

55% having a family doctor. There were a total of 2261 prescriptions requested by 1502 patients. The top 3 most commonly requested classes of medications were opioids 433/1502 (28.8%), antidepressants/antipsychotics 371/1502 (24.7%) and benzodiazepines 252/1502 (16.8%). The median (IQR) wait time was 73 minutes (35-128). 298/1502 (19.8%) of patients received their requested prescription (opioids 12.7%; antidepressant/antipsychotic 55.3% and benzodiazepines 16.3%). 740/1502 (49.3%) of patients requested a medication that had street value. Of those, 118/740 (15.9%) received the requested medication. **Conclusion:** There is no "one size fits all" solution for the patient who presents to the ED requesting a prescription. The large number of requests for psychiatric medications suggests a service gap for mental health patients in the community. This data supports the need for comprehensive electronic medication records to guide physicians' decisions.

**Keywords:** prescription requests

### P030

#### Assessment of lab results on emergency department patients that leave without seeing a physician

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**Background:** Most emergency departments (ED) utilize medical directives to initiate lab investigations for patients prior to physician assessment. This practice facilitates expedited patient care in the ED, resulting in safer and efficient care. However, some patients choose to leave the ED prior to seeing a physician due to prolonged waiting. Previously, at our hospital there was no defined process for identifying and following up on abnormal test results on patients that leave without being seen (LWBS), resulting in lab results often not being reviewed by a nurse or physician. **Aim Statement:** By April 2020, we aim to have 90% of ED LWBS patients with abnormal results identified and followed up. **Measures & Design:** A series of consultations and information gathering occurred that included an environmental scan of other EDs and discussions with emergency nurses, emergency physicians, Risk Management, Legal Department, College of Nurses of Ontario and Canadian Medical Protective Association. A process map was developed collaboratively to standardize the process to identify and follow up on abnormal investigations of LWBS patients and a new hospital policy was developed to officially outline this process. The following are the family of measures: Outcome measure – % LWBS patients with abnormal tests that had follow-up documented in chart Process measure – Number LWBS patients with investigations initiated by medical directive, Number LWBS patients, % LWBS patients Balancing measure – Satisfaction of nurses with new process for LWBS patients **Evaluation/Results:** At baseline, 29% of LWBS patients with abnormal lab results had follow up documented in the chart. After implementation of the new standardized process and policy, the follow up rate of LWBS patients with abnormal results in August, September and October 2019 was 47%, 28% and 29% respectively. **Discussion/Impact:** These results indicate that standardization and new policy implementation is insufficient to change practice, even one that aims to provide safer patient care. Nevertheless, these interventions are important first steps to improving the safety for ED LWBS patients. We plan to implement an audit and feedback approach to encourage nursing staff to routinely check lab results on LWBS patients.

**Keywords:** follow up, left without being seen, quality improvement and patient safety

### P031

#### Multidisciplinary healthcare and first aid provider training for in-flight medical emergencies: a crowdsourcing session followed by an airplane simulation

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**Innovation Concept:** Is there a healthcare provider on board? Healthcare providers may be less confident for in-flight medical emergencies (IFME), as these situations are not part of usual curriculum or practice contexts (e.g. hospitals). For example, the literature reveals that medical students and physicians lack IFME basic knowledge and preparedness. The goal is to pilot a training session for healthcare providers to improve their confidence in navigating IFME. **Methods:** This training innovation involved: i) a session to crowdsourcing insights from multidisciplinary healthcare and first aid providers, followed by reviewing considerations of a CMAJ 2018 article on airplane emergencies, and ii) 2 airplane simulations (syncope and cardiac arrest). During crowdsourcing, 7 IFME learning objectives were explored: i) challenges, ii) solutions, iii) equipment, iv) taking vitals, v) general approach, vi) cardiac arrest approach, and vii) human resources / role-delegation. Knowledge and approaches extracted were then applied in simulations. Participants provided scores out of 7.00 for: i) satisfaction of crowdsourcing session and simulation and ii) self-rated confidence on learning objectives at baseline, post-crowdsourcing session, and post-simulation. Results were analyzed with repeated measures ANOVA with post-hoc Tukey. **Curriculum, Tool, or Material:** The workshop curriculum was a crowdsourcing session and simulation to mentally rehearse and practice clinical skills in airplane settings to improve IFME preparedness. **Conclusion:** Participants rated the crowdsourcing activity (6.70/7.00, n = 11) and simulation (6.50/7.00, n = 11) positively. Confidence in the 7 topics improved from baseline (2.49/7.00) to post-crowdsourcing (5.23/7.00) to post-simulation (5.94/7.00). Significant differences ( $p < 0.01$ ) between baseline and post-crowdsourcing, and between baseline and post-simulation were observed. There was no significant difference between post-crowdsourcing and post-simulation. One simulation limitation was not all could be rescuers; therefore, debriefing is important to meet learning objectives. Second, the simulation was not within an airplane; housing simulations inside an airplane with flight attendants is a potential next step. Overall, self-confidence in topics of IFME may improve after just one crowdsourcing session, facilitated through group discussions and mental rehearsal. Added simulations may maintain self-confidence on these topics, by promoting memory retention through active learning and repetition.

