

# Professionalism, ethics, and identity in residency education: evolving in a changing landscape

## Professionalisme, éthique et identité en formation des résident·es: une ère de changement

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### 071 Physical and biophysical markers of assessment in medical training: A scoping review of the literature

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**Background:** Assessment in medical education has changed over time to measure the evolving skills required of current medical practice. Physical and biophysical markers of assessment attempt to use technology to gain insight into medical trainees’ knowledge, skills, and attitudes. The authors conducted a scoping review to map the literature on the use of physical and biophysical markers of assessment in medical training.

**Methods:** The authors searched seven databases on August 1, 2022, for publications that utilized physical or biophysical markers in the assessment of medical trainees (medical students, residents, fellows, and synonymous terms used in other countries). Physical or biophysical markers included: heart rate and heart rate variability, visual tracking and attention, pupillometry, hand motion analysis, skin conductivity, salivary cortisol, functional magnetic resonance imaging (fMRI), and functional near-

infrared spectroscopy (fNIRS). The authors mapped the relevant literature using Bloom’s taxonomy of knowledge, skills, and attitudes and extracted additional data including study design, study environment, and novice vs. expert differentiation.

**Results:** Of 6,069 unique articles, 443 met inclusion criteria. The majority of studies assessed trainees using heart rate variability ( $n = 160, 36\%$ ) followed by visual attention ( $n = 143, 32\%$ ), hand motion analysis ( $n = 67, 15\%$ ), salivary cortisol ( $n = 67, 15\%$ ), fMRI ( $n = 29, 7\%$ ), skin conductivity ( $n = 26, 6\%$ ), fNIRs ( $n = 19, 4\%$ ), and pupillometry ( $n = 16, 4\%$ ). The majority of studies ( $n = 167, 38\%$ ) analyzed non-technical skills, followed by studies that analyzed technical skills ( $n = 155, 35\%$ ), knowledge ( $n = 114, 26\%$ ), and affective skills ( $n = 61, 14\%$ ). 169 studies (38%) attempted to use physical or biophysical markers to differentiate between novice and expert.

**Conclusions:** While physical and biophysical markers have the potential to augment current assessment in medical education, future research is required to determine generalizability, reliability, validity, practicality, and best practices on how markers can be used to assess medical trainees.

## 072 Improving faculty completion of clinical assessments in an Internal Medicine program using a quality improvement framework

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**Introduction:** Though educational programs must ensure evaluation completion, how best to optimize response rates by clinical faculty is not well understood. We used quality improvement (QI) to apply theoretical frameworks from the Consolidated Framework for Implementation Research (CFIR) to develop interventions over four cycles to improve assessment completion by faculty.

**Methods:** A team of faculty evaluated the existing assessment system using QI methods and CFIR constructs related to workflow and incentives/disincentives to identify interventions: changing the timing of evaluations, developing a reminder system, sharing faculty development materials, implementing disincentives, and setting expectations from leadership. These interventions were performed over four PDSA cycles in a 12-month period. We used MedHub to generate reports on the incomplete evaluations.

**Results:** Four PDSA cycles followed the percentage of faculty with incomplete during a quarter. Cycle 1 implemented two email reminders. Cycle 2 implemented a change in timing of evaluations, 3 reminders with a third notifying the program director of the faculty with late evaluations. Cycle 3 included four reminders including notifying Department of Medicine section chiefs of faculty with remaining evaluations. Cycle 4 added messaging from leadership about expectations for completion. Each PDSA cycle had reductions in the number of faculty with late evaluations (Cycle 1: 59% to 50%, Cycle 2: 60% to 41%, Cycle 3: 66% to 45%, Cycle 4: 58% to 34%). Each cycle had an increasing percent change of incomplete assessments (11.1%, 34.2%, 35.1%, 42% across cycles 1-4 respectively).

**Conclusion:** Our program used QI principals to develop a series of interventions to improve completion. Incomplete evaluations are a complex problem requiring a multi-pronged approach. Limitations include the lack of balancing measures such as the quality of assessment and comments provided by the increased completion.

## 073 Perceived importance of Transition-to-Practice Competencies by Psychiatry Residents in Canada: A Cross-sectional evaluation

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**Introduction:** As Canadian psychiatry residency programs transitioned to the competency-based model, the Royal College of Physicians and Surgeons of Canada released a list of Transition-to-Practice (TTP) competencies, which include integrating skills for life-long learning, management of clinical, administrative, and financial aspects of practice. A Canadian study of 16 psychiatry training programs identified gaps in resident self-perceived skills in areas such as program planning or career development, suggesting a demand for TTP competencies that align with the needs of psychiatry residents. Our project is aimed to identify the skills/proficiencies psychiatry residents perceive as most valuable during their TTP.

**Methods:** An online questionnaire was sent to senior psychiatry residents (PGY4 and above) in Canada via the Coordinators of Psychiatric Education (COPE) from January to March 2023. Residents were asked to rank the Royal College TTP competencies based on their perceived levels of importance. Rankings were converted into quantitative data from 1 (Least Important) to 5 (Most Important). Open-ended comments were also collected from residents addressing other aspects they deemed important but not captured in existing TTP competencies.

**Results:** We received 72 responses from 15 (out of 17) Canadian medical schools. The top 3 TTP competencies were adverse event management, practice management, and business aspects of practice. Competencies rated least important included evaluating costs of treatments, quality improvement, and social media training. Residents highlighted the importance of managing practice-related finances and applying to jobs, which were not addressed by current TTP competencies.

**Conclusion:** This cross-sectional evaluation provided an opportunity to refine psychiatry residency training by focusing on prioritized TTP competencies perceived by residents. Furthermore, areas identified by residents as significant but not encompassed within the Royal College TTP competencies may reflect unaddressed needs in psychiatry residency training. This suggests the need for additional resources to address these gaps moving forward.

## 074 Using a two-phase qualitative approach to understand how Entrustable Professional Activities guide competence committee decision making

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**Introduction:** Following the transition to CBME, competence committees (CCs) have been used to make advancement decisions for trainees, including recommendations for progression versus remediation, using clinical assessments, exam scores, and other feedback. Within CBME, entrustable professional activities (EPAs) constitute the majority of clinical assessment data available to CCs. However, recent reports have raised concerns regarding the usefulness of the feedback on these EPA forms. Therefore, our objective is to understand how different residency programs are using EPA data to make decisions at the level of the CC.

**Methods:** To accomplish this, we used a two-phase qualitative study approach to explore the CCs in different training programs at McMaster University. For Phase 1, two members of the research team observed a CC meeting and took field notes using an observation guide. Currently, this phase has been completed for CCs in two programs: core pediatrics and urology ( $n = 13$  and  $n = 6$  CC members, respectively). Additional programs will join Phase 1 in the coming months, aiming to include 6-8 programs varying in size and procedural focus. The field notes will then undergo reflexive thematic analysis. Phase 2 will involve completing semi-structured interviews with members of the CCs to further explore the themes identified in Phase 1.

**Results:** The preliminary findings showed considerable variation in how EPAs and other assessment forms are used, relative to other available data such as exam scores, by the CCs to make advancement decisions for resident trainees.

**Conclusions:** Given the reliance on EPAs for assessment data in the CBME curricula and the concerns that have been raised in recent reports, it is important to understand the decision-making processes of CCs and how EPAs guide their decisions. Further data collection will explore this in-depth and provide insight into potential differences between training programs.

## 075 Attracting and increasing retainment of International Medical Graduates in Saskatchewan

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**Background:** The recruitment and retainment of health care providers in rural/remote communities in Saskatchewan has been an ongoing challenge. Saskatchewan has relied heavily on international medical graduates (IMGs) to help fill positions in these communities. The purpose of this project was to explore perceptions on how to attract IMGs to the province, as well as to garner suggestions from different organizational stakeholders on how to increase IMG retainment.

**Methods:** Six organizational stakeholder groups along with 20 IMG physicians who were currently practicing in Saskatchewan participated in focus groups or semi-structured interviews. Participants were asked to provide suggestions on how to increase retainment in the province or how to better attract IMGs to Saskatchewan. Transcripts were analyzed using thematic analysis in NVIVO.

**Results:** Organizational stakeholders had several suggestions to help increase retainment in the province. These included addressing individual location placement-fit, integration and support for physicians' families, as well as shift work/physician rotations in rural communities. IMGs who are currently practicing in Saskatchewan had several suggestions on how IMG physicians could be drawn to Saskatchewan: more information on provincial programming, IMG orientations for rural placement, less requirements for licensure, housing initiatives, increased incentives and resources, increased amenities in smaller communities, prioritization of IMGs with families or who are already Saskatchewan residents, support networks and community awareness, assessment of physician-community fit, and physician integration into the community.

**Discussion:** The overall intention of this project is to improve the availability and quality of healthcare services in Saskatchewan by increasing the number of qualified physicians, especially in underserved areas. The data collected in this study was used to develop recommendations intended to bolster successful outcomes in terms of gaining licensure in the province and retainment of IMG physicians in Saskatchewan, specifically in rural locations.

**076 The effects of Equity, Diversity, and Inclusion (EDI) training workshops on perceptions of resident trainees**  
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**Background:** Learners from marginalized backgrounds are disproportionately represented in experiences of discrimination. Equity Diversity and Inclusion (EDI) curriculum development studies show that simulation sessions, improve readiness to respond to discriminatory comments in the workplace. A workshop was developed to lay the foundation for an EDI training curriculum in residency programs.

**Purpose:** To assess the understanding of EDI-related topics in Canadian Residency Training Programs and to determine the efficacy of video-based simulation in knowledge acquisition pertaining to EDI topics.

**Methods:** Participants were Pediatric and Internal medicine residents at Memorial University of Newfoundland and the University of Calgary. Participants completed a pre-intervention survey to assess baseline knowledge. Participants watched videos developed by the University of Calgary on racism and gender inequity, followed by a facilitated discussion of the videos. They completed a post-intervention survey to assess level of knowledge gain.

**Results:** Most residents, 79%, felt the workshop increased the chance of responding to a microaggression that occurs to someone else in the workplace. Ninety six percent felt the workshop had given them tools on how to intervene in the case of a microaggression and 85% felt like they were probably and likely to use the tools received in the workshop in the future. Comfort with identifying microaggressions and likelihood to respond to microaggressions increased post workshop and were statistically significant ( $p=0.002$  and  $p<0.001$  respectively).

