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01

Near-peer tutoring: an effective adjunct for virtual anatomy learning. ***Jeffrey Sioufi*, *Brandon Hall*, *Ryan Antel*. From the Faculty of Medicine and Health Sciences, McGill University, Montréal, Que.**

Background: The start of the COVID-19 pandemic caused a shift in medical education from the classroom to the virtual setting. This abrupt change led to an increase in stress among students. In response, McGill University medical students piloted an anatomy club, hosting virtual events to prepare fellow students for their examinations. Near-peer teaching is a form of education in which junior students are tutored by more experienced students. **Methods:** Review presentations and mock examinations were created using cadaveric images from textbooks, with a region-based approach. As anatomy examinations use in-person cadaveric models, these sessions focused on identifying pertinent anatomic landmarks for students to properly orient themselves using typical prosection views. **Results:** In the Fall 2021 semester, these sessions had an average attendance rate of 80% (162/202) and 81% (169/208) among the classes of 2024 and 2025, respectively. A feedback survey was sent to all attendees to determine student satisfaction (29% response rate). Most students felt strongly that our sessions helped them prepare for examinations (4.84/5.00), improved their overall understanding of anatomy (4.61/5.00) and reduced examination-related stress (4.55/5.00). These mean Likert scores and attendance rates are greater than those for similar student-led initiatives, as reported in the literature. High-quality resources provided by the university library and collaboration from faculty members were key to the success of this initiative. **Conclusion:** Near-peer anatomy tutoring sessions were very popular among McGill University medical students (80% turnout). We encourage students from all medical schools to implement similar programs, given the high satisfaction and low cost with the use of faculty-supplied resources.

02

Surgical Exploration and Discovery: perspectives on student-led debriefs in undergraduate surgical education. ***Sarah Moussa*, *Mathushan Subasri*, *Mustafa Fakih*, *Nehal Islam*, *Reggie C. Hamdy*. From the Faculty of Medicine and Health Sciences, McGill University, Montréal, Que. (Moussa, Subasri, Fakih, Islam); and the Shriners Hospital for Children and Division of Orthopaedics, Montreal Children's Hospital, Montréal, Que. (Hamdy).**

Background: McGill University's Surgical Exploration and Discovery (SEAD) program is a 2-week immersive surgery program for first-year medical students, designed to provide them with early exposure to the field of surgery. The program allows students to observe experienced surgeons, attend specialty talks and participate in workshops that provide hands-on experience in various surgical procedures. We constructed a postevent debriefing framework for pre-clerkship students experiencing their first surgical exposure. **Methods:** At the end of the 2 weeks, a multiphase facilitator-guided postevent debriefing was constructed using available literature on medical education debriefing and the CanMEDS framework. The "Promoting Excellence and Reflective Learning in Simulation" framework was used. The CanMEDS framework identifies 7 essential roles of physicians: medical expert, communicator, collaborator, health advocate, scholar, professional and leader. The setting was an academic surgical department composed of 3 large hospital centres. A total of 22 first-year medical students enrolled in the SEAD program. **Results:** During the debriefing session, students openly shared their feelings, reflected on their experiences and discussed how they experienced each CanMEDS role during the program. This reflective process enabled students to gain a more robust understanding of the complexity and challenges of surgical practice and develop a better sense of the roles and responsibilities of a surgeon. **Conclusion:** This debriefing was a structured and meaningful way for students to make sense of their experiences and prepare for their future careers. Future research is recommended to validate debriefing strategies in undergraduate surgical education.

03

How are emotions of medical residents and faculty in general surgery affected by new assessment mandates implemented in medical education? ***Sonaina Chopra*, *Jason M.Harley*, *Amy Keuhl*, *Ereny Bassilious*, *Jonathan Sherbino*, *Elif Bilgic*. From McMaster University, Hamilton, Ont. (Chopra, Keuhl, Bassilious, Sherbino, Bilgic); and McGill University, Montreal, Que. (Harley).**

Background: Previous research shows that the overall perception of residents regarding the entrustable professional activity (EPA) assessment mandates is primarily negative. Because negative emotions are shown to hinder performance, this study aimed to explore the link between EPA assessment experiences and resident and faculty emotions. **Methods:** A standardized questionnaire (Medical Emotions Scale [MES]), which measures 20 unique emotions on a 5-point Likert scale, was used to explore the emotions of residents and faculty regarding EPA assessments. Participants were from 3 specialties (general surgery, emergency medicine and pediatrics) at a single institution. Data analysis included descriptive statistics and analysis of variance. **Results:** A total of 91 participants (46 faculty members and 45 residents) completed the survey, which included 11 faculty and 16 residents from general surgery. Results revealed that for general surgery, residents have more negative emotions associated with EPA assessments than faculty do. When we compared the reported emotions of residents and faculty from general surgery with those from emergency medicine and pediatrics, we found that general surgery residents and faculty reported higher positive emotions. Possible explanations for the emotional differences may include specialty-specific transitions to competence by design (CBD) or differences in how CBD and EPA assessments are being implemented in each specialty, including different strategies used by general surgery to overcome implementation challenges. **Conclusion:** Given that negative emotions have an overall negative impact on training, our findings could help residency programs understand the types of emotions that residents and faculty experience with EPA assessments and, if negative, determine ways to optimize the EPA assessment processes.

04

Equity, diversity and inclusion in medical residency: a Web-based analysis of Canadian PGME efforts. ***Mohamed S. Bondok, Mostafa Bondok, Liana Martel, Christine Law*. From the Cumming School of Medicine, University of Calgary, Calgary, Alb. (M.S. Bondok); the UBC Faculty of Medicine, University of British Columbia, Vancouver, B.C. (M. Bondok); the Faculty of Medicine, University of Ottawa, Ottawa, Ont. (Martel); and the Department of Ophthalmology, School of Medicine, Queen's University, Kingston, Ont. (Law).**

Background: Medical graduates rely primarily on online content to gather information about residency programs. The 2018 Best Practices in Application and Selection report, endorsed by Canadian postgraduate medical education (PGME) institutions, identified gaps in the selection and retention process. The report recommended promoting diversity in selection criteria, measuring diversity across programs and ensuring that diverse perspectives were included on selection teams. This study evaluated how Canadian PGME websites demonstrate their commitment to equity, diversity and inclusion (EDI) through accessible online materials, including policies, reports and strategic plans. **Methods:** Canadian PGME websites were evaluated against 20 literature-derived EDI criteria across 5 domains: leadership and governance, recruitment, accommodations and culture, community engagement, and pathways to entry. **Results:** Evaluation of 17 PGME websites, policies, reports and plans revealed that 9 (53%) websites featured 10 or more of the EDI criteria. Scores ranged from 4 to 13, with a mean score of 8.65 (standard deviation [SD] = 3.00). Programs in Ontario and provinces in Western Canada had higher mean scores (10.50, SD = 2.17; and 11.00, SD = 0.00, respectively) compared with Quebec (4.50, SD = 0.58), the Prairies (8.50, SD = 2.12), and the Atlantic region (8.00, SD = 2.83) (p = 0.02). This shows that websites of PGME institutions demonstrate only a fraction of the identified EDI criteria. These programs perform well in areas such as mission statements, harassment and discrimination policies, and coaching and counselling services. However, they lag in diversity promotion, family-friendly policies and emergency daycare supports. Regional differences exist, with Western Canada achieving the highest scores. **Conclusion:** This study highlighted EDI strengths and weaknesses among Canadian PGME institution websites with preliminary recommendations. Although there is evidence of PGME institutions' commitment to EDI, further improvements are needed.

05

The use of virtual patient case simulations in surgical postgraduate teaching innovations. ***Nancy Posel, David Fleiszer*. From McGill University, Montréal, Que.**

Background: Educational technologies provide opportunities for active, dynamic and engaging learning within core curricula. Virtual patient case simulations (VPS) at McGill University support diverse learning experiences, many easily associated with entrustable professional activities (EPAs) as part of assessment. **Methods:** To measure individual knowledge and understanding of the previously studied Advanced Trauma Life Support (ATLS) coursework, in academic years 2022–2023 and 2023–2024, 78 first-year surgical residents received unique licences to randomly complete 3 of 9 trauma VPS. Each student's responses were tracked and assessed through the application's "Report" feature. **Results:** We observed the following: 1. Decision-making was not always based on a strict use of the ATLS algorithm. Learners missed critical components. Additional stress, use of a timer and scoring may have contributed to these errors, as well as lack of familiarity with trauma. 2. Comprehensive "whole-patient" review was often lacking. Decision-making was focused on the immediate injury, irrespective of comorbidities that could ultimately affect patient recovery. 3. The quality of the summary statements of "handovers" varied and occasionally lacked comprehensiveness. **Conclusion:** We found that VPS can assess clinical learner encounters in an online, authentic and interactive environment and provide objective assessment methodologies, and can support critical decision-making and comprehensive case management and be linked to EPAs. Analysis of individual responses can support timely remediation and impact on case management for future complex clinical scenarios. Data from assessment can lead to educational research. Finally, similar initiatives could easily be extended to other schools in Quebec and include diverse material for clinical training.

