

Background/Purpose:

1. Faculty involved in student reflection courses don't have time themselves to reflect on the topics discussed and to develop a community of practice around areas of struggle.
2. It is becoming increasingly difficult to find time for faculty development for the variety of courses taught in the new medical undergraduate curriculum and to understand the faculty development needs of these tutors.

Summary of the Innovation: Implemented a 45 minute "edu-cafe" for faculty following a 1st and 3rd medical student reflection course to develop a community of practice and provide opportunity for faculty development.

Conclusion: Edu-cafe's are unique opportunities to develop a faculty community of practice that leads to faculty reflection on experiences with students and identifies areas for future faculty development.

DP 11-5**Better Together: A new model for supporting education scholarship**

Joyce Nyhof-Young University of Toronto, **Betty Onyura** University of Toronto, **Risa Bordman** University of Ottawa, **Rachel Ellis** University of Toronto, **Melissa Nutik** University of Toronto, **Nicole Woods** University of Toronto, **Sarah Wright** University of Toronto, **Risa Freeman** University of Toronto, **Milena Forte** University of Toronto, **Mahan Kulasegaram** University of Toronto

Background/Purpose: Academic medicine institutions seek to enhance clinician participation in education scholarship through various capacity building initiatives. Capacity building can involve both institutional-level (e.g. grant funding) and individual-level (e.g., training) support for faculty. The augmentation of structural supports with personalized support for faculty may be an effective way of optimizing capacity building efforts. With this view, the Office of Education Scholarship within the Department of Family and Community Medicine (DFCM) introduced a novel paired-consultation service to provide coaching to faculty interested in pursuing education scholarship (ES).

Summary of the Innovation: A clinician educator (MD) and an education scientist (PhD) provide coaching to DFCM faculty who express interest in ES projects. Broadly, consultants help consultees understand the processes, demands of, and resources for scholarship within the context of their intended activity. Consultants also use complimentary disciplinary perspectives to help consultees clarify the scope and focus of proposed projects. Planning guides are often used to guide consultees' efforts to conceptualize projects.

Conclusion: Consultations between 2016 and 2018 supported 28 seed ES grants in diverse areas (e.g. undergraduate, postgraduate, global health, quality improvement) across 9/14 sites. The project was evaluated by drawing on temporal theories of coaching including an adapted model of Prochaska's Stages of Change. Administrative records and long-term follow-up strategies were used to capture project trajectories and outcomes. Paired consultants learned from each other, supported ES capacity

building, and engaged distributed faculty while enhancing scholarly activity, networks, and capacity.

DP 11-6**What is the Resident Perspective on Quality Improvement Education in Family Medicine Residency Programs in Canada?**

Kelsi Cole McMaster University, **Kelsi Cole** McMaster University, **Hiroshi Tissera** McGill, **Camille Hortas-Laberge** Université Laval, **Jason Chhina** University of British Columbia, **Derek Chan** University of Alberta, **Alicja Krol-Kennedy** University of Calgary

Background/Purpose: Quality Improvement (QI) skills are critical within family medicine (FM) to improve patient care, safety, healthcare delivery, and collaboration within healthcare teams. There are several competencies within CanMEDS FM that address QI skills that residents should achieve. To enhance QI curricula in FM residency programs, it is critical to understand the resident perspective of their current QI education.

Methods: As part of the Guide for Improvement of FM Training Project 2018 (CFPC Section of Residents), we developed a national online survey to determine the perspective of FM residents in Canada on QI education within their curricula.

Results: 489 residents completed the survey (response rate 21%). 50.5% of residents expressed QI was important to their current education, and 49.3% believed they have sufficient knowledge to implement QI in practice. Residents felt QI courses were the most useful experience. Residents felt they would be more engaged in QI if they viewed successful projects and if they had increased mentoring from FM preceptors. Limited time, preceptor knowledge, and resources were barriers to QI education.

Conclusion: This study identified a need to enhance QI curricula within Canadian FM residency programs to improve resident engagement in QI and enable residents to achieve CanMEDS competencies. FM preceptors should have adequate knowledge to be excellent mentors in QI. Residents should be able to review other successful QI projects, and have

dedicated time and resources to participate in experiential QI activities and projects. This study provides a baseline for further assessment of the implementation of enhanced QI curricula into FM programs.

DP 11-7

Realignment of an Established Faculty Development Program for New teachers: A Systematic Approach

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Background/Purpose: Family Medicine teachers need robust faculty development (FD) that aligns with learner, and accrediting requirements. In 2005 at University of Toronto a 3 day annual BASiCs program was implemented to support new faculty to function optimally as teachers. Over the years sessions were revised, but there was evidence of misalignment. This project was designed to redevelop a FD program to address gaps and stakeholder needs.

Methods: The FD committee used quantitative /qualitative evaluation data, information from participants, focus groups and a systematic 9-step instructional design process to redesign the BASiCs program.

Results: Despite a 95% satisfaction rate, participants wanted shorter sessions and options for workplace FD. Analysis of learner characteristics, task analysis

around teaching level expectations and review of content sequencing revealed a needed realignment, around Competency by Design, QI, Wellness, relevance for inter professional audiences, and building a sense of academic identity. Three theoretical models guided the teaching approach: (1) adaptive expertise; (2) self-determination theory and (3) learning- centered approach. The redesigned program incorporated the following approaches: • a blended learning design of 3 core face-to-face sessions offered across 6 months, with developmentally sequenced modular streams of teaching and assessment • 2 pre-designed workplace FD components facilitated by local FD leads for peer coaching

Conclusion: Faculty Development is an essential tool to support teachers in alignment with new curricular, institutional and accrediting requirements. The poster will provide an overview of the redesign process and key components of the new BASiCs program.

DP 11-8

Just what I wanted to hear: Target teaching tips by podcast

Chelsea Jalloh University of Manitoba, **Steve Yurkiw** University of Manitoba, **Anita Ens** University of Manitoba

Background/Purpose: A significant component of Pre-clerkship Population Health course content at the University of Manitoba is delivered through small group sessions (SGS). Typically, for an SGS session there are 8 groups of 1 instructor and ~14 students. In examining aggregate student evaluations of SGS, a number of recurring positive themes (i.e. effective time management, able to explain key concepts) and undesirable themes (i.e. did not encourage student participation, deviated off topic) were identified regarding SGS instruction. Grounded in student feedback, a teaching development resource for SGS instructors was created. Intended to be quick, accessible, and practically applicable, a series of podcasts re: best practices for SGS instruction were developed by a course coordinator and members of

the Office of Educational and Faculty Development (OEFD).

Summary of the Innovation: An initial set of podcasts used an interview format with questions eliciting discussion about themes identified in students' SGS evaluations. Of the initial six podcasts, four featured SGS instructors who consistently receive strong student evaluations, and two featured educational specialists from OEFD. Drawing from these original recordings, a second set of shorter podcast excerpts was developed to address specific topics such as time management, answering questions effectively, and increasing student engagement. Podcast links were shared with SGS instructors and paired with administrative changes to support suggested best practices (i.e. ensuring availability of whiteboard markers to aid in instructor explanations, providing instructors with pictures/names of students in their SGS groups to facilitate student participation). Feedback on the podcasts was solicited from faculty and subsequent student evaluations will be compared with the previous year's to evaluate change.

Conclusion: The development of podcasts specific to SGS instruction was responsive to student feedback and combined the practical experience and insights of several successful SGS instructors with best educational practices from the literature. Particularly in a course that relies upon upwards of 50 SGS instructors each academic year, these podcasts share targeted, practical and evidence-based information to support instructors' educational development. These podcasts provide a flexible and accessible method to address CACMS Accreditation Standard 4.5 Faculty Professional Development by fostering SGS instructor development in teaching and instructional methods.

DP 12-1

The Development and Implementation of a Novel Simulation-based Interprofessional Trauma Education Module for Pre-licensure Health Professions Students

Lucy Patrick Dalhousie University, **Lorri Beatty** Dalhousie University, **Stephen Miller** Dalhousie University, **Kelly Lackie** Dalhousie University

Background/Purpose: Trauma resuscitations are a unique opportunity in medical education. They require clinical knowledge and skills, but learning the non-technical skills (communication, role clarification, crisis resource management) is also paramount. Interprofessional education (IPE), simulation, and trauma care have all independently been areas of focus in medical education. Several publications have highlighted deficiencies in IPE activities as well as trauma knowledge and skills among undergraduate medical students. Simultaneously, simulation had been gaining increased attention and application in medical curriculums. Dalhousie University has developed a novel trauma education module involving case-based scenarios with simulated patients. To our knowledge no other simulated patient based course combines trauma and IPE at the pre-licensure level.

Summary of the Innovation: The module was a simulation-based IPE activity for undergraduate medicine, nursing, paramedicine and respiratory therapy students. Course content focused on basic principles and skills related to trauma care as well as interprofessional competencies such as role clarification, collaboration and communication. Small interprofessional groups ran through two trauma scenarios with oversight from interprofessional educators from the various disciplines. A facilitated debrief, with a major focus on interprofessional competencies, followed each simulation. Approximately 140 students participated in the event.

Conclusion: Well received by facilitators and students, trainees indicated that the session not only increased trauma knowledge but also gave them an opportunity to hone interprofessional skills and interact with their colleagues at the undergraduate level. Though logistically challenging, educators plan

to continue to develop and refine this valuable session, making it a part of the regular curriculum.

DP 12-2

Dispensing Distributed Education: Interprofessional pharmacology training of McMaster Physician Assistant Students by Waterloo School of Pharmacy Students

Kristen Burrows McMaster University, **Janie Bowles-Jordan** Ms.

Background/Purpose: As Physician Assistant (PA) practice continues to evolve in Ontario, PA students and graduates often request additional pharmacology training in order to strengthen their expertise. In order to maximize interprofessional learning opportunities, a collaborative arrangement was established between McMaster University's Physician Assistant Education Program and the University of Waterloo's School of Pharmacy.

Summary of the Innovation: This mode of delivery was trialed in 2018, and was delivered in six sessions over a 12 week period. Topics of interest were proposed by the PA program in consultation with the regional coordinator of the School of Pharmacy. Topics included prescription writing, renal dosing, de-prescribing, and specific topics relevant to PA practice, including pharmacological management of chronic pain, osteoporosis, COPD, depression and other topics of interest. Pharmacy student presentations were reviewed by pharmacy faculty to ensure accurate content. Student evaluations were collated from both the pharmacy student presenters and the PA student participants, and collected by both Waterloo and McMaster for internal use.

Background/Purpose: The delivery of supplementary pharmacy curriculum by final year pharmacy students is an innovative way to foster interprofessional collaboration between different health professionals, allowing both groups to better understand each other's professions, programs, and the benefits of collaborative practice. PA students benefit from an updated and dynamic pharmacology curriculum, including the most recent guidelines, tips and tricks, and basic pharmacology. Pharmacy students benefit

from refreshing and updating pharmacological knowledge of topics taught earlier in Waterloo's curriculum, and using this experience to meet community outreach/IPE criteria as part of their own program.

DP 12-6

When 'mental health' meets 'interprofessionalism' meets 'social innovation': A disruptive curriculum for disruptive impact

Dr. Arlene MacDougall Western University, **Raksha Sule** University of Toronto, **Ruth Ruhara** Africa Mental Health Foundation, **Dr. Susan Rodger** Western University, **Dr. Victoria Mutiso** Africa Mental Health Foundation, **David Ndetei**, **Dr. Nadine Wathen** Western University, **Dr. Marlene Janzen Le Ber** Western University, **Dr. Oana Branzei** Western University, **Michael Njenga** Users and Survivors of Psychiatry - Kenya, **Kaitlin Saxton** Western University

Background/Purpose: The burden of mental disorders is still increasing worldwide; thus, novel approaches for training programs is required. The Global Mental Health INcubator for Disruptive Solutions Fellowship Program (GMFP) at Western University uses social innovation to incubate and accelerate disruptive solutions for the wicked problem of reducing the global burden of mental and substance use disorders and related issues. Through innovative pedagogy, students as innovators are capable of catalyzing impactful health system changes.

Summary of the Innovation: The 2017-18 GMFP, focused on the Kenyan context, offered Fellows a transdisciplinary environment to develop solutions to mental health system challenges proposed by Kenyan Community Partners (CP). 20 Fellows comprised four interprofessional teams, which included Western University and Kenyan medical students and residents, health professional students, and social and health science students. Fellows engaged in three GMFP curriculum pillars: a) Community-based Experiential Learning (2-week Summer Institute in Machakos, Kenya; follow-up year with close collaboration and communication with CPs); b) Social

Innovation Framework (sense-making, ideating, and prototyping; pitching to receive seed funding; implementing and evaluating; dissemination activities); and c) Professional Capacity Development (mindfulness and reflective practice; skills-development sessions, e.g. public speaking, leadership, etc.).