**Discussion:** Implementing a workshop on microaggressions into curricula should be a fundamental part of residency training programs. By creating workshops, residents can feel empowered to identify and respond to microaggressions in the workplace. This can help create a training environment that supports diversity and inclusion, thereby contributing to wellness and work satisfaction.

**077 Resident as Teacher: Developing pedagogical skills in a teaching internship**  
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**Introduction:** Residents act as role models for medical students, inspiring their future professional self. Although the daily practice scenario involves the resident in constant teaching and learning environment, they do not receive specific professional training focused on teaching pedagogy. Our objective is to share the experience of the Residency Program of Family Medicine at the Federal University of Uberlândia (UFU) – Brazil in addition of a teaching internship to aid second-year residents develop their pedagogical skills.

**Method:** Three groups of second year residents were supervised in weekly activities focused in andragogical teaching methods. Collaborative learning and Paulo Freire's theoretical framework were the guides for the methodologies used, taking into account the dialectic that by teaching we learn and we learn by teaching. During the two months internship, meetings used a problem based learning scenario, with discussions regarding methods in clinical case discussions and clinical supervision of last year medical students. Studies on active methodologies and andragogy permeated the theoretical content of the professional internship. Safety, trust, ethics and professionalism skills were the most frequently addressed.

**Conclusion:** At the end of the professional internship, the residents provided constructive feedback and reported the importance of being supported in this role as supervisors. Improved clinical reasoning, greater dedication to patients, better understanding of their own deficits and increased social responsibility were the main points highlighted by residents throughout the internship. The continuation of the teaching internship in this residency program proves to be essential to support residents in their pedagogical skills and it is seen as viable to be expanded to other residency programs since the resident-medical student interface is transversal in all medical areas.

**078 This session has been withdrawn.**

**079 Success factors for IMGs participating in support programs: Perspectives from organizational stakeholders**  
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**Introduction:** Various supports exist in Saskatchewan to assist international medical graduates (IMGs) in obtaining required licensures to practice (e.g., Saskatchewan International Physician Practice Assessment (SIPPA) and the College of Medicine's IMG support program) or into postgraduate residency training (one-on-one CaRMS (Canadian Resident matching service) prep support for the application process). These programs place heavy emphasis on rural or remote practice and are often associated with a return of service (ROS) policy wherein the physician is contracted to practice in the community for several years. Nevertheless, provincial statistics show that outcomes of existing programs (obtaining licensure to practice or placement into residency training) have low success rates; and for those who are successful, have low retention rates for remaining in rural/remote Saskatchewan communities. The purpose of this project was to determine success factors for IMGs in the various support programs.

**Methods:** Individuals from six organizational stakeholder groups participated in focus groups or semi-structured interviews. Stakeholders from all organizations were asked if they could discuss the success factors (what they felt was working really well) for IMGs in their program or organization. Transcripts were analyzed using thematic analysis in NVIVO.

**Results:** Five major themes were identified as contributing to successful outcomes. These included: Formal supports (programming, community supports and integration), informal supports (relationship building and ensuring understanding), experience (clinical, Canadian healthcare environment), educational continuum (e.g., time between undergraduate medical training and completing qualifying exams), and personal factors (mindset, age, willingness to work). In addition to this, there were a few comments mentioning manageable clinical workloads, adequate housing, income security, and a matching process for communities as contributing factors to successful outcomes.

**Discussion:** The data collected in this study was used to develop recommendations to improve options for IMGs in terms of educational programming, including supports for transition to SIPPA or medical residency.

**080 The wellbeing status of residents in single-center PGME programs**

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**Introduction:** Postgraduate medical education differs from many other educations, including education and active professional life. Both the workload and the program's academic requirements may cause intense pressure and stress on residents. Residents' well-being is critical to patient care and effective education. This cross-sectional descriptive study aimed to determine the well-being of residents in single-center PGME programs.

**Methods:** We used a validated well-being questionnaire, which included 14 items. The items were rated on a 5-point scale. Residents were invited by e-mail to fill out the questionnaire, which was distributed by Qualtrics. Filling out the questionnaire was voluntary and anonymous for all participants. They also answered open-ended questions related to their working conditions. Descriptive statistics and non-parametric tests were used in the data analysis.

**Results:** 85 residents participated in this study (response rate: 85%). The mean value for general psychological well-being was 2,9 (standard deviation: 1,2). Residents described their state of wellness as %14 good, %45 moderate, and %41 bad. There was no significant difference between surgical and non-surgical residents' well-being status ( $p > 0.05$ ). However, a significant relationship was found between years of residency education and happiness ( $p = 0.036$ ). The lack of work-life balance, career uncertainty, heavy workload, and economic problems were reported by residents as having a major role in their well-being status.

**Conclusion:** Creating supportive and positive interventions that address work-related demands and increase access to resources is essential. These interventions could assist residents in reducing their work stress and improving their well-being.

## 081 Implementation of a quality improvement checklist for learners to improve safety and expectations around break taking in the Pediatric Emergency department

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**Introduction:** The Pediatric Emergency Department (PED) is a unique environment for learners with an almost constant flow of patients, procedures, and high acuity presentations, which may result in learners not taking a break, or not completing key tasks prior to taking a break. Unclear expectations around break-taking can result in a suboptimal learning environment and potential patient safety issues. Our checklist tool aims to clarify expectations and encourage uptake of breaks in a safe manner. We aim to increase to 75% the number of learners who report that the expectations around break taking are clear and create a pre-break checklist that 75% of Staff physicians agree contain the most important items.

**Methods:** Using a quality improvement framework, we surveyed learners and staff from the PED on baseline attitudes around learner break taking in terms of expectations and frequency of completion of certain patient-care tasks. We implemented a checklist to clarify these expectations and will use post-surveys in our monthly PDSA cycles to evaluate its efficacy.

**Results:** 73.4% of learners agreed it was important to take a break. Only 40% felt there were clear expectations around break-taking and 70% felt there should be clearer expectations around break-taking. Only 26.7% frequently complete at least 12 of the 14 safety checkpoints we highlighted.

**Discussion:** Learners reported unclear expectations around break-taking and expressed desire for clarification. Staff felt learner breaks were important but noted some negative experiences in terms of missed learning opportunities and increased patient length of stay, due to unclear communication. The majority of staff stated that they frequently prompt their learners to take a break, however this was not the experience of all learners. Our checklist may help prompt both staff and learners regarding breaks and set clearly defined expectations and steps to ensure learner well-being and patient safety.

## 082 Evaluating the impact of two novel communication skills e-modules on Neurology residents' perceived confidence and knowledge of serious illness conversation skills.

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**Introduction:** There is a lack of adequate communication skills training in many Neurology residency programs. Our team developed two novel e-modules designed to teach serious illness communication skills for common clinical scenarios encountered within Neurology. Our study aimed to assess the impact of these e-modules on residents' knowledge, confidence and readiness to lead serious illness conversations.

**Methods:** In October 2023, 21 senior neurology residents were invited to participate in a virtual communication skills workshop including the novel e-modules. Learners were invited to complete 3 surveys: 1) pre-workshop survey assessing the current state of communication skills teaching within the program and learners' self-perceived confidence and readiness to lead serious illness conversations, 2) post-workshop survey assessing the usefulness and efficacy of the intervention, and 3) one-month post survey assessing recall of skills taught and perceived readiness and confidence. Survey delivery and data were collected through Qualtrics.

**Results:** 14 residents attended the workshop, 12 completed the pre-workshop survey, 10 the post-workshop survey and 0 the one-month post survey. 50% indicated they had not received prior communication skills training. 8 participants found that the workshop and e-modules were effective modalities to teach communication skills, 7 shared the intervention prepared them better to lead serious illness conversations, 7 felt it taught skills they could incorporate into their practice and 7 reported increased confidence to respond to emotions inherent to these conversations. No statistical significance was found between pre and post intervention data.

**Conclusion:** Our results demonstrate that the majority of residents found the e-modules and virtual workshop an effective means of teaching communication skills. This may lay the ground work to establish a larger program to further enhance neurology residencies' curricula and training in communication skills. The limitations of our study include a small sample size with low response rate in a single centre study.

### 083 “C”-ing the “L”essons learned from the Consultation/Liaison (CL) curriculum changes in response to earlier Royal College examination for psychiatry residents

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**Introduction:** PGY4 residents are expected to complete a four-month Consultation/Liaison Psychiatry (CLP) core clinical rotation (i.e., during July-to-October, November-to-February, or March-to-June). The new Royal College Examination (RCE) schedule in Spring 2024 implies that not all PGY4 residents would have completed their CLP rotation prior to writing the RCE. In response to this, the CLP academic-half-day is now delivered in the fall of the academic year, which is deviated from previously concurrent/synchronized didactic teaching with residents’ four-month CLP rotations. The objectives of our project are to evaluate the new CLP curricular offering and to explore potential impact (if any) to resident learning experience in response to the asynchronized academic-half-day teaching with core clinical rotations.

**Method:** An online knowledge self-assessment (34 knowledge questions on 17 CL topics) was administered to residents during: (1) the first didactic seminar of the CLP academic-half-day (as pre-survey); and (2) the last session of the CLP academic-half-day (as post-survey). Resident participation was voluntary, anonymous, and has no impact on their evaluations. The purpose of this self-assessment was to collect subjective and objective feedback from residents about the effectiveness and impact (if any) of the new CLP curriculum.

**Conclusion:** Thirty-five (100%) PGY4 residents completed the self-assessment pre-survey in August 2023, with an average score of 19.66 (out of 34). Residents performed the best in depression-in-the-medically-ill and psychopharmacology topics, and the lowest in perinatal psychiatry and cardiac/TBI. The post-survey was administered in December 2023. Residents’ feedback and results from the two self-assessments will support continuous quality improvement of our CL Core Curriculum.

