Oral Abstracts

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Sunday, April 19th - 08:00-09:30

Oral Presentation

OA 1-1 Documenting the process of using electronic health record data to assess residents' performance: Unveiling an Emergency Medicine resident prototype report card

Stefanie Sebok-Syer Stanford University, **Adam Dukelow** Western University, **Lisa Shepherd** Western University, **Robert Sedran** Western University, **Allison McConnell** Western University, **Lorelei Lingard** Western University

Background/Purpose: Physician report cards are an important aspect of outcomes-based practice and education. Therefore, we investigated how data collected from the electronic health record (EHR) could assess emergency medicine (EM) residents' independent and interdependent clinical performance and how such information can be appropriately represented in an EM resident report card.

Summary of the Innovation: Cerner EHR data were collected from 2017-2018, representing approximately 150,000 patient visits to the Emergency Department and 850 patient encounters, for one randomly selected fifth-year EM resident. A fifth-year resident was used for developing our prototype because we anticipated this performance level affords the best opportunity to look at both independent and interdependent metrics. Once we extracted all EHR data for our randomly selected resident, we developed an EM resident prototype report card that compared the resident's performance to faculty/other residents' performance. Our prototype breaks down EHR data by blocks, which better aligns with the rotation schedules of residents. Depending upon the metric (e.g. number of patients seen, bounce-back rates, or time to fluids/antibiotics), resident data were compared to faculty or year-appropriate residents'. Each metric was accompanied by an explanation of the metric and designation of independent or interdependent based on earlier interviews with faculty and residents. Finally, we present our development timeline and the resident prototype report card.

Conclusion: Our findings document a process for developing resident report cards that incorporates the perspectives of clinical faculty and residents. This work has important implications for capturing residents' contributions to clinical performances by distinguishing between independent and interdependent performance.

OA 1-2 Perceptions of Key Canadian Stakeholders: What are the Philosophies, Principles and Unintended Consequences of CBME?

Kelly Dore McMaster University, **Shiphra Ginsburg** University of Toronto, **Glenn Regehr** University of British Columbia, **Jonathan Sherbino** McMaster University

Background/Purpose: CBME is a global phenomenon that is radically influencing Canadian Residency Education. While the community is actively discussing CBME implementation, they have yet to agree on its underlying philosophy and principles, resulting in misinterpretation and miscommunication in these discussions. This study explored the perceptions of diverse key stakeholders regarding the philosophies, principles and implications of CBME in Canada.

Methods: Researchers identified CBME designers and scholars from diverse perspectives, geographies and professional roles, using snowball sampling after each interview. Transcripts were analyzed with iterative inductive thematic analysis. Initial coding was established with a subset of transcripts by 2 researchers and themes were further developed by the full team.

Results: 17 semi-structured interviews were conducted between September and November 2018. Five recurrent areas of disagreement and/or confusion were identified: Problems with the traditional education model CBME was intended to solve; Philosophies; Principle; Practices; and Unintended Consequences. In addition, it should be noted stakeholders cited different literature and framed their conversations differently. The results highlighted variations in the way CBME is conceptualized, underscoring the need for this conversation, and identified opportunities to improve the way conversations regarding CBME occur. One participant noted that "Common language is useful, but requires trust."

Conclusion: This study highlighted areas of discrepancy and overlap regarding the overarching intent, philosophies and principles of CBME. These initial insights may enable discussions on how to use our areas of agreement and discrepancy to inform more productive conversations and better implementation of CBME. Evident from the interviews, participants wanted to have this discussion.

OA 1-3 Spotting Potential Opportunities for Teachable moments (SPOT)

Spencer Sample McMaster University, **Hussein Al-Rimawi** McMaster University, **Teresa Chan** McMaster University

Background/Purpose: With competency based medical education (CBME), entrustable professional activities (EPAs) are used to evaluate residents on performed clinical duties. This study aimed to determine if implementing a case-based discussion, designed to increase recognition of available EPAs, into CBME orientation would help residents increase the number of EPAs completed.

Methods: We designed an intervention consisting of clinical cases that were reviewed by national EPA experts who identified which EPAs could be assessed from each case. A case-based session was incorporated into the 2019 CBME orientation where Postgraduate Year (PGY)1 residents read the cases and discussed which EPAs could be obtained with PGY2/faculty facilitators. The number of EPAs completed in the first two blocks of PGY1 was determined from local program data. Student's t-test was used to compare averages between cohorts.

Results: We analyzed data from 22 trainees (7 in 2017, 8 in 2018, and 7 in 2019). In the first two blocks of PGY1, the intervention cohort (2019) had a significantly higher average number of EPAs completed per trainee (47.4 [SD 11.8]) than the pre-intervention cohort (25.3 [SD 6.7]) ($p<0.001$) (Cohen's $d=2.3$). No significant difference existed in the number EPAs obtained between the 2017/2018 cohorts, with averages of 24.3 [SD 6.8] and 26.1 [SD 7.0] per trainee respectively ($p=0.6$).

Conclusion: A case-based orientation led by CBME-experienced facilitators nearly doubled the EPA acquisition rate of our PGY1s. The constant EPA acquisition rate between the 2017 and 2018 cohorts suggests this post-intervention increase was not solely based on user familiarity with EPAs.

OA 1-4 The Shift to Competency Based Medical Education in Canada: A Qualitative Study of Resident Experiences

Leora Branfield Day University of Toronto, **Terry Colbourne** University of Manitoba, **Alex Ng** MemorialUniversity of Newfoundland, **Franco Rizzuti** University of Calgary, **Linda Zhou** University of British Columbia, **Rani Mungroo** Resident Doctors of Canada, **Allan McDougall** Canadian Medical Protective Association

Background/Purpose: Competency-based medical education (CBME) has emerged as a new curricular paradigm focused on ensuring that post-medical education graduates are competent to meet patients' needs. As residents are key participants in this educational model, their engagement is key to successful implementation. We explored the perceptions and experiences of residents in Canadian training programs that have implemented CBME.

Methods: Using constructivist grounded theory, we conducted semi-structured interviews with residents training in family medicine and other specialty residency programs. Our resident-led team developed and refined an open-ended interview guide which explored trainee experiences with CBME. Themes were co-constructed alongside our own experiences of CBME using a constant comparative analytic approach.

Results: Residents expressed receptivity towards the goals of CBME but described many challenges to how they experienced these goals in practice. CBME assessments were felt to include a subjectivity of ratings and competence decisions, leading residents to adopt insincere behaviors. Learners described the administrative burden of assessment as overshadowing clinical duties and contributing to both burnout and feelings of anxiety regarding academic progression and professional success. Participants expressed that engaged and supportive faculty had a positive impact on their CBME experiences.

Conclusion: As CBME implementation continues across Canada, we hope educators and residents alike can benefit from this rich, mixed methods evidence on the challenges and opportunities trainees face in their educational experience. Resident perceptions should continue to be explored as a measure of CBME effectiveness and lessons learned should be applied to future initiatives.

OA 1-5 Using a Rapid-Cycle Approach to Evaluate Implementation of Competency-Based Medical Education

Stephanie Baxter Queen's University, **Heather Braund** Queen's University, **Tessa Hanmore** Queen's University, **Nancy Dalgarno** Queen's University

Background/Purpose: Queen's University implemented competency-based medical education (CBME) across all 29 programs on July 1, 2017. The purpose of this study is to describe key stakeholders lived experiences in CBME Foundation of Discipline stage in the Ophthalmology department.

Methods: Using a case study approach, a mixed method rapid-cycle evaluation was conducted during the 2018-2019 academic year. The evaluation consisted of two evaluation cycles with the first round of interviews and focus groups occurring in October 2018 and in March 2019. Residents, faculty, academic advisors, competence committee members, program director, program administrator, and the educational consultant were interviewed. Recommendations were implemented in January 2019 and June 2019.

Results: Stakeholders identified the need to build a shared understanding about how to both trigger assessments and encourage all faculty members to engage in the process. Stakeholders also described how their roles continued to evolve following CBME implementation. Participants discussed how the department functioned and would continue to build understanding about the assessment process. The rapid-cycle evaluation identified the need for streamlining and clarifying specific Entrustable Professional Activities. Stakeholders did suggest a preference for narrative feedback and identified the benefits of the feedback provided.

Conclusion: Rapid-cycle evaluation has been a valuable process for identifying key strengths and recommendations following implementation of a new CBME curriculum. Exploring lived experiences resulted in positive and immediate improvements to the residency program. Both the recommendations and evaluative approach will benefit other

departments and institutions as they implement CBME.

OA 1-6 Written-based progress testing: a scoping review

Debra Pugh Medical Council of Canada, **Vincent Dion** Université de Sherbrooke, **Ilona Bartman** Medical Council of Canada, **Claire Touchie** Medical Council of Canada, **Christina St-Onge** Université de Sherbrooke

Background/Purpose: Progress testing refers to a form of assessment in which a comprehensive test is administered to learners repeatedly over time. The use of progress tests (PT) is increasingly popular. To inform potential users, this scoping review aimed to document barriers, facilitators and potential outcomes to the implementation of written PTs in higher education.

Methods: Arksey and O'Malley's framework was used to identify and summarize the literature on PTs. Six databases were searched. We included articles written in English or French and pertaining to written PTs in higher education. Screening for inclusion criteria was performed by two team members (90% agreement) and then extraction was performed in pairs by the research team. Using a snowball technique additional papers were identified during this process. Thematic analysis was completed through an iterative process.

Results: The initial search strategy yielded 338 papers, of which 92 met inclusion criteria. Using a snowball technique, an additional 229 papers were identified and 8 were ultimately included in our analysis. The majority of PTs used the MCQ format and were relatively long (mean 179 items over 190 minutes). Five major themes were identified through thematic analysis: acceptability (e.g., satisfaction with feedback received), facilitators (e.g., collaboration), barriers (e.g., resource-intensiveness), validity evidence (e.g., psychometric evidence) and outcomes (e.g., impact on learning).

Conclusion: PTs appear to have a positive impact on learning and there is significant validity evidence to support their use. Although the use of PTs is resource and time-intensive, strategies such as collaboration with other institutions may facilitate implementation. PTs appear to have a positive impact on learning and there is significant validity evidence to support their use. Although the use of PTs is resource and time-intensive, strategies such as collaboration with other institutions may facilitate implementation.

OA 2-1 Examining Myths in Assessment: An Opportunity to Advance Trustworthiness in Assessment

Carlos Gomez-Garibello McGill, **Maryam Wagner** McGill, **Valerie Dory**

Background/Purpose: The shift to CBME places a renewed emphasis on assessment. One challenge in this context is that there are myths that affect the trustworthiness of assessment use and interpretations. By identifying myths, we aim to: 1) improve understanding of diverse components of assessment; 2) raise awareness of how to address multiple interpretations emerging from assessment use; and 3) contribute to better assessment practices.

Methods: This presentation draws from a narrative review of the literature in Education and Health Professions Education to identify myths associated with assessment, and uses analogies from Greek mythology to illustrate the underlying misconceptions.

Results: Four myths capture assessment misconceptions: • Assessment development: Similar to the ancient Greeks who consulted the Oracle of Delphi to find THE truth, educators falsely hold the belief that there is a single best assessment framework. • Generation of information: Workplace-based assessment mistakenly assumes that raters-like Zeus - know everything about assessment including rating, and generating feedback, because of their clinical expertise. • Feedback: Clinical teachers' assume that feedback always provides enlightenment to learners, just as Prometheus lighted man's world through fire. Unfortunately, learners will not always use feedback as intended. • Decision-making: Assessment using EPAs assumes that entrustment suggests competence. Like Janus, the Greek god that sees simultaneously into the future and the past, entrustability and competence may be two aspects of learners' performance; they are not synonymous.

Conclusion: Examining these myths provides an opportunity for assessment users to adopt critical

perspectives on assessment, and provides avenues for advancing validation efforts to ensure that uses are supported.

OA 2-2 Using the College of Family Physicians of Canada's(CFPC) Key Features as core competencies for Family Medicine(FM) Entrustable Professional Activities(EPAs); a mapping and validation project.

Keith Wycliffe-Jones University of Calgary, **Jacqueline Hui** University of Calgary, **Joshua Brochu** University of Calgary

Background/Purpose: The CFPC Evaluation Objectives are the basis for FM resident assessment in Canada. These include 99 Priority Topics (PTs), each with their own set of Key Features (KFs). Sufficient sampling of assessment data based on these KFs (n=947) contributes to overall summative decisions about competence and readiness for independent practice. The Calgary FM Residency Program uses 26 EPAs, developed by a Delphi process, to define expected outcomes-of-training. The purpose of this validation study was to map the CFPC KFs to the Calgary EPAs.

Methods: A 2-stage mapping process was utilised. Stage 1 involved 2 independent reviewers selecting KFs as the core competencies for each EPA. Stage 2 involved 13 meetings with a small nominal group who reviewed and accepted/discarded the chosen KFs for each EPA from Step 1. As a secondary activity, the group also assigned KFs to different FM Professional Profile (FMPP) categories.

Results: The average number of KFs assigned to each EPA was 84 (4-482). The range was 1 to 12 EPAs for each KF; 316 KFs were assigned to one EPA and 1 KF was assigned to 12 EPAs. 69 ("orphaned") KFs were not assigned to any EPAs. All of the major FMPP categories, except "scholarship", were represented by the selected KFs

Conclusion: This study directly links the CFPC Key Features to a set of training outcomes (EPAs) developed separately by the Calgary FM Residency Program, adding to the validity of KFs as ground-level, observable behaviours that can be assessed and used to make higher-level decisions about competence in Family Medicine.

OA 2-3 Sorry to bother you: Requesting and providing clinical support on clinical teaching units

Tristen Gilchrist University of British Columbia, **Rose Hatala** University of British Columbia, **Andrea Gingerich** University of British Columbia

Background/Purpose: Competency-based medical education propelled entrustable professional activities into the spotlight. While research has highlighted factors influencing supervisor entrustment of trainees, there has been less focus on how residents influence their own entrustment. We explored how residents request clinical support and how those requests impact provision of clinical support and subsequent levels of supervision.

Methods: We observed and interviewed four attending-resident dyads on internal medicine Clinical Teaching Units (CTUs) at UBC once per week for 2 weeks. Employing case study methodology, we first analyzed the dyadic relationships through a narrative lens. We then identified sentinel incidents to examine requests for and provision of clinical support. Finally, we used help-seeking and entrustment as sensitizing concepts to analyze data within-case, between-case, and cross-case to develop themes.

Results: When residents directly requested clinical support, it was provided. When they indirectly asked for support using body language or texting updates about patients, attendings often failed to recognize it as a request for support. The requests did not affect attending's judgment of the resident's competence. Provision of clinical support did not impact subsequent supervision. In fact, evidence of competence judgments impacting assignment of activities or level of supervision was lacking.

Conclusion: Residents use various strategies for requesting clinical support with some resulting in miscommunication. Seeking help did not adversely impact judgments of competence or subsequent levels of supervision. However, the link between resident competence and supervision was not obvious and requires further study if entrustment scales are to be used to assess residents on CTU.

OA 2-4 Bridging Role Conceptualizations to Entrustment in Athletic Therapy

Jeffrey Owen University of Calgary, **Mark Lafave** Mount Royal University, **Michelle Yeo** Mount Royal University, **Maria Palacios Mackay** Universidad San Sebastián, **Elizabeth Oddone Paolucci** University of Calgary

Background/Purpose: Pursuing efficient assessment of trainees in clinical practice is especially valuable for athletic therapy (AT) as a health care profession transitioning to competency-based education (CBE). Entrustment scales are used as authentic indicators of competence that bridge assessment with supervisors' decisions to grant trainees autonomy in executing specific tasks. To lay the groundwork for developing AT entrustable professional activities (EPAs) and to enhance assessment efficiency, we investigated the entrustment processes described by AT supervisors for appropriate language to develop an AT entrustment scale.

Methods: Semi-structured interviews were conducted with 14 AT clinical educators from various Canadian practice environments. We used directed content analysis to extract, describe, and order entrustment processes based on student autonomy. We then mapped criteria from three predominant medical education entrustment scales to the ordered AT entrustment processes and compared language using summative content analysis.

Results: In clinic settings, AT students may be permitted to "observe"; replicate the supervisor's actions or techniques; "assist" with a component of patient care; "lead" with periodic supervisor consultation; and "make [patient care] decisions on their own". These entrustment 'checkpoints' resemble ten Cate's five levels of supervision (2013), although field (sport) autonomy in AT is described with different language.

Conclusion: Two entrustment scales reflecting levels of trainee autonomy in the clinic and field settings of AT may act to streamline daily assessment in CBE. Further, compiling entrustment data could aid programs with assigning practicum placements based on site-specific requirements identified by supervisors.

OA 2-5 It's a Matter of Trust: Faculty perceptions of an entrustment scale in Family Medicine maternity care assessment

Milena Forte University of Toronto, **Natalie Morson** University of Toronto, **Natasha Mirchandani** University of Toronto, **Warren Rubenstein** University of Toronto, **Batya Grundland** University of Toronto, **Oshan Fernando** Western University

Background/Purpose: While entrustment scales (ES) have come into favour in an era of competency-based medical education (CBME), little research exists on how teachers make entrustment decisions using these scales. There is controversy in the literature as to how much faculty development is required prior to transitoning from traditional rating scales to ES. To explore this, we conducted cognitive interviews with teachers who had used a validated ES for family medicine maternity care assessments. We asked the teachers what the anchors meant to them and how they decided when to use them.

Methods: We used purposive sampling and conducted 14 cognitive interviews with faculty who had completed at least 2 entrustment-based assessments in family medicine maternity care over the last 6 mos. Interviews were recorded and transcribed. A constant comparison approach was used to code and analyze the data using NVivo 11 until consensus was reached regarding emerging themes.

Results: Themes: 1. Teachers interpretation of the anchors varied based on their own experience and values. 2.Teachers reported that entrustment scales better allowed them to objectively report on a resident's observed behaviour as compared to traditional rating scales, however their evaluations belied that they often struggled to limit their assessments to a report of observable behaviour, choosing instead to use the form to provide summative judgments.

Conclusion: Entrustment scales hold much promise, but teachers would likely benefit from faculty development including the use of a shared mental model to maximize their potential use in CBME

OA 2-6 Pharmacy students use guided reflection and entrustment (EPA) assessments to appraise 'secret' patient/pharmacist encounters in the self-care community workplace

Debra Sibbald University of Toronto

Background/Purpose: Pharmacists are entrusted to help patients minimize risks and maximize benefits when self-selecting treatment for minor ailments. Patients often initially access the Internet for advice. Undergraduates must understand and assimilate both patient and pharmacist perspectives on their path to self-regulated practice.

Methods: Second year (pre-clinical) students (n= 240) posed as patients seeking a pharmacist's advice in a community pharmacy, after having reviewed Internet sources. Using structured guided reflection, they analyzed relevant aspects of the encounter, completed an EPA assessment of the observed pharmacist and proposed measures to personally optimize implementation of this responsibility when in practice. Perceptions were analyzed from observations, reports, surveys, class discussions and interviews. EPA rankings (anchored to 5 levels of supervision) were tabulated.

Results: Student reflections, as patients, highlighted themes of entrustment and confidence in the pharmacist as an authoritative resource. As prospective pharmacists, they evaluated the clinician in terms of best practice guidelines, competencies demonstrated, barriers observed during the consultation and feelings about their future professional role. EPA reports rated the majority of pharmacists able to practice independently/unsupervised and 20% as role-models/able to supervise others. Time constraints for communication, rather than content expertise, was the primary obstacle.

Conclusion: Students valued this contextual opportunity to directly experience competencies required for patient care prior to their clinical year: subject expertise, communication, collaboration, professionalism, advocacy and scholarship. Assessing practitioners' level of entrustment was considered transformative in reinforcing the importance of expertly performing this professional role with appropriate time management once in practice.

OA 3-1 Developmental Progress Assessment: A Scoping Review

Christina St-Onge Université de Sherbrooke, **Élise Vachon Lachiver** Université de Sherbrooke, **Serge Langevin** Université de Sherbrooke, **Elisabeth Boileau** Université de Sherbrooke, **Frédéric Bernier** Université de Sherbrooke, **Aliki Thomas** McGill

Background/Purpose: Educators and researchers recently implemented developmental progress assessment (DPA) in the context of competency-based education. To reap its anticipated benefits, much still remains to be understood about its implementation. In this study, we aimed to determine the nature and extent of the current evidence on DPA, in an effort to broaden our understanding of the major goals and intended outcomes of DPA as well as how it has been executed in, or applied across, educational contexts.

Methods: We conducted a scoping study informed by Arksey and O'Malley's methodology. Our search strategy yielded 2496 articles. Two team members screened them for inclusion/exclusion (90% agreement), and extracted numerical and qualitative data from 56 articles based on a pre-defined set of charting categories. The thematic analysis of the qualitative data was completed with iterative consultations and discussions until consensus was achieved for the interpretation of the results.

Results: Tools used to document DPA include scales, milestones, and portfolios. Performances were observed in clinical or standardized contexts. We identified seven major themes in our qualitative thematic analysis: 1- Underlying aims of DPA, 2- Sources of information, 3- Barriers, 4- Contextual factors that can act as barriers or facilitators to the implementation of DPA, 5- Facilitators, 6- Observed outcomes, and 7- Documented validity evidences.

Conclusion: Developmental progress assessment seems to fill a need in the training of future competent health professionals. However, moving forward with a widespread implementation of DPA, factors such as lack of access to user-friendly technology and time to observe performance may

render its operationalisation burdensome in the context of CBME.

OA 3-2 When we talk about "Assessment for learning" what does it imply?

Elise Vachon Lachiver Université de Sherbrooke, **Maude Lemay** Bishop's University, **Christina St-Onge** Université de Sherbrooke, **Aliki Thomas** McGill, **Meghan McConnell** University of Ottawa

Background/Purpose: Researchers and educators often import concepts or approaches from educational and social sciences into health professions education (HPE). One such example is "Assessment For Learning (AFL)", which is increasing in popularity with the widespread implementation of Competency-based Medical Education (CBME). However, there seem to be several conceptualizations of this concept proposed in the literature. Our aim was to document the breadth and depth of the literature on AFL to inform its use in HPE research and practice.

Methods: We conducted a scoping study informed by Arksey and O'Malley's methodology. Our search strategy yielded 5239 articles. Two team members screened the abstract and included 229 articles in the final review. We extracted numerical and qualitative data based on a pre-defined set of extraction categories. Descriptive analyses were conducted for numerical data, and thematic analysis was conducted on qualitative data.

Results: 20% of the articles we included for full text review had definitions that did not correspond to the use of AFL. We observed an increase in the number of articles published between 1995 and 2019. 31% of the articles were published in HPE, while the remaining articles were published in other disciplines. AFL is at the interface of many concepts (e.g., feedback, test-enhanced learning, competency-based education) which contributes to its complexity. Authors seem to confuse AFL and formative assessment.

Conclusion: The complex nature of AFL may render it difficult to achieve a unified definition. In addition, the lack of uniformity in conceptualizations may hinder our understanding and implementation of AFL. Our aim is to build on these towards the operationalization and implementation of this evaluative approach in the concept of widespread implementation of CBME.

OA 3-3 The Representative Model for Educational Impact of Assessment Program on Medical Students' Learning

Mohammad Jalili Tehran University of Medical Sciences, **Azadeh Kordestani Moghadam** , **Hamidreza Khankeh**

Background/Purpose: Assessment strongly affects students' performance. A deeper insight needs be gained into the interplay of assessment and learning. The aim of the current study was to develop a model to explain the educational impact of assessments on students' learning, before, during and after the test.

Methods: This study used semi-structured interviews (8 medical students, 7 faculty members, 1 administrative staff involved in assessment), one focus group discussion (5 medical students), and observation. An iterative purposive sampling technique was used to recruit participants according to their first-hand experience or expertise in assessment. Selection of participants to theoretical saturation continued. A qualitative paradigm using grounded theory inquiry approach of Strauss and Corbin was then used to generate an explanation of the process of how assessment system impacts students' learning.

Results: The result of this study was the production of middle range theory with the core variable of "Little attention to assessment for learning". Other related concepts include "Structural factors affecting learning," "Strategies of learning and success in the test," and "consequences of assessment." Our diagrammatic model depicts the factors, mechanisms, and the outcomes of the assessment on learning within the context.

Conclusion: Considering the important role of assessment in the educational process, understanding how assessment affects learning is an important issue to consider when designing a proper assessment system. The results of this study and the suggested model for educational impact of assessment on students learning can help educators design assessments for better learning.

OA 3-4 Validation of a grid to document the quality of structured reflection when implemented as a learning strategy at the UGME level

Élise Vachon Lachiver Université de Sherbrooke, **Martine Chamberland** Université de Sherbrooke, **Jean Setrakian** Université de Sherbrooke, **Mélanie Marceau** Université de Sherbrooke, **Julie Ouellet** Université de Sherbrooke, **Christian Campagna** Université de Sherbrooke, **Linda Bergeron** Université de Sherbrooke, **Christina St-Onge** Université de Sherbrooke

Background/Purpose: We implemented a learning activity at the UGME level that requires students to complete a structured reflection (SR) grid, while solving problems with the purpose to help them develop their diagnostic reasoning. While SR has been studied in experimental settings, no tool exists to document how students use it when implemented in a curriculum. Thus, we created and proceeded to the validation of a tool to document the quality of students' SR.

Methods: Informed by the Unified Theory of Validity, we documented evidences of content (narrative description of development), internal structure (rater agreement using intra-class correlations; item analysis and internal consistency), and response processes (descriptive statistics). The analyses were done on 3 datasets (27 and 15-SR scored by 2 raters; 90-SR scored by 1 rater).

Results: The tool to document the quality of SR is comprised of four indicators: 1) Diagnostic hypothesis (dx): a) relevance and b) specificity; 2) Elements supporting dx, 3) Elements against dx:, 4) Elements expected but not present in the case: a) relevance and b) elaboration. ICCs on the 27- and 15- double-scored SR were: .82 (1st indicator), .80 (2nd), .89 (3rd), and .88 (4th), and .76, .75, .78, and, .84 respectively. Cronbach's alpha was .795 for the 90 individually scored RS. Item difficulty coefficients ranged from .04 to .94, while discrimination coefficients ranged from .031 to .489. Descriptive analyses showed that students used the SR grid to compare and contrast dx.

Conclusion: We created a tool to describe students' SR. Our findings suggest that the tool can be standardized and thus can provide data for research purposes or to give feedback to trainees and/or program administrators.

OA 3-5 Développement et validation d'une fiche de rétroaction francophone pour l'observation directe des résidents dans les programmes de médecine familiale au Canada - phase 1 : étude de besoins et validation de contenu

Miriam Lacasse Université Laval, **Luc Côté** Université Laval, **Gabrielle Hogue** Université Laval, **Pascal Lalancette** Université Laval, **Jean-Sébastien Renaud** Université Laval, **Christian Rheault** Université Laval, **Marion Dove** McGill, **Marie-Pierre Codsi** Université de Montréal, **Lyne Pitre** University of Ottawa, **Luce Pélissier-Simard** Université de Sherbrooke

Background/Purpose: L'évaluation programmatique encourage la rétroaction quotidienne, en particulier via l'observation directe (OD). Toutefois, aucun outil de rétroaction francophone pour l'OD (ORFOD) validé n'est disponible en médecine familiale (MF) au Canada. Cette étude visait à identifier les besoins normatifs, prescrits et perçus, pour développer et valider le contenu d'un ORFOD en MF.

Methods: Une revue des ORFOD utilisés dans les programmes canadiens de MF et de la littérature abordant l'OD en éducation médicale postgraduée (Pubmed, ERIC, Educational Source et CINAHL) a identifié les formats/contenus existants, ainsi que les besoins normatifs et prescrits au sujet de l'OD. Ces résultats ont été présentés à des cliniciens enseignants et résidents de 5 programmes de MF canadiens lors de groupes de discussion, dont l'analyse thématique de contenu a mis en évidence les besoins perçus (format/contenu souhaités).

Results: 18 outils locaux et 31 outils publiés ont été répertoriés. Les outils publiés étaient surtout de format critérié (n=19) ou liste à cocher (n=8); seulement 6 avaient été utilisés en MF. Les besoins normatifs ont été tirés des normes d'agrément du CMFC, et les besoins prescrits, de lignes directrices sur l'OD. 18 superviseurs et 4 résidents ont participé à un des groupes de discussion sur les besoins perçus. Un ORFOD conforme aux besoins identifiés (format narratif avec guide d'observation; contenu adapté au

niveau de résidence et au contexte clinique) a été conçu, puis soumis aux participants pour validation.

Conclusion: Cette étude a permis de développer et de valider le contenu d'un ORFOD conforme aux besoins normatifs, prescrits et perçus dans les sites francophones d'enseignement de la MF au Canada.

OA 3-6 The Role of Previously Undocumented Data in the Assessment of Medical Trainees in Clinical Competency Committees

Jennifer Tam University of British Columbia, **Glenn Regehr** University of British Columbia, **Anupma Wadhwa** University of Toronto, **Maria Athina (Tina) Martimianakis** University of Toronto, **Oshan Fernando** University of Toronto

Background/Purpose: The clinical competency committee (CCC) comprises a group of clinical faculty tasked with assessing a medical trainee's progress from multiple data sources. Current guidelines regarding the utilization of previously undocumented data (PUD) introduced in the CCC meeting are conflicting. This study explored the use of PUD in conjunction with documented data in creating a meaningful assessment in a CCC.

Methods: An instrumental case study of a CCC that uses PUD was conducted. A single CCC meeting was observed, followed by semi-structured individual interviews with all CCC members (n=7). Meeting and interview transcripts were analyzed using constructive grounded theory approaches.

Results: Informal PUD were introduced as summary impressions, contextualizing factors, personal anecdotes, and rarely, hearsay. The purpose was to raise a potential issue for discussion, enhance an impression, or counter an impression. PUD supported the co-construction of a developmentally-focused trainee assessment. Various mechanisms allowed for the responsible use of PUD: embedding PUD within a structured format; sharing relevant information without commenting beyond one's limitations; clarifying allowable disclosure of personal contextual factors with the trainee pre-meeting; excluding PUD not widely agreed upon in decision-making; and providing direct in-the-moment feedback to trainees pre-meeting. Documented data were perceived as limited by inaccurate or superficial data.

Conclusion: PUD appear to play a vital part of the group conversation in a CCC to create meaningful, developmentally-focused trainee assessments that cannot be achieved by documented data alone. Consideration should be given to ensuring the thoughtful incorporation of PUD as an essential part of the CCC assessment process.

OA 4-1 Health Humanities and Social Accountability in Action: Working Collaboratively across Disciplines and Communities

Pamela Brett-MacLean University of Alberta, **Hollis Lai** University of Alberta, **Tracey Hillier** University of Alberta, **Helly Goez** University of Alberta, **Helly Goez** University of Alberta

Background/Purpose: To promote development of caring and effective physicians, health humanities content and approaches are increasingly being introduced in medical education using different modalities, in different ways. Such integration has informed knowledge transmission, inquiry-based discovery, and other innovative processes and transformative experiences directed to democratizing medicine "for the public good" (Bleakley, 2012). Positive learning outcomes most often associated with introduction of the arts and humanities include content mastery and skills-based outcomes, such as enhanced communication, critical thinking, and ability to work on teams.

Summary of the Innovation: We have developed a robust method aligning health humanities and social accountability curriculum planning to adapt knowledge relevant to practice, responding to demands from the community to meet societal needs, and helping to fulfill medicine's social accountability. This method combines curriculum mapping with a community-engaged approach to identifying curricular gaps, as well as co-developing objectives and educational modules with community partners.

Conclusion: This approach to modularizing social accountability content ensures an evolving, responsive curriculum design that is sustainable,

evidence-based, reviewed by multiple experts-including community partners, involves active, engaged learning, and translates to other practices. Our Graduation Questionnaire results point to transformational outcomes: improved knowledge retention, and increased student preparedness to provide care informed by diversity, health equity, and humanistic lenses. Community satisfaction with our process and outcomes has been demonstrated in public forums. Bleakley (2012). Foreword. InSight: Visualizing health humanities; www.insighthumanities.ca

OA 4-2 The competency profile of the socially responsible health professional: citizens' points of view

Emmanuelle Careau Université Laval, **Marie-Claire Bérubé** Université Laval, **Émélie Provost** Université Laval, **Julien Poitras** Université Laval

Background/Purpose: According to the principles of social accountability, medical schools now have the obligation to train future health professionals to act appropriately in society and to collaborate to reform the health system so that it is relevant, high quality, efficient, equitable and sustainable for the benefit of the local communities, the country and the international community. But what particular set of competences is expected for students to develop regarding social accountability? Currently, more generic sets of competencies (e.g. CanMEDS) are not sufficiently detailed in terms of social accountability to allow programs to focus on what to do to train more socially responsible professionals.

Summary of the Innovation: To answer this question, Université Laval's Faculty of Medicine organized three citizen forums, in three different regions in the province of Quebec, to co-build the competency profile of the socially responsible health professional with citizens. Using a world cafe approach, citizens identified abilities they considered "socially responsible" based on situations they had personally experienced. A qualitative content analysis was then conducted in order to categorize these elements and propose a competency profile specific to social responsibility.

Conclusion: The competency profile developed to describe the socially responsible professional is composed of seven themes: 1) emotional and social intelligence 2) partnership with the patient 3) interprofessional collaboration 4) systemic thinking of health 5) systemic thinking management 6) anchoring in the community 7) ethics and social commitment.

OA 4-3 How to follow a more « socially accountable » institutional strategic planning: the Université Laval's Faculté de médecine experience

Emmanuelle Careau Université Laval, **Geneviève Bhérer** Université Laval, **Marie-Chantal Denis** Université Laval, **Caroline Dugal** Université Laval, **Patrice Lemay** Université Laval, **Julien Poitras** Université Laval

Background/Purpose: According to AAMC, strategic plans, and strategic planning, focus on articulating specific future goals or desired outcomes for medical schools and developing plans of action designed to achieve those goals. While a strategic plan is the formal documentation of a strategy, strategic planning is the specific process used to create the plan. Even if this process generally comes from the top of an organization, it must provide an opportunity to engage the community in developing the plan. However, it is not always easy to engage a variety of stakeholders in activities that go beyond simple consultation in an efficient way.

Summary of the Innovation: Through its commitment to social accountability, Université Laval's Faculté de médecine developed an innovative process of strategic planning to collectively built its 2020-2025 strategic plan. The process involved more than 400 healthcare professionals and managers, faculty members, employees, students, and citizens. First, the data collected through structured participative sessions (world café and citizen forums) were qualitatively categorized using the SWOT framework. Then a second thematic qualitative analysis was inductively conducted to identify emerging themes that will become the strategic orientations. Those themes were crossed with the three strategic axis of the Université Laval institutional plan to adopt nine strategic objectives. Web consultation and additional working sessions

allow to develop the operational objectives and means to be included in the action plan.

Conclusion: The strategic planning followed by ULaval's Faculté de médecine is considered as an effective and socially accountable process to collectively develop a strategic plan. In addition of engaging the entire community, it quickly creates a sense of ownership in the process.

OA 4-4 Evaluating the scope of social accountability in medical student summer research projects

Desiree Naude University of Saskatchewan, **Erin Walling** University of Saskatchewan, **Marcel D'Eon** University of Saskatchewan

Background/Purpose: Building social accountability (SA) into research is an important priority and expectation of medical schools. It is therefore necessary to evaluate to what extent research conducted within medical schools includes elements of SA. We aimed to create a tool to determine the degree of SA in medical student summer research project (MSSRP) proposals as a whole.

Summary of the Innovation: We developed a draft tool based on a search of the literature, meetings with faculty and staff, other similar resources and from analysis of MSSRPs themselves. Four independent reviewers used the tool on six randomly selected proposals to ascertain consistency and reproducibility of results. We then modified the tool and one author (DN) used it to evaluate 187 MSSRP proposals from 2018 and 2019. The final tool focused on evaluating equity, and community engagement in research proposals. We found low levels of social accountability. In 2018 and 2019, we found no evidence of any SA in 57.8% of proposals. The average equity score was 16.5%, the average community engagement score was 8.8%, and the total SA average over 187 proposals was 14.0%.

Conclusion: We created a tool that we used to evaluate the level of SA in MSSRP proposals and which other institutions can use to evaluate their own research. The process of developing this tool helped refine and operationalize a working definition of social accountability.

OA 4-5 Developing a Social Accountability Praxis: How Students Perspectives Change Across Undergraduate Medical Education

Erin Cameron Northern Ontario School of Medicine, **Jacqueline Harvey** Northern Ontario School of Medicine, **Holly Fleming** Northern Ontario School of Medicine

Background/Purpose: The World Health Organization has called for more socially accountable models of medical education. To date, service learning, student-led clinics, and explicit medical school mandates have been shown to facilitate the teaching and learning of social accountability in medical schools. Given that social accountability is a guiding principle within many medical schools, there is a need for more research to help bring to light pedagogical processes for developing social accountability and how such processes are experienced by learners. Thus, the purpose of this study was to explore undergraduate medical students' experiences and perspectives on social accountability.

Methods: Using a retrospective exploratory qualitative design, thirteen one-on-one semi-structured interviews were completed with undergraduate students in Year one through four. Each interview was recorded, transcribed verbatim, and analyzed by two researchers independently.

Results: Students described two types of praxis needed to develop a social accountability framework through medical school: (a) relationality praxis developed through interaction with mentors who use social accountability in their own practice and by listening to and understanding different voices and perspectives on social accountability; and (b) professional place praxis which recognizes the place bound and place dependency of social accountability and its specificity to a community.

Conclusion: Social accountability is now a central feature of medical schools in Canada. This study highlights how important relationality and place are foundational to the teaching and learning of social accountability. Lastly, engaging student perspectives is imperative for understanding how social accountability is transforming medical education.

OA 4-6 The distribution of available medical school opportunities in Canada by province of residence

Lawrence Grierson McMaster University, **Meredith Vanstone** McMaster University

Background/Purpose: Most Canadian medical schools apply admissions policies to allocate seats according to the applicant's province or territory of residence. The preferential selection of regional students may mean that access to medical school is inequitable, and higher performing students from particular provinces are disadvantaged.

Methods: Through review of publicly available data from multiple sources, this descriptive policy analysis determined the number of medical school seats that are potentially available to applicants from each province and territory. The comparative availability of medical school seats for applicants from each province or territory was then established as a function of the total number of available seats in Canada, regional application pressure, and estimates of the total possible regional application pressure.

Results: The results show that applicants from Quebec were afforded the greatest number of potential seats (1761), while those from Saskatchewan are afforded the fewest (1006). When considered with respect to application pressure, the greatest number of seats per applicant were realized for applicants from NWT/NVT (90.4) and PEI (26.4). Ontario applicants had access to the lowest number of seats per applicant (0.23).

Conclusion: The results are discussed with respect to the challenges associated with balancing values of equity with principles of regional social accountability. Privileging regional residence over performance may be justified by strong evidence that these applicants are ultimately more likely to serve patient populations which would otherwise not be served, coupled with evidence that small variations on admissions assessment tests do not impact the quality of physicians in practice.

OA 5-1 The Threads Among Us: Teaching Interprofessional Empathy as an Antidote to Incivility

Ellen M. Friedman Baylor College of Medicine, **Jordan Shapiro** Baylor Collge of Medicine

Background/Purpose: Empathic care of patients is well-accepted, but the same empathy is often lacking among health care providers towards each other. This interactive workshop provides an opportunity for health care providers to reflect upon, "Why do we treat each other poorly?" and "Why does it matter?" Participants will acquire leadership skills to promote interprofessional empathy.

Summary of the Innovation: We developed this 10-minute video, The Threads Among Us video, which depicts a patient undergoing a GI procedure while incivility is demonstrated among the medical team. The video forms the basis for a conversation about common incivility experienced by learners, trainees and faculty. There is particular emphasis on interdisciplinary relationships in a clinic a setting. This discussion uses 3 major concepts: The idea of social contagion and behaviors, The ladder of inference, a framework of emotional intelligence, and the importance of gratitude. We view this video and discussion as an excellent teaching tool.

Conclusion: We have piloted the Threads Among Us workshop to diverse groups of learners and physicians, including nurses, medical students, residents, and attending physicians. Evaluations show 52% reported they observed incivility several times a month in their own department; 60% in other departments; and 27% reported incivility was directed toward themselves. 94%-97% indicated the workshop video was excellent, 97% would recommend the video and the workshop to others.

OA 5-2 Getting them to the table: Engaging inter-professional team members to talk about their workplace practices

Lori Nemoy St. Michael's Hospital, Unity Health Toronto, **Kristen Daly** St. Michael's Hospital, Unity Health Toronto, **Christine Léger** St. Michael's Hospital, Unity Health Toronto, **Nazanin Khodadoust** St. Michael's Hospital, Unity Health Toronto, **Douglas Campbell** St. Michael's Hospital, Unity Health

Toronto, **Ryan Brydges** St. Michael's Hospital, Unity Health Toronto

Background/Purpose: We developed a novel tabletop simulation approach to identify workplace practices and intrapartum care providers' underlying rationales for how they work through challenging interprofessional clinical scenarios. These simulations also contributed data to an institutional ethnography exploring the ruling relations influencing workplace practices on the labour and delivery (L&D) unit.

Summary of the Innovation: We combined 'think-aloud' and simulation principles to design an approach for eliciting healthcare professionals' descriptions of how they collaborate in their work on a L&D unit, and their rationalizations for why they work that way. We engaged an interprofessional team of intrapartum clinicians, researchers, and simulation experts to design three tabletop simulation scenarios reflecting key challenges identified from analyzing incident analysis reports (n=81), field observations (72 hours), and semi-structured interviews (n=15). We ran each scenario three times with three separate teams of interprofessional clinicians from the unit.

Conclusion: The tabletop simulations revealed 'disjunctures' in how different professionals interpreted and adhered to key policies and procedures. These scenarios allowed us to examine longitudinal work processes in a condensed timeline, with opportunities to pause and probe, and with reduced focus on individual practitioner's competence. Moreover, participants described how the scenarios opened a productive dialogue between professional groups and suggested this simulation-based approach might contribute to enhanced interprofessional understanding and cultural change. Our innovative tabletop simulations produced rich data about what drives professionals' actions in veritable clinical cases, improved their engagement in change processes, and laid the foundation for informed change of policies and practices on the unit.

OA 5-3 Exploring how implicit biases influence inter-professional collaboration using a socio-material framework

Javeed Sukhera Western University, **Kaitlyn Bertram** Western University, **Shawn Hendrikx** Western University, **Margaret Chisolm** Johns Hopkins, **Juliette Perzhinsky** Western Michigan University, **Erin Kennedy** Western University, **Lorelei Lingard** Western University, **Mark Goldszmidt** Western University

Background/Purpose: Inter-professional collaboration (IPC) can be fraught with multiple tensions. In part, due to implicit biases within teams, which can reflect larger social, physical, organizational and historical contexts. Such biases exist outside conscious awareness, yet may influence IPC in both explicit and implicit ways. They may also influence communication, trust, and how collaboration is enacted within larger contexts. Overall, their influence on IPC is relatively under-explored. Therefore, the authors conducted a scoping review on the influence of implicit biases within inter-professional teams.

Methods: Using a scoping review methodology, the authors searched several online databases. From 2792 articles, two reviewers independently conducted title/abstract screening, and assessed articles for full-text eligibility. Reviewers then extracted, coded, and iteratively analyzed key data from 159 articles using a framework derived from socio-material theories.

Results: Overall, there was a paucity of research that described non-human influences, often focusing on single material elements instead of dynamic aspects of collaboration. In addition, the relationship between racial, age-related, and gender biases with IPC appeared largely unexplored in the literature. Many studies demonstrated how implicit biases regarding dominance and expertise were internalized by team members, influencing collaboration in mostly negative ways. Articles also described how team members adapted to such biases.

Conclusion: Our findings suggest that implicit biases remain relatively under-explored within IPC and sociomateriality may provide a useful framework to explore how bias influences different types of inter-

professional initiatives. Future research should consider the longitudinal and reciprocal nature of both positive and negative influences of bias on collaboration in diverse settings.

OA 5-4 Needs assessment study to build interprofessional in situ simulation training in non-technical skills: improving quality of care and patient safety during acute clinical adverse events.

Ahmed Moussa Université de Montréal, **Claude-Julie Bourque** Université de Montréal, **Nathalie Loye** Université de Montréal, **Audrey Larone Juneau** CHU Sainte-Justine, **Evelyne Wassef** Université de Montréal, **Ahmed Moussa** Université de Montréal, **Emilie Dumont** CHU Sainte-Justine, **Michael-Andrew Assaad** Université de Montréal

Background/Purpose: Healthcare providers (HCP) must master technical and non-technical skills (NTS) necessary to ensure patient safety and favourable outcomes. In situ simulation (ISS) possibly improves teamwork and team satisfaction, however evidence describing the effect of ISS on HCP NTS is not well described. We aimed to conduct a needs assessment to identify knowledge and competency gaps regarding NTS of HCP during acute events.

Methods: HCP in a level 3 NICU completed a questionnaire: 1) Open-ended comments on key concepts; 2) Needs assessment based on their past experiences in acute events; 3) Perceptions of past team performance and latent safety threats (LST) during critical events; 4) Perception of quality of interactions with other professionals during emergency interventions, open-ended questions about expectations in terms of training and barriers to participating in simulation training; 5) Demographics.

Results: 125 HCP responded (40% response). Crisis resource management and specific NTS (communication with families during events, teamwork and controlling stress) were identified as training needs. At least 50% of respondents state that during critical events 1) they feel anxious, 2) have the impression that a leader is never identified, 3) leaders do not coordinate communication between team members, 4) team members do not repeat or feedback information to ensure comprehension in the team. Two thirds of respondents identify lack of transfer of information as the main LST during acute events.

Conclusion: Competency gaps of HCP are related to NTS and specifically leadership, communication and stress management, which are essential to ensure patient safety and favorable outcomes. Upcoming ISS curriculum will include these concepts and will measure its effect on HCP behaviors and institution culture change.

OA 5-5 "Now I know it, Now I'll do it, I'll work on that": the nature of learning after team based simulation

Farhana Shariff University of British Columbia, **Glenn Regehr** University of British Columbia, **Rose Hatala** University of British Columbia

Background/Purpose: Learning in complex clinical environments requires health professionals to assess their performance, manage learning, and modify practices based on self-monitored progress. As self-regulated learning (SRL) theory suggests, however, learners often need guidance to enact these processes effectively. Simulation debriefings may an ideal place to prepare learners for self-regulated learning in targeted areas, but at present may not be optimally fostering these practices. This study aims to explore the nature of learning after team-based simulation.

Methods: A qualitative grounded-theory study was conducted in the context of an interprofessional in-situ trauma simulation program. Participants were interviewed both immediately, and 4-6 weeks after the simulation experience. Transcripts were analyzed in an iterative constant-comparative approach to explore emergent themes and concepts surrounding our research question

Results: There were numerous examples of acquired content knowledge and plans for straightforward practice change during initial interviews; however, more sophisticated examples of SRL were lacking early on. Some participants appeared to have evolved more specific goals and rudimentary implementation plans by the follow up interviews, but many

suggested this was prompted by study interviews rather than the simulation debriefing itself.

Conclusion: While participants did not develop fulsome SRL plans after the simulation, there were elements of SRL seen once learners had time to reflect on the questions and their own goals. This is an encouraging sign that simulation can support development of SRL skills, however, debriefing approaches would need to be optimized to take full advantage of the opportunity to encourage and foster these skills in practice after the simulation is over.

OA 5-6 Evaluating interest in a Novel Educational Program for Integrated Team-Based Care of Patients with both Physical and Mental Illness across different educational platforms

Alison Freeland University of Toronto, **Sanjeev Sockalingam** University of Toronto, **David wiljer** University of Toronto, **Alicia Lozon** University of Toronto, **Gurpreet Grewal** Trillium Health Partners

Background/Purpose: System-wide change is essential to transform health care for patients with co-morbid physical and mental health illnesses. Clinicians lack necessary training to optimize team-based management of these complex conditions. The Medical Psychiatry Collaborative Care Certificate (MP3C) program is a continuing professional development initiative designed to fill this gap, with 4 foundational and 8 practice improvement modules.

Methods: To evaluate interest in MP3C across different health care settings, MP3C modules were offered in a large suburban community hospital, an academic mental health facility, to an established interdisciplinary pediatric team, and through a regional primary care rounds series. Participants provided feedback via module evaluation, with questions about valuable use of time, referral of colleagues, and interest in attending future sessions.

Results: Attendees were as follows: Community Hospital: 305 total; Mental Health Facility: 30 total; Established Interdisciplinary team: 6 total; Primary care Rounds Series: 74 physicians. A majority of participants reported that MP3C was a valuable use of their time (93 -100%), would recommend the program to a colleague (89-100%) and plan to attend additional modules (79% -94%).