Conclusion: Solutions included: sustaining/scaling a social enterprise co-created by people with severe mental illness (PWSMI); designing an advocacy incubator with and for PWSMI; and testing a family education program to reintegrate PWSMI into the community. Curriculum feedback included: strength of interprofessionalism, significance of fostering self growth, and importance of community-led collaboration. Overall, training programs should disrupt curriculum norms, and support student innovators for meaningful health systems change.

DP 13-2

Transition to Practice: Evaluating the need for formal training in supervision and assessment among senior emergency medicine residents and new to practice emergency physicians

Sarah Kilbertus University of Toronto, **Kaif Pardhan** University of Toronto, **Juveria Zaheer** University of Toronto, **Glen Bandiera** University of Toronto

Rationale/Background: Supervision and assessment are core skills identified by both the Royal College of Physicians and Surgeons and the College of Family Physicians of Canada in their CanMEDS and CanMEDS-FM competency frameworks.

Instructional Methods: Emergency medicine residents are transitioning to practice with minimal training on how to effectively supervise and assess trainees. It remains unclear how comfortable senior emergency residents are with these competencies.

Target audience: Our study sought to examine physician comfort with supervision and assessment; what the current gaps were in training; whether there is a need for formal training in these areas; and what barriers or enablers would exist in implementing it.

Summary/Results: Qualitative data was collected during September 2016-November 2017, through 18 one-on-one interviews of PGY5 and CCFP-EM emergency residents, and attendings within their first 3 years of practice, at the University of Toronto and McMaster University. Transcripts were coded, analyzed, and collapsed into themes. Thematic analysis revealed five themes: Supervision and assessment skills were acquired passively through modeling; the training available in these areas is variably used, creating a diversity of comfort levels; competing priorities in the emergency department represent significant barriers to improving supervision and assessment; providing negative feedback is difficult and often avoided; competency by design (CBD) will act as an impetus for formal curriculum development in these areas.

Conclusion: As programs transition to a CBD model, there will be a need for formal training in supervision and assessment, with a focus on negative feedback, to achieve a standardized level of competence among emergency residents.

DP 13-3

Developing role models in clinical settings

Sonia Ijaz Haider The Aga Khan University, **Roger Gill** The Aga Khan University, **Qamar Riaz** The Aga Khan University

Background/Purpose: Role modeling is a key component of teaching professional values, behaviors and attitudes in medicine. It facilitates student learning and is vital in developing their professional identity. The aim of the present study is to explore how positive role modeling attributes can be developed in students, residents and medical teachers.

Methods: This was a qualitative study using focus group discussions. A total of 60 medical students, 35 residents and 21 medical teachers participated in the study. Four focus group sessions were conducted with medical students, three sessions with residents and two focus group sessions were conducted with medical teachers. Content analysis was used to analyze the transcribed verbatim.

Results: Four major themes that emerged from the study included attributes of role models, role modeling as a learnt behavior, challenges in developing role models, and recommendations for developing positive role models. A number of attributes of positive and negative role models were identified by the participants. All the participants including students, residents and teachers appreciated the importance of role modeling in developing professionalism among health professionals and medical students. Factors hindering development and demonstration of positive role modeling were also identified and possible solutions suggested.

Conclusion: Medical teachers need to be made cognizant of their role as positive role models in developing professionally competent physicians. The medical institutions need to develop and implement policies that would enhance positive role modeling by the teachers and facilitate learning of positive attributes at all levels

DP 13-4 Palliative and End-of-Life Care Programs: Preceptorships, Mentoring, and Case-Based Learning to Build Capacity

Ingrid Harle Queen's University, **Karen Smith** Queen's University, **Laura McDiarmid** Queen's University, **Eleftherios Soleas** Queen's University, **Katie Evans** Queen's University, **Bryn Fraser** Queen's University

Background/Purpose: The increased focus on Palliative and End-of-Life Care (PEOLC) among patients, families, and practitioners has led to a surge in interest among primary care physicians to learn more about the discipline and how it impacts their practice through Continuing Professional Development (CPD) (Hui et al., 2014). Palliative care is a deeply sensitive topic to most, if not all practitioners, hence it is an educational topic that is most effectively imparted through a mentorship model and an immersion process with an expert practitioner.

Summary of the Innovation: This biannual education program has entered its ninth cycle of cohorts and

combines small-group didactic learning about PEOLC with an in-depth immersion preceptorship in the palliative care field. Participants complete the 3-credit-per-hour didactic learning including case-based learning over 4 days and follow-up their learning by participating in the preceptorship with a skilled PEOLC practitioner. Additional reinforcement strategies included follow-up exercises driven by cases and pre and post reflections and needs assessments.

Conclusion: Approval scores from the nine cohorts have been overwhelmingly positive with 90% of respondents awarding perfect scores (average findings were universally positive). Early cohorts of the study took place during the height of the opioid crisis and pointed to an increased need for education about prescribing practices and the management of expectations of family and patient stakeholders. Organizations seeking to provide education on this topic should consider going beyond didactic sessions to handle a topic of this sophistication and sensitivity.

DP 13-5 ARLO: The role of feedback in a CPD environment

Jeremy Rezmovitz University of Toronto, **Elizabeth Wooster** OISE/University of Toronto, **Jerry Maniate** University of Ottawa, **Ian MacPhee** University of Toronto

Background/Purpose: It has been well documented that feedback and reflection are critical for learning across the medical education continuum. While opportunities for feedback (both formal and informal) exist in multiple formats at both the undergraduate (UME) and postgraduate (PGME) levels, the same does not hold true for continuing medical education (CME). As the medical education continuum shifts to a competency based model and CME shifts to a professional development bend (CPD), feedback and reflection will only gain importance for health care practitioners.

Summary of the Innovation: Building on research previously conducted, we conducted a literature review to describe the integral features of feedback in a CPD environment. The focus of this review was to

determine whether there had been any key shifts within the CPD learning environment and to describe any major differences between the CPD and UME and PGME environment.

Conclusion: While literature surrounding the role of feedback in a CPD environment is not as rich as in a UME or PGME environment, key features were determined. These features included that feedback is highly dependent on the context in which it is given and that it needs to be valued. To maximize feedback opportunities in CPD, they should be asynchronous, repetitive and linked to learning opportunities (ARLO). First, that feedback in the CPD milieu is a highly socialized construct. How the feedback is given, who is given it and by what method play essential roles in the CPD environment. If the feedback being provided is not seen as credible and specific, it will not be determined as valuable. Second, that feedback should be provided at frequent intervals.

DP 13-7

Lessons Learned: A multi methods systems approach to improving the culture and practice of feedback

Susan Glover Takahashi University of Toronto,
Rebecca Dube University of Toronto

Background/Purpose: Our purpose was to determine if we improved the culture of feedback using a multi-method co-learning approach targeting local challenges with feedback would be effective in improving competence in giving and receiving feedback across multiple postgraduate programs at our institution. While feedback is central to effective health professions education, it is repeatedly viewed by both learners and faculty as unsatisfactory. Much has been written about the need for, and the mechanics of feedback. Recent work suggests feedback may need to be re-conceptualized to be less frequent but more effective, and welcomed by the receiver within the context of a constructive relationship and a culture of continuous learning and improvement.

Methods: This case study describes a multi-level, systems approach that applies an integrated

relationship-centred approach to building individual, program and systems capacity for effective feedback. This approach builds on lessons gleaned from the education and leadership research. Specifically, the approach differentiates data from feedback and coaching, and identifies the myths and mistakes that need to be overcome by givers and receivers of feedback for successful and sustained improvements to individual learners and faculty feedback culture and practices. The workshop portion of our intervention was delivered on seven occasions, to mixed resident-faculty audiences. Cases reflecting local challenges with feedback were solicited from faculty and residents prior to the workshops. These were debated by the mixed audience, resulting in rich discussion. The grant competition program funded five initiatives developed by faculty-resident pairs. In the post-intervention focus group and survey evaluations, co-learning was seen as integral to the program's success. The symposium was attended by over 100 participants, including residents, attending physicians, and other health professionals. Topics covered by the keynote speaker and five panelists included video playback to support feedback, coaching, relationship-centred feedback, and CBME implementation. The importance of the relationship between the faculty and trainee was considered a take-away lesson for one-third of participants.

Conclusion: Key lessons from this case study highlight: the value of inventory of program needs for improved culture of feedback; the benefits of concurrent developmental activities that includes faculty and learners, the benefits of flexibility in educational delivery; the need for longitudinal mentorship of learners and faculty; and the positive potential impact of multi-level, systems approach that applies an integrated relationship-centred approach to building individual, program and systems capacity for effective feedback. Further evaluation of the impact of the co-learning approach utilized in this intervention on the feedback process is underway. We aim to expand and disseminate our intervention by engaging faculty and resident medical education leaders in its delivery at additional postgraduate programs at our institution.

DP 14-2

Revamping senior resident Scenario Rounds using curriculum mapping and a constructivist approach

Kevin Venus University of Toronto, **Lindsay Melvin** University of Toronto, **Rupal Shah** University of Toronto

Background/Purpose: Oral case scenarios are a core component of the internal medicine Royal College certification exam. However, residents do not commonly encounter this assessment method early in their residency. As a teaching tool, case-based scenarios help foster and assess clinical judgement. With the Royal College examination moving to PGY3, residents would benefit from earlier exposure to oral scenarios for practicing clinical decision-making and exam preparation.

Summary of the Innovation: We redesigned Scenario Rounds for senior (PGY2/PGY3) internal medicine residents on our clinical teaching unit (CTU) at Toronto Western Hospital, University of Toronto. The curriculum was mapped to Royal College exam objectives to ensure that scenario topics covered the breadth of core content. Other key design elements included a) a constructivist approach to advance scenario difficulty throughout the academic year b) a balanced frequency of ambulatory and acute-care scenarios to reflect real-life practice c) achieving 'desirable difficulty' by emphasizing higher-order tasks, such as management decisions, to stimulate discussion but not discourage participation. Rounds were evaluated via anonymous survey.

Conclusion: 23 senior residents participated in Scenario Rounds and 13 (57%) completed the survey. All respondents either 'agreed' or 'strongly agreed' that the rounds increased their understanding of the Royal College exam format, were appropriately challenging, and provided helpful feedback. Narrative comments indicated that residents sometimes found the environment intimidating due to the presence of multiple observers and suggested limiting attendance to peers. Scenario Rounds mapped to Royal College exam objectives and focused around high-order tasks, such as clinical decision-making, aid in residents' exam preparation.

DP 14-3

25 Years of Distributed Medical Education at a Rural Manitoba Community

Jose Francois University of Manitoba, **Scott Kish** University of Manitoba, **Don Klassen** University of Manitoba, **Bruce Martin** University of Manitoba, **Karent Grant** University of Manitoba

Background/Purpose: The recruitment of Family Physicians to rural areas has historically been a challenge. The Parkland Rural Residency Program (the Program), which was the first of its kind in Canada, was developed based on a belief that residents who train in rural areas would be prepared for rural practice. The purpose of this research was to evaluate the success of the Program after 25 years of preparing graduates for rural medical practice.

Methods: This cross-sectional survey used an online questionnaire with multiple choice, closed, and open-ended questions about past and current practice locations and scope of practice to explore the practice trajectory of Family Physicians who completed their residency in the Program. An email invitation to participate in the study was sent to the 150 graduates; 27 emails were returned and 44 (35.8%) of the remaining 123 graduates responded to the survey.

Results: Of graduates, 60% practiced solely in a rural location, 14% started practice in a rural or northern location and moved to an urban practice, 7% began practice in an urban area and returned to a rural setting, and 19% practiced only in an urban area. Forty of 43 physicians indicated being well or extremely well prepared for rural practice. The primary themes identified for changing practice location included family, practice location, and scope of practice.

Conclusion: The demonstrated success of the Program in preparing Family Physicians for rural practice has been positive for Manitoba. The implications of this study is that the model of training can be adapted to be implemented in other Canadian medical schools.

DP 14-4

If you build it they will come and stay: Implementing a new Family Medicine Residency Program (FMRP) in an underserved community

Stuart Murdoch University of Toronto, **Mary-Kay Whittaker** University of Toronto, **Linda Rozmovits** University of Toronto, **Caroline Abrahams** University of Toronto, **Risa Freeman** University of Toronto

Background/Purpose: In response to a government request to recruit and retain physicians in underserved communities, a University of Toronto FMRP was established at the Royal Victoria Regional Health Centre (RVH) in Barrie. This study investigated the correlation between postgraduate medical training and future practice locations, and the strengths, unique features and opportunities for improvement of this new FMRP.

Methods: RVH graduates from 2011-2016 (45) were invited to participate. Current practice location was determined using a government funded data set and the public registry of the provincial licensing body. Semi-structured 1:1 interviews gained insight into graduates' experience in the program. Interviews were recorded, transcribed and coded; thematic analysis and a constant comparative method were used, including anticipated and emergent findings and searches for disconfirming evidence. Purposive sampling was employed for thematic saturation.