### 084 Characterising the experiences of surgical trainees with advocacy during residency training

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**Introduction:** Equipping surgical residents with effective advocacy skills is crucial to addressing individual and systemic inequities. Although health advocacy is a core competency in CanMEDS, teaching and evaluating advocacy has been challenging, particularly in surgical residency programs. This study aimed to characterize attitudes towards and barriers to engaging in advocacy at both a patient and systems level among surgical residents at the University of Toronto.

**Methods:** First-year surgical residents participated in this mixed-methods study during a physician advocacy seminar. Consenting residents completed a survey on previous and current advocacy experiences. Interested residents participated in 20-minute semi-structured interviews to complement previously identified themes. Interview transcripts underwent qualitative analysis with semantic and conceptual coding by two investigators, ensuring interrater agreement on themes.

**Results:** Of 36 attendees, 27 (75%) completed surveys, and 13 (48%) were interviewed. Six themes emerged: previous advocacy work, advocacy opportunities, facilitators and barriers to engagement, recommendations for support, and advocacy career aspirations. Of survey respondents, 59% reported prior advocacy experience, whereas 41% had advocacy education exposure. Only 22% deemed pursuing advocacy during residency “very feasible.” Similarly, 47% were “slightly likely” to pursue advocacy during residency, while 37% were “moderately likely” to integrate advocacy into future practice. Thirty-three percent (33%) lacked mentors for advocacy skill development. Common barriers included limited time (89%), absence of established advocacy career tracks (56%), and lack of mentorship (56%). Proposed recommendations for enhancing advocacy support during training include integrating advocacy teaching into curricula (62%), allocating protected time (46%), improving advocacy recognition (46%), and prioritizing advocacy within academic culture (38%).

**Conclusions:** The study demonstrates that surgical residents acknowledge the significance of health advocacy. However, critical barriers remain in advocacy engagement during residency training. These findings can inform the development of formal advocacy curricula within surgical residency programs, preparing residents to excel as medical experts and advocates.

### 085 Evaluation of the “resident as teacher” curriculum: A needs assessment in medical education at an academic institution

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**Introduction:** Strong skills in teaching for residents contribute to increased satisfaction and improved student interest. Few opportunities are offered at the junior resident level. We aim to evaluate the needs in teaching of residents and provide recommendations to build further opportunities.

**Methods:** A 30-question survey created using current literature was sent to all 769 current PGY1 to PGY3 residents at Université de Montréal. Data gathered was analyzed to make recommendations for improvements in medical education training.

**Results:** We received 65 completed surveys (8.5 % response rate). 80 % of residents were interested in further training in teaching through simulations, online modules and direct supervision. 58% were interested in a medical education elective. Lack of time was considered by most responders (89%) as the main factor limiting participation. 71 % of residents offered less than 10 hours for participation yearly. Narrative comments noted the unavailability of information on current medical education resources. 71% of responders admitted not knowing any journal or resource in medical education. Lack of recognition by faculty compared to clinical performance or research was noted, particularly in family medicine.

**Conclusion:** Limitations of this study include possible selection bias from responders who were more likely to be interested in medical education and being a single institution study with its unique environment. There is strong interest amongst junior residents for further training. However, lack of time and knowledge of current resources are obstacles to further participation in medical education activities. There is need to allow protected time for medical education and offer a variety of activities, including an elective rotation. Information on currently available resources in medical education should be widely circulated. Promoting and recognizing teaching and reserving time by faculty for direct supervision of teaching by junior residents should be encouraged.

### 086 Future directions in Diagnostic and Clinical Pathology: Integrating case-based learning into residency training

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**Introduction:** The landscape of clinical and laboratory medicine residency training in Canada is changing. Within the Diagnostic and Clinical Pathology program specifically, the best pedagogical approach to delivering classroom-based teaching remains unclear. This study measured residents' perceptions of course satisfaction, ability to meet learning objectives and future clinical application across courses offered in three different in-person pedagogical approaches (an introductory "Boot Camp" course, Interactive Case-Based Sessions, and Modules).

**Methods:** Participant satisfaction (Kirkpatrick model level 1 data) was gauged using a composite score of ten criteria, and a targeted needs assessment (based on Kern's 6-step approach) was performed to assess the ability of each course to meet learning objectives. Additionally, residents' comfort with using course material in future clinical practice and open-ended narrative feedback were collected. Descriptive statistics were used for reporting quantitative data.

**Results:** Across all teaching sessions, most residents agreed that sessions were satisfactory (>80%) and had met learning objectives (>75%). Additionally, over 80% of residents were comfortable applying course material to clinical practice. The interactive and case-based sessions scored highest, averaging 91% and 86% of residents agreeing that the sessions fulfilled the criteria in course satisfaction and learning objectives, respectively. When considering all teaching sessions, 90% of residents felt comfortable applying the information learned in the courses to clinical practice. Open responses expressed a call for more case-based teaching across all teaching sessions.

**Conclusion:** Our initial pilot data suggests that a difference may exist between pedagogical approaches; however, future study is needed to assess if an interactive course-based approach is superior. Our study was limited to Kirkpatrick level 1 data, a small sample size, and descriptive statistics of central tendency. Our findings are best summarized in the comment from one resident who described case-based teaching as “bridging the gap between theoretical knowledge and clinical application.”



087 Soins critiques à l'urgence : exposition clinique et niveau de confiance des finissants en médecine familiale  
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**Introduction :** La médecine d'urgence requiert de nombreuses compétences spécifiques en soins critiques. Certaines organisations contestent l'atteinte de ces compétences chez les résidents finissants en médecine familiale. Cette étude vise à évaluer le niveau de confiance et le niveau d'exposition clinique des résidents finissants en médecine familiale sur diverses situations cliniques critiques dont l'exposition est jugée essentielle pour pratiquer la médecine d'urgence.

**Méthodologie :** Une étude de cohorte transversale auprès des résidents en médecine familiale dont la date de graduation est prévue le 1<sup>er</sup> juillet 2022 a été réalisée. L'instrument de mesure consiste en un autoquestionnaire évaluant la qualité de l'exposition clinique et le niveau de confiance des résidents dans 43 situations cliniques critiques. L'autoquestionnaire a été élaboré et adapté à partir de celui utilisé dans l'étude *Internal medicine resident's exposure*.

**Résultat :** Un courriel contenant un lien vers l'autoquestionnaire a été distribué à 96 résidents finissants de médecine familiale de l'Université Laval. 13 résidents ont répondu au questionnaire. 85% des répondants envisageaient pratiquer la médecine d'urgence une fois leur résidence terminée. Parmi les 43 situations cliniques critiques questionnées, 16 situations n'ont pas été rencontrées pendant la résidence chez au moins 15% des résidents. Seulement 5 situations cliniques ont été prises en charge de façon indépendante par plus de 50% des résidents. Le niveau de confiance des résidents était élevé pour 7 des situations cliniques critiques évaluées. Les analyses de sous-groupe n'ont pas pu être réalisées étant donné la petite taille de la population.

**Conclusion :** Chez les résidents finissants en médecine familiale, le niveau d'exposition clinique et plus particulièrement le niveau de confiance pour prendre en charge les situations cliniques critiques rencontrées à l'urgence semblent insuffisants à l'issue de leur formation.

088 Medical students' choice of family medicine residency: Is the solution in a regional medical campus? A retrospective study in Quebec, Canada

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**Background:** The province of Quebec experiences a marked shortage of family physicians in some areas. In 2004, Université de Montréal's (UdeM) faculty of medicine created a regional campus in Mauricie with the aim of attracting doctors locally. The goal of this study is to evaluate the impact of this campus on the proportion of students admitted to family medicine residency during the first round of the Canadian Resident Matching service (CaRMS) match in comparison with the main campus located in Montreal.

**Methods:** Data for UdeM's medical cohorts from 2018 to 2023 were retrieved and anonymized. Sociodemographic characteristics of students (gender, previous academic level, region of origin, medical campus) and first round residency match were analysed using Chi-Square tests and logistic regressions. The score of the Medical Council of Canada Qualifying Examination part 1 (MCCQE) was used to account for academic performance.

**Results:** Out of the 1,764 students, 1170 (66.3%) were female and 734 (41.6%) had previous university-level education. Overall, 129/232 students from Mauricie matched in family medicine (55.6%) compared to 727/1,532 students from Montreal campus (47.5%) (chi square = 3.927, p=0.048). A logistic regression model showed an association between matching into family medicine and female gender (Exp(B)=2.153, p<0.001), having a previous university-level education (Exp(B)=1.580, p<0.001), studying at the Mauricie campus (Exp(B)=1.421, p=0.025) and lower MCCQE scores (Exp(B)=0.988, p<0.001).

**Conclusions:** For UdeM's medical cohorts of 2018 to 2023, matching during the first round of the CaRMS to family medicine residency was associated with female gender, previous university-level education, regional campus and lower MCCQE score. Although many of these findings are in accordance with previously published studies in Canada, further studies will be required to understand how regional campuses help promote family medicine and retention in the targeted area.

### 089 Bridging the gap: A pocket resource to assist students' transition into their Psychiatry clerkship

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**Introduction:** Transitioning to clerkship is the most challenging time for medical students. Consequently, students appreciate formal, structured information during rotations. We aimed to evaluate the effectiveness of a Psychiatry Information Card, designed for 3rd year medical students entering their psychiatry rotation in Saskatoon.

**Methods:** This is a quasi-experimental study conducted among seven cohorts of 3-year medical students (cohort 1-3: control group and cohort 4-7: experimental group, estimated  $n = 59$ ). Students completed an online survey that covers demographics, knowledge, and comfort in psychiatry at the start and end of rotation. The questions were developed and organized in accordance with the 4-level Kirkpatrick's 'Model of Learning' Framework. Data was analyzed with ANCOVA.

**Results:** Of the 59 questionnaires distributed to medical students, 53 were completed. 22 in the control group and 31 in the experimental group. In both control and experimental group, there were significant improvements in both knowledge scores (including individual scores and overall scores) and comfort scores (including individual scores and overall scores) at post-rotation. However, the magnitude of the differences (i.e., post-rotation scores – pre-rotation scores) tend to be larger in experimental group than in control group. After controlling for sex and pre-rotation score, there was no statistically significant difference in post rotation scores (knowledge and comfort) between control and card group (all  $p$ -values  $> 0.05$ ).