Conclusion: The education approach worked across different sectors with the highest level of engagement to date in the community hospital setting. It was well received in various settings but different approaches were required to meet the needs of primary care, including specific primary care rounds. Ongoing evaluation of participant feedback has demonstrated feasibility and relevance to clinical practice of the MP3C program across a range of interdisciplinary health care participants and educational platforms.

OA 6-1 Evaluation of a Deteriorating Patient Simulation to Teach Integrated Physical and Mental Health Care in Undergraduate Medical Education

Fadi Gorgi University of Toronto, **Zarah Chaudhary** Wilson Centre, University Health Network and University of Toronto, **Carla Garcia** University of Toronto, **Maria Mylopoulos** Wilson Centre, University Health Network and University of Toronto, **Sanjeev Sockalingam** University of Toronto

Background/Purpose: Given the complexity of patient care, integrated physical and mental health training starting in undergraduate medical education is needed. Moreover, curricula are needed that foster adaptive expertise early in medical student training. Informed by adaptive expertise, we developed a low-fidelity simulation for 2nd year medical students based on a previously established Deteriorating Patient Simulation (DPS) model. We delivered our integrated care DPS to all 262 students and explored students' learning within this education program.

Summary of the Innovation: The DPS involved a case of a patient living with mental illness who develops physical and mental health symptoms in a community and acute care settings. Paired student observers in groups of nine worked collectively to manage 10 scenario deteriorations facilitated by a workshop leader oriented to the DPS model. We explored learning by asking students two open-ended questions post-DPS assessing: (1) their learning of health-system challenges, and (2) their perspectives on the limitations of standardization of care. We used

anonymized aggregate student responses for qualitative thematic content analyses.

Conclusion: Students reported that DPS increased their understanding of patient care challenges in three areas. First, students recognized how challenges with integrated care can result in patient loss of autonomy. Second, issues related to healthcare professionals' stigma and bias towards mental illness were identified. Third, challenges in the healthcare system related to care coordination and navigation. Students saw the utility of standardized care pathways and care guidelines. Our preliminary DPS data suggests it provides students with opportunities to learn about multi-level challenges with integrated healthcare. This data will be used to further develop the DPS model for integrated care and to further explore students' learning and outcomes.

OA 6-2 Realistic Preparation for Going Global: Pre-departure Training Driven by Role-Playing Case Study Simulations

Jennifer Carpenter Queen's University, **Guy Sheahan** Queen's University, **Eleftherios Soleas** Queen's University, **Mikaila De sousa** Queen's University, **Elizabeth Matzinger** Queen's University, **Nicholas Cofie** Queen's University

Background/Purpose: Associated with the increasing interest in student global health placements is the recognition that these placements impose unique ethical demands for involved stakeholders (Pinto & Upshur, 2009). These ethical demands are situations that can be anticipated using simulation cases (e.g. Mills et al., 2014). Pre-departure training is the opportune time to engage students with these ethical demands through simulations with role-playing peers to bring a sense of realism to probable observership scenarios that often occur.

Methods: This mixed methods research investigates the perspectives of participants in active role-playing simulations that occurred during a pre-departure training curriculum. Two cohorts totaling 112 participants completed a mixed-survey immediately afterwards.

Results: The participant reaction to the simulated cases was overwhelmingly positive (86% approval) and with 77% of participants reporting the scenarios increased their preparedness to confront ethical issues on their observership. Participants reported that the simulations allowed them to experience and confront uncomfortable, but realistic situations safely with peers and mentors supporting them with immediate feedback. Participants also credited the role-playing with fostering greater sense of teamwork and facilitating an impromptu post reflection where they would have to reconsider their efforts for sustainable advocacy

Conclusion: Participants were immensely positive and despite some initial discomfort with acting in front of their peers they participated enthusiastically. We aim to show that case study role play simulation is an effective way to give students exposure to the kinds of ethical dilemmas that they might encounter in their global health observerships and beyond.

OA 6-3 The invisible work of Cadaver Based Simulation: An ethnography

Victoria Luong Dalhousie University, **Paula Cameron** Dalhousie University, **Anna MacLeod** Dalhousie University, **Olga Kits** Dalhousie University, **Lucy Patrick** Dalhousie University, **George Kovacs** Dalhousie University, **Jonathan Tummons** Durham University, **Molly Fredeen** Dalhousie University, **Victoria Luong** Dalhousie University

Background/Purpose: Cadaver Based Simulation (CBS) is on the rise in Canada, due to recent advances in cadaveric preservation. However, the CBS literature tends to focus on perceptions of CBS and procedural performance. The complex work involved in CBS, particularly the invisible work of clinical cadaver staff, is little understood. This presentation therefore examines how cadavers, learners, workers, tools and spaces come together in a clinical cadaver program and offers implications for wider processes and discourses of simulation learning.

Methods: Our ethnographic methods (observation [n=30 hours], interview [n=30], document analysis [n=22]) allowed us to follow the cadaver before educational use (cadaver preparation), during (learning sessions with physicians, residents), and after (memorial service) over a two-year period (2018-2020) at Dalhousie University.

Results: Our analysis identified a complex work and educational "life cycle" of the cadaver, from its entrance into the body donation program through to burial and interment. This cycle is characterized by a series of transitions as cadavers pass through the hands of multiple actors. Some of these shifts were obvious (e.g., passing the threshold between home/hospital and morgue) and others were subtle, rapid, and constantly changing (e.g., moving between person and tool).

Conclusion: Cadavers require a complex system of invisible work processes within and beyond the classroom. CBS requires workers and learners to navigate the tension between treating the body as an anonymous educational tool and as a specific, whole person. Better understanding this nuanced process may inform how we use cadavers in medical education.

OA 6-4 Sharing Experiential Knowledge to Enhance Collaborative Practice in the Emergency Room

Nicolas Fernandez Université de Montréal

Continuous development of professional skills relies in part on the mobilization of cognitive, organizational and pedagogical resources. The "tacit" or experiential knowledge that professionals acquire in their work is one such resource (Polanyi, 1966; Henry, 2010), which is not found in textbooks or Google although it's part of their "cognitive toolkit". It has the advantage of building on experiences unique to each context. Aim: By identifying and mobilizing these "tools" this research aims to understand how tacit knowledge is mobilized, shared with others (colleagues, students), and more interestingly, how it generates new knowledge, which is reinvested in continuous professional development.

We filmed and selected work sequences taken during an emergency simulation at a Montreal trauma hospital, showing nurses and MDs working collaboratively. We invited them to participate in an "activity clinic" (Clot et al. 2000) an approach to work analysis in which professionals see themselves working and discuss their thought processes during the sequence. The interviews are conducted first individually, then in pairs and are recorded. The method enabled us to "dislodge" themes revealing cognitive processes engaged by individual professionals during the simulation. By sharing personal cognitive processes within the group, by referring to specific filmed sequences, a deeper mutual understanding was generated which led to identifying specific improvement initiatives.

Conclusion: We claim that this participatory research allows professionals to re-discover their work by discussing with colleagues, a process that generates new avenues for learning that can be reinvested in their practice.

OA 6-5 "She's a manikin; she won't mind": A sociomaterial look at patient centredness in manikin-based simulation

Paula Cameron Dalhousie University, **Molly Fredeen** Dalhousie University, **Anna MacLeod** Dalhousie University, **Victoria Luong** Dalhousie University, **Rola Ajjawi** Deakin University, Melbourne AUS, **Jonathan Tummons** Durham University, **Olga Kits** Dalhousie University, **Marti Cleveland-Innes** Athabasca

Background/Purpose: Medical educators increasingly prioritize Patient Centred Care (PCC), and have identified simulation as a promising area for pre-clinical PCC practice. However, due to the traditional separation of "hard" and "soft" skills in medical curricula, patient centredness is often associated with simulated patients and overlooked in clinical skill sessions with manikins. Manikins are often assumed to be "human enough" for skill practice but their influence on teaching and learning PCC can be overlooked. We therefore sought to understand (1) how manikins shape teaching and learning in undergraduate medical simulation, and (2) implications for PCC.

Methods: Informed by a broader body of data, this presentation offers a sociomaterial analysis of a third-year pre-clerkship simulation that combined six clinical skills within one overarching case. Two sets of student and instructor pairs were each assigned to a male-presenting medium fidelity manikin overlaid with an IV arm, phlebotomy trainer, and injection pad. Our ethnographic methods included video observations (n=240 minutes), curriculum analysis (n=8), and interviews (n=11).

Results: Human-manikin interactions both affirmed and undermined PCC. Affirming actions included teachers voicing patient concerns and directing students to seek consent; and students offering the patient procedural choices. Undermining elements included lack of student-patient communication; leaning on the manikin; centring teacher approval and expertise; and caricaturing the patient as stereotypically feminine.

Conclusion: Patient centredness is both affirmed and undermined in manikin-based simulation. The material form of the manikin complicates PC teaching and learning. Intentionally planning for this complexity may ensure more consistent adherence to patient centred principles.

OA 6-6 Engaging Learner Perspectives: A realist analysis of learner perceptions of safety in high stakes simulations

Joanna Rankin University of Calgary, **Rachel Grimminck** University of Calgary, **Paige Durling** University of Calgary, **Amber Barlow** University of Calgary, **Jihane Henni** University of Calgary, **Dean Mrozowich** University of Calgary

Background/Purpose: Learners in Psychiatry and Community Rehabilitation and Disability Studies (CRDS) work in high stress situations with patients and clients in distress during their residency and practicums. This presentation provides an overview of the evaluation of an innovative cross-disciplinary project between Psychiatry and CRDS using simulations of patients and clients in distress.

Methods: Both qualitative and quantitative data was collected and analyzed using learner surveys and focus groups to assess their perspectives of the efficacy of this educational intervention in their professional development. Using a Realist Analysis (Pawson, 1997, 2006, 2013) the team employed a combination of generic theme analysis and template analysis in combination with a context-mechanism-outcome (CMO) triad to build theories and interpretations of the role of simulations in this learning context.

Results: The data demonstrates learner's positive responses to the use of simulations in their increased confidence and learning and ability to engage more safely with uncomfortable emotions around working in complex situations. Conversely, we found that a lack of clarity around roles and goals increased feelings of uncertainty and distress amongst learners

Conclusion: Drawing from each disciplinary context, training level and data collection method, this presentation highlights the ways in which we have been able to engage learner perspectives to further develop simulations which address the very real, and competing priorities of the physical and emotional safety of both professionals and patients/clients which was expressed by our learners.

OB 1-2 A stitch in time saves nine: Rethinking curricular organization in response to student burn out

Liam Dowling Queen's University, **Andrea Guerin** Queen's University, **Lindsay Davidson** Queen's University

Background/Purpose: Expanding medical knowledge coupled with new requirements to foster multiple competencies has created pressure for medical school curricular time. Noting a recent decline in second year student classroom attendance, we conducted a survey to better understand student behaviour. Many students identified experiencing difficulty fulfilling all curricular and non-curricular obligations and reported high stress levels based on multiple competing demands.

Summary of the Innovation: In response, we created the "flextime" curricular pilot. Flextime reorganizes the way content is delivered, maximizing unstructured curricular time, clustering independent learning opportunities and allowing students greater autonomy over their schedule. Prior to the pilot, the second year student schedule was structured 80% of the time with little predictability. While some of the scheduled time was identified as independent learning, these time slots were interspersed with classroom sessions requiring in-person attendance. The flextime schedule provided students with 40% of the week block booked as unstructured time, with a set of independent learning tasks to be accomplished in a self-scheduled fashion. Students were re-surveyed following the innovation.

Conclusion: The described curricular reorganization was positively received by students, with no change in student performance. Allowing students flexibility in learning events was shown to increase the perceived importance of in class sessions, without impacting grades.

OB 1-3 Development and Implementation of a Comprehensive Peer Support Program for Medical Students at the University of Ottawa

Kelsey Mongrain University of Ottawa, **Kay-Anne Haykal** University of Ottawa

Background/Purpose: Graduating medical students have a high prevalence of distress before residency training regardless of specialty choice. Medical school provides the opportunity to prevent and manage mental health and psychological distress in a high-risk population early in medical training. Research has shown that students and trainees prefer to seek support from peers rather than approaching health professionals or faculty members for help. Student-led peer support programs in medical school could be a valuable addition to existing faculty programs and services by promoting help-seeking behaviors and fostering resiliency.

Summary of the Innovation: The goals of the peer support program are to improve help seeking behaviours, reduce stigma and provide non-judgemental, accessible and confidential peer support from students who have undergone professional training. The recognition of behavioural changes will allow peer supporters to: 1) identify students who are at risk of experiencing distress, depression or suicidal ideation, 2) provide peer counselling and 3) facilitate their pathway to proper resources and professional services. The development and implementation of the program Side by Side started with the recognition of students' needs before filling an existing gap and complementing pre-existing services. Extensive research led to the idea of building a cost-effective peer support program benefiting from the proximity of medical students and their expertise in understanding medical school challenges. Recruitment of a working group composed of students from all years and faculty has allowed to target the specific needs of the student population. A survey assessed barriers to seeking help and gathered student preferences regarding the program. Selected peer supporters from all years of medical school completed a thorough training program tailored for

the prevention and management of mental health crises. All peer supporters offer weekly hours of availability for students and must attend monthly debriefing sessions with a faculty counsellor to ensure their own wellbeing and quality of interventions.

Conclusion: A comprehensive and collaborative approach is needed to improve mental health among students early in medical training. In our survey, 85% of students indicated that they would feel relieved or indifferent if a peer supporter reached out to them based on behavioural changes. Thus, peer support programs should adopt an integrative, proactive, and preventative approach. Peer support is a step towards a culture that values physician wellness and away from one of invulnerability and shame. Careful evaluation will ensure the quality of a program that fits the needs of medical students.

OB 1-4 Cultural Responsiveness Training in Post Graduate Medical Education

James Barton University of Saskatchewan, **Anurag Saxena** University of Saskatchewan, **Stacey Lovo** University of Saskatchewan, **Veronica McKinney** University of Saskatchewan,

Background/Purpose: Indigenous people in Canada face discrimination and racism in healthcare. The Role of Practitioners in Indigenous Wellness is an online course delivered by Indigenous community members, through stories of intergenerational trauma, racism and colonialism, and the effect on health care experiences of Indigenous people in Saskatchewan. Cultural safety and communication strategies are emphasized.

Summary of the Innovation: Forty-nine residents completed the 24-hour course from September 2018-July 2019. Interactive components were facilitated by an Indigenous content expert who encouraged self-reflection and an active voice in blogs. Kirkpatrick's Model was utilized to evaluate learning: 1) Reaction: post-course satisfaction survey; 2) Learning: pre and post-course vignette responses; 3) Behaviour: communication strategies evaluated by iterative thematic analysis; 4) Transformational Goal Setting: creation of a cultural safety practice goal at course completion. High levels of satisfaction were reported, and residents indicated their knowledge had improved following the course. Initial analysis of communication strategies identified the following themes: 1) importance of ongoing development, 2) self-reflection in practice, 3) need for open communication about racism and bias, 3) culturally safe and welcoming communication, 4) patient engagement, patient-centered care and relationship development, 5) respect and integrity, 6) advocacy for resources, 7) culturally informed care, and 8) traditional care options.

Conclusion: Communication strategies discussed self-reflection, open communication about racism, building relationships, provision of welcoming space and traditional options for patients to ensure culturally responsive care. Course organizers have determined that participants may require more direct support for transformational goal setting so long-term impacts can be evaluated.

OB 1-5 Prevalence of resident burnout remains unchanged worldwide despite efforts in the last 20 years: are we missing the point?

Leen Naji McMaster University, **Zahra Sohani** McGill

Background/Purpose: We are in a critical period within the medical profession as physician burnout rates reach a peak. We conducted a systematic review to estimate the global prevalence of burnout in residents. Secondly, we investigate how it has evolved in the past few decades and identify associated factors.

Methods: We searched 6 databases from inception yielding 8,505 studies, of which 197 met our eligibility criteria. They comprised data from over 44,000 residents across 47 countries. We used meta-analysis to calculate pooled prevalence, and meta-regression to study associated factors.

Results: The pooled global prevalence of burnout was 47% (95% CI 43.1%; 51.5%). Our meta-regression suggested that the region of residency was significantly associated with burnout, with North American residents affected at higher rates. Additionally, we found that burnout rates have not significantly changed over the past 20 years. Lastly, we report that burnout was not associated with the specialty or level of training, age, sex, relationship status, or work hours.

Conclusion: Strategies to mitigate burnout through duty hour restrictions have been largely inconsequential since burnout rates appear unchanged over two decades. Our findings suggest that traditional risk factors (e.g., age, sex) do not in fact impact rates of burnout. Rather, it appears that systems, such as regional differences in the medical culture, play a large role. This is the unsettling state of burnout among the resident population; an important discussion at the forefront of medical education, in which the answers seem further than ever before.

OB 1-6 Getting into the Zone: More to Cognitive Flow than Cognition Alone?

Sydney McQueen University of Toronto, **Aidan McParland** University of Toronto, **Melanie Hammond Mobilio** University of Toronto, **Carol-anne Moulton** University of Toronto

Background/Purpose: Cognitive flow describes a state of enhanced focus, awareness, performance, and satisfaction with one's work or practice. Fields outside of medicine including elite sport have long incorporated psychological skills training to help performers enter flow states, but this phenomenon has yet to be explored deeply in medicine. The present study sought to determine if the phenomenon of flow is relevant to surgical practice and if so, how it is experienced by surgeons.

Methods: Using a constructivist grounded theory methodology, semi-structured interviews were conducted with 18 staff surgeons at the University of Toronto, purposively sampled for experience levels and practices. Data were coded and analyzed iteratively by three researchers until theoretical saturation was achieved.

Results: Although many surgeons were unfamiliar with cognitive flow, the phenomenon resonated with most. Participants identified conditions that supported flow states and allowed surgeons to positively engage in their work. Although flow has traditionally been considered a cognitive phenomenon, surgeons described the experience as multidimensional, shaped by physiological, emotional, sociocultural, and environmental facets. For example, surgeons identified a shared state of social flow: "Sometimes you achieve flow with a trainee that you're guiding through a case, which is kind of fun as well. So you experience flow through another person." (P4)

Conclusion: Understanding flow and other positive states in clinical practice may help enhance career satisfaction, combat burnout, and promote physician wellness.

OB 1-7 "How are you?" Physicians Describe Meaningful Peer Support

Tandi Wilkinson University of British Columbia, **Rola Ajjawi** Deakin University, Melbourne Australia, **Shireen Mansouri** University of Calgary

Background/Purpose: The practice of medicine is expected to be psychologically challenging at times. During episodes of significant emotional distress, physicians desire peer support. However, the features of informal, effective peer-based emotional support, how it arises, and its contribution to practitioner well being have not been well described in the medical literature.

Methods: A purposeful sample of Canadian rural physicians with a rich and meaningful experience of informal peer support for work related stresses were interviewed. Semi-structured interview questions focused on the experience of the support, the conditions under which the support arose, and the perceived value of the support. Interviews were coded and the data interpreted from a hermeneutic phenomenology perspective.

Results: Through peer support, participants experienced a substantial reduction in emotional distress, and were more able to process and move through difficult experiences. The majority of participants felt that the peer support was crucial to their willingness to continue to practice medicine. Useful qualities of the support included listening, a nonjudgmental attitude, normalizing, reframing and validation. Peer support most commonly arose as result of an invitation from the peer, in the form of the peer asking: 'how are you?'. Even very brief, one-time interactions were meaningful.

Conclusion: Informal peer support can be a significant factor in physician retention in medicine, as well as in supporting practitioner wellness. Promoting and supporting informal peer support at a system level,

through medical leadership and medical education, may be a low cost intervention with rich rewards for practitioners and the health care system.

OB 2-1 In Anticipation of CBD: Building an Integrative, Skills-Based Transition to Practice Curriculum in Psychiatry

Natasha Snelgrove McMaster University, **Sheila Harms** McMaster University, **JoAnn Corey** McMaster University

Background/Purpose: Residents in the psychiatry program at McMaster University indicated a desire for a practical, skills-based transition to practice curriculum. With the transition to competency-based medical education and its focus on having a robust transition to practice year, our program was invested creating a novel, pedagogically robust curriculum.

Summary of the Innovation: A needs assessment was sent out to the PGY-5 residents during the 2018-2019 academic year. The results from this survey informed the development of a 3-session curriculum focusing on: 1) negotiating, contracts and business incorporation, 2) billing and practice management, and 3) transition to practice "nightmares" like audits and college complaints. A curriculum based on cases was developed to reflect these learning needs. External and internal experts, including legal counsel, medical business and billing experts, and experienced faculty were included as teachers. The curriculum included didactic and interactive components anchored to cases and concluding with practical, concept-integration application exercises to enhance knowledge retention and application.

Conclusion: Feedback was sought through session evaluations and a survey following completion of the curriculum. Residents felt the curriculum was helpful and applicable, although noted a preference for earlier delivery. Additional topics of interest were identified. Using a quality improvement approach, the curriculum has now been expanded to 8 sessions including additional application exercises focused on billing, maintenance of certification, and ethical issues. This presentation will provide attendees with an understanding of how to create a practical transition to practice curriculum and will provide examples of the curriculum, including integration exercises used to solidify learning.

OB 2-2 Static in the line or a full disconnect? Exploring resident perceptions and interpretations of initial competency based medical education (CBME) implementation compared to the core components of CBME

Shivani Upadhyaya University of Alberta, **Marghalara Rashid** University of Alberta, **Andrea Davila-Cervantes** University of Alberta, **Anna Oswald** University of Alberta

Background/Purpose: CBD is a hybrid competency-based model that focuses on residents' abilities in relation to the competencies needed for success in practice. This model is based on five components: framework of competencies, sequenced progression, tailored experiences, competency-focused instruction, and programmatic assessment. There has been a limited exploration of residents' experiences of implementation of CBD thus far. We explored residents' mental models in relation to the core components and their general experiences to identify if CBD implementation in the first 8 disciplines is occurring as it was conceptualized.

Methods: A descriptive qualitative design was used to explore and better understand the resident experiences. All residents who had exposure to CBD implementation were invited to participate. We conducted face-to-face or telephone semi-structured interviews. Interviews were digitally recorded and transcribed verbatim. Thematic analysis was used to create data-driven codes and identify themes and subthemes. We used an iterative consensus building process to reach saturation. Research Ethics Board approval was obtained.

Results: A total of 20/50 (40%) residents representing 6 different disciplines from the 1st(n=4) and 2nd(n=16) cohorts of CBD implementation were interviewed. Five main themes emerged: i) value of feedback; ii) strategies for successful Entrustable Professional Activity(EPA) completion; iii) challenges encountered in CBD; iv) general perceptions regarding CBD, and v) recommendations to improve on existing challenges.

Conclusion: Exploring residents' mental models of CBD core components and understanding their experiences on the implementation will help

identify/disseminate successes, challenges and future directions from the residents' perspective to assist programs at different stages of CBD implementation.

OB 2-3 Exploring Residents' Perspectives of Competency-Based Medical Education Across Canada

Vivesh Patel Queen's University, **Stephen Mann** Queen's University, **Heather Braund** Queen's University, **Nancy Dalgarno** Queen's University

Background/Purpose: As Competence by Design is being implemented across Canadian residency programs, little is known about residents' perspectives on this method of training, despite them being most directly affected by the transition. This study examined the perspectives Canadian residents have regarding the advantages and disadvantages of competency-based medical education (CBME) and its implementation.

Methods: This mixed method study consisted of a single phase where an online questionnaire consisting of both Likert-type items (6-point scale) and open-ended questions was administered to residents enrolled in post-graduate programs across Canada. 434 residents completed the survey. 139 respondents were in CBME programs and 295 respondents were in pre-CBME programs at the time they completed the survey. An emergent thematic approach was used to analyze the qualitative survey data.

Results: Three themes emerged: program outcome concerns, changes, and emotional responses. In relation to program concerns, residents pre-CBME and those in CBME were concerned about administrative burden, challenges with the assessment process, and quality of feedback. Residents pre-CBME were concerned about faculty engagement and buy-in. In terms of changes, both groups of residents discussed a more formalized assessment process. Residents pre-CBME and those in CBME reported strong emotional responses such as experiencing more stress and frustration. Residents in CBME reported being more proactive in their learning and engaging in more self-reflection.

Conclusion: Our findings demonstrate that residents across Canada have mixed feelings and experiences regarding CBME. The reported concerns suggest that programs will need to address specific shortcomings to increase buy-in, and that cultural shifts may be required.

OB 2-6 Low-stakes progress test results are excellent predictors for success at the Medical Council of Canada Qualifying Examination part I.

Margaret Henri Université de Montréal, **Robert Gagnon** Université de Montréal, **François Gobeil** Université de Montréal, **Geneviève Grégoire** Université de Montréal

Background/Purpose: At Université de Montréal, progress tests (PT) are formative assessments which are administered on the final 2 years of the curriculum. We sought to assess the value of these tests for predicting success to the Medical Council of Canada Qualifying Examination part I (MCCQE I).

Methods: Five compulsory, formative PTs have to be taken by students during clerkship, the first 3 in year 3, and the last 2 during year 4. From 2013 to 2018, student scores from PTs and MCCQE I were prospectively gathered, and Pearson's coefficient was used to look for a relationship between the two. PT scores were also divided into deciles and analysed for risks of failing the MCCQE I.

Results: Results of 1496 students were analysed. A strong correlation was shown between PT scores and MCCQE I scores ($r=0.635$, $n=1496$, $p<0.001$). A good correlation of PT and MCCQE I scores was demonstrated from PT #3 (Pearson's $r > 0.500$). Students with mean PT scores in the lower decile were 6 times more likely to fail the MCCQE I (RR=6.4673, 95% CI 3.7727-11.0872, $Z=6.788$, $p<0.0001$) than those with mean scores in the higher deciles. Compared to those with no PT score in the lower decile, students with 2 PT scores in the lower decile had a RR of 20.9804 (95% CI 7.3114-60.2038, $Z=5.659$, $p<0.0001$), and those with 3 PT scores or more in the lower decile had a RR of 42.2716 (95% CI 15.8893-112.4586, $Z= 7.500$, $p<0.0001$) of failing the MCCQE I.

Conclusion: Our urology boot camp has demonstrated high feasibility and utility. The knowledge and technical skills uptake was seen, with participants' performance at or even above the level

of the second-year urology resident historical controls. We aim to further develop our boot camp, implement it annually as part of our competency-based curriculum, and provide a framework that can be used by other urology residency programs.

OB 3-1 Bridging the Gap: Improving CASPer Test Confidence and Competency for Underrepresented Minorities in Medicine through Interactive Peer-assisted Learning

Lolade Shipeolu University of Ottawa, **Johanne Matthieu** University of Ottawa, **Farhan Mahmood** University of Ottawa, **Ike Okafor** University of Toronto

Background/Purpose: The Computer-based Assessment for Sampling Personal characteristics (CASPer) is a situational judgement test (SJT) that is adopted by medical schools to assess for interpersonal and professional characteristics of applicants. Unlike conventional SJTs whereby test takers select their preferred response to an ethical dilemma from a series of choices, applicants writing the CASPer compose their own responses, thereby providing a window into the applicant's rationale for ethical decision-making. Underrepresented minority medical school applicants usually lack access to a network of individuals and/or resources that offer guidance and prepare them for the various application requirements of medical school.

Summary of the Innovation: Under the support of University of Toronto's Community of Support program, medical students at the University of Ottawa designed and taught a free online CASPer coaching program for underrepresented medical school applicants across Canada. The program consisted of 35 learners and three medical student tutors. Important attributes of the 4-week program included free access to a medical ethics book, insight sharing from three distinct tutors, feedback provision to in-class and homework responses, and facilitation of a mock CASPer test. Through extensive peer-to-peer mentorship, we aimed to reduce anxiety, improve confidence, and increase competency among minority students in our CASPer coaching program.

Conclusion: Results from our pre and post-program survey showed significant student improvement in familiarity with the test, increased competence, confidence and preparedness, as well as reduced anxiety ($p<0.05$). Through peer-to-peer teaching and access to medical student mentors, our program recognizes and addresses socioeconomic barriers that several minority applicants face when applying to medical school.

OB 3-2 O Negative Blood - Experiences from a Medical Education Teaching Rotation

Amanda Jones University of British Columbia, **Alasdair Nazerali Maitland** University of British Columbia, **Samantha Stasiuk** University of British Columbia, **Amil Shah** University of British Columbia, **Reed Holden** University of British Columbia

Background/Purpose: Both the CFPC and the Royal College have implementing a 'Residents as Teachers' initiative into their curriculum. Opportunities to teach undergraduate students are encouraged. Searching for the correct opportunities that benefit both the medical student and the resident trainee are challenging.

Summary of the Innovation: We created a sustainable and structured postgraduate rotation that provides robust teaching opportunities for the resident trainees while providing trainees with approachable content experts to teach them clinical skills, communication skills and ultrasound sessions. Residents from three different postgraduate programs participated and a total of 16 residents took part. Residents also participated in a scholarly project of their choosing including a reconstruction of a teaching session (often implementing clinical reasoning and elements of evidence-based physical examination), a quantitative medical education project or a quality improvement project. They received faculty development training in teaching on the fly, the learner in difficulty, giving and receiving feedback. Residents also benefited from a peer-review session. This is the first rotation of its kind in Canada.

Conclusion: The Medical Education Elective rotation at UBC has grown and been a very successful addition to the Undergraduate program. Residents feel inspired and have come away with improvements in

their teaching skills as well as their analytical thinking and ways to deliver content. It has also managed to strengthen the connection between UGME and PGME at UBC with a large burst of prior Medical Education Elective Residents returning to teach /become faculty members upon their residency graduation thereby increasing the overall number of teaching faculty.

OB 3-3 R2C2 for "in the moment" feedback and coaching

Heather Armson University of Calgary, **Rachelle Lee-Krueger** University of Calgary, **Karen Könings** Maastricht University, **Amanda Roze des Ordons** University of Calgary, **Jessica Trier** Queen's University, **Marygrace Zetkulik** Hackensack Meridian School of Medicine, **Jocelyn Lockyer** University of Calgary, **Joan Sargeant** Dalhousie University

Background/Purpose: The research-based four-phase R2C2 feedback and coaching model draws on collated performance data to build Relationship, explore Reactions, determine Content and Coach for change to co-create an action plan. While successfully used for progress meetings, it had not been studied in clinical settings in which brief feedback conversations occur after learner experiences. The purposes of this study were to explore how supervisors adapted the model for in-the-moment feedback and coaching, and develop a guide for its use in this context.

Methods: We interviewed 11 purposefully selected clinical supervisors to explore when they used the model, how they adapted it for in-the-moment conversations, and phrases they used in each phase that could guide design of an R2C2-in-the-moment model. We used framework analysis to synthesize interview data and conducted two research team consensus meetings to confirm findings.

Results: Participants readily adapted the model to varied feedback situations across several disciplines and clinical environments. They identified phase-specific phrases that could enable effective coaching conversations in a limited amount of time. Results facilitated revision of the original R2C2 model for in-the-moment feedback and coaching conversations, design of an accompanying trifold brochure, and website information (https://medicine.dal.ca/departments/core-units/cpd/faculty-development/R2C2.html) to support its use.

Conclusion: The R2C2-in-the-moment model offers an approach to feedback and coaching that builds on the original model while addressing time constraints and the need for an iterative conversation between the reaction and content phases, while enabling the supervisor to coach and work with the learner to co-create an action plan to improve performance.

OB 3-4 Coaching: a state-of-the-art review

Victoria McKinnon McMaster University, **Cindy Tran** McMaster University, **Jennifer Zering** McMaster University, **Ranil Sonnadara** McMaster University

Background/Purpose: Coaching has been investigated as a method of facilitating the development of medical trainee expertise over the past decade. However, few studies have considered how advances in coaching science within other domains could be applied to medical education. In the present study, we perform a state-of-the art review of recent coaching literature from several domains.

Methods: Five databases and Google Scholar were reviewed between 2016 and 2019. Search terms included: coach, skill, performance improvement, goal setting. Articles were excluded if they focused on business, wellness, youth, or family coaching. Study design, setting, coaching framework, and limitations were extracted.

Results: Seventy-eight articles were included which spanned medical professionals (55%), schoolteachers (21%), and athletes (15%). Thirty-four percent of studies involving medical professionals demonstrated significant improvement in technical skill performance following a coaching intervention. Studies involving teachers were frequently underpowered or showed non-significant interactions. Studies with athletes demonstrated that coaching interventions which resulted in improved performance tended to focus on mental imagery, preparation for dealing with high-stress scenarios, and periodized approaches to skill development.

Conclusion: There is currently heightened interest in applying coaching techniques to medical training yet only a third of studies reported its effectiveness for improving performance. The sport coaching literature

offers several promising techniques that could be highly effective in preparing medical trainees for independent practice.

OB 3-5 A Pan-Canadian Evaluation of the College of Family Medicine Canada's Fundamental Teaching Activities Framework

Douglas Archibald University of Ottawa, **Dianne Delva** Queen's University, **Rachelle Lee-Krueger** University of Ottawa, **Viola Antao** University of Toronto, **Cheri Bethune** Memorial – University of Newfoundland, **Catherine Giroux** University of Ottawa, **Katherine Moreau** University of Ottawa

Background/Purpose: The primary purpose was to conduct an evaluation of The College of Family Physicians of Canada's (CFPC) Fundamental Teaching Activities (FTA) Framework, a guide for Faculty Development.

Methods: Using a practical participatory evaluation approach a partnership between the project team and members of the CFPC Faculty Development Education Committee (FDEC) solidified the evaluation design, development of data tools, implementation strategies, validated key findings, and dissemination. Faculty Development programs across Canada were targeted for this evaluation, particularly Faculty Development Directors, Postgraduate Directors, and Site Directors were invited to participate. Mixed methods consisting of an online survey sent by FDEC to all Family Medicine Faculty Development Directors, Postgraduate Directors, and Site Directors and follow-up interviews with self-selected participants conducted by the research team.

Results: The surveys were distributed to the 15 Faculty Development Directors, the 18 Family Medicine Program Directors and 174 Family Medicine Site Directors in the Fall of 2018, soliciting response rates of 80%, 66.7%, and 19.5% respectively. Interviews were conducted with a representative sample of 12 survey participants in the Winter and Spring of 2019. Surveys and interviews were conducted in either French or English. Survey and interview responses suggest that awareness of the FTA was highest among Faculty Development Directors. There have been varied levels of implementation of the FTA framework across the country.

Conclusion: Program Directors reported utility for programmatic planning. Recommendations to reduce barriers to implementation, such as readability and clarity of the FTA and highlighting the collective and individual values of the framework will be presented.

OB 3-6 The Diversity Mentorship Program: a Model for Effective Equity-based Mentorship

Imaan Javeed University of Toronto, **Anita Balakrishna** University of Toronto, **Stephanie Zhou** University of Toronto, **Lisa Robinson** University of Toronto

Background/Purpose: Effective mentorship is a contributing factor to academic and workplace success in medicine, yet medical trainees from underrepresented / minoritized groups in medicine (UMGMs) often struggle to find mentors who are from similar social backgrounds. There is a lack of research on equity-based mentorship programs for UMGMs, especially in the Canadian context. To help address these gaps, the University of Toronto Diversity Mentorship Program (DMP) pairs 1st and 2nd year UMGM mentees with staff mentors who ideally share a similar social identity to foster equity-based mentoring relationships.

Summary of the Innovation: In 2018-2019, the DMP facilitated 52 mentor-mentee matches, forming pairs that were to meet throughout the academic year. We also offered structured events centered around the theme of equity-based mentorship, creating additional opportunities for learning and networking. The DMP centers around three main objectives: fostering identity development, strengthening community, and empowering excellence. We distributed an online survey to DMP mentors (response rate: 56%) and mentees (response rate: 44%) to learn more about their experiences, assess goal achievement, and highlight the DMP's strengths and weaknesses.

Conclusion: High proportions (>85%) of mentors and mentees felt they had productive mentoring relationships. Four in five mentors (79%) also found the DMP to be personally rewarding. The DMP provides a framework for an effective mentorship program for medical students belonging to UMGMs. Our data highlights activities, discussion topics, and

techniques used by mentor-mentee pairs, showing that many goals of the program were achieved. We are continually enhancing the program based on feedback to better achieve objectives.

OB 4-1 Integrating the Humanities to Enhance Clinical Reasoning

Wendy A Stewart Dalhousie University, **Mark Gilbert** Dalhousie University, **Pat Croskerry** Dalhousie University, **Stephen Miller** Dalhousie University, **Laura Thomas** Dalhousie University

Background/Purpose: Physician thinking error comprises 75% of the diagnostic errors in medicine. Six strategies have been identified for enhancing clinical reasoning, including: rationality, metacognition, critical thinking, lateral thinking, distributed cognition and the humanities. This humanities-based workshop was incorporated into the critical thinking curriculum as part of the Med 2 skilled clinician program at Dalhousie University.

Summary of the Innovation: Students were provided with an understanding of dual processing theory and cognitive bias through an online podcast and two journal articles. The six strategies felt to enhance clinical reasoning were outlined in a didactic teaching session followed by an interactive workshop utilizing film, visual art and medical readers theatre. Prompt questions were used to engage students in discussion around the types of clinical reasoning skills that can be acquired through each medium. All of the Med 2 class participated, and tutors found them engaged and open to this style of learning. Students completed feedback forms, reflecting on their response at the end of the workshop and how they felt before participating. Comments were overall positive, the experience enjoyable and many changed their perception around the use of the humanities, critical thinking and the importance of communication.

Conclusion: The humanities offer opportunities to develop flexible thinking, an appreciation of others' perspectives and an understanding of the importance of cognitive bias. Students were enthusiastic about the workshop and enjoyed the different format. Similar workshops will be integrated into the skilled clinician program in all years.

OB 4-2 Learning by Concept or Learning by Example: An Experimental Study of Teaching Bayesian Diagnosis

Jonathan Sherbino McMaster University, **John E. Brush** Eastern Virginia Medical School, **Mark Lee** McMaster University, **Judith Taylor-Fishwick** Eastern Virginia Medical School, **Geoffrey Norman** McMaster University

Background/Purpose: Clinicians use probability estimates to make a diagnosis. Teaching students to make more accurate probability estimates could improve the diagnostic process and, ultimately, the quality of medical care. Objective: To test whether novice clinicians can be taught to make more accurate Bayesian revisions of diagnostic probabilities using teaching methods that utilized explicit conceptual instruction or repeated examples.

Methods: A randomized intervention of two methods for teaching Bayesian updating and diagnostic reasoning. 3rd and 4th year medical students at McMaster University and Eastern Virginia Medical School (n=61). Students were randomized to 1) receive conceptual instruction on diagnostic testing and Bayesian revision (Concept group), 2) exposure to repeated example cases with feedback on posttest probability (Experience group), or 3) Control group. All groups were tested on their ability to update the probability of a diagnosis based on either negative or positive test results. Their probability revisions were compared to posttest probability revisions that were calculated using Bayes Rule and known test sensitivity and specificity. An effect size was calculated to measure how close students matched the calculated revision.

Results: Probability estimates of students in the Concept group were significantly closer to calculated probability as demonstrated by the smaller effect size (Concept=.189, Experience=.289, Control=.301, $p<=.002$). The differences between groups were relatively modest and students in all groups performed better than expected, based on prior reports in the literature.

Conclusion: The study showed an advantage for students who received theoretical instruction on Bayesian concepts. This finding has implications for

how we teach diagnostic reasoning to novice clinicians.

OB 4-3 Incidentally induced anxiety and clinical reasoning in medical students

Jonathan Misskey University of British Columbia, **Kevin Eva** University of British Columbia

Background/Purpose: Findings from cognitive psychology suggest that high levels of anxiety can impair cognitive processes. In particular, anxiety may be associated with prematurely closing one's diagnostic search. The objective of this study was to determine the influence of anxiety on the risk of premature closure errors in medical students.

Methods: Students were asked to rate the probabilities of particular diagnoses across 8 clinical cases, each which were designed to have 2 competing diagnoses that were equiprobable. While the same information was presented to each participant, the order in which features indicative of each diagnosis was presented was manipulated to determine the influence of information order on the probability ratings assigned. Students were randomized to an anxiety induction arm approximating the context of a high stakes examination setting or an anxiety reduction arm.

Results: The probability ratings indicated a significant primacy effect, and students in both arms strongly favored the diagnosis presented first (m=37.7 vs. 30.4; p=0.002). This was true both when the diagnoses were generated by the student (m=51.5; 95% confidence interval [CI] 48.8-54.1 vs. m=35.4; 95% CI 32.7-38.1; F= 49.2; d=2.6; p<0.001) and when the diagnoses were provided by the investigator (m=52.4, 95% CI 50.1-54.7 vs. m=36.8; 95% CI 33.8 vs. 39.8; F=46.6; d=0.61; p<0.001). Anxiety induction did not interact with information order.

Conclusion: Medical students in this study showed a strong tendency towards information they encounter early in a case presentation. The findings suggest that anxiety is not a strong contributor to the risk of premature closure, indicating that anxiety reduction is unlikely to offer a useful intervention to help overcome the errors it can induce.

OB 4-4 The definition(s) of clinical reasoning

Meredith Young McGill, **Aliki Thomas** McGill, **Ana Da Silva** Swansea University, **Stuart Lubarksy** McGill, **Larry Gruppen** University of Michigan, **David Gordon** Duke University, **Valerie Dory** McGill, **Temple Ratcliffe** University of Texas Healch Sciences Centre San Antonio, **Tiffany Ballard** University of Michigan, **Joseph Rencic** Tufts Medical Centre, **Lambert Schuwirth** Flinders University, **Steven Durning** Uniformed Services University for the Health Sciences

Background/Purpose: Despite being a considered a core aspect of a health professionals practice, little consensus exists regarding what clinical reasoning 'is'. The purpose of this research was to synthesize explicit definitions of clinical reasoning from health professions education literature to better support the development of teaching and assessment strategies for clinical reasoning.

Methods: Papers were identified through systematic searches of five databases, with screening occurring in teams of two, and represented 18 health professions. Within the 625 papers included in the review, we identified 96 explicit definitions, and analyzed the data descriptively and inductively.

Results: Three main findings emerged. 1) Commonalities across definitions were: clinical reasoning is fundamental to successful clinical practice, it is a type of thinking applied to health contexts, towards the goals of diagnosis, treatment, prescription, and improved patient care. 2) Definitions different along: what clinical reasoning is dependent on (e.g. cue recognition), executed through (e.g. deliberation), and towards the goal of (e.g. generating and testing hypotheses) and 3) Clinical reasoning was made up of different component parts across definitions (e.g. cue acquisition, hypothesis generation, cue interpretation, and hypothesis evaluation.

Conclusion: The 96 definitions converged on the importance of clinical reasoning in clinical care, the reliance on thinking applied to health contexts, and the ultimate goal of clinical reasoning as better patient care. However, they differed significantly - both within and across professions - in how clinical reasoning is executed, observed, and understood. These findings suggest the likely presence of different

understandings, or conceptualizations, of clinical reasoning are at play in the literature.

OB 4-5 In Support of Meaningful Assessment and Feedback: A study of Reasoning Tasks Used in Ambulatory Case Reviews

Azin Ahrari University of British Columbia, **Jacqueline Torti** Western University, **Kamilah Abdur-Rashid** Western University, **Mark Goldszmidt** Western University

Background/Purpose: One of the challenges when assessing and offering feedback to residents is lack of under-standing of the meta-tasks shaping clinical encounters. While most are familiar with the clinical tasks (history taking, physical examination, etc), few are familiar with the reasoning tasks that shape how we take histories, do physicals, or engage in decision making. In a prior study, we identified 24 reasoning tasks that physicians may engage in during clinical encounters. The purpose of this study was to use ambulatory clinic setting to identify reasoning tasks ad-dressed by residents and those introduced by faculty.

Methods: Data consisted of audio-recorded case reviews between attending physicians and PGY1-5 residents. Transcripts were analyzed using validated reasoning tasks and constant comparison approach.

Results: On average, 10 reasoning tasks were addressed/encounter. New consults focused more on tasks of identifying most likely diagnosis and establishing management plans. Follow-up en-counters focused on assessing rate of progression, response to treatment, estimating prognosis, and determining follow-up. Tasks refined by factually included weighing alternative treatment options, identifying complications associated with treatment, and assessing response to treatment.

Conclusion: These findings can be used in three ways: First, the common patterns of reasoning task omis-sions can be shared with residents for better preparing them for their ambulatory encounters. Second, having a shared language around the metacognitive tasks shaping the encounter can allow for more meaningful feedback with residents. Finally, as we move forward, reasoning tasks can be used in the design of assessment instruments in the era of competence-based training.

OB 4-6 Expert reasoning in the context of ill-structured clinical problems: Exploring the experiences and sources of 'comfort with uncertainty'

Jonathan Ilgen University of Washington, **Judith Bowen** Washington State University, **Pim Teunissen** Maastricht University, **Anique de Bruin** Maastricht University, **Glenn Regehr** University of British Columbia

Background/Purpose: To act with confidence while simultaneously remaining uncertain is a paradox that epitomizes expert practice. Yet how experts comfortably navigate complex, ill-defined problems remains poorly understood. We sought to examine the behaviors of experts who work in settings rife with uncertainty, exploring what they do to work "comfortably" despite lingering uncertainties.

Methods: We employed a constructivist grounded theory approach to explore experiences of uncertainty in emergency medicine faculty. We used a critical incident technique to elicit narratives about decision-making immediately following participants' clinical shifts, exploring how clinicians made judgments about whether problems were within their scope of practice, when they felt compelled to enlist others' help, and how they determined when a problem should be triaged to others. Two investigators analyzed the narrative transcripts, coding data line-by-line using constant comparative analysis to organize transcripts into focused codes, key conceptual categories, and then major themes.

Results: Participants identified multiple forms of uncertainty, organized around conceptualizations of the problem they were facing and the actions they would consider taking in those moments. They described iterative cycles of forward planning and monitoring that generated variable levels of comfort with the situation. This spectrum of comfort in led to a variety of responses: owning the problem with comfort, co-owning the problem with others, triaging the problem to others, or moving forward despite discomfort.

Summary: We describe emergency physicians experiences with uncertainty: how they identify the different forms of uncertainty, how they experience and manage these uncertain moments, and the multitude of ways that they respond to these moments of uncertainty. These results provide language around what clinicians mean when they say that they are "comfortable" working through clinical problems while simultaneously experiencing uncertainty.

Conclusion: Clinicians experience multiple forms of uncertainty. Their multitude of potential responses are informed by variable levels of comfort that result from real-time self-monitoring and forward planning.

OB 5-1 Evaluating the University of Toronto Medical School's Black Student Application Program (BSAP): Building evidence for a process of community support and outcomes of positive change

Traci Cook University of Toronto

Background/Purpose: In 2017, the University of Toronto's Medical School launched BSAP, an optional application pathway, to address the longstanding rates of low admissions and enrollment of Black students. In addition to meeting other mainstream prerequisites (MCAT, GPA, courses requirements, and admissions panel interviews), BSAP applicants submit an additional BSAP specific essay and complete interviews with Black physicians and/or community members.

Methods: This mixed-methods evaluation uses a critical realism paradigm and a community participatory social justice framework to a) explain historical background and discriminatory practices against Blacks of African descent that have negatively impacted equitable outcomes even in medical school admissions practices and enrollment numbers, b) provide trend data from 2009 - 2017, prior to BSAP, as evidence of long-time low enrollment numbers of Black medical school students, and 3) provide narrative feedback from the 2018 cohort of BSAP students to discuss perceptions of BSAP and community support as evidence of positive outcomes.

Results: Trend data based on unofficial numbers of Black medical school alumni between 2009- 2017 (n= ~40) are reported. Of the 14 students in the 2018 BSAP cohort, findings are based on outcomes of 16 pre- and post-interviews with 8 student participants. We will use a thematic analysis to report on participant experiences, identified barriers and enablers, and future factors affecting BSAP outcomes.

Conclusion: BSAP has effectively increased Black medical school enrollment at the University of Toronto and with continued community support will produce longitudinal success for participants and the medical school community at large.

OB 5-2 Experiences of 'First in Family' Medical Students

Sarah Wright University of Toronto, **Victoria Boyd** University of Toronto, **Nicole Woods** University of Toronto, **Malika Sharma** University of Toronto, **Lisa Richardson** University of Toronto, **Ryan Giroux** University of Toronto, **Ike Okafor** University of Toronto, **Maria Mylopoulos** University of Toronto

Background/Purpose: Despite perceived benefits of diversity, medical students from affluent and highly educated backgrounds are overrepresented in Canadian medical schools. Little is known of the medical school experiences of students who are first in their family (FIF) to attend university.

