

No differences were detected for triage complaints of altered level of consciousness, sexual assault, head or neck injury, limb injury, or social problems. **Conclusion:** The Calgary Stampede provokes appreciable changes in overall ED and UC utilization, with marked increases in nighttime visits, visits by men, trauma or substance abuse-related complaints, and minor treatment visits. This data may be useful in manpower planning to ensure optimal patient flow and service delivery during mass gatherings.

**Keywords:** mass gathering, utilization, stampede

### P130

#### Learning through simulation-a debriefing faculty development course

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**Introduction/Innovation Concept:** Introduction of a new simulation program including structured debriefing represents a substantial challenge. Debriefing performance is critical for facilitating learning in simulation. However, many faculty members are unfamiliar with the debriefing process. Faculty receives no training for conducting impactful and safe debriefs. Consequently, they are uncomfortable and often disengaged. We designed, implemented, and evaluated an innovative faculty-debriefing curriculum. Do professional development efforts in simulation debriefing teaching result in improved engagement in simulation teaching by faculty, increased comfort with simulation teaching, and an acceptance of a critical thinking framework for simulation teaching? **Methods:** We designed the curriculum to include the flipped classroom and deliberate practice models. Participants (n = 26; 42% of Emergency Medicine Faculty) were pre-circulated course materials, and then attended a full day course to introduce the simulation setting, the equipment, and two practice scenarios. Each scenario was followed by a group debrief. Twenty-one participants (80.7% response rate) completed pre and post course surveys; we analyzed the data using descriptive statistics. **Curriculum, Tool, or Material:** Results: Descriptive findings from a pre-course and post-course survey were conducted. Prior to participating in the innovation, 75% had participated in simulation teaching at Western, but only 30% of this faculty being comfortable with this teaching format. 65% of participants had no formal simulation training and 95% had no training in debriefing. Results of the post-course survey revealed 100% satisfaction with the flipped classroom model; and 48% and 52% were extremely likely and very likely to attend future faculty development courses respectively. 100% of participants felt comfortable in participating in debriefing post simulation teaching with 50% feeling comfortable to do this independently without a co-debriefer. 100% of participants felt that the critical thinking framework that was presented in the course for a debriefing model would translate into their clinical teaching in the future. **Conclusion:** Faculty development has a critical role to play in promoting academic excellence and innovation. Faculty development programs must respond to the changes in medical education. This education project integrated a unique model of learning for faculty, engaged faculty, and increased their comfort level for teaching in simulated setting and utilizing structured debriefing.

**Keywords:** innovations in emergency medicine education, simulation, faculty development

### P131

#### Risk factors for recurrent emergency department visits for hyperglycemia in patients with diabetes mellitus

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**Introduction:** Patients with poorly controlled diabetes mellitus may present repeatedly to the emergency department (ED) for management and treatment of hyperglycemic episodes, including diabetic ketoacidosis and hyperosmolar hyperglycemic state. The objective of this study was to identify risk factors that predict unplanned recurrent ED visits for hyperglycemia in patients with diabetes within 30 days of initial presentation. **Methods:** We conducted a one-year health records review of patients  $\geq 18$  years presenting to one of four tertiary care EDs with a discharge diagnosis of hyperglycemia, diabetic ketoacidosis or hyperosmolar hyperglycemic state. Trained research personnel collected data on patient characteristics and determined if patients had an unplanned recurrent ED visit for hyperglycemia within 30 days of their initial presentation. Multivariate logistic regression models using generalized estimating equations to account for patients with multiple visits determined predictor variables independently associated with recurrent ED visits for hyperglycemia within 30 days. **Results:** There were 833 ED visits for hyperglycemia in the one-year period. 54.6% were male and mean (SD) age was 48.8 (19.5). Of all visitors, 156 (18.7%) had a recurrent ED visit for hyperglycemia within 30 days. Factors independently associated with recurrent hyperglycemia visits included a previous hyperglycemia visit in the past month (odds ratio [OR] 3.5, 95% confidence interval [CI] 2.1-5.8), age  $< 25$  years (OR 2.6, 95% CI 1.5-4.7), glucose  $> 20$  mmol/L (OR 2.2, 95% CI 1.3-3.7), having a family physician (OR 2.2, 95% CI 1.0-4.6), and being on insulin (OR 1.9, 95% CI 1.1-3.1). Having a systolic blood pressure between 90-150 mmHg (OR 0.53, 95% CI 0.30-0.93) and heart rate  $> 110$  bpm (OR 0.41, 95% CI 0.23-0.72) were protective factors independently associated with not having a recurrent hyperglycemia visit. **Conclusion:** This unique ED-based study reports five risk factors and two protective factors associated with recurrent ED visits for hyperglycemia within 30 days in patients with diabetes. These risk factors should be considered by clinicians when making management, prognostic, and disposition decisions for diabetic patients who present with hyperglycemia.

**Keywords:** diabetes mellitus, risk factors, recurrent visits

### P132

#### Development and implementation of an intubation registry within a Canadian tertiary-care hospital

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**Introduction:** Intubation is a high-risk procedure that is frequently performed within the ED. Few Canadian centres have a system in place to monitor intubation frequency, indications, methods used, operator characteristics, first-pass success, and adverse event rates. There are no published data on the frequency of success or complications of emergency airway management in Canada. An airway registry would be a valuable quality improvement (QI) tool for assessing the impact of practice changes such as pre-intubation checklists and for identifying patients with "difficult airways." We describe the development and implementation of an airway registry in a Canadian tertiary-care centre. **Methods:** We created a collaborative working group with staff from EM, ICU, Respiratory Therapy (RT), and Privacy. An airway data form was created. Over a 3 month trial period, the form was completed by RTs following each non-OR intubation. At our centre, RTs are present at every intubation outside of the OR. If a patient was intubated outside of the hospital, forms were completed using verbal handover. RTs also provided constructive feedback and after 3 months the form was revised and finalized. Medical student volunteers entered data from the

forms and from chart reviews into a secure online database created for this purpose. **Results:** We have enrolled 373 patients over the first 5 months with ongoing enrolment at the time of abstract submission. The airway form captures the seniority and discipline of the intubator, preparation, technique, and any airway manoeuvres that were used. The form also captures Cormack-Lehane airway grading, confirmation techniques, complications, and the option to identify the patient as a "Difficult Airway." Privacy permission was granted to include patient identifiers in the airway registry so that additional information from chart reviews could

be obtained at a later date. Preliminary results will be presented at the conference. **Conclusion:** Our airway registry tracks intubation performance and may identify factors associated with adverse patient outcomes, which could prompt system-wide changes. Comparison of intubation performance to other Canadian institutions may be possible if similar airway registries are implemented. The development and implementation of an airway registry requires multi-disciplinary collaboration, engagement, and user feedback.

**Keywords:** intubation, airway, registry