physicians are frequent prescribers of opioids; therefore, the emergency department (ED) represents an important setting for potential intervention to encourage rational and safe prescribing. The objective of this study was to systematically review the literature on interventions aimed to influence opioid prescribing in the ED. **Methods:** Electronic searches of Medline and Cochrane were conducted and reference lists were hand-searched. All quantitative studies published in English from 2009 to 2019 were eligible for inclusion. Two reviewers independently screened the search output to identify potentially eligible studies, the full texts of which were retrieved and assessed for inclusion. Outcomes of interest included opioid prescribing rate (proportion of ED visits resulting in an opioid prescription at discharge), morphine milligram equivalents per prescription and variability among prescribers. **Results:** The search strategy yielded 797 potentially relevant citations. After eliminating duplicate citations and studies that did not meet eligibility criteria, 34 potentially relevant studies were retrieved in full text. Of these, 28 studies were included in the review. The majority (26, 92.9%) of studies were based in the United States and two (7.1%) were from Australia. Four (14.3%) were randomized controlled trials. The interventions were classified into six categories: prescribing guidelines (n = 10), regulation/rescheduling of opioids (n = 6), prescribing data transparency (n = 4), education (n = 4), care coordination (n = 3), and electronic medical record changes (n = 1). The majority of interventions reduced the opioid prescribing rate from the ED (21/28, 75.0%), although regulation/rescheduling of opioids had mixed effectiveness, with 3/6 (50%) studies reporting a small increase in the opioid prescribing rate post-intervention. Education had small yet consistent effects on reducing the opioid prescribing rate. **Conclusion:** A variety of interventions have attempted to improve opioid prescribing from the ED. These interventions include prescribing guidelines, regulation/rescheduling, data transparency, education, care coordination, and electronic medical record changes. The majority of interventions reduced the opioid prescribing rate; however, regulation/rescheduling of opioids demonstrated mixed effectiveness.

Keywords: intervention, opioid prescribing, systematic review

LO65

Assessing opioid-prescribing patterns for low back pain patients before and after the implementation of clinician performance indicators in the emergency department

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Introduction: Canada is in the midst of an opioid crisis. The number of apparent opioid-related deaths between January and March 2018 increased by 44% compared to the same period in 2016. The increasing use of prescription opioids and higher doses of opioids can lead to opioid addiction, toxicity and even death. Opioids are commonly prescribed for low back pain management in the ED, but the variability in opioid-prescribing patterns suggested an opportunity for improvement. Our centre implemented Clinician Performance Indicators (CPI) in 2015. CPIs were reported to each ED physician every 3 months and included the percentage of patients who were prescribed opioids. The intent was to raise awareness of opioid-prescribing patterns at our institution. Therefore, we evaluated opioid-prescribing patterns for patients with low back pain (LBP) before and after the CPI implementation. **Methods:** Data were obtained retrospectively for patients discharged from the ED from July 2015 to December 2018 with LBP-associated ICD 10 codes. We excluded admitted patients, those with specialist consultations, and patients who left without being seen. The primary outcome was opioid prescribing patterns for patients with LBP before and after CPI implementation. We performed a descriptive analysis of the data and compared the prescribing rates pre-implementation (July-Dec 2015) to post-implementation (July-Dec 2016) following a 6-month wash-out period. Moreover, we analyzed opioid-prescribing patterns over an extended period until December 2018. **Results:** After the exclusion criteria were applied, 8993 patients were included in the analysis. 53.5% were female and the mean (SD) age was 48.3 (19.78). During the three years of the study period, the percentage of LBP patients who received opioids showed a decreasing trend. Comparison of the pre and post CPI implementation periods showed a decrease in opioid prescriptions (42.0% vs 35.5%, 95%CI 2.9% to 10.2%). There was variation in opioids prescribed at our institution, the most common being hydromorphone (29.9%), followed by acetaminophen-oxycodone (24.2%) and acetaminophen-tramadol (20.0%). **Conclusion:** The implementation of CPIs positively impacted physicians' opioid-prescribing patterns for patients presenting with LBPs at our institution. Future studies are required to further improve the effectiveness of CPIs in influencing opioid-prescribing patterns.

