throughout the hospital to mitigate confusion, time delay and unfamiliarity during difficult airway interventions. Participants felt the exercise was an effective means of practicing interprofessional communication and role clarity, and improved their attitude towards the same. **Conclusion:** In situ simulation-based education with ad hoc trauma teams can improve interprofessional communication and identify latent safety threats for the management of multisystem trauma patients.

Keywords: innovations in EM education, simulation, trauma

P074

Emergency department utilization and outcomes for patients with early pregnancy complications

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Introduction: Affecting roughly 1 in 5 pregnancies, early pregnancy loss is a common experience for reproductive-aged women. In Canada, most women do not establish care with an obstetrical provider until the second trimester of pregnancy. Consequently, pregnant patients experiencing symptoms of early pregnancy loss frequently access care in the emergency department (ED). The objective of this study was to describe the resource utilization and outcomes of women presenting to two Ontario EDs for early pregnancy loss or threatened early pregnancy loss. **Methods:** This was a retrospective cohort study of pregnant (≤20 weeks), adult (≥18 years) women in two EDs (one community hospital with 110,000 annual ED visits; one academic hospital with 65,000 annual ED visits) between January 2010 and December 2017. Patients were identified by diagnostic codes indicating early pregnancy loss or threatened early pregnancy loss. **Results:** A total of 16,091 patients were included, with a mean (SD) age of 32.8 (5.6) years. Patients had a total of 22,410 ED visits for early pregnancy complications, accounting for 1.6% of the EDs' combined visits during the study period. Threatened abortion (n = 11,265, 50.3%) was the most common ED diagnosis, followed by spontaneous abortion (n = 5,652, 25.2%), ectopic pregnancy (n = 3,242, 14.5%), missed abortion (n = 1,541, 6.9%), and other diagnoses (n = 710, 3.2%). 8,000 (44.8%) patients had a radiologist-interpreted ultrasound performed during the initial ED visit. Median (IQR) ED length of stay was 3.4 (2.3 to 5.1) hours. There were 4,561 (25.6%) return ED visits within 30 days, of which 2,317 (50.8%) occurred less than 24 hours of index visit, and 481 (10.6%) were for scheduled, next day ultrasound. The total number of hospital admissions was 1,793 (8.0%), and the majority were for ectopic pregnancy (n = 1,052, 58.7%). Of admitted patients, 1,320 (73.6%) underwent surgical interventions related to early pregnancy. There were 474 (10.4%) patients admitted to hospital during return ED visits. **Conclusion:** Pregnant patients experiencing symptoms of early pregnancy loss in the ED frequently had radiologist-interpreted US and low rates of hospital admission, yet had high rates of return ED visits. This study highlights the heavy reliance on Ontario EDs to care for patients experiencing complications of early pregnancy.

Keywords: early pregnancy loss, pregnancy, ultrasound

P075

Targeted temperature management was associated with worse outcomes of non-shockable out of hospital cardiac arrest

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Introduction: We sought to assess the effect of in-hospital targeted temperature management (TTM) on outcomes of non-shockable out-of-hospital cardiac arrest (OHCA). **Methods:** This is a secondary analysis of a randomized controlled trial "A Randomized Trial of Continuous Versus Interrupted Chest Compressions in Out-of-Hospital Cardiac Arrest" (NCT01372748). We included non-traumatic comatose OHCAs with non-shockable rhythm who survived to hospital admission. Outcomes of interest were survival at hospital discharge and favorable neurological outcome (modified Rankin scale 0-3). We performed multivariable logistic regression, adjusting for baseline characteristics to determine the association between TTM and outcomes, compared to no TTM, for the entire cohort as well as for the propensity matched cohort. **Results:** Of 1,985 OHCAs who survived to hospital admission, 780 (39.3%) were managed with TTM. In TTM patients, 7.3 % patients survived to hospital discharge and 3.9 % had a favorable neurological outcome in contrast to 10.2 % and 6.1 %, respectively, in no TTM patients. Multivariable analyses demonstrated an association between TTM and decreased probability of both outcomes, compared to no TTM (adjusted ORs for survival: 0.67 95% CI 0.48–0.93, and for favorable neurological outcome: 0.57 95% CI 0.37–0.90). Propensity score matched analyses demonstrate the similar results. **Conclusion:** TTM might decrease the probability of neurologically intact survival for non-shockable OHCAs.

Keywords: non-shockable rhythm, out of hospital cardiac arrest, targeted temperature management

P076

Assessment of a newly integrated and standardized approach for pediatric concussions aimed to improve the concussion recovery process

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Introduction: Children with concussions presenting to emergency departments often receive very different recommendations for how to recover. In addition, there are no instructions for teachers to how children should return to learn and play after a concussion. Therefore, some children take too long to return to learn and play at school while others return too soon, thereby risking long-term problems because their brain injury is not fully healed. The purpose of this project is to determine the impact of a new integrated, standardized approach aimed to help a concussed child recover faster and whether the recovery experience for all involved has improved. **Methods:** Structured interviews were conducted with 11 parents of children treated for concussion at the Emergency Department of Pasqua Hospital in Regina, SK, four of whom received care after a change in practice whereby parents were provided with a return-to-school protocol form prior to discharge. Data were analyzed using an inductive qualitative content analysis approach using NVivo 12 software. **Results:** Three main categories were noted in the data: Parental response to the child's concussion, satisfaction with health services, and the communication amongst parents, physicians, and teachers. It was with regard to the last theme in particular that the impact of the return to school protocol was noted, helping to at least indirectly address the issue of the parent as the "middleman" in the communication triad. Most parents whose children received care prior to the introduction of the protocol suggested that providing written information at discharge to guide parents through the concussion recovery process would be helpful.