Results: Tracking practice patterns of graduates demonstrated that 2/3 of participants continued to work in the Barrie region after graduation. Analysis of qualitative data provided insights into an overwhelmingly positive educational experience. Strengths of the program included a wide range of hands-on training opportunities and graduates perceived that the program added value to the local community by increasing capacity to provide care to an underserved patient population.

Conclusion: Establishment of a postgraduate FMRP has been an important physician recruitment and retention strategy for the RVH community. The experience of RVH graduates suggest that this new program has much to offer as a model for successful

expansion of community-based postgraduate medical residency programs.

DP 14-5

Identifying the supports and barriers to the implementation of an educational intervention to promote residents' use of Evidence-Based Medicine: a knowledge translation study

Chantal Cassis McGill, **Aliki Thomas** McGill, **Fadi Al Zoubi** McGill, **Heather Owens** McGill

Background/Purpose: Evidence-based medicine (EBM) in cancer care has been shown to have a significant positive impact on patient outcomes. Despite EBM being a core competency in medical education in Canada, it is underutilized in cancer care. Residents must therefore develop EBM competencies during training. Purpose Using a knowledge translation (KT) approach, we drew from the Theoretical Domains Framework (TDF) to explore 1) hematology/oncology faculty and residents' perceptions of EBM, and 2) the supports and barriers to EBM and to an innovative educational intervention designed to increase the adoption of EBM amongst residents.

Methods: Sequential mixed methods design. The quantitative phase consisted of a survey measuring knowledge of, practice of and attitudes towards EBM. The qualitative phase consisted of focus groups with faculty and residents to elicit perceived supports and barriers. Survey data were analysed using descriptive statistics and focus groups transcripts were analysed using deductive coding guided by the TDF.

Results: 26 survey participants (39% response rate) indicated comfort with and favorable attitudes towards EBM. Supports and barriers relevant to the uptake of EBM were mapped to six TDF domains: knowledge, environmental context, social influences, decision-making, beliefs about consequences and capabilities. Supports and barriers associated with the educational intervention included knowledge, environmental context, beliefs about consequences and reinforcements.

Conclusion: Barriers impacting the educational intervention were addressed with changes to the intervention to increase the likelihood of its success. A robust KT framework was used to guide the design and implementation of an educational intervention aimed at changing health professional's behavior.

DP 14-7

Designing innovative programs in Translational Medicine: A case of Developmental Evaluation

Wei Yan Queen's University, **Chi Yan Lam** Queen's University, **Stephen Archer** Queen's University, **Stephen Vanner** Queen's University, **David Taylor** Queen's University, **Paula James** Queen's University

Background/Purpose: Translational medicine research fosters the multidirectional integration of basic, patient-oriented and population-based research with the long-term aim of improving the health of the public. It is a rapidly growing discipline that has already started to establish its territory in the United States and Europe; however, gaps remain in Canada. The development of research-based graduate programs in Translational Medicine was therefore undertaken at Queen's University.

Methods: This study investigated the utility and feasibility of applying developmental evaluation to facilitate the creation of innovative graduate programs in Translational Medicine. This study explored the events, activities, and processes as they happened during the development of the programs. Members of the advisory committee, faculty, potential students, and other collaborators were invited to participate.

Results: This study is guided by developmental evaluation theory (Gamble, 2008; Patton, 2011), which allowed us 1) to track program decisions; 2) to engage the developers in reflective activities to make sense of progress and development; and 3) introduce purposeful activities to aid program development. As the researchers and participants engaged in the process of developmental evaluation, the Translational Medicine graduate programs were

developed, revised, approved, and launched in September 2018.

Conclusion: The programs are unique research-based programs that offer a curriculum interweaving graduate level research with authentic clinical experiences in a multidisciplinary environment. This study contributes to the growing body of knowledge about the implementation of developmental evaluation in innovative medical education programs.

DP 14-8

Post-graduate training in autism-spectrum disorder (ASD) and intellectual disabilities (ID): a review

Zachary Adirim University of Toronto, **Anupam Thakur** University of Toronto

Background/Purpose: People with Autism-spectrum disorder (ASD) and intellectual disabilities (ID) represent a diverse population that have high levels of unmet physical and mental health needs. Robust training of today's health professionals can help bridge this gap. In conducting this review of postgraduate training in ASD and ID, we aim to; i) identify post-graduate training standards available in the literature; ii) explore curriculum content, different pedagogical approaches and evaluation strategies, and consider potential scalability to the broader field.

Methods: To conduct this review, databases searched including OVID, MEDLINE, EMBASE according to relevant MeSH terms and keywords including 'autism', 'intellectual disability', 'developmental disabilities', 'post-graduate training', and 'residency/internship'. Firstly, the titles and abstracts were screened according to inclusion/exclusion criteria, secondly full texts were reviewed, both steps performed by two independent reviewers. This data was then analyzed in order to provide an informed summation of the state of the field currently.

Results & Conclusion: Preliminary results suggest that there may be a paucity of research on clinical and educational programs provided to residents training today. Of the published literature, a variety of curricula developed in pediatrics, psychiatry and

family medicine have been developed, employing such methods as case-based simulation, online workshop, mandatory clinical rotations and didactic lecture models, which when taken together demonstrate the need for further study and innovation. This review can provide a framework for clinical educators developing comprehensive approaches to train future doctors adept at helping those with ID and ASD.

DP 15-2

University of Alberta Professionalism: A Transparent, Supportive, & Consistent Approach to Professionalism Concern Reporting, Process & Intervention

Penelope Smyth University of Alberta, **Bruce Fisher** University of Alberta, **Seema Ganatra** University of Alberta, **Manjula Gowrishankar** University of Alberta, **Britney Jones** University of Alberta, **Cary Ma** University of Alberta, **Sujata Persad** University of Alberta, **Jennifer Walton** University of Alberta, **Sandy Widder** University of Alberta, **Kunimoto Dennis** University of Alberta

Background/Purpose: Although many in medicine have likely experienced mistreatment, few report it. All individuals should feel safe reporting mistreatment and other professionalism concerns and administrators dealing with professionalism concerns must be supported. To accomplish this, organizations need to create systems and resources that are widely known, transparent and accountable.

Summary of the Innovation: Professionalism concerns are submitted through the virtual professionalism 'button'. The Triage Officer acts upon named concerns; actions include communication to the supervising administrator with an Administrator Approach to a Professionalism Concern. This resource outlines: (1) meeting with the subject as per adapted SPIKES professionalism meeting protocol; (2) applying the "misunderstanding, oops, can't, won't" classification model of professionalism; (3) apology as per apology template if appropriate; and (4) undergoing graduated levels of intervention with support throughout from the Office of Professionalism. The actions taken regarding

anonymized professionalism concerns depend on number of concerns submitted, external verification of event, or by Faculty administrator-third party submission.

Conclusion: Our development of an algorithm to professionalism concern reporting with standardized approach to professionalism lapse language, process, and levels of intervention is relatable to administrators, faculty and learners. This process recognizes multiple views of a professionalism incident, while identifying and acting upon unprofessional behaviours that require greater intervention. Our transparency in reporting and intervention has potential to improve workplace safety and culture, expanding resources for administrators, increasing system accountability.

DP 15-3

Knowledge and implementation of current opioid guidelines among health care providers

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Background/Purpose: Due to the magnitude of the opioid crisis, it is imperative to disseminate the current opioid guidelines in order to improve opioid prescribing practices. This study aimed to explore self-perceived knowledge and implementation of current opioid guidelines among healthcare providers, and to assesses the effect of an opioid-related educational intervention.

Summary of the Innovation: A 50-minute presentation on the opioid crisis and guidelines was incorporated in a larger accredited continuing professional development (CPD) event. Sixty-nine HCPs completed the pre-intervention survey, 45% of them also completed a post survey. A 5-point Likert scale was used to estimate their self-reported knowledge and implementation of current opioid guidelines, along with their self-perceived abilities and level of comfort in prescribing opioids (Moore's conceptual framework).

Results: Fifty percent of the participants were familiar with current opioid prescribing protocols and 46%

were implementing them, 62% stated that were able to identify drug seeking behaviors in patients, 82 % knew patients' risk factors and 78% evaluated them before prescribing opioids, 90% indicated that they prescribe non-opioid alternatives, and 35% expressed that they feel comfortable prescribing opioids. Self-reported levels of familiarity with the current opioid prescribing protocols ($p < 0.001$) and knowledge of patients' risk factors for prescribing opioids ($p = 0.012$) increased after the intervention. Improvements in their ability to identify drug seeking behavior in patients ($p = 0.033$), and in their comfort prescribing opioids for chronic non-cancer patients ($p = 0.015$) were also reported.

Conclusion: Healthcare providers' knowledge and implementation of current opioids guidelines need to be strengthened. A single presentation on the opioid crisis and guidelines incorporated within a larger CPD event showed significant gains in self-reported knowledge and skills among health care providers.

DP 15-4

Adjusting to Duty Hour Reforms: Residents' Perception of the Patient Safety Climate in Interdisciplinary Night-Float Rotations

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Background/Purpose: Following duty-hour reforms, residents looked for innovative scheduling models providing safe conditions for learning and patient care. In interdisciplinary night-float rotations, four to six residents from most residency programs collaborated for after-hour cross-coverage of most adult hospitalised patients as part of a Faculty-led rotation. Residents worked sixteen 12-hour night shifts over a month. This efficient but unusual combination of residents and supervisors from different programs needed validation.

Methods: We measured residents' perception of the patient safety climate during implementation of night-float rotations in five Canadian tertiary hospitals. We surveyed 267 residents who had completed the rotation in 2015-2016 with an online version of the Safety Attitudes Questionnaire. First

year residents came from most residency programs, second- and third-year residents came from internal medicine.

Results: 130 residents completed the questionnaire. Scores did not differ across hospitals and residents' years of training for all six safety-related climate factors: teamwork climate, job satisfaction, perceptions of management, safety climate, working conditions and stress recognition.

Conclusion: Simultaneous implementation in five hospitals of a Faculty-led interdisciplinary night-float rotation for most junior residents proved to be logistically feasible and showed similar and reassuring patient safety climate scores.

DP 15-6

Changing the World One Toy at a Time

Michiko Maruyama University of Alberta, **Robert Lederer** University of Alberta

Background/Purpose: There are many educational resources to teach the adult population about cardiovascular disease and living a "heart healthy" lifestyle; however, there are few resources that target the pediatric population. In fact, many of the "pediatric" educational resources are intended for parents or guardians rather than the child.

Summary: Children learn through play. Keeping this in mind, the goal was to create educational toys that will teach children about cardiac anatomy, introduce medical terminology, discuss the importance of cardiac health and encourage a cardiac healthy lifestyle. By combining two unlikely fields, cardiac surgery and toy design, a series of toys were created to explore cardiac health. Low cost and sustainability were key factors in the design. Three toys were created: The "Sternotomy Bear" is a bear with multiple accessories used to teach children about their perioperative experience including details about the surgery, post operative wound care and living cardiac healthy lifestyle. Organami is a series of paper-based three-dimensional anatomical model organs that children and even adults can cut, fold and glue together to learn anatomy. "Suzy the Surgeon" is

a cardiac surgeon action hero intended to encourage young girls to pursue a career in medicine.

Conclusions: The educational toys were very well received and the feedback from the target audience during toy making workshops was positive. By introducing the importance of cardiac health at an early age, a possible long-term outcome is a decrease in the incidence of cardiac disease among the adult population.

DP 16-1

Supports and constraints for memorable palliative care learning: implications for emerging professional identity.

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Background/Purpose: The aging demographic in many areas of the world will require healthcare providers including physicians who embrace this practice as part of their professional identity. Learning in health professions is a process that happens within complex and dynamic workplaces. Using the theoretical framework for learning as becoming: both embodied within an individual and shaped by social interactions within workplace and institutional cultures, this study explored memorable learning in palliative care for family medicine residents. Along with assimilation of knowledge and skill, professional identity is increasingly recognized as a goal of medical education. Through deepening the understanding of what supports and hinders memorable learning, implications for professional identity formation can be explored.

Methods: Using a qualitative approach, we undertook a study of narratives of memorable learning (NMLs) for palliative care recounted by family medicine residents. A thematic framework was developed inductively. The focus of this presentation is the themes of affordances and constraints for memorable learning.

Results: Themes of affordances and constraints for memorable learning was aligned along personal, interpersonal and systemic sub-themes. Learning at

all these levels was identified as memorable, even when it did not support the practice of palliative care.

Conclusion: Learning happens broadly through experience in the socio-cultural milieu of the workplace and factors that support and hinder learning can be addressed at the appropriate level. By creating a reflective and reflexive space within clinical workplaces, the implications of this interplay between the individual and their environment on emerging professional identity can be explored.

