

anticoagulation therapy remains unclear. This systematic review is designed to examine the use of risk scores in the ED to determine the management of patients presenting to the ED for atrial fibrillation and flutter. **Methods:** An extensive search of eight electronic databases and grey literature was conducted. Quasi-experimental studies were eligible for inclusion. Studies had to report on the ED management of adult patients presenting with AFF to be included. Two independent reviewers judged the relevance, inclusion, and risk of bias of the studies. Individual and pooled statistics were calculated as odds ratios (OR) with 95% CI using a random effects model and heterogeneity (I^2) was reported. **Results:** From 1,648 citations, 37 studies were included in this review. Heterogeneity was very high, precluding pooling. Only one of the included studies documented the use of CHADS₂ scores by attending physicians; while no studies documented the use of HAS-BLED. There was variability in the ED management strategies of AFF. The utilization of rhythm control in the treatment of AFF ranged considerable (OR: 0.04-9.84) in comparison to rate control. Of the 17 studies reporting cardioversion approaches, chemical (9 {53%}) cardioversion was the most common management strategy of AFF. **Conclusion:** Our results suggests that either few physicians are documenting stroke risk scores in adult patients with AFF, or that research studies assessing ED management of AFF are not reporting scores documented by the attending physicians. Future research needs to examine the use of stroke risk scores to determine the optimal and appropriate care for patients.

Keywords: atrial fibrillation, stroke, emergency department

P095

Who, what, where: a critical assessment of helicopter emergency medical services transport and transfer times on patient outcomes at two level 1 trauma centres

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Introduction: Helicopter emergency medical services (HEMS) have become an engrained component of trauma systems to expedite transportation to a trauma centre. Ornge is a provincially run, paramedic-staffed HEMS that is responsible for all air ambulance service within Ontario, Canada. They provide transportation for trauma patients through one of three ways: scene call, modified scene call or interfacility transfer. In this study we report the characteristics of patients transported by each of these methods to two level 1 trauma centres and assess for any impact on morbidity or mortality. **Methods:** A local trauma registry was used to identify all patients transported to our two trauma centres by HEMS over a 36-month period. Data surrounding patient demographic, arrival characteristics, transport times and in-hospital course were abstracted from the registry. Statistical analysis will be used to compare methods of transport and characterize any association between mode of transport and mortality. **Results:** From January 1st, 2012 to December 31st, 2014 HEMS transferred a total of 911 patients to our trauma centers with an overall mortality rate of 11%. Of these patients 139 were scene calls with a mortality rate of 8%, 333 were modified scene calls with a mortality rate of 14% and 439 were interfacility transfers with a mortality rate of 10%. **Conclusion:** Identifying any association between the type of HEMS transport and morbidity and mortality, we may be able to predict those that need more urgent transfer to a trauma centre and find ways to decrease our overall pre-trauma center time.

Keywords: trauma, helicopter emergency medical services (HEMS)

P096

Hospitalselfie: a review of implications and recommendations on patients making video recordings in hospital

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Introduction: Smartphones are everywhere. Recent technological advances allow for instantaneous high quality video and audio recordings with the touch of a button. In Canada, physician smartphone use is highly regulated by provincial legislature and multiple policies have been published from provincial physician colleges and the Canadian Medical Protective Association (CMPA). Patients on the other hand have no such laws to observe. We set out to look at what legislation and policies exist to provide guidance to physicians in two potential scenarios: when a patient requests to record a patient-physician interaction and if a patient surreptitiously records a patient-physician interaction without consent of the physician. **Methods:** A literature review searching for articles on patient video recordings and patient smartphone use was completed on both Medline and PubMed. Further review of each provincial privacy act and communication with each provincial privacy office was performed. Consultation with each provincial physician college and the CMPA was also done to identify any policies or recommendations to guide physicians. **Results:** Patients making video recordings do not fall under any provincial privacy law and there are no existing policies from any provincial physician college or the CMPA to provide guidance. Therefore, physicians must rely on their own institution's policy regarding patient video recording in the health care setting. Be familiar with your institution's policy. If your institution does not have a policy, create one with the input of appropriate stakeholders. Patients may surreptitiously video record medical interactions without physician consent. Although this may not be permitted under an individual institution's policy, it is not illegal under the Criminal Code. Thus, it is important to behave in a professional manner at all times and assume you may be recorded at any time. **Conclusion:** The majority of patients' recordings will be done without litigious intentions, but rather with the goal of understanding more about their own health and medical care. Unfortunately there are those who will undermine the physician-patient relationship. Physicians cannot allow this to cause distrust in future relationships, nor should it force physicians to practice more defensive medicine. Physicians must continue to practice the art of medicine and accept that "performance" is a part of the job.

Keywords: smartphone, video recordings, privacy

P097

Evaluation of an oral morphine protocol for treatment of acute pain crisis in sickle cell patients in the outpatient setting

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Introduction: Sickle cell vaso-occlusive crisis (VOC) is one of the most frequent causes of emergency visit and admission in children with this condition. With this study, we aim to evaluate whether the implementation of an oral morphine protocol has led to improved care of sickle cell disease (SCD), translated by a reduced hospitalization rate, an increased oral administration rate and faster opiate administration time, comparing cohorts of patients presenting to the emergency department (ED) and hematology outpatient clinic (HOC) with VOC pre and post implementation. **Methods:** Retrospective chart review of patients with SCD followed at CHU Ste-Justine, who presented to the ED and HOC with VOC, in the year pre and post implementation of the protocol.