Methods: All medical students in years 2, 3 and 4 were invited to participate in an interview to discuss their social background and medical school experiences, if they identified as first generation in their family to attend university in Canada. In order to better understand how their background influenced FIF medical student experiences, we also interviewed 6 students who identified as being from medical families for contrast. Bourdieu's concepts of habitus and capital were used as sensitising concepts to explore the data.

Results: Participants brought up issues of (not) feeling like legitimate medical students, tensions inherent in navigating their pre-medical life with their newly adopted identity as medical students, and how capital influences both the admissions process and experiences at medical school.

Conclusion: FIF medical students may continue to face challenges and disadvantages during medical school due to the social and cultural norms of the medical field. The results of this study provide insight into some of the ways that the medical school culture can make underrepresented groups, whom we seek to attract, feel marginalized. In doing so, this study also highlights possible ways for medical schools to further embrace the experiential knowledge and diversity that FIF students bring.

OB 5-4 No resident left behind: Establishing the need for targeted mentorship for underrepresented residents in Canada

Sung Min (Steven) Cho University of Toronto, **Sung Min (Steven) Cho** University of Toronto, **Anita Balakrishna** University of Toronto, **Mariela Ruetalo** University of Toronto, **Lisa Robinson** University of Toronto, **Glen Bandiera** University of Toronto

Background/Purpose: The University of Toronto's Postgraduate Medical Education (PGME) office aims to develop a Diversity Mentorship Program (DMP) to connect underrepresented/minoritized residents (UMR) to mentors who could support them in their educational and professional development. We conducted a survey of existing diversity-based mentorship programs and a survey of residents to gain their perspectives on mentorship.

Methods: Two separate online surveys were administered, one to all 98 Program Directors (PD) with a 91% response rate (n=89) and another to all 2044 residents which had a 35% response rate (n=719). PDs reported existing diversity-based mentorship opportunities in their programs. We examined residents' experience with previous mentorship, and perceptions of the proposed DMP and features of an ideal mentorship.

Results: PDs reported that 9 residency programs currently offer diversity-based mentorship opportunities. Among participating residents, 28% were UMRs. Among UMRs and non-UMRs, 29% and 25% respectively reported to lack mentors. Of UMRs without a mentor, 74% would like one. Nine in 10 UMRs (87%) expressed interest participating in a DMP and wished for the following components: 1) Career advice/networking and 2) Discussing minority experience/overcoming barriers. UMRs valued frequent meetings with mentors open to online communications, and preferred mentors from a similar minority group.

Conclusion: The difference in mentorship rates between URMs and non-URMs is negligible. The lack of diversity-based mentorship opportunities for residents and UMRs' desire to participate in one indicate the need for a PGME-wide DMP.

OB 5-5 Perceptions and experiences of gender equity in an academic internal medicine department

Shannon Ruzycki University of Calgary, **Allison Brown** University of Calgary, **Aleem Bharwani** University of Calgary, **Georgina Freeman** University of Calgary

Background/Purpose: Substantial literature demonstrates disparities between men and women physicians that consistently disadvantage women. These inequities have been demonstrated persistently over decades without improvement despite awareness. We sought to understand perceptions and experiences of gender equity in a single academic internal medicine department.

Methods: We conducted a sequential explanatory mixed methods study. The quantitative strand consisted of a department-wide survey using the Culture Conducive to Women's Academic Success instrument. This was followed by semi-structured interviewing of all department members who volunteered to participate. Interviews were coded inductively by two reviewers using thematic analysis guided by constructivism.

Results: 167 department members completed the quantitative strand (42.9% response rate; n=100 women (57.1% response rate among women), n=67 men (25.1% response rate among men). Men department members perceived the culture of the department toward women as significantly better than women themselves. There were 28 participants in the qualitative strand (7.2% response rate; n=22 women (12.9% response rate among women), n=6 (2.8% response rate among men). We identified two major themes (Parenthood & Caregiving and Leadership & Promotion) that were mediated by two experiences (Harassment & Discrimination and Exclusion). Men department members perceived

equity and did not report experiences of inequity while women department members perceived and experienced inequity in the department.

Conclusion: Men and women department members differ in perceptions and experiences of gender inequity. This gap in understanding the barriers and disparities experiences by women colleagues may explain persistence of inequity over time, as many senior leadership positions are held by men.

OB 5-6 Supporting medical student wellbeing: lessons from an international research program

Wendy Hu School of Medicine, Western Sydney University, Australia, **Eleanor Flynn** Melbourne Medical School, University of Melbourne, Australia, **Robyn Woodward-Kron** Melbourne Medical School, University of Melbourne, Australia

Background/Purpose: Links between medical student wellbeing, learning and performance are worldwide concerns. Heightened concerns at reports of self-harm and suicide, accreditation standards, legal and policy requirements reiterate medical school obligations to support the learning and welfare of struggling students, and to ensure all graduates are well versed in self-care. Yet, there is little attention to the impact of these obligations on the staff who provide this support. We conducted a series of studies to investigate the personal impacts and professional development implications of student support roles on academic and professional staff.

Summary of the Innovation: Using Design-Based Research, successive waves of data collection, analysis and implementation of findings in training interventions were conducted between 2011-9 at four medical schools in Australia, Sri Lanka and Malaysia. Data included 51 interviews and 181 questionnaire responses from professional and academic staff and medical student participants. Thematic analysis, informed by Emotional Labor and Positioning Theory, was conducted on qualitative data. Quantitative data were analysed descriptively.

Conclusion: For professional staff, support work was informal and not well recognised. There were positive impacts, but also prolonged distress after emotionally laden encounters. Academic staff described adopting diagnostician, judge and confidant positions, positioning students as good or troubling, depending on the circumstances and context of the support encounter. In diverse international contexts, participants expressed similar obligations to provide support and preferences for training in support. Structural and cultural differences limiting transfer of some support practices were identified.

Opportunistic, theoretically informed design-based research, sensitive to contextual nuances and triggers, can generate transferable research outcomes to address universal problems.

OB 6-1 TRC in Action: Leading the Way in Increasing the Number of Indigenous Physicians at UBC

James Andrew University of British Columbia

Background/Purpose: The final report of the Truth and Reconciliation Commission of Canada: Calls to Action was published in 2015. The Calls to Action number 23 states, "We call upon all levels of government to: i. Increase the number of Aboriginal professionals working in the health-care field. ii. Ensure the retention of Aboriginal health-care providers in Aboriginal communities. iii. Provide cultural competency training for all health-care professionals." The goal of the program is to increase the number Indigenous medical students and physicians in British Columbia. The program's vision was "A Total of 50 Indigenous medical students graduate from UBC's Undergraduate MD program by 2020." We will present the successes and challenges of our program.

Summary of the Innovation: Conducted a literature review by reviewing other medical school programs in Canada and the USA. Conducted one-on-one interviews with other UBC Indigenous programs such as Faculties of Law and Education. Community and student forums also provided feedback on the support and recruitment programs. Data on the number of applicants, enrolment and graduates are recorded on annual basis. The University Of British Columbia Faculty Of Medicine developed an Indigenous program that supports the recruitment, mentorship, and facilitated admission of Indigenous premedical undergraduate students for entry into the MD program. It also provides personal, cultural and

academic support for medical students entering the MD program. The highlights of the program includes the Indigenous MD Preadmissions Workshop (recruitment), Indigenous MD Orientation Days (support) and the Indigenous Medicine Cousins Mentorship Program (recruitment/support).

Conclusion: The program currently has forty Indigenous medical students in its entire four-year program. Eleven Indigenous medical students graduated in May 2019, which was the faculty's second largest class of Indigenous graduates. To date, ninety-one Indigenous physicians have graduated. Sixty five percent of graduates were/are trained in Family medicine while the remaining were/are trained in other specialties and subspecialties. We found it was crucial to consult other programs and medical school who already had programs in place to avoid "re-inventing the wheel." Need support from Indigenous communities who will be providing the students. During the first five years of the program, it became apparent that the designated admissions process was not sufficient, and it concluded that support from the Student Affairs and the Undergraduate MD Education offices were vital to the success of the program. UBC's Faculty of Medicine is seen as one of the leaders in increasing its numbers of Indigenous physicians.

OB 6-2 The Indigenous KAIROS Blanket Exercise: A Transformative Learning Experience in Medical Education

Lindsay Herzog University of Toronto, **Lisa Richardson** University of Toronto, **Sarah Wright** University of Toronto, **Jason Pennington** University of Toronto

Background/Purpose: It is well-established that Indigenous Peoples across Turtle Island (North America) experience significant health disparities, compared to the general population. The ongoing effects of colonization and institutional racism are core contributing factors to this inequity. It is important to encourage medical students to critically examine why the determinants of health exist, rather than accept them as inevitable. The KAIROS Blanket Exercise (KBE) has the potential to achieve this goal.

Summary of the Innovation: The KBE is an immersive, interactive exercise where participants move among blankets representing the land and walk through major events in Indigenous history. This is followed by a guided debrief, in the form of a talking circle. The KBE has great potential for transformative learning, and we therefore set out to elicit the impact that participation in the KBE had on medical students. In February 2018, 213 second-year medical students at the University of Toronto participated in the KBE, and 174 subsequently completed a voluntary paper evaluation. Data were analyzed by quantitative and qualitative methods.

Conclusion: Analysis of the evaluation revealed that participation in the KBE led to shifts in the way students viewed those from backgrounds different from their own, and encouraged reflection on the biases and stereotypes they held regarding Indigenous Peoples, as well as their position of privilege and power. Central to this transformation was the role of critical reflection through authentic dialogue, and revealing the complex socio-political context of Indigenous Peoples' history. This suggests that creating space for transformative educational experiences in medical curricula may foster perspective-shifting, ultimately leading to the development of reflexive practitioners.

OB 6-3 Let's talk about the uncomfortable: decolonizing healthcare and educational institutions

Alya Heirali University of Calgary, **Rachel Ward** University of Calgary, **Robert Johnston** University of Calgary, **Ashley Cornect-Benoit** University of Calgary, **Sharon Foster** University of Calgary, **Pearl Yellow Old Woman** University of Calgary, **Rita Henderson** University of Calgary, **Cheryl Barnabe** University of Calgary, **Lynden Crowshoe** University of Calgary

Background/Purpose: The 2015 Truth and Reconciliation Commission (TRC) 94 calls-to-actions bring attention to the pervasive injustices and institutional racism faced by the Indigenous people of Canada. As a result, institutions across Canada have discussed decolonization and indigenization strategies. Decolonization is a complex multifaceted term that involves restoring Indigenous views, culture, knowledge, and traditional values. This project focuses on decolonization from an educational and healthcare standpoint.

Methods: The inaugural Decolonizing Healthcare Congress Day was co-organized by students from graduate studies, nursing, and medicine. The event was attended by community members (including a local Indigenous Elder), students, researchers, educators, faculty, and health practitioners from diverse backgrounds. The event was opened with a paired keynote session which provided context for the importance of engaging in the decolonization of healthcare from an Indigenous and non-Indigenous perspective followed by small group discussions. Attendees participated in three breakout sessions over the remainder of the day, before coming back together as a large group. **Results:** Attendees had the opportunity to hear from the speakers as to how decolonizing health is a part of their work. The majority of the breakout sessions were spent in group discussion, learning and teaching each other. The day ended as a large group, providing an opportunity for sharing reflections, thoughts, and plans for the coming months and years as to how decolonizing can take place on an individual level within our learning and practices, and on institutional levels.

Conclusion: The organizing committee plans to develop a Decolonization task force aimed to address the key takeaways from the event. Notably, we hope to engage senior leadership of our school to help us implement change. Some of the suggestions include the introduction of anti-racism workshops for students, faculty and staff at our institution, inclusive sacred spaces, knowledge sharing practices, and holistic review of applications to post-secondary. Suggested future strategies for increasing Indigenous health research capacity includes evaluating current application standards and recruiting practices in post-secondary health fields.

OB 6-4 Creating pathways to healthcare education with Indigenous youth

Natalie Sloof Western University, **Layla Amer Ali** Western University, **Tyler Blue** Western University, **Brenna Hansen** Western University, **Danny Kim** Western University, **George Kim** Western University

Background/Purpose: The Truth and Reconciliation Commission of Canada has called upon all levels of government to increase the number of Indigenous professionals working within the healthcare field. In response, medical schools have undertaken initiatives to address application-specific barriers to pursuing medical education. These initiatives overlook upstream barriers that Indigenous peoples face in the pursuit of healthcare education.

Summary of the Innovation: Over several years the Indigenous MedLINCs program, through the Office of Distributed Education at the Schulich School of Medicine & Dentistry has coordinated the delivery of engaging, healthcare-related programming to Indigenous youth in Neyaashiinigmiing. Continuity of the relationship the medical school has fostered with the community has created an opportunity for youth and community members to explore their interest in healthcare professions. Programming includes aspects of wilderness first aid, suturing, and casting.

Conclusion: Beyond hands-on learning, these activities help create discussion and action around the perceived barriers to post-secondary education for Indigenous youth. By sparking an interest in healthcare and building confidence and self-efficacy related to helping, we believe that youth who take part in our programs will be more likely to consider a career in healthcare. Using a novel method we administered pre- and post-programming surveys and measured an increase in both interest in healthcare (18% increase) and helping-related self-efficacy (45% increase). The relationship that Schulich has built with its neighbouring Indigenous communities can be used as a model that can be adapted by medical schools across Canada in an effort to establish pathways and opportunities for Indigenous youth to consider careers in healthcare.

OB 6-5 Space for the Sacred in Health Care? The Integration of Indigenous Medicines into Biomedicine

Cathy Fournier Wilson Centre, **Robin Oakley** Dalhousie University, **Lisa Richardson** Women's College Hospital, **Cynthia Whitehead** Wilson Centre

Background/Purpose: The integration of Indigenous healing knowledge and practices into biomedical settings is complicated by Canada's history of colonialism, which included the banning of Indigenous medicines and healing ceremonies until the 1970's. While the recent Truth and Reconciliation Report recommendations for recognizing the value of

Indigenous healing practices and increasing access appear to be steps in the right direction, critical scholars argue that without more significant changes in settler-Indigenous relations, these moves may simply work to hide the ongoing influence of colonialism and obscure the impact of biomedical dominance on indigenous practices.

Methods: This paper presents early work from my doctoral study which examines the use of the Two-Eyed Seeing principle to theorize the integration of Indigenous medicines into health care setting while employing Indigenous, decolonizing methodologies including Indigenous First Voice. Exploring my identity as a woman with mixed ancestry (Metis, Mi Kmaq, French/Scottish and simultaneously coming to terms with a recent stage two cancer diagnosis, I will reflect on my own 'living' experience of navigating the tensions between using Indigenous medicines alongside biomedical care for cancer care. Two-Eyed Seeing is a Mi'Kmaq principle which involves "learning to see from one eye with the strengths of Indigenous knowledges and ways of knowing, and with the other eye with the strengths of Western knowledges and ways of knowing, and learning to use both these eyes together, for the benefit of all" (Bartlett, Marshall and Marshall, 2012, pg. 337).

Results: Two Eyed Seeing has the potential to provide a path for honouring Indigenous Peoples history, while moving towards reconciliation, by also keeping in mind Canada's colonial past, and simultaneously looking forward to a future where Indigenous healing practices can be valued and preserved without becoming biomedicalized.

Conclusion: Two-Eyed Seeing is one of many Indigenous epistemologies geared toward decolonizing healthcare practices in Canada (e.g. Iwama et al, 2009; Martin, 2012). However, the limitation is that, like biomedicine with its mind-body dichotomy, the Two-Eyed seeing concept splits the world into simplified categories of "indigenous" and "non-indigenous" and negates the impact on colonization, and market capitalism, on how knowledges are shaped.

OB 6-6 Impact of the mini-schools of health on future healthcare professionals' attitudes toward indigenous people

Christophe Moderie McGill, **Éric Drouin** Université de Montréal, **Richard Rioux** Université de Montréal, **Anne-Sophie Thommeret-Carrière** Université de Montréal, **Jean-Michel Leduc** Université de Montréal

Background/Purpose: Université de Montréal organizes Mini-Schools (MS), during which voluntary undergraduates of health sciences visit indigenous youth and exchange about health topics. Undergraduates take part to a pre-departure training one week before the MS. The MS last one day (Wemotaci) or one week (Côte-Nord). This study aims to assess the impact of these activities on undergraduates' prejudices toward indigenous people.

Methods: Undergraduates completed the Old-fashioned and the Modern Prejudiced Attitudes Toward Aboriginals Scale (O-PATAS and M-PATAS) before the training (baseline), after the training (T1) and after the MS (T2). Scores were compared using repeated measures ANOVA.

Results: Among the 70 participants, 49 filled the questionnaire at baseline, T1 and T2 (70% participation rate). They were from 11 health & social sciences programs, 77.6% were women, mean age was 21.8, 36.7% were in medicine, 24.5% in nursing. There was a significant reduction of prejudices as measured by the O-PATAS (Baseline 23.1 ± 5.9, vs. T1 22.4 ± 5.5 vs. T2 18.9 ± 5.6; Intervention effect: $F(2, 96) = 12.4$, $p < 0.001$). The reduction was significant at T2 ($F(1,48) = 12.7$ $p=0.001$), but not at T1 ($F(1,48) = 0.7$ $p=0.4$). Likewise, there was a reduction of prejudices as measured by the M-PATAS (Baseline 23.2 ± 6.0, vs. T1 23.6 ± 6.2 vs. T2 21.1 ± 5.5; Intervention effect: $F(2,96) = 5.3$, $p =0.009$). The reduction was significant at T2 ($F(1,48) = 7.9$ $p=0.007$), but not at T1 ($F(1,48) = 0.5$ $p=0.5$).

Conclusion: In a group of voluntary undergraduates in health and social sciences, opportunity for exchange with indigenous communities, but not theoretical teaching, appears to reduce prejudices. Maintenance of such changes over time remains to be eluded.

OC 1-1 Forecasting future clinical performance: The value of MMI selection interviews in predicting clinical competence in senior medical student OSCEs

Kylie Mansfield University of Wollongong, **Lyndal Parker-Newlyn** University of Wollongong, **Helen Rienits** University of Wolllongong, **Kelly Dore** McMaster University

Background/Purpose: Previous academic results predict future academic performance and are widely respected admissions measures, despite weaker correlation with clinical aptitude. Predicting clinical performance, is arguably a more important goal in medical school admissions - is MMI a better tool for predicting competence?

Methods: Selection scores from six cohorts of MD students (2007-2012) were correlated with all in-course assessments. Specifically, predictive validity of admission MMI vs final year OSCE was assessed (N=409). Attribute matched MMI scores from two cohorts of MD students (2016-2017 graduates) were correlated with OSCE domains of competence using linear regression and correlations disattenuated.

Results: GPA demonstrated significant correlation with academic performance in Yr1 written examinations ($R=0.12$, $P<0.0001$) which weakened in subsequent examinations ($R=0.07$-0.09, $P<0.0001$). GPA did not correlate with OSCE. However, MMI strongly predicted final year OSCE performance ($R=0.29$, $P<0.0001$). Certain MMI stations showed significant positive correlation with OSCE – specifically, stations assessing medical insight showed positive correlation with overall OSCE score ($R=0.16$, $P<0.0001$) and ethics/law domains ($R=0.22$, $P<0.0001$). Problem solving MMI stations showed positive correlation with investigation planning ($R=0.15$, $P<0.05$) and patient-centred care ($R=0.164$, $P<0.001$). Leadership based stations correlated with overall OSCE score ($R=0.16$, $P<0.008$), and professional discourse ($R=0.21$, $P<0.003$).

Conclusion: This study confirms correlation of prior GPA with early academic performance that decreases over time. It also demonstrates MMI is useful as a predictor of future clinical performance. Selection attributes specifically correlate with clinical domains, implying that MMI does not simply assess communication, but also other attributes fundamental for clinical skill development. MMI interviews can aid selection by predicting those who will perform well clinically in future assessments and also identifying key personal qualities that underpin future clinical competence.

OC 1-3 The use of Item Parameter Drift and a Multi-Facets Rasch Model to detect potential case exposure in a high-stakes OSCE

Karen Coetzee Touchstone Institute, **Sandra Monteiro** McMaster University

Background/Purpose: The epidemic of candidate cheating within high-stakes testing contexts is perhaps particularly worrisome within the medical licensure field where assessments serve predominantly as gatekeepers for public protection. The popular Objective Structured Clinical Examination or OSCE test format used within this field heightens the risk of candidate cheating via ease of information sharing prior to the examination. At the same time, tracking shifts in item parameters over time, a phenomenon commonly known as item parameter drift (IPD), to help detect potentially exposed test content is further complicated in OSCE settings, given the variance associated with the need for examiners to assign scores. The advancement of the Multi-facets Rasch model (MFRM) to allow test environment factors to be included directly within the model may perhaps offer a convenient solution to this judge-mediated setting for the calculation of case estimates that are more reflective of the context.

Methods: This study specifically applied a four Facet MFRM to investigate IPD patterns of 36 high-stakes OSCE cases administered over several administrations.

Results: Results revealed patterns of significant IPD in terms of increased case easiness in eight of the 36 stations (22%), indicating potential exposure.

Conclusion: Retirement of these cases is recommended and the adjustment of candidate scores based on these results warrants further investigation. The generated difficulty estimates for the remaining 22 cases provides a convenient system for tracking and monitoring IPD patterns in future administrations.

OC 1-2 Entrustment and the Objective Structure Clinical Examination (OSCE): bridging the gap towards competency-based medical education

Samantha Halman University of Ottawa, **Angel Fu** University of Ottawa, **Debra Pugh** Medical Council of Canada

Background/Purpose: The concept of entrustment has been shown to be useful in the assessment of trainees in a competency-based educational model. However, very little is known about the role of entrustment in performance-based assessment. The purpose of this study was to explore the use of an entrustment-aligned rating scale within the context of an OSCE progress test.

Methods: A 9-case OSCE progress test was administered to Internal Medicine residents (PGY 1 - 4). Residents were assessed using a checklist (CL), a global rating scale (GRS), a training level rating scale (TLRS) and an entrustability scale (ENT). Reliability was calculated for each measure using Cronbach's alpha. Correlations between scores using the different rating instruments were calculated. Differences in performance by year of training were explored using ANOVA and post hoc Tukey's HSD test. Examiners completed a survey regarding the different rating methods.

Results: Ninety-one residents and 42 examiners participated in the OSCE. Inter-station reliability was greatest using TLRS (0.83) compared to the ENT (0.79), GRS (0.77) and CL (0.74). Scores from the different rating instruments were highly correlated (range 0.85 to 0.93; $p < 0.01$). The average ENT score increased by training level (2.69/5 (PGY1) to 3.80/5 (PGY4)) but was statistically significant only between junior residents (PGY1/2) and senior residents (PGY3/4), $p < 0.0001$. 88% (n=37) of examiners completed the survey. Most preferred the ENT over other scales. Most (64%) indicated feeling comfortable in making entrustment decisions during the OSCE.

Conclusion: Entrustment scores were found to have high reliability and demonstrated significant differences in OSCE performance by level of training. This supports the incorporation of entrustment scales in OSCE progress tests.

OC 1-4 Apples and oranges? Substituting traditional global rating scales with entrustment scales for standard setting in a residency Objective Structured Clinical Exam (OSCE)

Sarah Troster University of Alberta, **Vijay Daniels** University of Alberta, **Deena Hamza** University of Alberta, **Anna Oswald** University of Alberta

Background/Purpose: Most CBME assessments are intended to be workplace-based; however, OSCEs are still a part of the assessment framework. Borderline regression standard setting for OSCEs uses a global rating scale with anchors such as poor, borderline, good, etc. This contrasts the entrustment scales used in CBME workplace-based assessments. The purpose of the study was to compare a traditional global scale to an entrustment scale in terms of reliability across stations and impact on pass/fail decisions.

Methods: The University of Alberta Internal Medicine residency program uses the O-SCORE entrustment scale for workplace-based assessments. In the spring of 2019, we added an adapted O-SCORE (e.g. I would have had to prompt) to our first-year resident OSCE in addition to our usual checklists and rating scales, including our six-point global rating scale (anchors Very Poor, Poor, Fair-Borderline Fail, Fair-Borderline Pass, Good, Very Good). We looked at correlations between, reliability across all stations, and consistency of pass-fail decisions for our six-point scale and the adapted O-SCORE.

Results: Correlations between the global scale and the O-SCORE were moderate to high depending on the station, reliability across stations was very similar, but the O-SCORE led to a higher cut score with 29% of pass decisions changed to a fail.

Conclusion: The adapted O-SCORE may not measure the same construct as our traditional global scale for some stations and led to a higher cut score with this scale. OSCE developers should be aware of the impact of directly substituting an entrustment scale for a traditional global scale.

OC 1-5 Factors that influence self-regulation of learning in OSCEs: The role of emotions.

Cynthia Min University of British Columbia, **Deborah Butler** University of British Columbia, **Daniel Pratt** University of British Columbia, **Kevin Eva** University of British Columbia

Background/Purpose: There is increasing interest in the use of assessments to enhance student learning and improve performance. However, there is limited understanding of the range of factors that influence the utility of such efforts. This study examined factors influential in how students were learning through OSCEs and identified the key role of emotional state in students' self-regulation of learning.

Methods: Using principles of Constructivist Grounded Theory, first-year medical students were interviewed about their experience learning in the context of a summative OSCE (N=21) and a formative OSCE (N=15).

Results: Students' efforts at learning in the context of the OSCEs was driven by personal objectives related to improving performance, but also by objectives related to achieving a positive emotional state. Students' emotional state was influenced by interactions between factors related to the student (e.g., time management skills), the assessment design (e.g., the presence of academic consequences) and the broader learning environment (e.g., concurrent educational tasks). In some cases, students who prioritized improving their emotional state did so at the expense of improving their performance because the strategies used to address emotional state and performance objectives were contradictory. In other cases, the strategies students used were complementary and thus, improving their emotional state did not negatively impact performance improvement.

Conclusion: Students' focus on improving their emotional state in OSCEs was sometimes detrimental to their objectives related to performance improvement. To support students' self-regulation of learning through assessments, educators may need to consider approaches to minimize negative emotions or help students manage negative emotions more effectively.

OC 1-6 "Why didn't they see my scars?" Critical Discourse Analysis of Simulated Patients' perceived tensions surrounding Objective Structured Clinical Examinations

Helen Reid Queen's University Belfast, **Jennifer Johnston** Queen's University Belfast, **Mairead Corrigan** Queen's University Belfast, **Tim Dornan** Queen's University, Belfast

Background/Purpose: OSCEs are dominant in health professions education (HPE). Such hegemony comes with unintended consequences, which we addressed using critical discourse analysis of interviews with an at times overlooked (and contentiously labelled) stakeholder group: simulated patients (SPs). An earlier study in this programme of research identified SPs as undervoiced in assessment conversations. Participants explored the nature of OSCEs, examining relationships, motivations and dynamics of power. The overall aim of this study was to contribute, critically and constructively, to debate around assessment in HPE.

Methods: Study design was iterative, with our critical approach foregrounding interplays of power and positionality. We carried out in depth interviews with a maximum variation sample of eight SPs at a UK medical school. Data analysis was an inductive process which began at data collection and developed through discussion among the research team as we focused on language in use, drawing on Gee's tools.

Results: SPs' language directly addressed power imbalances, tensions and contradictions around OSCEs. Participants constructed OSCEs within four discourses of reducing, objectifying, industrialising and making accountable.

Conclusion: Tensions around OSCEs (evident in published literature and built on through the voices of study participants in this work) may be explained by conflict around the point of paradigm shift towards a 'post-psychometric' era of assessment. Attending to

such tensions might support constructive development of assessment across the breadth of HPE.

OC 2-1 The whole is greater than the sum of its parts: Expanding the breadth of interprofessional education in undergraduate medical education

Nishan Sharma University of Calgary, **Rahim Kachra** University of Calgary, **Cydnee Seneviratne** University of Calgary

Background/Purpose: Interprofessional education (IPE) is valuable for students in health care and other undergraduate disciplines, and the Liaison Committee for Medical Education mandates IPE be a part of the undergraduate medical curriculum. We suggest that an IPE event that exposes students to a breadth of mindsets through peer-to-peer education and mentorship, including those who are not from health care backgrounds, can encourage the growth and development of future health care professionals.

Summary of the Innovation: We created a weekend-long Interprofessional Challenge (IC), bringing together learners from every faculty across our University to work on a healthcare-related grand challenge. The event was piloted in 2016 with 35 students, and has brought together over 100 students in subsequent years. Unlike traditional hackathons where the focus is on creating a "winning idea", we focus on providing students with the opportunity to learn with and from students from other faculties, while pursuing a common goal. Educational activities include brief presentations from each faculty on problem-solving, concurrent workshops on challenge-related topics, a "help-desk" of mentors, a "pitch clinic" and a pitch competition.

Conclusion: Feedback from the students, faculty, mentors and judges has been overwhelmingly positive and has led to every faculty at the University providing funding for subsequent years' events. Students valued the unique opportunity to create tangible solutions to real-life issues in a pre-determined interprofessional team. On average, students were "very likely" to both recommend (4.7/5) and attend (4.5/5) this type of event in the future. Our plans for the IC include expansion to other universities.

OC 2-2 Soutenir le développement des compétences en collaboration interprofessionnelle par la pratique réflexive : une approche innovante

Amélie Richard Université Laval, **Emmanuelle Careau** Université Laval, **Sébastien Yergeau** Commission scolaire des Navigateurs, **Mathieu Gagnon** Université de Sherbrooke

Background/Purpose: La pratique réflexive est nommée comme étant une approche à considérer pour soutenir le développement des compétences à la collaboration interprofessionnelle (CIP). Peu de littérature existe cependant à ce sujet et les initiatives de pratique réflexive en CIP sont souvent peu opérationnalisées et non fondées théoriquement. Considérant l'importance de la CIP et les enjeux rencontrés dans son enseignement, notre équipe s'est penchée vers le développement d'une approche de pratique réflexive basée sur la littérature et ancrée empiriquement.

Summary of the Innovation: Les fondements théoriques de l'approche développée ont été assurés par une recension réaliste des écrits sur la pratique réflexive en FIP, un relevé exhaustif de littérature sur la pensée critique en santé et services sociaux, ainsi que des rencontres de validation auprès d'experts du domaine. La validation de l'approche s'est poursuivie empiriquement par l'analyse de discussions interprofessionnelles entre étudiants et par des groupes de discussions focalisées avec des formateurs en CIP. L'approche développée consiste en un enseignement explicite des formes de base du raisonnement logique et de certaines habiletés de pensée favorables à la CIP, puis à la mise en pratique des apprentissages dans le cadre de discussions cliniques entre étudiants facilitées par des personnes ressources formées. Les outils développés, issus de la logique formelle et informelle, ont été expérimentés dans le cadre d'un cours de CIP offert auprès d'étudiants de six Facultés de l'Université Laval.

Conclusion: L'enseignement explicite et l'utilisation du raisonnement logique et des habiletés de pensée en CIP sont des stratégies qui favorisent le

développement de compétences à la collaboration telles que la communication interprofessionnelle, le leadership collaboratif, la résolution de conflits et le travail d'équipe. La rigueur du dialogue qui en découle permet également de discuter des cas cliniques dans une perspective centrée sur les besoins de la personne et de ces proches.

OC 2-3 Inter-Professional Faculty Development in small groups - the importance of a safe environment.

Erica Amari University of British Columbia, **Kiran Veerapen** University of British Columbia, **Wilson Luong** University of British Columbia, **Jennifer Clark** University of British Columbia, **Katherine Wisener** University of British Columbia, **Brenda Hardie** University of British Columbia, **Sue Murphy** University of British Columbia, **Robin Roots** University of British Columbia, **Donna Drynan** University of British Columbia, **Julia Klick** University of British Columbia, **Rose Hatala** University of British Columbia

Background/Purpose: Faculty Development (FD) utilizing inter-professional small groups is uncommon. At the University of British Columbia, we implemented a longitudinal FD program where faculty from various health professions taught and learned from each other. We sought to understand how the inter-professional setting impacts teaching and learning in FD.

Methods: Four cohorts of five participants each, met for six, 90-minute sessions that were moderated by FD leads over one year. Each participant developed and delivered an interactive lesson on a key educational topic. Participants gave structured feedback; dialogue and reflection were encouraged. A safe space was actively promoted through modeling of respectful, collaborative communication by the facilitator, corresponding ground rules and a focus on educational topics. Interviews were conducted with three participants and four cohort leaders. Preliminary content analysis was conducted by two of the authors by coding the transcripts and identifying themes.

Results: Participants reported feeling safe in sharing their experiences and perspectives more freely in these groups than in their own uni-professional groups. They began to appreciate commonalities and variations in how health professions applied educational principles. They took into consideration the needs and perspectives of other professions when planning lessons, resulting in a fresh approach. Over time, the feedback and discussions became robust, and participants incorporated the observed learned strategies in their own practices.

Conclusion: Longitudinal FD in small groups with active participation of inter-professional faculty in a safe environment promotes a deeper understanding of how other professions teach and work and enhances the feedback process.

OC 2-5 What motivates Professional Development? An Interprofessional Glimpse into the Minds of Healthcare Professions Educators

Ingrid Harle Queen's University, **Mikaila De sousa** Queen's University, **Eleftherios Soleas** Queen's University, **Richard van Wylick** Queen's University

Background/Purpose: Professional Development (PD) events (Faculty Development and Continuing Professional Development) are key components of clinically upskilling and maintaining the teaching capacity of faculty in Health Science programs. A typical needs assessment ascertains the relative strengths and gaps in faculty knowledge. We flipped this notion to determine how well PD providers know what motivates their clientele to attend PD events.

Methods: An online survey combining open-ended and Likert-items asking about motivations to attend PD Events was performed and received 204 responses across our nursing, rehabilitation therapy, health science, and medicine faculty. Response rates averaged around 15% and proportions of responses were representative of the sizes of each health professions' faculty roster.

Results: There were no significant differences between types of Health Professions Educators and their relative emphasis on a given motivator. The strongest reported motivator for attending a given FD event was "interest in the content", while the lowest reported motivator was "Continuing Education credits" and their equivalents. Topics that were seen as strongly contributing to competence as a health

professional and teacher occupied the middle of the range of importance as drivers.

Conclusion: Nothing surpasses topics of interest as a main driver of attendance at PD events but clear arguments for how the PD event will improve healthcare provision or teaching ability are closely related to an increase in attendance. Although accreditation is a key component of ensuring quality, evidence-based education, credits and equivalent extrinsic incentives such as nice venues, or time-condensed events were reported by Faculty to very weakly motivate them.

OC 2-6 Investigating the impact of interprofessional co-debriefing on team performance outcomes in a simulated mass casualty incident.

Irina Charania University of Calgary, **Ian Wishart** University of Calgary, **Gemma Percival** University of Calgary, **Amy Poelzer** University of Calgary

Background/Purpose: Research demonstrates that debriefing is a key aspect of simulation-based learning and that debriefing quality impacts student learning. While many characteristics of debriefing have been elucidated, the impact of interprofessional (IP) co-debriefing on student learning has not been investigated. Therefore, we explored the effect of IP co-debriefing compared to single facilitator debriefing on TEAM questionnaire scores among students participating in a simulated disaster.

Methods: Pre-licensure healthcare students were randomly assigned to IP groups. Student then triaged and cared for standardized patients portraying victims of a mass casualty. Teams completed their first simulation scenario and were subsequently debriefed by one or two facilitators. Students then participated in a second scenario with their same group. In total, 369 students (i.e., 152 medical, 157 nursing, 44 respiratory therapy, and 16 paramedicine students) participated. Debrief facilitators included faculty and clinicians from medicine, nursing, respiratory therapy, medical laboratory technology, and radiation technology. To evaluate student teamwork performance, the Team Emergency Assessment Measure (TEAM), a previously validated assessment measure of teamwork during medical emergencies, was completed by facilitators and students.

Results: Facilitator ratings of student team performance in the two scenarios improved significantly for students assigned to single-facilitator debriefing in their first scenario, (39.58 to 50.44, $p<.001$). Facilitator ratings of students assigned to co-facilitated debriefing did not differ significantly between the two scenarios (45.06 and 46.95, p=ns). Student ratings indicated significant improvements for both single and co-facilitated conditions, 47.59 to 55.55, $p<.001$; and 49.96 to 54.40, $p<.001$ respectively.

Conclusion: Our analysis indicates IP co-facilitation does not result in facilitator perceived improvements in teamwork during a single-day learning event, despite perceived improvement of similar magnitude being reported by students across conditions.

OC 2-4 "I'll Scratch Your Back If You Scratch Mine…..Maybe." How helping behaviours are understood and enacted in professional work teams: A Scoping Review.

Erin Kennedy Western University, **Sayra Cristancho** Western University, **Javeed Sukhera** Western University, **Don Eby** Western University, **Sandy DeLuca** Western University

Background/Purpose: Contemporary healthcare teams are complex and dynamic. Team members frequently encounter challenges that require seeking assistance from inside and outside the team. Despite how commonly help-seeking behaviours are encountered, understanding the complexities in the provision and receipt of help within interprofessional teams is underdeveloped in the health professions education literature. The experiences of other team-based professions, such as business and engineering, might offer insight into these challenges.

Methods: We undertook a scoping literature review to explore how helping behaviours in professional teams have been studied and are understood. This methodology offers a systematic way to identify, map, and review existing knowledge on helping behaviours, including stakeholder perspectives.

Results: Our review suggested two features of helping phenomenon related to the provision or

receipt of help within teams: 1) ways that help is defined and enacted, 2) personal, situational, and organizational factors that shape how this occurs. Our review also found a lack of literature that details naturalistic work teams (i.e. not artificially created) in both health care contexts and other professional domains of literature.

Conclusion: Understanding helping behaviours is essential to encourage and support optimal functioning of clinical teams. Insights derived from other team-based professions adds to our understanding of how help is sought and provided within teams. This knowledge can influence initial education and professional development initiatives to establish and enhance helping behaviours within clinical teams.

OC 3-1 Humanism in Surgery - Developing a Patient as Teacher Initiative in Surgical Clerkship

Jory Simpson University of Toronto, **Emilia Kangasjarvi** University of Toronto, **Allia Karim** Reserca, **Stella Ng** University of Toronto

Background/Purpose: Patient as Teacher (PAT) programs offer an approach to education that recognizes patient expertise and engages patients in the medical education process. Sharing patient experiences through narratives can create learning and understanding that encourages meaningful dialogue and partnerships between patients and providers. Despite increased adoption in medical education, PAT programs have not been studied sufficiently in the context of surgery.

Summary of the Innovation: We report findings from the development and evaluation of a newly established PAT program at University of Toronto. Integrated into third year surgery clerkship, the program consists of 3 interactive workshops with 4 different breast cancer survivors and creation of an arts-based reflection. To explore students' experiences, 5 focus groups with 46 students were conducted at rotation's end. Students reflected on overall program experience, including its impact on their educational practices and identity. Transcripts were analyzed using thematic analysis involving an iterative process of inductively coding data and organizing codes into relevant thematic categories. Students valued protected time to learn directly from the patients, slowing down and focusing on the human side of surgical care and from hearing the experiences the "less victorious" narratives. They learnt the significance of the "the little things" in patient-provider interactions, further developed an appreciation for the individuality of experiences despite the same disease and finally the impact of breast cancer on a person's identity and life.

Conclusion: The PAT program successfully promoted and fostered the humanistic side of surgery and is a model that could be incorporated into surgical clerkships throughout Canada.

OC 3-2 Exploring patient perceptions of learner competence on a medical teaching unit

Megan Mercia University of Calgary, **Rahim Kachra** University of Calgary, **Allison Brown** University of Calgary, **Irene Ma** University of Calgary

Background/Purpose: Proponents of competency-based medical education (CBME) suggest it may improve patient care and promote greater social accountability to the public and desired outcomes for patients (1,2). Given the rise of patient engagement in healthcare and patient-centered models of care, it is important to understand how patients might define and think about competence and CBME models of training. There is a need to engage patients in the design, delivery, and assessment of CBME to parallel current trends in healthcare.

Methods: A convergent parallel mixed methods design was used to simultaneously collect quantitative and qualitative data that converged on the central phenomenon of patient perceptions of competence in medical learners. Participants were adult inpatients admitted to the Medical Teaching Unit at Foothills Medical Centre whose care team involved medical students and residents from the University of Calgary.

Results: Between April and August 2019, 82 patients completed a survey and 35 patients completed a semi-structured interview. Patients commonly associated confidence in learners with competence, and felt it was acceptable for learners in difficulty to require more time to complete their training. Medical

expertise and communication were perceived as the most important CanMEDS domains, whereas Leadership was seen as the least important domain.

Conclusion: Patients were supportive of principles underpinning CBME, largely, that some learners may require more time. Patients prioritized expertise and communication, perceived as confidence, in their assessment of competence. Future research should further explore how patients may be involved in the assessment of learners.

OC 3-3 Patient Involvement in Medical Education Research

Katherine Moreau University of Ottawa, **Kaylee Eady** University of Ottawa, **Sarah Heath** University of Ottawa

Background/Purpose: Funding organizations encourage researchers to involve patients in research. Patients can contribute unique insights that help align studies with patients' needs. In this study we explored the involvement of patients in medical education research (MER).

Methods: Using Web of Science, we identified corresponding authors who published MER in English in 2017. We calculated descriptive statistics (i.e., frequencies and percentages) based on the data.

Results: Of the 283 respondents, 153 (54.1%) indicated that they involve patients in their MER. Of these respondents, 102 (66.7%) stated that patients are participants (i.e., data sources), 41 (26.8%) noted that patients are involved as advisors/reviewers (i.e., provide guidance to the research team but are not research team members), and/or 22 (14.4%) indicated that patients are involved as research team members (i.e., where they are formally recognized as part of the research team). The 130 respondents who do not involve patients in their MER do not involve them because they believe that their research topic(s) are irrelevant to patients (n=68; 52.3%), they have limited resources to support patient involvement (n=40; 30.8%), and/or they do not know how to involve patients (n=28; 21.5%).

Conclusion: Patient involvement in MER, beyond patients as data sources, is slowly emerging. Moving forward, it is important for those working in MER to acknowledge that patients can contribute to study priority setting, the development of research questions, data collection and analyses, or dissemination efforts. Such involvement can improve the quality of MER.

OC 3-4 Patient Emancipation? Patient Teacher Programs in Medical Education

Emilia Kangasjarvi University of Toronto, **Jory Simpson** University of Toronto, **Farah Friesen** University of Toronto, **Stella Ng** University of Toronto

Background/Purpose: "Patient as Teacher" (PAT) educational initiatives aim to bring the human experience more prominently into the medical education process by integrating patients and their stories into teaching. Yet despite decades of PAT programs and related research, incongruent perspectives on patients' involvement and motivations can still complicate PAT efforts. The underlying reasons for patient engagement from the perspectives of all PAT stakeholders - particularly patients - requires further scrutiny to ensure meaningful, non-tokenistic PAT programs and avoid potential coercion.

Methods: A new Patient as Teachers program was launched in 2018 for undergraduate University of Toronto MD students doing their surgical clerkship. Using a phenomenographic approach, we conducted 21 semi-structures interviews with patient teachers, students and facilitators who participated in this program to investigate the qualitatively various ways the program (the phenomenon) was experienced.

Results: Analysis identified different phenomenographical categories of description and how these categories were structurally related. One category may explain why patients participate in medical educational programs: retroactive emancipation. The program offered a way for patients' to counterbalance the dehumanizing care experience parts, give voice and drive for a change in how healthcare engages with patients.

Conclusion: As patient engagement in medical education increases, we should consider how to make patient involvement more inclusive and authentic. By conceptualizing PAT programs as potential early stage emancipation movements we may better support educational program development that involves

patients in a more humanistic and ethically sound manner to promote true patient-centered healthcare.

OC 3-5 Fostering non-clinical skills in medical education: a rapid review

Julie Massé Université Laval, **Stéphanie Beaura** Université Laval, **Marie-Claude Tremblay** Université Laval

Background/Purpose: Recently, patient engagement has shown promise in medical education including benefits in fostering non-clinical skills in students. However, how patient engagement promotes the development of such skills remain largely unexplored. This review aims to describe the characteristics and outcomes of interventions actively involving patients in medical education.

Methods: A rapid review was conducted. We searched MEDLINE and ERIC for primary studies on active patient engagement in medical education, conducive to non-clinical skills. Two coders independently reviewed selected studies. A narrative synthesis focusing on interventions' characteristics and outcomes was performed. Towle's toponymy (categorizing levels of patient involvement) and Kirkpatrick's framework were used.

Results: Our search yielded 2168 documents. 22 were retained after abstract and full-text screening. Described interventions involved encounter-based contacts (n=16) or more longitudinal initiatives (n=6). Patient's involvement in intervention's planning, if stated, was ranging from limited (n=3) to moderate or high (n=8). Patient's autonomy in interventions' implementation varied from quasi-total (n=2) to more limited with various levels of academic control. Studies reported outcomes related to students' reaction (n=19), changes in attitudes (n=17) and acquisition of new knowledge and skills (n=13).

Conclusion: Few studies on patient engagement in medical education report acquisition of non-clinical skills. Most of those studies are quantitative, limiting our in-depth understanding of the mechanisms leading to skills development. More qualitative research is needed to explore learnings' "how's" and "why's" and to optimize patient's contribution to medical education.

OC 3-6 How does having the patient continuously present in the teaching and learning encounter affect the learning environment for the attending physician the learner and the patient?

Bavenjit Cheema University of British Columbia, **Cheryl Holmes** University of British Columbia, **Cary Cuncic** University of British Columbia, **Carolyn Canfield** University of British Columbia, **Heather Buckley** University of British Columbia, **Kiran Veerapen** University of British Columbia, **Erica Amari** University of British Columbia, **Laura Nimmon** University of British Columbia, **Daniel Ho** University of British Columbia, **Anneke van Enk** University of British Columbia, **Katherine Wisener** University of British Columbia, **Meredith Li** University of British Columbia

Background/Purpose: Although much has been written about the medical learning environment, the patient, who is the focus of our care, has been systematically excluded from this discourse. . The purpose of this study was to explore the role of the patient as an active participant with agency in an authentic medical learning environment from the standpoint of the learner, the faculty and most importantly the patient. We hoped to gain insight into the reinforcement of positive professional values such as patient-centred behaviours and a respectful environment.

Methods: The study recruited attending physicians and medical trainees to adopt a "patient-centered clinic" approach where all case presentations were conducted in examination rooms with the patient, as opposed to a conference room. Using a design-based research methodology, semi-structured interviews explored the impact of the new learning environment. After each week of interviews, the study members discussed insights and the interview questions were refined. The preliminary sample included of the study with 5 attending physicians, 8 trainees, 5 patients and 1 family member.

Results: Results revealed three themes: 1. The teaching model allowed for a more patient-centered and inclusive health care environment; 2. Attending physicians and medical trainees reported that presenting cases with the patient present challenged normal teaching practices and may have limited

teaching opportunities; and 3. Although it was difficult to ascertain the effect on professionalism, patients felt more respected.

This study provides a valuable platform for exploring the evolution of a positive learning environment with the lens of patient agency and centeredness.

OC 6-1 Social background and medical school choice in the UK: a national qualitative interview study

Eliot Rees University College London, **David Harrison** University College London, **Karen Mattick** University of Exeter, **Katherine Woolf** University College London

Background/Purpose: Students from lower socio-economic backgrounds who were state educated are underrepresented in medicine in the UK. Widening access to medical students from these 'non-traditional' backgrounds has become a key political and research priority. It is known that medical schools vary in the number of applicants from non-traditional backgrounds they attract and accept. This study seeks to explore how and why applicants from different social background choose which medical schools to apply to in the UK.

Methods: We conducted a national qualitative interview study, adopting a critical realist perspective. We purposively sampled applicants and first year students from eight UK medical schools. Participants attended semi-structured individual or group interviews. We performed a framework analysis, identifying codes inductively from the data.

Results: Sixty-six individuals participated; 35 applicants and 31 students. We identified three main themes: (i) priorities, (ii) perceived resources and constraints, (iii) strategies for choice. Participants' background influenced their priorities in selecting medical schools. Traditional applicants were more likely to prioritise prestige, whereas non-traditional applicants were more likely to describe being concerned with fitting in, being close to home, and finance. Some applicants had strong preferences for particular medical schools, whereas others were more concerned with simply getting in somewhere. Applicants described how their beliefs about their own educational, social, financial, and psychological capital expanded or constrained their choices.

Conclusion: Priorities, and perceived resources and constraints shaped applicant choice of medical schools, and these varied depending on applicant social background.

OC 6-6 CASPer Down Under: understanding the role of SJT in selecting rural background applicants for medical school in Australia

Lyndal Parker-Newlyn University of WOLLONGONG, **Kylie Mansfield** University of Wollongong, **Kelly Dore** McMaster University

Background/Purpose: A key challenge for medical schools worldwide is identifying appropriate tools to select students ideally suited for medical practice from a competitive applicant pool. Situational Judgement Tests (SJT) are one such tool, designed as an ability measure of emotional management and predicting future professional behaviour. CASPer is a video-based online SJT developed by McMaster University and widely used in Canada. Our aim was to determine validity evidence for CASPer in an Australian medical student selection context.