06

Outcomes of the Canadian Orthopaedic Surgery Medical Education Course. ***Anser Daud, Tyler Hauer, Noah Carr-Pries, Kalter Hali, Jesse Wolfstadt, Peter Ferguson*. From the University of Toronto, Toronto, Ont.**

Background: Studies have highlighted inadequate exposure to musculoskeletal education and orthopedic surgery in mandatory medical school curricula. The Canadian Orthopaedic Surgery Medical Education Course (COSMEC) is designed to enhance the education of medical students on orthopedic surgery and common musculoskeletal presentations encountered in primary care. We report on the effectiveness of COSMEC in supplementing the medical school curriculum and enhancing medical student knowledge of common musculoskeletal and orthopedic conditions, in its first 2 years of operation. **Methods:** Canadian medical students participated in COSMEC, which consists of live teaching sessions led by orthopedic faculty and senior residents over a 12-week period. Teaching objectives were guided by the musculoskeletal objectives of the Medical Council of Canada Qualifying Examination I, and expert opinion. Voluntary pre- and post-course surveys were administered to assess outcomes related to participant knowledge, participant-reported confidence and participant interest in orthopedic surgery. **Results:** A total of 803 and 976 medical students attended COSMEC in 2022 and 2023, respectively, with an average of 137 attendees per session. Knowledge quiz scores improved from (± standard deviation) 7.92 ± 2.6 out of 14 before participation in COSMEC, to 9.7 ± 2.0 afterward (n = 86, $p < 0.05$). There were also significant improvements in participant-reported confidence related to performing a history and physical examination, developing a differential diagnosis, understanding bone and joint emergencies and describing fracture radiographs ($p < 0.05$). **Conclusion:** COSMEC is an effective learning resource for medical students, which can enhance knowledge and confidence in orthopedic and musculoskeletal topics. It can play a useful role in supplementing core medical school curricula for medical students.

07

Educational effectiveness of social media as a continuing professional development intervention among practising surgeons: a systematic review. ***Arashk Ghasroddashti, Fatimah Sorefan-Mangou, Rosephine Del Fernandes, Erin Williams, Ken Choi, Boris Zevin*. From Queen's University, Kingston, Ont.**

Background: Social media has the potential to improve global access to educational resources and professional networking. However, to our knowledge the educational effectiveness of social media as a continuing professional development (CPD) intervention is yet to be summarized. The objective of this systematic review was to assess the educational effectiveness of social media as a CPD intervention among practising surgeons. **Methods:** MEDLINE and Embase were searched from 1946 to 2022. We included studies assessing the educational effectiveness of social media for practising surgeons. We excluded studies that involved only trainees, did not evaluate educational effectiveness or involved an in-person component. The Medical Education Research Study Quality Instrument (MERSQI) was used for quality appraisal. Learning outcomes were categorized by Moore's Expanded Outcomes Framework level (MEOFL). **Results:** In total, 927 records were retrieved. After we removed 97 duplicates and screening titles and abstracts for relevance, 129 studies underwent full-text review. We included 14 studies. The mean (± standard deviation) MERSQI score of included studies was 9.0 ± 0.8. A total of 3227 participants across 105 countries and various surgical specialties were included, with neurosurgery being the most represented specialty. Twelve studies evaluated surgeons' satisfaction (MEOFL 2), 3 studies evaluated changes in knowledge (MEOFL 3), 1 study evaluated changes in competence (MEOFL 4) and 5 studies evaluated changes in performance or practice (MEOFL 5). No studies evaluated changes in patient or community health (MEOFLs 6 and 7). **Conclusion:** Social media for CPD of practising surgeons is associated with improvements in self-reported knowledge, competence and performance and practice. Future research should assess patient and community health changes related to use of social media for CPD.

08

Factors influencing medical students' decision to pursue a career in surgery in North America: a systematic review. ***Ethan D. Patterson, Sawmmiya Kirupaharan, Steve Mann, Andrea Winthrop, Boris Zevin*. From Queen's University, Kingston, Ont.**

Background: Fostering interest in surgical careers is a persistent challenge for surgical educators in North America. The aim of this review was to identify modifiable factors that influence medical students' decision to pursue a career in surgery. **Methods:** A systematic search was conducted in Embase, Education Source, Cochrane Central Register of Controlled Trials and MEDLINE, from database inception to July 2022. Studies reporting medical students' self-reported motivating and deterring factors regarding a career in surgery were included. Methodologic quality was appraised using the Critical Appraisal Skills Programme checklists. **Results:** A total of 38 publications (n = 8479 students, 50.9% female) were included, with 33 (86.8%) quantitative and 5 (13.2%) qualitative studies. A majority of the studies were cross-sectional (n = 34), with 2 pre-post and 2 prospective cohort studies. Longitudinal studies followed students from 2 months to 4 years. Most-cited motivating factors were mentorship (n = 17), interactions with staff and residents (n = 9) and career opportunities (n = 4). Deterring factors included negative perceptions about lifestyle (n = 15), negative interactions with surgeons and residents (n = 5) and lack of mentorship (n = 2). **Conclusion:** Mentorship was a key factor influencing the choice of a career in surgery, suggesting that medical students perceive benefit from assistance in navigating the challenges of a surgical career; it also underscores the importance of early exposure to surgeon–educators. However, the paucity of longitudinal studies limits our ability to determine how students' perceptions regarding a career in surgery change during undergraduate training. These results highlight opportunities to stimulate medical students' interest in a career in surgery.

09

Improving operating room teamwork: Do current strategies offer actionable solutions? ***Mostafa Bondok, Nibras Ghanmi, Cole Etherington, Youssef Saddiki, Isabelle Lefebvre, Pauline Berthelot, Pierre-Marc Dion, Benjamin Raymond, Jeanne Seguin, Pooyan Sekhavati, Sindeed Islam, Sylvain Boet*. From the Faculty of Medicine, University of British Columbia, Vancouver, B.C. (Bondok); the Faculty of Medicine, University of Ottawa, Ottawa, Ont. (Ghanmi, Saddiki, Lefebvre, Berthelot, Dion, Raymond, Seguin, Sekhavati, Islam); the Clinical Epidemiology Program, Ottawa Hospital Research Institute, Ottawa, Ont. (Etherington, Boet); the Department of Anesthesiology & Pain Medicine, The Ottawa Hospital, Ottawa, Ont (Boet); and the Department of Innovation in Medical Education, University of Ottawa, Ottawa, Ont. (Boet).**

Background: Suboptimal teamwork in the operating room is a contributing factor in a significant proportion of preventable complications for surgical patients. One of the most frequently identified barriers to effective teamwork is lack of knowledge of best practices and strategies. This scoping review aimed to identify actionable strategies for use during surgery by mapping the existing literature according to the Action, Actor, Context, Target, Time (AACTT) framework. **Methods:** MEDLINE, Embase, CINAHL, ERIC, Cochrane, Scopus and PsycINFO were searched from inception to April 5, 2022. Eligible studies described a teamwork intervention that could be implemented during the intraoperative period and described specific AACTT elements. Screening and data extraction were conducted by 2 independent reviewers. **Results:** We identified 9289 studies, 249 of which were eligible for inclusion. Eight teamwork interventions could be mapped to the AACTT framework (bundle or checklists, protocols, audit and feedback, clinical practice guidelines, environmental change, cognitive aid, education, other). Most studies involved education (n = 108 [43.4%]) or bundle or checklists (n = 76 [30.5%]). Education interventions centred on teaching broad teamwork concepts or nontechnical skills, and bundle or checklist interventions generally involved a wide variety of actions and actors, and rarely specified the actors and targets for each action. Conversely, protocol interventions generally

reported well-defined actions and specific actors. **Conclusion:** Several teamwork interventions could be classified using the AACTT framework; however, many were ambiguous with respect to the actors and actions involved. Protocol interventions appeared to be among the most actionable for the operating room, given clear specification of AACTT elements, and their effectiveness should be evaluated in future work.

10

Affective influence on lumbar laminectomy performance on a virtual reality spine simulator. ***Trisha Tee, Puja Pachchigar, Bilal Tarabay, Recai Yilmaz, Nour Abou Hamdan, Chinyelum Agu, Abdulrahman Almansouri, Jason Harley, Rolando Del Maestro*****. From the Neurosurgical Simulation and Artificial Intelligence Learning Centre, McGill University, Montréal, Que. (Tee, Pachchigar, Tarabay, Yilmaz, Abou Hamdan, Agu, Almansouri, Del Maestro); the Department of Neurology and Neurosurgery, McGill University, Montréal, Que. (Del Maestro); the University of Montreal Health Centre, Montréal, Que. (Tarabay); and the Simulation, Affect, Innovation, Learning, and Surgery Laboratory, Montreal Neurological Institute, McGill University, Montréal, Que. (Harley).**

Background: Performing surgery is a highly stressful and emotional task, especially among trainees. We sought to understand how emotions influenced performance outcomes in a standard yet technical spine procedure called the laminectomy. This study assesses the involvement of emotions in predicting surgical trainees' laminectomy performance on a virtual-reality spine simulator. **Methods:** Neurosurgical or orthopedic residents or fellows performed a lumbar laminectomy on the TSym virtual-reality spine simulator. Procedural metrics, such as the time to decompress the lamina and verify the decompression, were recorded. Participants completed a survey on emotions before the simulation. We conducted a multiple linear regression analysis to test whether anxiety, relaxation and relief predicted the time it took to complete the decompression and decompression verification steps. **Results:** A total of 34 neurosurgical or orthopedic trainees participated in the study. The multiple regression analysis for the time to complete the decompression step was statistically significant ($R^2 = 0.31$, $F = 4.41$, $p = 0.011$). The analysis revealed that anxiety significantly predicted this performance metric ($\beta = 0.532$, $p = 0.002$). The multiple regression analysis for the time to complete the decompression verification step was also statistically significant ($R^2 = 0.336$, $F = 5.059$, $p = 0.006$). Relaxation significantly predicted the time to verify decompression in a simulated laminectomy ($\beta = -0.627$, $p = 0.001$). These results suggest that surgical trainees' emotional states before a simulated procedure can affect surgical performance. **Conclusion:** Emotions influenced participants' simulated laminectomy performance, supporting consideration of emotional regulation in surgical training to minimize error and achieve optimal levels of surgical performance.

