

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-Coeur 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