

to assess feedback, asking questions about the applicability of the videos to the viewer's clinical practice, how interesting they found the content of the videos, what they liked and disliked, and how willing they would be to access future procedural videos if we were to make them. We also had respondents provide suggestions for topics of future videos. We then sent the videos and accompanying survey to a group of McMaster University medical students, residents, and attending physicians in family medicine and emergency medicine. Upon reviewed the results it seemed that there was a large difference in perceived utility of the videos between attending physicians and trainees, and so we proceeded with subgroup analysis of trainees and staff. **Curriculum, Tool, or Material:** Orthopedic procedural videos as described above. **Conclusion:** Using a 5-point Likert scale, we found that overall trainees (4.3, SD 0.76 CI 0.41) found the videos more useful and interesting than did attending physicians (3.4, SD 0.68 CI 0.37), with respondents commenting that they were very clear and easy to follow for junior trainees. Most respondents also indicated that they would access future videos we made (4.2 SD 0.74 CI 0.39 for trainees, 3.2 SD 0.65 SI 0.34) for attendings). Future directions include making the videos more concise and adding more visual summaries to improve viewership, and targeting videos for specific learner level. We are hoping to implement these videos into future curriculum development for our learners and, if successful, other Emergency Medicine residency programs across Canada.

Keywords: innovations in EM education, procedural skills

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Administrative codes for heat illness: a validation study in Ontario, Canada

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Introduction: Extreme heat events due to climate change are becoming increasingly frequent and severe, and may have an impact on human health. Administrative database studies using International Classification of Diseases 10th revision codes (ICD-10) are powerful tools to measure the burden of acute heat illness (AHI) in Canada. We aimed to assess the validity of the coding algorithm for emergency department (ED) encounters for AHI in our region. **Methods:** Two independent reviewers retrospectively abstracted data from 507 medical records of patients presenting at two EDs in Ontario between May-September 2015-2018. The Gold Standard definition of an AHI is chart-documented heat exposure with a heat related complaint, such as syncope while working outdoors on a hot day. To determine ICD coding algorithm positive predictive value (PPV), records that were previously coded as ICD-10 heat illnesses were compared to the Gold Standard for AHI. To determine sensitivity (Sn), specificity (Sp) and negative predictive values (NPV), the Gold Standard was compared to randomly selected records. A total of 326,702 ED visits were included in study period with 208 having an ICD-10 code related to heat illness. Sample size calculation demonstrated a need to manually review 62 previously coded heat illnesses and 931 random cases, of which 50 and 474 have been reviewed, respectively. In both abstractions, 20% of cases underwent a blinded duplicate review. **Results:** In our review of 474 random records, 2 cases were identified as AHI but without an appropriate ICD-10 code, 445 were not AHIs, and no cases had been identified as having an AHI ICD-10 inappropriately applied. In our review of 50 previously coded heat illnesses, 34 were

found to be appropriately coded and 16 inappropriately coded, as AHI ICD-10. Average patient age and gender of heat illness vs non-heat illness ED presentations were 32 and 48 years of age and 49% and 64% male, respectively. The leading complaint in AHI was heat stroke/exhaustion (39%), followed by headaches (15%), dizziness (9%), shortness of breath (9%) and syncope/presyncope (6%). 76% of all heat illness presentations presented following a period of physical exertion. **Conclusion:** Final calculation of Sn, Sp, PPV, NPV for the algorithm will occur upon completion of the review. Preliminary results suggest that ICD-10 coding for AHI may be applied correctly in the ED. This study will help to determine if administrative data can accurately be used to measure the burden of heat illness in Canada.

Keywords: coding, heat, validation

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What happens to bypassed trauma patients meeting Field Trauma Triage standards?

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Introduction: Prehospital field trauma triage (FTT) standards were reviewed and revised in 2014 based on the recommendations of the Centers for Disease Control and Prevention. The FTT standard allows a hospital bypass and direct transport, within 30 min, to a lead trauma hospital (LTH). Our objectives were to assess the impact of the newly introduced prehospital FTT standard and to describe the emergency department (ED) management and outcomes of patients that had bypassed closer hospitals. **Methods:** We conducted a 12-month multi-centred health record review of paramedic and ED records following the implementation of the 4 step FTT standard (step 1: vital signs and level of consciousness (physiologic), step 2: anatomical injury, step 3: mechanism and step 4: special considerations) in nine paramedic services across Eastern Ontario. We included adult trauma patients transported as urgent that met FTT standard, regardless of transport time. We developed and piloted a data collection tool and obtained consensus on all definitions. The primary outcome was the rate of appropriate triage to a LTH which was defined as: ISS \geq 12, admitted to intensive care unit (ICU), non-orthopedic surgery, or death. We have reported descriptive statistics. **Results:** 570 patients were included: mean age 48.8, male 68.9%, falls 29.6%, motor vehicle collisions 20.2%, stab wounds 10.5%, transported to a LTH 76.5% (n = 436). 72.2% (n = 315) of patients transported to a LTH had bypassed a closer hospital and 126/306 (41.2%) of those were determined to be an appropriate triage to LTH (9 patients had missing outcomes). ED management included: CT head/cervical spine 69.9%, ultrasound 53.6%, xray 51.6%, intubation 15.0%, sedation 11.1%, tranexamic acid 9.8%, blood transfusion 8.2%, fracture reduction 6.9%, tube thoracostomy 5.9%. Outcomes included: ISS \geq 12 32.7%, admitted to ICU 15.0%, non-orthopedic surgery 11.1%, death 8.8%. Others included: admission to hospital 57.5%, mean LOS 12.8 days, orthopedic surgery 16.3% and discharged from ED 37.3%. **Conclusion:** Despite a high number of admissions, the majority of trauma patients bypassed to a LTH were considered over-triaged, with a low number of ED procedures and non-orthopedic surgeries. Continued work is needed to appropriately identify patients requiring transport to a LTH.