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Exploring the shifting landscape in the match outcomes of women applying to surgical residency programs in Canada: Have we achieved equity? ***Mostafa Bondok, Mohamed S. Bondok, Anne Xuan-Lan Nguyen, Christine Law, Nawaaz Nathoo, Nupura Bakshi, Nina Ahuja, Karim F. Damji*****. From the Faculty of Medicine, University of British Columbia, Vancouver, B.C. (M. Bondok); the Cumming School of Medicine, University of Calgary, Calgary, Alb. (M.S. Bondok); the Faculty of Medicine and Health Sciences, McGill University, Montréal, Que. (Nguyen); the Department of Ophthalmology, Queen's University, Kingston, Ont. (Law); the Department of Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, B.C. (Nathoo); the Department of Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ont. (Bakshi); the Division of Ophthalmology, McMaster University, Hamilton, Ont. (Ahuja); and the Department of Ophthalmology and Visual Sciences, Aga Khan University, Karachi, Pakistan (Damji).**

Background: Women are known to be under-represented in certain surgical specialties in Canada, but to our knowledge it has not been delineated how this compares between specialties and trends across time, and whether this is a result of differences in match rate by gender or a lesser number of women applicants. This study assessed gender-based differences in surgical specialty match outcomes. **Methods:** Data were extracted from the Canadian Resident Matching Service reports. **Results:** A total of 9488 applicants ranked surgical specialties as their first choice from 2003 to 2022. Increases in the proportion of women applicants in the periods 2003–2007 versus 2018–2022 were significant for cardiac surgery (22% to 43%, $p = 0.03$), general surgery (46% to 60%, $p < 0.001$), orthopedic surgery (23% to 35%, $p < 0.001$), urology (23% to 38%, $p < 0.001$), and all aggregated surgical specialties ("all surgery") (45% to 55%, $p < 0.001$). An increase in the proportion of women applicants who matched over the same periods was observed for general surgery (47% to 60%, $p < 0.001$), orthopedic surgery (24% to 35%, $p < 0.01$), urology (21% to 34%, $p < 0.001$) and all surgery (46% to 54%, $p < 0.001$). From 2003 to 2022, a lower match rate for women than men was observed for otolaryngology (0.60 v. 0.69, $p = 0.008$), urology (0.61 v. 0.72, $p = 0.003$) and all surgery (0.71 v. 0.73, $p = 0.038$), while higher match rates were observed for ophthalmology (0.65 v. 0.58, $p = 0.04$). **Conclusion:** Although the number of women applicants to surgical specialties in Canada has increased in recent years, differences in match rate by gender remain. Further research to understand and address these differences is needed.

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Exploring residents' emotion-regulation strategies and their effectiveness in team-based surgical simulations. ***Keerat Grewal, Sayed Azher, Matthew Moreno, Reinhard Pekrun, Jeffrey Wiseman, Gerald M. Fried, Susanne Lajoie, Ryan Brydges, Allyson Hadwin, Ning-Zi Sun, Elene Khalil, Jason M. Harley*****. From McGill University, Montréal, Que. (Grewal, Azher, Moreno, Wiseman, Fried, Lajoie, Sun, Harley); the University of Essex, Colchester, UK (Pekrun); the Ludwig Maximilian University of Munich, Munich, Germany (Pekrun); the Australian Catholic University, Sydney, Australia (Pekrun); the University of Toronto, Toronto, Ont. (Brydges); the University of Victoria, Victoria, B.C. (Hadwin); the McGill University Health Centre for Interprofessional Simulation, McGill University, Montréal, Que. (Khalil); and the Research Institute of the McGill University Health Centre, McGill University, Montréal, Que. (Harley).**

Background: Team-based surgical simulations are safe, immersive environments that replicate challenging situations encountered in practice. As emotions can affect performance and decision-making, it is imperative to know which emotion-regulation (ER) strategies are used during simulations and how effective they are. We investigated which ER strategies residents reported using during simulations, and the perceived effectiveness of these strategies. **Methods:** A pre–post survey study recruited 30 residents participating in team-based surgical simulations. Postsimulation, individual and team ER strategies used during the simulation and their perceived effectiveness (5-point scale) were reported. Emotion-regulation strategies were characterized as situation modification, attention deployment, cognitive change, response modulation and no regulation, based on the Emotion Regulation in Achievement Situations model. **Results:** Residents reported situation modification more frequently at the individual (n = 11) and team level (n = 12), with the team level being significant (p = 0.002). Attention deployment was the most effective at the team level (n = 7, M = 4.43) and was significantly more effective than no regulation (n = 8, M = 3.25; z = 12.571, p = 0.002). At the individual level, cognitive change (n = 1) and attention deployment (n = 9) were the most effective (M = 4.00), although not significant relative to other strategies; H(4) = 8.785, p = 0.067, power = 0.96. **Conclusion:** Residents reported attention deployment as being more effective at regulating their emotions, while situation modification was the most frequently used. This suggests that ER strategy selection may not entirely depend on effectiveness and may be influenced by other factors. Our research provides novel insight into and highlights the necessity of exploring the nuances of residents' ER during simulations.

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Impact of an educational workshop for medical student surgical clerkship rotation preparation. ***Emily Lan-Vy Nguyen*, *Prachikumari Patel*, *Hala Muaddi*, *Nadia Rukavina*, *Roxana Bucur*, *Chaya Shwaartz*. From the Temerty Faculty of Medicine, University of Toronto, Toronto, Ont. (Nguyen); Abdominal Transplant, University Health Network, Toronto, Ont. (Shwaartz); General Surgery, University of Toronto, Toronto, Ont. (Shwaartz, Muaddi); and HPB Surgical Oncology, University Health Network, Toronto, Ont. (Shwaartz, Bucur, Rukavina, Patel).**

Background: Simulation-based teaching is required to supplement theory-based knowledge acquisition in medical school. We designed an educational workshop for second-year medical students and evaluated its impact on their surgical clerkship rotation preparation. **Methods:** Five 1-hour sessions covering technical domains (aseptic technique, surgical instrument handling, suturing, knot-tying) and nontechnical domains (oral presentation, progress note, expectations of a clerk) were taught by a general surgery staff surgeon, surgical trainees and an operating room nurse. Students' confidence and knowledge in surgical topics before and after the workshop were assessed through 10-point Likert scale questionnaires and a multiple-choice test, respectively. Pre- and post-workshop responses were compared with paired t test. **Results:** A total of 19 medical students at 1 Canadian medical school participated. Of these, 16 (84.2%) were included in the analysis after incomplete questionnaires were removed. Mean (± standard deviation) student age was 25.1 ± 2.4 years and 10 (62.5%) were female. Ten students (62.5%) had had little (< 5 times) or no exposure to an operating room in the last year. After the workshop, students' confidence across technical and nontechnical domains improved from 2.74 ± 0.85 to 6.41 ± 0.83 (p < 0.01). Students scored an average of 69.7% on the test before the workshop and 80.2% after it (p = 0.002). Of these, 11 students (68.8%) agreed that they better understood the role and expectations of a surgical clerk. All students agreed that the workshop should be offered again. **Conclusion:** Our novel educational workshop improved the confidence, competence and preparation of medical students for their surgical clerkship. Future efforts will examine the impact of a workshop series on students' clinical evaluations and residency selection.

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McGill Surgical Exploration and Discovery: impact on medical students' perception and skills in surgery. ***Nehal Islam*, *Sarah Moussa*, *Mathushan Subasri*, *Moustafa Fakih*, *Reggie Charles Hamdy*, *Evan Wong*. From McGill University Health Centre, McGill University, Montréal, Que.**

Background: McGill Surgical Exploration and Discovery (SEAD) provides early opportunities to observe staff surgeons in various surgical disciplines, hands-on surgical-skills workshops and lunchtime talks. The aim of the SEAD program is to increase students' understanding of surgical skills and knowledge and provide insights into the lifestyle demands of a surgical career. This study evaluated changes in medical students' perceptions and skills in surgery over the course of the SEAD program. **Methods:** A total of 52 medical students applied for the SEAD program, and 20 actively participated. Pre- and post-program surveys were conducted to assess students' perceptions of surgery as a career, emotional responses related to specialty selection, interest in surgical specialties, perceptions of job prospects and the quality of experience with individual SEAD workshops and talks. **Results:** Students had a positive experience with SEAD, with reduced anticipation and fear associated with specialty selection after the program. They exhibited increased interest in surgical specialties, attributing it to exposure through workshops and talks. However, perceptions of job prospects became increasingly unfavourable, likely owing to a better understanding of the lengthy and rigorous training for surgical disciplines. We found that SEAD effectively influences students' perceptions and interest in surgical careers, addressing negative emotions and sparking interest in surgical specialties and surgical careers. To better prepare students, it is crucial to provide comprehensive information about the challenges and rewards of a surgical career, including the training period. **Conclusion:** The McGill SEAD program positively affects medical students' perceptions and interest in surgical careers. Early exposure to surgery fosters a better understanding of the profession and its demands.

