ordered at DG than at HI (OR = 1.52, 95% CI: [1.48, 1.55]). Laboratory tests were more likely to be ordered by nurses at DG than at HI (OR = 1.58, 95% CI: [1.54, 1.62]). Laboratory tests were more likely to be ordered if the ED was not busy, if the patient was over 65, had a high acuity, had a long stay in the ED, required consults, or was admitted to hospital. Doctors were more likely to order a laboratory test in patients over 65, requiring consults or hospital admission, whereas nurses were more likely to order laboratory tests in patients with high acuity or long stays in the ED. Data from the interviews suggested differing influences on decision making between nurses and doctors, especially in the areas of social influence and knowledge. **Conclusion:** Currently, there is limited research that investigates behaviour of both emergency physicians and nurses. By determining barriers that are most amenable to behaviour change in emergency physicians and nurses, findings from this work may be used to update practice guidelines, ensuring more consistency and efficiency in laboratory test ordering in the ED.
Keywords: clinical assessment, laboratory testing, clinical decision making

P045

Human trafficking awareness, a learning module for improved recognition of victims in the emergency room

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Introduction / Innovation Concept: Estimates suggest that up to eighty-seven percent of human trafficking victims have come into contact with a healthcare provider during their exploitation and yet less than ten percent of emergency medicine (EM) physicians feel confident in identifying a victim. When provided with the relevant tools, medical personnel can aid in the recognition of victims and take the necessary steps in providing appropriate care when they present to the emergency department. Identifying this need for increased awareness in the urgent care setting, a module on human trafficking was implemented into the undergraduate medical education and departmental grand rounds. **Methods:** After identifying gaps in current medical education regarding screening for victims of human trafficking, a literature review was completed on the topic in medical education and utilized in constructing a list of objectives. These were then reviewed by community organizations that aid victims of trafficking and the Canadian Alliance of Medical Students Against Human Trafficking. Undergraduate medical students completed surveys prior to and following the learning module, in order to evaluate improvement in acquired knowledge. **Curriculum, Tool, or Material:** A one-hour lecture from ACT Alberta was given to undergraduate medical students as well as to residents and staff in departmental grand rounds. The session met the following objectives: defining human trafficking, recognition of victims, and identification of next steps in providing care. Additionally, an online module from Fraser Health was made available as an additional resource with case studies specific to emergency departments. The surveys consisted of 13 questions evaluating students' knowledge on human trafficking and its prevalence in emergency medicine. The questions were a combination of a Likert scale, multiple choice, and short answer. There was a large amount of positive feedback from the students and comparison of the surveys showed that their knowledge in identifying victims had significantly improved. **Conclusion:** Medical students, residents, and staff may come into contact with victims of trafficking in the emergency department and yet less than three percent of emergency physicians have had training on how to recognize a victim. Implementing human trafficking awareness will impact EM medical education by providing victims a greater chance of being recognized and offered help when they present to the emergency room.
Keywords: human trafficking, innovations in emergency medicine education, medical education

P046

The development of a validated checklist for bougie-assisted cricothyroidotomy

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Introduction: A cricothyroidotomy is a life-saving procedure and essential skill for EM physicians. The bougie-assisted cricothyroidotomy (BAC) is a newly describe technique that is both simple and reliable. There remains no consensus for the essential steps and ideal training strategy for the procedure. Using a modified Delphi process, we created an expert-derived checklist as a transferable educational tool for BAC instruction. **Methods:** A literature search was conducted to identify relevant articles describing the steps for BAC performance. These steps formed the first-iteration checklist for the modified Delphi process. Fourteen experts from general surgery, emergency medicine, otolaryngology, and anesthesia were recruited as participants for the Delphi process which consisted of three iterations. In the first two rounds, experts ranked each checklist step on a scale of 1-7, suggested additions, and provided comments. After each round the comments and rankings were integrated and steps with an average ranking of ≤3.0 were removed from the checklist for the next round. In the final round, consensus was sought by asking experts to indicate if this checklist was acceptable for teaching BAC to a novice learner. **Results:** A 22-item checklist was developed from a literature review. Following a modified Delphi methodology, the final BAC checklist contained 17 items. Internal consistency of the checklist was very good (α = 0.855). In the third and final round, 86% of the participants agreed that the final iteration of the checklist. There was disagreement regarding "bougie hold up" as an appropriate method to confirm bougie position within the tracheal lumen. The checklist was modified, replacing "hold up" with digital palpation in the trachea as confirmation of successful bougie placement. With these modifications, consensus was achieved. **Conclusion:** Using a modified Delphi process, derived from existing literature and expert opinion, a 17-item BAC checklist was developed for novice instruction. This BAC checklist represents the first consensus-based set of steps for the procedure which may serve as a useful tool for trainee instruction and evaluation. Future research is required to test the validity of this checklist in training for a BAC and its applicability within competency-based medical education.
Keywords: airway, checklist, cricothyroidotomy

P047

Test characteristics of point of care ultrasound for the diagnosis of retinal detachment in the emergency department