Methods: University of Wollongong (UOW) delivers a 4-year graduate medical program with a focus on medical care in rural areas. UOW MD selection algorithm includes scores from GPA, GAMSAT, extracurricular portfolio, rural background and MMI. In May 2018 UOW undertook a pilot administering an Australian specific CASPer test to MD applicants (n=1,548). Scores were correlated and disattenuated with other selection measures and demographics.

Results: Significant correlation exists between CASPer and MMI ($R=0.52, p<0.0001$) particularly in applicants with a CASPer score 1 SD or more below mean. At MMI these applicants were more likely to score poorly and/or receive a "red flag" for concerning behaviour. Weaker correlations exist between CASPer and admissions portfolio ($R=0.19, p<0.0001$). Minimal correlation exists between CASPer and GPA, age and gender. Rural upbringing / education did not impact CASPer scores. The test was widely accepted by applicants with 86% indicating that they were satisfied, very satisfied or extremely satisfied with the CASPer test experience.

Conclusion: This study is the first widespread use of video-based SJT for medical student selection in

Australia. It demonstrated less gender bias than existing selection measures, and no bias against rural applicants. CASPer screened effectively for MMI score and demonstrated sensitivity in identifying applicants who display concerning behaviours at interview. Further research will explore the role of CASPer as an in course measure of professional behaviours and the impact of clinical skills on CASPer performance.

OC 6-3 ral and Remote Sustainability Score. Eight years of experience as a screening tool for admission to a distributed medical education program (DME) with an emphasis on rural practice.

Tammy Klassen-Ross University of Northern British Columbia, **Paul Winwood** University of British Columbia, **Geoff Payne** University of Northern British Columbia

Background/Purpose: The University of British Columbia (UBC) is addressing the shortage of physicians in remote and rural communities in BC through a distributed model of undergraduate medical education (DME). For its Northern Medical Program (NMP), whose goal is to train physicians for northern and rural communities, a novel admissions tool, the Rural and Remote Suitability Score (RRSS) was developed. The RRSS was designed to provide an objective measure of undergraduate medical applicants' affinity for training in rural, remote, and/or northern settings and those most likely to practice family medicine in such communities.

Methods: The RRSS is a self-report screening tool that is used as part of the admissions process to the NMP. The RRSS assesses students in four categories 1) Rural lived experiences, 2) Self-Reliance and Independence, 3) Rural related activities, and 4) other information including ties to rural areas and rural mentors. An adjusted total score RRSS is generated combining all categories. Practice locations were scored on a 6-point scale based on the BC Rural Subsidiary Agreement designation and population size. Practice locations were obtained from the College of Physicians of BC, the Canadian Medical Directory and alumni data.

Results: Preliminary analyses of RRSS scores of graduating classes from 2008-2016 (n=245) indicated a significant positive correlation between RRSS adjusted total score and recruitment location $r = 0.16$, $p < .05$. Furthermore, it was found that 59% of the students who chose NMP as their first-choice ranking of the 4 DME sites of UBC pursued a career in Family Medicine.

Conclusion: There is a positive relationship between the RRSS score and rural practice location. This supports the use of the RRSS as an admissions tool for rural DME. The results also demonstrate that students are more likely to pursue family medicine if they attend the Northern Medical Program, which was one of the purviews of the distributed site.

OC 6-4 Gender and age effect in integrated French Multiple Mini Interviews. A maturity issue?

Robert Gagnon Université de Montréal, **Philippe Bégin** Université de Montréal, **Jean-Michel Leduc** Université de Montréal, **Christian Bourdy** Université de Montréal

Background/Purpose: Since the implementation of MMI in three French-speaking medical schools in Québec in 2009, higher scores are obtained by female candidates. Analysis of scores by gender and by age shows interesting patterns. The objective of this study was to study the effect of gender, age and their interaction in MMI scores.

Methods: Scores on MMI from 2009 to 2019 were assembled. Raw scores from the sites were standardized on a common scale with a mean of 500 and a standard deviation of 50. Anova on mean scores and graphical presentations are used for analysis.

Results: Results were obtained for 15,271 candidates. Mean score for women (n= 9,276) is 505.2 (sd = 47.3) and 491.2 (sd = 51.7) for men (n= 5,995). Significant effect of gender ($F=97.51$; $p<0.001$; effect size = 0.28), significant effect of age ($F=7.1$; $p<0.001$) and a non-significant interaction for gender by age ($F=1.2$; $p= 0.24$). While male have lower scores at all age groups, a clear parallel progression of scores by age for both gender groups till the age of 25-26y. A significant drop of scores is observed for both groups after 27y.

Conclusion: In the present study, MMI scores are significantly associated with gender and age. An reversed U-shape progression of MMI scores is associated with age. While the delayed progression of MMI scores in male applicants could be explained by a possible lag in maturity, drop of performance for both groups after 27y is more challenging to interpret. Some implications of those effects on students cohorts will be discussed.

OC 6-5 Nature over Nurture: Selecting students with rural backgrounds is addressing maldistribution of physiotherapists

Robin Roots University of British Columbia, **Anne Worthington** University of British Columbia, **Andrea Gingerich** University of Northern British Columbia, **Sue Murphy** University of British Columbia

Background/Purpose: Rural communities remain medically undeserved due to the maldistribution of health professionals. In Canada, 19% of the rural population is served by less than 8% of all physiotherapists. In an effort to increase recruitment and retention in rural locations, health profession education programs have made changes to selection processes and curricular experiences. However, evidence of their impact has been inconclusive.

Methods: In response to the maldistribution problem, the Physical Therapy (PT) program at the University of British Columbia developed the "Northern and Rural Cohort". Drawing on evidence that geographical background and exposure to rural practice settings influences practice location, its admissions process preferentially selected applicants with lived experience in a rural location and required students to complete four out of six clinical rotations in northern or rural communities. Chi-squared tests and binary logistic regressions were conducted using five years of data (375 students) to identify the impact of program changes on rural recruitment.

Results: Post-graduation, significantly more PT students with a rural background (47%) are working in a rural community as compared with 8% from a non-rural background. PT students with a rural background were 9.5 times more likely to practice in a rural community (95% CI [5.1, 17.6]). The expanded rural clinical model was not as strongly associated with rural practice.

Conclusion: This study found that targeted admissions criteria is needed to address maldistribution of physiotherapists. These results may inform other programs in developing strategies to increase recruitment of health professionals in rural communities.

OC 6-2 Associations between CASPer scores and sociodemographic characteristics of applicants : preliminary findings from a multicenter study in Quebec

Jean-Michel Leduc Université de Montréal, **Robert Gagnon** Université de Montréal, **Valeria Akim** Université de Montréal, **Richard Rioux** Université de Montréal, **Philippe Bégin** Université de Montréal, **Natalie Loye** Université de Montréal, **Sébastien Béland** Université de Montréal, **Jean-Sébastien Renaud** Université Laval, **Claire Hudon** Université Laval, **Martine Bourget** Université Laval, **Annie Ouellet** Université de Sherbrooke, **Isabelle Gauthier** Université de Sherbrooke, **Sondos Samandi** Université de Sherbrooke, **Estelle Chetrit** McGill, **Saleem Razack** McGill, **Kate Hooton** McGill, **Christian Bourdy** Université de Montréal

Background/Purpose: CASPer is a situational judgment test used for selection by many medical schools in North America. Associations between sociodemographic characteristics and scores were recently described in the USA. The goal of this study was to assess if subgroup performance differences were observable in a Canadian context.

Methods: A sociodemographic questionnaire was distributed to applicants invited to at least one selection interview across 4 medical schools in Quebec in 2019. Data was anonymized and linked to CASPer z-scores. Mean comparisons between subgroups were made using Student's t-test and effect sizes were assessed using Cohen's d. A multiple regression model was then created using backward stepwise regression.

Results: Sociodemographic data and CASPer results could be matched for 930 out of 1898 interviewees (49.0%). Their mean age was 21, 61.4% were women, 66.0% were white, 17.0% had a parental income

Conclusion: On a subset of applicants invited to selection interviews in Quebec, CASPer scores presented subgroup differences related to older age and lower parental income. No subgroup difference between white and non-white applicants was observed.

OC 4-1 Changing Practitioners' Perspectives: Using first-person perspective in 360-video to cultivate empathy in health professionals

Seema Marwaha University of Toronto, **Sara Martel** Trillium Health Partners Institute for Better Health, **Arjun Sharma** University of Toronto, **Matthew Strang** Trillium Health Partners Institute for Better Health, **Nikita Singh** Trillium Health Partners Institute for Better Health

Background/Purpose: There is a deficit of empathy-based training and patient-experience education in the current medical education curriculum. This is in part due to a curricular focus on objective, scientific competencies rather than more subjective interpersonal skills. Medical education and training tends to focus on outcome-based thinking, but it is often unclear if the stated competencies observed in empathy and communication translate to real world ability.

Summary of the Innovation: After interviewing groups of patients, an immersive 360 degree video simulation filmed from the perspective of the patient was created, meant to be viewed in a virtual reality (VR) headset. We showed the VR simulated patient experience to 12 medical students individually and then conducted three focus groups of four students each. The focus groups were recorded, transcribed and thematically analyzed to identify the major themes discussed. Five major themes were identified: 1) The 360-video format can serve as a stand-in for experiential learning 2) It was valuable to experience a care-provider's verbal/non-verbal communication from the patient's perspective 3) Self-reflection is important 4) There are several perceived barriers to empathy 5) Empathy being defined as something you think and act on, not something you feel.

Conclusion: The patient's first-person perspective in a narrative vignette could enhance practitioners' reflection on patient experience and encourage a process-based thinking aligned with a person-centered care approach. The themes generated can help to inform how immersive simulations can be used in the medical curriculum to teach empathetic actions and the patient experience.

OC 4-2 Health Artificial Intelligence Ethics in Medical Education

Sara Gerke Harvard Law School, **Gali Katznelson** Western University

Background/Purpose: Artificial Intelligence (AI) is rapidly transforming health care. Already, the U.S. Food and Drug Administration has cleared or approved health AI-based medical devices that can diagnose diabetic retinopathy, read scans for stroke, and detect wrist fractures. Despite its tremendous potential to transform health care for the better, AI also poses new ethical challenges for stakeholders, such as physicians, patients, and AI makers, that need to be addressed. For example, under what circumstances (if any) does a physician need to inform a patient about the AI used in their care? How does one deal with cases where the AI is a "black-box," even for the physician? What sorts of biases might an AI perpetuate? We argue that medical schools should include a curriculum for health AI ethics. We have developed a case-based curriculum for health AI ethics for medical education that addresses these and other questions.

Summary of the Innovation: In our presentation, we will give an overview of this curriculum and discuss examples for essential topics to discuss with the students such as issues of informed consent, bias and disparities, safety, transparency and trust, as well as data privacy.

Conclusion: Currently, medical school curricula in Canada do not address such ethical issues. As future leaders of the health care system, medical students must be able to critically think about health AI and the ethical challenges associated with it. Not only will they likely have to practice medicine alongside health AI in the near future, but they will have a large role in shaping its implementation into health care.

OC 4-3 Creating an "Entrepreneurship in Healthcare" teaching program for medical students at the University of Toronto

Aida Ahrari University of Toronto, **Pawandeep Sandhu** University of Toronto, **Dante Morra** University of Toronto, **Alison Freeland** University of Toronto, **Sarah McClennan** University of Toronto

Background/Purpose: The way of the future requires significant opportunity to innovate in healthcare. Physicians are positioned to lead clinical innovation, given their firsthand exposure to healthcare challenges. However, they lack the necessary expertise in innovative methodology as there is no exposure to this in the Canadian medical education space. To fill this gap, we designed a seminar series in healthcare entrepreneurship for early stage medical learners at the University of Toronto; a first of its kind among Canadian medical schools.

Summary of the Innovation: A series of semi-structured interviews were conducted with key stakeholders including physician entrepreneurs, local innovation leaders, curriculum specialists and medical students. Using thematic analysis, recommendations were extracted to inform the design of the program. The seminar series content was informed by a well-established entrepreneurial framework - MaRS Innovation Framework - and adapted to the needs of medical learners. The program consists of a 6-session seminar series outlining a methodological approach to the development of a medical startup. Each session is taught by an expert in the area, accompanied by student-led projects that promote the application of gained knowledge.

Conclusion: Thematic analysis highlighted the following requirements: 1) thoughtful organization of the structure, content and delivery of seminars is key, 2) the program should serve as a catalyst for developing relationships between students and local entrepreneurial entities, and 3) the program should provide students with the opportunity to explore new career paths. The evaluation of this seminar series will inform future iterations with a goal to be a valuable platform for inspiring the next generation of healthcare entrepreneurs to transform the healthcare landscape.

OC 4-4 Digital Compassion: A conceptual framework for learning to care in the digital age

David Wiljer University of Toronto, **Rebecca Charow** University of Toronto, **Gillian Strudwick** University of Toronto, **Allison Crawford** University of Toronto

Background/Purpose: In the age of digital health care and emerging technologies, new models of virtual, online and digitally-enabled care are rapidly emerging. However, the impact of emerging technologies on the delivery of compassionate care is not well understood. There is lack of research around the impact of technology on the delivery of care and the capabilities required to deliver compassionate care in the digital ecosystem.

Methods: To develop an understanding of the role of compassion in the context of digital health, an ecological approach was used to create a conceptual model of digital compassion. From the ecological perspective, a preliminary framework for understanding digital compassion was developed using a functional definition of compassion as the foundation. The preliminary framework was explored through two scoping reviews to further refine the model in the context of the research literature, as well as understand the use of digital compassion from the perspective of mental health care.

Results: Based on a functional definition of compassion, a framework for digital compassion has been developed and includes six dimensions: 1) awareness of suffering; 2) digitally mediated responses; 3) online interventions; 4) digital training and coaching; 5) compassion oriented technologies; 6) compassionate oriented algorithms. This framework has guided two scoping review protocols. Reviewing 37 articles in mental health care, the predominant domains of research were online interventions, training and coaching and developing compassion-oriented technologies.

Conclusion: A framework for digital compassion has been developed that can enhance our understanding of how to learn and teach the appropriate uses of digital tools to optimize care. The framework is currently being used to guide a modified Delphi process to identify capabilities and standards to advance digital compassion.

OC 4-6 Validation of a grid to document the quality of self-explanation when implemented as a learning strategy at the UGME level

Martine Chamberland Université de Sherbrooke, **Jean Setrakian** Université de Sherbrooke, **Mélanie Marceau** Université de Sherbrooke, **Élise Vachon Lachiver** Université de Sherbrooke, **Julie Ouellet** Université de Sherbrooke, **Émilie Blais** Université de Sherbrooke, **Linda Bergeron** Université de Sherbrooke, **Christina St-Onge** Université de Sherbrooke

Background/Purpose: We implemented self-explanation (SE) as a novel learning strategy in our UGME program knowing that SE increases diagnostic performance in clerks. However, we have yet to document what trainees do when asked to use SE outside of an experimental setting. Thus, we created, and proceeded to the validation of, a grid to document the quality of students' audio SE that was recorded when solving a clinical case.

Methods: We proceeded to a validation approach informed by the Unified Theory of Validity. We documented evidences of content through the definition and operationalization of the construct of interest (SE). We documented evidences of internal structure using Intra-Class Correlations on 3 datasets (audio SE); and response processes using descriptive statistics.

Results: We operationalized 3 indicators: clinical inferences (CI), biomedical inferences (BI) and monitoring (M). The team piloted and revised the grid through an iterative process until consensus about the grid's representativeness of the construct and its feasibility. The grid was applied by 2 team members to 30 SE, and yielded indicator ICCs of .81 (CI); .92 (BI); and .53 (M). After discussion, team members applied the grid to 2 other datasets (n=30 SE, and n=25 SE) and obtained ICCs of >.75. Mean CI varied from 16.27 to 27.04; Mean BI varied from 13.33 to 17.76 and Mean M varied from 2.03 to 3.10.

Conclusion: We created a standardized grid to describe students' SE. The documented SE, as illustrated by mean CI, BI, and M, aligns with what we could expect from the students' level of knowledge. They followed instructions and made inferences that we would expect. We consider this to be an interesting tool to describe SE to eventually provide feedback to students and as data for research.

OC 4-5 Exploring the relationship between participation in project echo and healthcare providers' orientation to lifelong learning

Sanjeev Sockalingam University of Toronto, **Thiyake Rajaratnam** Centre for Addiction and Mental Health, **Amanda Gambin** Centre for Addiction and Mental Health, **Jenny Hardy** Centre for Addiction and Mental Health, **Eva Serhal** Centre for Addiction and Mental Health, **Allison Crawford** University of Toronto

Background/Purpose: Lifelong learning (LLL) is a driving force for continued professional development (CPD) in healthcare professions. Project Extension for Community Healthcare Outcomes (Project ECHO©) is a tele-education model designed to address and bridge knowledge gaps between academic specialists and healthcare providers in remote areas through the development of a virtual community of practice. While the use of the ECHO model is expanding rapidly, little is known about the relationship between LLL and ECHO engagement. The current project aims to assess how orientation to LLL changes with participation in a cycle of ECHO Ontario Mental Health (ECHO-ONMH).

Methods: ECHO-ONMH completed Jefferson Scale of Lifelong Learning before and after each 36 week ECHO cycle to assess changes in orientation to LLL. A total of 41 providers were recruited over two consecutive ECHO cycles. We captured ECHO session attendance through a weekly registration database. Based on data distribution, participants were classified as high and low ECHO users using median session attendance (26 sessions) as a cut-point.

Results: ECHO-ONMH participants' mean LLL scores were 44.56±5.48. Low ECHO-ONMH users (n= 19) showed no significant improvement in LLL scores pre- vs post-ECHO (p=0.54). However, high ECHO-ONMH users (n=22) demonstrated a significant improvement (Pre-ECHO:42.77±5.13; Post-ECHO:44.18±5.69, $p<0.05$).

Conclusion: The results of this study highlight a relationship between high participation in ECHO-

ONMH and increased orientation to LLL amongst PCPs. This study suggests that the ECHO model may serve as an important CPD intervention that promotes LLL and contributes to master adaptive learning.

OC 5-1 Curricular Alignment Matrices

Amanda Stalwick University of Saskatchewan, **Regina Taylor-Gjevre** University of Saskatchewan

Background/Purpose: Ensuring curricular alignment of integrated vertical themes and program/course level objectives is essential. At the University of Saskatchewan, we have developed matrices to ensure program level objectives and integrated vertical themes are aligned with curricular outcomes.

Methods: Gap reports are run in our data management system and matrices are developed to visually indicate where in our curriculum we are teaching our program level objectives and integrated theme objectives. The Program Level/Course level matrix identifies where course level objectives intersect with program level objectives. Likewise, the integrated theme matrix indicates where vertical themes intersect with course content.

Results: The matrices offer a visual representation of the placement of our program level objectives and integrated vertical themes. They speak to the placement and adequacy of our curricular content and assist in adjudicating curricular change. At a glance, faculty and course reviewers are able to identify where program level objectives and integrated vertical themes are taught.

Conclusions: The development and utilization of curricular alignment matrices has enabled us to identify, communicate, and review objective placement in our curriculum. While they are not the only way we monitor our curriculum, they assist in our curricular monitoring, review, and quality assurance process.

OC 5-2 Using assessment and evaluation data to determine the state of medical programs: A program evaluation framework.

Pauline Pan University of Toronto, **David Rojas** University of Toronto, **Frazer Howard** University of Toronto, **David Tihanyi** University of Toronto, **Christopher Jones** University of Toronto, **Richard Pittini** University of Toronto

Background/Purpose: As part of the accreditation process, medical schools are asked to show evidence of the effectiveness and value of their programs, a task that is assigned to the Office of Assessment and Evaluation. Medical schools collect a comprehensive amount of assessment and evaluation data from their students, however, to date, there is no overarching evaluation framework that allows us to use the collected data to create an accurate representation of the state of the medical program.

Summary of the Innovation: The University of Toronto MD program, in preparation for its accreditation process in 2020 has developed a theory-informed evaluation framework that uses the MD program competency framework as a lens to analyze the assessment and evaluation data collected from students. This analysis allows us to determine how well the program is achieving the program goals. Specifically, the evaluation framework maps the assessment and evaluation data for each course (Pre-clerkship and Clerkship) to the MD program key competencies and using statistical analyses determines to what extent each course is achieving each of the key competencies. After implemented, courses receive a score for each of the key competencies.

Conclusion: To our knowledge, this is the first program evaluation framework that uses assessment and evaluation data to determine the state of a Medical Program. Results can also inform the refinement of the program courses. The mapping process of assessment and evaluation data to the MD competencies is paramount to this framework. If completed correctly, other schools could implement this framework to analyze the state of their programs.

OC 5-3 Using design thinking to re-invent the delivery of undergraduate medical education

Rahim Kachra University of Calgary, **Allison Brown** University of Calgary, **Mike Paget** University of Calgary, **Nishan Sharma** University of Calgary, **Joshua Low** University of Calgary, **Kathryne Brockman** University of Calgary, **Zachary Urquhart** University of Calgary

Background/Purpose: Didactic lecturing is a demonstrably ineffective method for content delivery. Despite this, many medical schools still rely heavily on the lecture format due to a lack of obvious alternatives. Design thinking principles can be implemented to create such alternatives. The first stage of design thinking emphasizes data gathering, keeping users at the centre of the research, and engaging all stakeholders. The second stage consists of rigorous data analysis and the creation and evaluation of prototypes. The final stage assesses efficacy of the new systems as they are implemented.

Summary of the Innovation: Between December 2017 and December 2018, we observed over 120 hours of student behaviours during lectures and small group sessions throughout the pre-clerkship. We also conducted 179 interviews and 9 focus groups with students, course chairs, faculty lecturers, technology management, and course administrators. 316 unique insights were identified and used to create twelve themes. Eighty-nine unique solutions were proposed by our team, which were bundled into twelve larger-scale solutions. We selected our top 5 "quick wins," and top 3 "major projects." Our Pre-Clerkship Committee has reviewed and vetted the innovations and provided good feedback for future directions.

Conclusion: At this unique time in medical education, many programs are redefining themselves in order to determine the optimal method of content delivery. To our knowledge, we are the first program to use design thinking to create a student-centered approach to the delivery of course content. Our process uncovered rich data and insights that have previously gone uncaptured. The collection and application of this data is a critical next step towards a truly evidence-based medical education.

OC 5-4 Exploring criteria used by judges to rate content for medical education curricula

Marcel D'Eon University of Saskatchewan, **Malshi Karunatilake** University of Saskatchewan, **Greg Malin** University of Saskatchewan, **Harold Bull** University of Saskatchewan

Background/Purpose: Medical school curricula have high content loads with negative academic and personal consequences for medical students. From out of a vast amount of available information, curriculum designers need to select appropriate content. Establishing effective content rating criteria is vitally important yet it seems that there is little rationale for the terms and phrases used. This may lead to omitting important content and/or including unnecessary content. We explored the meaning and value of terms and phrases used to rate content when making curricular decisions.

Methods: We designed a survey with all open-ended questions to ask participants in four stakeholder groups (education leaders, clinical faculty, basic science faculty, and learners) about what they thought selected terms and phrases meant and how suitable they thought they were for making content decisions.

Results: Nineteen people representing all stakeholder groups completed the survey. We found an obvious lack of consensus surrounding the meaning and suitability of these terms. For instance, the 'general medical practice' was often confused with the 'family practice'. In addition, all stakeholder groups almost uniformly rejected the phrase 'needed for the minimally competent graduate'. The phrase 'to function safely in clerkship' was generally unacceptable to participants.

Conclusion: We are concerned that faculty are making decisions about content without a common or clear understanding of terms and phrases used in the process. Our participants rejected two criteria but also did not generally endorse any of the others. Curriculum designers need to establish more consensus on the criteria used among faculty who choose content.

OC 5-5 Curriculum Renewal as Organizational Learning

Christen Rachul University of Manitoba, **Helen Mawdsley** University of Manitoba, **Benjamin Collins** University of Manitoba, **Keevin Bernstein** University of Manitoba, **Ira Ripstein** University of Manitoba, **Joanne Hamilton** University of Manitoba

Background/Purpose: In 2015, the UGME program at the University of Manitoba began implementing a renewed curriculum after a process that began in 2010. To identify factors that facilitate and impede the ongoing goals of curriculum renewal, we relied on Crossan's 4Is model of organizational learning that links individuals, groups, and the organization through the four processes of intuiting, interpreting, integrating, and institutionalizing.

Methods: As part of a mixed-methods evaluation of the new curriculum, we conducted 16 individual semi-structured interviews with leadership, faculty members, and administrators who played key roles in the curriculum renewal process. We conducted an iterative thematic analysis of interviews informed by Crossan's 4Is model of organizational learning.

Results: Analysis of interviews revealed that while many of the goals for the renewed curriculum have been achieved, some outstanding issues remain. Also, curriculum renewal is not a bounded event, but an ongoing process of organizational learning. The themes of Collaboration, Engagement, Leadership, Decision-making Practices, and Processes and Structures provide insight into the factors that facilitated and impeded the renewal process.

Conclusion: Some of the goals of curriculum renewal have been achieved through strong leadership, frequent collaboration, and engagement from multiple stakeholders that facilitated the development of shared understandings through which new routines and processes formed. Curriculum renewal was impeded by inconsistent decision-making processes and evolving processes and structures in terms of manpower, recognition, and protected time. Findings provide insight into ways that outstanding issues can be addressed and that the on-going process of curriculum renewal can be supported through individual and collective actions.

OC 5-6 A theory-based stakeholder evaluation of an integrative resilience curriculum

Juehea (Lucia) Lee University of Toronto, **Ben Shachar** University of Toronto, **Joanne Leo** University of Toronto, **Shayna Kulman-Lipsey** University of Toronto, **Leslie Nickell** University of Toronto, **Nellie Perret** University of Toronto, **David Rojas Gualdron** University of Toronto

Background/Purpose: In response to higher rates of distress and burnout among medical students, the University of Toronto developed a 4-year integrative Resilience Curriculum (RC) that was embedded into the core Doctorate of Medicine curriculum. The RC consists of online modules, compulsory workshops, and video narratives that aim to equip students with tools to increase their resilience. Preliminary data captured students' perceived value of the RC. The goal of this study was to employ a theory-based evaluation to explore how the RC has unfolded to date, including its strengths and areas for improvement, from the perspective of its stakeholders: developers, defined as those who led the development of the RC, and implementers, defined as those who facilitated resilience workshops.

Methods: Two focus groups, comprising of developers (n = 6) and implementers (n = 5), were facilitated. An iterative thematic content analysis was conducted. Line by line and axial coding were used for transcriptions. Codes were categorized to establish preliminary themes. Iterative discussions yielded final themes.

Results: Both groups identified the integration of the RC into core curriculum and changes implemented as a response to student feedback as strengths of the curriculum. Limited training for implementers was identified as a shortcoming.

Conclusion: Findings from this research can be considered when developing and implementing a medical education-based resilience curriculum. Themes emerged from this study may be used, in future, to inform the creation of an innovative tool that assesses the impact of RC on the resilience and well-being of medical students.

OC 7-1 Surgery ABCs: A Healthcare Podcast for Kids

Natalie Marsden University of Alberta, **Jenni Marshall** University of Alberta, **Jonathan White** University of Alberta

Background/Purpose: "Surgery ABCs" is an educational healthcare podcast targeted at pre-school and elementary aged kids to provide basic information on the body and medicine. Podcasts are becoming increasingly popular as an educational tool for children. While many science-based podcasts are available for this age group, podcasts focused on healthcare are lacking. This gap provided a unique opportunity to create a podcast to empower kids to learn about their bodies, to prepare them for encounters with the healthcare system, and to encourage them to consider careers in healthcare.

Summary of the Innovation: In association with the Surgery 101 project, we produced 11 "Surgery ABCs" episodes to address questions kids have about the body. Topics included: "What happens if I break a bone?" "Why does my stomach rumble?" "Where do farts come from?" "Why do my teeth fall out?" "Why is my pee yellow?" "Why am I ticklish?" "Why does food taste good?" "Why do I need to get my shots?" "Why does my heart beat?" "How can I blow out a birthday candle?" and "Why do I feel sad sometimes?" During each episode, the host, her daughter and a medical student discuss a part of the body, and highlight a practitioner that works on that area of the body in the 'Doctor of the Day' segment. The podcast is available on Spotify and iTunes, and has been downloaded more than 11,500 times; the episode on sadness has proven most popular among listeners.

Conclusion: This project demonstrates that children and their parents are interested in learning more about the human body and that podcasts can be used to as an educational tool to address children's curiosity about their bodies

OC 7-2 Factors influencing medical student perception of a career in General Surgery

Savannah Silva McMaster University, **Ashley Eom** McMaster University, **Qian Shi** McMaster University, **Danyal Saeed** McMaster University, **Jeffery Grab** University of Alberta, **Patrick Ciechanski** University of Alberta, **Deepak Dath** McMaster University

Background/Purpose: CaRMS data shows fluctuation in applications to general surgery. Our aim is to explore the current factors affecting medical students' perceptions of general surgery in order to guide curriculum changes and staff activities to promote student interest.

Methods: This grounded theory qualitative research study used semi-structured, individual interviews. Ten medical students from all years of medical school at two institutions were interviewed to explore the appeals and deterrents of entering a career in general surgery and how these factors may affect their career choices. The interviews were recorded, transcribed, and underwent coding by two independent co-investigators for data analysis.

Results: Students appreciated tangible outcomes, impactful work, and fast-paced workflow but struggled with rigorous training and the potential poor work-life balance in general surgery. Students expected egregious behaviours from residents and staff but reported mostly experiencing a willingness to teach, provision of clinical opportunities, and offers of research. If observed, students rationalized egregious behaviours to factors like fatigue and lack of agency. Institutional culture appeared to impact the experience of students on their surgical rotation.

Conclusion: Work hours, tangible outcomes and fast-paced work define surgery. Early clinical exposure can help students understand these specialty-defining factors for career choice. Negative stereotypes about personality and culture still exist, but exposure to surgical ambassadors in early years can counteract the negative stereotypes at the outset. Facilitating positive surgical exposure can help students with making career choices.

OC 7-3 Impact of gaps in surgical training and assessment on performance in an Obstetrics and Gynecology residency program

Stephanie Scott Dalhousie University, **Kevin Eva** University of British Columbia, **Nancy VanEyk** Dalhousie University

Background/Purpose: Development of expertise in complex skills, including surgery, requires deliberate practice. How practice is structured varies with diverse training requirements often leading residents to spend considerable time in non-operative rotations. Because advantages and disadvantages of such "gaps" are unknown, we examined longitudinal learning trajectories of residents and compared performance after prolonged periods of practice vs after gaps in training.

Methods: Daily operative assessments were analyzed retrospectively with learning curves generated. To systematically assess the impact of gaps, we compared scores received by residents after two successive months in which they were not assessed operatively and two successive months in which they were assessed at least once.

Results: 4400 scores for 33 residents over a 10 year period were analyzed. Residents performed better during their third sequential month of being assessed (mean=4.40, 95%CI=4.33-4.46) relative to during months after being away from the operating room for at least two months (mean=4.21, 95%CI=4.13-4.29; $p<0.01$; $d=0.7$). However, the maximum performance achieved was more strongly related to the number of times residents experienced a gap in training ($r=0.50$) than to the number of times residents experienced 3 consecutive months of training ($r=0.25$).

Conclusion: Time away from surgical practice and assessment negatively impacted short-term performance, but may improve long-term learning. This speaks to the value of spaced education and is important for the design of longitudinal skills based training programs.

OC 7-4 General surgery resident work patterns, results of a time- motion analysis study.

Eric Walser Western University, **Chris J Zhang** Western University, **Sayra Cristancho** Western University, **Lorelei Lingard** Western University, **Michael Ott** Western University, **Anna Mierzwa** University of Alberta

Background/Purpose: Postgraduate training is transitioning to a competency-based model (CBME) with a focus on flexibility and high-value learning activities. The effects on workflow and resource requirements in academic centers is largely unknown. Accurate characterization of resident workload is essential to ensure successful implementation of CBME.

Methods: A list encompassing the tasks performed by surgical residents on a daily basis was generated using expert consensus. Time-motion analysis methodology was used to revise the list and map tasks and time-on-task. Three trained observers tracked surgical residents throughout regular workdays and call nights. Multiple strategies were employed to reduce observer bias whenever possible.

Results: Nineteen residents were observed for 631 hours over 50 work periods. 38 discrete tasks were identified, in 6 categories (direct patient care, indirect patient care, learning activities, transit, downtime and miscellaneous), each with an explicit definition. 99% of time was categorized using this system. The most common tasks were operating (134 hr), EMR interaction (68 hr) and patient assessment (61 hr). Only 38% of time was spent in direct patient care activities. There were differences in work patterns between residents' groups based on seniority level, service type (elective vs on-call), and time in academic year.

Conclusion: This represents the most complete time-motion analysis study to date in surgical residents and provides key insights into their activities. Consideration should be given to developing strategies to increase time spent in direct patient care and critically analyzing the educational value of indirect care tasks. Additional resources should be allocated for the transitions in resident workload mandated by CBME.

OC 7-5 Propagating the "SEAD": exploring the value of an overnight call shift in the Surgical Exploration and Discovery Program

Aram Abbasian University of Toronto, **Shirley Xue Jiang** University of Toronto, **James Rutka** University of Toronto, **Nada Gawad** University of Ottawa, **Teresa Ziegler** University of Toronto, **Alexander Adibfar** University of Toronto

Background/Purpose: General surgery resident attrition highlights a need to support well-informed specialty selection. This study evaluated the role of overnight call shifts in surgical career exploration for pre-clerkship medical students.

Methods: The mixed-methods design utilized entry and post-call shift surveys and focus groups. Survey data characterized the population and call shift, guided focus group segmentation by baseline interest in surgery, and provided context to interpret qualitative data. Focus groups were transcribed and analyzed with a phenomenological approach using thematic analysis.

Results: Twenty-five first-year medical students participated in a call shift at two level 1 trauma centres. Sixty-four percent (n=16) of participants were male. The high interest group (n=9) had more prior operating room exposure than the moderate (n=12) and low (n=4) interest groups (p=0.039). Most students valued participating in a call shift; 80% (n=20) rated the experience "positive" or "very positive." Thematic analysis yielded two categories of themes: 1) Valuable aspects of the experience, including being part of a team, mentorship, understanding the clerk's role, dispelling misconceptions, trial of working overnight, and influencing interest in a surgical career; and 2) Determinants of an enjoyable experience, including resident engagement and number of traumas. An overnight call shift experience was valuable regardless of students' baseline interest in surgery. While it only influenced a few students' specialty preferences, exposure facilitated a better understanding of a unique component of surgical careers and provided valuable mentorship.

Summary: Twenty-five first-year medical students participated in a call shift at two level 1 trauma centres. Sixty-four percent (n=16) of participants were male. The high interest group (n=9) had more prior operating room exposure than the moderate (n=12) and low (n=4) interest groups (p=0.039). Most students valued participating in a call shift; 80% (n=20) rated the experience "positive" or "very positive." Thematic analysis yielded two categories of themes: 1) Valuable aspects of the experience, including being part of a team, mentorship, understanding the clerk's role, dispelling misconceptions, trial of working overnight, and influencing interest in a surgical career; and 2) Determinants of an enjoyable experience, including resident engagement and number of traumas. An overnight call shift experience was valuable regardless of students' baseline interest in surgery. While it only influenced a few students' specialty preferences, exposure facilitated a better understanding of a unique component of surgical careers and provided valuable mentorship.

Conclusion: These findings support implementing call shift experiences in curricular or extracurricular programs to increase accessibility and enable earlier, informed career decision-making.

OC 7-6 Educational impact drives feasibility of workplace-based assessment for cataract surgery

Nawaaz Nathoo University of British Columbia, **Andrea Gingerich** University of British Columbia, **Ravi Sidhu** University of British Columbia

Background/Purpose: As we transition to Competency-Based Medical Education, the increased demand for workplace-based assessments (WBA) leads to new challenges for implementing suitable WBA tools with published validity evidence, while also being feasible and useful. Despite published evidence to support their validity, there has been very poor uptake of WBA tools in ophthalmology residency programs in Canada. In order to understand why evidence-based assessment tools may not be incorporated into residency programs, it is necessary to understand the perspectives of stakeholders who are ultimately the end-users of these tools.

Methods: We investigated WBA implementation by studying their feasibility. Eleven surgical teachers used 3 daily assessment tools while supervising cataract surgery with ophthalmology residents. Semi-

structured interviews with teachers and a focus group with the residents enabled discussion of feasibility. Interpretive description, a qualitative methodology, was used to guide data analysis.

Results: Three themes emerged: (1) Surgical teachers' primary goal for assessment is to provide feedback to improve surgical competence. (2) Surgical teachers preferred the assessment tool with a design that best aligned with their approach to teaching and how they wanted to provide feedback. (3) Orientation to the tools, combined with established remediation pathways, may help preceptors to better use assessment tools and improve their ability to give critical feedback.

Conclusion: Feasibility of a WBA tool may be based primarily on its perceived educational impact. Tools that emphasize feedback and align with teaching practices may improve feasibility to stakeholders and help to overcome known threats to feasibility such as long tools and frequent submissions.

OD 1-1 A Dialogical Approach to Teaching for Person-Centred Care

Victoria Boyd University of Toronto, **Lisa Richardson** University of Toronto, **Paula Veinot** Independently employed, **Tarek Abdelhalim** University of Toronto, **Mary Jane Bell** University of Toronto, **Zac Feilchenfeld** University of Toronto, **Umberin Najeeb** University of Toronto, **Dominique Piquette** University of Toronto, **Shail Rawal** University of Toronto, **Rene Wong** University of Toronto, **Sarah Wright** University of Toronto, **Cynthia Whitehead** University of Toronto, **Arno Kumagai** University of Toronto, **Ayelet Kuper** University of Toronto

Background/Purpose: Training future physicians to provide compassionate, equitable, person-centred care remains a challenge for medical educators. Dialogues offer an opportunity to extend person-centred education into the real-time, situated contexts of clinical care. In contrast to discussions, dialogues encourage the sharing of authority, expertise, and perspectives to promote new ways seeing. Yet how to best implement dialogic teaching in graduate medical education is unknown.

Summary of the Innovation: The core project team and a pilot working group (PWG) of physician-teachers co-constructed and implemented a faculty development program and dialogic education model to promote dialogic teaching in clinical settings. The team kept detailed implementation notes and interviewed PWG members. Data was co-analyzed using a qualitative description approach within a constructivist paradigm. Ongoing analysis informed iterative changes to the faculty development program and dialogic education model. Patient and learner advisors were engaged to gain practical guidance.

Conclusion: The concepts and practice of dialogic teaching resonated with PWG members. The group found that the dialogic structure of faculty development meetings and the legitimacy afforded by a formal label for the approach enabled dialogic teaching. In contrast, PWG members cited insufficient time, lack of space, and other structural issues as barriers. Patient and learner advisors provided important insights to deepen the design, implementation, and eventual evaluation of the dialogic education model. While our dialogic teaching approach is intended to be transferrable beyond our Department, successfully enabling this approach requires expertise, willingness, and support to teach knowledge and skills not traditionally included in medical curricula.

OD 1-2 Perceptions of Incoming Medical Residents about their role as a Teacher

Wilson Luong University of British Columbia, **Kiran Veerapen** University of British Columbia, **Erica Amari** University of British Columbia, **Jennifer McKay** University of British Columbia, **Sharon Doucet** University of British Columbia, **Henry Broekhuyse** University of British Columbia, **Clarissa Wallace** University of British Columbia

Background/Purpose: Incoming medical residents transition from being learners to both learners and teachers over a short time. This period is marked by increased responsibilities and provides an opportunity for reflection on their own educational experience and their perception of the teaching role. Early experiences impact the enactment of their role as teacher and the development of their identity and could be harnessed to inform further training.

Summary of the Innovation: To equip incoming residents with an understanding of their teaching role and basic clinical teaching skills, the Office of Faculty Development has developed a mandatory online module which all incoming residents complete within six weeks of entry. This module forms the introduction to a longitudinal Resident as Teacher (RaT) program. Embedded within the module are refective exercises about the qualities of memorable resident teachers and questions about their expectations of their teaching role. Since 2017, 1200 complete data sets have been collected and analyzed for emergent themes.

Conclusion: The emergent themes are: 1) The top memorable qualities of resident teachers are being approachable, enthusiastic, and consistent, and these were some of the qualities they sought to emulate while they themselves began to teach; 2) 'Pimping',

'being crabby' and making the student feel stupid were the poor qualities they had experienced; 3) Residents felt that teaching would solidify their own knowledge but that they would be challenged by time constraints, lack of experience and not knowing how to address different levels of learners. These themes inform Residency Program Directors as they plan teaching opportunities and training for residents, and also inform the continuous development of the RaT program.

OD 1-3 Medical Student POCUS Peer-Teaching: Grassroots Revolution Ready for Mainstream

Claire Heslop University of Toronto, **Mazen El-Baba** University of Toronto, **Katherine Dillon** University of Toronto, **Kathryn Corbett** University of Toronto, **Mazen El-Baba** University of Toronto

Background/Purpose: Point of Care Ultrasound (POCUS) has changed the face of acute care medicine, and has numerous life- and cost-saving applications. POCUS is provided by not only physicians, but also by residents and, increasingly, medical students, as an adjunct to the physical examination and to expedite the provision of safe medical care. Nationwide expert consensus has established that core POCUS techniques are appropriate for undergraduate medical school training, however due to time and training constraints, medical schools have made limited strides in training medical students in POCUS either prior to or during clerkship. One of the most significant limitation to POCUS training is insufficient time for educators to provide hands-on training sessions. However, many existing peer-teaching modules exist, and medical students provide peer teaching in topics such as anatomy, at multiple medical schools, with good success. Similar peer-teaching curricula, designed according to accepted nationwide consensus and disseminated by the students themselves, could become perfect efficient vehicles for providing POCUS training among medical students, in a timely and cost-effective manner.

Summary of the Innovation: We developed a peer-teaching curriculum specific to the training needs of pre-clerkship medical students. The curriculum uses a graduated model of POCUS skill development, and includes competency checklists established by a panel of physician experts across clerkship disciplines. We pilot tested the curriculum at a two day workshop for clerkship medical students organized by students interested in training not yet offered at their medical school site. Students enrolled in the workshop used the curriculum to teach each other each POCUS techniques, and were assessed at the end of the workshop on their knowledge and scanning competencies by faculty trained in education and assessment of POCUS.

Conclusion: Medical students can be effective peer-teachers of POCUS skills for pre-clerkship and clerkship level applications. Using peer-teaching curricula could be a means to offload instructor demands and permit more rapid and sustainable dissemination of foundation POCUS skills across undergraduate medical students nationwide.

OD 1-4 Teaching medical students political advocacy skills through experiential learning: lessons from the 2019 Canadian Federation of Medical Students (CFMS) Day of Action

Charles Yin Western University, **Yipeng Ge** University of Ottawa

Background/Purpose: Understanding the impact of policy on health, physicians are advocates for both individual patients but the communities they serve. It is challenging to effectively teach medical students advocacy through didactic lectures. Experiential learning is an increasingly utilized pedagogical tool to teach skills that are difficult to acquire in the classroom. We set out to determine whether experiential learning is an effective strategy in teaching advocacy skills for medical students.

Methods: We conducted a mixed-methods study of medical students participating in the 2019 CFMS Day of Action, where students met with policymakers in Ottawa to advocate for healthcare policy change. Participants completed a modified Social Issues Advocacy Scale questionnaire prior and following Day of Action. A select number of participants also participated in semi-structured interviews, which were transcribed and analyzed using a grounded theory approach.

Results: Questionnaires were completed by 33/68 students (48.5%) prior to Day of Action and 27/68 (39.7%) following. Overall, participants scored 78.5 (out of 100) on the scale prior to Day of Action participation and 87.0 following ($p = 0.0035$), indicating increased political awareness and confidence in advocacy skills. This was confirmed in our analysis of individual student interview transcripts, where themes of increased understanding of political advocacy along with improved competence and confidence in advocacy skills were identified.

Conclusion: Our results support the notion that experiential learning can be an effective means of teaching advocacy skills for medical students. Medical educators teaching advocacy should consider experiential learning as a supplement or alternative to in-classroom approaches for health advocacy training.

OD 1-5 The Use of Personal Notes in Medical Practice: Implications for How we Teach Clinical Documentation

Mark Goldszmidt Western University, **Lara Varpio** F. Edward Hébert School of Medicine, **Pamela McKenzie** Western University

Background/Purpose: While research has studied formal clinical documentation practices, less is known about clinicians' creation and use of informal documents in care practices. Trainees often create their own personal documentation systems, frequently through trial and error. In this study, we set out to explore the significance of clinicians' personal notes for clinical care, professional training, and research.

Methods: Across 8 of our prior studies, clinicians' personal notes were identified as important tools of clinical practice. Bringing these informal documents together into a single data set, we studied the use of personal notes across several clinical contexts. We engaged in a rhetorical analysis of these notes to explore how they are used in clinical contexts.

Results: We consistently noted the use of personal notes to support patient care. Experienced clinicians had well established highly structured and well-established practice; trainees and newer to practice clinicians were continually developing personal documentation strategies. Rarely were novices explicitly taught personal notes strategies. Four overarching purposes of personal notes were identified: 1) Cognitive tool for bundling patient information; 2) Temporal boundary object for supporting personal remembering over a hospital stay; 3) Collaborative tool for supporting handover and other shared care tasks; and 4) Structuring tool for organizing daily tasks.

Conclusion: Personal notes are integral to safe and effective clinical practice. Despite their ubiquitous nature, personal notes have been largely ignored in research and teaching. The types and uses of personal notes should be explicitly studied and taught so as to maximize their benefit to learning and to practice.

OD 1-6 Teaching Medicine to a General Public: How to Assess If Your Audience Is Learning

Malgorzata Kaminska University Of Northern British Columbia, **Trina Fyfe** University Of Northern British Columbia, **Cirisse Stephen** University of British Columbia, **Lisa Munro** University Of Northern British Columbia, **Sonya Kruger** University Of Northern British Columbia, **Lindsay Mathews** University Of Northern British Columbia, **Peyton Fisher** University of British Columbia

Background/Purpose: Public medical education programs (e.g., Mini Med Schools (MMS)), frequently limit evaluations to self-reported learner satisfaction. Based on Kirkpatrick's evaluation model, other methods could be used to assess educational impact. Instruments such as retrospective pre/post surveys (RPPS) detect a shift in learners' understanding, while script concordance tests (SCTs) measure clinical reasoning. Unaware of any publications about knowledge increase, application, or retention in MMS participants, we wondered whether RPPS and SCTs be used to evaluate such programs?

Methods: A 6-week MMS for the general public consisting of weekly 2-hour lectures on basic sciences and biomedical topics was delivered by medical faculty, covering material similar to medical school lectures. RPPS and SCTs were administered to all participants at the end of each lecture with SCTs repeated 8 weeks post-MMS.

Results: 59 participants (<16 to 69 years old) with diverse educational backgrounds took part in the MMS. RPPS showed an increase of at least 2 points on a 6-point Likert scale for each session. The SCTs' Cohen d effect size between participants and experts was 2.81 (98% response rate), remaining unchanged post-MMS (47% response rate). The SCT instrument Cronbach's alpha was 0.69. 98% of participants found assessments to be "fun and useful".

Conclusion: The RPPS consistently showed significant self-assessed increases in understanding of the material presented. The ability of our varied non-medical participants to apply newfound medical knowledge in SCTs was within the effect size typical for medical students. The ability to apply this knowledge 2-3 months later was maintained over time. RPPS and SCTs can be used to help guide and improve MMS curricula, thus ensuring that the intended knowledge is successfully transmitted.

OD 2-1 Increasing instructional relevance based on student reflections after they search for evidence

Maria C Tan University of Alberta, **Sandy Campbell** University of Alberta

Background/Purpose: Every medical school integrates library-based instruction in finding and evaluating evidence as part of its core curriculum. By the beginning of Year 3, undergraduate medical students have consolidated their preferred search methods and are given a refresher assignment to ensure that they are using the breadth of resources available. Historically, the results of this assignment demonstrated students' skill in finding evidence, but did not elucidate knowledge gaps, frustrations and barriers to their identification and use of evidence. We describe a simple education innovation of reorienting an assignment to build student self-awareness about searching for evidence.

Summary of the Innovation: We embedded a reflective component into an existing assignment without lengthening it. We asked students to compare multiple resources and to reflect on a challenge they experienced when searching for evidence to complete the assignment, or on a strategy they used. Responses were analysed and themes identified.