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Does BlackBox Explorer Technology improve operative teaching for surgical residents? ***Aradhana Tewari*, *Ryan Brydges*, *Marisa Louridas*. From St. Michael's Hospital, Unity Health Toronto, Toronto, Ont. (Tewari, Brydges, Louridas); and the University of Toronto, Toronto, Ont. (Brydges, Louridas).**

Background: Video review has been shown to assist with the acquisition of operative technical skills, but it can be time-consuming for both trainees and staff. Artificial intelligence (AI) scoring of video performances may lighten staff surgeons' load in operative teaching and assessment. We examined surgical trainees' perspectives on the value of the BlackBox Explorer's (BBX) automated, AI-algorithm, video-based operative teaching and assessment system. **Methods:** Surgical residents and fellows rotating at the Humber River Hospital in Toronto, Ontario, were randomized into 2 groups. Each group used the BBX and the institutional video-recording platform, in opposite sequences during their rotation. Our primary data included semistructured interviews that were analyzed using a constant comparative approach. **Results:** Our analyses of 14 interviews showed that participants judged the BBX's utility as restricted; its utility was contingent on whether it facilitated self-directed utilization and self-regulated learning via interpretable assessment data (e.g., AI scores). Participants described inconsistent institutional support, lack of integration into the formal curriculum, and rare instances of interdisciplinary collaboration regarding the best use of the system. Trainees found the BBX promoted their self-regulated learning infrequently. Although trainees felt that the system has clear potential, they also identified technical and systems barriers that must be addressed to effectively integrate the BBX into surgical curricula. **Conclusion:** Siloed implementation breeds inconsistent utilization. Our findings show that no matter how beneficial an AI-based, automated assessment system may be, the human touch of effective integration into busy curricula remains a key challenge for surgical educators and leaders alike.

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The impact of a deceased donor organ procurement workshop on surgical transplant fellows' confidence and competence. ***Shilpa Balaji*, *Prachi Patel*, *Hala Muaddi*, *Karolina Gaebe*, *Carla Luzzi*, *Aileigh Kay*, *Nadia Rukavina*, *Markus Selzner*, *Trevor Reichman*, *Chaya Shwaartz*. From the University of Toronto, Toronto, Ont. (Balaji, Gaebe, Selzner, Reichman, Shwaartz); the University Health Network, Toronto, Ont. (Patel, Luzzi, Kay, Rukavina, Reichman, Shwaartz); and the Mayo Clinic, Rochester, Minn. (Muaddi).**

Background: Deceased donor organ procurement is a complex and time-sensitive procedure that requires exceptional skill of surgeons, including transplant fellows who are crucial in organ retrieval. Thus, training fellows in these procedures is imperative, but such opportunities are limited. Therefore, we designed and conducted the first technical training workshop in Toronto, Ontario, and assessed its impact on enhancing transplant fellows' proficiency in organ retrieval. **Methods:** The abdominal transplant fellows from our institution, the University of Toronto, were invited to participate in the study. At the beginning of the workshop, participants were asked to report their exposure to and confidence in various aspects of organ procurement and test their knowledge with multiple-choice questions. Questionnaires were also administered immediately post-workshop, 1 month and 6 months after the workshop. The *t* test and Wilcoxon tests were used to compare responses before and after the workshop. **Results:** A total of 7 fellows participated in the study; 57% (4/7) had had very limited exposure to deceased donor operations in the past year. After the workshop, fellows' confidence increased (± standard deviation) (4.9 ± 3.8 v. 6.9 ± 2.9, $p \leq 0.05$) persistently at 1 month (7.9 ± 2.2, $p \leq 0.05$) and 6 months post-workshop (8.9 ± 0.7, $p \leq 0.05$). The competence scores also improved at the end of the workshop (72.4% v. 81.6%, $p = 0.46$), at 1 month (72.4% v. 85.7%, $p = 0.06$) and 6 months post-workshop (72.4% v. 86.7%, $p = 0.11$). **Conclusion:** The deceased donor workshop was successful in enhancing the fellows' confidence and competence. Future efforts will focus on incorporating insights from this workshop and improving it to ultimately better the outcomes of organ transplantation.

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Vascular anastomosis workshop improves general surgery residents' confidence and competence. ***Shilpa Balaji*, *Hala Muaddi*, *Ali Shahabinezhad*, *Prachi Patel*, *Nadia Rukavina*, *Trevor Reichman*, *Shiva Jayaraman*, *Chaya Shwaartz*. From the University of Toronto, Toronto, Ont. (Balaji, Reichman, Jayaraman, Shwaartz); the University Health Network, Toronto, Ont. (Shahabinezhad, Patel, Rukavina, Reichman, Shwaartz); Unity Health Toronto, Toronto, Ont. (Jayaraman); and the Mayo Clinic, Rochester, Minn. (Muaddi).**

Background: Vascular anastomosis (VA) is a crucial aspect of complex surgical procedures in general surgery. However, most general surgery residents do not have sufficient exposure to vascular surgery during residency. Therefore, we designed and implemented a VA workshop for fifth-year general surgery residents, which, to our knowledge, was the first of its kind in Canada. The study evaluated the benefit of the VA workshop in improving the confidence and competence of fifth-year general surgery residents. **Methods:** We organized a didactic lecture and hands-on technical training workshop for residents. The residents completed pre- and post-workshop questionnaires assessing their confidence and competence via a self-rated numerical scale and a multiple-choice test, respectively. Data were reported using means and standard deviations. The mean change in responses post-workshop was compared using a paired Student *t* test and Wilcoxon signed-rank test, as appropriate. *P* values ≤ 0.05 were considered statistically significant. **Results:** A total of 13 general surgery residents at our institution, the University of Toronto, participated in the workshop. Of the 13 residents, 7 (53.8%) reported very few exposures to VA (< 5 times in the past year) and 10 (76.9%) were involved in the procedures only as observers. Residents' confidence level almost doubled after attending the VA workshop (2.8 ± 2.0 v. 5.1 ± 1.6, $t_{12} = -5.86$, $p \leq 0.05$). The competence score assessing residents' knowledge also improved after the workshop (58.3% v. 83.3%, $p \leq 0.05$). **Conclusion:** This workshop improved residents' confidence and competence in performing VA. Future studies will use objective measures such as task completion time and errors and will assess the long-term impact of regular VA workshops.

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A comparative analysis of video-based versus text-based learning resources for Foley catheter insertion and the implications for medical student procedural skills training: a pilot study. ***Joseph Nasbed*, *Luca Ramelli*, *Owen Kolasky*, *Tiffany Dickenson*, *Mike Dullege*, *Annie Kang*, *Andrea Winthrop*, *Steve Mann*. From Queen's University, Kingston, Ont.**

Background: Foley catheter insertion is a vital skill requiring training to ensure patient comfort and prevent complications. Although text-based resources have been used for procedural training, video-based tools have gained prominence. The aim of this study was to compare standard text-based and video-based resources for training on Foley catheter insertion. **Methods:** A total of 22 pre-clerkship students were randomized into video-based learning (VBL; n = 11) and text-based learning (TBL; n = 11) groups. The VBL group received standard text-based resources and a new instructional video; the TBL group received text-based tools only. Trainees underwent standardized simulation skills testing before and after training, assessed by trained raters. A questionnaire gauged self-perceived proficiency and confidence pre- and post-training. **Results:** Both groups showed significant performance improvement after the training in standardized simulation testing (VBL: t = –3.19, p = 0.0096; TBL: t = –3.82, p = 0.0029). Although the VBL and TBL groups did not differ significantly in their simulation scores (t = 1.683, p = 0.837), VBL participants expressed feeling well prepared for in-person catheter placement (t = 6.06, $p = 5.15 \times 10^{-6}$), suggesting enhanced self-assuredness. Although the small sample size did not reveal differences in low-stakes simulation performance, VBL-exposed individuals reported heightened confidence, which underscores the potential of VBL in enhancing confidence in procedural skills training among novice medical trainees. A larger sample size is warranted to explore the broader implications of integrating video tools into medical curricula. **Conclusion:** The results of this pilot suggest that VBL tools might offer advantages over traditional TBL resources for training medical students and residents in specific procedural skills, such as Foley catheter insertion.

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Improving assessment and training in craniosynostosis: the role of interactive 3-D models and multimodal e-learning. ***Davy Lau*, *Erika Henkelman*, *John Jacob*, *Isabella Watson*, *Faizal Haji*. From the University of British Columbia and the B.C. Children's Hospital Research Institute, Vancouver, B.C. (Lau, Henkelman, Watson, Haji); and the B.C. Children's Hospital Digital Laboratory, Vancouver, B.C., (Jacob).**

Background: Craniosynostosis (CSO) refers to the premature fusion of a child's sutures, leading to distinct differences in head shape for which early diagnosis is important. However, the rarity of CSO limits the clinical exposure required to develop diagnostic accuracy. To address this educational gap, we created an e-learning platform with 3-D representations, to train physicians in how to differentiate CSO and non-CSO head shapes. **Methods:** A multidisciplinary team created the platform's educational content from primary literature, medical websites and expert opinion. Three-dimensional scans of infants with CSO and non-CSO head shapes, taken from data sets approved for noncommercial use, were embedded within this module, allowing for interactive manipulation by the user. An assessment tool will be created based on the didactic content, requiring participants to diagnose head shapes from photographs of recruited patients. **Results:** The didactic component of the e-learning module has been created and consists of textual information, various photographs of infant head shapes and review questions. Participants are first presented with photographs illustrating a particular head shape presentation (e.g., plagiocephaly) then, through direct comparison, are taught the differences between the CSO and non-CSO diagnoses within that presentation. Similar 3-D e-learning platforms have demonstrated efficacy at teaching basic craniofacial anatomy. However, there are scant examples in the literature describing clinical diagnosis of craniofacial differences being taught through this methodology. **Conclusion:** E-learning with 3-D representations is a novel approach for educating clinicians to accurately diagnose differences in head shape.