Patients with a VOC diagnosis during the study periods were selected in each department's database. The primary outcome was to evaluate the hospitalization rate. The rate of oral administration, as well as the opiate administration time from inscription in the ED or arrival in the HOC were also calculated. We estimated that 35 patients per arm would be sufficiently powered to detect at least a 30% rate reduction of admissions, with a power of 80% and a significance of 0.05. **Results:** Over the two periods, a total of 105 patients (49 pre and 56 post) were included from the ED and 62 patients (36 pre and 26 post) from the HOC. Both departments showed a reduction in hospitalization rate: a difference of 48% (95% CI 32, 61) in ED and 38% (95% CI 13, 57) in HOC. Both showed an increase in the rate of oral administration: a difference of 36% (95% CI 19, 50) in ED and 33% (95% CI 8, 53) in HOC. There was a non-significant difference of 10 min (95% CI -10, 25) in the opiate administration time in ED, as opposed to HOC where a significant difference of -45 min (95% CI -71, -6) was found, with both presenting median times over the recommended 60 minutes post implementation. Both settings showed an increase in the percentage of patients without IVs; a difference of 17% (95% CI 4, 30) in ED and 55% (95% CI 72, 31) in HOC. **Conclusion:** This study validates the use of our oral morphine protocol for the treatment of VOC, by showing a significant reduction in hospitalization rates. Although delays remain in our opiate administration time, our protocol decreased the number of painful IV procedures.

Keywords: pain, pediatrics, sickle cell disease

P098

Development and evaluation of a mobile simulation lab with acute care telemedicine support

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Introduction / Innovation Concept: Skillful performance is central to the provision of quality healthcare. Well-organized, deliberate practice with instruction and feedback leads to the best learning and patient outcomes. Professionals in rural/remote locations often face significant challenges in maintaining procedural proficiency and delivering acute care medical services. This is especially important with low-frequency high-stakes procedures. Simulation can play an important role in skills maintenance but limited access to simulation labs and resources in rural areas due to time, cost and distance are often prohibitive. Mobile telesimulation has the potential to facilitate high-quality instruction and overcome these barriers. Our goal is to develop a mobile simulation unit (MSU) that uses acute-care telemedicine mentoring techniques to meet the needs of rural physicians. **Methods:** The MSU design process is a prototype development series with qualitative results from each prototype (A and B) informing design and development of the next. This serves as an assessment of the functionality and set-up of the MSU for housing the simulation equipment/mannequin and providing an acceptable learning environment. The final design (C) will be evaluated for educational effectiveness. Medical students will be taught endotracheal intubation on a mannequin in the MSU under one of 2 conditions. The experimental group will receive instruction, demonstration and feedback from an expert in the telesimulation lab at Memorial University. The control group will receive the same instructions and feedback face-to-face from an expert located in the MSU. Participants will complete a retention test 1 week after the intervention. Performance between the 2 groups will be compared and user satisfaction will be assessed. **Curriculum, Tool, or Material:** The MSU will be a portable, inflatable structure equipped with telecommunication equipment to provide efficient interaction between the rural/remote learner and their instructor at a different site. The design and components of the MSU will facilitate easy transport and

deployment for telesimulation in rural/remote areas. A combination of fixed and wearable cameras will facilitate instruction, demonstration and feedback to the learner. **Conclusion:** Mobile telesimulation may play an important role in overcoming the barriers of geography, cost and access to expert instruction. Implications of this research are far reaching and extend beyond healthcare education and training.

Keywords: innovations in EM education, simulation, rural medicine

P099

Development and qualitative evaluation of an emergency medicine simulation book to facilitate the use of simulation for our local EM program

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Introduction / Innovation Concept: Simulation-based medical education (SBME) has seen increased application in medical education. Emergency medicine (EM) trainees must develop a diverse skill set to smoothly transition to clinical practice and ensure optimal patient outcomes. The competency-based medical education (CBME) framework helps ensure residents develop the required expertise relevant to each of the CanMEDs roles. Simulation is a valuable supplement to hands-on clinical experience and allows skill development in a low-risk setting. The EM Simulation book serves to facilitate the effective application of simulation in our curriculum. **Methods:** A number of resources were compiled to meet the needs of our simulation program within Memorial University of Newfoundland. Personal knowledge/experience of the author and local contacts provide site relevant content. Prior training helped in review and selection of materials on simulation theory and debriefing. Core EM resources were sourced for information on procedural training. Literature review on simulation was used to compile a list of resources and materials for further reading. The development and revision of the manual continues as an iterative process with sequential edits based on review and feedback. Qualitative evaluation of the design and value of this document is planned to get feedback from key stakeholders including learners, faculty and simulation lab staff. **Curriculum, Tool, or Material:** The final product is a 94-page document provided in print and electronic format to the EM residents and several faculty involved in simulation. It introduces residents to our simulation program, provides relevant background information and orients them to this modality of curriculum delivery. Theory and rationale behind SBME is included. Information on the key role of debriefing is highlighted. Several core EM procedural topics are covered with tips on practice station set up. Additional learning resources are noted, including information on case development for potential teachers. **Conclusion:** The simulation book brings together key information to optimize the simulation-based medical education experience for EM residents at Memorial University.

Keywords: innovations in EM education, simulation, residency education

P100

It's more than just Travel CME: an embedded ethnography of a unique emergency medicine conference

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Introduction: Travel-based continuing medical education (CME) has become a popular format for physicians looking to combine education with travel. However these programs do not usually include shared group activities and when they do, they are often social, sedentary events. Emergency Medicine Update (EMU) Europe is a unique