one-page survey was developed by the authors (JC and JM). Each hospital listed on the BC Ministry of Health's website was contacted to confirm that they had a functioning ED attached to the hospital and to determine who their site lead was. Each ED site lead was then emailed the questionnaire and up to three more follow-up emails and direct phone requests were performed as needed. **Results:** 92 of the 95 EDs completed the survey and we discovered that just over 1000 physicians deliver emergency care in BC with approximately half doing so in combination with family practice. There was an estimated shortfall of 199 physicians providing emergency care in 2014 and an anticipated shortfall of 287 by 2017 and 399 by 2019. Slightly more than half had formal certification, with 28% through the Royal College of Canada and 70% with the College of Family Physicians of Canada. **Conclusion:** More than 1000 physicians care for patients in EDs across BC but there is a significant and growing need for more physicians. There is tremendous variation across health authorities in emergency medicine certification, but approximately half of those who deliver emergency care have formal certification. Despite limitations of a survey method, this provides the most accurate and current estimate of emergency practitioner resources and training in BC and will be important in guiding discussions to address the identified gaps.

Keywords: physician human resources, training, certification

P089

Frequency of substance abuse in Albertan emergency departments: a retrospective NACRS analysis

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Introduction: Substance abuse is strongly correlated with frequent ED use, which is a known risk factor for mortality. This study aimed to examine epidemiologic trends in ED visit frequency, and visit and patient characteristics among all patients presenting to Albertan EDs with visits related to substance abuse over a five-year period. **Methods:** This is a retrospective analysis of National Ambulatory Care Reporting System (NACRS) administrative ED data for Alberta. All ED visits related to substance abuse made by adults from fiscal year 2010/11 to 2014/15 were included. Using a validated definition enhanced by expert consultation, ED visits were classified as visits related to substance abuse if a set of ICD-10 codes determined *a priori* were present within the primary or secondary diagnostic fields. Data are reported as means (with SD), medians (with IQR) and proportions. Visit and admission frequencies were compared using Chi square and Chi square trend tests. All analysis was performed using SAS 9.4. **Results:** Over the study period, 177,287 visits related to substance abuse were made to Alberta EDs. These visits were made by 77,291 unique patients, and annual patient numbers increased consistently from 17,660 in 2010/11 to 24,737 in 2014/15; 62% of patients were male and median age was 38 years (IQR 24, 49). Visits increased from 27,839 in 2010/11 to 42,965 in 2014/15 ($p < 0.001$). 50% arrived by ambulance, and were mostly triaged as CTAS 3 to 5 (32% CTAS 1 or 2, 43% CTAS 3, and 23% CTAS 4 or 5). While most of the patients were discharged, 15.6% of visits resulted in admission; statistical but not clinically meaningful differences were detected in proportions of admitted visits across the study years. Compared to the overall population of patients with substance abuse presentations, frequent presenters (with a visit number greater than the 95th percentile) appeared to be older (median age 40 years [IQR 31, 49]) and had a higher proportion of males (69%). **Conclusion:** ED presentations for substance abuse increased from 2010 to 2015 in Alberta, and frequent presenters appear to have a different demographic profile. Future study is needed to determine whether patients who present frequently with substance abuse are at increased risk for mortality as this may justify targeted intervention.

Keywords: drug and alcohol use, substance-related disorders, frequent users

P090

Comparing patients who leave the emergency department prematurely, before versus after medical evaluation: a NHAMCS analysis

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Introduction: Many patients leave the Emergency Department (ED) before beginning or completing medical evaluation. Some of these patients may be at higher medical risk depending on their timing of leaving the ED. The objective of this study was to compare patient, hospital, and visit characteristics of patients leaving prior to completing medical care in the ED either before or after evaluation by a medical provider. **Methods:** This is a retrospective cross-sectional analysis of ED visits using the 2009-2011 National Hospital Ambulatory Medical Care Survey. The target population was identified by coded dispositions corresponding to leaving prior to completing medical care, and two groups were defined based on whether or not they had been evaluated by a medical professional. Data are reported as means (with standard errors) and proportions, and bivariate and multivariate logistic regressions were performed. All analysis was performed using SAS 9.4 and SUDAAN 11.0.1 to account for the complex sample design. **Results:** 100,962 ED visits were documented from 2009-2011, representing a weighted count of 402,211,907 total ED visits. 2,646 (3%) resulted in a disposition of left without completing medical care. Of these visits, 1,792 (68%) left prior to being seen by a medical provider versus 854 (32%) who left after medical provider evaluation. Patients who left after being assessed by a medical provider were older, had higher acuity visits, were more likely to have visited an ED without nursing triage, more likely to have arrived by ambulance, and more likely to have private insurance than other payment arrangements (e.g. worker's compensation or charity). **Conclusion:** When comparing all patients who left the ED prior to completion of care, those who left after versus before medical provider evaluation differed in their patient, hospital, and visit characteristics and may represent a high risk patient group.