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Anatomy of a strategic plan for education: driving innovation in McMaster's Division of Cardiac Surgery. ***Charlotte C. McEwen*, *Iqbal Jaffer*, *Matthew Sibbald*. From the Faculty of Health Sciences, McMaster University, Hamilton, Ont. (McEwen, Jaffer, Sibbald); Division of Cardiac Surgery, McMaster University, Hamilton, Ont. (McEwen, Jaffer); Division of Cardiology, McMaster University, Hamilton, Ont. (Sibbald); and the McMaster Education Research, Innovation and Theory Program, McMaster University, Hamilton, Ont. (Sibbald).**

Background: The McMaster Division of Cardiac Surgery is a small subspecialty residency training program in Hamilton, Ontario. This year, after the appointment of a new and energetic program director, and having completed a successful Royal College of Physicians and Surgeons review, the division turned its attention to the future and invested in the development of a strategic plan for education. **Methods:** This plan was developed through a 5-stage process that included a survey of residents and faculty, expert review, leadership consultation, focus group feedback at the program's academic retreat, and vetting before submission to the residency program committee for approval. **Results:** Three key strategic priorities were identified: to elevate the program's current practice to best-in-class standard, accelerate training innovation by engaging with emerging technologies and methodologies and, recognizing that faculty are the backbone of the program, intensifying faculty support. Although many of the division's partner organizations (McMaster Postgraduate Medical Education, McMaster Undergraduate Medical Education, the Department of Surgery, Hamilton Health Sciences) have strategic plans, this is the first developed for this program. Further, this plan provides the program with a strategy to tackle the twin challenges of diminished operative volumes since the start of the COVID-19 pandemic and transition to competency-based medical education. **Conclusion:** The strategic plan for education in the Division of Cardiac Surgery is a new, innovative project benefiting residents and faculty by clarifying the program's mission, communicating its values, and organizing future actions to enhance training.

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Optimizing the learner's role in feedback: development of a feedback-preparedness online application for medical students in the clinical setting. ***Victoria Blouin*, *Florence Bénard*, *Florence Pelletier*, *Sandy Abdo*, *Léamarie Meloche-Dumas*, *Bill Kapralos*, *Adam Dubrowski*, *Erica Patocskai*. From l'Université de Montréal, Montréal, Que. (Blouin, Bénard, Pelletier, Meloche-Dumas, Patocskai); and Ontario Tech University, Oshawa, Ont. (Abdo, Kapralos, Dubrowski).**

Background: Feedback is an essential component of medical education, especially during clinical rotations. There is growing interest in learner-related factors that can optimize the efficiency of the feedback, including goal orientation, reflection, self-assessment and emotional response. However, to our knowledge, no mobile application or curriculum currently exists to specifically address those factors. **Methods:** Our team conceptualized and created an innovative online application, available on mobile phones, to bridge this gap. The application is designed to be completed by medical students immediately before their clinical rotation feedback session. It includes an informative section on the role of feedback, tips for the feedback session and personal reflection questions. Learner-based feedback was provided by 18 students in their third or fourth year of medical school on a pilot version of the application. **Results:** Most learners deemed the module to be relevant (83.3%) and helpful in guiding reflection and self-assessment (77.8%) and better preparing for an upcoming feedback session (77.8%). Minor improvements were suggested in terms of content and format. The learners' initial positive response supports further efforts to engage in validity and evaluation research. Future steps include modifying the mobile application based on learners' comments, evaluating its efficacy in a real clinical setting and clarifying whether it is most beneficial for midrotation or end-of-rotation feedback sessions. **Conclusion:** Our team successfully developed and evaluated an innovative online application to address learner-related factors that can optimize the efficiency of feedback.

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Trainee response to artificial intelligent tutor instruction in surgical simulation. ***Puja Pachchigar*, *Chinyelum Agu*, *Recai Yilmaz*, *Trisha Tee*, *Rolando Del Maestro*. From the Neurosurgical Simulation and Artificial Intelligence Learning Centre, Department of Neurology & Neurosurgery, Montreal Neurological Institute, McGill University, Montréal, Que. (Pachchigar, Agu, Yilmaz, Tee Del Maestro); and l'École polytechnique universitaire de Marseille, Marseille, France (Agu).**

Background: An artificial intelligence (AI) tutor called the Intelligent Continuous Expertise Monitoring System (ICEMS) was created to continuously assess trainees' performance during neurosurgical simulation and provide specific instructions to improve skills, based on 5 machine learning algorithms trained with expert data. The objective of this study was to characterize trainee responses to AI tutor instruction on low bipolar force application. **Methods:** A total of 33 medical students performed 5 subpial tumour resection simulations on the NeuroVR surgical simulation platform, monitored by the ICEMS. This tutor provided feedback on 6 instructions, including on low and high bipolar force application, tissue injury, bleeding, instrument tip separation and high aspirator force. This study focused on identifying trainee responses to errors in low bipolar force usage. The system identified 53 low bipolar force application errors, which were extracted from participant response data in seconds and grouped using an AI system — Agglomerative Clustering, an unsupervised learning algorithm — into 3 groups: successful, unsuccessful and over responses. **Results:** Eleven of 33 participants (33%) never needed AI tutor instructions. The 22 remaining trainees received 53 tutor instructions (67%). In total, 28 instructions were classified as successful responses (53%), 19 as unsuccessful (36%) and 6 as over responses (11%). Mean increase in bipolar force application response values were 0.18, 0.02 and 0.47 N, respectively. These varying trainee responses to AI tutoring may have been related to individual learner response to tutor instruction, learning styles and abilities, or misunderstanding instructions. **Conclusion:** Future studies need to focus on developing intelligent tailored feedback methodologies that address different trainee needs.

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Promoting diversity in surgery through UofC UpSurge. ***Ifeoluwa Adedipe*, *Carolyn Stephens*, *Merry Ghebretatios*. From the Cumming School of Medicine, University of Calgary, Calgary, Alb.**

Background: Underrepresentation in medicine is prevalent throughout undergraduate and postgraduate medical education, as well as in academic leadership. The University of Calgary (UofC) chapter of UpSurge is a pipeline program created to address the lack of Black representation in surgery. We aimed to demonstrate the benefits of pipeline programs to increase diversity in surgery and facilitate implementation of these programs on a national scale. **Methods:** PubMed, MEDLINE and Google Scholar databases were searched to identify relevant articles that met 1 or more of the following criteria: outlined the degree of diversity in surgery education and leadership; assessed the development, implementation and evaluation of pipeline programs; and reported on wellness outcomes from pipeline programs for learners. **Results:** Of the 13 identified studies that met the inclusion criteria, 9 provided evidence supporting the lack of diversity among surgical trainees and leadership; 6 studies substantiated the importance of pipeline programs in increasing representation in medical and surgical fields; and 2 studies provided evidence supporting the benefit of pipeline programs in improving the wellness of under-represented trainees. These results showed that racialized learners represent a disproportionately small number of surgical trainees. The current literature suggests that pipeline programs may increase interest and recruitment of racialized applicants to surgical specialties, enhance well-being and facilitate success. **Conclusion:** Pipeline programs such as UofC Upsurge can improve the significant lack of diversity in surgical specialties by increasing representation and learner wellness.

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Evaluating the benefit of a novel surgical robotic training workshop for general surgery and subspecialty trainees in Canada. ***Simon Laplante*, *Prachi Patel*, *Shilpa Balaji*, *Hala Muaddi*, *Nadia Rukavina*, *Chaya Shwaartz*. From the University Health Network, Toronto, Ont. (Patel, Laplante, Rukavina, Shwaartz); the Temerty Faculty of Medicine, University of Toronto, Toronto, Ont. (Balaji); and the Mayo Clinic, Rochester, Minn. (Muaddi).**

Background: The uptake of robotic surgery is increasing globally, including in Canada. However, despite its significant adoption, a formal training curriculum for general surgery trainees is currently lacking in Canada. Therefore, we designed a comprehensive training workshop for general surgery trainees and assessed its benefits. **Methods:** A total of 15 general surgery residents and fellows from the University Health Network who

participated in the workshop were asked to report their exposure to and confidence in using the robotic surgery technology at the beginning and end of the workshop. Their knowledge was also assessed at the beginning and end of the workshop, using a multiple-choice test. The paired *t* test or Wilcoxon test was used, as appropriate, to compare responses pre- and post-workshop. **Results:** A total of 57% (4/7) of residents and 38% (3/8) of fellows reported having had no exposure to robotic surgery in the past year. After attending the workshop, both residents' (± standard deviation) (2.0 ± 0.4 v. 5.7 ± 1.1, $p \leq 0.05$) and fellows' confidence increased (3.1 ± 0.3 v. 6.7 ± 0.7, $p \leq 0.05$). When tested on their knowledge about robotic surgery, trainees' competence scores also improved (residents 47% v. 63%, $p = 0.025$, and fellows 56% v. 65%, $p = 0.13$). All participants agreed they felt safer using the robot in the clinical setting after attending the workshop. The results from our study indicate the need to tailor this workshop according to various training and competence levels for surgical trainees. **Conclusion:** Future efforts will focus on incorporating insight from this workshop and exploring different measures of technical competence to create a longitudinal robotic curriculum in Canada.