**Keywords:** in-flight medical emergencies, innovations in EM education, simulation

### P032

#### Perceived versus actual cricothyroid membrane landmarking accuracy by emergency medicine residents and staff physicians

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**Introduction:** Cricothyrotomy is an intervention performed to salvage "can't intubate, can't ventilate" situations. Studies have shown poor accuracy landmarking the cricothyroid membrane, particularly in female patients by surgeons and anesthesiologists. There is less data available about emergency physician performance. This study

examines the perceived versus actual success rate of landmarking the cricothyroid membrane by resident and staff emergency physicians using obese and non-obese models. **Methods:** Five male and female volunteers were selected as models. Each model was placed supine, and a point-of-care ultrasound expert landmarked the borders of each cricothyroid membrane. 20 residents and 15 staff emergency physicians were given one attempt to landmark five models. Data was gathered on each participant's perceived likelihood of success and attempt difficulty. Overall accuracy and accuracy stratified by sex and obesity status were calculated. **Results:** Overall landmarking accuracy amongst all participants was 58% (SD 18%). A difference in accuracy was found for obese males (88%) versus obese females (40%) (difference = 48%, 95% CI = 30–65%,  $p < 0.0001$ ); and non-obese males (77%) versus non-obese females (46%) (difference = 31%, 95% CI = 12–51%,  $p = 0.004$ ). There was no association between perceived difficulty and success (correlation = 0.07, 95% CI = -0.081–0.214,  $p = 0.37$ ). Confidence levels overall were higher amongst staff physicians (3.0) than residents (2.7) (difference = 0.3, 95% CI = 0.1–0.6,  $p = 0.02$ ), but there was no correlation between confidence in an attempt and its success ( $p = 0.33$ ). **Conclusion:** We found that physicians demonstrate significantly lower accuracy when landmarking cricothyroid membranes of females. Emergency physicians were unable to predict their own accuracy while landmarking, which can potentially lead to increased failed attempts and longer time to secure the airway. Improved training techniques and a modified approach to cricothyrotomy may reduce failed attempts and improve the time to secure the airway.

**Keywords:** cricothyroid, cricothyrotomy, landmarking

### P033

#### Procedural skills training in emergency medicine physicians within the Edmonton zone: a needs assessment

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**Introduction:** Procedural skills are a key component of an emergency physician's practice. The Edmonton Zone is a health region that comprises twelve tertiary, urban community and rural community emergency departments (EDs) and represents over three hundred emergency physicians. This study describes the current attitudes toward procedural skill competency, current procedural skill practices, and the role for educational skills training sessions among emergency medicine physicians within a geographical health region. **Methods:** Multicenter descriptive cross-sectional survey of all emergency medicine physicians working at 12 emergency departments within the Edmonton Zone in 2019 ( $n = 274$ ). The survey underwent several phases of systematic review; including item generation and reduction, pilot testing, and clinical sensibility testing. Survey items addressed current procedural skill performance frequency, perceived importance and confidence, current methods to maintain competence, barriers and facilitating factors to participation in a curriculum, preferred teaching methods, and desired frequency of practice for each procedural skill. **Results:** Survey response rate was 53.6%. Variability in frequency of performed procedures was apparent across the type of hospital sites. For majority of skills, there was a significantly positive correlation between the frequency at which a skill was performed and the perceived confidence performing said skill. There was inconsistency and no significant correlation with perceived importance, perceived confidence, or frequency performing a given skill and the desired frequency of training for that skill. Course

availability (76.2%) and time (72.8%) are the most common identified barriers to participation in procedural skills training. **Conclusion:** This study summarized the current emergency department procedural skill practices and attitudes toward procedural skill competency and an educational curriculum among emergency medicine physicians in Edmonton. This represents a step towards targeted continuing professional development in the growing realm of competency-based medical education.

**Keywords:** clinical competence, emergency medicine, medical education

### P034

#### Computed tomography rates for emergency department super-users

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**Introduction:** Most emergency departments (ED) in Canada have a population of high frequency users that present to the ED on a regular basis. These patients are well described in the literature and typically defined by a frequency of 8–10 visits/year. In Thunder Bay, Ontario we have a significant population of patients that present more often than we have termed “super-users”. These patients often are typically from a vulnerable population with multiple co-morbidities and a high mortality rate. Although their risk for poor health outcomes is well recognized, both the chronicity and complexity of their symptoms often contributes to diagnostic dilemmas. The decision to order a computed tomography (CT) scan can be a difficult balance between ruling out life threatening diagnoses and exposing the patient to excessive radiation. Our objective was to describe how often these super-users of the ED received a CT scan and what types of imaging were completed. **Methods:** The Thunder Bay Regional Health Sciences Centre is a geographically isolated hospital in Northwestern Ontario with the next closest hospital based CT scanner greater than 300 km away. Based on previous literature and our preliminary scoping of the super-user group, we have identified a minimum of 25 visits as the threshold. A retrospective chart review was conducted for the year 2017 using our electronic medical record. Patient demographic data was collected along with the type and number of CT scans into a standardized collection tool. **Results:** Our preliminary results showed that our total population of super-users was 75 patients with an average of 32 visits to the ED per year. A total of 76% of the patients had a CT scan completed at least once. On average these patients have a CT during 10% of their visits with head CT comprising 50% of the imaging and abdominal/pelvis imaging comprising another 45%. For 20% of these super-users, they had CTs on 20% of their visits. From this population, only 10% of the patients had surgery in 2017 while 7% of visits required admission to hospital. The most common diagnoses for these patient visits relate to mental health/addictions, gastrointestinal complaints and infection. **Conclusion:** This study has shown that a significant number of our super-user population are receiving multiple CTs. Our next step is collect data on individual radiation doses and calculate exposure risks. We hope to inform policy and decision-makers who are developing programs to treat the underlying cause of their high resource use.

**Keywords:** computed tomography, emergency department, super-user