DP 16-2

Bringing the voice of primary care to BC Cancer: Results from a province-wide primary care oncology needs assessment

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Background/Purpose: The prevalence of cancer in British Columbia (BC) is growing by approximately 3% per year and the survival rate for all cancers continues to increase. With this marked increase in prevalence and survival rates, there is a need to leverage the expertise of family physicians (FPs) to ensure the increasing demands are met. A province-wide needs assessment was completed to better understand the needs of FPs providing care for patients with cancer in BC.

Methods: The needs assessment was conducted in three phases, with results from each phase informing the next. The phases consisted of nine key informant interviews, followed by a comprehensive online survey, and five focus groups.

Results: Analysis found that FPs see themselves as the key point of contact and psychosocial support for their patients throughout their cancer journey and value being involved in treatment decisions. Clinical knowledge related to cancer is highly variable in FPs and there is a need for more support around transitions in care and managing comorbidities, post-treatment follow-up and late-effects. Family physicians identified gaps in communication channels

between community FPs and cancer providers. Finally, recommendations related to education and resources moved away from tumor-specific education towards more care pathway-based education and resources.

Conclusion: Specific barriers, enablers and support gaps were identified by FPs providing care to their patients with cancer. The findings will inform the development of programming, resources and educational offerings to better support FPs and improve the sustainability of cancer care in BC.

DP 16-4 **Exploring the Meaning and Implications of Emotional Safety in Medical Education Using a Peer Mentoring Initiative**

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Background/Purpose: The medical education field has acknowledged the importance of safe learning spaces for students to reflect on their formative learning experiences. However, little empirical medical education research has explored what constitutes "safety" from the learners' perspectives or exactly how it enables "better" learning.

Methods: In a pilot Peer Mentorship in Medical Education (PMME) program, six residents shared their academic, emotional, and clinical experiences with 16 pre clerkship students over 16 semi-formal, small group sessions that used clinical scenarios. Employing a phenomenological approach, eight medical students from PMME were recruited for semi-structured interviews to gain an understanding of their experience. Transcripts were thematically analyzed integrating social ecological theory.

Results: The learners interpreted safety as not feeling judged, which is related to a belief that their learning activities will not carry consequences. They also indicated that having supportive relationships

amongst the peers and mentors as a key factor shaping their sense of safety. They reported that safety freed them to focus on learning in the present moment without considering the consequences, which enabled them to deepen their relationship with the mentors.

Conclusion: Our findings highlighted how engendering educational safety may empower learners by diverting their focus away from the consequences of actions. This engagement in the moment cultivated flow and enhanced learning engagement. This resulting phenomenon may also affect learners' identity formation, but warrants further research. Overall, learners' improved social experience may foster well-being, while simultaneously creating and enriching self-reinforcing learning environment.

DP 16-5 **Providing Education, Improving Access: Training Nurse Practitioners (NPs) to Provide HIV Treatment and Prevention in British Columbia (BC) - A Novel Interdisciplinary HIV Training Program**

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Background/Purpose: To meet provincial goals of HIV Treatment as Prevention®, including increased access to and maintenance of HIV prevention and care, the College of Registered Nurses of British Columbia, in collaboration with the BC Centre for Excellence in HIV/AIDS (BC-CfE), sought to update prescribing standards and education requirements for NPs in BC.

Summary of the Innovation: A joint working group of NPs and the BC-CfE Clinical Education and Training team identified a list of competencies based on existing HIV prevention and treatment guidelines, and recommendations for training NPs to meet the competencies were developed. To expedite training,

and to address the differing needs of people living with HIV (PLHIV) and those at risk of acquiring HIV, a tiered system was proposed: Tier 1: Treatment for HIV Prevention (PEP/PrEP prescription), and Tier 2: Treatment for PLHIV (ART initiation and management). Both are comprised of online learning and evaluation. Tier 2 also includes the on-site BC-CfE Intensive Preceptorship Training program (previously described: Kang, et al., 2018) and continued support through a mentorship program. Training is prioritized for NPs that work in remote or underserved areas with at-risk populations, e.g. men who have sex with men, people who inject drugs. Tier 1 launches in Fall 2018, while Tier 2 launches in Spring 2019.

Conclusion: This novel program will provide opportunities to expand the role of NPs in the treatment and prevention of HIV infections. In turn, this will increase patients' access to HIV care and prevention. Successful development of this program can serve as an example of interdisciplinary collaborations in training program development.

DP 16-6 A Description of the Professional Identity of Massage Therapists in Ontario

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Background/Purpose: The absence of a strong professional identity leaves healthcare practitioners at risk of role blurring, ethical distress and burnout. Factors that may influence professional identity formation are: the workplace and workplace values, education, professional culture and mentorship, and cumulative professional experience. Massage therapists have been described as having a feeble professional identity; the description of which is not clearly articulated in the literature. The description of a professional identity, in the practitioners' own words, is a first step in understanding the values and beliefs that underpin thinking, actions, and interactions. To explore this, an exploratory sequential mixed methods study was conducted, the results of the qualitative strand are reported here.

Methods: This qualitative description study explored how registered massage therapists (RMTs) in Ontario described their professional identity. Data were collected using semi-structured interviews. Qualitative content analysis was undertaken by two of the researchers.

Results: Participants described six themes related to their professional identity: passion as professional motivation, confidence and competence, the therapeutic relationship, individualized care, patient empowerment and role recognition. Their identity is one of a healthcare provider who may not always feel respected as such.

Conclusion: Understanding professional identity as described by the members of a profession is an opportunity for educators to consider how pre-service education supports, develops, or detracts from an individual's alignment with, and development of, a professional identity. Insights from this profession with fragmented practice patterns can inform other health professions as patterns of specialization increase.

DP 16-8 The transition of International Medical Graduate (IMG) fellows into the ICU team: Identity Gain or Loss?

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Background/Purpose: IMGs play an integral part in health care systems worldwide. The practice of critical care is complex, the inability or delayed ability of IMGs starting a critical care fellowship to adapt to their new training environment and role may be problematic for the trainees and for patient care. We explored how known theories on professional transition apply to the ICU environment with the ultimate goal of developing evidence-informed initiatives to support IMG fellows and ICU teams.

Methods: We conducted 16 individual interviews with IMG fellows who were enrolled in the adult critical care fellowship program of the University of Toronto. Fellow's perceptions of their role and

transition within the ICU team were analyzed through a constructivist grounded theory approach.

Results: Analysis revealed that most of the participants had a limited understanding of the role of a fellow. For many fellows, this uncertainty translated into an initial lack of confidence in their ability to fulfill their role. The multidisciplinary ICU team (composition and roles) was perceived as a huge challenge. Participants reported experiencing many losses: autonomy, appreciation, efficiency, skills, and personal work standards. Fellows maneuvered this period of transition by relying on honed clinical skills, building trust with ICU team members, changing attitudes towards teamwork, or seeking social support.

Conclusion: Our findings show that IMGs who have to transition into the role of a fellow within an interdisciplinary ICU team encounter uncertainties that lead to a dynamic process of collapse and reconstruction of their professional identity.

DP 17-1

Using Mixed Methods and Multiple Data Sources to Assess Comparability of Sites in Clerkship Rotations

Helen Mawdsley University of Manitoba

Background/Purpose: Medical educators are interested in assessing the comparability of sites to determine if students achieve comparable learning, regardless of the site at which they trained. While each site derives masses of data over the course of delivering education, viewing each source of data in isolation may be misleading. The purpose of this study is to consider the value of incorporating several sources of readily available information to provide insight into whether or not sites are comparable.

Summary of the Innovation: A sequential mixed methods design was used to assess comparability of sites. Data available at an individual level included: rotation satisfaction, FITER results, and NBME results. Rotation satisfaction was collected as Likert and narrative responses through an online survey delivered by a learning management system. FITER results included 19 consistent elements across all

rotations, collected as ordinal data. NBME results included NBME status, as well as results. The Kruskal-Wallis test, ANOVA, and Pearson correlation analysis were used on quantitative data. Thematic analysis of narrative comments completed the analysis.

Conclusion: While there is some variability across sites, there is also comparability for learning experience shown. If only one data source was considered, the differences between sites may be unfortunately magnified or diminished. It is recommended to: 1) consider multiple sources of data and mixed methods analysis, when assess comparability of sites in medical education, and 2) consider how organizational data structures and processes can be built to support robust analysis of comparability of sites within medical education programs.

DP 17-4

Halving your Paperwork: The Administrative and Emotional Benefits of Combined CPD and FD forms

Kate Kittner Queen's University, Eleftherios Soleas Queen's University, Allyson James Queen's University, Mikaila De Sousa Queen's University, Carolyn Scott Lee Queen's University

Background/Purpose: Although a highly rewarding and fulfilling endeavour, accrediting Continuing Health Education (CHE) activities generates a significant amount of paperwork. Fulfilling the requirements for Continuing Professional Development (CPD) and Faculty Development (FD) accreditation by the Royal College of Physicians and Surgeons of Canada (RCPSC) and College of Family Physicians of Canada (CFPC) for CHE in our office previously required several separate applications laden with redundancies when both accreditations were sought.

Summary of the Innovation: Prompted by revisions to the accreditation standards of CACME, RCPSC, and CFPC, our office established a working group that reviewed our then separate applications (n=5) and drafted a unified application that would fulfil the requirements for Mainpro+ and Mainport accreditation for both CPD and FD in one document.

This process was iterative and as a bonus, familiarized our accrediting staff with the new requirements as outlined by both colleges.

Conclusion: Applying for programs that sought accreditation from CFPC and RCPSC used to require multiple applications and corresponding forms that created significant redundancy for applicants and reviewers. We successfully expedited the review process by having one form to complete, creating guides that reflect the nature of a sufficiently completed application, and addressing frequently asked questions. We will illustrate the process that we undertook to design the application, how we reconciled all the supplementary documentation, and visually articulate the potential benefits.

DP 17-5

Resident Engagement in Accreditation

Terry Colbourne University of Manitoba, **Adriana Krawchenko-Shawarsky** University of Manitoba, **Jerry Maniate** University of Ottawa, **Margaret Moores** University of Ottawa, **Rani Mungroo** Resident Doctors of Canada

Background/Purpose: Accreditation is a peer-reviewed quality improvement process, playing a significant role in the maintenance of quality postgraduate medical education in Canada. New residency accreditation standards are being implemented in 2018, this brings an opportunity to further engage residents in accreditation. Residents can provide unique perspectives on the quality of their programs, but this perspective is sensitive given their positions as trainees and must be handled differently than other sources.

Methods: From September 2017 to March 2018, the Resident Doctors of Canada (RDoC) developed a pre-accreditation questionnaire to confidentially gather quantitative and qualitative information on residents' overall residency experience, prior to an onsite full accreditation survey. We undertook an in-depth, iterative review of the 80-question RDoC pre-accreditation questionnaire that was developed in 1983 and mapped new questions to the new accreditation standards. Beta-testing took place with RDoC's training committee, board of directors,

national stakeholders and provincial housestaff organizations.

Results: Beta-testing and consultations show that this questionnaire is a valid, reliable and effective instrument for gathering resident feedback. It is being implemented for the Dalhousie University accreditation in November 2018. RDoC will evaluate the implementation of the questionnaire following this accreditation and revise as needed.

Conclusion: The RDoC pre-accreditation questionnaire remains a valid and unique opportunity to integrate resident feedback into the accreditation process in a confidential manner. Results are made available to the resident surveyors on the accreditation survey teams to inform their reviews. RDoC is exploring options to communicate the results to the survey team while ensuring that confidentiality remains paramount.

DP 17-6

Graduate studies for Clinician Educators: a continuum of learning perspective at Laval University

Danielle Saucier Université Laval, **Nathalie Gingras** Université Laval, **Andréane Beaulieu** Université Laval

Background/Purpose: Graduate studies in health professions education are trending. But available Canadian programs are more often aimed at Educational Researchers rather than Clinician Educators, whereas expressed needs favor the later. How can graduate study programs better respond to learners' needs to prepare the future Clinician Educators our institutions also need?

Summary of the Innovation: Université Laval has developed since 2013 a series of complementary graduate programs (see Figure 1) geared toward the competencies expected of Clinician Educators (see Table 1), in a continuum of learning perspective (see Figure 2) where one can register first to a short program then move on to a longer one, building upon previous learning. They are offered online and in French, open to all health professions and facilitated by interprofessional faculty, and highly interactive and practical in format. Our program evaluation

system and admission data confirm that these programs cater to a variety of learning needs and professional contexts, most learners studying part-time. Each program is of interest to health professionals with specific career plans. Most of our graduates engage further in educational leadership positions in their university or clinical institution; they consider having gained a new educational vision as well as specific competencies.

Conclusion: Laval's School of Medicine was able to design and implement graduate programs to train Clinician Educators, within the university's traditional graduate studies system and in a continuum of learning perspective, while responding to societal requests for applied learning experiences and distance-learning formats. This is an impactful addition to traditional Faculty development workshops and Research-oriented Masters programs.