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Undergraduate surgery learning objectives: illuminating discrepancies among Canadian medical schools. ***Maren Brodovsky*, *Carolyn Lai*, *Abdollah Behzadi*, *Geoffrey Blair*. From the University of Toronto, Toronto, Ont. (Brodovsky, Behzadi); the Sunnybrook Health Sciences Centre, Toronto, Ont. (Lai); and the University of British Columbia, Vancouver, B.C. (Blair).**

Background: For many future physicians, the clerkship rotation in surgery is their last comprehensive exposure to the field of surgery. It is therefore crucial that medical students have a solid understanding of the surgical issues that every physician should be able to identify and manage. The aim of this study was to evaluate the variations in undergraduate surgery learning objectives from medical schools across Canada. **Methods:** Employing a systematic approach, we analyzed the surgical learning objectives from 6 medical schools across Canada, dispersed geographically. We assessed the quantity of objectives provided to students, the clarity and specificity of these objectives, and what surgical subspecialties were included or omitted. **Results:** Among the 6 medical schools, subspecialty learning objectives ranged from listing 1 relevant patient presentation to more than 50 diagnoses. Some sets of objectives included simple lists of a few surgical conditions, while others were detailed, multi-page documents highlighting numerous presentations, diagnoses and complications. Notably, 2 of the 6 schools did not include objectives for pediatric surgery. The analysis highlighted notable variations in the surgical learning objectives provided to students across medical schools. A lack of consistency was found in the number of objectives given, the clarity of expectations for students and the subspecialties covered within these objectives. **Conclusion:** These findings support a need for standardization of learning through the development of National Undergraduate Surgery Learning Objectives. This will help to ensure that students are completing medical school with the comprehensive foundational knowledge of surgery needed to practise in any area of medicine.

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Cerebral corticectomy in ex-vivo calf brain model: face and content validation. ***Abdulrahman Almansouri*, *Nour Abou Hamdan*, *Recai Yilmaz*, *Trisha Tee*, *Puja Pachchigar*, *Mohammadreza Eskandari*, *Chinyelum Agu*, *Bianca Giglio*, *Neevya Balasubramaniam*, *Josh Bierbrier*, *D. Louis Collins*, *Houssem-Eddine Gueziri*, *Rolando F. Del Maestro*. From McGill University, Montréal, Que.**

Background: Simulation-based training has been shown to be useful in surgical education. In neurosurgery, the subpial resection technique is a critical bimanual skill that needs mastery. This involves resecting the intended area of pathology while respecting anatomic boundaries. Currently, there is a lack of realistic simulation models that replicate this task. We therefore sought to develop an ex-vivo calf brain simulation model and conducted a case series to test the model's face and content validity. **Methods:** We designed a case series that included 23 participants categorized a priori into 2 groups: 12 skilled and 11 less skilled participants. Fresh ex-vivo calf brains were used in the study, owing to their morphological similarity to the human brain. The brain was fixed in a human skull model, replicating an off-midline craniotomy. An operative microscope, bipolar forceps, ultrasonic aspirator and microscissors were used to conduct 3 predefined subpial corticectomies. Surgical movements were continuously captured via optical cameras that track fiducial markers attached to surgical instruments. Face and content validity were assessed using 7-point Likert scale questionnaires. **Results:** Overall median scores of 6.0 (range 4.0–6.0) were obtained for face validity, and 6.0 (range 3.5–7.0) for content validity. Participants in both groups rated the model similarly, with no statistical differences identified. **Conclusion:** The subpial resection procedure was replicated on a novel ex-vivo calf brain simulation model. Face and content validity scores were met. The model may have utility in neurosurgical education involving brain operative procedures.

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Validating a virtual simulation tool for local and regional flap reconstruction in the head and neck. ***Ella Koonar*, *Fatemeh Ramazani*, *Robert Hart*, *Jessica Henley*, *Sam Roberts*, *Shamir Chandarana*, *Wayne Matthews*, *Christiaan Schrag*, *Jennifer Matthews*, *David Mackenzie*, *Court Cutting*, *Justin Lui*. From the University of Calgary, Calgary, Alb. (Koonar, Ramazani, Hart, Henley, Roberts, Chandarana, W. Matthews, Schrag, J. Matthews, Mackenzie, Lui); and New York University, New York, NY (Cutting).**

Background: Three-dimensional visualization and design of local and regional reconstructive techniques poses a challenge for surgical trainees. Simulation-based learning provides trainees with high-fidelity environments to practise these technical skills. Current literature reveals a deficiency in digital simulation models for local head and neck reconstruction. In this prospective, randomized pilot study, we aimed to validate a novel virtual simulation tool and integrated educational curriculum designed for local head and neck reconstruction. **Methods:** Participants were randomized to 2 content delivery groups: lecture-based didactic session and virtual simulation. All participants completed pre- and post-session tests. Domains assessed included theoretical reconstructive knowledge, ability to design local flaps, and

understanding of common complications. Additionally, respondents were polled on their exposure to local flap reconstructive training and comfort level with local reconstructive techniques. All tests were independently scored by 3 head and neck surgeons, according to a prospectively designed rubric to ensure inter-rater reliability. **Results:** Ten residents in otolaryngology–head and neck surgery and in plastic and reconstructive surgery participated in this study, across all levels of training. Participants in the simulation group reported significantly improved levels of comfort with local reconstructive techniques compared with those in the didactic group. Additionally, participants in the simulation group were found to have higher post-test scores, compared with those receiving didactic teaching. **Conclusion:** This novel virtual simulation tool will improve residents' comfort and understanding of local head and neck reconstructive techniques, addressing a notable deficiency in surgical training.

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The impact of a surgical boot camp and near-peer teaching on the acquisition of basic surgical skills in medical students transitioning to clerkship. ***Éolie Delisle, Tomas Cordoba, Carlos Cordoba*. From the Université de Montréal, Montréal, Que. (Delisle, T. Cordoba); and the Centre hospitalier universitaire de Montréal, Montréal, Que. (C. Cordoba).**

Background: Simulation teaching is recognized by the scientific community as beneficial for acquiring surgical techniques. Near-peer teaching has proven to be an effective method for medical training. To address the concerns of medical students transitioning to clerkship, fourth-year medical students designed a pre-clerkship surgical simulation at the Université de Montréal. The goal of this simulation was to help students acquire basic techniques for their surgical rotation. **Methods:** In August 2023, an 8-hour surgical boot camp was organized, covering 11 different topics. The program included lectures and practical sessions. A total of 21 students starting clerkship participated and completed a self-administered questionnaire before and after the workshop. The aim of this questionnaire was to evaluate their knowledge, technical skills, self-perceived confidence, anxiety and motivation related to basic surgical procedures. **Results:** Before the simulation, 66% of participants lacked confidence in their surgical ability. After completing the program, there were statistically significant improvements in both knowledge and self-confidence for all 11 procedural skills ($p < 0.05$). Of attendees, 85% reported feeling confident about beginning their rotation and 80% expressed confidence in performing tasks in the operating room. These results show that students gain useful surgical skills by participating in workshops. Because every student who participated in the training would recommend it, citing its relevance and importance in the curriculum, we believe these courses should be integrated into medical school curricula to increase students' skill set. A limitation was the small sample size. **Conclusion:** Surgical simulations prepare medical students for rotations by increasing their technical capabilities and confidence. We recommend integrating them into the curriculum.

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Evaluating the impact of the MLASE checklist on surgical training literature involving machine learning and virtual reality: a comparative analysis. ***Bianca Giglio, Adrien Lacroix, Julianne Cairns, Ahmad Alsayegh, Mohamed Alhantoobi, Neevya Balasubramaniam, Widad Safih, Meriem Hamel, Rolando Del Maestro*. From the Neurosurgical Simulation and Artificial Intelligence Learning Centre, McGill University, Montréal, Que.**

Background: In 2019, the Machine Learning to Assess Surgical Expertise (MLASE) checklist was developed to assist researchers in ensuring quality when generating literature pertaining to the evaluation of surgical expertise via machine learning (ML), using virtual reality (VR) simulation. This investigation assesses the impact of the MLASE checklist on relevant literature since its publication. **Methods:** A literature review was conducted to identify articles published between July 1, 2019, and May 31, 2023, related to ML, VR and surgery. Articles were divided into those that cited and those that did not cite the MLASE checklist. Studies involving ML-based classification of surgical expertise on VR simulators were scored by 2 expert reviewers using the MLASE checklist. **Results:** A total of 1118 articles were identified, of which 124 (11.1%) cited the MLASE checklist article. Of these, 9 (7.3%) met the inclusion criteria; the other 115 (92.7%) were reviews and other articles. Of the 16 total articles that met the inclusion criteria, 7 (43.8%) did not cite the MLASE checklist. The difference in average MLASE scores between citing articles (mean 18.4, range 16.5–20) and nonciting articles (mean 13.1, range 6–18.5) was statistically significant ($p = 0.004$). The majority of the articles citing the MLASE checklist (92.7%) did not involve ML-based classification of surgical expertise on VR simulators. Only 16 articles met the inclusion criteria and 9 (56.3%) cited the MLASE checklist. **Conclusion:** Using the MLASE checklist resulted in an improvement in the quality of the literature.