**Conclusion:** The findings show that medical students' self-reported knowledge and comfort is relatively higher with the help of a resource during a new rotation. In our study it is important to note that the medical students were at various stages of their training. Those who presented early in the year were likely less familiar and confident than those towards the end of the year which would be reflected in their responses. Our study supports this concept and identifies an area in medical education that requires further contribution.

### 090 Evolving the admission process: An international initiative to explore alignment with professional and program identity in residency applicants

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**Introduction:** Challenges in the admission process have been addressed to better match applicants to thrive in residency education, to align with the needs of patients and to the program mission. This is a descriptive report of an innovation in a multicentric program in Mexico to explore alignment with professional and program identity in residency applicants with an online psychometric evaluation, to provide an input to the interview and to contribute to an holistic application process.

**Method:** Since 2021, 921 applicants to 17 residency programs have done an online psychometric evaluation including: personal data form, California Psychological Inventory (CPI), Multiphasic Personality Inventory (MMPI-2) and the institutional Inventory of Strengths and Vulnerabilities. All data was processed by 2 university psychologists to generate a results report for the program director to: a) provide an overview of the applicant characteristics to be addressed during the interview (emotional resources, personality and attitudes), and b) provide a recommendation regarding the match of the applicant with the program mission. Between 2021 and 2023, 73.62% (2021: 67.33%, 2022: 86.33%, and 2023: 67.39%) of applicants have been recommended (characteristics, emotional resources and competencies matching program mission) and recommended with observations (regarding needs for specific support, mentoring and remediation).

**Conclusion:** An online psychometric evaluation may provide additional information to consider if an applicant's characteristics and identity is aligned with what the program is able to provide and support to help them to thrive. Future directions include creating a brand identity for each program and a more specific match. Residency Programs have the duty to select residents that will contribute to patient care, therefore they should aim to match qualities and characteristics of candidates with the program mission and core values, and support them to thrive and succeed in the program.

### 091 Evaluation of a “crucial conversations” simulation for Internal Medicine residents

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**Introduction:** Internal Medicine residents participate in challenging conversations regularly throughout their training. “Crucial conversations” are those that go beyond the medical content of discussion, and involve exploring patients’ values and wishes regarding their care. They require strong communication skills, and are encapsulated in several Entrustable Professional Activities (EPAs). While there is data supporting the fact that simulation helps residents strengthen their communication skills, this data is limited to goals of care conversations. Few studies have examined the use of simulation in developing communication skills beyond goals of care conversations. We studied the effectiveness of a “crucial conversations” simulation session for Internal Medicine residents in improving residents’ confidence and communication skills surrounding a wide variety of critical conversations.

**Method:** Approximately 30 Internal Medicine residents participated in a 2-hour virtual simulation session in which they carried out a “crucial conversation” with a standardized patient. Practice scenarios included stations on disclosing medical errors, assessing capacity, LGBTQ health, addictions medicine, and interprofessional conflict. Residents received verbal feedback on their performance from the standardized patient, their peers, and a physician facilitator. They also received written feedback by having the physician assessor complete an EPA following their conversation. We asked residents to complete an anonymous survey to determine their confidence in having “crucial conversations” before and after completing our session. These results will be analyzed to determine the effectiveness of our session in helping residents improve their confidence with these conversations.

**Conclusion:** Simulation for “crucial conversations” is a novel way to incorporate social medicine training into residency curricula. Data collection is still in process, however initial results suggest that this session is helpful to residents and improves their confidence with these conversations. Future directions include obtaining objective, longitudinal data to determine if such sessions improve residents’ communication skills.

### 092 Moving towards Competence by Design in Forensic Psychiatry training: What we learned from our trainees

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**Introduction:** The Department of Psychiatry intends to train their forensic psychiatry residents to be leaders in the community who will break down barriers to care, reduce stigma, and advocate for change. Competence By Design (CBD) is the Royal College of Physicians and Surgeons of Canada’s major change initiative to reform training of medical specialists in Canada. However, there is lack of shared learning in the literature regarding implications and challenges for implementing CBD in forensic psychiatry subspecialty programs. The objective of our project is to evaluate the Forensic Psychiatry Subspecialty Residency Program to assure our residents are well prepared to educate general psychiatrists, community agencies, correctional officers, and the courts, ultimately improving patients’ and society’s overall quality of life.

**Method:** As part of our program evaluation efforts, we administered an exit survey to our graduating residents in 2022 and 2023, respectively. Survey questions assessed residents’ perceived confidence in transition-to-practice, sense of wellbeing and burnout, scholarly productivity during residency, and their plan and/or intention to practice forensic psychiatry.

**Conclusion:** Three graduates in 2022 and two in 2023 (i.e., 100% response rate) completed our exit survey. All of them confirmed employment and would be working full-time as forensic psychiatrists. Going forward, we will conduct semi-structured interviews with residents graduated in 2020 and 2021 (pre-CBD cohort) and those graduated in 2022 and 2023 (post-CBD cohort) to seek further feedback and insights for quality improvement of our program delivery.

### 093 The Co-WRaP study: Co-Creating solutions to enhance the well-being of residents and partners

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**Introduction:** Postgraduate medical training is often an exciting phase of trainees' careers. However, it is also commonly associated with significant work demands that can negatively impact trainees' well-being and intimate relationships. There is limited research on the personal relationships of trainees despite the potential role that partners can play in protecting against the stressors associated with training. The Co-WRaP Study aims to better understand the impact of training on the well-being and relationships of postgraduate medical trainees and their partners, and to identify potential strategies to better support them.

**Methodology:** This qualitative study was conducted at McMaster University in Hamilton, Ontario, from August to December 2023. An invitation to participate in 60-minute one-on-one interviews was sent to all McMaster postgraduate medical trainees and they were asked to invite their partner to participate (if applicable). Overall, 23 postgraduate medical trainees and 16 partners, selected for a diversity of experiences and identities, participated in semi-structured interviews. Interpretive description was used as the overarching methodology to capture the shared and unique experiences of trainees and their partners.

**Results:** Results will be available by February 2024. Reflexive thematic analysis will be used to analyze the collected data. This approach will involve an iterative process of data familiarization, coding, generating initial themes, reviewing and defining themes, and writing the overall thematic narrative.

**Discussion:** This study will inform residency education leaders of the impacts of training on trainees' well-being and relationships. It will also help design and identify priority interventions that can support the well-being of trainees and partners at the individual, dyadic, and systemic levels.

### 094 The Effect of Internal Reviews on the EFFECT scores

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**Introduction:** Supervision of residents and supervisors' feedback is critical in promoting the residents' development in postgraduate medical education (PGME). Feedback from residents for supervisors is often challenging and less investigated. This study aimed to describe the strengths and areas for improvement in the supervision process by residents in PGME programs in a single center and to assess how internal review (IR) affects it.

**Methods:** We used The Evaluation and Feedback for Effective Clinical Teaching (EFFECT) questionnaire which had 58 questions in seven domains: role modeling, task allocation, planning, feedback, teaching methodology, assessment, and personal support. The items were rated on a 5-point scale. We uploaded the questionnaire to Qualtrics to be distributed via email, and residents were asked to complete it before and 6 months after the IR. Filling out the questionnaire was voluntary and anonymous for all participants. The study population was divided into two groups as surgical and nonsurgical. Mean overall scores (MOS) and mean scale scores were calculated. Independent and paired t-tests were used to compare the data of the groups and the data before and after IR, respectively.

**Results:** Seventy-four of 86 residents (86.04%) replied to the survey and evaluated 222 supervisors. Twenty-four residents were in surgical programs. Non-surgical program supervisors received significantly higher scores for role modeling (clinical skills) ( $3.7 \pm 4.3$  vs  $4.3 \pm 0.8$ ), assessment ( $4.1 \pm 2.8 \pm 1.4$ ), feedback ( $4.2 \pm 1$  vs  $3.6 \pm 1.3$ ), and teaching methodology ( $4.4 \pm 1$  vs  $3.5 \pm 1.1$ ). 34 residents participated post-IR. IR improved the scores of receiving feedback ( $2.9 \pm 1.2$  vs  $3.6 \pm 1$ ) and planning ( $3.6 \pm 1.1$  vs  $4.4 \pm 0.9$ ), especially in non-surgical programs.

**Conclusion:** Implementing EFFECT in the evaluation process can improve supervisors' experience and create an inspiring learning environment. IR is an effective intervention to increase the awareness of supervisors about their responsibility.

### 095 Assessing a tailored curriculum for Endoscopic simulation for General Surgery Residency programs in Canada

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**Background:** Gastrointestinal (GI) endoscopy is the standard method for the detection and treatment of GI cancers, as well as other diseases. However, typical endoscopic practices are technically challenging and necessitate advanced visual-spatial skills and considerable hands-on practice. Simulators (eg, plastic phantoms, computer simulators, and biosimulation models) have been put into use for endoscopic training. As such, there is a need to develop a tailored curriculum to be used in conjunction with these simulators. The goal of this project is to develop and implement a curriculum tailored for the needs of and resources available to general surgery residency programs across Canada. The efficiency of this curriculum will then be assessed to show whether this training improves endoscopic skills in novice surgical residents.

**Methods:** An endoscopic curriculum, which focuses on upper endoscopy and colonoscopy, has been developed. Junior residents in general surgery will be recruited to participate in the study, where they will perform a pre-test and a post-test before and after the training sessions, which will include a written and practical section (measured by the Global Assessment of Gastrointestinal Endoscopic Skills). The tool scores skills including patient management and comfort, ability to navigate the scope, proficiency in using irrigation, suction, and insufflation to maximize endoscopic field, advancement/withdrawal of scope, the decision making behind performing a biopsy, efficiency, and a complete and appropriate mucosal evaluation. The assessment will also include a subjective section to gauge residents' perceptions on their comfort performing the evaluated endoscopic skills.

**Conclusion:** The introduction of an endoscopy training curriculum using a simulator will be a risk-free alternative for working on skills in medical procedures at the trainee's speed. Assessing the efficiency of this training curriculum will allow for the implementation of a tailored training for Canadian training programs and for all future trainees.

