

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