Keywords: patient safety, left against medical advice, left without being seen

P091

Anaphylaxis: epidemiology and treatment in a Canadian emergency department

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Introduction: As part of the multicenter C-CARE (Cross-Canada Anaphylaxis Registry) project, this study aimed to describe the characteristics of anaphylactic reactions and assess if emergency physicians follow treatment guidelines. **Methods:** A cohort study was conducted in the emergency department of Sacré-Cœur Hospital, a university-affiliated, urban tertiary care hospital. For each anaphylaxis case recruited by the treating physician, a standardised questionnaire was completed. The information for missed cases was collected retrospectively through chart

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review. **Results:** Between May 2012 and May 2015, 280 cases (205 prospective and 75 retrospective) of anaphylaxis were identified from a total of 182,408 ED visits. The median age was 36.21 years (IQR 27.8), 61.8% were female, and 12.5% of all patients were children (<18 years old). The majority of reactions were triggered by food [54.3% (95% CI:48.5-60.1%)], followed by medications [18.2% (95%CI:13.7-22.7%)] and venom [5.7% (95%CI:3.0-8.4%)]. Among all cases, 66.8% (95% CI:61.3-72.3%) received epinephrine; 26.1% (95%CI:21.0-31.2%) received it prior to their arrival and 46.8% (95%CI:41.0-52.6%) in-hospital. As for other in-hospital treatments, 85.4% of patients (95% CI:81.3-89.5%) received corticosteroids, 81.1% (95%CI:76.5-85.7%) received H1 antihistamines, and 41.1% (95%CI:35.3-46.9%) received H2 antihistamines. Out of all patients who had anaphylaxis, 86.4% (95% CI:82.4-90.4%) were prescribed an epinephrine auto-injector in-hospital or had already had one prescribed. **Conclusion:** Our results reveal that food is a major trigger of anaphylaxis and that despite current guidelines, there is under use of epinephrine and preferential use of corticosteroids and antihistamines.

Keywords: anaphylaxis, treatment

P092

Clinical performance feedback to paramedics: what they receive and what they need

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Introduction: Clinical performance feedback is not always well utilized in healthcare, despite its potential in continual professional development to improve provider performance in healthcare settings. In order to more effectively incorporate performance feedback, we must evaluate the strengths and flaws of current feedback systems and determine best practices. With this goal, we sought to explore the perspectives of paramedics on the feedback they want and what they currently receive. **Methods:** We used a qualitative methodology with semi-structured interviews. A convenience sampling of practicing paramedics in the Niagara region was interviewed. We used an interpretive descriptive technique with continuous recruitment of participants until thematic saturation was achieved. Themes were identified and a coding system was developed by two investigators separately to code themes and sub-themes. These two systems were merged by consensus. We conducted a member check by contacting participants to determine if they agreed with our analysis. **Results:** 12 paramedics were interviewed. In our analysis we found several themes: positive perception/aspects of feedback and current feedback systems, current barriers, shortcomings of current systems, desire to know patient outcomes, and mental health as it relates to feedback. Positive perception of feedback has included asking for feedback, specific requests for feedback and strengths of current systems. Perceived barriers to feedback included issues around: confidentiality, practical limitations and social barriers. The limitations of current feedback systems noted the lack of feedback, and the questionable value of the feedback received. The desire to know patients' clinical course/outcomes was also a recurrent theme, with paramedics spontaneously expressing desire for feedback specific to cases, greater insight into the ultimate diagnosis and knowledge of outcomes. The mental health of paramedics was frequently discussed as well, including positive impact on job satisfaction and confidence and potential for negative impact. **Conclusion:** We have explored and generated a description of the perspectives of paramedics on feedback in general and the clinical performance feedback they currently receive. The information gained will lay the groundwork for improved feedback systems to provide paramedics with the feedback they want to continually improve as healthcare providers.

Keywords: feedback, paramedic, quality improvement

P093

The effect of Alberta's new impaired driving legislation on motor vehicle-related trauma

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Introduction: Motor vehicle collisions (MVCs) resulting in injuries and death disproportionately involve impaired drivers. Those under the influence of alcohol also have a much higher rate of presentation and admission to hospital for traumatic injuries. In an attempt to decrease impaired driving and consequently alcohol related MVCs and injuries, the government of Alberta recently introduced more strict legislation in the summer of 2012 for drivers found to be under the influence of alcohol. However, it has yet to be seen what impact the enforcement of this new legislation has had on traumatic injuries secondary to MVCs and alcohol impairment. The objective of this study was to assess the relationship between the implementation of Alberta's new impaired driving legislation and the number of alcohol-related motor vehicle traumatic injuries presenting to the emergency department of a Level I Trauma Centre. **Methods:** A retrospective single centre cross-sectional chart review examining all adult patients presenting to the ED of a major trauma centre who: a) require trauma team activation or consultation and b) have a MVC related injury. Of those charts meeting these criteria, the proportion of patients with positive ethanol screens will be compared between the year before and after the new legislation being implemented. Patients will be identified using electronic medical record logs. **Results:** 938 total MVC related trauma patients were identified during the study period (468 prior to legislation enactment [2010-2012], 470 after [2012-2014]). 33.3% of these MVC trauma patients had positive ethanol screens prior to the legislation enactment and 32.4% after (a non significant decrease). Interestingly, with a secondary analysis on a year by year basis, the trends appear to be more noteworthy. When comparing between 2010 and 2013 there was a statistically significant drop in the number of cases over legal limit by 7.74%. Subgroup analysis also demonstrated a large, statistically significant drop in 16-24 yr old cases between 2010 and 2013, from 29 to 11% (a 62% drop). **Conclusion:** While an impact was not seen immediately following the enactment of Alberta's new impaired driving legislation, a year by year analysis demonstrates a statistically significant decrease in MVC related trauma involving alcohol in the years following the new law. Of note, a substantial 62% drop was seen in the 16-24 year old age category.

Keywords: motor vehicle, trauma, alcohol

P094

The frequency of stroke risk assessment tools used to assess patients presenting to the emergency department with atrial fibrillation and flutter

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Introduction: Acute atrial fibrillation or flutter (AFF) is the most common dysrhythmia managed in the emergency department (ED). A key component of managing AFF in the ED is the prevention of stroke. Predictive indices (e.g., $CHADS_2$, HAS-BLED) should be used to assess each patient's risk of stroke and bleeding to determine the appropriate anticoagulation therapy. The frequency of use of these predictive indices in the emergency department to determine appropriate

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