Conclusion: Major themes included: inability to find an article specific to every component of their question; difficulty narrowing search results; and successful use of rediscovered tools and strategies. Reorienting the assignment helped students to demonstrate self-awareness about their uncertainty and knowledge gaps in searching for evidence, and to celebrate their successes with new skills and tools for effective searching. Knowing what makes students feel frustrated, uncertain, or confident about searching, helps librarians tailor future instruction to students' articulated learning needs.

OD 2-2 Experiential learning in clinical research: Lessons learnt from a transplant educational training model.

Olusegun Famure University of Toronto, **Bronte Anderson** University of Toronto, **Angel Cai** McMaster University, **Joseph Kim** University of Toronto

Background/Purpose: Exposure to and participation in research activities have widely been reported as methods to engage undergraduate students in the life sciences and medicine in the principles of epidemiology, research methods and applied statistics. Despite this awareness, there is a lack of experiential learning opportunities in clinical research which focus primarily on developing these skill sets and applying them to medical research in a specific discipline.

Summary of the Innovation: The Multi-Organ Transplant Student Research Program (MOTSRTP) was introduced at Toronto General Hospital, University Health Network in 2009, to provide post-secondary and medical students the chance to gain exposure in healthcare and research. Students attend educational seminars and clinical observerships; as well as undertake clinical research duties in order to gain insight within transplantation. Through a 53-question survey, we investigated feedback from past MOTSRTP participants and evaluated the impacts the program has had on their academic and professional goals.

Conclusion: To date, 277 students have been trainees in the MOTSRTP. We achieved a response rate of 35.7%. Respondents spent an average time of 20 months in the program. Common motivations to join the MOTSRTP were to gain experience in research,

work closely with individuals in the healthcare field, and gain knowledge in transplantation. 71.9% of respondents strongly agreed that the MOTSRTP improved skills that benefited their future educational/career pursuits. Trainees rated the program positively, in terms of skill development, educational, and clinical opportunities. During and after participation in the MOTSRTP, trainees have published a total of 174 abstracts and 92 peer-reviewed papers; presented at 226 conferences; and received over 60 research grants. Trainees suggested improvement in the areas of training in statistics and student leadership opportunities. The impact of the MOTSRTP on trainees' pursuit of transplantation-related careers and/or transplant advocacy warrants further study.

OD 2-3 The Best Practices In Medicine (BPiM) Project - Exploring the Use of Intitutional Data and E-learning Modules to Improve Resource Utilization

Rishie Seth University of Toronto, **Elizabeth Wooster** University of Toronto, **Mallory Jackman** University of Toronto, **Jerry Maniate** University of Ottawa

Background/Purpose: Health care usage and costs are constantly under scrutiny. Campaigns targeting these issues mainly address over utilization which increases resource strain; however under-utilization may result in inappropriate patient care. The Best Practices in Medicine (BPiM) project combines a personalized audit and feedback framework with online reflective activities with the aim of right-sizing utilization.

Summary of the Innovation: Institutional data was used to develop personalized score cards for each physician. Personal results were presented beside overall division and department results as comparisons. On line guideline and education activities were provided for individual interaction.

Conclusion: Implementation of the BPiM Project led to a reduction of resource utilization and an increase in requests for resource utilization for abnormal results. Additionally, the introduction of scorecards led to discussions between colleagues and creation of 'informal' communities of practice (COP). These discussions and COPs led to further exploration of practice patterns and future initiatives to manage resource utilization.

OD 2-4 Using experiential learning to train physicians and teams in obesity prevention and management: 5As Team Multidisciplinary Training Program.

Denise Campbell-Scherer University of Alberta, **Melanie Heatherington** University of Alberta, **Dayna Lee-Baggley** Dalhousie University, **Thea Luig** University of Alberta, **Guillermina Noël** Luzern University of Applied Sciences & Arts, **Sonja Wicklum** University of Calgary, **Angie Hong** University of Toronto, **Erin Cameron** Northern Ontario School of Medicine

Background/Purpose: Research shows that physicians and teams lack the knowledge and confidence to effectively address weight concerns with patients. There is emerging research demonstrating the positive impact of collaborative, whole-person approaches to clinical communication about weight and health. Yet, there is a pressing need to translate evidence and innovative approaches into high quality training programs in obesity prevention and management. The 5As Team developed and evaluated a workshop for multidisciplinary learners based in principles of experiential learning. The workshop takes the learners outside of the classroom and engages them in activities to foster reflection about obesity discourse, to question assumptions, and promote understanding of what it is like to live with obesity.

Summary of the Innovation: The workshop emphasizes experiential learning and incorporates didactic lectures. Learners have the opportunity to wear a bariatric suit, simulating the encumbrance of a larger body. In addition, learners explore a therapeutic approach that transforms clinical conversations into collaborative deliberation about improving health within the specific life context of the individual patient, and practice the approach with tools that guide the conversation.

Conclusion: Evaluations of the workshop highlight experiential learning elements of the program as being crucial to increasing confidence when engaging in weight-related conversations with patients.

Learners expressed interest in implementing a collaborative, whole-person approach and tools in their own practice. Experiential learning offers an innovative approach to obesity prevention and management training that stretches beyond the biomedical realm and introduces the human complexity and contextuality of living with obesity.

OD 2-5 Exploring the Role of Social Networks in Supporting Faculty Development

Heather Buckley University of British Columbia, **Laura Nimmon** University of British Columbia

Background/Purpose: Faculty development is increasingly important in health professions education. Faculty developments' conceptualization has evolved from an individual skills training activity to more contemporary notions of an organizational model. This organizational model recognizes relationships and networks as increasingly important mediators of knowledge mobilization. Although these conceptual advancements are critical, we lack empirical evidence and therefore robust insights into how networks shape processes of learning in faculty development. To fill this gap the following research question was explored: How do the professional social networks of faculty shape their learning about teaching?

Methods: This study used a qualitative social network approach to explore how teaching faculty's relationships influenced their learning about teaching. The study was conducted in an undergraduate course at a Canadian medical school. Eleven faculty participants were recruited and 3 methods of data collection were employed; semi-structured interviews, participant drawn sociograms, and demographic questionnaires.

Results: Results showed that the networks of faculty participants influenced their learning about teaching in the following four areas: knowledge acquisition and mobilization, identity formation, vulnerable expression (intellectual candour), and scaffolding.

Conclusion: Our insights illuminate how social factors may influence faculty's learning about teaching. The findings support the recent calls to re-orient faculty development in the health professions as a dynamic social enterprise. We propose that faculty developers should consider faculty's social embeddedness in their professional social networks to strategically enhance and optimize faculty learning.

OD 2-6 Material Concepts: A Randomized Trial Exploring Simulation as a Medium to Enhance Cognitive Integration and Transfer of Learning

Kulamakan Kulasegaram University of Toronto, **Nicole Woods** University of Toronto, **Ryan Brydges** University of Toronto, **Jeffrey Cheung** University of Illinois at Chicago College of Medicine

Background/Purpose: Instruction that encourages trainees to integrate conceptual "why" and procedural "how" knowledge improves their transfer of procedural skills. Questions remain, however, for how to represent the causal relationship between clinical concepts and procedural actions (e.g., how anatomy relates to needle insertion). We compared video-based and simulator-based approaches for presenting these causal relationships during simulation-based lumbar puncture (LP) training, and measured impacts on participants' retention and transfer.

Methods: During a 1-hour session, we randomized 66 medical students to one of three instructional interventions: i) video-based procedural-only instruction, ii) integrated video-based instruction, and iii) integrated simulator-based instruction. One-week later, we tested participants' LP skill retention and transfer, and their conceptual and procedural knowledge on a written test.

Results: Simple mediation regression analyses revealed that participants receiving integrated instruction had superior LP retention and transfer outcomes, mediated by gains in conceptual knowledge (all p0.01). Participants receiving procedural-only instruction practiced significantly more LPs during training (M=2.36) than participants receiving integrated video-based (M=1.82) and simulator-based instruction (M=1.50), $p<0.05$.

Conclusion: Trainees' ability to create cognitive connections between conceptual and procedural knowledge improves when they interact with instructional materials highlighting the causal relationships between these knowledge types. We

show how simulators can be designed to support such "cognitive integration" by making clinical concepts visible and material, which further enhances trainees' conceptual knowledge, retention, and transfer. Though integrated instruction reduced time for hands-on practice, we suggest ways future research might capitalize further on simulator-based integrated instruction.

OD 6-1 Multi-source Feedback: Components Supporting Quality Improvement

Marguerite Roy Medical Council of Canada, **Claire Touchie** Medical Council of Canada, **Nichole Kain** College of Physicians and Surgeons of Alberta

Background/Purpose: MCC 360 is a unique multi-source feedback (MSF) national program designed to support physician QI around the CanMEDS roles of collaborator, communicator, and professional. Quantitative ratings and qualitative comments are collected from a sample of physician colleagues (PC), co-workers (C), and patients (PT). These data are supplemented with self-ratings and reported back to physicians. Each physician reviews the report with a trained feedback facilitator and creates an action plan for QI. This study explores how four MSF elements (survey items, comments, facilitation, and action plans) support the elicitation and translation of feedback into a QI plan for change.

Method: Data included survey items, rater comments, facilitator reports, and action plans for 174 physicians. Word frequency queries and thematic analysis were used to identify common words and concepts and explore relationships among data sources.

Results: Overlap between high frequency words in surveys and comments was substantial (61% for PC, 55% for C, and 65% for PT). The language used to describe goals in physician action plans was highly related to respondent comments (53% for PC, 52% for C, and 45% for PT) but not to survey items (18% for PC, 18% for C, and 15 % for PT). Themes in facilitator reports relate to action plan content (72%).

Conclusion: Each MSF element investigated plays a role in eliciting and translating feedback into action. Rated survey items prime respondent comments. Comments contextualize feedback messages. Facilitation supports interpretation and reflection. Action planning translates feedback into a structure to support change.

OD 6-2 Development and Evaluation of a Multisource Feedback (MSF) Form for Residency Program Director Competencies

Theresa Beesley McGill, **Evelyn Constantin** McGill, **Mara Kontopoulos** McGill, **Patricia Wade** McGill, **Armand Aalamian** McGill

Background/Purpose: Program directors (PDs) have complex roles in residency education and are expected to demonstrate competence in multiple areas specifically, leadership. However, PDs can receive minimal to no feedback on their leadership performance. McGill University's Postgraduate Education team aimed to develop a program evaluation process using a multisource feedback (MSF) form to provide feedback from multiple perspectives within the residency program to PDs.

Summary of the Innovation: The MSF form was developed using an iterative and scholarly approach, including a literature review to identify PD competencies, identification of PD roles from the PGME job description and mapping to the CanRAC Standards. Prior to implementation, the form was pilot tested with 5 residency programs ensuring applicability, relevance, and value of the MSF form items. Feedback was incorporated into the final version of the form. The MSF form was distributed to the Department Chair, PD, Program Administrator, Faculty Member, and Chief/Senior Resident(s) to gather standardized performance data of a residency program PD who completed 12-24 months of service. Data were analyzed to provide an aggregate score for the PD's performance. Scores were matched to an analytical rubric allowing the PGME Office to provide a one-page report with formative feedback and strategies to enhance PD performance.

Conclusion: The MSF form establishes a formal and standardized QI process to provide PDs with formative feedback on their competencies that can potentially enhance performance. The form will undergo a meta-evaluation at year 1, 3 and 5. Additionally, the form provides an opportunity to highlight the performance of PDs with effective leadership and informs the PGME Leadership and

Department Chairs of competencies that result in effective leadership of residency programs.

OD 6-3 Perceptions of Assessment and Feedback: Relationships and Reconciliation

Kaif Pardhan University of Toronto, **Christopher Watling** Western University, **Linda Jones** University of Dundee

Background/Purpose: Residency training takes place in a work-place learning environment. Each supervisor may have a different approach to the delivery of their feedback and may deliver different assessments for the same quality of performance. Research question: among residents who receive regular feedback how do different styles of feedback by supervisors impact the residents' learning?

Methods: A qualitative methodology was used. Participants were residents from residency programs that have routine one-on-one feedback and assessment. In depth, semi-structured one-on-one interviews were conducted by the primary investigator (PI). These were then transcribed, reviewed and coded. The participants were University of Toronto and McMaster University residents. Sample size was determined by thematic saturation. The interview guide was updated in an iterative fashion to further explore themes generated in the initial interviews. Interview transcripts were reviewed and coded by the PI with assistance from collaborators.

Results: Analysis of the eighteen participants revealed five themes. Residents employ reflection to consolidate the feedback they receive; the source of the feedback matters: both relationship with the resident and their credibility; emotional responses impact how feedback is interpreted; the content of the feedback remains important; and, residents actively reconcile feedback that is incongruent with previously received feedback and their own self-perception.

Conclusion: How residents use feedback to further their learning is variable. The individuality of these responses to feedback are important for trainee self-reflection in furthering their learning as well as important in faculty development as they develop skills in assessment and feedback.

OD 6-4 Multi-source feedback during simulated resuscitation scenarios: a qualitative analysis

Brent Thoma University of Saskatchewan, **Tim Chaplin** Queen's University, **Adam Szulewski** Queen's University, **Heather Braund** Queen's University, **Nancy Dalgarno** Queen's University, **Rylan Egan** Queen's University

Background/Purpose: Competency-based medical education (CBME) requires increased feedback based on direct observation, but this can be challenging for rare events such as resuscitation cases. Simulation provides an environment where such rare events can be practiced and observed. Further, with the implementation of CBME there is a renewed interest in multi-source feedback. This qualitative study explored the focus and effectiveness of multi-source feedback provided by multiple stakeholders in a simulation-based resuscitation course.

Methods: The course consisted of 12 resuscitation cases and was completed by 87 first year residents from 14 specialties at two Canadian institutions. Faculty, co-residents, and a nurse completed narrative assessments after each case. Self-assessments from each resident were also collected. All comments were analyzed using an emergent thematic approach using NVivo.

Results: Four themes emerged from the data: Communication, Leadership, Confidence and Comfort, and Medical Expert. Faculty focused their feedback on the Medical Expert theme, commenting on topics such as therapeutic and diagnostic actions. Registered nurses focused most of their feedback on the Communication theme, not only with the patient and their family, but also within the resuscitation team. Resident peers mostly provided feedback relating to the Leadership, Confidence and Comfort, and Communication themes. Residents focused their self-feedback on the Confidence and Comfort theme, anticipating the extent to which they could manage the scenario.

Conclusion: These findings demonstrate the importance of involving multiple stakeholders in providing feedback to residents. The inclusion of multiple stakeholders helps to provide residents with

holistic feedback spanning across multiple areas of their performance.

OD 6-5 Multisource feedback of interprofessional competencies: how communication and collaboration are viewed across health disciplines

Kerry Wilbur University of British Columbia, **Erik Driessen** Maastricht University, **Fedde Scheele** VU School of Medical Sciences, **Pim Teunissen** VU Medical Center

Background/Purpose: Workplace-based assessment of competencies may be further optimized by drawing upon the impressions of multiple assessors, including those outside the trainee's discipline. Feedback related to interprofessional roles like communication and collaboration are often considered suitable for credible team input. However, we actually know very little about how clinicians across professional contexts judge these competencies for trainees outside their discipline.

Methods: We adopted a constructivist grounded theory approach to explore perspectives through semi-structured interviews with multidisciplinary team members on a clinical training unit. A purposeful sample of dietitians, nurses, therapists, pharmacists, physicians, and social worker participants were asked to describe expected communication and collaboration performance of their own students as well as from trainees outside their profession joining the team. They were also asked to share their views on multisource feedback (MSF) in their setting

Conclusion: Team members often grouped communication and collaboration roles for trainees outside their profession, especially as it pertained to patient encounters. Expectations were consistent (e.g. be kind, minimize jargon), but the utility of offering such vague feedback was questioned. Conversely, how trainee's from other professions shared patient information to inform their own care was concrete. Participants formed favourable impressions of students who are accessible for consultation, proactively seek and offer data for decision-making, respond to questions in a timely manner, and are respectful. These team members had occasionally solicited MSF but many were reluctant to offer input about trainees from other professions without repeated opportunity for observation.

Conclusion: Our findings suggest there may indeed be distinctions between expectations of how mixed-discipline trainees should communicate and collaborate among interprofessional team members. However, not all clinicians believe their input on other students' performance is necessarily legitimate given brief or infrequent encounters.

OD 6-6 Physician reactions to multisource feedback data and facilitated feedback

Claire Touchie Medical Council of Canada, **Marguerite Roy** Medical Council of Canada, **Nicole Kain** College of Physicians and Surgeons of Alberta

Background/Purpose: Research identifies the critical role that facilitation plays in promoting reflection and supporting performance change following multisource feedback (MSF). The R2C2 model was developed for initiating feedback conversations using data to plan and implement practice change. This study investigates how physicians who underwent MSF, followed by a conversation with an R2C2-trained facilitator, reacted to their feedback; and which CanMEDs roles were targeted in the development of action plans.

Methods For this study, 139 Alberta physicians underwent MSF followed by a one-hour conversation with a trained facilitator to review the MSF data and discuss action plans. Following the conversation, each physician created up to three action plans. For each session, facilitators wrote a report describing their interaction with the physician, including a section on how the physician reacted initially to their MSF data. Participant data and facilitator reports were used to code physicians' reactions as either receptive or non-receptive. In addition, observable change targeted in physician action plans was coded against the CanMEDS framework.

Results: The majority of physicians (96%) were receptive to their MSF data. Regardless of reaction, most action plans targeted the Communicator (40%), Collaborator (15%) and Professional (15%) CanMEDs roles. Less receptive physicians were more likely to

target changes related to the Professional role (25%), and less likely to target changes related to the Collaborator role (4%) compared to those who were more receptive (15% and 16%, respectively).

Conclusion: There appears to a relationship between physician reactions to MSF, receptivity, and targeted roles in developed action plans.

OD 7-1 Identity Work in Medical Schools: The Case of Academic Family Physicians

Charo Rodriguez McGill, **Emmanuelle Belanger** Brown University, **Laure Fiquet** Universite de Rennes 1, **Teresa Pawlikowska** Royal College of Surgeons in Ireland, **Sofia Lopez-Roig** Universidad Miguel Hernandez, **Maria Angeles Pastor-Mira** Universidad Miguel Hernandez, **François-Xavier Schweyer** Ecoles des Hauts Etudes en Sante Publique de Rennes, **Salvador Pertusa** Centro de salud Cabo Huertas, **Pierre-Paul Tellier** McGill

Background/Purpose: Academia benefits family medicine clinical practice through better research, teaching, and scholarship. However, the status of academic departments of family medicine is still unequal. Academic family physicians may therefore be motivated to project onto others an enhanced representation of themselves as a professional group (image) with the aim to improve the perception others hold about them (reputation), as well as their own sense of self (identity). The research question was: Why are academic family physicians motivated to control/improve their professional image in academic contexts?

Methods: This was a case study conducted in medical schools from Canada, France, Ireland, and Spain. Participants per case were 10-15 family physicians holding an academic appointment (n = 53). Data sources included individual semi-structured interviews and organizational documents. Rhetorical analysis was applied to interview transcripts.

Results: Participants offered arguments of different order (pathos, ethos, logos) to construct a positive image of family medicine as academic discipline. Emotional appeals included 'professional pride' and 'personal preference for long-term doctor-relationships'. Ethical arguments comprised 'the role of family medicine in ensuring quality of care', and the need to 'respect the professional expertise' of family physicians. Logical appeals concerned the 'current momentum of family medicine', its 'importance for the healthcare system', and the 'valued role of family physicians in teaching in the community'.

Conclusion: International family physicians appeared highly motivated to improve their professional image in academic centers, not only for personal reasons, but also for ethical and logical concerns grounded in their sense of accountability in healthcare delivery.

OD 7-2 Variables associated with students' a priori discipline choices at the time of entry into medical school

Melinda Davis University of Calgary, **Janeve Desy** University of Calgary, **Sue-Ann Facchini** University of Calgary, **Mike Paget** University of Calgary, **Sylvain Coderre** University of Calgary, **Christopher Naugler** University of Calgary, **Kevin McLaughlin** University of Calgary

Background/Purpose: Choosing a medical career path is complex and anxiety producing for students. Many have a perception that they must commit to a medical career choice early in order to be competitive. Prior experiences influence a priori attitudes towards careers and, particularly in a 3-year curriculum, may also shape the final choice. Objective: to identify variables associated with initial choice of discipline.

Methods: First year medical students in 2 consecutive classes completed an anonymous online survey in orientation week.

Results: 81.4% and 90% classes 2021 and 2022 respectively. Mean age and gender did not differ between the cohorts. 26% (both cohorts) had already decided on a career path and, in most cases, this choice was based upon personal or professional experiences prior to entering medical school. In both cohorts, variance in the initial choice of discipline (Emergency Medicine the most popular, Anesthesia and Psychiatry the least) was largely explained by whether students felt confident describing the day-to-day activities of this type of physician. The criteria being used to select a career showed no gender differences, but a consistent finding in both cohorts was that females were more likely to consider OBGYN

(odds ratio (OR) 6.7 - 10.7) or pediatrics (OR 3.7 - 4.7) and less likely to consider surgery (OR 0.1 - 0.3) as a career choice at the time of entry into medical school.

Although the majority of medical students have not chosen a medical discipline at the time of entry into medical school, there are large differences in the likelihood of a discipline being an initial choice. Our data find that students' gender and familiarity with a discipline associate with initial choices.

OD 7-3 Embedding identity: The sense-making process of teachers in family medicine to reconcile their multiple professional identities

David Ortiz-Paredes McGill, **Charo Rodriguez** McGill, **Torsten Risør** The Arctic University of Norway, **Tamara Carver** McGill, **Peter Nugus** McGill

Background/Purpose: Clinical teachers must perform tasks involving both education and patient care. However, little is known about how they manage and make sense of their professional identities (PIs). The present research examined the lived experiences of teachers in family medicine as they negotiate their PIs during a faculty development program (FDP).

Methods: This study adopted interpretative phenomenological analysis; a methodology that explores in-depth how people conceptualize their world while adopting an insider's perspective. Six teachers in family medicine participating in an international blended education FDP were purposively sampled. In-depth semi-structured individual interviews were conducted and thematically analyzed. Six identity diagrams were then created with the aid of the emergent themes to depict the relationship between the identities that each participant had identified.

Results: Although participants had a unique lived experience and career path, all identity diagrams reflected that participants recognized one identity (i.e., embedding identity) containing other roles akin to their professional world. This identity dynamic allowed them to meaningfully reconcile the different demands and beliefs from their multiple and overlapping PIs. Such a sense-making process enabled them to work in complex contexts and assume multiple responsibilities that involved patient care, teaching and learning.

Conclusion: The empirically grounded notion of embedding identity is a strategy to make sense of many PIs. An embedding identity embraces others, without necessarily creating a hierarchy, and thus makes possible certain meaning, unity and harmony. FDPs could help clinical teachers to identify an embedding identity to support them in meeting the overlapping demands in education and patient care.

OD 7-6 La formation de l'identité professionnelle d'enseignant par un programme de formation en pédagogie dans un campus décentralisé

Marie-Hélène Girouard Université de Montréal, **Diane Robert** Université de Montréal, **Caroline Bell** Université de Montréal, **Julie Morisset** Université de Montréal

Background/Purpose: Le campus de l'université de Montréal en Mauricie existe depuis 2004. En plus de leur rôle de clinicien , les médecins ont dû développer une pratique d'enseignement. Des besoins de formation en pédagogie ont émergé . Pour développer cette nouvelle culture et cette nouvelle identité professionnelle d'enseignant, une formation adaptée a été créée.

Summary of the Innovation: Un programme de 5 jours sur une année est offert aux cliniciens médecins de famille et spécialistes. Un animateur -formateur accompagne les participants (10 à 12) à travers divers thèmes comme : la position d'apprentissage, les stratégies d'enseignement, la rétroaction, la prescription pédagogique, le curriculum caché, la motivation, le raisonnement clinique, l'étudiant en difficulté, l'identité professionnelle … Chacun est abordé en lien avec les différents rôles du clinicien-enseignant . L'identité professionnelle de l'enseignant se forme dans ce parcours en favorisant l'apprentissage par l'interaction entre les participants, les travaux, lectures et les journaux réflexifs. Les participants sont encouragés à réfléchir seul et en groupe sur leurs valeurs personnelles, professionnelles et sur leur enseignement. Ces réflexions permettent d'actualiser ou de modifier leur pratique d'enseignement

Conclusion: Depuis l'instauration du programme , 5 cohortes ont suivi le programme (56 participants) À terme , les participants ont exprimé mieux percevoir leur rôle de clinicien enseignant , être plus motivé à enseigner et mieux outillé. Ils deviennent des agents multiplicateurs auprès de leur pairs au profit des étudiants.

OD 7-4 Unpacking the Very Visible Knapsack: A Socio-material Analysis of #myCMAbackpack

Alice Cavanagh McMaster University

Background/Purpose: For more than twenty years, the Canadian Medical Association (CMA) has given first year medical students across Canada a knapsack, co-sponsored by their provincial medical association and (in previous years) by MD Financial Management. "The backpack" is ubiquitous in hospitals and on medical campuses and has become a pan-Canadian symbol of medical learners, the cornerstone of a hashtagged marketing campaign, and part of a much anticipated rite of passage for new students. The semiotic meaning of '#myCMAbackpack' in medical education, however, remains undertheorized.

Methods: The CMA backpack was examined as a socio-material artefact of contemporary Canadian undergraduate medical education (UGME), replete with its own agentic effects. Data was collected iteratively in response to themes identified through constant comparative analysis using NVivo 12. Materials for analysis included autoethnographic field notes, Twitter posts in the public domain using the hashtag "myCMAbackpack", online publicity materials related to the backpack, and five backpacks distributed to Canadian medical students between 2013-2019.

Results: Using actor-network theory as a touchstone, twin themes of initiation and identification developed as important in understanding symbolic meaning(s) of the backpack in UGME. For professional associations, events where the backpacks are revealed and distributed act as a form of initiation: representatives of the Canadian medical associations welcome students into the profession with a prominent symbol of their new status that bears their logo. For learners, as both a material object and as a hashtag, the backpack acts as a form of public identification with medicine: wearing a backpack renders them visible to others in and around Canadian healthcare as trainee members of the medical profession.

Conclusion: Like the white coat and the stethoscope before it, the backpack has emerged as a symbolically potent material element of Canadian UGME. The backpack has substantial implications for how learners understand what it means to present as "professionals"; further work is necessary to continue parsing meanings bound up in #myCMAbackpack.

OD 7-5 How medical students make meaning of early significant clinical experiences: The role of social networks

Samantha Stasiuk University of British Columbia, **Laura Nimmon** University of British Columbia, **Maria Hubinette** University of British Columbia

Background/Purpose: Medical curricula are increasingly providing opportunities to promote, support and guide reflection in medical students. While our curricula are moving towards creating time and space to promote reflection, we do not fully understand the broader social influences that shape reflection. This study asked three questions a) How do learners use social networks to reflect on and make meaning of early significant clinical experiences? b) What do learners find valuable in these interactions? and c) What role do our formal curricula play in supporting learner reflection processes that might be social by nature?

Methods: Using a phenomenological approach, individually generated sociograms provided a stimulus for narrative production in subsequent semi-structured interviews with first year medical students.

Results: Learners described the importance of verbal processing within their social networks and engaging in dialogue around early significant clinical encounters. Strikingly, learners acknowledged a period of identity formation heavily influenced by networks as they sought to make meaning from early significant clinical experiences. Learners also struggled to find meaningful ways to involve their networks outside of medicine in their new experiences. They found some curricular

opportunities such as reflective portfolio sessions to be useful, when deemed to be authentic.

Conclusion: It is important to capture the role learners' social networks play in the support of their identity formation, as well as capacity for empathy and resiliency. Understanding this social phenomenon will provide us with a teaching language and framework that appreciates the profound role social relations play in students' meaning making of early significant clinical experiences.

OD 4-1 An online CPD program on keeping medical records using a serious gaming approach. You can't be serious, right?

Martin Tremblay Fédération des médecins spécialistes du Québec, **Sam Daniel** Fédération des médecins spécialistes du Québec, **Beatriz Merlos** Fédération des médecins spécialistes du Québec

Background/Purpose: About 25% of physicians in Quebec do not create and maintain medical records properly according to our physician professional order (CMQ). Our organization had to develop an educational intervention to address this important unperceived gap, which was judged uninteresting as per participants.

Summary of the Innovation: We created a 1.5-hour online knowledge self-assessment program. Coached by Hippocrates himself; participants must solve various vignettes developed from CMQ's medical record keeping regulations. A validated questionnaire based on the Theory of Planned Behavior was used to measure participants' behavioral intention post intervention. Launched in March 2016, 180 specialist physicians have registered to this course (completion rate: 74%). Participants agreed or totally agreed that a serious gaming approach was appropriated for this topic (95%) and all reported that this course met their learning objectives. Self-reported confidence to respect good practices in record keeping increased by 21%. 97% of the participants would participate again in a serious gaming CPD activity. A mean CPD REACTION score of 6.2/7 indicated that the program was efficient to promote participants' intention to respect good practices in record keeping. From the early development phase, we knew that meaningful vignettes were required to maintain participants' engagement. A CMQ representative was involved in the development of real-life scenarios. We also created a short humoristic and appealing video to facilitate recruitment.

Conclusion: Using a serious gaming approach for this program convinced our organization that taking an unconventional educational path with our learners is feasible. We are now exploring broader instructional design avenues for upcoming programs.

OD 4-2 Practice changes following participation in a multimodal "CPD-Reality" training: a 6-month follow-up qualitative study

Émilie Gosselin Université de Sherbrooke, **Catherine Bertholet** Université de Sherbrooke, **Marie-France Langlois** Université de Sherbrooke, **Annie Ouellet** Université de Sherbrooke

Background/Purpose: Continuing professional development (CPD) activities are an important aspect of lifelong learning. However, they often don't maximize potential for practice changes or measure their actual impact on practice. We developed an innovative 2-day multimodal CPD reality training activity in obstetrical ultrasound for small groups of obstetricians/gynecologists based on a competency-based approach including real life immersion. The aim is to describe practice changes identified by participants six months after training.

Methods: Qualitative descriptive study with a convenience sample of 10 participants including 45-minute phone interview six months following training using a semi-structured interview guide. Verbatim transcripts were analyzed by two team members each using Miles, Huberman and Saldana's method. Consensus among all researchers was obtained.

Results: All participants expressed changes in their ultrasound practice for the six main training objectives (image optimization, enhanced skills, fetal anatomy assessment, nuchal translucency measurement, exam reporting and genetic counselling). Most changes occurred immediately after the training and were maintained or still evolving. Other contextual factors mentioned as influencing practice changes included: initial experience level, self-directed learning skills, certification goal, colleague support, work-setting

acceptance/resistance, resource availability, schedule limitations and population's needs.

Conclusion: A multimodal CPD-reality training activity appears to have promoted rapid and consistent changes in practice despite other contextual factors. This type of activity offers a promising avenue for the development of other similar CPD activities that will ultimately facilitate practice change.

OD 4-3 Management of Patients with Morbid Obesity in Primary Care: Informing a CPD Event

Nancy Dalgarno Queen's University, **Boris Zevin** Queen's University, **Mary Martin** Queen's University, **Colleen Grady** Queen's University, **Karen Smith** Queen's University, **Rachael Morkem** Queen's University, **Robyn Houlden** Queen's University, **Richard Birtwhistle** Queen's University, **David Barber** Queen's University

Background/Purpose: Over one million Canadians have Class II or III obesity and are eligible to be referred by Primary Care Providers (PCP) for surgical and/or medical weight loss; however, fewer than 7% are referred. The purpose of this study is to explore the knowledge, experience, perceptions and educational needs of PCPs in managing weight loss in primary care to inform development of a Continuing Professional Development (CPD) event.

Methods: Mixed method study combining a survey and focus groups with PCPs (n=591) in eastern Ontario. Survey data analyzed using descriptive and inferential statistics in SPSS. Thematic analysis utilizing an inductive approach completed on qualitative data through open coding with NVivo.

Results: The survey was completed by 103 PCPs (17.4%). Overall, 39.1% had participated in education on the management of patients with obesity in the past 5 years, however 88.5% believe there is a need for education on bariatric surgery. Seven focus groups with 17 PCPs were conducted. PCPs described lack of knowledge as a barrier to managing obesity in primary care. Topics suggested for CPD included general information about bariatric surgery (procedures, referral process, post-operative follow-up, surgical complications), effective weight-loss strategies, and availability of local resources.

Conclusion: Given the high prevalence of Class II and III obesity, PCPs are now key stakeholders for ensuring patients with obesity receive timely and high quality care. Understanding past experiences and perceptions of PCPs informed the development of a CPD intervention to support PCPs in providing quality and evidence-based care to their patients with obesity.

OD 4-4 Who are you? The roles of practice remediators

Glenn Regehr University of British Columbia, **Pim Teunissen** School of Health Professions Education, **Lara Varpio** Uniformed Services University of the Health Sciences, **Gisele Bourgeois-Law** University of British Columbia

Background/Purpose: There is little literature addressing the remediation of practicing physicians and even less investigating the unique role of practice remediators. As part of a larger program of research exploring social constructions of remediation in medicine, this study explored remediators' understanding of the remediation process through their stories of engaging with practicing physicians.

Methods: Using experience-focused narrative research, we elicited the stories of nine clinicians in five provinces who had been asked by regulatory authorities to oversee the learning and practice of physicians with significant competence gaps. We analyzed their stories of particularly memorable remediation experiences using a hermeneutic approach. We explored the meanings that participants articulated about their work as remediators by iteratively reading their stories, examining the sense-making that participants achieved through these narratives, and identifying the roles and responsibilities participants described.

Results: Participants' narratives articulated a wide range of roles, responsibilities and activities related to their remediation work. Remediators rhetorically positioned themselves as coaches and/or mentors. However, when engaging in remediation, they described practices and actions inconsistent with these roles, e.g. providing summative assessment for the regulator. Several people narrated poignant challenges for which they were unprepared.

Conclusion: Ambiguities regarding the process of remediation manifested in our remediator participants as a lack of clarity, and some conflict, regarding their role when engaging with physicians requiring remediation. Faculty development might help, but more importantly, discussions regarding the nature and purpose of the remediation process are still needed across the profession.

OD 4-5 Primary Care Providers Participation in Cardiology-related Continuing Medical Education Increases the Likelihood of Prescribing Recommended Lipid Management

Diana Sanchez-Ramirez University of Manitoba, **Alexander Singer** University of Manitoba, **Leanne Kosowan** University of Manitoba, **Alan Katz** University of Manitoba, **Christine Polimeni** University of Manitoba

Background/Purpose: Studies that objectively assess the effect of Continuing Medical Education (CME) activities on clinical performance are lacking. This study sought to explore if participation in a series of cardiology CME activities has an impact in the lipid management that primary care providers (PCPs) deliver to their patients.

Methods: This retrospective cohort study used a database of participation in cardiology CME activities (2011-2017) linked to electronic medical records of patients receiving care from 225 PCPs participating in the Manitoba Primary Care Research Network. Statistical analyses were completed using logistic regression with Generalized Estimated Equations.

Results: Results indicated that after adjusting for relevant confounders, the odds of prescribing statins to patients with cardiovascular diseases (CVD), diabetes mellitus (DM) or chronic kidney disease (CKD) among PCPs who did not participate in the cardiology CME activities were 50%, 55% and 67% lower, respectively, compared with PCPs who participated in two or more activities. The odds of prescribing statins to patients with CVD and DM among PCPs who participated in only one cardiology CME activity were also 67% and 63% lower, respectively, compared with PCPs who participated in two or more activities.

Conclusion: This study found that PCPs who participated in two or more cardiology CME activities had higher odds of providing recommended statin treatment to adults with CVD, DM or CKD. While there are several factors that might influence clinical decision-making, our results still suggest that participation in CME activities have a positive effect on clinical practice.

OD 4-6 A Competency-Based Continuing Professional Development for Routine Pessary Care in Primary Care

Parisa Rezaiefar University of Ottawa, **Claire Kendal** University of Ottawa, **Janine Schieck McKay** Montfort hospital, **Douglas Archibald** University of Ottawa, **Maddie Venables** Bruyere Research Institute

Background/Purpose: Pelvic organ prolapse (POP) affects up to 50% of parous women causing significant morbidity. Vaginal pessaries are recommended as first-line management for patients with POP. Pessary fitting and Routine Pessary Care (RPC) are within the scope of practice of family physicians though training opportunities are limited, in part due to few family physician teachers. Furthermore, evidence confirms that continuing professional development (CPD) has little impact without practice-based reinforcement. To address this gap, we developed a competency-based medical educational (CBME) CPD to teach RPC to family physicians and evaluated its success using Kilpatrick model. We measured three outcomes: 1) physician participants confidence in providing and teaching RPC after the intervention and its maintenance over time compared to before attending this CPD; 2) whether or not participants provided RPC to their patients after attending this CPD; and 3) whether or not the quality of patient care was affected after this intervention.

Summary of the Innovation: Eighteen academic family physicians participated in a two-hour simulation-based CPD session on RPC. We reinforced their training by incorporating a procedure template within their electronic medical record (EMR) and transferred the RPC care of their eligible patients from our women's health (WH) clinic to the Primary Care Provider (PCP) clinic of physician participants who completed this CPD. PROGRAM EVALUATION: We were interested in three outcomes based on level

two to four of Kilpatrick model. First, we measured physician confidence (Kilpatrick level 2) in both performing and teaching RPC for four types of ring pessaries using a previously validated 5-point Likert-type confidence survey. (Rezaiefar et al 2018) As a control, we used the Gellhorn pessary, which was shown to participants during the CPD workshop but the skills to insert or remove it were not taught. Participants completed the confidence survey prior to, immediately after, and again 12 months after the simulation-based RPC workshop. Secondly, we assessed physicians' practice change (Kilpatrick level 3) by measuring the number of RPC related visits of participating patients at the PCP clinic and at the WH clinic in the one year before and one year after the intervention using a chart audit. Thirdly, we evaluated physicians' competence and patient outcome (Kilpartrick level 4) by measuring the quality of RPC provided to patients using a four point scale, assigning one point for each of the following items documented in the EMR clinical template: 1) Vaginal exam was documented, 2) Complications identified, 3) Complications managed according to the guideline and 4) Appropriate follow up recommended. Outcome: At the completion of this one year study 12 patient participants were receiving care from nine physician participants. We observed: 1) a significant improvement and maintenance of physicians' confidence in providing RPC (2.288, $P < 0.001$ and 1.727, $P = 0.001$) and teaching RPC (2.152, $P < 0.001$ and 2.106, $P < 0.001$) after the CPD and at one year respectively; 2) an increase in the number of visits for RPC care provided by PCPs (one year pre-intervention = 1%, one year post-intervention = 35%, $P = 0.002$) and a decrease of visits for RPC care to WHC (one year pre-intervention 30%, one year post-intervention 8%, $P = 0.028$) for patient-participants. The quality of RPC provided at PCP clinic was not inferior to WH clinic.

Conclusion: Our proof of concept study offers evidence that CBME principle can be applied successfully to deliver procedural skills CPD programs. The incorporation of clinical EMR templates is an inexpensive and easily incorporated practice-based reinforcement strategy that may improve physicians' confidence and behavior change when putting a newly acquired procedural skill into practice.

OD 3-1 The Team is the Point: Structure and Expertise in an Accreditation and Quality Improvement Unit

Patricia Wade McGill, **Fernanda Claudio** McGill

Background/Purpose: Accreditation of medical programs require schools to invest substantial resources in order to complete self-assessment activities, organize reviews, and engage in quality improvement activities to meet standards. In Universities offering several Health Programs, including medicine, having to meet accreditation standards from several accrediting bodies and engage in quality improvement, duplication of resources can be expensive. McGill's Faculty of Medicine chose to centralize these activities and resources under the Office of Accreditation and Education Quality Improvement (OAEQI).

Summary of the Innovation: OAEQI uses a team-based approach to coordinate accreditation processes and support educational Q.I. activities. Teams are a blend of Academic and Administrative staff collaborating to provide individualized services to the Undergraduate and Postgraduate medicine, Nursing, Occupational and Physiotherapy and the Communications programs. The education teams function on a tripartite service model that aligns curriculum, assessment and evaluation to fulfill their mandate. Through this multidisciplinary relationship, the Office identifies clear and measurable outcomes to design and deliver individualized services.

Conclusion: In a survey administered to PGME programs after the 2019 accreditation visit, over 80% of the respondents strongly agreed that because of the OAEQI services, they felt prepared to submit their accreditation documents and for their visit and interviews. 92% of the services were rated very or extremely useful. Finally, all respondents reported needing support from OAEQI to respond to accreditation results and implement quality improvement initiatives. Developing a centralized office to support Accreditation and Educational Q.I. activities allows for a more efficient, cost effective, use of resources and develops permanent and consistent expertise.

OD 3-2 Program and Session Evaluations: Leveraging Response Rates

Clare Cook Northern Ontario School of Medicine, **James Goertzen** Northern Ontario School of Medicine

Background/Purpose: CPD program and session evaluations are essential for (a) planning committees measuring a program's impact and planning relevant programs (Moore et al 2009); (b) presenters seeking feedback on educational content/delivery; (c) participants to reflect on their learning and application to practice (Armson et al 2015). For data to be valid, response rates must reach a critical threshold, which depends on session size (Nulty 2008). With electronic evaluations the norm, survey rates often low, and evaluation fatigue common, how can we leverage response rates to provide valid data?

Summary of the Innovation: The NOSM CEPD Office has used a quality improvement approach, trialing different initiatives to increase response rates for electronic evaluations, including: a) Multiple access methods: sending evaluation links to participants' email; QR codes; "short links" b) Tent cards on session tables: providing visual reminders; simulating availability of paper evaluations c) "Reusable" evaluations: links participants use to evaluate multiple sessions successively d) Using the same evaluation link to generate electronic attendance certificates e) Academic detailing with speakers and planning committees to raise awareness on the critical role of evaluations f) Offering incentives (e.g., prize draws) for completion g) Designing evaluations to capture rich comments while maintaining high completion rates

Conclusion: A multi-pronged approach works well to effectively reach faculty with diverse experiences and comfort with technology. Response rates for our annual faculty development conference (250+ participants) have exceeded 50%. Rates for individual sessions can reach 100%. It is vital to plan early, take the program's context into account, and identify ways to reduce evaluation fatigue.

OD 3-3 Using Regulatory Data to Shift the Performance Curve: MD Snapshot Reports

Nicole Kain College of Physicians & Surgeons of Alberta, **Nigel Ashworth** University of Alberta, **Delaney Wiebe** College of Physicians & Surgeons of Alberta, **Ed Jess** College of Physicians & Surgeons of Alberta, **Jacqueline Wagner** College of Physicians & Surgeons of Alberta, **Nancy Hernandez-Ceron** College of Physicians & Surgeons of Alberta

Background/Purpose: The College of Physicians & Surgeons of Alberta (CPSA) is the medical regulatory authority (MRA) in the province of Alberta, Canada. Along with other MRAs and stakeholders, the CPSA has helped to identify, research and explore various factors that may influence physician performance, including competence, individual factors and system-level factors. In 2016, the CPSA conceptualized a series of reports called "MD Snapshot," designed as feedback, self-reflection and practice quality improvement (QI) tools. Utilizing the growing body of evidence around factors and the CPSA's own registration and prescribing databases, the "MD Snapshot-Practice Checkup" (Practice Checkup) and "MD Snapshot-Prescribing Profile" (Prescribing Profile) were developed.

Summary of the Innovation: Practice Checkup is an annual factors-based personalized report for physicians, with the aim of promoting practice self-reflection and QI. Prescribing Profile is a quarterly personalized report for physicians containing numerous prescribing benchmarks. Prescribing Profile provides data apportioned into two domains: opioids (measured in total Oral Morphine Equivalents [OME] prescribed) and benzodiazepines (measured in total Defined Daily Dose [DDD] prescribed).

Conclusion: Two years after the inaugural MD Snapshot reports were distributed, there was a 23% decrease in overall OME prescribed and an 18% reduction in overall DDD prescribed. This downward trend has been observed over each quarter since Prescribing Profile has been issued. Survey and focus group feedback indicates that the majority (>60%) of physicians agree that Practice Checkup promotes practice self-reflection. These innovations demonstrate that regulatory data may be used to influence and improve physician performance.

OD 3-4 Learner driven faculty development

James Goertzen Northern Ontario School of Medicine, **Clare Cook** Northern Ontario School of Medicine

Background/Purpose: Medical education experts suggest learner evaluations often do not significantly change faculty's teaching. Providing faculty development to distributed preceptors can be challenging. This project links concepts from quality improvement, communities of practice, and reflection on education practice to assess the impact of a workshop using learner evaluations to stimulate teaching improvements.

Methods: A faculty development workshop based on grouped, anonymized evaluations was offered to Northern Ontario Local Education Groups (LEGs). LEGs are key to delivering undergraduate and postgraduate educational activities at NOSM and function as communities of practice. Participants reviewed strengths and areas for improvement; discussed individual and group-based improvement strategies; and completed intention to change declarations. Follow-up surveys and interviews assessed impact.

Results: Eleven workshops with LEG membership of 291 representing 25% of NOSM's clinical faculty participated, including rural and urban LEGs; small and large LEGs; family medicine and specialty LEGs. Common themes such as improving learning orientation and providing regular feedback emerged across multiple LEGs. Weaknesses unique to specific LEGs were also identified including appropriate response to learners' negative experiences and how to manage patients with learners. Outcomes include individual faculty changes (e.g. eliciting feedback; clarifying learning objectives) and LEG-based changes (e.g. new tools, processes, assessments). Faculty responded positively and report increased awareness of their LEG as a Community of Practice.

Conclusion: Learner evaluations provide opportunities to engage faculty individually and within a community of practice to implement meaningful improvements to their teaching practices.

OD 3-5 Exploring how best to teach quality improvement throughout the continuum of medical training: a realist review of peer-reviewed and grey literature.

Allison Brown University of Calgary, **Kyle Lafreniere** University of Calgary, **David Freedman** University of Toronto, **Aditya Nidumolu** Dalhousie University, **Matthew Mancuso** University of Alberta, **Kent Hecker** University of Calgary, **Aliya Kassam** University of Calgary

Background/Purpose: Integration of Quality Improvement (QI) into competency frameworks requires appropriate educational initiatives across the medical education continuum. There is a need for evidence regarding the content, format, and process pertaining to QI teaching throughout medical training. The purpose of this study was to explore the contextual factors, mechanisms, and predictors of success that support QI learning in medical education.

Methods: A realist review of peer-reviewed and grey literature on the topic of QI in medical education was conducted with the aim of identifying what works, for whom, in what circumstances, and why. No date or methodological filter was used, rather, relevance to the research question was used to identify articles which could strengthen and interrogate a program theory.

Results: After two reviewers screened 18854 unique records, seven reviewers screened 609 full-text records for eligibility and extracted 358 studies. The majority of QI curricula occurred at the postgraduate level in the United States using ambulatory contexts for experiential learning. At the undergraduate level, curricula often combined didactic and experiential learning during clerkship. Longitudinal curricula or scholarly tracks that ran throughout the entire medical curricula were common. Contextual factors included supportive environments with pre-existing QI culture, alignment with hospital goals, and using continuity clinics for projects. Mechanisms included: mentorship; curricula with clear objectives, deliverables, and constructive feedback.

Conclusion: Contexts and mechanisms identified from this synthesis can foster QI learning during training. The results of this research can help guide

the development and implementation of QI programming across medical schools and residency programs.

OD 3-6 Moving away from the "check box" metaphor: how residents are learning about quality improvement during residency training

Aliya Kassam University of Calgary, **Allison Brown** University of Calgary, **Kayla Atchison** University of Calgary, **Kent Hecker** University of Calgary

Background/Purpose: Formal training in Quality Improvement (QI) may help to ensure that physicians are equipped with the knowledge, skills, and attitudes to implement system-level solutions that improve the healthcare system. Yet, training in this area is not consistent across postgraduate programs. The purpose of this study was to explore how residents learn about QI.

Methods: Four data sources were analyzed to explore how residents learn about QI: surveys, interviews, observations, and archival records. 182 residents from four programs completed survey with over 130 items, 23 residents and 6 faculty completed an individual, semi-structured interview, 27 hours of observations were completed, and 5 years of archival records were analyzed.

Results: Residents with formal QI curricula reported higher knowledge, skills, and attitudes as well as motivations to make improvements throughout their careers. Effective components of QI curricula included: 1) accessibility of microsystems which foster a positive culture for QI, 2) mentorship from faculty and QI champions, 3) clearly defined objectives and deliverables, and 4) protected time to support residents in their QI activities. Residents without formal QI curricula reported their deficiency in QI training were due to their program's research requirement, which was commonly perceived as a "checkbox."

