

use in situ simulation (18%) and hold a simulation boot camp (41%). Most centres required an academic project, most commonly a quality assurance project (53%) and/or a critical appraisal of the literature (59%). Publication or national conference presentations were required by 12% of programs. Competency based assessments use simulation (88%) and direct observations (53%). Only 24% of programs have a transition to practice curriculum. All programs maintain strong connections to family medicine. **Conclusion:** This study demonstrates diverse structures of CCFP(EM) programs across Canada. Programs are similar regarding the provision of ultrasound, simulation and protected teaching time. Variation exists in administrative structure and financial resources of each program, academic project requirements, and how programs perform competency based assessments.

**Keywords:** emergency medicine program, certification in the College of Family Physicians – emergency medicine, survey

#### LO41

**Competency-based learning of pediatric musculoskeletal radiographs**  
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**Introduction:** Pediatric musculoskeletal (MSK) image interpretation has been identified as a knowledge gap among emergency medicine trainees. The main objective of this study was to implement a validated on-line pediatric MSK radiograph interpretation system with a performance-based competency endpoint into pediatric emergency fellowship programs and examine the number of cases needed to achieve a competency threshold of 80% accuracy, sensitivity and specificity. We further determined proportion who successfully achieved competency in a given module and the change in accuracy from baseline to competency. **Methods:** This was a prospective cohort multi-centre study. There were seven MSK radiograph modules, each containing 200-400 cases (demo-<https://imagesim.com/course-information/demo/>). Thirty-seven pediatric emergency medicine fellows participated for 12 months. Participants did cases until they reached competency, defined as at least 80% accuracy, sensitivity and specificity. We calculated the overall and per module median number of cases required to achieve competency, proportion of participants who achieved competency, median time on case, and the mean change in accuracy from baseline to competency. **Results:** Overall, the median number of cases required to achieve competency was 76 (min 54, max 756). Between different body parts, there was a significant difference in the median number of cases needed to achieve competency,  $p < 0.0001$ , with ankle and knee being among the most challenging modules. Proportions of those who started a module and completed it to competency varied significantly, and ranged from 32.4% in the ankle module to 97.1% in the forearm/hand,  $p < 0.0001$ . The overall median time on each case was 34.1 (min 7.6, max 89.5) seconds. The overall change in accuracy from baseline to 80% competency was 13.5% (95% CI 12.1, 14.8), with the respective Cohens effect size of 1.98. The change in accuracy was different between modules,  $p = 0.001$ , with post-hoc analyses demonstrating that the ankle/foot radiograph module had a greater increase in accuracy relative to elbow ( $p = 0.009$ ) and pelvis/femur ( $p = 0.006$ ). **Conclusion:** It was feasible for pediatric emergency medicine fellows to complete each learning pediatric MSK learning module to competency within approximately one hour, with the exception of the ankle module. Learners who completed the modules to competency demonstrated very significant increases in interpretation skill.

**Keywords:** pediatrics, competency, education

#### LO42

**How I stay healthy in emergency medicine: a qualitative analysis of a blog-based survey of expert emergency physicians and their methods to maintain and improve their wellness**

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**Introduction:** Emergency medicine (EM) is a demanding specialty with high rates of physician burnout. As emergency physicians, we must stay healthy to promote healthy living, optimize our ability to care for our patients, extend our careers, and be there for our families. While we all desire a healthy lifestyle, maintaining one in practice can be difficult. We sought to investigate the strategies emergency physician employ to maintain and improve health and wellness while mitigating the professions stressors. **Methods:** From April 2015 to July 2017, forty-three wellness champions from Canada, the USA, and Australia were identified using a snowball sampling technique. Each participant answered 5 introductory questions and 8 productivity questions pertaining to health and wellness. These were transcribed and loaded to a publicly accessible blog, ALiEM.com, as part of the Healthy in EM series. Two investigators reviewed the transcripts using inductive methods and a grounded theory approach to generate themes and subthemes using coding software, NVivo (Burlington, Massachusetts), until saturation was achieved. Consensus between investigators (JC, ZP) established the master code and audit trail. An external audit by investigators (TC, BT) not involved with the initial analysis was performed to ensure reliability.

**Results:** Major themes including diet, sleep, exercise and social activities were coded and further subcategorized along with perspectives, habits, personal philosophies, and career diversity. These themes translated across both professional and personal aspects of participants lives. For example, the pre-shift and post-shift strategies often included some form of regimented activities-of-daily-living that required discipline to adhere to at work and home. **Conclusion:** Our findings show the importance of homeostasis in the professional and personal realm among expert emergency medicine physicians. Among healthy emergency physicians, diet, sleep, and exercise patterns intertwined with perspectives, habits, personal philosophies, and social activities contributed to maintenance of wellness.

**Keywords:** wellness, burnout, job satisfaction

#### LO43

**Perceptions of airway checklists and the utility of simulation in their implementation emergency medicine practitioner perspectives**

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**Introduction:** Checklists used during intubation have been associated with improved patient safety. Since simulation provides an effective and safe learning environment, it is an ideal modality for training practitioners to effectively employ an airway checklist. However, physician attitudes surrounding the utility of both checklists and simulation may impede the implementation process of airway checklists into clinical practice. This study sought to characterize attitudinal factors that may impact the implementation of airway checklists, including perceptions of checklist utility and simulation training. **Methods:** Emergency medicine (EM) residents and physicians working more than 20 hours/month in an emergency department from two academic centres were invited to participate in a simulated, randomized controlled trial (RCT) featuring three scenarios performed with or without the use of an airway