

classification. **Results:** We obtained satisfactory hair and urine samples from 18 cases (median [IQR] age 27 [20,31] years; 12 male) and 13 controls. THC and CBN concentrations were higher in cases than controls (THC 240 [120,820] vs 99 [73, 290] pg/mg; CBN 63 [33, 260] vs 15 [negative, 76] pg/mg; each  $P < 0.05$ ). CBD and THC-COOH were often unquantifiable to undetectable in both cases and controls. **Conclusion:** Hyperemesis cannabis patients have substantially higher hair cannabinoid concentrations than their peers without vomiting, although there is some overlap. The association cannot demonstrate a direct dose-response with THC—confounding (e.g. other cannabinoids, external smoke deposition), altered metabolism and reverse causation (e.g. seeking temporary symptom relief by using more cannabis) could also yield a positive association. Nevertheless, these findings support counselling patients with hyperemesis to reduce or discontinue using cannabis. They also support national regulatory initiatives including education, labelling, and progressive taxation based on potency intended to discourage excessive use.

**Keywords:** cannabis, hyperemesis, drug abuse

#### P005

##### Consultations in the emergency department: a systematic review

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**Introduction:** Consultation in the emergency department (ED) is a common component of emergency health care. Consultation is defined as a case in which an ED physician (EP) requests the services of another physician (consultant) for an ED patient to assist, advise, and/or transfer care when the care required is beyond the expertise of the EP's practice. While consultation is generally considered required and beneficial for patient care, consultation can also have a negative impact by incurring delays in patient flow and disposition. These delays contribute to ED crowding, patient dissatisfaction and, in some cases, worse health outcomes. Using an a priori protocol and accepted methodology, the aim of this systematic review was to update a previous review on the same topic and determine the proportion of 1) ED visits that involve consultation and 2) consultation cases that result in admission. PROSPERO registration number: CRD42017054054. **Methods:** Literature search involved multiple electronic databases (e.g., MEDLINE and EMBASE) and grey literature (e.g., Google Scholar and conference abstracts). Study selection was conducted independently by two reviewers and determined by consensus among the two reviewers with disagreements resolved by a third party. Data extraction was conducted independently by two reviewers and determined by consensus among the two reviewers with disagreements resolved by a third party. A descriptive analysis was conducted. Outcome measure data were aggregated and reported with suitable descriptive statistics such as raw or weighted mean, median, or proportion with 95% confidence interval. **Results:** Literature search yielded 1,584 studies, of which 65 were included. Two-thirds of studies were conducted in USA or Canada. Of the 65, 54 were focused on a particular patient group or consulting specialty (e.g., psychiatry) while 11 considered the general ED population. Of these 11, the median proportion of ED visits involving consultation was 26%. The median proportion of cases with consultation that resulted in admission was 60%. **Conclusion:** Consultations in the ED are quite common and many of these cases result in admission. Given their frequency of occurrence and increasing ED crowding, efforts to reduce consult delays and expedite disposition appear warranted.

**Keywords:** consultation, admission

#### P006

##### Characterizing patients with newly-diagnosed diabetes mellitus in the emergency department: A one-year health records review

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**Introduction:** Diabetes mellitus is an increasingly prevalent chronic condition that is usually managed in an outpatient setting. However, the emergency department (ED) plays a crucial role in the management of diabetic patients, particularly for those who are presenting with newly diagnosed diabetes. Little research has been done to characterize the population of patients presenting to the ED with hyperglycemia with no previous diagnosis of diabetes. The objective of this study was to describe the epidemiology, treatment, and outcomes of patients who were newly diagnosed with diabetes in the ED and to compare those with newly diagnosed type I versus type II diabetes. **Methods:** A one-year health records review of newly diagnosed diabetes patients  $\geq 18$  years presenting to one of four tertiary care EDs was conducted. All patients with a discharge diagnosis of hyperglycemia, diabetic ketoacidosis or hyperosmolar hyperglycemic syndrome were screened, but only those who did not have a previous history of diabetes were included. Trained research personnel collected data on patient characteristics, management, disposition, and outcome. Descriptive statistics were used to summarize the data where appropriate. **Results:** Of 645 patients presenting with hyperglycemia in the study period, 112 (17.4%) were newly diagnosed diabetes patients. Of these patients, 30 (26.8%) were later diagnosed with type I diabetes and 82 (73.2%) were diagnosed with type II diabetes. For the newly diagnosed type I patients the mean (SD) age was 27.6 (9.9) and the mean (SD) age for type II patients was 52.4 (14.1). Of all the new onset patients, 26.8% were diagnosed with diabetic ketoacidosis. The percentage of patients diagnosed with diabetic ketoacidosis was higher in type I than type II (63.3% vs 13.4%;  $P < 0.01$ ). A total of 49 (43.8%) patients were admitted to the hospital, and more patients with type I were admitted compared to those with type II (66.7% vs 35.4 %;  $P < 0.01$ ). **Conclusion:** Limited research has been done to describe patients newly diagnosed with diabetes in the ED. Patients with type I were found to be more likely to present to the ED with serious symptoms requiring admission to hospital. Our findings demonstrate that the ED may have a strong potential role for improving diabetic care, by providing future opportunities for education and follow-up in the ED to reduce complications, particularly in type I.

**Keywords:** diabetes, hyperglycemia

#### P007

##### A comparative analysis of qSOFA, SIRS and Early Warning Scores Criteria to identify sepsis in the prehospital setting

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**Introduction:** Early recognition of sepsis is key in delivering timely life-saving interventions. The role of paramedics in recognition of these patients is understudied. It is not known if the usual prehospital information gathered is sufficient for severe sepsis recognition. We sought to: 1) evaluate the paramedic medical records (PMRs) of severe sepsis patients to describe epidemiologic characteristics; 2) determine which severe sepsis recognition and prediction scores are routinely captured by paramedics; and 3) determine how these scores perform in the pre-hospital setting. **Methods:** We performed a retrospective review of patients  $\geq 18$  years who met the definition of severe sepsis in one of two urban Emergency Departments (ED) and had arrived by ambulance over