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Conclusion: Our initial results show a positive impact in regards to the process of children returning to learn and play after a concussion. Specifically, the increased communication between physician, teacher, and parent seems to benefit and improve the child's recovery process.
Keywords: concussion, interview, pediatric

P077

Predicting positive practice improvement: a model for understanding how data and self-perception lead to practice change

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Introduction: Despite studies highlighting the inaccuracies of self-assessment, practicing physicians continue to rely on self-perception to maintain clinical competence. Many approaches have been proposed to augment physician performance. In the realm of Quality Improvement (QI), Audit and Feedback (A&F) has a modest effect. Educators have proposed coaching interventions and academic constructs have invoked training for early-career clinicians. Very few of these are driven by the perceptions and the needs of the end-user - the physicians. We currently lack a model to understand physicians' perceptions of their own practice data and an understanding of the factors which would enable practice change. In this study, we sought to develop a model for data feedback which may best help physicians change practice. **Methods:** In a previous study, we conducted a needs analysis of 105 physicians in the Hamilton-Niagara area in order to understand which data metrics were most valuable to physicians. Using the survey results, we designed an interview guide that was used as a qualitative study of physicians' perspectives on A&F. By intentional sampling, we recruited 15 physicians amongst gender groups, types of practice (academic vs community) and durations of practice. We conducted this interview with all 15 participants which were then transcribed. We then performed thematic analysis and extraction of all interviews using a realist framework. These were then translated into broader themes and, by using a grounded theory framework, created a model to understand how physicians relate practice data to their own sense of self. Interviews were anonymized and no identifying data was shared as part of the interview. All interviewees consented to participation at the outset and could withdraw at any time. **Results:** Via stakeholder interviews from 15 key informants, we developed a model for the understanding of how a physician's sense of self and the nature of the data (quantity and quality) may be combined to understand the likelihood of practice change and the adoption of the change strategy. Using this model, it is possible to understand the conditions under which A&F would provide the greatest opportunity for practice change. **Conclusion:** Physician identity intersects with A&F data to shed insights on practice improvement. Understanding the core identity constructs of different physician groups may allow for increased uptake in A&F processes.
Keywords: audit and feedback, performance measurement, quality improvement

P078

Impact of vaping on lung health and visits to the emergency department: a cross-sectional study

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Introduction: Despite being legal in Canada, the vaporized liquid of vaping systems contains several chemicals presenting unknown risks to lung health and little is known about their use in patients visiting the emergency department (ED). This study explores associations between exposure to inhaled products and respiratory presentations in the ED. **Methods:** A cross-sectional lung health survey among patients presenting to a Canadian ED was conducted, exploring the association between inhaled toxic exposures (e.g., vaping, cannabis and cigarette smoking) and visits related to respiratory symptoms. Eligible participants were ambulatory (CTAS 2 to 5), stable, adults (≥ 17 years) visiting the ED from July to November, 2019. Results are described as frequencies and percentages (categorical variables) and medians with interquartile range (IQR, continuous variables). Univariate and multivariate logistic regression models report associations as odds ratios (OR) with 95% confidence intervals (CIs). The Health Research Ethics Board approved the study. **Results:** From 1433 eligible patients, 1024 (71%) completed the survey. The median age was 43.5 (IQR: 29, 60), and 51% were female. Overall, 177 (17%) reported ≥1 respiratory symptoms and 83 (8%) reported using any vaping products. In a univariate regression analysis, exposure to vaping was positively associated with ED visits related to respiratory symptoms (OR 2.11, 95% CI: 1.26 to 3.54). In the multivariate model, vaping and a previous diagnosis of ≥1 respiratory conditions showed positive association with respiratory-related ED visits (OR 1.86, 95% CI: 1.03 to 3.33; and OR 2.13, 95% CI: 1.50 to 3.02, respectively). There was evidence of an additive effect of the combined exposure to cigarettes and vaping and respiratory-related ED visits (OR 3.22, 95% CI: 1.61 to 6.43). Smoking cannabis and cigarettes alone were not associated with increased risk of respiratory-related visits. **Conclusion:** Using vaping products increased the occurrence of respiratory-related ED visits, particularly in people with pre-existing lung conditions. A dose-response relationship exists where the risk is highest in patients inhaling a combination of toxins. Contrary to previous assumptions, the use of vaping products has a negative impact on lung health.
Keywords: adverse effects, e-cigarettes, vaping

P079

Clinical handover from emergency medical services to the trauma team: A gap analysis

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Background: Clinical handover between emergency medical services (EMS) and the hospital trauma team can be subject to errors that may negatively affect patient care. Thus far, there has been limited evaluation of the quality of EMS handover. As such, we sought to characterize handover practices from EMS to the trauma team, identify areas for improvement, and determine if there is a need for standardization of current handover practices. **Aim Statement:** Identify areas for improvement in handover from EMS to the trauma team, specifically examining handover content, structure, and discordances between different team members regarding handover expectations. **Measures & Design:** Data were prospectively collected over a nine week period by a trained observer at Canada's largest level one trauma centre. A randomized scheduled was used to capture a representative breadth of handovers. Data collected included outcome measures such as duration of handover, structure of the handover, and information shared, process measures such as questions and interruptions from the trauma team, and perceptions of the handover from nurses, trauma team leaders (TTLs) and EMS according to a bidirectional Likert scale. **Evaluation/Results:** Of 410 trauma team activations, 79 verbal

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