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Exploring the impact of LearnENT's social media as a powerful tool in OHNS medical education. ***Gizelle Francis, Alexander Moise, Youssef Omar, Kalpesh Hathi, Dorsa Mavedatnia, Elysia Grose, Timothy Philips*. From Dalhousie University, Halifax, N.S. (Francis, Hathi); McGill University, Montréal, Que. (Moise); the University of Saskatchewan, Saskatoon, Sask. (Omar); the University of Toronto, Toronto, Ont. (Mavedatnia, Grose); and Queen's University, Kingston, Ont. (Philips).**

Background: Advancements in medical education, driven by health care demands and technology, have led to the adoption of virtual learning. However, certain medical fields, such as otolaryngology–head and neck surgery (OHNS), are underrepresented in undergraduate medical education curricula. LearnENT, an OHNS educational app, fills this gap and has gained a global user base through its active social media presence. **Methods:** Data were collected using the Instagram Business Profile analytics software to analyze the LearnENT Instagram account's performance. Follower demographics, audience activity patterns and account interactions were measured. LearnENT mobile application data were also collected, and a descriptive analysis was conducted to identify trends. **Results:** The LearnENT Instagram account had 900 followers, representing a diverse community in terms of demographics and geographical locations. Canada had the highest representation, followed by the United States, India and Spain. The LearnENT mobile application

experienced substantial growth, reaching 8257 users by the study's end. We found that LearnENT's Instagram account effectively disseminated OHNS educational resources and engaged learners, evidenced by the growth in followers and app users. The global reach and diversity of the account highlighted its ability to connect individuals worldwide. Growth and engagement can be further enhanced using graphics and audience preferences, and engaging with other OHNS accounts. **Conclusion:** LearnENT plays an important role in networking and fostering community among OHNS medical professionals and learners. This study highlighted the LearnENT Instagram account's effectiveness in sharing OHNS resources, fostering collaboration and boosting engagement. The account's recent growth and diverse community underscore the impact of social media.

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MiHolo, a holographic training tool for minimally invasive mitral valve repair surgery. ***Clément Schneider*, *Denis Corbin*, *François Lesage*, *Michel Pellerin*, *Walid Ben-Ali*. From the Institut de Cardiologie de Montréal, Montréal, Que.; and the Université de Montréal, Montréal, Que.**

Background: Minimally invasive mitral surgery (MIS) is an innovative surgical technique that allows for the repair or replacement of the damaged mitral valve through small right mini thoracotomy incisions. This endoscopic-guided approach improves patient recovery time, reduces perioperative complications and enhances overall patient outcomes. However, MIS techniques consist of complex and technically demanding skills and require specialized training and expertise. The aim of this study was to create a realistic surgical simulation for MIS valve repair surgery using a Microsoft HoloLens and hologram gestures, to enhance training of future surgeons. **Methods:** We recorded 10 procedures by senior surgeons, tracking hand and wrist gestures, during MIS valve repair surgery, using artificial intelligence gesture algorithms. We created a reference holographic projection using recorded procedures from the experts' hand gestures. We incorporated mitral valve visualization and annuloplasty needle positioning on endoscopic instruments into a holographic projection for enhanced training. We benchmarked the accuracy and realism of the holographic projection and its representation of the experts' hand gestures, including needle positioning. We compared trainee performance on the simulator before and after they had used the holographic surgical training tool to assess its effectiveness in improving surgical skills, including hand gestures and needle positioning using performance metrics. **Results:** This was a simulator project. Currently we are capable of recording expert users, comparing them with novice surgeons and noticing differences. **Conclusion:** We aimed to create a realistic and accurate holographic projection of a surgeon's movements and gestures during MIS valve repair surgery and assess the effectiveness of the holographic teacher in conveying information and knowledge to trainees. The software is able to suggest improvements, but we need to test it on our target population.

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Evaluating the impact of medical students' participation in telephone visits for patients with breast cancer: a pilot study. ***Zakaria Tamani*,* *Maxine Joly-Chevrier*,* *Florence Bénard*, *Léamarie Meloche-Dumas*, *Laurence Laflamme*, *Kerianne Boulva*, *Rami Younan*, *Adam Dubrowski*, *Erica Patocskai*. *Denotes shared first authorship. From the Faculty of Medicine, Université de Montréal, Montréal, Que. (Tamani, Joly-Chevrier, Laflamme); General Surgery, Université de Montréal, Montréal, Que. (Bénard, Meloche-Dumas); Surgical Oncology, Centre hospitalier de l'université de Montréal, Montréal, Que. (Boulva, Younan); and Health Sciences, maxSIMhealth Laboratory, Ontario Tech University, Oshawa, Ont. (Dubrowski, Patocskai).**

Background: Telemedicine saw a notable surge during the COVID-19 pandemic. However, medical students seldom participate in teleconsultations, because it is deemed inefficient or less pedagogical. The aim of this study was to assess the patient-reported impacts of clerks' participation in telephone appointments, and the perceived pedagogical value of these encounters. **Methods:** Patients having a follow-up telephone appointment for breast cancer treated at the Centre hospitalier de l'université de Montréal were recruited. Participants were randomized to receive either a call from a clerk, followed by a call from their surgeon (experimental group), or a call from their surgeon only (control group). Online surveys were sent to patients, medical students and surgeons to document their experience with the exchange. **Results:** A total of 16 patients were recruited, of whom 13 completed the questionnaire (experimental $n = 8$; control $n = 5$). Patients in both groups said they felt heard and had enough time to ask questions. For patients in the experimental group, the participation of a clerk had either a positive or neutral effect on their stress level. Most of them wished to have a medical student present at their next teleconsultation (62.5%). All surgeons ($n = 2$) and students ($n = 5$) felt that telephone appointments were a valuable pedagogical experience. This is an ongoing pilot study. Patient recruitment and adherence have been challenging owing to limited electronic device access and knowledge among older populations, as well as a recent decrease in teleconsultations. **Conclusion:** Preliminary results show that integrating medical students into teleconsultations is well received by patients, while offering a valuable learning experience.

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The importance of understanding the personalities of surgeons when choosing a career: medical students' perspectives. ***Giancarlo Sticca*,* *Joseph Petruccelli*,* *Dominique Dorion*. *These 2 authors contributed equally to this work and are both first co-authors. From the Université de Montréal, Montréal, Que. (Sticca); McGill University, Montréal, Que. (Petruccelli); and the University of Sherbrooke, Sherbrooke, Que. (Dorion).**

Background: Medical students are often expected to select a specialty without necessarily having a comprehensive understanding of the physicians' personalities within a given specialty. The objective of this study was to evaluate the importance that medical students place on understanding surgeons' personalities when considering a surgical career. **Methods:** Medical students at the University of Sherbrooke anonymously submitted career-orientation questions to surgical specialists over 2 years. Questions were categorized into standard (responsibilities, schedule), personality (character traits, strengths and weaknesses) and other (extracurricular) questions. Then, 30 medical students interested

in surgery were administered a validated questionnaire after reading the surgeons' answers to the students' questions. **Results:** Medical students spontaneously asked personality-oriented questions 75.1% of the time. Of the students who responded, 60% claimed personality-oriented questions had the greatest impact on their perspective of the surgical specialty and 90% reported that a lack of information on surgeons' personalities could lead to suboptimal career choices. Students considered the similarities of their personalities with those of the surgeons as being important for career choice (mean = 3.67). After reading the surgeons' answers, the students' conviction that surgeons had unique personalities grew (mean before reading answers = 3.33, mean after = 3.70, $p < 0.05$). Additionally, students placed more importance on understanding surgeons' personalities before choosing a specialty (mean before = 3.1, mean after = 3.67, $p < 0.05$). **Conclusion:** When considering a surgical career, medical students believe it is important to understand the overarching personality traits of surgical specialists. This seems to assist them in making informed decisions regarding career choice.

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A conversation on the current state of diversity, equity and inclusion in surgery. ***Yasmin Osman*, *Florence Bénard*, *Merieme Habti*, *Léamarie Meloche-Dumas*, *Xaviery Duranleau*, *Kerianne Boulva*, *Ahmad Kaviani*, *Rami Younan*, *Adam Dubrowski*, *Kiara Vessella*, *Erica Patocskai*. From the Université de Montréal, Montréal, Que. (Osman, Bénard, Habti, Meloche-Dumas); McGill University, Montréal, Que. (Duranleau); the Centre hospitalier de l'université de Montréal, Montréal, Que. (Boulva, Kaviani, Younan, Patocskai); the maxSIMhealth Laboratory, Ontario Tech University, Oshawa, Ont. (Dubrowski); and Dawson College, Montréal, Que. (Vessella).**

Background: Persistent implicit and explicit biases continue to maintain barriers that prevent the surgical environment from being inclusive and offering equal opportunities, whether in medical school or residency programs. We sought to address these issues by conducting semistructured interviews with medical students, residents and faculty to gain insight into their experiences, identify shortcomings and encourage discussions on how to effectively recognize and address bias in surgery. **Methods:** Medical students in their first or second year of clerkship, surgical residents and attending surgeons affiliated with the same teaching institution were recruited to participate. Two focus groups were conducted: the first with 6 students, and a second with 4 residents and 2 surgeons. Interviews were transcribed verbatim and underwent grounded theory–based analysis. **Results:** Six themes emerged regarding diversity, equity and inclusion: exclusion, fear of repercussions, lack of support, unconscious bias, impact of nepotism and socioeconomic status. The identified barriers to an inclusive environment were discomfort with denouncing bias owing to potential repercussions on residency or career applications, unequal opportunities owing to socioeconomic status and nepotism, and lack of support from colleagues. **Conclusion:** Participants shared a wide range of experiences, whether as part of a clinical rotation or as a staff surgeon. The consensus is that while the surgical environment is more diverse than in the past, there are still several barriers that have to be addressed to increase inclusivity and equity in a substantive way.