DP 17-7

Conflict of interest numbers after establishing reporting mechanisms in clerkship

Pamela Veale University of Calgary, **Mike Paget** University of Calgary

Background/Purpose: As a response to accreditation standard 12.5: Non-Involvement of Providers of Student Health Services in Student Assessment/Location of Student Health Records, we have a conflict of interest instrument (COI) that we include in our clinical assessments. Knowing about a student/preceptor relationship in advance is difficult for several reasons: unless one party discloses, accessing student medical records is inappropriate and students may not know who their preceptor is prior to arriving on a rotation (particularly those that are scheduled by department). We have a policy (<https://bit.ly/2NB1gvy>), but also needed to monitor the conflicts and ensure there is a mechanism for communication.

Summary of the Innovation: Placing a mandatory COI box in the In Training Evaluation Report (ITER) was our solution with a process to follow up when a conflict is identified. Additionally we expanded our

definition of a conflict beyond patient/preceptor relationships to include having been the student's employer, having a personal relationship with the student and/or their family members. This gave preceptors a way to opt out and forces a communication step with all preceptors.

Conclusion: This has been very effective in 4486 ITERs over 18 months, allowing us to reconcile a small number of conflicts. None were considered to interfere with evaluation. Only one had been a past patient/preceptor relationship.

DP 18-1

A New Technique for Considering Point of View in History of Medicine Research

Carol Nash University of Toronto

Background/Purpose: Historical research in medicine is undertaken to interpret previous work of those engaged in healthcare delivery and medical research from the perspective of currently relevant social concerns. As such, this research is both limited and shaped by social interest. Constructed in this way, historical research does not concentrated on coming to know the narrative of historical figures in medicine from their own point of view. Why investigating and understanding the narrative of these figures is worthwhile is it has the ability to present a fuller and a deeper assessment of medical history unbiased by interpretations of what is socially relevant at the present time.

Summary of the Innovation: A method was undertaken in the historical analysis of the life of Dr. Emily Stowe, Canada's first practicing female physician, using a particular order of questions designed to initially reveal the most obvious and objective aspects of Dr. Stowe's life and then proceeding to examine the more obscure and subjective features.

Conclusion: By using a technique to come to know the life of Dr. Stowe from her point of view rather than in relation to the present concerns of society a well-rounded narrative is revealed, one that shows Dr. Stowe's life to be based on different circumstances and values than normally assumed by historians thus increasing the scope of what is known about Dr.

Stowe and demonstrating how her life can be viewed from her own perspective.

DP 18-2

Was it fair? Evaluating predictors of successful funding to an education scholarship grant

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Background/Purpose: Local education scholarship grants can enable education scholarship and capacity building. Evaluating the impact of such grants requires addressing issues of fairness of structural factors that may influence funding decisions. The University of Toronto, Faculty of Medicine, Education Development Fund (EDF) is a grant that aims to promote scholarship. This project critically examines predictors of success aside from proposal quality in order to evaluate fairness and bias in the EDF's funding decisions.

Methods: Applications to the EDF across 10 funding cycles (2007-2016, n=261) were coded for factors known from the literature to influence funding decisions including person or investigator (PI) level factors: gender, rank, department, qualifications, and experience. Project level factors included methodology type, area of focus, and amount of funding requested. These factors were then used to predict funding decisions; associations were analyzed using chi-squared, multivariate logistic and linear regressions.

Results: 35% of proposals were funded. Two PI level factors had weak associations with funding: academic rank ($\Phi=0.29$) and advanced qualifications ($\Phi=0.13$). Amount of funding requested was a weak but significant predictor (Cohen's $d=0.3$). No other factors were significant and regressions showed poor model fit for predicting funding.

Conclusion: We failed to detect any meaningful predictors of funding outside of overall proposal

quality. This suggests that known structural factors have not unfairly influenced funding decisions although further investigation on the decision making process and the constructions of quality is warranted. Implications for grant program evaluation will be discussed.

DP 18-3

A Critical Review of Representation in Global Oncology Curricula Development and the Influence of Neocolonialism

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Background/Purpose: Homogenization of medical curricula is occurring globally often through the dominance of Western perspectives in educational encounters. The purpose of this study was to assess the issue of socio-political and geographic representation in the development of global oncology curricula.

Methods: This systematic review involved a comprehensive search strategy in Medline, EMBASE and 6 other sources from inception to November 2017. There were no language or date restrictions. Where available, both controlled vocabulary terms and text words were used in the subject components for oncology curriculum/education and humanistic. Two investigators independently reviewed the publications for eligibility. To explore the degree of dominance of western perspectives, an anti-colonial frame was applied to determine representation across a number of axes including sex, culture, geographic sector, among other intersections of power.

Results: 24,316 documents were identified and ultimately 16 were included. Of the 16 curricula, 5(31%) were medical oncology, 5(31%) were radiation oncology, and 4(25%) from surgical oncology. 10 (63%) were published from 2010-2017.

13(81%) curricula originated from Europe. The 16 curricula had 289 authors; 201 were male (70%) and most were from Europe (n=187; 64%) or North America (n=70; 24%). The most common purpose for these curricula were promoting quality patient care (n=11), harmonizing training standards (n=9), and facilitating physician mobility (n=3). The methods for creation of these curricula were most commonly a committee or task force (n= 9). Over time there was an increase in the proportion of female authors and the number of countries represented in the authorship.

Conclusion: Existing global oncology curricula are heavily influenced by Western male authors and as a result may not incorporate relevant socio-cultural perspectives impacting care in diverse geographic settings.

DP 18-4

Barriers and Facilitators to Research by Schulich School of Medicine & Dentistry Physicians Located in Distributed Sites

Lynn Doan Western University, Tommaso Romagnoli Western University, Madeline Taylor Western University, Danny Kim Western University, George Kim Western University

Background/Purpose: Research serves physicians to remain up-to-date and proficient in their fields, however decreases in the number of medical students pursuing physician-scientist careers and a decline in health professionals engaged in research poses a challenge to medical advancement and knowledge translation. Distributed physicians face unique challenges which may act as barriers including patient expectations, time, resources and support. In this study we aim to identify barriers and facilitators to engaging in research for distributed South Western Ontario physicians.

Methods: We developed a semi-structured interview guide querying research history, training and research capacity. In-person interviews were conducted with 54 distributed physicians then transcribed verbatim and analyzed in an immersion and crystallization framework.

Results: Graduate degrees were held by 22.2% of physicians, 39.9% had been involved in research ethics, 25.9% had been involved in securing funding, 29.6% had received research training and 39.9% were currently involved in research. A total of 6 themes were found including time, research training, resources, clinical impact, organization and character. Themes spanned 35 unique codes. Time and resources were most commonly discussed as barriers while character and clinical impact were most commonly discussed as facilitators to research.

Conclusion: A large proportion of distributed physicians are participating in research, however the majority are not. While barriers such as professional time and work-life balance are difficult to remedy at the institutional level, barriers like research skills, accessibility and research culture are factors that provide Canadian medical schools an opportunity to enhance the research capacity of distributed faculty.

DP 18-5

Investigating medical student perceptions of the influence of health science research training on their learning experiences and approach to patient care: A program evaluation study

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Background/Purpose: The Health Science Research (HSR) component of the University of Toronto MD Program's Foundations Curriculum introduces students to research principles and is directed at helping them use research to contribute to improving the health of patients and populations. No published literature exists on medical students' perceptions of the utility and importance of HSR-type curriculums. This study investigated the value and utility of HSR by graduating medical students who completed HSR in 2015-2016.

Methods: A cross-sectional, web-based, 14-item questionnaire investigated perceptions of how HSR prepared MD students to identify, critically appraise

and understand research during clerkship. Demographic information (e.g., age, gender, research experience) was collected. Data was analysed with descriptive statistics and descriptive thematic analysis.

Results: 67/266 students (25%) responded (mean age 27 years; 60% male). HSR was rated most highly in the areas of assessing study validity, determining applicability to patient care and critical appraisal (median rating of 4/5, i.e., 'agree'). Emerging themes from free-text prompts included: a desire for a greater emphasis on critical appraisal, less focus on producing research, and a greater appreciation for the value of research and research methods as clerkship progressed.

Conclusion: Results suggest that students would prefer more exposure to critical appraisal in HSR. They are informing ongoing changes to the curriculum to better address the needs and expectations of students and HSR faculty around teaching and learning critical appraisal. Study outcomes will be shared internally and with other medical schools and health professions organizations to inform undergraduate research educational interventions.

DP 18-7

Evaluation of the effectiveness of a hybrid-course model in the delivery of an introductory program in clinical epidemiology and biostatistics for healthcare professionals

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Background/Purpose: Knowledge in clinical research is an indispensable component of medicine. Yet current literature reports a high percentage of peer reviewed publications misuse statistics and/or study design. Despite the importance of research, traditional medical training is often detached from

research education, leading to sub-optimal research skills in medical professionals.

Summary of the Innovation: The Summer Program in Clinical Epidemiology and Biostatistics (SPICE+B) was developed and implemented at a tertiary care institution in 2013, to address the gap of research skills in medical trainees. The program combines lectures by healthcare professionals, practical exercises, and an online interactive portal. We investigated the professional profiles of attendees and evaluated the short-term effectiveness of the program in enhancing research skills, over a five year implementation period.

Conclusion: To date, 789 people attended SPICE+B. Biomedical/medical trainees and clinical fellows constituted majority of participants (27.4% and 17% respectively), while the lowest percentage comprised of nurses and allied health professionals (4.6%). 51% of attendees reported to have previously taken a course in research methodology. Common reasons for enrolling in SPICE+B included research skills development, (28.2%), networking opportunities with mentors and peers within one's profession in regards to clinical research (18.1%) and gaining marketable skills to advance one's career (17.5%). Overall, attendees were satisfied with the program's content, reported an increased understanding of study design and the critical appraisal of published papers. In addition to the topics presented, suggestions made by participants on additional areas of interest such as reporting clinical data and approaches to data management. The long-term impact of the program in advancing attendees educational and professional pursuits needs further exploration.

DP 18-8

Seeing the Patient: The Use of Portraiture and Narrative to Explore the Lived Experience of Children with Epilepsy and their Caregivers

Wendy Stewart Dalhousie University, **Mark Gilbert** Dalhousie University, **Melanie MacGillivray** Dalhousie University

Background/Purpose: Epilepsy impacts children and their families. The focus is often on medical treatment rather than other daily challenges. The creation of images has been shown to humanize, give voice and empower the people pictured. This innovative project combined portraiture and narrative to explore the experience of children and families living with epilepsy.

Methods: Following REB Approval, the researchers recruited 6 patients aged 5-25 years of age with epilepsy. Project data included: the artists journal chronicling the portraiture process with each participant; recorded interactions between the artist and participants; and follow-up interviews. Narrative data were analyzed using a phenomenological approach to understand the lived experience of the children and their families.

Results: Families find the seizures frightening and modify their life to deal with these fears. Parents and siblings are vigilant in their care of the child with epilepsy. The patients are resilient and often recover quickly while leaving families in fear after seizures. Families worry about their child being accepted given the stigma and fear around seizures. The project captured the relationships children have with their families, and how they have influenced them and others in terms of attributes such as compassion and kindness.

Conclusion: These data provide a deeper understanding of the experiences and needs of patients with epilepsy and their caregivers. The portraits provide a unique perspective on the impact of epilepsy on the children and their families. The paintings and qualitative data are being used in workshops to educate learners and the public about epilepsy and the kinds of supports families need.

DP 19-1

Using Self-Reported Measures of Confidence and Anxiety to Determine the Efficacy of the Surgical Exploration And Discovery (SEAD) Program in Reducing Anxiety and Increasing Confidence in Performing Procedural Skills

Frank Battaglia University of Ottawa, **Emilie Langlois** University of Ottawa, **Marisa Market** University of Ottawa, **John Shin** University of Ottawa, **Christine Seabrook** University of Ottawa, **Tim Brandys** University of Ottawa

Background/Purpose: Clerkship students feel increased anxiety and lack of confidence when it comes to surgery. This study assessed whether participation in Surgical Exploration and Discovery (SEAD), a two-week intensive surgical program that includes career information, simulation workshops and operating room observerships, would help decrease anxiety, increase confidence, and foster interest in a surgical career.

Methods: 30 first year medical students were randomly selected for the SEAD program and 32 were only given the program's instruction manual during the duration of the program serving as the control. At baseline and after the completion of SEAD, both groups were given a survey containing the State Trait Anxiety Inventory that measures self-reported anxiety levels with an adjunct that gauges confidence and interest in a surgical career.

Results: Students who participated in the program showed significant improvements in self-perceived knowledge and confidence for each surgical skill: scrubbing (p-value <0.001, p-value<0.001), maintaining sterility (p-value<0.001, p-value<0.001), and surgical assisting (p-value<0.001, p-value<0.001). However, there was no difference in the average state anxiety with procedural skills (p-value=0.190) between students who participated in SEAD and those who did not. Students who completed SEAD had a notable increase in their interest in pursuing a career in surgery compared to their pre-test (p-value=0.020) and compared to the control group (p-value=0.600).