### 096 Evolving from applicant to trainee in a changing landscape: From selection to performance in residency education

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**Introduction:** Internationally, a challenging landscape has emerged due to the limitations of the current system for matching applicants into residency positions, lack of evidence that neither quantitative measures of performance of medical students graduates, holistic reviews to identify and stratify candidates, nor qualitative reviews or interviews reliably predict subsequent performance of residents. This is a descriptive report of an innovation in a multicentric program in Mexico to explore the evolution from selection to performance in residency education in applicants that underwent as part of the application process an online psychometric evaluation.

**Method:** Since 2021, 921 applicants to 17 residency programs have done an online psychometric evaluation processed by 2 university psychologists to generate a results report for the program director and provide a recommendation regarding the match of the applicant with the program mission. Between 2021 and 2023, 73.62% of applicants have been recommended (characteristics, emotional resources and competencies matching program mission) and recommended with observations (regarding needs for specific support, mentoring and remediation), and 26.38% not recommended to match with program mission (NR). 75% of Residents in the NR group that were admitted are currently: a) in a remediation program due to low academic performance and are at academic risk to lose their residency scholarship, or b) left their residency program prior to completion (resident attrition).

**Conclusion:** An online psychometric evaluation may provide additional information to consider if: a) an applicant's characteristics and identity are aligned with what the program is able to provide and support to help them to thrive as residents, and b) the candidate requires early remediation to prevent low performance and resident attrition. Future directions include exploring other factors related to resident attrition and the impact of early remediation and mentoring for all applicants as residents, including those in the NR group.

## 097 Touchdown! Gamifying residency ITE prep

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**Introduction:** The annual Emergency Medicine In-Training Exam (ITE) is vital in assessing the medical knowledge and skills of residents as they progress through training. Establishing a review curriculum that is both engaging and educational can be challenging. We describe a novel curriculum implemented during the 2022-2023 academic year using gamification and real gaming elements emulating American football.

**Method:** This curriculum was designed as an annual competition between teams of residents in an American football-style tournament. The tournament consisted of seven regular season matches, two playoff matches, and one final “Super Bowl” championship. Each match consisted of 20 simulated board style multiple choice questions, divided into 4 quarters of play and didactic discussion. Players on each team were assigned positions fashioned after standard American Football positions such as “quarter back” or “defensive line players”. Each position contributed differently to the team’s overall score; some positions helping their team score points while others blocked scoring by the opposing team. An option to play in the tournament asynchronously ensured that all residents had the ability to participate even while off-service. Scores were kept in real-time during the match using electronic scoreboards displayed overhead to also simulate a football game.

**Conclusion:** 64 residents (100%) voluntarily participated in the tournament and were offered a post intervention survey. The response rate was 72%. More than half of the participants responded that they prepared more for the ITE this year than in previous years, and over 80% felt that their participation in the gamified curriculum led them to prepare more than they otherwise would have. Over 90% of respondents agreed that this new curriculum was an effective form of ITE preparation, and more than 95% agreed that they enjoyed the gamification. Continued evaluation is needed to determine the effectiveness of a gamified curriculum longitudinally.

## 098 Knots and knowledge: Revolutionising basic surgical skills training with 3D-printing

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**Introduction:** Knot tying is a cornerstone of surgical skills, among the first techniques taught to interns in operating rooms. Despite the importance of proficiency in knot-tying, surgical residency programs face challenges in teaching this skill due to limited access to training tools and varying skill levels among residents. Commercial knot-tying boards, often costly and with lengthy shipping times, pose adoption hurdles for time-constrained rotations. In recent years, 3D-printing technology has heralded a new era of innovation in medical education. Its capacity for affordable, customizable, and rapidly prototyped educational tools revolutionizes surgical education, breaking barriers to skill acquisition and fostering equitable healthcare practices.

**Objective:** Our innovation aims to address this challenge by introducing a low-cost 3D-printed knot-tying board tailored for surgical skill training. The board replicates clinical scenarios, offering resident learners a realistic and standardized platform to practice a diverse range of knot-tying techniques commonly encountered in surgical procedures.

**Methods:** Using computer-aided design software, we designed a modular knot-tying board aimed to increase residents’ proficiency in three fundamental aspects of knot-tying: knot-tying proper, knot-tying against tension, and knot-tying at depth. The board was iteratively developed and incorporated feedback from residents, fellows, and staff until the optimal parameters were achieved. Once finalized, the board was printed on a consumer-grade 3D-printer using polylactic acid, an economically- and environmentally viable plastic, for a total production cost of \$4.58.

**Conclusion:** Narrative feedback was collected from five medical students, ten general and vascular surgery residents, and three vascular surgery fellows. All participants acknowledged the board’s effectiveness in providing a realistic and accessible platform for honing knot-tying skills that improved overall learner confidence skills. The 3D-printed knot-tying board presents a cost-effective and scalable solution that can be readily adapted by surgical residency programs, bridging the gap in knot-tying proficiency and contributing to improved patient outcomes across specialties.

## 099 Residents' awareness and attitudes toward different pregnancy care options: Do longitudinal clinical experiences in Family Medicine Obstetrics make a difference?

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**Introduction:** In Canada, family medicine obstetrics (FMOB) physicians provide care to many pregnant patients living in both urban and rural communities; however, fewer than 10% of all family physicians (FPs) practice intrapartum care, with this percentage steadily declining. Based on the College of Family Physicians of Canada recommendations to address this void, our program trains residents in pregnancy care by FMOB teachers as a longitudinal clinical experience (LCE) embedded in residents' core FM experience. The primary goal is to help residents develop competence and confidence in perinatal care, and foster positive attitudes toward this area of practice. A secondary goal is to raise residents' appreciation of the broad scope of FM to encourage professional identity formation (PIF) as "womb-to-tomb" FPs for those planning to include intrapartum care in their practice, and support building intraprofessional collaborations with their FMOB colleagues for those who do not. This study aims to examine the impact of the FMOB LCE on residents' awareness and attitudes toward pregnancy care and their decision-making when referring patients.

**Method:** Participants: FM residents in the urban stream ( $n = 8-10$ ). Setting: FM residency program. Design: Descriptive, qualitative study using semi-structured, one-on-one interviews before and after residents' core FMOB LCE. Intervention: Residents are paired with an FMOB teacher, attend regular pregnancy care clinics, and provide obstetrical call coverage as a LCE for the duration of their "blocktime" FM clinical experience. Outcomes: Interview questions probe residents' experiences, awareness, and attitudes toward different pregnancy care options available to patients. Four clinical vignettes are used to explore participants' decision-making when referring for ongoing pregnancy care. Analysis: Thematic analysis of interviews.

**Conclusion:** Data collection and analysis will be completed by September 2024. The findings will inform targeted medical education in pregnancy care to best support PIF and promote intraprofessional collaboration.

## 100 Use of an automated logging system to estimate improved efficiency in meeting resident procedure completion requirements

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**Introduction:** Procedural aptitude is a core competency of graduate medical education (GME; related CanMEDS competencies: 3.1, 3.3, 3.4). Procedure logging often relies on inefficient and duplicative manual workflows, a longstanding problem in GME. The excessive time needed to document required procedures can negatively impact resident education and patient safety and delay patient care. Automation may provide a solution to this problem.

**Methods:** A novel automated system for directly extracting bedside procedure completion data for 47 emergency medicine resident physicians directly from a widely used electronic health record (EHR) system was used to determine the average number of procedures performed by each resident per week over the course of approximately one year (May 22, 2022 – May 7, 2023). Corresponding data were also obtained from procedures logged manually by the same residents in the same timeframe. These data were combined with the required volume of bedside procedures from the Accreditation Council for Graduate Medical Education (ACGME) to estimate reductions in time necessary to meet the minimum number of procedures.

**Results:** The reduction in time needed to meet minimum required procedure volumes for selected procedures with the automated system were estimated (in weeks) to be: adult medical resuscitation, 78.5; adult trauma resuscitation, 70.4; endotracheal intubation 4.3; procedural sedation, 48.1; central line placement, 57.3; fracture/dislocation reduction, 38.9; lumbar puncture, 157.3; point-of-care ultrasonography, 55.5.

**Conclusion:** Utilization of an automated system for logging procedure completion based on EHR data more likely reflects the clinical reality of patient care by residents, and may be associated with substantial reductions in time needed for residents to meet minimum required procedure volumes. While satisfying minimums does not automatically confer competency, more accurate determination of these data may allow earlier promotion to independent practice, improving patient care and serving as a better foundation for procedural completion guidelines.

## 101 The population-centered medical model: A method of practice for public health physicians

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**Introduction:** Process models such as the Patient-Centered Clinical Method describe the processes by which physicians care for individual patients. Public health and preventive medicine is a Royal College specialty program for which such methods of practice do not exist. To date there has been no model of care that describes the work of public health physicians with populations.

**Method:** A Constructivist Grounded Theory (CGT) methodology was used in this study. Eighteen (18) currently or recently practicing Canadian public health physicians participated in semi-structured interviews from February 2022-2023. Interview transcripts were coded in three phases: line-by-line with a focus on gerunds, focused coding for categories, and finally theoretical coding. Analytic meetings, post-interview debrief memos, analytic memos, theoretical sampling, and constant comparison were used during data analysis. Rigour was enhanced by using thick description, ensuring data saturation, and considering reflexivity and bias.

**Conclusion:** The Population-Centered Medical Model (POP-CMM) describes a method of practice for public health and preventive medicine. Public health physicians bring values, knowledge, and stances to their practice of medicine. As public health issues are identified, the process of caring for populations as patients involves diagnosis and intervention. Public health physicians focus on systems and prevention (as compared to a focus on individuals and treatment), and the process relies on knowledge sharing and relationship building between the physician and the population. This core process model can form the basis for understanding competence in medical training and practice. Coupled with prior work to understand technical and relational competence in genres of practice, the concept of core processes and discursive competence in genres of practice represents an innovative way to consider teaching and training in medical specialties.

## 102 Preparing surgeons for independent practice: A resident-driven transition to practice curriculum for General Surgery residents

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**Introduction:** The transition from residency to independent practice can be a challenging time where new graduates navigate aspects of surgical practice not encountered in the traditional residency curriculum. Drawing on insights of both current and past residents, we developed and implemented a transition to practice (TTP) curriculum for graduating general surgery (GS) residents.