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Introduction: The acute onset of flashes and floaters is a common presentation to the emergency department (ED). The most emergent etiology is retinal detachment (RD), which requires prompt ophthalmologic assessment. Previous studies of point of care ultrasound (POCUS) have reported high sensitivity and specificity for RD, but are

limited by small sample size, use of highly trained and experienced sonographers, and referral bias. Our primary objective was to assess the test characteristics of POCUS performed by a large heterogeneous group of emergency physicians (EPs) for the diagnosis of RD. **Methods:** This was a prospective diagnostic test assessment of POCUS performed by EPs with varying ultrasound experience on a convenience sample of ED patients presenting with the complaint of flashes or floaters in one or both eyes. Participating EPs completed a one hour didactic lecture and were expected to demonstrate appropriate performance of one practice scan before enrolling patients. After standard ED assessment, patients underwent an ocular POCUS scan targeted to detect RD. EPs recorded the presence or absence of RD on the data collection instrument based on their POCUS scan. After completing their ED visit, all patients were assessed by a retina specialist who was blinded to the results of the POCUS scan. We calculated sensitivity and specificity with associated exact binomial confidence intervals (CI) using the retina specialist's determination of the final diagnosis as the criterion standard. **Results:** A total of 30 EPs, consisting of 21 staff physicians and 9 residents, participated in this study. These EPs performed a total of 128 POCUS scans. Of these scans, 13 were excluded. Of the remaining 115 enrolled patients, median age was 60 years, and 64% were female. The retina specialist diagnosed RD in 16 (14%) cases. The sensitivity and specificity of POCUS for detecting RD was 75% (95% CI 48% to 93%) and 94% (95% CI 87% to 98%), respectively. The positive likelihood ratio was 12.4 (95% CI 5.4 to 28.3), and negative likelihood ratio was 0.27 (95% CI 0.11 to 0.62). **Conclusion:** In a heterogeneous group of EPs with varying ultrasound experience, POCUS demonstrates high specificity but only intermediate sensitivity for the detection of RD. A negative POCUS scan is not sufficiently sensitive to rule out RD in a patient with new onset flashes or floaters.
Keywords: point of care ultrasound, retinal detachment, emergency physician

P048

Profiling the burdens of working nights. Traditional 8-hour nights vs staggered 6-hour casino shifts in an academic emergency department
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Introduction: Emergency physicians (EP) often work at undesirable hours. In response to deleterious effects on quality of life for EPs, traditional 2300-0700 night shifts have been replaced at some centres with staggered 6-hour casino shifts (22:00-04:00 and 04:00-10:00). Though purported to allow for better sleep and recovery patterns, no evidence exists to support the benefits on sleep or quality of life that is used to justify a casino shift model. Using a before and after survey model, this study examines the impact of overhauling night work from a traditional 8-hour shift to casino shifts on the quality of life and job satisfaction of EPs working in an academic emergency department (ED). **Methods:** In 2010, an initial online, 37-item survey, was sent to all EPs working in the ED, just prior to the transition to casino shifts. 6 years following the transition, a slightly modified 37-item survey was again distributed to all current EPs working at that same centre. Participants rated their level of agreement on a 7-point Likert scale regarding questions related to night work. Results from the two surveys were compared. **Results:** 43 2010- and 47 2016-surveys were completed. In 2016, recovery to baseline function after a single early shift (22:00-04:00) was most common after 1 day at 52.4%, and after multiple early shifts was ≥2 days at 66.7%. Recovery after a single late shift (04:00-10:00) was most common at 1 day at 54.8%, and after multiple

late shifts was ≥2 days at 59.5%. This was in contrast to 2010, when 55.8% recovered from a single traditional night shift after 1 day, and 95.3% required ≥2 days to recover from multiple traditional night shifts. In relation to casino shifts, 40.5% of respondents stated that night shifts are the greatest drawback of their job, compared to 79.1% previously. A minority of respondents felt that teaching (36.5%), diagnostic test interpretation (23.2%), and quality of handover (33.5%) were inferior on early and late night shifts compared to other shifts (74.4%, 58.1%, and 60.5% for traditional night shifts respectively).95.0% of respondents preferred casino over traditional night shifts. **Conclusion:** There were self-reported improvements in all domains following the implementation of casino shifts.
Keywords: casino shifts, night shifts, scheduling

P049

Modelling and manufacturing of a 3D printed trachea for cricothyroidotomy simulation
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Introduction: Most current cricothyroidotomy simulation models are either expensive or low fidelity and limit the learner to an unrealistic simulation experience. The goal of this project is to innovate current simulation techniques by 3D printing anatomically accurate trachea models. By doing so emergency cricothyroidotomy simulation can be accessible, high fidelity, cost effective and replicable. **Methods:** 3D modelling software was used in conjunction with a desktop 3D printer to design and manufacture an anatomically accurate model of the cartilage within the trachea (thyroid cartilage, cricoid cartilage, and the tracheal rings). The initial design was based on dimensions found in studies measuring the dimensions of tracheal anatomy. This ensured an appropriate anatomical landmark design was achieved. Several revisions of the model were designed and qualitatively assessed by medical and simulation professionals to ensure anatomical accuracy that exceeded that of the currently used, low cost, cricothyroidotomy simulation model in St. John's. **Results:** Using an entry level desktop 3D printer, a low cost tracheal model was successfully designed that can be printed in under 3 hours. Due to its anatomical accuracy, flexibility and durability, this model is ideal for use in emergency medicine simulation training. Additionally, the model can be assembled in conjunction with a membrane to simulate tracheal ligaments and skin for appearance. **Conclusion:** The end result is a high fidelity simulation that will provide users with an anatomically correct model to practice important skills used in emergency airway surgery, specifically land marking, incision and intubation. This design is a novel, easy to manufacture, replicable, low fidelity trachea model that can be used by educators with limited resources such as those in rural and remote areas.
Keywords: 3D printing, simulation, cricothyroidotomy

P050

A prospective cohort study to evaluate discharge care for patients with atrial fibrillation and flutter (AF/AFL)
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Introduction: Atrial fibrillation and flutter (AF/AFL) are the most common arrhythmias encountered in the emergency department (ED); however, little information exists regarding the preventive management of patients with AF/AFL by emergency physicians (EPs). This study explored whether patients with AF/AFL received the recommended thrombo-embolic (TE) prophylaxis at discharge from the ED; patients'