Conclusion: The SEAD program may increase medical students' confidence and interest in pursuing a surgical career. These results encourage offering medical students with similar opportunities that provide exposure to surgery in pre-clerkship

DP 19-2

Office Emergencies: A Novel Simulation-Based CPD Workshop

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Background/Purpose: Transfer of new knowledge into practice is rarely measured or even observed in CPD activities. Furthermore, most learning objectives of accredited CPD activities offered by medical associations are not designed to promote clinical practice behaviour change. Rather, CPD activities typically assess participants' satisfaction and occasionally a change in knowledge, skills or attitudes. Small group CPD have shown greater potential for behavior change.

Summary of the Innovation: The Knowledge Institute at the Hôpital Montfort, in collaboration with Médecins francophones du Canada, has developed a four-hour CPD simulation workshop on the management of office emergencies for practicing physicians. This project presents the educational framework behind the workshop, the evaluation tool developed to assess behavior change as well as some results. The simulation workshop is based on the competency-based learning approach and on simulation best practice guidelines, with a six-month post evaluation questionnaire. Before the simulation workshop, participants must reflect on their current practice and review pre-course materials. During the simulation workshop, participants are each given the opportunity to act as the leader of a simulated crisis. A debriefing session takes place participants to critically reflect on their performance and identify

areas in need of improvement. Participants complete a self-assessment based on the feedback provided by the instructor and other participants. They are also given the opportunity to complete a personalized development plan based on the workshop.

Conclusion: This type of learning opportunity seems to have decreased participants' anxiety with the use of simulation as a teaching modality. Participants felt that the workshop triggered an interest for them to institute tangible changes in their own settings. This type of experiential learning activity should be more accessible to practicing physicians as it is was noted to be both engaging and enriching for participants as compared to other traditional CPD activities.

DP 19-4

Outside the comfort zone: Evaluation of a simulation-based curriculum in managing agitated patients for paediatric residents

Lindsay Fleming University of Toronto, **Katherine Hick** University of Toronto, **Chetana Kulkarni** University of Toronto, **Sharon Lorber** University of Toronto

Background/Purpose: Given the prevalence of mental health comorbidity in the paediatric population, it is important that paediatric trainees are competent in the management of acute psychiatric emergencies, including agitation. Simulation is used in fields where high-risk decisions must be made safely and rapidly. Limited studies exist to inform the most effective method of training paediatric residents in the management of agitation. Our innovation involved using a simulation-based workshop and evaluated whether it altered paediatric resident knowledge, comfort and competence in the management of agitation.

Summary of the Innovation: Residents enrolled in the Core Paediatrics training program at the Hospital for Sick Children were divided among three groups; Group 1 - a 1-hour academic half-day lecture on agitation management; Group 2 - a simulation-based workshop on managing agitation; and Group 3 - no intervention. Confidence and knowledge were assessed in both the didactic lecture and simulation

groups using a pre- and post- intervention self-efficacy questionnaire and an open-ended clinical vignette. All trainees completed an agitated patient station with blinded examiners as part of their mandatory 2018 in-training OSCE assessment.

Conclusion: Residents who participated in the simulation-based workshop performed better in the agitated-patient OSCE scenario compared to those who participated in the 1-hour didactic lecture and those who received neither. Scores for this scenario did not improve with increased level of training as was seen in other stations, demonstrating a broader knowledge gap. Our project demonstrates that management of acute agitation is a necessary skill for paediatricians which is not being met by current curricular standards. Simulation-based learning may be an effective way of addressing this need.

DP 19-5

Creation and Evaluation of a Standardized Sustainable Curriculum To Teach Perineal Laceration Repair To Maternity Care Providers

Nicolette Caccia University of Toronto, **Kathleen Kline** Ryerson University, **Elena Kiriloff** Ryerson University, **Victoria Evans** Ryerson University, **Vicki Van Wagner** Ryerson University, **Brigit Lynch** McMaster University

Background/Purpose: In 2009 the Ryerson Midwifery Education Program identified the need for a standardized sustainable curriculum to teach perineal laceration repair. In response, a reusable, composite simulation-program consisting of e-modules, video, instructor demonstration, and hands-on workshop was developed. This program provides learners with basic competencies to refine their skills in clinical environments. This curriculum could be used interprofessionally for other undergraduate and early postgraduate maternity care trainees.

Summary of the Innovation: The tripartite curriculum includes: two narrated e-modules (theoretical and practical aspects of management and repair); a narrated video demonstrating a complete repair (added in 2012); and a 3-hour workshop involving live

demonstration of repairs followed by a hands-on 4:1 preceptor supervised practice using pork. This curriculum has been used with 479 midwifery students since 2010 at Ryerson and McMaster universities. To assess the utility of the curriculum participants completed surveys reporting their comprehension at multiple junctures: prior to the e-modules; after watching the video; and after the workshop. The curriculum was rated as highly effective for teaching suturing skills and perineal laceration management. Students reported significant knowledge acquisition from the tripartite curriculum and pork simulated perineum and felt it would be useful in refining their suturing skills during clinical rotations and in early practice

Conclusion: The curriculum appears to provide a high-fidelity, low-cost, standardized method of teaching foundational skills in perineal repair to maternity care learners.

DP 20-2

Performance Assessment Using Prosections In Anatomy Laboratory Teaching

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Background/Purpose: The integrated learning approach is the current mainstream for the medical curriculum. The approach promotes integrated learning of basic, social and clinical sciences and health population, which has demonstrated success in enhancing critical thinking and professionalism for future physicians. However, the integrated curriculum has also resulted in a dramatic reduction in the hours of didactic teaching, which has greatly impacted anatomy laboratories using cadaveric dissection. Many studies have emphasized the central role of cadaveric dissection in acquiring in-depth knowledge of the variations in the human anatomy integral to the safety of clinical practice. Therefore, prosections were introduced as an alternative modality to overcome the challenge of reduced hours for cadaveric dissection. The current study aims to determine the learning outcome using prosections, in comparison to cadaveric dissection, by measuring students' performance.

Methods: Prosections of the reproductive system were chosen as the learning modality, while the other systems used cadaveric dissection. Traditional spot exam was used as the tool of assessment. Students' performance was compared among systems using the two different modalities. In addition, the cohort using prosections was compared to the historical cohort, which used cadaveric dissection. The findings were analyzed using the Student's t-tests.

Results: Students' performance using prosections as a learning modality was not inferior to cadaveric dissection.

Conclusion: Prosections may be deemed an alternative modality to cadaveric dissection to accommodate the reduced hours and to ensure an adequate level of anatomy knowledge for safe clinical practice.

DP 20-5

Case-based learning in undergraduate dermatology medical education

Linda Zhou University of British Columbia, **Annie Liu** University of Toronto, **Andrea Lam** University of Toronto, **Erin Dahlke** University of Toronto

Background/Purpose: The instruction of dermatology can be challenging due to its large scope, heavy clinical nature, and limited curriculum space. Case Based Learning (CBL) is an emerging education paradigm and has no current literature on its use in dermatology.

Methods: Case-based learning was implemented in the pre-clerkship dermatology curriculum at the University of Toronto to three student cohorts (totaling 710 students and 93 tutors) between May 2016 and April 2017. We analyzed assignment performance, pre-and-post-CBL knowledge test scores, and experience surveys on students and tutors. Surveys were evaluated using aggregate descriptive statistics for quantitative data and thematic data analysis for qualitative data. All assessments were anonymous and voluntary.

Results: We received strong positive feedback on the CBL experience, with no score less than 3.8 on a 5-point scale (where 5 indicated "strongly agree" with a

positively-phrased question). Thematic data analysis revealed several key themes, including positive comments for (i) a specialist tutor, (ii) the use of visual media, (iii) and the "mini-cases" style of CBL, while challenges included (iv) a lack of motivation. Group assignments scored high, ranging from 88.9% to 99.3%. Tracked pre-and-post-CBL knowledge test scores showed a 32% (from 42% to 74%) increase in scores after the CBL experience.

Conclusion: CBL in dermatology medical education was well-received by students and tutors, with high scores in content evaluation and knowledge assessment. Future studies should examine optimal delivery methods and its long-term effects on knowledge retention.

DP 20-7

Is it time to get serious about play? A Needs Assessment for Medical Improv in the UME Curriculum

Jaya Tanwani University of Toronto, **Jeremy Rezmovitz** University of Toronto, **Judith Peranson** University of Toronto

Rationale/Background: Although the use and success of theatre (2,3-6,7) and improv (8-9, 10,11) has been documented in health professional education settings (9,12), the utility of a medical improv curriculum has not been, to our knowledge, formally considered in Canadian medical education programs.

Instructional Methods: Improvisational theatre (improv) is a form of collaborative storytelling, in which the actions of participants are unscripted and created spontaneously. Medical improv is an arts-informed education endeavour designed "to improve cognition, communication, and teamwork in the field of medicine"(1).

Target audience: The study's purpose is to investigate what role the humanities are playing in facilitating CanMEDS competencies in the pre-clerkship medical curriculum at the University of Toronto, from the perspective of students. We sought to identify if there is a perceived need for improvement in CanMEDS competency development using medical improv.

Summary/Results: Survey response rate was 26.55% (57 (44.88%) Year 1, 70 (55.12%) Year 2 students). 112 students (88.19%) reported that they perceived a role for the humanities in medical training with 12 students (9.45%) expressing ambivalence. Students indicated that the humanities could foster the Communicator (23.05%) and Health Advocate (19.81%) roles. 101 students (79.53%) were familiar with improv with a range of direct experience. 53.54% expressed interest in participating in improv; Year 2 (52.94%), and female students (60.29%) expressed the most interest. 66.93% reported being unaware that engaging in medical improv may foster CanMEDS competency development. Most students perceived improv's relevance to only the Communicator (32.43%) and Collaborator (26.22%) roles. Few students thought that improv could facilitate the Scholar (2.70%) and Medical Expert (4.32%) roles.

Conclusion: Most students are unfamiliar with the potential of medical improv to promote the acquisition of CanMEDS roles. However, there is significant student interest in participating in improv, establishing the acceptability for consideration of an innovative pilot medical improv curriculum for medical students.

DP 20-8

Multi-modal education approach to enhance the learning of a difficult airway pathway for non-anesthetists in non-operating room settings: The Niagara Health Experience

N. Shira Brown Niagara Health, **John Chirico** Niagara Health, **Melanie Hollidge** Niagara Health, **Helen Caetano** Niagara Health

Background/Purpose: Patients with difficult airways (DA) can present in emergency department (ED) and intensive care units (ICU), where complications are higher compared to operating room (OR) settings. Various guidelines are available for DA management, but the implementation and adaptation at a system level is sparse.

Summary of the Innovation: Niagara Health (NH) is a multi-site organization with 160,000 ED and 40,000

urgent care visits annually. Approximately 0.32% of our ED/UCC visits involve intubations of which 44% have the potential to be difficult. NH designed a quality improvement program to implement a standardized DA Pathway to improve awareness, education, and approach to patients who present with a DA. The education program consists of 6 online modules, pre/post testing and an in-person workshop. The workshop consists of two components: 1) review of the pathway and familiarization of the DA cart contents with hands-on skills practicum; 2) DA simulation scenarios with utilization of the pathway in real time.

Conclusion: To date, 58% of physicians and RT's have attended, and 10% of nurses have attended. One-hundred percent of the participants 'strongly agreed' or 'agreed' that the program enhanced their knowledge. In addition, 98% felt they would change their practice. Narrative themes included improved confidence and comfort. Essential to the success of this program has been the multi-disciplinary involvement, the multimodal educational program, and leadership support. The program represents an enormous human capital and fiscal investment from the institution, but the improvement in approach to patients with a DA are difficult to put a price on.

DP 21-1

Virtual Pathology: An effective teaching tool for Medical Students

Chaya Prasad Western University Of Health Sciences

Background/Purpose: Medical schools' current curriculum includes didactics pathology lectures. Students have no hands on experience with pathology material, such as looking down a microscope and appreciating diagnostic features. Our objective was to provide a realistic view of pathology as practiced in the medical field.

Summary of the Innovation: We implemented a virtual pathology session, in conjunction with standard didactic presentations. Blood and lymph course is a complex topic and is the first year students' introduction to clinical medicine. Complex cases were selected to demonstrate classic disease entities, both benign and malignant. Cases were

obtained from free websites that provides whole slide mounts, with features such as spanning and zooming, just as slides are evaluated by a pathologist in real time using a microscope. Students were asked to complete a survey.

