curriculum mapping, competence committees and programmatic assessment had been completed by >90% of programs, while <50% of programs had engaged off-service rotations. **Conclusion:** Measuring readiness for change aids in the identification of factors that promote or inhibit successful implementation. These results highlight several areas where programs struggle in preparation for CBD launch. Emergency medicine training programs can use this data to target additional implementation support and ongoing faculty development initiatives.

Keywords: Competence by Design, implementation, residency education

LO79

The variable landscape of resident selection: A study of Canadian Royal College emergency medicine training programs

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Introduction: Little is known about how Royal College emergency medicine (RCEM) residency programs are selecting their residents. This creates uncertainty regarding alignment between our current selection processes and known best practices and results in a process that is difficult to navigate for prospective candidates. We seek to describe the current selection processes of Canadian RCEM programs. **Methods:** An online survey was distributed to all RCEM program directors and assistant directors. The survey instrument included 22 questions consisting of both open-ended (free text) and closed-ended (Likert scale) elements. Questions sought qualitative and quantitative data from the following 6 domains; paper application, letters of reference, elective selection, interview, rank order, and selection process evaluation. Descriptive statistics were used. **Results:** We received responses from 13/14 programs for an aggregate response rate of 92.9%. A candidate's letter of reference was identified as the single most important item from the paper application (38.5%). Having a high level of familiarity with the applicant was considered to be the most important characteristic of a reference letter author (46.2%). Respondents found that providing a percentile rank of the applicant was useful when reviewing candidate reference letters. Once the interview stage is reached, 76.9% of programs stated that the interview was weighted at least as heavily as the paper application; 53.8% weighted the interview more heavily. Once final candidate scores are established for both the paper application and the interview, 100% of programs indicated that further adjustment is made to the rank order list. Only 1/13 programs reported ever having completed a formal evaluation of their selection process. **Conclusion:** The information gained from this study helps to characterize the landscape of the RCEM residency selection process. We identified significant heterogeneity between programs with respect to which application elements were most valued. Canadian emergency medicine residency programs should re-evaluate their selection processes to achieve improved consistency and better alignment with selection best practices.

Keywords: emergency medicine, residency, selection

LO80

Perfecting practice for rare procedures: a simulation-based, multi-centre randomized trial

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Introduction: Mastery learning, which deconstructs a complex task into sequential sub-steps combined with deliberate practice to achieve each step in sequence, represents an important method to enhance simulation-based procedural skills training. However, the evidence to support the effectiveness of this theory to improve learning is lacking. This study compared mastery learning using deliberate practice with self-guided practice on skill performance of a rarely performed, life-saving procedure, a bougie-assisted cricothyroidotomy (BAC). **Methods:** In this multi-centre, randomized study at five North American emergency medicine (EM) residency training programs, we assigned 166 EM postgraduate trainees to either mastery learning and deliberate practice (ML + DP) or self-guided practice for BAC. Three blinded airway experts independently evaluated BAC skill performance by video review before (pre-test) and after (post-test) each training session. The primary outcome was post-test skill performance using a 5-point global rating score (GRS). A secondary outcome, defined a priori, was performance time to complete the BAC skill (chronometry). **Results:** There was no significant difference in post-test BAC performance after ML + DP or self-guided practice. Performance scores improved for both groups by 13% from the pre-test to post-test (F $(1,138) = 43$, $p < 0.001$). Overall, time to complete the BAC improved significantly from pre-test (87.6 seconds) to post-test (54.1 seconds), (F, $1,149) = 122$, $p < 0.001$). At post-test, the ML + DP group performed the skill 7.4 seconds faster than the self-guided practice group (F $(1,150) = 6.77$, $p < 0.01$). **Conclusion:** Mastery learning coupled with deliberate practice provides systematic and focused feedback during skill acquisition. However, it is resource intensive and its efficacy is not fully defined. In this study, MP + DP did not result in improved global performance; it did result in faster performance times, a relevant finding for time-sensitive procedures. These results are important for educators who seek to optimize technical skills training in a competency-based model of medical education. Our findings suggest that time-sensitive procedures might benefit from ML + DP teaching strategies to enhance time to procedural performance.

Keywords: deliberate practice, procedural skills, simulation

LO81

The use of in situ simulation to improve emergency department staff comfort with the management of high acuity, low occurrence cases

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Introduction: In the emergency department (ED), high-acuity presentations encountered at low frequencies are associated with reduced staff comfort. Previous studies have shown that simulation can improve provider confidence with practical skills and management of presentations in various fields of medicine. The present study examined the effect of in situ simulation on interprofessional provider comfort with the identification and management of high-acuity low-frequency events in the ED. It further assessed the feasibility of implementing weekly simulation as an interprofessional education initiative in a high-volume ED. **Methods:** This was a retrospective pretest post-test quasi-experimental design. Weekly in situ simulation events were facilitated by an interdisciplinary team in a high-volume ED in Hamilton, Ontario that sees an average of 185 patients per day. To date, 34 simulation events were held between January 18, 2019 and November 22, 2019, and included neonatal, paediatric and