

significant morbidity for individuals even after discharge. The objective of this study was to describe the patient-important outcomes and burden of disease for emergency department (ED) patients with hyperglycemia after discharge from hospital. **Methods:** This was a prospective cohort study of patients 18 years presenting to two tertiary care EDs (combined annual census 150,000 visits) with a discharge diagnosis of hyperglycemia, DKA or HHS over a 15-month period (Jul 2016-Oct 2017). During the ED visit, consent was obtained for a telephone follow-up call to determine patient-important outcomes. Trained research personnel collected data from medical records and completed a 14 day telephone follow-up using a standardized questionnaire to determine medication changes, missed days of school or work, and repeat admissions or visits to a healthcare provider. Descriptive statistics were used where appropriate to summarize the data. **Results:** Thus far, 172 patients have been enrolled in our study. Mean (SD) age is 53.9 (19.3) years and 97 (56.4%) are male. 65 (37.8%) patients were admitted from their initial ED visit. Of the 125 patients (72.7%) providing post-discharge outcomes, 75 (60.0%) required an adjustment to their diabetes medications or insulin. 21 (16.8%) patients missed days of school or work for a median (IQR) duration of 3.5 (1.3, 7.0) days. 85 (68.0%) saw another healthcare provider within a 14 day period, 45 (36.0%) saw their family physician, and 34 (27.2%) saw an internist or endocrinologist. 9 (7.2%) were seen again in the ED, 5 of these patients required admission to hospital. There was one death that occurred within the follow-up period. **Conclusion:** This prospective study builds on our previous retrospective work and demonstrates that visits for hyperglycemia carry a significant burden of disease beyond what may be seen in a single ED encounter. Further research will attempt to identify the factors that may be predictive of adverse outcomes in hyperglycemic patients presenting to the ED.

Keywords: diabetes mellitus, hyperglycemia, patient-important outcomes

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Methanol poisoning by inhalation: a case series

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Introduction: Methanol intoxication is a well-recognized toxicological emergency. While most cases of significant methanol poisoning occur via ingestion, there are reports in the literature of poisoning resulting from the inhalational route. We report a series of methanol intoxications secondary to inhalational abuse of a methanol containing lacquer thinner presenting to an inner city Emergency Department. **Methods:** A laboratory database was searched for methanol levels >5 mmol/L. (16mg/dL). from January 1, 2010 to December 31, 2015. A chart review was completed to determine mode of poisoning, clinical presentation, treatment, and disposition. **Results:** We found 35 patients who made a total of 83 emergency department (ED) visits with a methanol level >5mmol/L. (16mg/dL). The methanol levels ranged from 5.3-39.6 mmol/L. (16.96-126.72 mg/dL). 73% of poisonings were secondary to inhalation of a methanol-containing lacquer thinner. The median age of these patients was 43 years, and 49% were male. The majority of patients (96%) resided in the core area. The most frequent chief complaints were substance abuse/intoxication, gastrointestinal complaints, and chest pain. 18% of patients described visual symptoms. Treatments were fomepizole only (59%), fomepizole plus hemodialysis (26%), and hemodialysis alone (2%). 49% of patients were discharged from the ED, while 28% and 23% were admitted to an intensive care unit (ICU) and an internal medicine ward respectively. There were no cases of blindness. We describe

a cohort of patients who developed methanol poisoning from inhalation of a methanol containing lacquer thinner that required treatment with fomepizole and hemodialysis. While almost 1/3 of these patients were admitted to ICU, 49% were discharged from the emergency department after a course of fomepizole. The etiology of this outbreak was found to be a change in the formulation of the lacquer thinner, substituting a higher concentration of methanol for toluene. The manufacturer and a number of local retail outlets were contacted. This resulted in the product being taken off the shelves by the retail outlets, and eventually, a change in the product formulation by the manufacturer, with a resultant decrease in the methanol content. After these actions, we have not seen any additional presentations of inhalational methanol intoxication. **Conclusion:** We report the largest case series to date of patients who presented with methanol intoxication, requiring fomepizole and/or hemodialysis, secondary to inhalation of a methanol containing lacquer thinner. Physician advocacy regarding the etiology of this outbreak resulted in collaboration with retail outlets and subsequent action by the manufacturer. This ended the outbreak.

Keywords: methanol, advocacy, poisoning

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Development of the BC-Airway Registry for Emergencies (BCARE) network

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Introduction: Intubation is one of the highest-risk procedures performed in the ED. Few Canadian centres monitor intubation frequency, indications, methods used, success, and/or complication rates. An airway registry that tracks patient outcomes and variation in practice would be a valuable quality improvement (QI) tool. We describe the development of the BC-Airway Registry for Emergencies (BCARE) network, an emergency intubation database at two tertiary-care and one community hospital. **Methods:** Respiratory Therapists (RTs) are present at every intubation outside of the OR and complete a standardized post-intubation form. The airway forms were developed collaboratively with input from RTs, emergency physicians, intensivists, and anesthesiologists. Completed forms are collected from participating sites and data is entered into a secure online database where patient outcomes are analyzed in real-time. **Results:** We collected data from 737 unique intubations over 19 months with ongoing enrolment at the time of abstract submission. Mean age was 59.4 (Range 17-95, SD 17.6), Male 66.2%, intubation locations were ED (396, 53.7%), ICU (221, 30.0%), Ward (120, 16.3%). The most common indications for ED intubation were ICH/stroke (14.6%), seizure (10.9%), and sepsis (9.5%). Intubations are done by attending physicians more frequently in the ED (48.0%) compared to in the ICU (11.8%), and ward (8.6%). ED intubations were more commonly performed using video laryngoscopy (57.7%) with a smaller proportion using direct laryngoscopy (39.0%). First-pass success was 81.8% in the ED, 79.2% in the ICU, and 77.5% on the wards. Of ED intubations, 56 (14.1%) had complications and 73 (18.4%) were considered to be a difficult airway. **Conclusion:** The BCARE network tracks intubation performance across hospitals and is a valuable QI tool. BCARE can be used to ensure that all centres are meeting a benchmark success rate, for assessing the impact of practice changes such as pre-intubation checklists, and for implementing systematic methods to identify patients who previously had a "difficult airway."

Keywords: airway, intubation, registry