Conclusion: This study highlights the need for formal QI training that provides residents with meaningful opportunities to improve care and structure within their curriculum to both learn and apply QI concepts. Results of this study can inform the development of educational programming in competency-based models of training that will meet the needs of learners.

OD 5-1 Exploring the Effects of Medical Student Absenteeism

Bochra Kurabi University of Toronto, **Pauline Pan** University of Toronto, **Hana Lee** University of Toronto

Background/Purpose: Starting in October 2018, students in year 1 (Y1) and year 2 (Y2) of the MD Program at the University of Toronto submitted unplanned and planned absence requests using an online Absence Request Form. This system has allowed the MD Program to track absence requests from mandatory activities and respond to students absence requests effectively. We investigated the correlation between the number of absence requests and various quantitative assessment data to explore the relationship between attendance and student academic success in two cohorts of undergraduate medical students.

Summary of the Innovation: A review of the data revealed that 522 students requested 2525 absences (84% unplanned absences). The average number of absences per student was 4.66 (SD = 3.49) for Y1s and 4.97 (SD = 3.68) for Y2s. The largest unplanned absence category was for illness/injury (41%), followed by self-care (32%). The largest planned absence categories were academic presentation at a conference (4%) and absences due to significant events (4%). The number of absence requests was negatively correlated with scores on Mastery Exercises ($R = -0.11$, $p = 0.045$), Anatomy Bell ringers ($R = -0.21$, $p < 0.01$), OSCEs ($R = -0.29$, $p < 0.01$), and the Progress Test ($R = -0.28$, $p < 0.01$).

Conclusion: A high rate of attendance is key to the success of trainees in the highly-integrated Foundations (Preclerkship) curriculum. Further improvements to the absence tracking system will be key in further supporting our students individually and identifying absence trends that will allow the MD Program to address both acute and long-term curricular gaps.

OD 5-2 The Canadian Medical Student Ultrasound Curriculum: Providing Common Ground Where None Exists. A Statement from the Canadian Ultrasound Consensus for Undergraduate Medical Education (CanUCMe) Group

Stephen Miller Dalhousie University, **Irene Ma** University of Calgary, **Peter Steinmetz** McGill

Background/Purpose: This study establishes by expert review a consensus-based, focused point-of-care ultrasound (POCUS) curriculum, consisting of a foundational set of POCUS skills that all Canadian medical students would be expected to attain at the end of medical school.

Summary of the Innovation: An expert panel of 21 POCUS and/or educational leaders representing 15 of 17 (88%) Canadian medical schools was formed and participated in a modified Delphi consensus method. Experts anonymously rated 195 curricular elements on their appropriateness to include in curriculum using a Likert scale. The group defined consensus as 70% or more experts agreeing to include or exclude an element. We determined a priori that no more than three rounds of voting would be performed. Of the 195 curricular elements considered in the first round of voting, the group reached consensus to include 78 and exclude 24 elements. In the second round, consensus was reached to include four and exclude 63 elements. In the final round, with one additional item added to the survey, the group reached consensus to include an additional three and exclude eight elements. A total of 85 curriculum elements reached consensus to be included, with 95 to be excluded. Sixteen elements did not reach consensus to be included or excluded.

Conclusion: The CanUCMe Group recommends by consensus 85 curricular elements be considered for inclusion for teaching in the Canadian medical school POCUS curricula.

OD 5-3 Entering Medical Students' Transition to PBL - an Enhanced Curriculum

Jennifer MacKenzie McMaster University, **Lori-Ann Linkins** McMaster University, **Karen McAssey** McMaster University, **Robert Whyte** McMaster University

Background/Purpose: Problem Based Learning (PBL) pedagogy utilizes patient scenarios to stimulate students to link new knowledge to existing cognitive networks, reflect on/design learning objectives, research material, and co-construct knowledge. PBL supports learning, retention, contextual transfer, collaboration, self-directed learning, and cultural and ethical competencies. Primarily from traditional curricula, entering medical students' transition to PBL with its focus on collaboration, co-creation, and constructive cognitive conflict, compounded by lack of familiarity with PBL process and expectations, has resulted in anxiety and uncertainty. Rather than starting with standard PBL, a scaffolded introduction was designed.

Summary of the Innovation: Introduction to Medicine is the first subunit of the renewed Undergraduate Medical Education curriculum at McMaster University. Learning themes included: learning process, communication, professionalism, and wellness, based on student and faculty feedback, published and grey literature, and expert input. After an interactive introduction including video modelling about the rationale and process of PBL, 6-7 tutorial groups were placed in one classroom with 3-4 experienced tutors circulating. One facilitator directed structure/debriefs for major steps in PBL process, scaffolded over 4 sessions. The final session replicated a standard tutorial. Objectives added to standard scenarios included: self-reflection, participation, goal setting, learning strategies, and feedback. Concurrent curricula supported students' learning.

Conclusion: Formal and informal feedback supported growth in PBL skills. Students' affirming experiences including comparing objectives with other groups and clarifying challenges, improved cohesion and reduced tension. Tutors reported shared understanding, improved consistency, validation, and real-time peer support. Future directions include refinement of

learning structure, integration of non-medical expert competencies, supporting curricula, and handover to standard tutors.

OD 5-4 "Am I Meeting That Standard?" -- How Medical Students Set Standards Amid Ill-Defined Expectations

Kevin Chien University of Ottawa, **Lorenzo Madrazo** Western University, **Kori LaDonna** University of Ottawa

Background/Purpose: Medical students hold themselves to higher standards than their supervisors and underrate their performance compared to external measures. While these inaccuracies can impact wellness and create roadblocks for learning, our understanding of these tendencies remains limited. Uncovering the factors that drive medical students' (mis)perceptions may better position faculty to mitigate these detrimental effects.

Methods: Eleven medical students in years 1-3 participated in semi-structured interviews to discuss how they self-assess and set performance standards. Constructivist grounded theory guided the iterative data collection and analytic process.

Results: In the absence of clear expectations and useful feedback, participants described using perceived external expectations, peer comparison, and their personal values to set performance standards. Participants saw their performance as suboptimal if they did not expertly grasp clinical knowledge, demonstrate confidence, or flawlessly execute examination checklists. When their performance fell short of their personal standards and perceived expectations, participants reported experiencing increased stress, anxiety, and self-doubt. Several participants identified structural biases as a prominent factor that exacerbated pressures to excel.

Conclusion: Medical students gauged success by measuring their performance as clinicians rather than their gains as learners. Faculty should encourage medical students to develop their learner identity by setting clearer standards, providing reflective feedback, and normalizing learning through failure. The impact of structural biases on performance should also be considered. Such efforts can help trainees develop into lifelong learners with sustainable careers in medicine.

OD 5-5 Examining the evolution of student perceptions of reflective portfolio in undergraduate medical education

David Li University of British Columbia, **Ian Miao** Northern Ontario School of Medicine, **Maria Hubinette** University of British Columbia

Background/Purpose: Portfolios are intended to provide safe, non-judgemental, and confidential environments to encourage reflection in undergraduate medical education (Belcher et al 2014). With the debut of competency-based education, portfolio has been increasingly utilized to help monitor progress toward exit competencies (Kjaer et al 2006; Lewis & Baker 2007). While students' perceptions of portfolio have been studied in an isolated time frame (Driessen et al 2005), this study examines fourth year students' perceptions of a reflective portfolio and the evolution of their perceptions over the four years of medical school.

Methods: We conducted semi-structured interviews with 17 fourth year medical students at the University of British Columbia. The interviews were recorded and transcribed verbatim. We analysed the data using the thematic analysis framework outlined by Braun and Clarke (2006).

Results: We identified several recurring themes. (1) Students valued the randomly allocated groups for the diversity of perspectives afforded. (2) Student perceptions of portfolio evolved from one of relationship building, in the pre-clinical years, to one of professional development. Consequently, students highly valued continuity of groups and coaches. (3) Students elucidated key factors for developing effective coach-student relationships including coach willingness to exhibit personal vulnerability and authenticity as well as flexibility in discussion topics.

Conclusion: Our data suggests that the perception of a reflective portfolio changes over time, particularly in the transition into clinical training. Further, students valued longitudinal relationships that developed with peers outside their social networks. Finally, students expressed key factors for successful student-coach relationships.

OD 5-6 Transforming a Library Resources Lecture to a Show Production for Medical Students: 3 years in the making

Anthony Seto University of Calgary, **Zahra Premji** University of Calgary

Background/Purpose: Lights! Camera! Action! The use of these elements propelled the transformation of an "Electronic Clinical Resources" lecture for medical students to an engaging show production. Variation in classroom lighting, video-assisted content delivery, and in-class games were built into the lecture gradually, over three years. Traditionally, lectures on library resources (e.g. how to use databases to search up clinical queries) were not highly rated, as students may consider the subject "drier" than other medical topics. An immersive, educational "production", rather than a regular lecture, may improve learning and retention through active learning and emotional simulation.

Summary of the Innovation: The lecture underwent 3 annual revisions (2017-2019). In 2017, a "Fast Finder" game was added to the second half of the lecture. This game required teams of students to compete against other teams to answer as many multiple-choice questions as they could in 15 minutes; students used electronic clinical resources, covered in lecture, to answer clinical questions. In 2018, additional practice questions were integrated throughout the first half of the lecture, using an online medium, Kahoot, as a delivery mechanism. The second half involved a "Fast Finder" activity again, but students competed individually instead of on teams, and questions were delivered through Kahoot. In 2019, the answering mechanism for the practice questions was through holding body poses (to represent A, B, C, or D). The "Fast Finder" component reverted back to the team-based game of 2017. The first half of the lecture was transformed into a show, where the classroom functioned as "HQ", and the facilitators communicated to secret spies "live on location" through a video-feed (pre-recorded movie).

Conclusion: With each subsequent year, session ratings improved. The 2016 lecture facilitation was rated 3.73/5 by students in the end-of-course evaluation. The revised sessions of 2017, 2018, and 2019 scores were 4.19, 4.25, and 4.47 out of 5, respectively. Lesson-planning is similar to show-producing. Adding themes, showmanship, and interaction can increase audience immersion and satisfaction. With a bit of creativity and openness, any medical school lecture has the opportunity to transform into an educational "show" to better engage students cognitively and emotionally.

OE 1-1 Community Physician Retention in South Western Ontario: Perceptions of Longstanding and Recently-Recruited Physicians

Eric Liu Western University, **Alexandra Rocha** Western University, **Robert Mcallister** Western University, **Danny Kim** Western University, **George Kim** Western University

Background/Purpose: Despite efforts to address healthcare distribution inequalities across Canada through physician recruitment, studies have demonstrated that physician attrition is higher in rural regions, indicating retention and recruitment are separate issues. In this study we aim to identify qualitative differences in attitudes towards physician recruitment and retention from a group of South Western Ontario (SWO) community physicians based on service length.

Methods: We developed a semi-structured interview guide and conducted telephone interviews with 28 SWO community physicians. Physicians were separated by service length and defined as LS (longstanding physician, >5 years at practice location, n=14) and RR (recently recruited physician,

Results: When asked about factors influencing their current practice location, LS and RR mentioned scope of practice and collegial support. RR exclusively mentioned community familiarity as a barrier to recruitment, while LS emphasized burnout/distress as a barrier to retention. Both groups talked about their residency as a key facilitator, however RR to a much greater degree. LS often discussed family satisfaction and autonomy as facilitators to retention, both of which RR rarely discussed as facilitators.

Conclusion: While these groups shared overlap in their perceptions, there are clear differences in their attitudes towards factors keeping them in their practice location. RR valued their educational experience and support with transition to practice, while LS emphasized community integration and flexibility in practice. These factors provide avenues to address immediate and long-term physician need.

OE 1-2 Causes of prescribing errors in children in relation to doctors' prescribing behaviour. Qualitative evaluation using reported incidents

Richard Conn Queen's University Belfast, **Mary Tully** University of Manchester, **Mike Shields** Queen's University Belfast, **Tim Dornan** Queen's University Belfast

Background/Purpose: Medical education exists to improve patient care, yet most education research is not situated within clinical practice. As a consequence, researchers have struggled to demonstrate that education impacts patient outcomes. Prescribing error in children is a case in point, continuing to cause harm for patients and anxiety for physicians, despite concerted efforts at improvement. This study aimed to generate evidence to inform prescribing education by developing an in-depth understanding of the behavioural causes of errors occurring in authentic clinical practice.

Methods: Qualitative evaluation of a large dataset of reported prescribing errors in children in secondary care, using critical realist causal logic and the Capability-Opportunity-Motivation-Behaviour (COM-B) theoretical model.

Results: 460 reported errors contributed to analysis. A range of prescribing behaviours, such as not checking resources or not involving patients, led to errors. Behaviours were determined by highly-interrelated elements such as prescribers' lack of pediatric experience, insensitivity to risks, fragmented, unsupportive workplaces, and the specific demands of prescribing tasks.

Conclusion: This study reveals the complex, wide-ranging causes of prescribing errors in children. It points to a need for sophisticated educational strategies that account for prescribing complexity, such as authentic, contextualised modes of feedback, interprofessional education geared towards collective performance, and measures to expand the role of patients in supporting safe prescribing. This study's approach - using data derived directly from

practice and focusing on prescribing behaviour - offers the potential to directly benefit patients.

OE 1-3 Examining the unintended effects of intraprofessional (primary-specialty) care models using a critical social theoretical lens

Rene Wong University of Toronto, **Simon Kitto** University of Ottawa, **Cynthia Whitehead** University of Toronto

Background/Purpose: Professional organizations emphasize the importance of the primary-specialty care interface (PSI) especially for patients with chronic diseases. Despite the abundance of research to improve communication within the PSI, persistent tensions negatively impact medical education and patient care. There has been a dearth of theoretically-informed research exploring how structural, organizational and system-level factors influence the PSI.

Methods: Using diabetes as a case, we conducted a Foucauldian discourse analysis of policy, professional and educational documents, and interview transcripts with a purposive sample of primary care and specialist physicians. By analyzing the PSI as a discursive construction we sought to explore what is actually happening in efforts to improve the PSI (including the unintentional effects) and the potential consequences for education and patient care.

Results: The PSI is constructed in a way that privileges a disease-centric approach to care. Specialists occupy a position to correct the practices of problematic primary care physicians, whose expertise in managing uncertainty, complexity and relational care is relatively obscured. However, physicians described teaching and implementing initiatives to improve the PSI that may be unintentionally preventing socially marginalized patients from ever receiving care.

Conclusion: While efforts to improve the PSI are adopted and taught with the best intentions, our analysis suggests they may prevent development of the relationships between primary care and specialist physicians necessary for the delivery of quality patient care. Making explicit the implicit assumptions about the PSI opens space for educators to see and develop new ways of thinking about and teaching collaboration as a competency.

OE 1-4 Representations of Administrative Staff and Faculty over 50 Years of 'Reports from the Dean'

Morag Paton University of Toronto, **Stephanie Waterman** University of Toronto, **Cynthia Whitehead** University of Toronto, **Ayelet Kuper** University of Toronto

Background/Purpose: Language and representation matter. For almost one-hundred years, the Faculty of Medicine at the University of Toronto has produced an annual report from the Dean, discussing pertinent issues, showcasing successes and acknowledging community members. The reports have traced the history of the faculty through the wars, the Great Depression, and the introduction of socialized medicine. Included in those narratives are the people who work within the Faculty as staff members, teachers, researchers, and leaders. This study forms the beginning of my doctoral thesis research employing Foucauldian discourse analysis to explore how administrative staff have been and continue to be represented across three departments in the Faculty of Medicine.

Methods: Fifty years of digitalized Reports from the Dean written between the 1920s and the 1970s form the archive and were reviewed, coded in NVivo12, and analyzed using Foucauldian discourse analysis techniques.

Results: Staff and Faculty have been written about differently in the Reports and this changes over time. Staff representations are minimal with specific named administrative staff mentioned very rarely. This is juxtaposed by the heavy focus on named Faculty members. Staff are constructed in various ways, typically using aspects of their personal dispositions. In contrast, faculty are constructed more so for their accomplishments or the esteem held by others. When faculty are constructed using aspects of their personal dispositions, this is often gendered.

Conclusion: How staff and faculty have been constructed through these texts hint at the differential power ascribed to these groups. Further phases of this research will further explore the discourses that govern this differential power.

OE 1-5 Perceptions of Research by Schulich School of Medicine & Dentistry Physicians Located in an Academic Centre or Distributed Sites

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

Background/Purpose: Increasing the research capacity of physicians located in distributed sites (DS) enables the Schulich School of Medicine & Dentistry to encourage research and help advocate for community patient populations in an era of declining clinician-scientists. DS physicians face unique challenges which may act as barriers, including patient expectations, time, resources, and support. In this study, we aim to identify and compare barriers and facilitators to engaging in research for Schulich DS or academic centres (AC) physicians.

Methods: We developed a semi-structured interview guide querying research history, training, and research capacity. In-person interviews were conducted with 68 Schulich physicians (14 AC & 54 DS) then transcribed verbatim and analyzed in an immersion and crystallization framework.

Results: A total of 6 themes were found including time, research training, resources, clinical impact, organization, and character. Themes spanned 35 unique codes. Time was the largest barrier to both AC & DS physicians, however DS physicians often listed their organization as a barrier, while AC physicians only mentioned this as a facilitator to research. AC physicians felt access to resources was a key facilitator, while DS physicians more frequently mentioned resources as a barrier.

Conclusion: DS physician's perception of research is unique compared to AC physicians. While barriers including professional time and work-life balance are difficult to remedy at the institutional level, differences in barriers emphasized by DS and AC physicians such as non-clinical network or collaboration are factors that provide Canadian medical schools practical targets to enhance the research capacity of faculty in distributed sites.

OE 1-6 How the Certificates of Added Competence shapes family medicine practice in Canada

Meredith Vanstone McMaster University, **Ilana Allice** McMaster University, **Alison Baker** McMaster University, **Alexandra Farag** McMaster University, **Jesse Guscott** McMaster University, **Michelle Howard** McMaster University, **Margo Mountjoy** McMaster University, **Henry Siu** McMaster University, **X. Catherine Tong** McMaster University, **Lawrence Grierson** McMaster University

Background/Purpose: This study concerns the Certificates of Added Competence (CAC) program initiated to increase enhanced skills training for members of the College of Family Physicians of Canada (CFPC). The current study is policy-responsive work performed in partnership with the CFPC, to explore the impact of four CACs on the provision of comprehensive primary care in Canada.

Methods: This mixed-methods study uses six qualitative case studies and a national survey to investigate the way that CACs in Care of the Elderly, Palliative Care, Anesthesia, and Sports and Exercise Medicine impact the organization and delivery of family medicine across Canada. Cases are conceptualized as groups of family physicians who work in an inter-connected way; cases were selected to represent diversity in geography, patient population, and practice arrangement. In each case, we conducted qualitative interviews, within-case focus groups, and review of relevant documentation. A descriptive content analysis was performed, within and across cases and informed the development of the survey.

Results: Through a unique combination of enhanced expertise in specific domains of care and a grounding in the principles of Family Medicine, CAC holders act as a bridge for patients between family physicians and specialty care, extending both the comprehensiveness and continuity of care provided by family physicians in a community.

Conclusion: Through this research, we seek to provide an improved understanding of the impact of CACs and to give advice to the CFPC about whether, and how, to implement additional CACs in service of

providing access to co-ordinated and community-adaptive comprehensive care.

OE 2-1 Structured Oral Exams: Exploring Stakeholders' Perspectives

Isabelle Boulais Université de Sherbrooke, **Frédéric Bernier** Université de Sherbrooke, **Elise Vachon Lachiver** Université de Sherbrooke, **Melanie Marceau** Université de Sherbrooke, **Linda Bergeron** Université de Sherbrooke, **Christina St-Onge** Université de Sherbrooke

Background/Purpose: Structured oral examinations (SOE) are often used to assess clinical reasoning and are an important element in a comprehensive program of assessment. However, knowledge about stakeholders' perceptions of SOE is limited at the undergraduate medical education (UGME) level. We therefore explored stakeholders' perceptions of the SOE, as part of an assessment program.

Methods: We recruited stakeholders from one Canadian university to participate in a qualitative descriptive study. We collected data through focus groups with learners (n=5) and assessors (n=3), and analyzed it using Miles, Huberman and Saldana's method. Two team members carried out the analysis for each transcript and all team members discussed the interpretation until a consensus was reached.

Results: Thirty-eight learners and ten mentors participated in the study. We identified several positive perceptions of SOE (e.g., authenticity of the format to represent real clinical work, allows for the assessment of clinical reasoning) and some negative consequences (e.g., stress and anxiety due to the format and time allowed, disappointment linked to not receiving feedback). The flexibility of the format was seen as both positive (could have a face-to-face interaction with the rater) and negative (perceived subjectivity and lack of standardization).

Conclusion: The perceived positive aspects of SOE seems to outweigh the perceived potential negative ones. Thus, overall, our results support the continued use of SOE as a modality to assess clinical reasoning within a UGME program of assessment. Considerations should be given by the individuals responsible for the exam to minimize the perceived potential negative consequences.

OE 2-2 Evaluation of Entrustable Professional Activities Assessment in Undergraduate Medical Education using Mobile Technology

Vernon Curran Memorial University of Newfoundland, **Nicholas Fairbridge** Memorial University of Newfoundland, **Diana Deacon** Memorial University of Newfoundland, **Norah Duggan** Memorial University of Newfoundland, **Katherine Stringer** Memorial University of Newfoundland, **Heidi Coombs** Memorial University of Newfoundland, **Steve Pennell** Memorial University of Newfoundland

Background/Purpose: Memorial University introduced Entrustable Professional Activities (EPAs) into an undergraduate clerkship curriculum as formative assessments. This study applies the Norcini et al. (2018) consensus framework for good assessment to evaluate a mobile system in assessing undergraduate EPAs during clerkship.

Methods: An electronic clinic card was developed for mobile use by both clerks and preceptors. Clerks were tasked with transcribing in-the-moment coaching and assessment discussions with preceptors. Assessments were collated and analyzed by ordinal regression, and users were surveyed on satisfaction with the new modality.

Results: The mobile eClinic Card system enabled 80 clerks and 624 preceptors to document 6,850 submissions that included 18,661 EPA scores across 47 clinical sites over a 48-week core clerkship curriculum. The rating system was found to be generally consistent, reliable and equivalent between preceptors, clinical sites, or the specific activity assessed. Clerks documented progressive improvement. Some differences between disciplines were found in rating odds, in preceptor composition and workload. Student odds of success did not correlate to subject examination scores. Preceptors and students were satisfied with ease of use and dependability of the eClinic Card mobile app; however, clerks suggested the quality and utility of formative coaching feedback could be improved. Preceptors felt enhanced faculty development would be beneficial.

Conclusion: Findings support the utility, feasibility and acceptability of a mobile system in assessing work-based Entrustable Professional Activities within clerkship curriculum. Change management is a major determinant of success and user engagement is essential for uptake of mobile technologies for work-based assessment.

OE 2-3 Learner Handover - Who is it really for?

Susan Humphrey-Murto University of Ottawa, **Lorelei Lingard** Western University, **Lara Varpio** Uniformed Services University of the Health Sciences, **Chris Watling** Western University, **Shiphra Ginsburg** University of Toronto, **Kori LaDonna** University of Ottawa

Background/Purpose: Learner handover (LH), or forward feeding, can support longitudinal assessment in rotation-based systems, but concerns have been raised. Because successful implementation relies on a better understanding of existing practices and beliefs, our purpose was to explore how faculty perceive and enact LH.

Methods: Using constructivist grounded theory, we conducted 23 semi-structured interviews with faculty from two universities, asking participants to describe their LH practices. We probed to understand why LH was used, its perceived benefits or risks, and the socio-cultural influences on faculty LH practices.

Results: While participants reported that LH was motivated by both learner benefit and patient safety, they primarily described motivations focused on their own needs. LH was used to improve faculty efficiency by focusing teaching and feedback, and it was perceived as a "self-defence mechanism" when faculty were uncertain about a learner's competence and trustworthiness. LH also served social or therapeutic purposes when faculty used it to gossip, vent, or manage insecurities about their assessment of learner performance. Because of its multiple, sometimes unsanctioned purposes, some participants advised being reflective about the motivation behind LH conversations.

Conclusion: Efforts to improve LH currently center on developing formalized learner-centered processes. However, our findings suggest that LH tends to be faculty centered. While sharing information may create biases that harm learners, LH may be one of the few avenues available for faculty to share anxieties around entrustment. We suggest that any LH processes should consider faculty needs prior to implementation.

OE 2-4 Workplace medical student mistreatment: assessment of interventions

Maury Pinsk University of Manitoba, **Gillian Nattress** University of Manitoba

Background/Purpose: Pediatric UGME at the University of Manitoba assesses incidence of witnessed and experienced clinical clerk mistreatment during the pediatric clinical rotation. Interventions were implemented to address mistreatment involving nursing colleagues. We assessed the effectiveness of these interventions.

Methods: Student reports of mistreatment during the pediatric clerkship were obtained during exit interviews administered by the director and associate director. Data over six years was assessed for clinical group involved in the complaint, and stratified by period in which the alleged event(s) took place. One-way ANOVA and post-hoc Tukey identified that complaints of observed mistreatment by nurses were statistically different compared to every other group. Complaint frequency was assessed in a run chart.

Results: Complaints were reported by students experiencing workplace mistreatment 26 times, the majority of which involved residents (44%), allied health (17%) and nursing (17%). Bystanders registered 34 reports of mistreatment, the majority of which involved nursing (46%), allied health (23%) and residents (16%). One way ANOVA with post-hoc Tukey analysis revealed that only bystander complaints of nursing associated mistreatment were statistically significantly higher ($p = 0.001$) to all other groups. Nursing associated mistreatment complaints were most prevalent during January - mid February. Finally, assessment of complaint frequency shows significant decrease since interventions have been implemented.

Conclusion: Medical student harassment is a serious problem in training. Since interventions have been put in place, we have seen a reduction in both

observed and experienced workplace student mistreatment. We discuss the interventions that were implemented.

OE 2-5 Seeing but not believing: Insights into the intractability of failure to fail

Andrea Gingerich University of British Columbia, **Stefanie Sebok-Syer** Stanford University, **Roseann Larstone** University of Northern British Columbia, **Christopher Watling** Western University, **Lorelei Lingard** Western University

Background/Purpose: Inadequate documentation of trainee underperformance persists despite research-informed solutions targeting this failure-to-fail phenomenon. Documentation could be impeded if assessment language is misaligned with how supervisors conceptualize underperformance. Since frameworks tend to itemize competence while being vague about incompetence, assessment design may be improved by better understanding how supervisors experience being confronted with an underperforming trainee.

Methods: We interviewed 22 physicians about their experiences supervising trainees who demonstrate incompetence. Following constructivist grounded theory, the interviews were conducted and analyzed iteratively.

Results: Physicians began with an assumption: all trainees should be capable of progressing by applying learning to subsequent clinical experiences. Underperformance was therefore unexpected, and evoked disbelief in supervisors, who sought alternate explanations for the surprising evidence. Supervisors struggled to explain underperformance, often due to limited interaction time, and offered two main explanations: underperformance was being unable to engage with learning due to illness, life events, or learning disorders so that progression was stalling or stalled; or it was being unwilling to engage with learning due to lack of interest or insight. Once underperformance was identified, some physicians were compelled to flag stalled trainees to get them help and to flag disengaged trainees to protect patients.

Conclusion: Physicians conceptualize underperformance as failed progression that cannot be recovered through supervision. Although failure-to-fail tends to be framed as a reluctance to document underperformance, the prior step of identification may be hampered by brief, isolated supervisory relationships that do not allow sufficient interactions to make sense of unexpected trainee performance.

OE 2-6 Idiosyncrasy in assessment comments: Do faculty have distinct writing styles?

Andrea Gingerich University of British Columbia, **Christopher Watling** Western University, **Kevin Eva** University of British Columbia, **Shiphra Ginsburg** University of Toronto

Background/Purpose: Written comments are gaining traction as robust sources of assessment data. Compared to the structure of numeric scales, what faculty choose to write is ad hoc, leading to idiosyncratic differences in what is recorded. We explored what aspects of writing styles are determined by the faculty offering comment and what aspects are determined by the trainee being commented on.

Methods: We compiled in-training evaluation report (ITER) comment data from all faculty providing at least 8 ITERs at four large North American Internal Medicine training programs. Data were analyzed using the Linguistic Index and Word Count (LIWC), which categorizes and quantifies written language. Generalizability Theory was used to determine whether faculty could be reliably discriminated from one another based on writing style; correlations/ANOVAs were used to determine what styles were related to faculty or trainee demographics.

Results: Each dataset contained data from a range of 23-142 faculty who provided 549-2666 assessments on 161-989 trainees. Faculty could easily be discriminated from one another using a variety of LIWC metrics including Word count (G=0.79), Words per sentence (G=0.76), and the use of "Clout" words (G=0.71). These patterns appeared person-specific and did not reflect demographic factors such as gender or rank. These metrics were similarly not consistently associated with trainee factors such as PGY, gender, or the numeric score.

Conclusion: Faculty seem to have detectable writing styles that are relatively stable across the trainees they assess. If written comments are to meaningfully contribute to decision-making we, need to understand and account for idiosyncratic writing styles.

OE 3-1 Creation of a Pilot Addiction Medicine Week Created for and by Pre-Clerkship Medical Students

Melissa Tigert University of Toronto, **Hilary Stone** University of Toronto, **Ruby Alvi** University of Toronto, **Peter Selby** University of Toronto, **Azadeh Moaveni** University of Toronto, **Joyce Nyhof-Young** University of Toronto, **Robin Glicksman** University of Toronto

Background/Purpose: Medical students receive limited exposure to substance use disorders (SUDs) throughout their undergraduate medical training, despite its prevalence in society. At the University of Toronto, a week-long extra-curricular program in addiction medicine was developed to enhance SUD knowledge, skills and attitudes toward managing patients with SUDs. The program was available to all pre-clerkship students; 20 individuals applied. Of these students, 13 participated.

Summary of the Innovation: The novel curriculum included half didactic and half clinical shadowing experiences. Didactic lecture and workshop topics included: the biopsychosocial model of addiction, motivational interviewing, harm reduction care models, naloxone training and stigmatization of addiction disorders. The clinical course component involved placements at residential treatment facilities, in-patient hospital services, rapid access clinics and specialty addiction medicine placements (e.g. substance use in pregnancy clinics). The curriculum was evaluated using a mixed-method design (surveys, a focus group and a written reflection).

Conclusion: Participants reported high program satisfaction, and felt the clinical exposure was invaluable for skills building, career exploration, and understanding stigma and the patient experience. Moreover, participants felt that program stimulated personal and professional growth, and introduced them to forms of advocacy for this vulnerable population. Key learning points included prioritizing patient and family member perspectives, and providing diverse modalities of learning to highlight the different aspects of the biopsychosocial model. Overall, participants felt the week would initiate a change in their future practice, and felt that all medical students should have similar exposure to addictions medicine.

OE 3-2 Who Wants to Translate? Evaluation of a Novel Medical Mandarin Education Program for and by Pre-clerkship Medical Students

Jin Sheng (Jason) Zhou University of Toronto, **RuiQi Chen** University of Toronto, **Yu Yang Feng** University of Toronto, **Yao Lu** University of Toronto, **Joyce Nyhof-Young** University of Toronto

Background/Purpose: Limited English-proficient (LEP) patients have adverse health outcomes, including increased emergency room visits, diagnostic tests, and misdiagnoses. Toronto is a multi-cultural city with a quarter million mandarin speakers, and the Medical Mandarin Education Program (MMEP) was developed in 2018 to address observed communication difficulties between healthcare providers and Mandarin-speaking patients. MMEP provides a supportive extracurricular environment for MD students to learn and practice medical Mandarin with peers.

Summary of the Innovation: From August 2018 - May 2019, we piloted ten 1-hour long sessions with 25 unique 1st and 2nd year MD students. Eight student-led sessions taught content paralleling the Foundations pre-clerkship curriculum via topic vocabulary words, sentence translations, and practice cases. Two physician-led sessions promoted cultural understanding and personal practice tips. Following program completion, we conducted two 45-minute, audio-recorded focus groups with 6 participants each. Transcripts were iteratively examined via descriptive thematic analysis. A post program survey investigated participant demographics and experiences.

Conclusion: MMEP was well received by students, who noted appropriate material length and difficulty. 90% of participants were intermediate/fluent Mandarin speakers; yet only 25% were comfortable

using it in a clinical context. MMEP addresses this language gap. Perceived program impacts include increased comfort with and likelihood of using clinical Mandarin in future patient care, a developing sense of peer linguistic and cultural community, and increased understanding of cultural diversity. Program information is being disseminated to students and schools interested in minority languages and cultural competencies.

OE 3-3 Autopsy of a Longitudinal Integrated Clerkship: An Organizational Process Analysis of a Clerkship Program's Demise

Clare Hutchinson University of Toronto, **Clare Hutchinson** University of Toronto, **Abdollah Behzadi** University of Toronto, **Natalie Clavel** University of Toronto, **Ra Han** University of Toronto, **Adam Kaufman** University of Toronto, **Piero Tartaro** University of Toronto, **Kulamakan Kulasegaram** University of Toronto, **Maria Martimianakis** University of Toronto, **Maria Mylopoulos** University of Toronto, **Stacey Bernstein** University of Toronto

Background/Purpose: In 2014 the University of Toronto launched a multi-site, urban longitudinal integrated clerkship (LInC), encompassing all medical disciplines. After expanding to 10% of the class in seven sites, this pilot program was terminated in 2018. This descriptive study outlines the reasons for the program's discontinuation using an organizational processes framework.

Methods: As co-creators of the program, we identified several factors that led to the program's collapse. Based on our observations and qualitative analysis of focus group transcripts, we have described our findings related to the structural, human resource, symbolic and political challenges.

Results: Structurally, the co-existence of LInC and block clerkship within the same hospitals created confusion and competition for scarce clinical resources. From a human resource perspective, the creation of personalized daily schedules for each LInC student carried a significant administrative burden. Symbolically LInC represented the promotion of heightened humanism in medicine. Paradoxically this holistic emphasis was perceived as both less rigorous compared to traditional block clerkship, and as an invalidation of block student interpersonal skills. Politically, LInC created issues of equity among the medical school class, due to the significant resources allocated to a small minority of the class perceived as being treated preferentially.

Conclusion: LInC challenged the culture of our large, traditional medical school. Despite the program being highly successful clinically, asking students to choose between two parallel clerkship curricula co-existing in the same institution proved unsustainable. We are planning on bringing the most impactful elements of the program to the entire medical school class.

OE 3-4 Introduction of the National Electives Diversification Policy: A McGill University Case Study

Alexandra Cohen McGill, **Sonia Macfarlane** McGill

Background/Purpose: At CCME 2018, the 16 Canadian Faculties of Medicine endorsed the creation of a national electives policy. This policy would enforce a maximum of eight weeks in any entry-level discipline, with the goal of diversifying clerkship training and promoting parallel career-planning. Medical students are facing significant concern over the increasing number of unmatched Canadian Medical Graduates. When the national electives policy was first introduced at McGill, student response was subjectively negative. We thus sought to elicit both quantitative and qualitative feedback, with the goal of advocating for the student perspective prior to and throughout policy implementation.

Methods: Two anonymous online surveys were sent to all McGill medical students in September and December of 2018. Narrative feedback was collected in four town hall meetings.

Results: Seventy percent (First survey, N=165) and 66% (Second survey, N=179) of survey respondents voted in favor of the national electives policy. Students expressed support for the following reasons: 1) Uniformity across Canada; 2) The opportunity to pursue multiple career paths; 3) Predicted financial benefits due to perceived decreased travel needs. Students reported concerns regarding the following issues: 1) Potential decreased exposure to clinical supervisors; 2) Uncertainty about residency selection criteria; 3) Concern for country-

wide policy enforcement. Students were tentative with regards to implementation of the policy.

Conclusion: Despite the initial negative response, McGill students were predominantly in favor of the national electives policy. Given the shifting Canadian landscape of residency positions, students expressed interest in maintaining collaboration with policy-makers throughout the implementation and review process.

OE 3-5 The Potential Effect of the Psychiatric Clerkship and Contact-Based Hypothesis on Explicit and Implicit Stigmatizing Attitudes of Canadian Medical Students Towards Mental Illness

Anish Arora McGill, **Harman Sandhu** McMaster University, **Jennifer Brasch** McMaster University

Background/Purpose: The purpose of this study was to assess if having completed a psychiatric clerkship or having increased exposure to mental illness in general was associated with reduced explicit and implicit stigmatizing attitudes towards mental illness in undergraduate medical students.

Methods: A secondary analysis of data specific to medical students from McMaster University was completed. Data were obtained through a cross-sectional survey administered electronically. The survey consisted of a demographic questionnaire, the Opening Minds Scale for Healthcare Providers (OMS-HC) 12-item survey, and an Implicit Association Test (IAT). The OMSHC was used as a measure of explicit stigmatizing attitudes, whereas the IAT was used as a measure of implicit bias. All analyses were completed using Stata/IC 15 and were two-tailed with significance defined as $p < 0.05$.

Results: Individuals that self-reported either having had a mental illness or diagnosis by a health care professional had significantly lower levels of explicit stigma. Final-year medical students had significantly lower levels of implicit stigmatizing attitudes than first-year medical students. Neither having completed a psychiatric clerkship nor having a close relationship with someone experiencing a mental illness was significantly associated with the explicit or implicit stigmatizing attitudes of medical students.

Conclusion: More years in medical school and self-identifying or receiving a diagnosis of mental illness are associated with reduced stigmatizing attitudes, whereas having completed the psychiatric clerkship and having a close relationship with an individual experiencing mental illness were not. This study suggests that the psychiatric clerkship may have limited impact on the stigmatizing attitudes of medical students.

OE 3-6 REACT: A Pre-Clerkship Bootcamp to Improve Student Knowledge and Interest in Critical Care Specialties

Jamie Ghossein University of Ottawa, **Vignesh Shankar Sethuraman** University of Ottawa, **Frank Battaglia** University of Ottawa, **Neraj Manhas** University of Ottawa, **Shankar Sethuraman** University of Ottawa, **Celina DeBiasio** University of Ottawa, **Rhiannan Pinnell** University of Ottawa, **Nikhil Rastogi** University of Ottawa

Background/Purpose: To address the minimal exposure to critical care specialties in pre-clerkship curricula, we implemented an intensive one-week critical care program for pre-clerkship students. The goal was to increase pre-clerkship students' self-assessed knowledge, interest and confidence in the critical care specialties.

Methods: Pre-clerkship students participated in the REACT (radiology, emergency medicine, anesthesiology, critical care and traumatology) pilot program, consisting of observerships, career discussions, and hands-on simulation across the selected acute care specialties. This prospective cohort study evaluated the effectiveness of the REACT program in improving critical care knowledge and facilitating career planning when compared with a control group. At baseline and completion, students completed a survey assessing specialty interest, self-assessed knowledge, and confidence of the simulated skills.

Results: 29 pre-clerkship students were recruited, 15 participated in the REACT program. No significant differences in study measurements were noted between the study arms at baseline. At program conclusion, REACT participants showed increases in nearly all study outcomes compared to baseline and the control group. Significant increases were noted in

specialty knowledge, career interest (anesthesia only), and procedural knowledge/confidence (p

Conclusion: The REACT program was effective in increasing interest, self-assessed knowledge and confidence in the critical care specialties. This program can be expanded to other medical schools to grant early exposure to critical care specialties.

OE 6-5 A modern approach to physician resource planning to improve accessibility and personalized health care for Canadians

Dax Bourcier Université de Sherbrooke, **Brandon Collins** Memorial University of Newfoundland, **Stuti Tanya** Memorial University of Newfoundland, **Mathieu Doiron** Université de Sherbrooke, **Natasha Larivée** Dalhousie University, **Alex Wong** Dalhousie University, **Marie Vigneau** Université de Sherbrooke, **Ameer Jarrar** Dalhousie University, **Victoria Kulesza** Dalhousie University, **Jelisa Bradley** Dalhousie University, **Ryan Wade** Memorial University of Newfoundland, **Patrick Holland** Dalhousie University

Background/Purpose: The Canadian health system is vulnerable to disruption by exponential advances in technology and differing work expectations from incoming physicians and patients. A principle that is likely to persist for health-related stakeholders is the provision of accessible and personalized health care services to all Canadians. Physician resource planning (PRP) is a crucial component in ensuring the right mix, distribution, and number of physicians needed by society. Currently, each province approaches PRP differently as there is no official national oversight. This results in some provinces that report data publicly, while a few use a physician forecasting model.

Summary of the Innovation: One consequence of this disjointed approach was that Atlantic medical students have expressed as their top concern the limited access to data on the current and projected physician workforce. To address this issue, the Health Human Resource Task Force (formerly Atlantic Task Force) of the Canadian Federation of Medical Students created a national interactive platform that uses a map of Canada to illustrate the demand for physicians in our society. Users can filter data by specialty, province or territory (and regions), year, and source of the most relevant public data on the physician workforce.

Conclusion: We believe that informing medical students with these realities during pre-clerkship will guide them to choose a career based on both personal interests and social accountability. Our group has also identified collaboration, social accountability, and artificial intelligence as the three fundamentals to modernise PRP strategy. Overall, these efforts contribute to the vision of system stewardship for an integrated Canadian health care system.

OE 6-1 Lost and never found: Exploring the involvement of trainees in the care of people who inject drugs

Lisa Liu Western University, **Mark Goldszmidt** Western University, **Sarah Burm** Dalhousie University, **Sayra Cristancho** Western University, **Jacqueline Torti** Western University, **Javeed Sukhera** Western University

Background/Purpose: People who inject drugs (PWID) represent a complex population for trainees. Despite increasing attention to PWID in the context of the opioid epidemic, there is a dearth of research exploring how care for PWID is enacted within clinical training. Moreover, existing research does not address how both human and non-human elements shape the care and learning experiences relating to PWID. This study therefore aimed to explore the involvement of trainees in the care of PWID.

Methods: Data collection and analysis was informed by Actor Network Theory with an emphasis on the symmetrical relationship between human and non-human actors such as policy and physical space. Data consisted of observational field notes, field interviews and artifacts from 100 hours spent on inpatient wards and emergency departments within two hospitals in an urban setting in Ontario, Canada.

Results: Care for PWID is enacted quite differently compared to other patient populations. Resource constraints and variation in how polices are enacted assemble with challenges such as frequent physical absences of patients to produce 1) mistrust between patients and staff; 2) suboptimal withdrawal management, and 3) PWID leaving against medical

advice. For trainees, misalignment between PWID and staff, and poor outcomes contributed to frustration and futility.

Conclusion: Trainees play an increasingly important role in the care of PWID. Continuing with the status quo risks training a population of physicians whose experiences of "learned helplessness" hinder their ability to advocate and care for this vulnerable patient population.

OE 6-2 Creating inclusive spaces in healthcare education: translating knowledge to promote inclusion and equity of people with disabilities in healthcare professions

Yael Mayer University of British Columbia, **Tal Jarus** University of British Columbia, **Laura Bulk** University of British Columbia, **George Belliveau** University of British Columbia, **Christopher Cook** University of British Columbia, **Michael Lee** University of British Columbia, **Jennica Nichols** University of British Columbia, **Laen Hershler** University of British Columbia, **Ally Malinowski** University of British Columbia, **Yuval Jarus-Hakak** University of British Columbia, **Emily Gresham** University of British Columbia

Background/Purpose: Healthcare professions have the lowest representation of workers with disabilities compared to any other Canadian workforce sector. Health education is the gate to working in health professions, and therefore promoting inclusiveness in health education is essential to diversify healthcare professions. In Grassroots theory for social change, it is believed that groups of people can create power by taking mutual action to achieve social change. According to this theoretical framework, advocacy should be focused on working with many, to build a community that will work together toward a mutual goal. We used this framework to impact policies that affect people with disabilities in health education.

Summary of the Innovation: Rich data from a qualitative study, wherein we heard the lived experiences of students and clinicians with disabilities in healthcare professions, led to a knowledge dissemination project, called Inclusive Space network. We created knowledge translation materials as well as a campaign to reach students, faculty, and curriculum developers in health education, and the general public. We will also present the process of building the advocacy network among students and faculty in the healthcare professional programs, and describe the responses of the healthcare education community to the campaign.

Conclusion: The Inclusive Space Campaign was found to be a very useful educational tool for increasing awareness of the experiences of students and clinicians with disabilities in healthcare professions. Initiatives like these that involve multiple stakeholders are much needed to increase inclusion and equity in healthcare education.

OE 6-3 What is a Health Advocate?

Theresa Van Der Goes University of British Columbia, **Ian Scott** University of British Columbia, **Maria Hubinette** University of British Columbia, **Renate Kahlke** The Royal College of Physicians and Surgeons

Background/Purpose: Competency frameworks identify Health Advocacy (HA) as critical in physician practice, though its exact meaning remains contentious. Little has been done to examine how learners understand their HA role. Our study asked learners how they understand HA in their diverse educational and practice contexts.

Methods: Using constructivist grounded theory, we purposively sampled medical students (N=80) and family medicine residents (N=48) from diverse educational and practice contexts. We analyzed existing written reflections, then completed individual and group interviews with theoretically sampled participants (N=29), including new participants from pediatric (N=2) and internal medicine (N=4).

Results: We found that learners understood HA in two distinct ways: 1) As identifiable behaviours, applied across contexts. 2) As "going above and beyond" what would be expected in that context, for their patient(s). These two approaches to HA often came into conflict as learners struggled to articulate their role as health advocates; the first approach suggests that HA is a normative set of behaviours that all physicians should be able to perform, regardless of context, while the second suggests a sense of pushing

past normative expectations in a particular context by "going above and beyond."

Conclusion: These conflicting definitions can be troubling to learners who struggle to achieve "competence" by the time they complete their training. However, in our view, both approaches have value. Behavioural conceptions of HA offer a benchmark for teaching and assessment while "going above and beyond" invites learners to identify and push the boundaries of current practice in order to improve care in imperfect systems.

OE 6-4 Connecting lived experience with medical students: A pen-pal curriculum innovation to promote compassion regarding mental health and homelessness

Jackie Tsang University of Toronto, **Ivona Berger** University of Toronto, **Abirami Kirubarajan** University of Toronto, **Seiwon Park** University of Toronto, **Roxanne Wright** University of Toronto, **Carmen Charles** University of Toronto, **Judith Marshall** University of Toronto, **Fok-Han Leung** University of Toronto

Background/Purpose: Homelessness is one of the most powerful social determinants of health. Patients who have a history of homelessness, particularly those who also have a diagnosis of mental illness, often do not seek out medical care due to perceived stigma and barriers to empathy. However, it remains difficult for medical faculty to effectively teach compassion regarding this topic to medical students through didactic learning.

Summary of the Innovation: This innovation involved pre-clerkship students and community members with lived experience of homelessness and mental illness. The community members were recruited from our partner organization Houselink, a Toronto-based community housing agency and non-profit organization with a focus on mental health. Pre-clerkship students were matched with a community member from Houselink. On a biweekly basis for two months, written correspondence was exchanged. All written correspondence was anonymized, without any identifying data. After the two months of piloting the innovation, feedback from participants will help inform broader curriculum implementation.

Conclusion: This innovation is beneficial for both the medical student and community member groups. Medical students were able to interactively learn about social determinants of health, by connecting their knowledge of health with a local story. Furthermore, community members were able to share their experiences, which often goes unheard and under-acknowledged. This longitudinal innovation aimed to create meaningful partnerships for both parties, since community members at Houselink previously reported feeling isolated. This pilot innovation was inexpensive and time-effective, and has the potential to be scaled to be implemented in the undergraduate medical curriculum at the University of Toronto.

OE 6-6 Transforming our relationship with the social determinants of health: a scoping review of social justice interventions in Canadian medical schools

Nisha Kansal McMaster University, **Anvita Kulkarni** Queen's University, **Janice Lee** University of Toronto, **Brittany Graham** McMaster University, **Michael Kruse** McMaster University, **Megan Chu** McMaster University, **Sureka Pavalagantharajah** McMaster University, **Jason Profetto** McMaster University, **Albina Veltman** McMaster University

Background/Purpose: Physicians are in a powerful position to improve the health status of oppressed peoples by working to mitigate disparities rooted in social and structural inequities. However, it is uncertain whether medical schools are adequately equipping future physicians with the skills needed to care for diverse people and bodies, beyond the theoretical considerations of the social determinants of health (SDoH). The current scoping review aimed to describe how Canadian medical schools teach social justice, comparing pedagogical strategies.

Methods: An electronic search was performed using OVID to identify published studies of social justice-based interventions that authors implemented and evaluated within Canadian medical school curricula.