**Methods:** A needs assessment survey was completed by University of Toronto PGY 4-5 GS residents and recent graduates. Survey results were used to inform curriculum content. An adaptive TTP curriculum was implemented in 2021 consisting of an ambulatory rotation, seminars and a portfolio. For the ambulatory rotation, each resident was assigned to a mentor; this model encouraged personalized teaching of practice management, including triaging referrals, billing, and reflective practice. The curriculum aligned with the General Surgery TTP entrustable professional activities (EPAs); competency was assessed via completion of the EPAs. The seminar series consisted of 4-6 interactive sessions run by academic and community surgeons focused on finding a job, practice management, financial wellness and medico-legal considerations. The series evolved based on resident feedback from 2021-present. The TTP portfolio was designed to complement the ambulatory rotation and seminars and includes completion of a mock-billing exercise, CV and letter of intent for their "Dream Job". The TTP portfolio encourages self-reflection and documentation of achievements. The curriculum has been highly rated by participants; we plan to complete a survey of recent graduates practicing independently who completed the curriculum for further continuous quality improvement.

**Conclusion:** With its unique blend of experiential learning, seminars shaped by current and past residents, and portfolio exercises, this novel curriculum equips GS residents with the comprehensive skill set needed to confidently transition into independent practice. The curriculum forms a model that could be used by other surgical programs to form a bridge between residency and independent practice.



### 103 Assessing the applicability of Virtual Reality goggles in Diagnostic Radiology residency training in Africa

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**Introduction:** The application of Virtual Reality (VR) technology in the health professions education allows learners to explore and manipulate computer-generated real or artificial three-dimensional multimedia sensory environments in real time to gain practical clinical knowledge. While a growing body of evidence suggests that VR technology improves knowledge and skills outcomes of health professionals, its application in global health contexts has been less explored. We extend and evaluate the applicability of the use of VR goggles in a collaborative and innovative virtual residency training program in diagnostic radiology in a cross-cultural context in Kenya.

**Method:** The curriculum is delivered via interactive case display and 48 didactic monthly staff rounds using VR goggles technology to 58 radiology residents in Kenya over a 4-year period. The rounds cover relevant topics in radiology and are patterned after the Royal College of Physicians and Surgeons of Canada approved rounds currently given to Diagnostic Radiology residents at Queen's University. After each round, participants are asked to complete a post virtual reality rounds evaluation survey. The online survey collects information on the usability, feasibility, and utility of the VR goggles and compares residents' experience with the VR goggles with a traditional method of delivery. Quantitative and narrative data were respectively analyzed descriptively and thematically.

**Conclusion:** We anticipated the innovative application of VR goggles would provide opportunities for radiology residents in Kenya to learn important and practical radiology skills from an international faculty in a bidirectional learning context. Preliminary evaluation results suggest that the VR goggles provided immersive experience, better in-person experience, good interaction with lecturer, active case participation, and enabled residents to have close-up image viewing and scrutiny. Learners also felt recognized and appreciated. These results are promising and could shape future decisions about implementing VR goggles technology in radiology residency training programs across Africa.

### 104 A new way of standardizing the assessment of surgical skills in orthopaedic surgery training programs

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**Introduction:** The current national examinations for Orthopaedic surgery trainees do not assess technical skills. The implementation of a blinded, national standardized surgical Objective Structured Clinical Examination (OSCE) could allow for unbiased evaluation of both surgical decision making and technical skills. Standardized video assessment has been used in arthroscopic and laparoscopic skills but less so for open procedures. Our aim is to assess the feasibility and reliability of capturing videos of a simulated competency-based OSCE to be assessed by surgeon evaluators from across the country.

**Method:** Four residents from each Post-Graduate Year (PGY) two to five, as well as a practicing surgeon were recruited. Two clinical scenarios were evaluated: a both bone forearm fracture and talar neck fracture. Participants interviewed a simulated patient, reviewed imaging, and performed the appropriate surgical procedure on fresh cadaver specimens. High quality videos were captured and edited to approximately fifteen minutes, and all participant identifiers removed. Eighteen orthopaedic surgeon evaluators were recruited to assess the videos using established OSCE, Objective Structured Assessment of Technical skills (OSATS) and the Ottawa Surgical Competency Operating Room Evaluation (O-score). They were blinded to participant identity and year of training.

Statistical analysis was performed with STATA software. ANOVA was used to determine differences between years. Further students' t-testing was used for between-year comparisons. Linear regression models were used to determine dependency of scores. Pearson's correlation coefficient was used to evaluate the agreement between scores.

**Conclusion:** This study validates using anonymized videos for surgical skills assessment in orthopaedic training programs and demonstrates the ability to discriminate between years of surgical training. More importantly, there may be an opportunity to use simulation to objectively evaluate surgical competence and further help determine readiness for independent practice. The Orthopaedic Surgery Examination Board should further assess the adoption of a standardized assessment of technical skills.

## 105 Evaluation of the Learning Environment for continuous Quality Improvement: Ensuring utility through validation efforts

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**Introduction:** Healthy and positive learning environments (LE) play a central role as an enabler of the CanMEDs competencies, and have become an important focus for residency programs. The status of the LE is an accreditation standard and continuous quality improvement must be demonstrated. Institutional program evaluation processes play an important role in educational CQI. Particularly, a utilization-focused evaluation approach helps ensure that evaluation data organically collected from different sources is utilized to drive decision making by generating credible and relevant information for invested groups. The information's usefulness is validated by registering how much it represents the perceptions of the relevant groups who provided the data

**Method:** One Canadian Department of Paediatrics has undertaken a systematic approach to evaluate its LE. A database of trainee feedback from POWER Rotation Evaluation Summary (RES) reports and retreat reports from 2018-2023 was created and analysed using socio-cultural and cognitive learning theories and established qualitative methodologies. Both negative and positive patterns were identified regarding trainees' overall impressions of how their learning was supported and enabled by the rotation's organization, curriculum implementation, and relationships formed with faculty, peers and staff. Analysis was shared with relevant groups in the form of reports and in-person presentations and was further refined through a process of meaningful discussion with relevant groups. In parallel, a governance structure for operationalizing the findings from the analysis was generated allowing for real time decision-making and interventions to improve LE.

**Conclusion:** Data generated on the LE through a CQI process was validated through theoretical triangulation which situated our local LE context within the broader literature, and through a UFE approach as our findings resonated with multiple groups making it a credible source to drive quality improvement efforts. Future plans for validation include triangulation with teacher and rotation evaluation, and accreditation findings will be pursued.

## 106 From cognitive competencies to character: Transformative leadership training in medicine

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**Introduction:** Leadership training for physicians suffers from a lack of consensus on the definition of leadership and critiques about the subjective nature of teaching and measuring leadership competencies. As such, leadership training has focused on cognitive domains that are more objective and easier to define, teach and assess. Although cognitive competencies are necessary for leadership development, they are insufficient. Cognitive competencies reflect what a leader can do, but character influences how leaders decide what to do, which is critical for effective leadership. The purpose of this work was to implement an innovative character-based leadership course in residency training, focused on developing dimensions of character including humanity, transcendence, drive, collaboration, integrity, humility, justice, temperance, accountability, and courage. The use of character-based leadership moves us beyond focusing on cognitive competencies and allows us to articulate dimensions of character that promote effective leadership.

**Method:** The researchers developed and implemented a longitudinal post-graduate character-based leadership course within the Schulich School of Medicine and Dentistry at Western University in London, Ontario, Canada. The course engaged residents ( $n = 30$ ) and staff physician mentors ( $n = 8$ ) from across training programs in a multifaceted year-long learning process. Residents and mentors explored character development through pedagogical approaches to foster their growth. These included: (a) mentorship; (b) small-group discussion; and (c) critical reflective practice.

**Conclusion:** This innovative approach to teaching leadership through a character lens developed a nurturing learning environment that promoted character and leadership development to a community of learners and educators who valued, promoted, and manifested character in their everyday lives. In an age where many educators' focus and attention are directed at cognitive competencies, it is critical that we have directed attention to the equally important realm of character. Ultimately as leaders, 'what we know' will remain essential and relevant, but 'who we are' is paramount.

### 107 Perceived psychological safety and preferences on inclusion or exclusion of patient care and quality metrics for Emergency Medicine resident dashboards

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**Background:** The ability for residents to assess their patient care using evidence-based, psychological safe metrics is of critical importance. Our objective was (1) to create an evidence-based list of potential patient and quality metrics to include in an EM resident patient care dashboard and (2) to determine the perceived psychological safety and preference for inclusion versus exclusion for each metric by EM residents and EM residency leadership.

**Methods:** Searching PubMed and MedEDPORTAL for EM resident dashboards and using ACGME Emergency Medicine Defined Key Index Procedure Minimums and leading EM quality indicators, we created a list of potential metrics. PGY1-4 EM residents and EM residency leadership from a single residency program received survey where participants selected preference for inclusion or exclusion and psychological safety on a 4-point Likert scale for each metric. Descriptive statistics and a chi-square test of independence were used for analysis.

**Results:** We created a list of 43 potential metrics. 32 residents (47%) and 4 residency leaders (100%) completed the survey. 8 metrics were ranked with a preference for exclusion by residents and 3 by residency leaders. 3 metrics were identified as moderate-high psychological risk by residents (ED length of stay, patients per hour, death within 24 hours), while 11 metrics were identified by residency leaders. A chi-square test of independence showed there was a significant difference between residents and residency leaders in the assessment of psychological safety for 6 metrics: case reviews resulting in provider feedback, downstream CAUTIs, patients discharged on opioids without naloxone, CT utilization, billing code mix, and percentage of patients who received an abdominal US after CTAP.

**Conclusions:** We created a list of patient and quality metrics to include in an EM resident patient care dashboard. Residents and residency leadership agreed on including most metrics with concerns for psychological safety for some metrics.

### 108 POCUS morning report: Creating a POCUS positive culture on Internal Medicine wards

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**Introduction:** Point-of-care ultrasound (POCUS), an emerging skill for the Internist, is often taught during core residency program academic half-days. These occur a few times throughout residency and are resource intensive. Skills can degrade unless practiced by learners longitudinally. We wished to create a POCUS positive-culture, where trainees felt motivated and comfortable to practice POCUS independently on their Internal Medicine (IM) rotations to work towards achieving competence. We initiated an innovative POCUS curriculum during IM rotations in place of “morning report” with the goal of influencing attitudinal change.