Conclusion: 202 (out of 234) students completed the survey. 73% students (159/202) stated that they did not have a clear understanding of pathology and microscopy. This number increased to 86% (166/202) after the virtual pathology session. 57% of students (116/202) had never seen a pathology glass slide under a microscope. 86% (165/202) of students agreed that they had better appreciation of pathologic features with the virtual session. 66% (134/202) of students wanted to see virtual pathology integrated into other system courses while 72% (146/202) of students wanted a virtual histology session. 64 % of students (130/202) were excited to be part of the cutting edge of technology and being able to experience it in person. We plan to implement virtual pathology in all system courses moving forward.

DP 21-2

Clinical Informatics Competencies Betwixt Canada and the United States: Lessons from a Comparison of Enabling and Sub-Competencies

David Chartash Yale University, **Elizabeth Chen** Brown University, **Marc Rosenman** Northwestern University

Background/Purpose: Since the medical school objectives project in the United States, the inclusion of informatics competencies in medical education has been of interest, furthered by the sub-specialty of clinical informatics. The 2015 CanMEDs revision explicitly mentioned health informatics, in one of the enabling competencies (#1.4). An understanding of the differences and similarities between Canadian and American informatics competencies would support the teaching of digital meta-cognition, as well as the optimized use of the electronic medical record.

Methods: The authors performed a mapping exercise, matching enabling competencies from the CanMEDS 2015 eHealth Working Group report and

sub-competencies from the 2017 ACGME Clinical Informatics program requirements. The subsequent overlap was examined at both a micro and macroscopic level.

Results: There is 51% overlap when the content of the Canadian competencies and American sub-competencies are mapped. The CanMEDS enabling competencies with the most content left unmapped are in the roles of Leader and Collaborator. The enabling competencies with the least content left unmapped are in the roles of Medical Expert, Scholar and Communicator. In the mapping process, the distinct emphasis that Canadian medicine places on patient-centered communication is a feature. The clear articulation that clinical judgment shall not be superseded by the use of the Electronic Medical Record (EMR) is a key component of this feature.

Conclusion: Overall, the American clinical informatics competencies approach the business and operation of medicine using information (technology). This is parallel to the Canadian eHealth competencies, which educate residents towards an understanding of the impact of digitization on clinimetrics, patient care and professional practice.

DP 21-3

One hundred thousand hours: data from a decade on YouTube

David Topps University of Calgary, **Rachel Ellaway** University of Calgary

Background/Purpose: As one of the earliest groups to deploy teaching videos on YouTube, we have seen many trends and changes. However, our Clinisnips channel sustains a high impact rate, despite the evanescent nature of YouTube.

Summary of the Innovation: With over 10 million views and a sustained rate of 2400 views/day, we have been able to apply big data analytic approaches to the impact of our series. Improved context, metadata and activity metrics provide us with a better sense of how to employ and refine these videos. We have developed curation, mashup and annotation tools that enhance the value of these and other videos. Re-use of existing materials significantly reduces production costs. These improvements allow

better integration with other learning materials and curriculum, while decreasing the dependence on Google's limited analytics.

Conclusion: Quality of content is necessary but not sufficient to ensure long term usage. Enabling other groups to easily incorporate your materials into their learning designs, while providing powerful metrics, makes all the difference.

DP 21-4 Smartphone use among medical students at Thammasat medical school: the impact on medical education

Paskorn Sritipsukho Thammasat University

Background/Purpose: Smartphones are increasingly common in personal use and educational spheres. This study aimed to examine behavior and attitude regarding the use of smartphones in their medical education among the medical students.

Methods: A cross-sectional study was performed by recruiting 400 medical students, from the first to sixth years, at the Thammasat medical school. Respondents completed the self-administered questionnaire asking for their attitude and behavior of using smartphones in daily life and for medical education purpose.

Results: The overall response rate was 91.5 %. The mean duration of using smartphones was 6.9 hours (SD=3.5 hours) per day with the mean duration of 1.9 hours (SD=1.2 hours) per day and 4.8 hours (SD=2.8 hours) per day for educational purpose and social-games purpose respectively. Regarding the correlation between hours spent by using smartphones and the grade point averages (GPA) of the students, total spending hours ($r=-0.19$) and spending hours for social-games purpose ($r=-0.32$) were significantly negative-correlated with the GPA. A larger proportion of clinical-year students, the fourth to the sixth years, use medical apps to aid their learning compared to the proportion of pre clinical-year students (81.5% versus 72.6%, $p < 0.009$). The most popular medical apps used by the medical students were Up to date, following by Medscape and Clinical key respectively. A larger proportion of

clinical-year students believed that smartphones were necessary in helping their medical education, compared to the pre clinical-year students (83.2% versus 64.5%, $p < 0.001$). Most students preferred smartphone than textbooks in problem solving in medical learning.

Conclusion: This survey demonstrated that the medical students had positive attitude and practice in using smartphone device in their medical learning. However, negative consequences of smartphones as lower GPA was documented for students who had more spending time of using smartphones for social-games purpose.

DP 21-5 Using Digital Storytelling to Understand the Teaching and Learning of Compassionate Care

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Background/Purpose: Compassionate care is intrinsic to the patient-physician relationship and is foundational to Family Practice; yet this construct is barely mentioned in Canadian Family Medicine postgraduate accreditation documents. Digital storytelling was used to explore how to make the implicit value of compassionate care more explicit for educators and learners.

Methods: Using 8-hour digital storytelling workshops, groups of 5-8 residents, staff physicians and patients from an academic Family Medicine unit created 2-5 min short videos describing personal experiences of compassionate care. During a semi-structured focus group discussion, each group reflected on their digital stories, explored their understanding of compassionate care; identified educational gaps in the teaching and learning of compassionate care; and proposed strategies to enhance/maintain compassionate care during postgraduate training and into clinical practice. Transcripts were subjected to thematic content analysis.

Results: All stakeholder groups defined compassionate care as complex, action-oriented, patient-centered, and self-reflective. Subtle differences included the interplay between life experiences, emotional awareness, medical knowledge and skills; and the fluidity of compassionate care. Lack of role models, positive feedback for displays of compassion, and reflective opportunities were major educational gaps. Strategies to enhance and maintain compassion included: more opportunities for meaningful reflection, addressing the hidden curriculum, practicing "slow medicine," and fostering self-care.

Conclusion: Digital storytelling is an effective educational tool that provided residents and staff physicians with reflective opportunities to enhance and maintain their capacity to deliver compassionate, patient-centered care. Successfully incorporating this tool into existing postgraduate curricula in a way that is sustainable and transformative may be challenging.

DP 21-8

Virtual interactive cases in rheumatology medical education

Linda Zhou University of British Columbia, **Shirley Chow** University of Toronto

Background/Purpose: As health care costs rise, medical education must focus on high-value clinical decision making. To teach and assess efficient resource utilization in rheumatology, online Virtual Interactive Cases (VIC) were developed to simulate real patient encounters to increase price transparency and reinforce cost consciousness.

Methods: VIC modules were distributed to a sample of medical students and internal medicine residents where they assess patients, order appropriate investigations, develop differential diagnosis, and formulate a management plan. Each action was associated with a time and price, with totals compared to ideals. Trainees were evaluated not only on their diagnosis and patient management, but also on the total time, cost, and value of their selected work-up. Trainee responses were tracked anonymously, with opportunity to provide feedback at the end of each case.

Results: Seventeen medical trainees completed a total of 48 VIC modules. On average, trainees spent \$227.52 and 68 virtual minutes on each case, lower than expected. This may have been due to a low management score of 52%, despite an average diagnostic score of 92%. In addition to qualitative feedback, 85.7% felt more comfortable working-up similar cases and 57.1% believed the modules increased their ability to appropriately order cost-conscious rheumatology investigations.

Conclusion: Initial assessment of the VIC rheumatology modules was positive, supporting their role as an effective tool in teaching an approach to rheumatology patients, with an emphasis on resource stewardship. Future directions include expansion of cases based on feedback, wider dissemination, and evaluation of learning retention.

DP 22-3

Providing added value to undergraduate medical education programs: Reliability of accreditation decisions

Danielle Blouin CACMS / CACME, **Shannon Venance** CACMS / CACME

Background/Purpose: UME accreditation includes onsite visits by a team of peers, who rate each accreditation element as Satisfactory-S, Satisfactory with a need for monitoring-SM or Unsatisfactory-U. Two CACMS members review the team report and assign their own ratings to elements. After discussion, the full CACMS (13 voting members) decides on final ratings. Programs are informed of team ratings and of the final CACMS ratings. Differences between these ratings create uncertainty, misperception and stress within programs. This project determined 1) the frequency with which final decisions differ from team ratings and 2) the interrater reliability of accreditation decisions at each step (team-reviewers, reviewers-CACMS, team-CACMS) and across rater categories. This knowledge will quantify the discrepancy risk and identify training needs for teams, reviewers and CACMS members.

Methods: Ratings resulting from visits from 2014-2018 (6 full; 5 limited) were reviewed. Average-

measure intraclass correlation, using a two-way random effects model with absolute agreement, was used to compute the interrater reliability for elements where at least one rating was SM or U (full visits), and for all elements evaluated in limited visits.

Results: 2466 ratings were made on 822 accreditation elements. Final ratings differed from team ratings for 41 (5.0%) elements. Intraclass correlations (191 cases) were: teams-reviewers 0.87 (0.82, 0.90); reviewers-CACMS 0.95 (0.93, 0.96); teams-CACMS 0.83 (0.78, 0.87); across 3 rater categories 0.92 (0.90, 0.94).

Conclusion: Only 5% of team ratings changed in final accreditation decisions. Interrater reliabilities for each pair of raters and overall are excellent, and would be increased by further training and standardization of teams.

DP 22-6

The case-based method to teach population health promotion and prevention in undergraduate MD program

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Background/Purpose: Health promotion and prevention is usually taught with lectures or problem-based methods. This leaves little space for understanding decision making processes underlying population-based programs. In our new competency-based UGME curriculum, the case-based method was chosen to teach these topics to enhance in-depth analysis of adapted real situations encountered in public health.

Summary of the Innovation: Activities were implemented for first-year students during winter 2018. Focus was on population health promotion and prevention, as a complement to individual aspects of prevention (integrated in clinical activities). This best represents the two dimensions of the CanMEDS Health Advocate. Students analyzed, using theoretical models, how different elements are

considered in choosing the best interventions in response to common public health problems. Ten themes were selected, representing domains or types of intervention (eg. outbreak investigation, workplace and environmental health). Objectives were defined with increasing complexity over two years. Case-based method translated into a flipped classroom activity: students read a case and documentation on their own, discussed with pairs in small groups, then brought the discussion in a larger group with teacher. Afterwards, students completed an analysis report. Assessment included written exam and analysis reports scored using a rubric.

Conclusion: Population health promotion and prevention is given an explicit emphasis in the program. Case-based learning activities engage student to analyse public health situations, understand how public health intervention are designed and clarify the roles they can play as health advocate physicians in collaboration with other professionals and organizations.

DP 22-8

Comparing medical student and resident perceptions of preparedness for the third year core surgical clerkship rotation: A needs assessment

Melissa Wood University of Saskatchewan, **Trustin Domes** University of Saskatchewan, **Ron Nguyen** University of Saskatchewan

Background/Purpose: The surgical clerkship is a significant transition associated with stress and challenges for medical students (clerks). We aimed to investigate the perceptions of clerks and residents to the preparedness of clerks, with the goal of identifying elements to include in an orientation video.

Methods: We completed two needs assessment surveys one distributed to (orthopaedic and general) surgery residents and one to clerks already having completed their surgical clerkship. The surveys consisted of multiple choice and short answer questions to determine a baseline perception of clerk preparedness and elements to be included in the

orientation video. Quantitative data were analysed with student's t-test and chi-square testing, and qualitative data analysed using thematic analysis.

Results: A total of 74 clerks and 22 residents completed the surveys. Clerks and residents agreed that on average clerks were slightly to somewhat prepared for surgical rounding, completing a surgical consult and writing surgical orders on day one of their rotation. Clerks perceived themselves as more prepared for practicing operating room etiquette and functioning in the operating room compared to the residents' perceptions. Residents perceived the clerks as more prepared to write surgical notes than the clerks perceived themselves. Clerks rated their preparedness after the current rotation orientation to be slightly to somewhat prepared, while residents perceived clerks to be somewhat prepared.

Conclusion: Clerk's perceptions of themselves were similar but not identical to the residents' perceptions of clerk preparedness. There is potential to improve clerk preparedness and our current surgical clerkship orientation.

DP 23-1

Wellness education to address burnout in medical students

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Background/Purpose: Distress and burnout, known to have negative implications on health and performance, are prevalent among medical students. Integrating wellness lectures as part of the medical school curriculum and exploring students' personality preferences, may aid in the development of effective interventions and the identification of those at risk.

Methods: A prospective study comprised of four, interactive wellness lecture series was conducted in the course of one year with 327 first-year osteopathic medical students. Pre- and post-assessment information were collected using the General Well-

Being Schedule (GWB), Maslach Burnout Inventory-Student Survey (MBI-SS), and Myers-Briggs Type Indicator. To ascertain the prevalence and differences in the variables, descriptive statistics and one-way MANOVAs were performed.