Results: Six studies met inclusion criteria - two focused on experiential learning, two described didactic methods, and two interventions were mixed. Common outcomes identified by the studies included

increased content knowledge, greater understanding of SDoH, acknowledgement of power and privilege imbalances, identification of physicians' roles as advocates, emphasis on the importance of interdisciplinary care, and increased capacity for self-reflection and personal growth. Experiential interventions were associated with greater personal transformation, but tended to have limited accessibility.

Conclusion: Despite the widespread recognition of physicians' roles as health advocates, there is a lack of consensus about the most effective strategy for teaching social justice in medical education in Canada. While additional research focusing on the relative merits of didactic versus experiential learning is needed, these preliminary results suggest that experiential learning emphasizing self-reflection and personal growth may be the optimal approach towards transformative learning.

OE 4-1 Canadian Program Directors' Perceptions of Unmatched Canadian Medical Graduates

K. Taneille Johnson University of British Columbia, **Alex Dotto** University of British Columbia, **Aalok Kumar** University of British Columbia, **Carol-Ann Courneya** University of British Columbia

Background: The substantial number of Canadian medical graduates (CMGs) failing to secure post-graduate residency positions through the Canadian Residency Matching System (CaRMS) is a well-known problem. No study to date has examined residency program director (PD) perspectives on why CMGs fail to match and how PDs perceive previously unmatched applicants.

Methods: We conducted a pilot study at our institution with PDs representing programs participating in the CaRMS R-1 match. Seven of the 28 contacted PDs were interviewed. Interview transcripts were independently coded in NVivo 12.2.0 and themes were reached by consensus.

Results: Most study participants were PDs with at least 2 years' experience representing small to moderate sized programs. Five programs were procedural specialties. PDs identified concerns about fairness to other applicants and risk of student litigation with providing applicants advice but overall felt comfortable meeting with unmatched CMGs. PDs were sympathetic towards unmatched CMGs and felt CMGs may not match due to professionalism or other application "red flags;" too few applications or applications to overly competitive programs; or weak interview skills. PDs felt being unmatched is unlikely to negatively affect future applications to their programs. Most PDs were unaware of opportunities available to unmatched CMGs provided by our institution. PDs recommended unmatched students consider additional research and clinical experience to strengthen future applications.

Conclusion: Our study provides a first look into how PDs view unmatched CMGs. PDs identified match factors beyond "red flags," such as professionalism. Education for PDs on opportunities available to unmatched CMGs and challenges facing unmatched CMGs may be beneficial.

OE 4-2 Analysis of Factors Affecting Canadian Medical Students' Success in the Residency Match

Kelly Howse Queen's University, **Nicholas Cofie** Queen's University, **Nancy Dalgarno** Queen's University, **Joshua Lakoff** Queen's University

Background/Purpose: Currently career advisors for undergraduate medical students can only provide general advice and support for residency application, as there is limited data to support detailed application strategies. This study utilizes a large registry of longitudinal data from the Canadian Resident Matching Service (CaRMS) and examines factors that influence students' matching outcomes.

Methods: We analyzed matching outcomes based on seven years (2013-2019) of residency application data (n = 13,499) from the CaRMS database using descriptive and binary logistic regression modeling techniques.

Results: Applicants who received higher number of rankings are more likely (OR = 1.185, $p < 0.001$) to match to their first choice discipline in the first iteration of the match regardless of discipline competiveness. Graduation from a medical school in Quebec (OR = 0.481, $p < 0.001$), number of applications submitted (OR = 0.920, $p < 0.001$), and

research activities (OR = 0.985, p < 0.001) had reductive effects on matching outcomes. Publication outputs (OR = 1.001, p > 0.05) did not significantly predict matching outcomes.

Conclusion: The number of rankings an applicant received emerged as the only consistent and robust predictor of achieving successful matching outcomes. This information can guide career advisors in supporting medical students in their CaRMS application strategies, and inform residency programs' application and selection processes.

OE 4-3 Benefits and challenges of residency remediation programs: perspective of former remediated residents

Sara Turcotte McGill, **Rosario (Charo) Rodriguez** McGill, **Fok-Han Leung** University of Toronto, **Milena Forte** University of Toronto, **Kathleen Rice** McGill, **Perle Feldman** McGill

Background/Purpose: Three to twelve percent of medical residents require specific support to successfully complete their residency. There is no literature on the perspective of remediated residents about their experience. The study intends to help fill the gap and to contribute to remediation knowledge in medical residencies

Methods: Qualitative study using interpretative phenomenological analysis of 6 semi-structured interviews of practicing family physicians who underwent successful remediation.

Results: Super themes found: pre-remediation unawareness of deficiencies; pre-existing mental health issues, presence of financial, cultural, gender, age, religious, familial, hierarchical, legal and identity issues at play. Remediation usually useful; could seldom be damaging in the short or long term. Remediation success related to a resident-centered design, with customized tutoring and coaching on consensual specific deficiencies. Supportive attitude of staff was an important feature related to success. Wellness, psychological and peer-support groups could contribute, according to profile. Unanticipated negative impacts found on licensing, early career trajectory, access to academic career and possibly on resident health. Unexpected positive impact of the research interview process for participants. Former residents suggested earlier feedback of trainee's clinical deficiencies and emotional issues, better continuity between remediation and general residency program and creation of neutral review of the remediation decision

Conclusion: Insights of former trainees can be useful in designing and evaluating residencies remediation programs.

OE 4-4 The Socioeconomic Cost of Residency Application in Canada

Assil Abda Université de Montréal, **David-Dan Nguyen** McGill, **Sarah Mecheddal** Université de Montréal, **Marco Mascarella** McGill, **Lily Nguyen** McGill

Background/Purpose: The Canadian residency application process includes exploring specialties of interest through medical electives and applying and interviewing for those specialties. Given the considerable amount of debt incurred by medical students throughout their training, this process comes as an added financial requirement. This study assessed the reported costs of this process and gathered students' perspectives on the process.

Methods: An online survey was distributed to graduating class medical students across Canada in 2018 and 2019. The survey gathered quantitative data including demographic and expense data (elective rotations and interview costs), and qualitative data on students' perspectives.

Results: 245 students from 12 medical schools completed the survey from March 2018 to May 2019. Students spent between 340$ and 25 000$ on their process (median 2818$, average 3957$). Several factors influenced the cost of the process such as the desired specialty and the location of the base university - with francophone-university graduates spending less than their peers. Overall, 63% of students believed the cost of the application process was not reasonable and 61% would favor a centralized interview process. Narrative comments revealed 35% of students view administrative fees as significantly burdensome and 12% viewed the process as unequitable or unescapable.

Conclusion: The cost of application to residency varies tremendously from student to student due to

a variety of factors but most students believed the cost of the process was not reasonable and would favor a centralized interview process. Amongst other areas, administrative fees were highlighted as a potential target to reduce costs for future applicants.

OE 4-5 Exploring the construct of anticipatory stress and finding a job after residency training

Aliya Kassam University of Calgary, **Megan Thomas** University of Calgary, **Kent Hecker** University of Calgary

Background/Purpose: Anticipatory stress (AS) arises from a (perceived) lack of control about future events. Research on AS has mostly examined physiological indicators such as salivary cortisol or blood pressure. The exploration of AS in residents also remains unexamined. Nearly one in five newly graduated physicians cannot find a full-time job in Canada. The objective of this study was to explore the construct of AS related to residents finding a job after completion of their postgraduate training.

Methods: Medical students, residents, and former program directors were recruited via purposive sampling. Semi-structured interviews probed for factors that lead to stress associated with residents finding a job after residency, defining AS and whether participants experience(d) stressors associated with finding employment after residency. Interviews were audio-recorded and transcribed verbatim. Two reviewers independently coded the interview transcripts using thematic analysis.

Results: N=21 interviews were conducted (n=6 medical students, n = 9 resident physicians and n= 6 former program directors). Common themes that arose with respect to AS were: lack of job market information, the learning environment, willingness to relocate, financial and family situation, level of independence, connections with staff physicians, specialty selection and the need for additional training. There was consensus around AS changing with respect to where on the continuum of learning and practice, participants were situated.

Conclusion: Anticipatory stress can be experienced with respect to finding a job after residency. Transparent career development initiatives to help residents find a job after residency along with job market data surveillance and reporting warrant further investigation to ensure learner needs are met.

OE 4-6 Residents' Motivation in Clinical Settings and Exam Performance: Unexpected Findings

Janelle Sloychuk University of Alberta, **Oksana Babenko** University of Alberta, **Olga Szafran** University of Alberta, **Kimberley Duerksen** University of Alberta

Background/Purpose: In 2009, a family medicine (FM) residency program at a large Canadian university transitioned to competency-based medical education (CBME). The objective of this study was to investigate the relationship between motivation, specifically achievement goals, of FM residents trained in CBME and their performance on the in-training examination (ITE).

Methods: This was a longitudinal, cohort study. Residents' achievement goals (performance-approach, performance-avoidance, and mastery-approach goals) were assessed at the midpoint of the two-year residency training. The ITE, a low-stakes formative assessment, was used to measure residents' knowledge in family medicine in Years 1 and 2 of residency training. Descriptive and regression analyses were performed. A total of 45 (52%) residents had complete data at three points of data collection.

Results: In clinical settings, residents predominantly endorsed mastery-approach goals, which is the most adaptive form of motivation linked to deeper learning. However, regression analysis revealed a significant negative effect of these goals on residents' performance on the ITE in Year 2 (beta = -0.29; $p < 0.01$), after controlling for their Year 1 ITE performance. Performance goals (less adaptive forms of motivation) had no significant effects on residents' performance on the ITE.

Conclusion: Although FM residents trained in CBME appeared to focus on mastery (as opposed to demonstration) of competencies in clinical settings, these goals, surprisingly, were not linked to improved performance on the in-training examination.

Implications of this finding for practice in medical education will be shared with the audience.

OE 5-1 A Rural University-High School Healthcare Career Community Engagement Initiative: The Healthcare Travelling Roadshow.

Sean Maurice University of Northern British Columbia, **Kristjan Mytting** University of Northern British Columbia, **Quinn Gentles** University of British Columbia, **Robin Roots** University of British Columbia, **Alina Constantin** University of Northern British Columbia, **Sonya Kruger** University of Northern British Columbia, **Warren Brock** University of British Columbia, **Olusegun Oyedele** University of British Columbia, **John Soles** District of Clearwater, **Shelley Sim** District of Clearwater, **David Snadden** University of British Columbia

Background/Purpose: Youth from rural communities face significant challenges in the pursuit of healthcare training. Healthcare trainees with a rural background are more likely than those without to practice rurally as healthcare professionals.

Summary of the Innovation: The Healthcare Travelling Roadshow (HCTRS) is an initiative that provides rural youth with exposure to healthcare careers, while providing healthcare students with exposure to rural opportunities, and an interprofessional education experience. To our knowledge, this is the first description of an initiative for rural university-high school healthcare career outreach that involves near-peer teaching, highly interactive sessions, and an interprofessional focus. Ten HCTRSs took place throughout northern, rural and remote British Columbia between 2010 and 2017.

Conclusion: Questionnaires were delivered to youth, healthcare students and community members. Quantitative elements were graded on a 5-point Likert scale. Qualitative elements were analyzed thematically. Participants indicated that the program was very successful (4.71, 95% CI 4.63-4.79), would likely encourage healthcare students to consider rural practice (4.12, 95% CI 3.98-4.26), and that it inspired local youth to consider careers in healthcare much or very much (4.45, 95% CI 4.35-4.55). Qualitative analysis led to description of four themes: 1) Sincerity and interactivity sparking enthusiasm; 2) Learning through rural exposure and community engagement; 3) Healthcare student personal growth; and 4) Interprofessional collaboration and development. Constructive comments emphasized that meeting the needs of all stakeholders requires a degree of compromise. Success of the program requires meaningful engagement with multiple academic and community stakeholders.

OE 5-2 Understanding gender-based needs in rural physician mentoring programs

Stephanie Gariscsak University of British Columbia, **Jenna Lightbody** University of British Columbia, **Bob Bluman** University of British Columbia, **Brenna Lynn** University of British Columbia

Background/Purpose: Existing literature highlights attributes of successful physician mentorship programs. However, limited research explores women's experiences as a rural physician, and gender-related pressures. This study aims to investigate the role of a formal mentoring program in supporting female rural physicians in their development of successful mentoring relationships.

Summary of the Innovation: To date, 110 physicians practicing in rural British Columbia have been enrolled in a formal eight to ten month mentoring program developed by UBC CPD. Mentors and mentees participated in post-program activities in which they reflected on their experiences with the program and its impact on relationship-building, personal and professional satisfaction, as well as integration in rural BC. Surveys have been analyzed using thematic analysis and phenomenology. 53 mentees completed the survey. Three themes emerged from surveys amongst female mentees: demands of having a young family, maintaining work-life balance, and gendered mentor preferences. Female mentees were twice as likely to specify preference for a female mentor in comparison to male mentees preferring a male mentor. Female mentees were 3.5 times more likely than men to request support from a mentor with a married family status, and female mentees were 5 times more likely than men to request a mentor who could specifically assist them in maintaining work-life balance.

Conclusion: Rural physician mentorship programs that acknowledge gender-based challenges can improve and create solidarity amongst rural female physicians. Our findings will inform the design of future mentorship programs and initiatives responding to the unique needs of rural physicians.

OE 5-3 Driving Socially Accountable Medical Education through a Research Program for Rural Faculty

Wendy Graham Memorial University of Newfoundland, **Thomas Heeley** Memorial University of Newfoundland, **Shabnam Asghari** Memorial University of Newfoundland, **Cheri Bethune** Memorial – University of Newfoundland

Background/Purpose: Rural physicians have intimate patient-provider relationships which afford them a window into community context and patient needs. This awareness positions them with a valuable perspective to conduct socially accountable research that addresses contextually specific health needs within their communities. Memorial University has introduced the 6for6 program to empower its rural medical faculty to overcome the barriers typical to rural scholarship (e.g., lack of skills, geographical and professional isolation) and enable them to research solutions to community-specific health needs.

Summary of the Innovation: 6for6 is a research-focused longitudinal faculty development program. We deliver a blended synchronous and asynchronous curriculum to six rural faculty over six sessions in a year, covering research and writing fundamentals. Transcending the curriculum is a socially accountable commitment on behalf of the program to empower participants to construct a research project around a healthcare issue from their community. We achieve this empowerment through regular peer-to-peer review, individualized mentorship, and dedicated support from a shared research assistant. The ultimate goal is for participants to graduate with the knowledge and skills required to conduct a well-defined, socially accountable research project aimed at uncovering solutions to a local health issue.

Conclusion: 6for6 has empowered thirty rural physicians across its 5-years of delivery, working on projects ranging from Indigenous maternal health to physician resilience. Resulting participant research has influenced strategic plans in regional health, lowered emergency department wait times, and educated many small-town community citizens about well-water contamination. When empowered, rural medical faculty can conduct and inspire impactful, socially accountable research.

OE 5-4 Improving Resident Education and Patient Care through National Physician Licensure

Brandon Tang University of British Columbia, **Bernard Ho** University of Toronto

Background/Purpose: The lack of a unified national physician licensure in Canada restricts physician mobility and negatively impacts patient care. Currently, working in a different province/territory requires a separate medical license for each of the thirteen medical regulatory authorities, despite similarities in licensure processes and required documentation. These barriers limit the exposure of early career physicians including residents, while restricting access to physician care, especially in rural communities.

Summary of the Innovation: Resident Doctors of Canada (RDoC) has been advocating for a unified licensure process through several avenues. Firstly, our 2018 national resident survey demonstrated that while only 18.5% of residents plan to locum outside the province/territory of their primary practice, 52% would pursue locum experiences if no additional license applications were required. Secondly, RDoC published a Collaborative Statement on Canadian Portable Locum Licensure in 2017, with the support of national organizations. Thirdly, RDoC has advocated for improved physician mobility, and are supportive of the Fast Track and License Portability Agreements in development by the Federation of Medical Regulatory Authorities of Canada. However, these preliminary agreements do not include residents, as they require a license for independent practice.

Conclusion: Our national survey identified residents' desires to practice in jurisdictions outside their primary province/territory. National processes to facilitate a unified or fast-track licensure would enrich resident education by facilitating exposure to diverse practice settings and would help address healthcare

needs in underserved communities by encouraging resident mobility.

OE 5-5 "You can't address the other stories until you address the big ones": Insights from rural practitioner palliative care learning

Frances Kilbertus Northern Ontario School of Medicine, **King Keely** Northern Ontario School of Medicine, **Susan Robinson** Northern Ontario School of Medicine, **Sayra Cristancho** Western University, **Sarah Burm** Dalhousie University

Background/Purpose: Palliative care practice is complex and challenging. This is amplified in rural settings with limited specialized services, high burden of care, broad scopes of practice, and relationships entangled across personal-professional boundaries. The purpose of this study was to gain a deeper understanding of palliative care learning for providers in low resourced rural environments in order to improve education and support for future rural healthcare providers.

Methods: Narrative inquiry informed approaches to data collection and analysis. Data was collected through semi-structured interviews and rich pictures, a visual research method that uses participant-generated drawings to both evoke and record insights into complex situations. Participants included physicians (n= 9) and nurses (n= 6) practicing in rural northern Ontario.

Results: Participants drew and recounted vivid and emotional stories. They described the process of rich pictures as enlightening. Positive and negative emotions were elicited in the narratives. Participants described tensions between feeling powerful and acting with autonomy and feeling compromised or constrained in actions and feelings. Narratives and drawings tended to capture the impossibility of perfection and the physical, emotional, and moral complexity that one encounters when providing palliative care. Most participants noted that their formal education did not prepare them for the reality of rural palliative care practice.

Conclusion: Findings revealed memorable palliative care learning as fleeting opportunities that must be seized and reflected upon by healthcare providers and not something that can necessarily be planned. Conceptualizing learning as a process of becoming can be a useful framework to prepare and support current and future rural practitioners.

OE 5-6 Mixed Messages: A Visual and Textual Analysis of a Rural Medicine Website

Rebecca Malhi University of Calgary, **Douglas Myhre** University of Calgary

Background/Purpose: The mission of Distributed Learning and Rural Initiatives (DLRI), University of Calgary, is to facilitate relationships between "medical educators, healthcare professionals in training, and individuals and families living in rural communities." The current study evaluates the DLRI website to determine whether it accurately reflects our mission and commitment to rural medicine.

Methods: We examined all public-facing webpages that comprise the DLRI website. Text were analyzed for both purpose and content. We also conducted a visual analysis of images on the webpages using techniques derived from art criticism. Specific attention was paid to the subject and context of the images as well as any notable presences or absences.

Results: Thirty-two webpages were analyzed. DLRI's mission was only described explicitly on one webpage. Text on many webpages were procedural with substantial use of jargon. Student pages, in particular, were very directive and often used negative phrases. The visual analysis found that of 23 individual images, 14 of them were rural landscapes with no people. The majority of images containing people showed students, often depicted socializing. Little ethnic diversity was seen in images.

Conclusion: Textual analysis of the DLRI webpages indicates a mixture of welcoming and bureaucratic discourse. The visual analysis of the images documented a focus on isolated, de-populated rural landscapes. In addition, there was a notable absence of images of patients, community members, or individuals from diverse backgrounds. The analysis informed recommendations to align the text and images with the DLRI mission and the social accountability mandate of the University of Calgary.

OE 7-1 Evaluating an Integrated Ethics Curriculum: Evidence of Process and Outcome Changes

Kulamakan Kulasegaram University of Toronto, **Carrie Bernard** University of Toronto, **Betty Onyura** University of Toronto, **Eva Knifed** University of Toronto, **Erika Abner** University of Toronto, **Nadia Incardona** University of Toronto, **Irene Ying** University of Toronto, **Frank Wagner** University of Toronto, **Risa Freeman** University of Toronto

Background/Purpose: Preparation for ethical decision making in practice can be challenging for postgraduate (PG) trainees. Strategies from learning science on integration of ethical and clinical reasoning to promote transfer of learning may enhance ethics education. We report the evaluation of a curriculum based on learning science principles for teaching ethics to family medicine (FM) trainees at the University of Toronto.

Methods: A longitudinal curriculum was deployed as a pilot at 4 training sites over two years to FM PG trainees. A rich description of the curriculum is presented as an innovation report. A comparative evaluation focused on a) evidence of changes in ethical reasoning and b) performance on simulated scenarios requiring ethical decision making. Evidence for a) was gathered through interviews of trainees about ethical challenges in clinics in the curriculum sites and control sites; b) through a 5-station OSCE blueprinted on exit level ethics competency and scored by blinded raters.

Results: A total of 12 interviews with curriculum and control residents were completed will be reported. Twelve curriculum and 9 control trainees in final year of training participated in the OSCE. A large effect was seen in favour of curriculum trainees (Cohen's d =1.01, $F(1,19)=5.3, p<0.04$) on total OSCE performance.

Conclusion: Evaluation of trainees' perceptions, experience of ethical reasoning in clinic, and simulated assessments show evidence of the curriculum's efficacy. We discuss rationales for success, limitations, and approaches to scaling up the curriculum as well as evaluation.

OE 7-2 Residents as research subjects: balancing resident education with contribution to advancing educational innovations.

Louis-Philippe Thibault-Lemyre Université de Montréal, **Ahmed Moussa** Université de Montréal, **Thuy Mai Luu** Université de Montréal, **Celine Huot** Université de Montréal, **Genevieve Cardinal** Université de Montréal, **Benoit Carriere** Université de Montréal

Background/Purpose: Research in education is essential to advance knowledge as well as to improve learning. Medical residents can be solicited as subjects for studies, however no literature defines how to protect their rights as participants and to limit the impact of their participation on their clinical training.

Methods: Through a modified Delphi study, a group of 8 experts in Pediatrics at Université de Montréal, (clinical educators, education researchers, residents and IRB president) developed recommendations to guide how the inclusion of residents as subjects in medical education research can take place with the dual goal of protecting residents' rights while also promoting contribution of researchers' work to medical education literature.

Results: Five issues and recommendations were described. 1) Freedom of participation: participation or non-participation, or withdrawal from a study should not interfere with teacher-learner relationship (recommendations on procedures for recruitment and content of consent form) ; 2) Over-solicitation of residents (recommendations on the process of limiting the number of ongoing studies); 3) Management of time dedicated to participation to research (recommendations on schedule and proportion of time for study participation); 4) Educational security: data collected during a study should not influence clinical assessment of the resident (recommendations on the role of the researcher as a clinical supervisor); and 5) Emotional security of the learner (recommendation on the requirement for debriefing during simulation-based studies).

Conclusion: This guide is an essential tool to insure respect of resident rights and completion of a robust training program but also to support high quality research in education that will enrich medical education literature.

OE 7-3 Using the Francophone Literature of Western Canada to Weave Humanism into the Fabric of Medical Education

Jan Marta University of Toronto

Background/Purpose: Though by now well accepted in medical humanities, the use of literature for health care teaching has tended to remain narrowly circumscribed to the Anglo-American canon, limiting the usefulness of the literary texts for other linguistic and cultural groups of practitioners and patients. This innovation expands the canon to include the use of Western Canadian Francophone Literature in a model interweaving humanism into clinical teaching (bedside, "couch-side", and seminar) in medicine and psychiatry, to resonate with non-Anglophones, while including universals that speak to all.

Summary of Innovation: The model consists of suggested texts, guidelines to key concepts (representations of illness experiences, health care, and the impacts on family and community, narrative strategies), and recommendations for incorporating them into clinical training settings. For example, the juxtaposition, in a clinical seminar, of two short story collections, Un jardin au bout du monde (Garden in the Wind) (1975) by Manitoban Gabrielle Roy, and C'était écrit (It was Written) (2009) by Mauritian immigrant to Alberta, Eileen Lohka, reveals the health experiences of different generations of Westerners of diverse backgrounds, showing the impact of lives in historical context on the expression of illness, individually and impacting the local and broader communities.

Conclusion: This innovation builds on successful models from previous research and teaching practices (undergraduate, post-graduate, continuing medical education), both personal by the author, and by leading scholar-clinicians in the field of narrative medicine, like Rita Charon. Such interventions have been shown to have positive effects on a physician's professional activities, benefitting both caregiver and patient.

OE 7-4 A scoping review on the uses of the arts and humanities in medical education

Tracy Moniz Mount Saint Vincent University, **Maryam Golafshani** University of Toronto, **Lorelei Lingard** Western University, **Paul Haidet** Penn State College of Medicine, **Nancy E. Adams** Penn State College of Medicine, **Javeed Sukhera** Western University, **Carolyn Gaspar** Dalhousie University, **Rebecca Volpe** Penn State College of Medicine, **Claire De Boer** Penn State College of Medicine, **Tavis Apramian** Western University, **Shannon Arntfield** Western University

Background/Purpose: Learning experiences that integrate arts and humanities (A&H) within curricula may lead to important learning outcomes, including skills-based outcomes such as honing observation and interpretation skills, relational outcomes such as empathy, communication, and teamwork, and transformational outcomes related to professional identity and advocacy. The range of A&H that can inform medical learning and, ultimately, patient care is vast. We conducted a scoping review to identify how and why the A&H are being used to educate physicians and interprofessional learners across the developmental spectrum.

Methods: A search strategy involving seven databases located 21,684 citations. Five reviewers independently screened titles and abstracts. Full-text screening followed (n=4,348). Of these, 653 met inclusion criteria. We performed demographic, conceptual and discursive analyses.

Results: The literature is diverse and dominated by (a) conceptual works that call for the use of A&H in medical education generally or that critically engage with its ideas and methods, and (b) qualitative studies that evaluate A&H-based pedagogical strategies, notably the use of literature and reflective writing. Conceptual analysis demonstrated that A&H function as a means for learners to master skills and engage in perspective-taking and relationship building. In the discursive analysis, the relationship between the A&H and medicine is often constructed as a way to supplement medicine with new perspectives and knowledge. Absent are the voices of medical students and artist- and community-based educators, as well

as robust engagement with A&H in pre-medical and continuing medical education.

Conclusion: These results can inform national and institutional discussions regarding the use of A&H in medical education.

OE 7-5 Educating for patient centered end of life care: Understanding the temporal, occupational, and relational dimensions that shape dying patients' experiences

Laura Yvonne Bulk University of British Columbia, **Laura Nimmon** University of British Columbia, **Gil Kimel** University of British Columbia, **Nigel King** University of Huddersfield

Background/Purpose: Temporality, occupation, and relationships are identified as discrete factors impacting quality of life for patients at the end of life (EoL) and their loved-ones. However, educators and practitioners require insight regarding whether their interaction shapes quality of life for patients at end of life. This study is framed by an understanding that meaning is negotiated between people through social interaction and occupational engagement in temporal contexts.

Methods: We conducted in-depth interviews with 9 patients and 10 loved-ones followed by an iterative analysis process involving open, axial, and selective coding.

Results: The data highlight ways that temporality impacts relational and occupational experiences. We explore this within three main processes: 1) experiences of temporal rupture, 2) diminished significance of clock time, and 3) shifts in occupational priorities focused on being, becoming and belonging.

Conclusion: Our analysis of participant narratives provides novel insights into the complex interactions between temporal, occupational, and relational aspects that patients and their loved-ones experience in hospice. Health professionals can enable better EoL experiences by acting upon their awareness of these complexities. It is critical that educational practices prepare health professionals to understand how patients and loved-ones experience quality of life - including altered temporality and shifting priorities - if we are to foster patient-centered EoL care.

OE 7-6 Informing a medical assistance in dying curriculum in specialty residency training programs

Susan MacDonald Queen's University, **Nancy Dalgarno** Queen's University, **Mary Martin** Queen's University, **Sarah LeBlanc** Queen's University, **Ross Walker** Queen's University, **David Taylor** Queen's University, **Karen Smith** Queen's University, **Richard Van Wylick** Queen's University, **Rylan Egan** Queen's University, **Karen Schultz** Queen's University

Background/Purpose: Medical assistance in dying (MAID) became legal across Canada when Bill C-14 was passed in 2016. Currently, little is known about practitioner interest in MAID education, the most effective strategies for providing MAID education, and the importance of integrating MAID into existing curricula. This study examines and compares residents' and faculty preceptors' perspectives about MAID.

Methods: Two anonymous surveys were distributed to residents (n=549) and preceptors (n=797) in 29 different specialty programs. Survey data was analyzed using descriptive and inferential statistics.

Results: Response rates were 23.1% for residents and 13.0% for preceptors. Preceptors were more comfortable and competent discussing MAID with a patient compared to residents ($p<0.00$ and $p=0.007$, $\alpha=0.05$), though residents were more likely to want to participate in a MAID assessment ($p<0.000$). The majority of both residents (73.5% ± 8.0%) and preceptors (79.0% ± 8.0%) believe it is important to include MAID education in their specialty's curriculum. The most important topics included the discussion of MAID with patients (90.4%[±5.4%] and 79.6%[±8.0%] of residents and preceptors, respectively) and regulations and legal aspects of MAID (87.0%[±6.2%] and 84.7%[±7.0%] of residents and preceptors, respectively).

Conclusion: Significantly more residents want to be part of the assessment and clinical teams providing MAiD compared to preceptors, however both groups agree that it is important to include MAID education in the curriculum of their specialty program. Next steps will focus on creating MAID learning outcomes and developing MAiD curriculum appropriate to the

educational needs of each specialty residency program.

OF 1-1 Contagion: An innovative video-game based approach to antimicrobial stewardship and education

Samveg Shah McMaster University, **Maroof Khalid** McMaster University, **Sudarshan Bala** McMaster University, **Maynard Luterman** McMaster University, **Yasmeen Vincent** McMaster University

Background/Purpose: Medical students are traditionally underexposed to antimicrobial stewardship. Previous studies indicated that 90% of senior clerks wanted more education on appropriate antibiotic prescriptions and only one-third felt prepared for clinical practice [1]. Currently, educational material focuses on passive didactic learning instead of active learning, which was shown to have a greater influence on prescribing behaviour [2]. Educational video games, a form of active learning, have been shown to improve clinical skills in medical training. [3]

Summary of Innovation: We developed a collaborative role-playing video game, Contagion, with the goal of teaching antimicrobial stewardship and treatment. Players act as rural physicians, treating infections in various communities with limited antibiotic access, growing resistances, and risk of outbreaks. Through the course of the game, players learn to classify bacteria, identify their clinical presentations, and prescribe according to the Choosing Wisely Canada guidelines. Phase I of Contagion was qualitatively tested on medical students and physicians at McMaster University for teaching effectiveness, applicability to real-life scenarios, and enjoyability. 100% of the medical students found the game to be an enjoyable and effective learning aid to increase their knowledge base. Physicians agreed that the game was reflective of simple clinical scenarios.

Conclusion: Phase I of Contagion was well-received by physicians and medical students as a tool to address educational gaps in antimicrobial stewardship and treatment. Further iterations of the game will focus on complex clinical decision making and acute care scenarios. The next phase is to test the game on a larger cohort by involving multiple schools across Canada. Resources [1] Lilian M. Abbo, Sara E. Cosgrove, Paul S. Pottinger, Margaret Pereyra, Ronda Sinkowitz-Cochran, Arjun Srinivasan, David J. Webb, Thomas M. Hooton. Medical Students' Perceptions and Knowledge About Antimicrobial Stewardship: How Are We Educating Our Future Prescribers?. Clinical Infectious Diseases. 2013;57(5):631-638 [2] Ohl CA, Luther VP. Health care provider education as a tool to enhance antibiotic stewardship practices. Infect Dis Clin North Am. 2014;28(2):177-193. [3] Evans KH, Daines W, Tsui J, Strehlow M, Maggio P, Shieh L. Septris: a novel, mobile, online, simulation game that improves sepsis recognition and management. Acad Med. 2015;90(2):180-184.

OF 1-2 CARTOONING AND DRUG USE: Creating Art for Stigmatized Topics

Armin Mortazavi University of British Columbia, **Kate Campbell** University of British Columbia, **Andrea Keesey** University of British Columbia, **Brenna Lynn** University of British Columbia

Background/Purpose: Imagery connects with people on an emotional level. This is especially true for a topic as stigmatized as substance use. If the style or content of an image clashes with the tone of the educational work, it can polarize the learner, and cause them to lose trust in the content. To ensure the use of comics did not distract from learning, we developed a process for using original comic art to compliment addiction care and substance use education.

Summary of Innovation: Designed in partnership with BCCSU, the Addiction Care and Treatment Online Course provides self-paced education for health care providers to diagnose and treat patients with substance use disorders. To make content more engaging, we developed a unique visual style for the course. Comics helped describe specifics substances, add realism to case studies, personalize characters, and enhance text throughout the course. Visuals were designed and refined along with text content. Input was gathered from subject matter experts and staff on visual accuracy, interpretation, and tone.

Conclusion: Comics are often associated with humor and fiction but with careful consideration they can communicate complex topics, compliment text-based education, and improve learning outcomes as described by dual processing theory. We discovered

that early implementation of art in content creation was critical. Rather than final touches, the visuals were key in the iterative process. The module launched February 2019. As of September 2019, over 5,500 learners have enrolled. Learner feedback collected through post-course surveys indicate the visuals are enhancing and not distracting from learning.

OF 1-3 Theatre as an innovative educational tool in health professions education

Tal Jarus University of British Columbia, **Yael Mayer** University of British Columbia, **Laura Bulk** University of British Columbia, **Laen Hershier** University of British Columbia, **Christopher Cook** University of British Columbia, **Jennica Nichols** University of British Columbia, **George Belliveau** University of British Columbia, **Michael Lee** University of British Columbia

Background/Purpose: Theatre offers a powerful medium to promote perspective-taking, emotional identification, and assimilation of new information about marginalized groups in an experiential way. Therefore, Research-Based Theatre (RBT) can increase knowledge, deepen understanding, and impact attitudes among students who are studying to become health professionals. This project used RBT as an educational tool to facilitate discussion around disability, and measured its impact on attitude change and knowledge increase regarding the issues faced by students and clinicians with disabilities in health professions.

Method: Alone in the Ring, a 30-minute play based on interviews we conducted with 80 students and clinicians with disabilities, displays their stories and experiences. Students and faculty watched the play and participated in a discussion following the play. Attitude toward and knowledge about the experiences of students and clinicians with disabilities was measured before and after the play. Focus groups with some participants were conducted 2-3 weeks after the performance.

Results: Results indicated a shift in attitudes and increased knowledge of the barriers students and clinicians with disabilities face.

Conclusion: Within this presentation we will describe how RBT can be used as an innovative educational tool in health professions education and practice to facilitate discussion on sensitive and complex topics and provoke new questions around accessibility and diversity in the professions. We will discuss issues related to ethical, educational, and professional dilemmas. This innovative educational approach to promote social change, inclusion, and equity for people with disabilities is meant to catalyze much needed discussions in health education.

OF 1-4 Bringing the Patient Voice to Professionalism in Medical Education

Simon Haney University of Toronto, **Shiphra Ginsburg** University of Toronto, **Ayelet Kuper** University of Toronto, **Ryan Brydges** University of Toronto, **Paula Rowland** University of Toronto

Background/Purpose: Research has acknowledged the value of patients as an essential stakeholder group in education, yet medicine has failed to incorporate patients' perspectives into a discourse they are surely expert in: professionalism. Our purpose was to explore patients' perceptions of professional behaviour in medical learners as a first step to considering patients' potential roles in assessing professionalism.

Methods: Using a constructivist grounded theory approach we interviewed 12 patients (6F, 6M), recruited from one urban hospital. Each participant watched 5 video scenarios that depict common professionally challenging situations faced by medical students. After each video, participants were asked what they thought the student should (or shouldn't) do in the scenario, along with their rationale.

Results: Participants' responses largely echoed those of medical students and faculty. They referenced principles of professionalism, the student's affect or internal factors, and potential implications of actions when discussing what they felt was correct behaviour. Patients conveyed an understanding of the multiple competing factors students must balance (e.g., providing optimal care while maximizing educational opportunities) and expressed empathy regarding some of the pressures students face. Participants also identified principles not previously raised by students or faculty, including the

importance of respecting privacy and of not showing disagreement among professionals in front of a patient.

Conclusion: Knowing what patients perceive as important will allow educational and assessment efforts to be refined to reflect their values. Our work can inform emerging initiatives to include patients in the assessment of medical learners.

OF 1-5 Three applications of learning sciences in medical education

Tracey Hillier University of Alberta, **Doris Lunardon** University of Alberta, **Vijay Daniels** University of Alberta, **Anna Oswald** University of Alberta, **Cody Surgin** University of Alberta, **Hollis Lai** University of Alberta

Background/Purpose: Learning science is an interdisciplinary approach that marries computer science, educational psychology and other fields to enhance the design of and solutions for teaching and learning. Specifically, the learning analytics process model provides a guide to design and implement learning dashboards aimed to improve learning. The purpose of our study is to demonstrate how we applied this model in three applications to improve the learning environments in medical education.

Summary of the Innovation: We developed our own data reporting structure to provide oversight in clinical experiences and applied it in three different contexts. The first application was originally developed to track the completion of observed history taking and physical exam in the medical school. Through minor modification, the same dashboard was then used to track all clinical codes and experiences for clinical dental education. The third instance was modified to track the collection of entrustable professional activities across all residency programs. Through these applications of learning sciences, in data and cognitive domains, it improved the feedback and experiences students receive in clinical settings.

Conclusion: The monitoring of history and physical exams has improved the consistency of supervision (>80%) in medical student clinical training for the past five years. Using the same dashboard for dentistry has led to a 30% increase year-to year in the quantity and categories of clinical experience. The use of this dashboard supported a soft launch of our Internal Medicine residency program two years before the national launch facilitating a smooth transition. This study demonstrates how one solution from learning sciences can be applied to improve learning experiences across three domains.

OF 1-6 Discovery Healthcare: Encouraging Highschool Students in South-Western Ontario to Pursue Careers in Healthcare

Arita Alija Western University, **Julia Petta** Western University, **Richard Yu** Western University, **Vivian Tia** Western University

Background/Purpose: South-Western Ontario (SWO) continues to face challenges recruiting healthcare professionals, particularly to rural sites. In order to combat this, healthcare careers can be promoted among highschool students in SWO, as they are still in the midst of deciding on their future career, with the intention of them returning to their community. These objectives were executed through Discovery Healthcare (DHC); a summer camp aimed to expose highschool students in SWO to a broad spectrum of healthcare careers to promote interest in these fields and retention in their communities.

Summary of the Innovation: Five-day long camps were held in Leamington, Sarnia, Chatham-Kent and Wingham throughout July 2019 facilitated by four medical students. There was a total of 77 students with the majority going into grades 9 and 10. Students heard from local guest speakers in fields such as medicine, nursing, and allied health. Some spent an afternoon shadowing healthcare professionals in community hospitals, and did an ambulance tour with a paramedic. They had the chance to learn clinical skills such as vitals, casting, and suturing. Students also worked through case diagnoses and learned about social determinants of health.

Conclusion: Surveys were distributed to students at the beginning and end of each camp in order to gauge their understanding of pathways to different healthcare careers, and their interest in pursuing them. After the camp, they had a greater

understanding, but an increase in interest depended on local availability of speakers. They were also interested in additional careers that they had not previously considered. DHC aspires to further its impact by inspiring more highschool students in SWO to pursue healthcare careers. We hope that this initiative will launch similar programs in other underserved areas.

OF 2-1 Evaluation of the Indigenous Health Curriculum in Canadian Undergraduate Medical Education

Muskaan Sachdeva University of Toronto, **Lisa Richardson** University of Toronto, **Cynthia Whitehead** University of Toronto, **Robert Paul** University of Toronto

Background/Purpose: Health disparities between Indigenous and non-Indigenous Canadians may be perpetuated by inadequate training of medical professionals on Indigenous topics including the colonial history of Canada with longstanding systematic mistreatment of Indigenous Peoples. The purpose of this review is to analyze the current state of Indigenous Health (IH) curricula in Canadian medical schools.

Methods: Literature search was conducted using OVID database, news media, medical school websites, and IH medical education resources. Publications were screened for relevance and reliability. Data was analyzed using thematic analysis.

Results: Out of 125 documents identified through the search, 28 were selected for full text review. Publications were classified into four themes: Current State of Canadian Medical Schools, Perception of Medical Students, Recommendations for Medical Schools, and Indigenous Voices. In response to the AFMC-IPAC recommendations from 2008, medical schools have made IH additions to curriculums by increasing participation of medical students in Indigenous health-related activities, enrolment of Indigenous medical students, and cultural diversity training. However, a lack of standardization was found with adhering to recommendations in medical schools across Canada. Medical students still report inadequate preparation for provision of healthcare for Indigenous persons and communities. Additionally, Indigenous communities continue to report discrimination and a lack of opportunities that provide meaningful input into curriculum.

Conclusion: Although Canadian medical schools have made changes to IH education, recommendations have yet to be effectively incorporated into medical school curricula, especially suggestions from Indigenous communities. Based on the perceptions of students and Indigenous communities, further curricular reform is required to improve healthcare for Indigenous Peoples.

OF 2-2 Adaptation and Adoption: How Trainees Make Sense of Clinical Practice Variation

Katherine Ng University of British Columbia, **Kevin Eva** University of British Columbia, **Luke Chen** University of British Columbia

Background/Purpose: Physician role modelling is an important means through which knowledge and skills transfer from clinician to trainee, helping to foster clinical expertise. However, day to day clinical practice is inherently complex and is characterized by wide variability. Practice variability may arise in situations of clinical uncertainty where there is a lack of clinical practice guidelines, or where more than one clinical approach is acceptable. Due to this considerable variability, learners face substantial challenges drawing guidance from more senior clinicians. To develop their own expertise, trainees are faced with the challenge of making sense of the variable and sometimes contradictory practice patterns of their clinical preceptors. The purpose of this study is to explore how learners make sense of the variation they see in clinical practice and how this variability influences their own practice patterns.

Methods: This study drew from constructivist grounded theory methodology. Data was collected using individual semi-structured interviews, conducted at two Canadian academic tertiary care hospitals. Participants included senior trainees in medicine-based residency training programs and recent graduate physicians.

Results: A model of learning emerged in which the concept of a personal style of medicine was central.

Both trainees and recent graduate physicians described their own developing style of medicine playing a pivotal role both in how practice variability was interpreted, and which practice patterns were adopted. Clinical mentors, institutional practices, medical hierarchy, and peer practice also influenced how learners interpreted variable practice patterns and how they made decisions selecting their own practice patterns. Analysis is ongoing at the time of submission.

Conclusion: Medical learners are confronted with wide variability in day-to-day practice. Clinical mentors, institutional culture, peer practice, and a sense of personal identify impact how learners perceive variation, and influence their decisions around adopting or rejecting particular practices. Improving our understanding of how learners decipher practice variation will add to our knowledge of how expertise is developed and will better enable us to help learners to move along the continuum from novice to expert.

OF 2-3 Une nouvelle fiche d'évaluation au service de l'évaluation en APC : l'expérience de l'Université de Montréal

Diane Robert Université de Montréal, **Marie-Pierre Codsi** Université de Montréal, **Isabelle Gosselin** Université de Montréal, **Samuel Gatien** Université de Montréal

Background/Purpose: Depuis l'implantation de l'approche par compétences en formation médicale, divers établissements dans le monde implantent des outils pour évaluer le progrès et les niveaux de maîtrise des compétences. Ces outils sont souvent mal adaptés au contexte particulier de la médecine de famille. Notre présentation vise à décrire le processus d'élaboration collectif d'une Fiche d'appréciation du stage clinique (FASC) en médecine de famille. Cette fiche juxtapose les Activités professionnelles confiables (APC) et les compétences requises pour les réaliser.

Summary of the Innovation: Un groupe de travail mandaté par la Direction du programme, avec les 18 Directeurs locaux de programme (DLP) a validé une liste d'APC par une enquête Delphi. Dans un deuxième temps, lors d'une journée d'atelier, 47 participants (enseignants et DLP) ont décrit les niveaux de maitrise attendu à observer chez les résidents pour chaque APC. Ces travaux ont mené à la création d'une nouvelle FASC et d'un Guide de notation qui permettent d'évaluer 11 APC et 7 compétences. L'appréciation des APC se base sur la confiance que suscite chez les des enseignants le travail des résidents. Cinq « niveaux de confiance dans la délégation de responsabilité » (NiCDeR) ont été définis pour les principales compétences sollicitées par chaque APC.

Conclusion: Nous pensons que ce nouvel outil d'évaluation peut servir à tous les programme de médecine de famille visant une approche par compétence. L'utilisation d'un processus de co-construction a permis d'augmenter la validité et la pertinence de cette FASC et de favoriser son appropriation par les cliniciens-enseignants sur le terrain.

OF 2-4 An Innovative e-Prescribing Learning Platform for Medical Students and Residents

Marie Rocchi University of Toronto, **Janet Cooper** Association of Faculties of Pharmacy of Canada

Background/Purpose: Prescribing is an essential activity for physicians, requiring attention to detail and patient factors. In Canada, most prescriptions are printed or faxed to a pharmacy. In 2020 there will be approximately 811 million prescriptions dispensed in Canadian community pharmacies. e-Prescribing is the secure transmission of a prescription from an electronic medical record (EMR) to a pharmacy's computer system; key to this process is the use of data fields and standardized terminology. Canada Health Infoway is implementing PrescribeIT™ across Canada, a digital solution that will require training of medical students, residents and physicians. Research has shown that, while e-prescribing increases patient safety by improving legibility and reducing fraud/misuse of controlled substances, other types of errors may occur, requiring new types of vigilance and systems understanding.

Summary of the Innovation: The Association of Faculties of Pharmacy of Canada (AFPC) has created an online, open access, competency-based, educational resource called e-Learning for Healthcare Professionals. An e-prescribing course was developed in collaboration with the Association of Faculties of

Medicine of Canada and the Canadian Association of Schools of Nursing, funded by Infoway. Key concepts about e-prescribing are presented; learning activities include interactive virtual cases. The course can be used in both uniprofessional and interprofessional settings. A Fundamentals version for students requires about 90 minutes; a Comprehensive version is available for instructors.

Conclusion: A tour of the course, with evaluation data from hundreds of pharmacy student users, lessons learned from faculty, and implementation strategies will be shared. The use of this course in this emerging and critical area by medical educators is encouraged.

OF 2-5 Reading of the Week - A Novel (and National) Education Project for Psychiatry Residents

David Gratzer University of Toronto, **Faisal Islam** McMaster University

Background/Purpose: William Osler started the first journal club more than a century ago. Though technology has advanced, in our day as in Osler's, CME is challenging to deliver. This presentation discusses the Reading of the Week (ROTW), an innovative education project, aimed at Canadian residents of psychiatry, and the contribution of this project to residents' CPD.

Summary of the Innovation: ROTW summarizes the latest literature and is emailed out weekly through formal partnerships with 12 Canadian post-graduate programs (roughly 90% of Canadian psychiatry residents); Readings are also available online. The selections cover everything from public policy to practice, including studies from the British Journal of Psychiatry and Lancet Psychiatry. Readings include commentary, providing a larger context. Like Osler's journal club, there is the opportunity to exchange ideas, with "letters to the editor." In the spring of 2019, we aimed to assess outcomes for ROTW using continuing medical education (CME) evaluation framework (Moore's framework). Results: A total of 332 responded to the online survey (a third of subscribers). 90% reported they "always or usually" read the summary. 97% were satisfied with ROTW; 93% agreed that ROTW had improved their understanding of the current psychiatry research; 60% shared ROTW to someone else at least once. Comments included: "I have used the summaries to make better informed clinical decisions."

Conclusion: This presentation outlines the practical implementation and impact of a unique CME intervention aimed at addressing challenges related to remaining "up-to-date" amidst the vast amount of resources available in print and online. ROTW provides a boundless option for CME for trainees and providers.

OF 2-6 Digital Tattoo - A Workshop to Support Student Understanding of the Impact of Social Media Platforms

Patricia Gerber University of British Columbia, **Alexandra Kuskowski,** University of British Columbia, **Kathleen Scheaffer** University of Toronto, **Lucas Wright** University of British Columbia, **Salma Abumeeiz** University of British Columbia, **Laura Atiyeh** University of British Columbia, **Emily Fornwald** University of British Columbia, **Ursula Ellis** University of British Columbia, **Eseohe Ojo** University of British Columbia

Background/Purpose: Online communication tools and platforms for peer and professional connections are widely adopted by students across health professional programs. Programs and professional standards, guidelines, and codes, emphasize the importance of using social media in a responsible and respectful manner which embodies professionalism. However, there are limited pedagogical tools and strategies to highlight the importance of making informed decisions about aligning digital identities with the expectations for health professionals. This project aimed at addressing that gap.

Summary of the Innovation: Following a literature review and consultations with students and faculty clinicians, we developed authentic case studies with companion questions and resources for use in a "Digital Identity Workshop" for 224 first-year Doctor of Pharmacy students. A facilitator guide was also developed. All materials were made publicly available using a Creative Commons CC-BY license for reuse by other institutions. The Workshop engaged participants in discussions regarding privacy risks, exercising ownership over data distribution, the impact of ethically questionable behaviour on patient care, and the reputation of health professionals. The

case studies, activities, and resources aimed to support students' confidence in aligning their emerging professional identities with their existing digital identity. Pre- and post-workshop assessments were deployed to measure students' ability to navigate this terrain.