Keywords: bypass, paramedic, trauma

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Distal radial fractures: adequacy of reductions performed in the emergency department

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Introduction: Distal radial fractures (DRF) remain the most commonly encountered fracture in the Emergency Department (ED). The initial management of displaced DRFs by Emergency Physicians (EP) poses considerable resource allocation. We wished to determine the adequacy of reduction, both initially and at follow up. This data updates previously presented high level findings. **Methods:** We performed a mixed-methods study including patients who underwent procedural sedation and manipulation by an EP for a DRF. Radiological images performed at initial assessment, post-reduction, and clinic follow up were reviewed by a panel of orthopedic surgeons and radiologists blinded to outcomes, and assessed for evidence of displacement. Demographic data were pooled from patient records and included in statistical analysis. **Results:** Seventy patients were included and had follow-up completed. Initial reduction was deemed to be adequate in 37 patients (53%; 95% CI 41.32 to 64.10%). At clinic follow-up assessment, 26 reductions remained adequate; a slip-page rate of 30% (95% CI of 17.37 to 45.90). Overall 7 patients (10%; 95% CI 4.65 to 19.51%) required revision of the initial reduction in the operating room. Agreement on adequacy of reduction on post-reduction radiographs between radiologists and orthopedic surgeons was 38.6% (95% CI -38.3 to -7.4, Kappa -0.229). The statistical strength of this agreement is worse than what would be expected by chance alone. There was no association found between age, sex, or time of initial presentation and final outcomes. **Conclusion:** Although blinded review by specialists determined only half of initial EP DRF reductions to be radiographically adequate, only 10 percent actually required further intervention. Agreement between specialists on adequacy was poor. The majority of DRFs reduced by EPs do not require further surgical intervention.

Keywords: emergency department, fractures, reductions

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Parental leave policies and culture for physicians in emergency medicine

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Introduction: Medicine demands a sacrifice of physicians' personal life, but culture has slowly changed towards valuing a balanced work life. Parental leave is linked to better physical and mental health, but policies and culture surrounding parental leave are largely unstudied in the Canadian Emergency Medicine landscape. Anecdotally, experiences vary widely. This study was designed to determine what proportion of Canadian Emergency Departments have formal parental leave policies (maternity, paternity, and other ex. adoption) and what proportion of Canadian EM physicians are satisfied with their department's parental leave policies. **Methods:** Two surveys were generated; one to assess attitudes and experiences of emergency physicians, and a second survey for department chiefs assessed the policies and their features. These were approved by the UBC REB and distributed through the CAEP Research Committee. Primary outcomes were physician satisfaction with their department's parental leave policy (4-5/5 Likert Scale), and departments with a formal parental leave

policy (Y/N). **Results:** 38% (8/21) of department chiefs reported having a formal policy for maternity leave, 29% (6/21) for paternity leave, and 24% (5/21) other. The survey of Emergency Physicians revealed similar rates at 48% (90/187) maternity, 40% (70/184) paternity, 29% (53/181) other. Among physicians who were aware of them, 69% (62/90) were somewhat or very satisfied with the maternity leave policies, 58% (51/88) with paternity leave policies, and 48% (39/81) with other parental leave. Less than 10% were somewhat or very dissatisfied with any of these. Several department chiefs commented that they had never refused anyone parental leave, but have no formal policy. However, 87% (147/187) of physicians reported a formal maternity leave policy was somewhat or very important to them; similarly 80% (134/187) paternity leave. Less than 15% felt each was somewhat or extremely unimportant. **Conclusion:** Presence and type of parental leave policy varies across the country. Most physicians were satisfied with the support they had available, but the vast majority felt that a formal maternity and paternity leave policy itself was important. This study would suggest that, without actually changing practice, the introduction of a formal parental leave policy is of value. Our research group will use this data to collaborate on a template parental leave policy to be made available for this purpose.

Keywords: leadership, policy, wellness

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The impact of a pancreatitis admission algorithm on emergency department length of stay in a tertiary care academic hospital

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Background: Emergency department (ED) overcrowding is associated with a broad spectrum of poor medical outcomes, including medical errors, mortality, higher rates of leaving without being seen, and reduced patient and physician satisfaction. The largest contributor to overcrowding is access block – the inability of admitted patients to access in-patient beds from the ED. One component to addressing access block involves streamlining the decision process to rapidly determine which hospital service will admit the patient. **Aim Statement:** As of Sep 2011, admission algorithms at our institution were supported and formalised. The pancreatitis algorithm clarified whether general surgery or internal medicine would admit ED patients with pancreatitis. We hypothesize that this prior uncertainty delayed the admission decision and prolonged ED length of stay (LOS) for patients with pancreatitis. Our project evaluates whether implementing a pancreatitis admission algorithm at our institution reduced ED time to disposition (TTD) and LOS. **Measures & Design:** A retrospective review was conducted in a tertiary care academic hospital in Montreal for all adult ED patients diagnosed with pancreatitis from Apr 2010 to Mar 2014. The data was used to plot separate run charts for ED TTD and LOS. Serial measurements of each outcome were used to monitor change and evaluate for special cause variation. The mean ED LOS and TTD before and after algorithm implementation were also compared using the Student's t test. **Evaluation/Results:** Over four years, a total of 365 ED patients were diagnosed with pancreatitis and 287 (79%) were admitted. The mean ED LOS for patients with pancreatitis decreased following the implementation of an admission algorithm (1616 vs. 1418 mins, $p=0.05$). The mean ED TTD was also reduced (1171 vs. 899 mins, $p=0.0006$). A non-random signal of change was suggested by a shift above the median prior to algorithm implementation and one below