**Methods:** Our curriculum introduced a 45-minute monthly session for all learners on IM. Sessions included a 15-minute focused lecture followed by an opportunity for each learner to have scanning time on a consenting IM inpatient. Five focused POCUS topics were introduced on a rotating basis monthly, at two hospital sites. Sessions focused on identifying one pathology, such as absent lung sliding, instead of a comprehensive approach of all lung ultrasound pathologies. Trainees voluntarily participated in an electronic survey before and after the session.

**Results:** Medical students, residents (post-graduate year 1-3) and physician assistants ( $N = 46$ ) participated in the survey from July-December 2023. The percentage of respondents that reported feeling comfortable with POCUS increased from 51% to 93% after the session ( $p < 0.001$ ). After the session, 62% of respondents indicated they would use POCUS more on the IM wards. Narrative feedback praised the hands-on, concise and practical nature of the sessions.

**Conclusions:** Our innovative POCUS curriculum increased comfort levels in learners and empowered them to practice POCUS on IM wards. These sessions efficiently taught a wide variety of learners using minimal infrastructure and can serve as a blueprint for other institutions. Next, we'd like to further explore barriers to practicing POCUS use on IM rotations and consider strategies to assess for skills competence.

### 109 The WIDER LENS curriculum: A new curriculum to advance perspectives on Equity, Diversity, Inclusion, Antiracism, and Physician Health within a residency program's academic curriculum

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**Introduction:** With the development of Competence by Design by the Royal College of Physicians and Surgeons of Canada, there are new competencies that focus on improving residents' knowledge base on racism and systemic barriers within medicine. Therefore, it became imperative that curriculum was developed that allowed opportunities for learners to have discussions on these very important issues that impact not only patient care but residents and faculty's wellbeing. Hence, a seminar series was developed to address these areas. The benefits and challenges of developing and delivering this seminar series was assessed.

**Method:** An evidence-based, trauma-informed curriculum called the WIDER LENS Seminar Series (Wellness, Integration of work and life, Dispute Resolution and Difficult Conversations, Equity/Diversity/Inclusion, Anti-Racism, Leadership, Ethics, New Starts/Transition to Practice, and Systems and Organizations) was developed and delivered to residents in a subspecialty program over two years since 2021. This seminar series focuses on equity, diversity, inclusion, antiracism, practice management, physician health, and workplace psychological safety, with the CanMEDS roles embedded throughout. The curriculum was developed and delivered by one faculty member via a virtual format. Attendance and evaluations were gathered to assess the impact, benefits, and challenges of the seminar series.

**Conclusion:** Narrative feedback from residents acknowledged the benefits obtained from the discussions and evaluations for the WIDER LENS curriculum were highly favourable. Attendance at the seminar series suggested residents were engaged. Narrative feedback from the presenter, while overall positive did highlight some challenges with sustainability of the seminar series. Future directions include discussions on how to sustain the seminar series given the benefits acknowledged in improving resident physician's personal and professional growth.

### 110 Feedback in an Entrustment-based OSCE: Analysis of content and scoring methods

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**Background:** The integration of Entrustable Professional Activities (EPAs) within Objective Structured Clinical Examinations (OSCEs) has yielded a valuable avenue for delivering timely and meaningful feedback to residents. However, concerns pertaining to the quality of this feedback have arisen.

**Objectives** This study aimed to assess the quality and content alignment of verbal feedback provided by examiners during an entrustment-based OSCE after assessing residents using either entrustability scales or checklists.

**Methods:** We conducted a progress test OSCE for internal medicine residents, evaluating seven EPAs. The immediate two-minute feedback provided by examiners was recorded and analyzed using the Quality of Assessment for Learning (QuAL) Score. We also analyzed the degree of alignment with EPA learning objectives: competency milestones and task-specific abilities. In a randomized crossover experiment, we compared the impact of two scoring methods, entrustability scales and checklists, on the quality and alignment of feedback.

**Results:** A total of 21 examiners provided feedback to 67 residents. The feedback demonstrated high quality (mean QuAL score 4.3/5) and significant alignment with the learning objectives of the EPAs. On average, examiners addressed 2.5 milestones and 1.2 task-specific abilities in their feedback. No significant differences were observed between the two scoring methods.

**Conclusion:** Entrustment-based OSCEs provide examiners with a valuable tool to deliver high-quality feedback, addressing a wide range of EPAs in line with learning objectives. Our study found no significant impact of the scoring method, suggesting that the feedback's richness and diversity stem from the thoughtful OSCE design and examiners' abilities.

### 111 Professionalism Rounds: Engaging learners in professionalism education

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**Introduction:** Professionalism is a core component of medical education and clinical practice. Teaching interventions often focus exclusively on learners, and discuss professionalism in vague terms. Moreover, there is growing concern regarding the rising incidence of perceived professionalism lapses in training and clinical practice, suggesting a gap between education and practice.

**Method:** We developed a professionalism curriculum to work together in a solutions-focused way, to address the concerns. Through five one-hour sessions per year, we aim to discuss anonymized cases based on real life examples of professionalism challenges. Cases are developed by residents, and discussions are facilitated by residents and faculty. Sessions are attended by medical students, residents, fellows, and faculty as well as guests representing nursing, allied health, hospital ethics, and the legal team where applicable to the case. Topics include feedback and evaluations, challenging patient encounters, and various scenarios of conflict resolution, among others. These sessions aim to promote the development of improved communication, patient care and conflict resolution skills that will set an important foundation for professionalism through the learning continuum and in clinical practice.

**Conclusions:** Through interdisciplinary discussions that work to flatten perceived hierarchies and address elements of the hidden curriculum, we create a safe space for conversation and mutual understanding. We emphasize that professionalism is not only individual, but also related to cultural, institutional, and environmental factors. Interactive, case-based examples facilitate an improved and tangible understanding of professionalism for attendees to translate and apply in day-to-day practice. Evaluations and informal feedback suggest that sessions are well-received, and relevant to professionalism challenges experienced through training. Next steps include continued data collection through formal evaluations and expanding on possible dissemination strategies to other institutions. With the move towards CBD, this curriculum can also be extended to facilitate the evaluation of professionalism as a competency

### 112 Building community through adaptive mentorship to advance the development of educational curriculum targeting inequities in the health system

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**Introduction:** There is an emerging recognition of the need to develop and implement educational curriculum at the postgraduate level to build the necessary knowledge, skills and attitudes to address issues of health inequities. This type of curriculum will require innovations in building and implementing them within resource constraints found in traditional educational environments. Adaptive Mentorship Networks are an educational innovation designed to create mentoring communities that are compassionate, mutually beneficial for those participating, and adaptable to different individuals and contexts.

**Method:** The Equity, Diversity, Inclusion, and Accessibility (EDIA) Adaptive Mentorship Network is an innovation built as a part of the Team Primary Care project. This network has created a national community of mentors and mentees that are focused on developing projects to advance EDIA including healthcare education. This network includes 11 mentors and 5 mentee groups located across Canada. The mentors are from a variety of disciplines (family medicine, public health, nursing, social work, etc.) and have a spectrum of expertise in building EDIA projects targeted at the macro (health systems), meso (educational environments) and micro levels (clinical and workplace settings). Detailed survey-based data is being collected about both the mentors and mentees, and the projects they are working on. The mentorship network is being built alongside other innovations, such as readiness assessments and an online learning platform, to further develop education and curriculum focused on EDIA.

**Conclusion:** This national mentoring community offers a setting that can break down traditional silos of curriculum development. This network can support postgraduate programs with varying levels of resources across the country to engage in collaborative mentoring discussions. This can enable the sharing of resources and curriculum innovations which can address challenges in building and implementing postgraduate level curriculum targeted at addressing issues of inequities in the health system.

### 113 Impact of Observed Structured Teaching Exercises (OSTE) on teaching skills and behavioral change in a Clinician Educator track program

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**Introduction:** OSTEs are the gold standard for programmatic evaluation of clinician educator tracks (CETs). However, most CETs only evaluate Kirkpatrick level 1 outcomes. We assessed the impact of OSTE on teaching skills and behavioral change in learners within our 2-year, interdisciplinary CET program.

**Methods:** In October 2023, 18 post-graduate trainees from Internal Medicine ( $n = 9$ ), Pediatrics ( $n = 3$ ), Emergency Medicine ( $n = 2$ ), General Surgery ( $n = 1$ ), Family Medicine ( $n = 1$ ), Pathology ( $n = 1$ ), and Psychiatry, ( $n = 1$ ) participated in three recorded OSTE experiences playing the following roles: 1) Resident providing bedside teaching to an M3, 2) Chief Resident giving corrective feedback to an intern, and 3) Observer providing feedback to CET peers during the first two encounters. Volunteer M4s played the standardized roles of M3 and interns. After encounters #1 and #2, learners engaged in self-assessment and received feedback from both M4 and CET peers. Program evaluation included Likert-scale and open-ended questions.

**Results:** Of the 16 learners who replied, a majority strongly agreed that the OSTE improved their teaching skills (94%), was an appropriate development activity for residents (87.5%), helped identify areas for additional training (81.3%), and helped identify practices in teaching that they would like to change (62.5%). The OSTE was noted as a “low stakes but high yield learning opportunity.” Self-rated performance in the bedside teaching scenario was higher than the corrective feedback scenario. More objective analyses from the video-recorded OSTEs are in progress.

**Conclusions:** We successfully implemented the first OSTE in our longitudinal CET program. This innovation leverages the Community of Practice in offering reciprocal peer feedback and video-based coaching once yearly. We hope practical lessons learned are informative for others who plan high fidelity simulation of teaching encounters at their institutions.

### 114 Readiness for unsupervised practice for the 17 ABP General Pediatrics EPAs: Are graduating residents ready to provide the care patients need?

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**Objective:** Determine graduating resident readiness for unsupervised practice in each of the 17 American Board of Pediatrics General Pediatrics Entrustable Professional Activities (17 ABP EPAs).