Conclusion: Faculty, staff, librarians, and students collaborated to develop, implement, and evaluate a digital identity workshop for pharmacy students. In this presentation we will share our innovation, experiences, and strategies to help support other health programs' efforts to enhance student development of professionalism in online platforms.

OF 3-1 Tweet this! Using Social Media as an Innovative Tool for Increasing Survey Responses

Maryam Wagner McGill, **Jackie Roberge-Dao** McGill, **Aliki Thomas** McGill, **Monica Slanik** McGill, **Bernadette Nedelec** McGill, **Cynthia Perlman** McGill, **Sara Saunders** McGill

Background/Purpose: Health professions education (HPE) programs continuously evaluate their quality to inform educational improvements and address accreditation demands. Having completed their education and had the opportunity to apply acquired competencies in their profession, new graduates are ideally positioned to provide feedback on their programs. However, response rates to exit surveys are generally poor, which have negative implications for the data quality, non-response bias, and overall validity. Recent studies suggest that 65% of adults engage in some form of social networking. We aimed to capitalize on the untapped potential of social media as a tool to increase survey responses among graduates of an Occupational Therapy Program.

Summary of the Innovation: We identified characteristics of successful online postings and produced two videos featuring faculty discussing how student feedback is implemented with the overall message of 'pay it forward'. A reminder video featuring a graduate was also produced. The videos were posted over three weeks on Twitter, Instagram, and Facebook. Effectiveness of the innovation was measured primarily through the survey responses, which tripled from the previous administration. Social media analytics (e.g., conversation rate, responses to posts, likes, retweets, amplification rate) demonstrated that Facebook was the most effective medium. Semi-structured interviews with a subsample of the respondents revealed features of the video that were most effective (music, faculty, use of feedback).

Conclusion: Social media is a powerful tool for increasing survey responses. The implementation of the innovation in this program may inform best methods to applying this approach across all HPE programs to augment survey responses.

OF 3-2 An innovative approach to Program Evaluation in PGME: Design, Development, and Implementation

Theresa Beesley McGill, **Carlos Gomez-Garibello** McGill, **Maryam Wagner** McGill, **Evelyn Constantin** McGill, **Regina Husa** McGill, **Armand Aalamian** McGill

Background/Purpose: Residency program directors are required to gather evidence to make decisions about their program, to improve its effectiveness, and to inform decisions. Recent changes to the CanRAC accreditation standards include program evaluation. However, residency programs have diverse needs, and program directors (PDs) have limited time and varied knowledge of program evaluation. In response, we developed an innovative approach to support program evaluation in the over 70 different residency programs, using a scholarly and iterative process. This innovative approach included standardized templates delivered alongside capacity-building workshops.

Summary of the Innovation: The innovative approach was implemented in two phases. Phase 1 included a capacity-building initiative for PDs as a one-day retreat. The retreat included three workshop activities using a stepwise approach to teaching principles of program evaluation, how to develop a logic model and evaluation matrix, and distributed logic model and evaluation matrix templates. Workshop activities integrated the CanRAC accreditation standards to provide PDs with concrete examples of how to use program evaluation to facilitate informed decisions on how to improve their residency program. Phase 2 included follow-up meetings with the education team members to review PD developed program evaluation plans. One-on-one support was offered to PDs once a month over

the last year to assist PDs with the implementation of their program evaluation plans.

Conclusion: This innovative approach provides standardized program evaluation templates for PDs to use in their program evaluation process, contributes to capacity building in PGME for program evaluation, and is a practical process, which can be implemented in PGME across Canada.

OF 3-3 Developing an evaluation plan for CBME by capturing the interests of program directors across specialties

Deena Hamza University of Alberta, **Anna Oswald** University of Alberta

Background/Purpose: The implementation of CBME is well underway in postgraduate medical education programs across Canada, which has produced opportunities for research and evaluation. Evaluation can be a prescriptive process; however, evidence suggests that involving relevant stakeholders and co-creating an evaluation plan may facilitate better engagement in the work required to shift to CBME. The purpose of this project was to create an inventory of CBME interests of program directors (PDs) from one Canadian university to build a scholarly network.

Methods: Data from semi-structured interviews were analyzed using descriptive statistics, thematic analysis, and content analysis.

Results: 14 out of 24 (58%) program directors in the 2017 - 2019 CBME implementation cohorts participated in this project. Nine out of 14 (64%) PDs have specific interest areas for evaluation. Identifying residents in difficulty earlier, particularly for shorter programs (>2 years), was the most frequently identified interest followed by how much feedback is enough, and how to support faculty in the provision of quality narrative feedback that is documented. Other interests reported by PDs include the appropriateness of new assessments in developing a global impression of learners; how residents navigate assessment of learning (performance) versus assessment for learning (growth); and how residents cope and adapt with the shift in training model.

Conclusion: The development of an inventory supported cross-specialty connections and collaboration on projects, directing resources and expertise to areas of interest and reducing unnecessary overlap. PD engagement in the evaluation process may promote the legitimacy of change and the value of participating in studies to better understand CBME.

OF 3-4 The CanadiEM Junior Editor Program: A quantitative study and program evaluation

Sonja Wakeling McMaster University, **Brent Thoma** University of Saskatchewan, **Teresa Chan** McMaster University

Background/Purpose: CanadiEM.org is a multi-author open access medical education website which aims to improve emergency care in Canada by building an online community for healthcare practitioners and providing them with high quality, freely available educational resources. Junior editors (medical student and/or resident) are key members of the community who are mentored to advance their academic skills and knowledge. The program also supports the sustainability of the CanadiEM project by supporting the creation and publishing of online content. We aimed to assess the impact and efficacy of this program while discovering ways to improve it.

Methods: The experience of all current and previous Junior Editors were assessed through a survey of 48 questions, including 15 multiple choice rated using a Likert Scale, 10 open-ended, and 23 demographic or binary yes/no questions. The participants' perceptions of their experience, future involvement, and opinions regarding implementation at other websites were assessed using open-ended questions. These responses were thematically analyzed.

Results: A total of 28 Junior Editors responded (71.7%). Results revealed a positive experience across all domains, with better experiences compared to previous similar roles. Most (85.7%) stated they achieved their expectations from the program, and 82.1% would incorporate this program into another medical education website if given the opportunity.

Conclusion: Junior Editors placed particular value on digital and authorship skills development, inspiration for future FOAMed, research engagement, and mentorship/networking. Through collaboration, we will implement improvement initiatives. Based upon these results, we believe that the Junior Editor model

may also be viable within other medical education communities.

OF 3-5 How are postgraduate medical educators using reflective writing to remediate professionalism? A constructivist grounded theory study

Tracy Moniz Mount Saint Vincent University, **Carolyn Gaspar** Dalhousie University, **Andrew Warren** Dalhousie University, **Chris Watling** Western University

Background/Purpose: Underperformance in the professional role has high stakes for learners and educators. Problems with professionalism, unless appropriately and effectively remediated, may portend serious problems in practice. Yet, such remediation is particularly challenging. Increasingly, educators turn to reflective writing (RW) as a remediation strategy in residency, yet little is known about what educators expect RW to accomplish, how they choose RW tasks, why they use RW, or how RW is evaluated. In this study, we aimed to understand how and why postgraduate medical educators use RW as an educational intervention to remediate professionalism.

Methods: We interviewed ten medical education professionals across eight Canadian medical schools. Data was analyzed iteratively for themes using coding principles from constructivist grounded theory.

Results: We identified five dominant themes: (1) Professionalism is widely perceived as difficult to remediate, owing to lack of guidance regarding effective strategies and insufficient learner insight; (2) RW is part of multipronged yet variable approaches to remediating professionalism; (3) RW is expected to demonstrate or, less frequently, to help develop learner insight into the issue; (4) Standards for quality vary, and educators struggle with subjectivity in evaluating RW; and (5) Educators and learners are challenged by inexperience with RW and impacted by issues of learner vulnerability and confidentiality.

Conclusion: This study represents an important step in medical education research towards apprehending how RW is used to navigate remediation around the professional role when challenges arise in residency. Understanding of the potential and pitfalls of RW may inform more tailored and effective approaches to professionalism remediation.

OF 3-6 The Nature of Wisdom in Clinical Medicine

Donald Boudreau McGill, **Eric Cassell** Weill Medical College of Cornell University

Background/Purpose: There is a dearth of descriptions of wisdom in clinical medicine. It has often been conflated with proficiency in clinical reasoning and decision making. Given that clinical actions always involves an individual patient and an individual physician, their subjectivity and intersubjectivity, these concepts are inadequate in capturing the 'particularization' that is a cognitive necessity and a moral imperative of physicians in the context of patient care.

Methods: Informed by a narrative review of the literature and a close reading of three preeminent texts, the authors reinterpret the phenomenon of wisdom in clinical medicine.

Results: The Aristotelian notion of practical wisdom (phronēsis) offers a more coherent and complete account of wise medical conduct. A strategy of thinking about, with, and through clinical cases creates avenues for physicians to particularize the clinical encounter.

Conclusion: Case based thinking in clinical practice includes understanding the unique features of a 'particular', reasoning about persons, constructing thick case descriptions, avoiding the hubris of premature case closure, and deliberating about right and good clinical decisions. This approach is authentically patient-centered and ensures the interweaving of humanism into medical practice and education.

OF 6-1 Medical trainees' push for cultural competence through internships with neglected communities

Rosa Lakabi McGill, **Sarah Chibane** McGill

Background/Purpose: INCommunity internships were developed through medical students' motivation to understand the reality and challenges faced by neglected communities in Montreal. The

project aims to equip physicians-in-training to holistically and empathically attend to their communities' health needs by acquiring cultural competence and knowledge on social determinants of health. Further, INCommunity focuses on fostering interprofessional learning through interactions with allied health professionals.

Summary of the Innovation: INCommunity is a student-led IFMSA-Québec initiative founded in 2011. It consists of free 4-week summer observerships allowing medical trainees exposure to marginalized groups: migrants, indigenous communities, law offenders, neglected urban populations and women in states of vulnerability. The project partners with many placements sites: indigenous communities, clinics, NGOs, detention and youth centers, injection sites, rehabilitation centers and shelters. Upon selection, participants receive a compilation of articles and a training on cultural competency adapted to their stream. The internship itself includes various placements, weekly debriefing sessions among participants and one-on-one discussions with a mentor (physician). A reflective exercise is expected in the form of a report.

Conclusion: With 68 students having been offered internships since 2016 and over 50 partnerships established annually, this student-led initiative was found to be an effective approach to teaching social determinants of health. Indeed, it was adopted as a week-long rotation in University of Montreal's clerkship curriculum in 2013. It is currently being implemented in Sherbrooke. Overall, INCommunity emphasizes the importance of collaborating with trainees in medical education to create better adapted and effective learning experiences.

OF 6-2 Trends in the proportion of female provincial and national residency organization award recipients across Canada from 2000 to 2018

Sarah Silverberg University of British Columbia, **Shannon Ruzycki** University of Calgary, **Irene Ma** University of Calgary

Background/Purpose: Women physicians are underrepresented in academia, leadership, and administration. Previous evidence suggests that women physicians are evaluated differently than men physicians; this manifests as lower teaching evaluation scores, student evaluation scores, grant attainment, and award distribution. While gender bias has been demonstrated at the level of academic and national research awards, awards selected by resident physicians have not previously been examined.

Methods: A cross-sectional analysis of resident-selected awards for residents and staff physicians was conducted from 2000-2018 using data on award distribution from provincial and national residency organizations in Canada. Based on award name and/or description, we classified awards into either education and teaching awards or professionalism, advocacy and wellness awards.

Results: Women residents and women staff physicians had significantly lower odds of receiving resident-selected awards than men (OR 0.57, 95% CI 0.39-0.81; $p<0.01$ and OR 0.74, 95% CI 0.57-0.95; $p=0.02$, respectively). Compared with men, women had significantly lower odds of receiving education and teaching awards, compared with professionalism, advocacy and wellness awards as residents and staff physicians (OR 0.32, 95% CI 0.11-0.96; $p<0.03$ and OR 0.30, 95% CI 0.16-0.53; $p<0.0001$, respectively).

Conclusion: Between 2000 and 2018, women residents and staff physicians in Canada, compared to men, had significantly lower odds of receiving awards selected by residents from provincial and national residency associations. Reasons for possible implicit and explicit bias influencing evaluation and recognition of women physicians need to be further explored.

OF 6-3 Preparing service providers to 'champion' translation of cultural safety and trauma-informed care into service delivery and practice

Kimberly Miller Sunny Hill Health Centre for Children, **Stephanie Glegg** Sunny Hill Health Centre for Children, **Jason Gordon** BC Association for Child Development and Intervention

Background/Purpose: On-line and didactic programs exist that aim to enhance cultural safety and trauma-

informed care (CS&TIC). Most improve knowledge but may not adequately prepare participants to 'champion' service delivery and practice change. We designed the "CS&TIC Champions" workshop to equip self-selected service providers from the early intervention sector to apply knowledge translation (KT) theory and practice to support the implementation of CS&TIC best practices within their organizations across British Columbia.

Summary of the Innovation: The one-day interactive Champions workshop the final component of a comprehensive curriculum co-developed by an advisory committee of Elders, service providers, educators and families with lived experience. We applied adult learning principles to introduce evidence-informed KT best practices and planning tools; participants engaged in group activities to set goals and applied these approaches in their respective contexts. Participants identified barriers to implementing CS&TIC, and actively generated solutions to these challenges. Immediately post-workshop, participants completed a survey gathering self-reported ratings of confidence (1=much poorer to 5=much stronger) and ability to perform KT activities to support practice change (1=poor to 5=competent).

Conclusion: Twenty-two of 25 participants completed the survey. Respondents reported greater confidence as champions (median=4; IQR 3-4) and valued networking with other champions. They could identify KT strategies best suited for supporting CS&TIC in their contexts (median= 4/5; IQR 3-4), but more support was wanted to develop KT plans targeting barriers and facilitators. (median=3/5; IQR 3-4). The CS&TIC Champions workshop equipped participants with KT strategies, but follow-up coaching could better support participants to 'champion' translation of CS&TIC into service delivery and practice.

OF 6-4 Créer un lieu d'échange culturel, interdisciplinaire et intellectuel entre les étudiants et étudiantes et les membres des Premières Nations : les mini-écoles en sciences de la santé de l'Université Laval

Henri Cyr Université Laval, **Sonia Jalbert** Université Laval, **Emmanuelle Careau** Université Laval, **Dominique Vandal** Université Laval

Background/Purpose: Mettre en valeur la présence autochtone sur le territoire desservi par l'Université Laval et promouvoir l'échange et la collaboration entre les peuples autochtones et allochtones est un aspect de la responsabilité sociale de la Faculté de médecine.

Summary of the Innovation: À cet égard, trois mini-écoles en sciences de la santé ont été organisées au cours de l'année 2018-2019. Ainsi, 700 élèves de niveaux primaire et secondaire des écoles des communautés innue de Pessamit et huronne-wendate de Wendake ont rencontré plus de 90 étudiants et étudiantes provenant d'une dizaine de programmes liés à la santé, dont la moitié en médecine. Les membres de tout âge de ces communautés ont aussi participé à l'accueil chaleureux lors d'une soirée où les échanges culturels étaient à l'honneur. Les liens créés visent à stimuler l'intérêt des jeunes pour des professions de la santé et ce faisant, à contrer le décrochage scolaire, tout en les sensibilisant à des enjeux de santé spécifiques à leur communauté. Ce projet interdisciplinaire offre aussi aux futurs professionnels et professionnelles une expérience unique qui contribue au développement de leur professionnalisme, en plus de leur permettre d'intégrer les connaissances acquises et de devenir des leaders culturellement compétents d'un mouvement de changement.

Conclusion: Ce projet innovant a permis de se rapprocher des Premières Nations, de mieux comprendre leurs enjeux de santé, de briser les préjugés et d'établir un dialogue pérenne de même qu'un partenariat durable avec ses membres. Ainsi, la Faculté poursuit les objectifs des démarches de réconciliation entamées par l'Université Laval visant à favoriser la réussite scolaire et à sensibiliser la communauté universitaire aux réalités autochtones.

OF 6-5 Developing a New Measure of Cultural Sensitivity for Health Professions Learners: Better Metrics for Observerships

Rylan Egan Queen's University, **Nazik Hammad** Queen's University, **Eleftherios Soleas** Queen's University, **Jennifer Carpenter** Queen's University, **Mikaila De sousa** Queen's University, **Nicholas Cofie** Queen's University

Background/Purpose: Immersion in other cultures is a transformative learning opportunity for learners to become lifelong advocates for all their patients. To measure the efficacy of these experiences, a validated instrument to measure change on the relative cultural sensitivity, is necessary. The last validated instrument was revised in 2002 (Beswick & Hills, 1969; Neuliep, 2002; Neuliep & McCroskey, 1997). We live in a different era than when these items were written and crafted. In order to sincerely understand people's latent perceptions, we need a shrewder instrument and one that cannot be as easily gamed for a socially desirable outcome.

Methods: This instrument development combined 12 expert consultations and the narrative experiences of 95 health professions students and then rigorously applied item-response theory and instrument development science to develop a generalizable scale of cultural perceptions.

Conclusion: The developed scale was prototyped with an interprofessional sample of health professions students and analysed using correlation analyses and exploratory factor analysis revealing a 2-factor structure. Based on these findings, items were dropped and the scale trimmed to a final form.

Conclusion: The scenarios and constructs of this instrument are highly interdisciplinary and transferable across health professions and beyond. For example, electives and placements for nurses, physiotherapists, and medical trainees are designed to expose learners to many different health provision and learning contexts that may have very different cultural feels to them. This instrument would offer a means for these training programs to measure the increase in advocacy and cultural sensitivity in these learners. We look forward to freely sharing our learning and instrument with any health professions educator to promote the development of health advocates everywhere.

OF 6-6 Later is too late: Exploring student experiences of diversity and inclusion in medical school orientation

Wid Yaseen University of Toronto, **Asia van Buuren** University of Toronto, **Paula Veinot** Independent Research Consultant, Halifax, Nova Scotia, Canada, **Maria Mylopoulos** University of Toronto, **Marcus Law** University of Toronto

Background/Purpose: There is increasing effort among medical schools to recruit a diverse student body. However, there is a paucity of research into the unique experiences of students with diverse backgrounds during their transition to medicine. The purpose of this study was to explore first year medical students' experiences and expectations with respect to diversity and inclusion during medical school orientation.

Methods: Between April and August 2019, 16 first-year Canadian medical students completed audio-recorded semi-structured interviews. Interviews explored how issues of diversity and inclusion during orientation affected students' transition into medicine and their professional identity development. Interviews were transcribed and analyzed for common themes using descriptive analysis.

Results: As early as their first week as medical students, participants reported feeling a disconnect between their institution's message of diversity and inclusion and their own experiences of these issues during orientation activities. They described complex social pressures and an early stratification during orientation based on their social identity. The perceived disconnect became more apparent as the school year progressed. Participants proposed tangible suggestions for institutional improvement of orientation vis-a-vis diversity and inclusion.

Conclusion: Longstanding issues of diversity and inclusion in medicine manifest from day one of medical school. While orientation may be seen as a student-run week to welcome students into the profession, it is a crucial period for medical schools to properly set the stage to intentionally demonstrate its

commitment to an inclusive culture and meaningful professional identity development. To address these issues later in the school year is too late.

OF 4-1 Développement du rôle d'éducateur des étudiants en médecine dans un programme fondé sur une approche par compétence.

Paul Chiasson Université de Sherbrooke, **Louis Gagnon** Université de Sherbrooke, **Sylvie Mathieu** Université de Sherbrooke, **Sylvie Houde** Université de Sherbrooke, **Cécile Trochet** Université de Sherbrooke, **Nathalie Bettez** Université de Sherbrooke, **Marie-Josée Leblanc** Université de Sherbrooke, **Frédéric Bernier** Université de Sherbrooke, **Ghislaine Houde** Université de Sherbrooke, **Ann Graillon** Université de Sherbrooke, **Evelyne Cambron-Goulet** Université de Sherbrooke

Background/Purpose: Le rôle d'éducateur fait partie intégrante de la pratique médicale dès le début de la formation. Il se traduit par des activités de supervision, de présentations ou autres types d'activités de formation auprès des collègues et autres intervenants. Ce rôle intègre plusieurs compétences CanMeds, notamment la communication, la collaboration, l'érudition, et l'expertise. L'apprentissage de cette compétence est souvent implicite ou informel dans les curriculum pré doctoraux. Dans le cadre de la refonte du programme de médecine, nous avons construit des activités pédagogiques intégrées et longitudinales soutenant le développement du rôle d'éducateur.

Summary of the Innovation: Les activités pédagogiques sont déployées tout au long des quatre années du programme et préparent les étudiants à agir dans trois principaux contextes en lien avec leur rôle d'éducateur soit : 1. Le partage des connaissances en petits groupes, 2. La présentation efficace en milieu clinique, 3. L'apprentissage et la supervision en milieu clinique. Chacune de ces activités visent l'acquisition de connaissances, leur intégration dans des activités pratiques en situation réelles et le développement de la pratique réflexive. Les acquisitions sont supportées par des méthodes pédagogiques interactives centrées sur l'apprenant. L'évaluation est fondée sur des examens écrits et sur l'observation directe.

Conclusion: Le développement du rôle d'éducateur s'est concrétisé dans des activités pédagogiques dédiées qui rendent explicites les apprentissages sous-jacents. La pertinence de ces activités pour la pratique future est soulignée par les professeurs impliqués. L'intégration des compétences de collaboration et de communication est particulièrement appréciée des étudiants.

OF 4-2 Advancing Scholarly work across Ontario's Distributed Medical Education programs

Larry Chambers McMaster University, **Alison Freeland** University of Toronto, **Charles Su** University of Ottawa, **Dorothy Bakker** McMaster University, **Ruzica Jokic** Queen's University, **George Kim** Western University

Background/Purpose: Distributed medical education (DME) has increased by 30% in Ontario and innovative planning to support and advance scholarly work within these diverse teaching environments is required to ensure equivalent academic opportunities for faculty and students. In order to advance scholarship, an innovative approach was undertaken by all six DME programs associated with the Ontario Faculties of Medicine to reach consensus on five recommendations to be actioned in a coordinated and collaborative process, with the potential for knowledge and resource sharing for greater impact across DME settings.

Summary of the Innovation: The academic leads of Ontario's 6 DME programs participated in a semistructured facilitated session to share and compare current state of DME scholarly activities and resources. Five improvement opportunities with relevance to all sites were identified, and recommendations were developed by consensus to address these. The recommendations focused on ensuring that DME program faculty have necessary skills and tools to participate in and supervise scholarly work, and have opportunities for academic promotion and career advancement. The importance of nurturing a culture of recognition and value in scholarship that extends beyond the traditional academic health sciences centres, and of ensuring the relevance of academic work to the communities in which DME scholarship occurs were also highlighted.

Conclusion: This is the first time that DME leaders from 6 Ontario medical schools have collaborated to advance scholarly work across different distributed clinical settings. Sharing ideas, solutions and resources will be the most effective way forward to ensure this is accomplished.

OF 4-3 Development of the role of researcher of medical students in a program based on a competency-based approach.

Mathieu Bélanger Université de Sherbrooke, **Luigi Bouchard** Université de Sherbrooke, **Fanny Lapointe** Université de Sherbrooke, **Frédéric Bernier** Université de Sherbrooke, **Ghislaine Houde** Université de Sherbrooke, **Paul Farand** Université de Sherbrooke

Background/Purpose: La recherche est intimement liée à la pratique des médecins qui doivent régulièrement interpréter et s'appuyer sur des données probantes, ou participer à la réalisation de celles-ci. L'Association des facultés de médecine du Canada a souligné également l'importance d'inclure la recherche à la formation médicale. La recherche sollicite plusieurs rôles CanMeds, particulièrement l'érudition, la collaboration et l'expertise. Dans le cadre de la refonte du doctorat en médecine de l'Université de Sherbrooke, nous avons construit un parcours soutenant le développement des compétences en recherche pertinentes à la pratique médicale.

Summary of the Innovation: Les activités du parcours se déploient en 3 étapes avec, en alternance, des activités permettant l'acquisition et l'utilisation des connaissances et des projets adaptés aux étapes de la formation. À la première étape, des séances d'apprentissages par équipes (APÉ) et des rencontres supervisées soutiennent la rédaction et la vulgarisation d'un résumé scientifique. À la 2e étape, les séances d'APÉ sont suivies du développement individuel et de la présentation d'un protocole de recherche. À la 3e étape, les étudiants doivent participer à une collecte de données dans le cadre d'un projet de recherche longitudinal collectif impliquant une cohorte de plusieurs milliers de patients et analyser les données pour répondre à une question de recherche. Les activités des étudiants sont réalisées sous la supervision de professeurs-chercheurs.

Conclusion: Le programme soutient l'intégration de la recherche au développement de la pratique médicale dans une approche par compétence. Les professeurs-chercheurs et les étudiants apprécient la pertinence des activités, et leurs apports au développement de la collaboration et de la communication. De plus, le parcours suscite l'intérêt des étudiants à s'impliquer dans des projets de recherche.

OF 4-4 Application of the Holmes' Reflection Model to Promote Professionalism in Medical Students upon Starting Clinical Rotations: A Randomized Controlled Trial

Sara Mortaz Hejri McGill, **Leila Naimi** Tehran University of Medical Sciences

Background/Purpose: Professionalism is expected to be developed in medical students during their training in medical school and also during their rotations at hospitals. Despite the effort of keeping the educational environment positive, there are still unprofessional behaviors that could negatively impact students. This study aimed to apply the Holmes' approach which uses unprofessional behaviors observed in clinical settings to facilitate reflection among students upon their entrance in clinical rotations.

Methods: A total of 75 medical students, upon starting their internal medicine clerkship, were enrolled in the study and were randomly assigned to the control and intervention groups. For the intervention group, we organized a longitudinal program within 16 weeks, based on four steps of the Holmes' reflection approach: priming, noticing, processing, and choosing. To evaluate the effectiveness of the program, we measured several outcomes in both groups before and after the program, using a situational judgment test (SJT), Queen's University Belfast Professionalism Index (QUBPI), and Professionalism Mini-evaluation Exercise (P-MEX).

Results: Scores of SJT increased in the intervention group at the end of the program (from 7.56 to 10.17; P≤ 0.001), while there was no significant difference in the controls' scores. There were no significant changes in scores of QUBPI (attitude towards professionalism) and P-MEX (professional behavior)

comparing control and intervention groups before and after the program.

Conclusion: Based on our findings, Holmes' reflection approach increased the medical students' knowledge of professionalism upon entering the clinical setting significantly, but long-term follow-up is required to evaluate the effects of this reflection approach on other desirable outcomes.

OF 4-5 Navigating Ottawa Resources to Improve Health: An Evaluation of a Multidisciplinary Ottawa Student-Run Clinic

Maria Merlano University of Ottawa, **Julie Bain** University of Ottawa, **Michael Hirsh** University of Ottawa, **Katina Zheng** University of Ottawa

Background/Purpose: Navigating Ottawa Resources to Improve Health (NORTH) is an innovative, interdisciplinary, student-run clinic that aims to connect clients with identified social needs, to community resources. Medical, social work, and law students work together as navigators, supervised by a community social worker. To our knowledge NORTH is the first student clinic in Canada devoted entirely to addressing social determinants of health (SDOH). The aim is to address the social needs of clients, while providing students with the opportunity to build competencies in SDOH, communication, and interdisciplinary teamwork that will be necessary as future professionals.

Summary of the Innovation: The clinic was piloted at the Bruyère Family Health Team in Ottawa and ran from January to August 2018. Thirty-one referrals were received, the majority from physicians and social workers. Twenty of which were seen by NORTH navigators. While many clients had multiple reasons for referral, income support was the most common need. Of 53 scheduled visits, 40 were successfully completed (23 in person, 17 over the phone). Survey results showed that NORTH was well received by both referring providers and clients. Both groups felt that the limited hours of operation was the most significant barrier. Nevertheless, both responded positively to the timeliness in addressing referrals and appointments.

Conclusion: Results of the pilot suggest that NORTH has great potential in terms of addressing SDOH challenges faced by clients. However, issues with continuity of care, missed appointments and logistical challenges need to be addressed moving forward. Many lessons were learned from this pilot which can be implemented in the clinic. Next steps also include evaluating the pedagogical value of the clinic for student navigators.

OF 4-6 Physician Leadership Explored from the Perspective of Medical Students

Albert Vo Western University, **Jacqueline Torti** Western University, **Nabil Sultan** Western University

Background/Purpose: Recently, leadership has gained new relevance in medicine in Canada. A 2015 revision to the CanMEDS framework included the new leader role. This emphasis on leadership, although exciting, presents challenges to medical education as current undergraduate medical leadership curricula are lacking. It is important to design effective leadership curricula for medical professionals targeting early stages of training. To design relevant undergraduate medical leadership curricula, it will be necessary to explore medical students' perceptions of physician leadership.

Methods: This was an exploratory qualitative descriptive study. Medical students in their 1st, 2nd and 3rd years were recruited by email and in-person. Participants took part in an approximately one hour-long semi-structured interview exploring different topics in leadership. Interviews were audio-recorded and then transcribed by a professional transcription agency. Interview transcripts were coded and analyzed thematically.

Results: In total, 24 students were interviewed, fourteen 1st years, three 2nd years and seven 3rd years. Students shared various perspectives on three aspects of leadership, character, competence and commitment, as well as general views on leadership. Identified themes included the discussion of positional and dispositional leadership, leadership being an individual choice, the association between character and personality and one's ability to develop character.

Conclusion: Overall, many students saw the relevance of the character, competence and commitment aspects of leadership. However, there

were many varied views on leadership as students have different past experiences and teachings on leadership. This research provides important insights for the development of future undergraduate character-based leadership curricula.

OF 5-4 Medical Student Mistreatment and Reporting: A Journey

Amanda Bell McMaster University, **Catherine Connelly** McMaster University, **Allyn Walsh** McMaster University, **Meredith Vanstone** McMaster University

Background/Purpose: Over 50% of Canadian medical students report experiencing mistreatment, yet only a small proportion of students report these concerns to school administration. It is unknown how medical students make sense of their experiences of mistreatment and come to decide whether to formally report these experiences. A better understanding of this phenomenon will facilitate changes by the medical school to better support students

Methods: This Constructivist Grounded Theory study interviewed 19 current and former medical students from one institution about their experiences with mistreatment and reporting. Anonymized transcripts were reviewed, coded and theory was developed.

Results: Students undergo a journey surrounding experiences of mistreatment in five phases: Situating, Experiencing and Appraising, Reacting, Deciding, and Moving Forward. Students move through these phases as they come to understand their position as medical learners and their ability to trust and be safe within this institution. Each experience of mistreatment causes students to react to what has happened to them, and then decide if they will share their experiences and reach out for support. They choose if they are going to report the mistreatment, at what cost and for what outcomes. Students continue through their training while incorporating their experiences into their understanding of the culture in which they are learning and continually resituating themselves within the institution.

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Conclusion: This study revealed institutional mistrust from students especially as it related to reporting mistreatment. Interventions designed to support students and decrease exposure to mistreatment may be best focused on increasing organizational trust between students and medical school leadership. Students volunteered mechanisms to support them. Medical school administration should consider how they can increase trust with their learners while identifying areas of concern and procedures for intervening and providing more transparent resolutions.

OF 5-2 Risks, Responsibility, and Resiliency: Qualitative Insights on Accessing Mental Health Care and Maintaining Wellness in Ontario Medical Students

Wendy (Wen Qing) Ye McMaster University, **Bradley Rietze** Northern Ontario School of Medicine, **Sydney McQueen** University of Toronto, **Lena Quilty** Centre for Addiction and Mental Health (CAMH), **Christine Wickens** University of Toronto

Background/Purpose: High levels of burnout, anxiety, and depression among medical trainees are linked to reduced workplace productivity, empathy, and professionalism. Medical students are not accessing mental health resources, citing limited time, and concerns regarding confidentiality, cost, and stigma. This study aims to identify perceived barriers and successful strategies for accessing mental health resources by Ontario (ON) medical students.

Methods: Between May-Sep 2019, semi-structured telephone interviews were conducted with 16 medical students from ON medical programs. Students were purposively sampled for year of training, perceived stress levels, and experiences in accessing wellness resources. A descriptive thematic approach was used for analysis. Interview questions focused on identifying barriers and promoting factors for maintaining wellness, and on suggestions for wellness improvement.

Results: Three main themes were identified: barriers to accessing care; maintaining and promoting wellness; and navigating professionalism and the "hidden curriculum". Students identified significant administrative and resource barriers, including inflexible leave of absence policies, remote locations for clinical experience away from supports, frequent travel during clerkship, and time constraints/crisis management. Stigma, and fear of career consequences were frequently cited as concerns with the "hidden curriculum". Peer support and mentorship from attending physicians were instrumental in facilitating student access to mental health resources.

Conclusion: The identified wellness barriers and promoting factors will be further explored in future province-wide survey studies. This information will be used to inform policy changes in medical education to improve student wellness.

OF 5-3 Improving Learner Wellbeing: A Two year review of the CFMS National Wellness Program (NWP)

Misha Virdee McMaster University, **Dax Bourcier** Université de Sherbrooke, **Victor Do** University of Alberta

Background/Purpose: While trainees enter medical school with similar baseline wellness characteristics to age-matched peers, their wellbeing declines significantly during training in comparison, highlighting the role our medical training environment has on wellbeing. To change this trajectory we need comprehensive, strategic wellness initiatives that go beyond programming. The CFMS first created our national wellness program (NWP) 2 years ago to address these challenges.

Summary of the Innovation: The NWP is composed of 4 pillars; Awareness, Advocacy, Programming, Resilience and Personal Development. Our awareness arm highlights students in their unique wellness journeys and "normalizes" discussions around challenges in medicine. Our advocacy pillar focuses on learner mistreatment and systemic interventions to create a health promoting working and learning environment. Our programming pillar includes the national wellness challenge (over 800 participants, a majority who report their wellness is positively influenced) and our longitudinal wellness initiative, which provides resources to promote nutrition, mental, physical, financial and social/relationship wellness. In promoting resilience and personal development we are providing free STRIVE (Simulated Training for Resilience in Various Environments) training that utilizes the Big4+ concepts. We also facilitate "Safe Space: Let's Get Real" national discussions for members to speak openly and collaborate on wellness challenges.

Conclusion: The CFMS national wellness program represents the first comprehensive student-led national level medical student wellness program. Based on learner qualitative surveys, participation and other quality indicator measures we have to the medical learning environment in our first 2 years. The CFMS looks forward to continuing this work with an upcoming 3 year strategic vision.

OF 5-1 Medical Students' Reasons to Not Report Mistreatment

Namta Gupta McGill, **Léanne Roncière** McGill

Background/Purpose: Mistreatment is a widespread problem at Canadian medical schools. It is associated with the development of significant psychological morbidity and impaired professional attitudes. At McGill University, the student council determined, through discussions with its members, that a specific rotation presented a higher rate of mistreatment events. Further investigation identified that most students had failed to report the events through the Faculty mistreatment reporting process. This study's objective was to identify barriers to students reporting mistreatment in a clinical environment at a Canadian medical school.

Methods: The two main student communication channels (Facebook class groups and weekly student council newsletter) were used to recruit students from two different graduating classes. Three members of student council were identified as contact persons. 24 interviews were held by phone or in person over the span of one month. Interviewees were guaranteed anonymity. Interviewers noted interviewees' reasons for non-reporting. A narrative analysis looking for emerging themes was subsequently conducted.

Results: Reasons students do not report mistreatment through the official process can be classified into four categories: 1) students' lack of trust that their report will have any impact on the system, 2) students' fear of potential repercussions on their future careers, 3) students' understanding and recognition of mistreatment and 4) tediousness of the reporting process.

Conclusion: Canadian medical schools should consider these reasons when creating their mistreatment reporting processes in order to ensure students' trust, anonymity, awareness, and to ensure that the process remains simple and straight to the point.

OF 5-5 Moral Distress Among Critical Care Physicians: Implications for Medical Education

Dominique Piquette University of Toronto, **Aimee Sarti** University of Ottawa, **Franco Carnevale** McGill, **Karen Burns** University of Toronto, **Peter Dodek** University of British Columbia

Background/Purpose: Moral distress and its consequences (burnout, attrition), are deleterious to health care workers, to patients and the health care system. We aimed to explore commonly reported causes and consequences of moral distress in ICU physicians, but also relationships with broader conditions and consequences related to ICU physicians' wellbeing.

Methods: We conducted a national cross-sectional survey, including structured and free-text comments, to understand the magnitude, causes and consequences of moral distress as well as other wellness measures in ICU physicians in Canada. Inductive thematic analysis of the free text comments of survey respondents by an inter-disciplinary team of four investigators who have expertise in qualitative research.

Results: Eighty-three of the 225 survey participants shared 135 written comments, which identified contextual and relational factors that contributed to either moral distress or work-related stress in the ICU. Certain factors appeared modifiable, whereas others were not under physicians' control. As these challenges drew upon limited ICU physicians' resources, cumulative stressors represented a threat to wellbeing, but also impacted physicians' relationships with other healthcare professionals, patients and relatives, and physicians' family members. Occurrence and consequences of moral distress varied across physicians. Many participants described their work as rewarding. These rewards combined with individual coping strategies helped ICU physicians face work-related stressors.

Conclusion: Understanding moral distress among practicing physicians is important for medical education. Relational factors involved in physician's distress and professional rewards are more likely to be effectively targeted by educational interventions than contextual factors.

OF 5-6 The fatigue paradox: a grounded theory study of physicians', nurses' and residents' perceptions of physician fatigue

Taryn Taylor Western University, **Lorelei Lingard** Western University, **Sandra Deluca** Western University, **Julie Ann Vankoughnett** Western University, **Richard Cherry** Western University, **Emily Field** Western University

Background/Purpose: Work hour regulation has failed to solve the problem of fatigued physicians. Organizations are turning to fatigue risk management (FRM) frameworks utilized in other high-reliable industries, which assume a shared understanding of fatigue as hazardous. Although physicians reliably recognize when they are tired, it remains unclear how they perceive the impact of their workplace fatigue. Thus, we set out to explore physician, nurse and resident perspectives on the impact of physician fatigue.

Methods: Using a constructivist grounded theory approach, we conducted 40 interviews with staff physicians (20), residents (8) and nurses (12) from six departments practicing in a tertiary academic centre or community hospital in Ontario, Canada. Iterative data collection and analysis directed theoretical sampling. Constant comparative analysis raised our initial open coding to a more conceptual level, resulting in the final grounded theory.

Results: Participants held paradoxical views about physician fatigue. They described multiple manifestations of fatigue in clinical work (e.g. slowness, incorrect orders, poor communication) while maintaining that fatigue minimally impacts patient care. Our analysis revealed four main themes within this duality: (1) the idea of indefatigable physicians, (2) the reliance on a safety net, (3) the absence of proof and (4) the minimization of fatigue-related events.

Conclusion: Healthcare providers are working within a complex framework that sustains contradictory perspectives about the significance of fatigue. This "fatigue paradox" may be necessary since existing systems expect fatigued physicians to provide patient care. Left unchallenged and unexamined, paradoxical perceptions of physician fatigue may impede successful implementation of fatigue risk management in practice.

OF 7-1 Recognizing our Hidden Faculty: 3-year outcomes of the Health Professional Educators (HPE) program in the Department of Family and Community Medicine at the University of Toronto

Deborah Kopansky-Giles University of Toronto, **Judith Peranson** University of Toronto

Background/Purpose: The transformation of teaching units into interprofessional (IP) care teams has created opportunities for non-physician teachers (Health Professional Educators - HPEs) to take on roles as teachers in Family Medicine (FM). The integration of HPEs has historically been on an informal basis, with implications for the quality of education experienced by both learners and teachers. In 2015, the Department of Family and Community Medicine (DFCM) at the University of Toronto launched an innovative faculty development program to formally recognize the important role that non-physician Health Professional Educators (HPEs) (such as nurses, pharmacists, social workers and others) play in the training of medicine learners.

Summary of the Innovation: Lead by an HPE and physician co-leadership model, this initiative has resulted in a number of successful outcomes to better support this often hidden cohort of medical educators, including: the creation of guidelines and a more robust process for HPE faculty appointments (with an increase in the number of HPE appointments attained); implementation of targeted HPE communication strategies (website, newsletters); increased visibility of HPEs in planning and attending faculty development activities (leading to more engagement at clinical teaching sites); and the establishment of a Community of Practice (CoP) for peer teacher support, now with approximately 125 members.

Conclusion: This presentation will summarize the structure and achievements of the DFCM's HPE Program to date, utilizing Stufflebeam's CIPP model of program evaluation (Frye & Hemmer, 2012) to describe the context, input, process/methods and products of this innovative program. Key program enablers, opportunities and costs, and plans for ongoing activities will also be described.

OF 7-2 Rethinking "The [Past] Medical History": An Exploration of Patient Networks of Care Providers

Laurent Perrault-Sequeira Western University, **Jacqueline Torti** Western University, **Andrew Appleton** Western University, **Maria Mathews** Western University, **Mark Goldszmidt** Western University

Background/Purpose: Patients' networks of care providers have largely been ignored in current models of history taking. That each patient has a family physician who helps them navigate the healthcare system is largely assumed. For many hospitalized patients - especially those with multi-morbidity - this may not accurately reflect their reality. Moreover, failing to consider alternative care networks could lead to inadequate care planning.

Methods: Prospective cohort study with data collection and analysis informed by constructivist grounded theory methodology. Data included interview transcripts from 30 patients admitted to an inpatient internal medicine service of an urban academic health centre. Analysis and data collection proceeded in an iterative fashion with sampling progressing from purposive to theoretical.

Results: We found a complex interplay among the types of family physician relationship (highly involved, less involved, non-existent), specialist relationship(s) (highly involved, consultative, fragmented), and patients' personal abilities/social supports. These configurations appeared to impact how each cared for self and navigated the healthcare system. Those with less optimal combinations described many challenges during transitions in medical care arising from hospital admission, new diagnoses, increasing medical complexity, and changes in functional ability.

Conclusion: Our elaboration of the multiple configurations of care networks has implications for teaching history taking. Adapting history taking to more effectively identify care networks can help guide discharge and ongoing care planning for high risk patients. Doing so requires moving from "past medical history" to "chronic active issues," and exploring the associated network of care providers and social context.

OF 7-4 Does variability in overnight call schedules prior to the Internal Medicine clerkship exam influence student grades?

Nicholas Sequeira University of Toronto, **Catherine Matolcsy** University of Toronto, **Edmund Lorens** University of Toronto, **Luke Devine** University of Toronto

Background/Purpose: University of Toronto's Internal Medicine clerkship written exam occurs on a Friday morning. Overnight call is cancelled Thursday night. 50% of students are on call the weekend before the exam: either Friday and Sunday night or Saturday night. Students on call Saturday night are also on call Wednesday night. The Wednesday shift ends less than 24 hours before the exam. Remaining students are only on call Monday or Tuesday night. Students often express concern about the perceived impact of weekend call on studying and Wednesday call on cognition. Shift work has been shown to alter circadian rhythm for up to 3 days. This study aimed to determine whether call schedules influenced Internal Medicine exam grades.

Methods: Data from 2015-2017 was retrospectively analyzed including 465 students from 5 academic hospitals. Archived call schedules were used to group students by their pre-exam call schedule. Student grades on the Internal Medicine written exam were analyzed for each group and adjusted for the students' grades on the wards and the oral exam.

Results: Students with Friday/Sunday call (n=86) and Saturday/Wednesday call (n=87) scored 77.28%+/-8.82% and 76.46%+/-8.76% respectively. Students without weekend call (n=292) scored 76.44%+/-8.77%. There was no significant difference between groups before or after adjusting for ward and oral exam grades.

Conclusion: There was no significant difference between grades regardless of when students had overnight call. Clerkship directors may use this data to inform call schedules. Further studies regarding study habits and satisfaction may inform the impact of pre-exam call schedules on student wellness.

OF 7-5 Perception of the Influence of a Humanities Curriculum on the Development of Patient-Centered skills in Family Medicine Residents

Nina Nguyen University of Ottawa, **Andrea Zumrova** University of Ottawa, **Alan Ng** University of Ottawa

Background/Purpose: The Family Medicine residency program at the University of Ottawa offers a humanities curriculum to strengthen the CanMEDS-FM competencies of their trainees. This study assesses its impact on the residents' perception of the development of patient-centred skills.

Methods: Thematic analysis was done on anonymous written activity evaluations from 2007 to 2018 and on 11 anonymized peer interviews of resident physicians who attended at least one (1) educational activity between 2016 and 2018. Both the NVivo software and a paper-based approach were used for analysis. Initial coding was done following the competencies listed in the CanMEDS-FM framework. In addition to descriptive quantitative statistics obtained through

NVivo, CmapTools was used to produce two (2) thematic maps: one for the written evaluations; and the other for the interviews.

Results: Although all CanMEDS-FM competencies were covered by the curriculum, there was a strong dominance of the communicator, collaborator, professional and health advocate ones. The communicator competency was more prominent in the written evaluations, as opposed to the professionalism one in the interviews. Ancillary themes were the value of the contents, the time constraints surrounding involvement in the curriculum, and the initiation of personal reflection about one's practice.

Conclusion: The existing humanities curriculum is perceived by participating residents to have a positive impact on the development of CanMEDS-FM competencies, especially the ones required for a sustainable clinical practice. Updates of the material used during educational activities and protected academic time could further the impact of the curriculum among residents.

OF 7-6 New Graduate Health Professionals' Experiences with Employer Supports

Kevin Eva University of British Columbia, **Teresa Green** Vancouver Coastal Health

Background/Purpose: New graduate health care professionals face challenges when transitioning from training to employment. However, employers looking to the literature to inform the development of supports to ease transition to practice will find weak evidence. The aim of this research was to begin to address this gap by exploring newly hired new graduate occupational therapist experiences of onboarding activities to better understand what they value and why.

Methods: A constructivist phenomenological approach was used. Semi structured interviews were conducted with new graduate occupational therapists working in urban hospital settings. Interviews were audio recorded, transcribed, de-identified and coded. A series of iterative discussions were used to review and revise codes and themes and to organize the data at a conceptual level.

Results: Employers initiated a range of formal onboarding activities. Experiences of these activities were impacted by environmental factors that either facilitated or impeded their function or compensated for a lack of formal support. New employees described initiating activities themselves that acted in addition to, or compensated for, a lack of formal support. Employee-initiated activities were also facilitated or impeded by environmental factors.

Conclusion: Our findings suggest that employers of new health professionals should tailor the supports they provide based on the employees' past experience and ability to act proactively to create their own supports, while being conscious to account for or modify the nature of the work environment. Secondly, they suggest there is value in employers using transition to employment best practices to support new graduate health professionals' transition to practice.

OF 7-3 'A roller coaster of emotions': A phenomenological study into the lived experience of medical students emotions in simulation

Gerard Gormley Queen's University Belfast, **Claudi Perez** Medical Education Unit, Universidad Católica del Norte, **Erik Driessen** School of Health Professions Education, Maastricht University, **Diana Dolmans** School of Health Professions Education, Maastricht University

Background/Purpose: Simulation based education (SBE) is a frequently used method of teaching in medical curricula. Whilst considered safe from a patient perspective, learners can often experience a range of emotions including fear and anxiety. Given that emotions are potent learning mediators, many have called for greater insight to learner's emotional states in simulation. This study sets out to provide a deep understanding of the lived experience of learners emotions in SBE.

Methods: A qualitative study was conducted using Hermeneutic phenomenology. Medical students were recruited and purposefully sampled to engage in a ward based simulation exercise. While wearing video-glasses - first person PoV video-footage was captured and used to elicit interviews with

participants following the simulation. Interviews were transcribed and analysed using the Template Analysis approach in an interpretive, iterative and reflexive fashion.

Results: Four main themes emerged 1) 'Nervous anticipation' 2) 'Shock and awe' 3) 'Emotions in the moment' 4) 'Safe landing?'

Conclusion: The embodied nature of SBE has potential to evoke a range of emotions in learners. Given the unpredictable nature of clinical performance by a learner in a simulation, their emotional states are also dynamic and emergent. There is never static in the complex interplay between perceived performance and learners emotional states. Constant reconfiguring occurs between emotions and perceived performance - with a fine balance between maintaining a dynamic learning equilibrium or volatility. By raising surface awareness of these complex emotional states, can allow educators to take action in their teaching practice. Not only by modify the degree of challenge intra-simulation, but also attending to psychological safety prior to and after simulation.