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Current state of female and BIPOC representation in Canadian medical education administration leadership. ***Rahim Valji*, *Simon Turner*. From the University of Alberta, Edmonton, Alb.**

Background: Diversity, equity and inclusion are increasingly recognized as important issues. To our knowledge, no studies have been done on diversity in Canadian medical education administration leadership. The aim of our study was to identify the current state of sex and racial diversity in Canadian medical education administration leadership. **Methods:** Web pages for all 17 Canadian medical schools were examined. The dean of medicine at each institution was recorded. All faculty displayed on the undergraduate medical education (UGME) and postgraduate medical education (PGME) webpages that held the title "dean" were recorded. Deans were categorized as either male or female, and White or Black, Indigenous and people of colour (BIPOC). Data were gathered in July 2022. **Results:** We recorded 17 deans of medicine. Of these, 11 were male and White (65%); 1 was male and BIPOC (6%); 4 were female and White (24%); 1 was female and BIPOC (6%). Females made up 47% (8/17) of UGME associate deans, 41% (7/17) of PGME associate deans, 63% (25/40) of UGME assistant deans and 57% (8/14) of PGME assistant deans. BIPOC people made up 12% (2/17) of UGME associate deans, 29% (5/17) of PGME associate deans, 18% (7/40) of UGME assistant deans and 14% (2/14) of PGME assistant deans. These results showed that among deans of medicine, female and BIPOC representation was lower than male and White representation, respectively. In UGME and PGME dean positions, female representation was similar to or exceeded male representation. BIPOC representation was lower than White representation. **Conclusion:** Action needs to be taken to support improved diversity among Canadian medical education administration leadership.

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What's in a name? The development of trust and familiarity in dynamic interprofessional operating room teams. ***Tobi Lam*, *Melanie Hammond Mobilio*, *Jacob Hirsh*, *Dean Lising*, *Tulin Cil*, *Edyta Marcon*, *Carol-Anne Moulton*. From the University of Toronto, Toronto, Ont.**

Background: Operating room (OR) teams often function with dynamic personnel changes and uncertainty. Trust between coworkers requires familiarity of individual competence, benevolence and integrity. Without familiarity, temporary teams depend on swift trust from professional role expectations. Interventions (i.e., Surgical Safety Checklist, TheatreCapChallenge) have looked at improving role clarity by identifying individuals by name. The aim of this project was to explore the experience of knowing and using names, and its impact on teamwork in the OR. **Methods:** A total of 16 semistructured interviews were conducted with OR team members, transcribed and de-identified. Through concurrent and iterative qualitative data analysis, 2 emergent concepts were identified and applied as analytical frameworks: types of trust, and variable levels of familiarity. **Results:** Trainees were identified to be least familiar to the team. Varying types of trust were experienced. Names provided a scaffold for trust. Participants adapted to variable trust with automatic assumptions of confidence in institutions ("We have enough checks and balances in

our system"), role-based swift trust ("I expect them to have a certain competence or certain skill"), and individuated or person-based trust ("I kind of get really excited that I get to work with that person"). Results demonstrated that individuated trust was developed with shared experiences. **Conclusion:** We described strategies used to familiarize trainees into the OR team, but traditional power dynamics and hierarchies of surgery may be barriers to team trust. Although teams can function with interchangeable members, psychological safety requires individuated trust and more personalized connections.

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Development and pilot of a plastic and reconstructive surgery case-based learning curriculum. ***Alexandra D'Souza, Thomas Milazzo, Shaishav Datta, Chantal Valiquette, Emma Avery, Sophocles Voineskos, Melinda Musgrave, Kyle Wanzel*. From the Temerty Faculty of Medicine, University of Toronto, Toronto, Ont. (D'Souza, Milazzo, Datta, Valiquette, Avery, Voineskos, Musgrave, Wanzel); and the Division of Plastic, Reconstructive & Aesthetic Surgery, University of Toronto, Toronto, Ont. (Datta, Valiquette, Avery, Voineskos, Musgrave, Wanzel).**

Background: Canadian medical students have limited curricular exposure to plastic and reconstructive surgery (PRS) in preclerkship. To address this, a novel PRS longitudinal case-based learning (CBL) program was developed. **Methods:** The curriculum was co-developed with 5 PRS faculty members and 4 residents at the University of Toronto. Five sessions were developed, focusing on the following topics: PRS foundations, soft-tissue infections, skin lesions, burns and hand injuries. Topics were selected for their relevance to core medical curricular learning objectives established by the Medical Council of Canada. Each CBL session was designed to address a single topic, consisting of a didactic presentation given by a faculty member, followed by a standardized case and question set. The CBL teaching modality was chosen for its ability to link theory to practice using focused learning points. A single pilot session was delivered virtually, to assess student engagement and feasibility. **Results:** After the pilot session, feedback from 26 students indicated that the session was engaging and clear. As well, students believed the session effectively addressed learning objectives and was appropriate for their educational training. **Conclusion:** We developed a curriculum to provide early exposure to PRS topics among preclerkship students. Promising feedback from a pilot session suggests strong student interest and effective delivery. We have since initiated full implementation of the 5-session longitudinal program for the 2023–2024 academic year. We anticipate increasing engagement and aim to comprehensively evaluate content delivery and student perspectives throughout the term.

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Women in surgery: a qualitative study of gendered experiences within everyday surgical life. ***Jillian Schneidman, Neil Armstrong*. From McGill University, Montréal, Que. (Schneidman); and the University of Oxford, Oxford, UK (Schneidman, Armstrong).**

Background: Women now make up more than half of all medical graduates in Canada yet remain significantly under-represented within the field of surgery. Strategies to date have largely focused on increasing numbers and targeting women themselves, rather than looking at more subtle ways that gender inequities are embedded within the institution. This qualitative study centres the experiences of women in surgery to look at the gendered processes that are occurring within the background of women surgeons' everyday surgical lives. **Methods:** Participant observations (67 h) and semistructured interviews ($n = 6$) were conducted with women surgeons from various subspecialties in a Canadian academic hospital to examine the role that gender plays within their everyday surgical life. Data were analyzed iteratively and categorized into emerging themes. **Results:** The data suggested that gender subtly affects women surgeons' surgical life in a multitude of ways. Their social positionings within the surgical hierarchy were disproportionately affected as they were often associated with the less "complex" surgical cases and subspecialties. Additionally, women surgeons faced stereotypical gendered assumptions and expectations from others, which directly challenged their credibility as surgeons. Last, they encountered difficulties with the surgical materials in their daily practice because their bodies did not match with how the materials had been designed. **Conclusion:** This study reveals inequities that are present for women surgeons within their everyday surgical lives. Moving forward, these forms of discrimination must be acknowledged to advance the understanding of and strategies for gender inequity in surgery.

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An interdisciplinary complex airway crisis resource management simulation training module for otolaryngology residents: a longitudinal experience. ***George Gerardis, Jennifer Silver, Milène A Azzam, Rachel Fisher, Ilana Banks, Meredith Young, Lily HP Nguyen*. From McGill University, Montréal, Que.**

Background: Management of airway emergencies requires proficiency of nontechnical skills to ensure patient safety and improve patient outcomes. The objective of this project was to develop, implement and evaluate a novel simulation module that focuses on interdisciplinary and interprofessional crisis resource management (CRM) of complex airway emergencies. **Methods:** The module's design focuses on interdisciplinary and interprofessional team training, consisting of a 30-minute lecture followed by 3–4 simulation scenarios and debriefing sessions. Participants completed self-assessment forms that included items targeting participant satisfaction and assessment of nontechnical skill development. **Results:** From 2012 to 2022, 138 people participated in this module, including residents from anesthesia, otolaryngology, pediatric emergency medicine and intensive care, as well as nurses and respiratory therapists. All disciplines demonstrated improvement in all nontechnical CRM skills through all iterations of the module ($p < 0.05$). Participants without previous CRM training reached levels in CRM skills comparable to those with previous training. Nearly 96% (149/156) of participants felt better equipped to function in an interdisciplinary and interprofessional team following module completion. Our results show that this module allows residents to not only further develop their nontechnical CRM skills in the setting of complex airway emergencies, but also to catch up to their peers with previous exposure to CRM training, thereby potentially avoiding errors in crisis situations often attributed to

poor CRM skills. **Conclusion:** This long-standing training module has allowed for residents to further develop their non-technical CRM skills in an interdisciplinary and inter-professional environment that allows for scenarios of higher complexity and important similarities to practice contexts.

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Assessing the accuracy of responses by ChatGPT to questions regarding pediatric surgery. ***Megan Skakum, BJ Hancock, Suyin Lum Min, Fouad Youssef, Richard Keijzer, Melanie Morris, Anna Shawyer, Giuseppe Retrosi.*** **From the University of Manitoba, Winnipeg, Man.**

Background: ChatGPT is a large language model covering many subjects, including medical literature. We evaluated its accuracy and reproducibility in answering questions related to pediatric surgery. **Methods:** We used ChatGPT to generate the top 10 parent questions about congenital diaphragmatic hernia (CDH), esophageal atresia (EA), congenital pulmonary airway malformation (CPAM) and Hirschsprung disease (HD), totalling 40 questions. These were posed to ChatGPT. Six pediatric surgeons assessed the answers using a 5-point Likert scale, ranging from 1 (very bad) to 5 (very good). Reproducibility was analyzed by twice querying the model and comparing grading differences. **Results:** Out of the 40 responses, 12.5% (5/40) were scored as "very good," 77.5% (31/40) as "good," and 10% (6/40) as "neutral." For each diagnosis, the answers were scored as: CDH 2/10 "very good," 8/10 "good"; EA 1/10 "very good," 7/10 "good," 2/10 "neutral"; CPAM 1/10 "very good," 7/10 "good," 2/10 "neutral"; HD 1/10 "very good," 9/10 "good." Furthermore, the consistency of the model was evident in 65% of the questions, which means they received similar scores when posed repeatedly. **Conclusion:** ChatGPT frequently supplied accurate and consistent answers to prevalent questions related to pediatric surgery. ChatGPT has the potential to act as a valuable supplementary source of information for patients inquiring about pediatric surgery, augmenting the standard of care delivered by licensed health care experts. We advocate for more research to explore how this innovative technology can be harnessed to enhance patient outcomes and quality of life.