**Methods:** At the end of the 2021-22 and 2022-23 academic years, we collected supervision levels for the 17 ABP General Pediatrics EPAs for 1498 categorical pediatric residents and 144 medicine/pediatrics residents at 47 categorical and 16 medicine/pediatrics training programs, respectively. At each program, clinical competency committees were asked to determine the assigned supervision level. Supervision levels ranged from being trusted to only observe the EPA; execute the EPA with full supervision; execute the EPA with reactive, on-demand supervision; and execute the EPA without supervision. For this study, we dichotomized reports to consider being or not being entrusted with unsupervised practice.

**Results:** Across all 17 ABP General Pediatrics EPAs, 21,464 total supervision levels were reported for categorical residents and 2113 were reported for medicine/pediatrics residents. No EPAs had more than 90% of residents reported as ready for unsupervised practice at graduation and only 4 EPAs (health screening, newborn care, make referrals, and handovers) had more than 80% of residents deemed ready (Table). Most EPAs ( $N = 10$ ) had between 50-79% of residents reported as ready for unsupervised practice. For three EPAs (surgical diagnosis, practice management, QI/equitable care), less than 50% of residents were deemed ready.

**Conclusion:** The 17 ABP General Pediatrics EPAs define the profession of general pediatrics, and there are no EPAs for which more than 82% of graduating residents are deemed ready for unsupervised practice at the time of graduation. These findings add to a growing literature demonstrating concerns about the readiness of residency graduates to provide the routine care that patients depend on. They serve as a call to work together as a community to design and implement curricular changes that can address these gaps.

### 115 Embedding planetary health education into a Medical Teaching Unit (MTU): Quantifying healthcare emissions using a case-study approach and studying the impact on learners

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**Introduction:** Educating medical learners on healthcare's contribution to climate change may be important in reducing the carbon footprint of care delivery. Learners are increasingly interested in becoming knowledgeable about this topic. We designed an educational intervention that allowed learners to estimate greenhouse-gas emissions of healthcare through a case study format presented monthly.

**Methods:** Subjects were learners rotating on the Medical Teaching Unit (MTU) at Dalhousie University from November 2023 to March 2024. The education intervention involved learner conducted case studies of patients on the MTU in a pre-designed framework involving documentation of tests and treatments and calculation of their greenhouse-gas emission estimates using Dalhousie's/CASCADES Healthcare Life Cycle Analysis database. Cases were presented each month during "planetary health rounds", where the emissions associated with care were discussed in hopes of mitigating future emissions through shared learning. A secondary benefit is that this scrutiny of testing and treatment can identify care which has high climate impact but low clinical benefit. The evaluation plan includes survey-based assessment of the impact of each session conducted at the end of each session. A previously validated evaluation tool was used to understand whether and how the intervention and educational session changed learners' future practices. This intervention will be rolled out in Ottawa in 2024 with collaborative evaluation planned.

**Results:** Preliminary results of post-session surveys indicate 24 of 24 (100%) learners gained new knowledge during the session, and 21 of 25 (86%) would change their clinical practice. We aim to present the "top 5" themes discussed during planetary health rounds, and full results of our evaluation of this educational intervention.

**Conclusion:** The case analysis framework for estimating greenhouse-gas emissions of healthcare paired with a planetary health round shows promise as an educational intervention that will promote climate change education and carbon-reducing practice change.

### 116 Equipping residents with tools to address professionalism challenges in Clinical Practice: A cross discipline near-peer supported longitudinal curriculum

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**Background:** Teaching professionalism in a way that resonates with postgraduate learners continues to be a struggle that is not unique to specific disciplines. Learners enter residency having learned the black and white rules of professionalism, but often struggle to apply those to the realities and 'grey zones' of clinical practice. We aimed to create a professionalism curriculum co-created and co-delivered by near peer residents that would reflect the breadth of challenges residents face and provide tools to respond to those challenges in the moment.

**Method:** PGY1 Residents from across specialties at McMaster were invited through their Program Directors to participate in a cross discipline Professional Competencies curriculum starting in Winter 2020. For the last four years, residents from up to 18 different programs have participated. The curriculum is divided into a welcome workshop with a focus on reflective practice and frameworks to respond to professionalism concerns in the moment, and four monthly small group sessions. Small group sessions are conducted over Zoom and co-led by staff facilitators and near peers (PGY3+), nominated by their programs as exemplars of professionalism. Small group sessions include an invitation to share residents own encounters with unprofessional behaviour, and an opportunity to work through cases that are organized around the CanMeds Professionalism pillars of commitment to patients, commitment to society, commitment to profession, and commitment to patients. Cases are reviewed by near peers annually and updated to reflect contemporary issues faced by residents.

**Conclusion:** Resident evaluations have been consistently favourable, with strengths identified as the inclusion of near peers and the cross-discipline nature of the discussions. Residents appreciate the focus on practical tools and frameworks that can be applied to help promote a culture of professionalism. Our next steps are to look at trends in the number and nature of reports of professionalism concerns of and by residents.

### 117 Teaching the teacher: An interactive workshop on how to give and receive effective feedback in resident education

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**Background:** Currently, undergraduate and post-graduate medical education is trending toward a competency-based curriculum associated with consistent feedback for learners. Feedback is crucial to the growth of medical learners and is the cornerstone of creating a well-rounded healthcare system comprised of competent physicians. To effectively transition their curriculum, The Hospital for Sick Children developed a novel workshop for physicians and learners regarding the provision and reception of high-quality constructive feedback.

**Method:** The Feedback Workshop was developed to help participants understand feedback theory through analyzing social, environmental, and mental barriers that prevent the provision and reception of effective feedback. Guided roleplays encompassing the CanMEDS Roles were created to emulate feedback encounters commonly experienced by staff and residents. These roleplays purposefully demonstrated issues pertinent to both providing and receiving feedback. Participants consisted of staff and trainees who formed pairs wherein one provided feedback and the other received it, in accordance with guidelines specific to the simulated feedback encounter. Each station lasted 20 minutes and encompassed roleplay, role-reversal, discussion, and subsequent facilitated debrief with the entire group to discuss key takeaways. A mixed-method design was used to determine participant attendance, satisfaction, and takeaways.

**Conclusion:** Currently we have conducted 8 feedback workshops for 100 participants including staff physicians, clinical-fellows, and resident learners across various departments. This workshop is easily adaptable to programs of differing sizes and education levels. Preliminary results from the post-workshop survey indicate increased participant understanding of challenges in both providing and receiving feedback, and a greater sense of comfort in delivering constructive feedback to learners. Participants also highlighted three predominant takeaways: how to create an environment conducive to feedback conversations; the importance of trainee self-assessment; and how to acknowledge biases in feedback. Future workshops will increase sample size and diversity, providing a comprehensive understanding of the workshop's ability to inform feedback delivery.

### 118 Clinical practice guideline repository: An innovative learning tool for residents training in core Internal Medicine

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**Introduction:** The Royal College of Physicians and Surgeons of Canada (RCPSC) outlines specific objectives of training for Canadian Internal Medicine (IM) residents. To achieve these learning goals, trainees must spend time searching a vast body of medical literature, to provide updated and evidence-based patient care. Clinical practice guidelines (CPGs) are a high-yield resource to support the development of the medical expert CanMEDs role by summarizing the best possible evidence guiding patient evaluation and care. However, to our knowledge, no centralized tool gathers CPGs relevant to Canadian IM training to help streamline learning. Thus, we created and are evaluating a database of CPGs for IM residents at the University of Ottawa (OttawaU).

**Methods:** The 2021 objectives of training for IM were extracted from the RCPSC website and used as the framework to build the CPG database. Major medical association websites were reviewed for guideline content (updated July 2023), complemented by an online search using keywords such as "guideline" and specific objectives of training. Targeting Canadian IM residents, our focus was on identifying all relevant Canadian CPGs complementing RCPSC objectives of training; when these were not available, relevant American and/or European guidelines were included. International guidelines were also included when providing newer updates than Canadian CPGs. A survey of IM residents using this CPG tool at OttawaU is currently underway analyzing reactions and behaviors.

**Conclusion:** This repository holds promise as a tool for Canadian core IM residents to quickly access curated CPGs pertaining to their learning. We hope for robust uptake of this tool to strengthen resident medical expertise and evidence-based patient care, recognizing that it is not all-encompassing but rather meant to complement other learning tools. In the future, this tool has the potential for collaboration with and use by other core IM residency programs across Canada.



## 119 Enhancing resident competence in EKG interpretation through interactive and engaging educational techniques

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**Introduction:** In resource-limited countries, where access to specialized cardiac expertise is scarce, internists hold a crucial role in cardiac care. With the shortage of cardiologists, the ability of internists to accurately interpret electrocardiograms (EKGs) becomes vital but remains challenging. This initiative aims to improve the proficiency of internal medicine residents at Hôpital Universitaire de Mirebalais, Haiti, in interpreting electrocardiograms (EKGs) by implementing innovative interactive educational methodologies.

**Method:** A structured educational program has been designed to strengthen residents' ability to interpret EKG. Weekly online quizzes reinforce theoretical knowledge, while EKG workshops led by cardiologists, internists offer practical insights for real-world scenarios. The use of kahoot, a game-based learning platform for biweekly competitions among residents fosters engagement and skill reinforcement. Anticipated changes include improved EKG interpretation skills, leading to better diagnostic accuracy and patient care. These changes will be evaluated through pre- and post-assessments measuring EKG interpretation proficiency during the academic year 2023-2024. This evaluation will also incorporate feedback from residents regarding the effectiveness of the educational tools and self-assessment. The implementation process involves continuous monitoring and adaptation based on feedback to optimize the program's efficacy.

**Conclusion:** In countries lacking cardiovascular expertise and advanced paraclinical investigations, it's especially crucial to empower internists with strong EKG interpretation skills. Initial feedback from residents has indicated not only enthusiasm but also a tangible appreciation for the interactive techniques employed in the program. By providing protected time for these activities, we've fostered an environment conducive to learning and skill refinement. A comprehensive evaluation will determine the impact on enhancing resident competence and improving the retention of diagnostic skills. Successful implementation could enhance patient outcomes and serve as a model for similar initiatives in medical education, benefiting not only regions with limited resources but also resource-rich countries.

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