Results: Pre-assessments showed that 22.8% (74/325) of students had severe distress, 58.1% (190/327) had high scores on exhaustion, 32.1% (105/327) cynicism and 67.5%(220/326) with low scores on professional efficacy. Compared to introverts, extroverts noted less depression and greater positive well-being and vitality ($P < 0.01$), including high professional efficacy and low exhaustion and cynicism ($P < 0.05$). Post-wellness education showed that 21.1%(55/261) reported severe distress, 58.6%(154/263) high exhaustion, 54.0% (142/263) high cynicism, and 54.0%(142/263) low professional efficacy, with extroverts showing greater positive well-being scores than introverts ($P < 0.01$).

Conclusion: Distress and burnout are common among first-year osteopathic medical students, with extroverts showing greater resilience compared to introverts. Wellness education is the first step in addressing this issue. Additional efforts, such as a comprehensive program that engages student participation and promotes peer support, are recommended to effectively address wellness in pre-clinical training.

DP 23-2

Put Your Mask On First Before Assisting Others! A Wellness Retreat for Students of Peer Support Groups

Joanie Mélançon Université Laval, **Alexandre Lafleur** Université Laval, **Andrée Vézina** Université Laval, **Joanie Melançon** Université Laval, **Laurence Petitclerc** Université Laval

Background/Purpose: Students in health sciences are at higher risk of burnout and depression when compared with population controls. Peer support and engaging in wellness activities are useful coping mechanisms. Working under the student affairs office, students of peer support groups provide

personal support and academic tutoring. Can Faculty contribute through a wellness retreat to equip those students to be resilient in their own training and in their peer support role?

Summary of the Innovation: Student affairs office organised a three-day wellness retreat for students of peer support groups of the Laval University Faculty of Medicine. The 20 participants were undergraduate students in medicine, physical rehabilitation and graduate students in health sciences research. They slept in a contemporary centre of holistic health within the historic Monastère des augustines (Québec, Canada). Program goals were: experience a wide range of wellness activities, reflect on global health habits, engage in interdisciplinary networking and cultivate peer support skills. The activities encompassed mindfulness meditation, breathing exercises, singing bowls, yoga and ball exercises, tai chi and various discussions on caregivers' roles.

Conclusion: Qualitative data was collected through a group interview and written comments. Participants commented on the importance of having this dedicated time for wellness activities and reflection. They appreciated that the retreat was organised by Faculty leaders, enlightening new activities. They discovered simple relaxation techniques that they wish to share with students in difficulty. The schedule facilitated rest and wealthy health habits that they wish to pursue. Through reflexive activities, sharing common goals and values as caregivers, participants strengthened their group spirit.

DP 23-3 Cultivating Medical Students' Well-Being Through a 4-Year Longitudinal Wellness Curriculum

Camila Velez McGill, **Namta Gupta** McGill, **Pascale Gendreau** McGill

Background/Purpose: Medical students are at a higher risk for depression, anxiety, and burnout than age-matched, college students. Poor psychological well-being among medical students can interfere with learning and success in medical school, decrease quality of life, and negatively impact quality patient

care. Education is a promising tool to enhance medical students' resilience, well-being, and mental health, with a range of educational interventions offering a greater chance of success.

Summary of the Innovation: The WELL Office in the Faculty of Medicine at McGill has developed a novel 4-year longitudinal Wellness Curriculum to address medical students' well-being and resilience, and foster a culture of wellness within the learning environment. As part of the academic MDCM curriculum, the Wellness Curriculum teaches medical students coping and self-care skills from diverse disciplines (e.g., nutrition, psychology, and neuroscience) that are tailored to medical students' unique realities. Students attend lectures and workshops on topics such as mindfulness, resilience, coping strategies, diversity, and healthy relationships, as well as small group reflection and problem solving.

Conclusion: This presentation will explore experiences of Wellness Curriculum design, development, and implementation, with a specific focus on objectives, content, and delivery. Reflections on student feedback will also be provided. This presentation will offer direction, considerations, and recommendations for the development of wellness curriculum and programming within undergraduate medical education.

DP 23-4 The Canadian Federation of Medical Students National Wellness Program: A Comprehensive National Student-Led Innovation

Victor Do University of Alberta, **Stephanie Smith** University of Calgary, **Henry Annan** Dalhousie University, **Franco Rizzuti** University of Calgary

Background/Purpose: A plethora of literature has brought attention to the challenges that medical trainees encounter during medical training. More than one-third of pre-clerkship students report significant burnout during their studies with the number rising to over one-half during clerkship. Furthermore, while trainees enter medical school with similar baseline wellness characteristics to their

age-matched peers, their health and wellness declines significantly in comparison, highlighting the role of the medical training environment has on well-being. Thus, medical students need comprehensive and strategic wellness plans that go beyond programming supports. The CFMS sought to create a national student-led wellness program that better addresses the needs of our student members.

Summary of the Innovation: The NWP is composed of 4 pillars; Awareness, Advocacy, Programming, Resilience and Personal Development. The awareness arm includes student wellness spotlights, which highlight medical student wellness journeys, and themed campaigns coinciding with pre-existing provincial and national campaigns. In fostering strong advocacy, we are strategically representing students on issues such as learner mistreatment, students with disabilities and most importantly bringing about culture change for a health-promoting learning and working environment. Our programming includes the wellness challenge month (over 800 participants, with a majority reporting that their wellness is positively influenced through their participation) and the longitudinal wellness initiative, which focuses on providing resources in the areas of nutrition, mental, physical, financial and social/relationship wellness. In promoting resilience and personal development we are supporting the STRIVE (Simulated Training for Resilience for Various Environments) training program that utilizes the Big4+ concepts. Further we facilitate "Safe Space: Let's Get Real" national discussions for members to collaborate and speak openly about their challenges. This program incorporates the work of over 50 volunteers and content is available to our over 8000 members.

Conclusion: Our program represents the first comprehensive student-led national level medical student wellness program in Canada. We support local member school efforts, while leveraging our position as a national body. Our next steps are to further engage other trainee organizations and faculties as well as undertake a more comprehensive data analysis process.

DP 23-5

Developing and implementing interactive 360-degree video simulations, a form of immersive reality, to prepare learners for emotionally challenging clinical experiences.

Gabriel Blank University of British Columbia, **Joseph Anthony** University of British Columbia, **Gurdeep Parhar** University of British Columbia

Background/Purpose: Promoting mental health, wellness, emotional resiliency and the addressing of learner mistreatment has become an increasingly important goal of health professional training programs. Considering the successful use of virtual reality (VR) in treating specific phobias and training emotional regulation, we proposed that this technology may provide an entirely new means of valuable training. We developed three 360-degree video simulations, a type of VR, each displaying emotionally challenging situations. The 360-degree videos were meant to create environments that were realistic, produced an emotional response, and allowed learners to better prepare to handle challenging clinical scenarios.

Summary of the Innovation: We developed and tested three 360-videos filmed using a cast of professional actors. These simulations were brought to life through an Oculus Go VR Headset and over-ear headphones with Ambisonic Spatial Audio. A post-exposure debriefing guide was created for facilitators to help learners both integrate their experience and develop techniques to handle these challenging clinical scenarios.

Conclusion: Preliminary analysis shows that learners thought the simulations caught their attention, were highly captivating, were enjoyable, and evoked emotions like anxiety and fear in a safe environment. All these factors worked together to create a simulation that was perceived as highly life-like. Having actors look at the camera, including accurate background noises, and using directional audio can improve the educational experience by adding an extra level of realism. In short, VR is a promising medium for training emotional resilience that can be more distributable, scalable, and economically viable than standardized clients.

DP 23-6

Physician Well-being as an Entrustable Professional Activity

Jonathan Gregory Western University, **Javeed Sukhera** Western University, **E. Ali Bateman** Western University

Background/Purpose: Practicing physicians are experiencing high rates of burnout and diminished well-being. When physicians are unwell, patient care is also jeopardized. Although calls for action have led to a surge in research, significant gaps remain in our understanding of the concept of physician well-being, its determinants, and its consequences. Moreover, medical training may perpetuate behaviours and stigmatizing beliefs that erode physician well-being. Recent efforts to reform postgraduate education through competency-based medical education (CBME) provide an opportunity to improve physicians' future health outcomes. Given that commitment to physician health and well-being is now recognized as a core competency for physicians, we propose re-conceptualizing well-being in the context of an entrustable professional activity (EPA).

Methods: The EPA concept translates competencies into clinical practice and facilitates assessment.

Results: Building from the CanMEDS 2015 Framework and informed by a comprehensive literature review, we developed an EPA for physician well-being: "demonstrating commitment to self and physician well-being". We designed four milestones as observable markers of progress for postgraduate learners and propose assessment strategies. Anticipated barriers include variation in beliefs regarding well-being and a lack of research regarding feedback in this area.

Conclusion: The implementation of CBME provides a unique opportunity to develop and sustain educational reforms that enhance well-being. Our proposed EPA for physician well-being has the potential to improve well-being by focusing on desired outcomes despite knowledge gaps. Further research is needed regarding assessment strategies and faculty development to complement the implementation of an EPA related to physician well-being.

DP 23-7

Is Transition to Competency by Design Associated With Faculty Burnout?

Amy Fraser University of Ottawa, **Kerri Ritchie** The Ottawa Hospital, **Devin Sydor** Queen's University, **Caroline Gerin-Lajoie** University of Ottawa

Background/Purpose: Burnout is a work-related syndrome characterized by emotional exhaustion and lack of feelings of accomplishment at work. Stress, lack of control over work, and lack of values alignment with leadership increase risk of burnout. These risks occur during times of institutional change, such as during curriculum redesign. We measured the burnout levels of faculty before and after the introduction of Competency by Design in the Department of Anesthesiology at uOttawa. Increasing levels of burnout could suggest a need for greater faculty support.

Methods: After obtaining ethics approval, we mailed the Maslach Burnout Inventory (MBI) to 120 faculty prior to CBD implementation (2015) and during ongoing rollout of CBD (2017). Participation was voluntary; data was anonymized. Results were compared using standard descriptive summary statistics.

Results: The response rate was 31% (37/120) in 2015, and 24% (27/120) in 2017. Mean scores for MBI subscales of Emotional Exhaustion (EE) and Depersonalization (DP) were 19.1 (SD=5.9) and 11.0 (SD=2.4) respectively in 2015, and 21.8 (SD=7.9) and 11.8 (SD=3.8) in 2017. There was no significant difference in scores between 2015 and 2017; EE $t(65)=-1.60064$, $p > .05$ and DP $t(65)=1.76$, $p > .05$.

Conclusion: The results suggest that faculty did not experience a significant change in levels of burnout after CBD implementation. The literature suggests two possible explanations: 1. People become habituated to new situations (the "hedonic treadmill"); and 2. Perceived feelings of stress do not always align with measured stress. The results of this study may be reassuring to faculty members of programs adopting CBD. Limitations of this study include only two sampling dates, which may have failed to capture transient increases in burnout before or after implementation.

DP 23-8

Does Burnout Predict Teacher Self-Efficacy in Academic Physicians?

Amy Fraser University of Ottawa, **Kerri Ritchie** University of Ottawa, **Devin Sydor** Queen's University, **Caroline Gerin-Lajoie** University of Ottawa

Background/Purpose: Burnout is a work-related syndrome characterized by emotional exhaustion, difficulty finding meaning in work, lack of feelings of accomplishment at work, and difficulty viewing others as people. Teacher self-efficacy (TSE) is a teacher's self-assessment of the ability to successfully help students learn. Previous literature has suggested that burnout and teacher self-efficacy are inversely related. As both physicians and teachers, academic faculty may suffer from burnout, which can have impacts on their perceived effectiveness as teachers. This study investigates the relationship between burnout and TSE in a group of Canadian academic anesthesiologists.

Methods: In 2017, after obtaining research ethics approval, we mailed the Maslach Burnout Inventory

(MBI) and Teacher Self-Efficacy Scale (TSES) to academic anesthesiologists at the University of Ottawa and Queen's University. Participation was voluntary and data was anonymized. Scores from the TSES and the Emotional Exhaustion (EE) subscale of the MBI were analyzed using a t-test for unequal sample sizes. To examine whether EE predicted TSE, a linear regression analysis was used.

Results: The response rate was 24% in Ottawa (29/120) and 33% in Kingston (12/36). There was no significant difference in EE and TSE scores between sites. EE did not predict TSE ($F(1, 38) = .79, p > .05$).

Conclusion: In contrast to published studies, burnout did not predict TSES in this population. This may be because physicians perceive their TSE differently than primary or secondary school teachers, or because the root causes of burnout in academic medicine may be more related to non-teaching activities. Future studies on the relationship between burnout and teaching evaluations generated by students would be helpful to clarify these findings.