Keywords: clinician performance indicator, low back pain, opioid

LO66

Strengthening team communication may decrease medico-legal risk for physicians in the emergency department

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Introduction: In a busy emergency department (ED), effective communication is integral to the provision of safe medical care. Physicians working in the ED interact with multiple team members including patients, allied healthcare professionals and other physicians, who all need to understand their verbal and written instructions. Our study's objective was to identify and describe communication problems occurring in the ED setting, and how these problems contributed to patient safety events and increased medico-legal risk for physicians. **Methods:** The Canadian Medical Protective Association (CMPA) is a not-for-profit, medico-legal organization which represented over 97,000 physicians at the time of this study. We conducted a retrospective descriptive analysis where we extracted five years (2013-2017) of CMPA data describing closed medico-legal cases occurring in the ED involving physicians (any specialty) who experienced complaints due to communication issues. We then applied an internal contributing factor framework to identify data themes. Data were summarized using descriptive statistics. **Results:** We identified 517 eligible cases involving 521 patients (some cases involved >1 patient). We found that 99.8% (520/521) of patients experienced some form of healthcare-related harm in the ED. Specifically, there was poor communication between: the physician and patient or patient's family (202/517, 39.1%); two or more physicians (79/517, 15.3%), and physicians and other healthcare providers (55/517, 10.6%). Inadequate documentation was observed in more than half of the cases (324/517, 62.7%) and poor team communication affected physicians' decision making process (326/517, 63%) in areas such as deficient assessments, inadequate investigations, failure or delay to attend to the patient, and disposition decisions. **Conclusion:** Team communication issues are prevalent among physician medico-legal

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cases occurring in the ED. Efforts to strengthen communication skills may enhance patient safety and reduce medico-legal risk.
Keywords: communication, emergency department, patient safety

LO67

Alcohol-related emergency department visits by youth aged 12-24: demographics and resource utilization at Kingston Health Sciences Centre

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Introduction: Recent evidence shows an increase in alcohol-related emergency department (ED) visits among youth. We sought to quantify the impact of ED visits (type and frequency, patient characteristics and resource use) related to alcohol in our centre. **Methods:** This was a chart review of patients aged 12-24 with alcohol-related ED visits between Sept 2013-Aug 2017. The National Ambulatory Care Reporting System (NACRS) database was searched for visits alcohol related ICD-10 codes. The Canadian Hospital Injury Reporting and Prevention Program (CHIRPP) database was also searched using the keyword alcohol. Duplicate visits were removed. Visits were excluded if patients had a history of psychosis, were held in the ED for psychiatric assessment, were homeless, were inmates from a correctional institute, if alcohol use was not mentioned and for complaints of sexual assault/intimate partner violence. Data was abstracted by two reviewers using a standard form with predetermined variables. Differences were resolved with third party adjudication. Interrater reliability of the reviewers was assessed with Kappa scores through duplicate review of 10% of randomly selected charts. A further 10% were assessed by a 3rd reviewer for extraction accuracy. **Results:** 3,256 ED visits were identified with 777 removed via predefined exclusion criteria. 2,479 visits were reviewed with a male predominance (54.3%). More than half of all patients (50.9%) arrived via ambulance. Assigned CTAS levels were Resuscitation: 1% Emergent: 9.9% Urgent: 48.2% Less Urgent: 35.7% Non-Urgent: 4.2% (missing 1%). The median LOS was 2.9 hrs (IQR 1.8-4.6). All visits were subclassified into mutually exclusive categories: injury (51.8%), acute intoxication (45.1%) and mental health issue (3.2%). Males were more likely to present with injury (62.4% vs 42.6%, $p < 0.01$). Females were more likely to present with acute intoxication (53.3% vs 46.7%, $p < 0.01$) and mental health issues (59.5% vs 40.5%, $P = 0.01$). ED resource use was notable: 483 (19.4%) had imaging tests and 1216 (49.1%) had some medical intervention (blood test, fluids or medication). 57 (2.3%) patients were admitted and there was one death from an alcohol related MVC. **Conclusion:** Alcohol-related ED visits by youth are common in our centre and utilize substantial prehospital and in-hospital resources. Identification of effective harm reduction strategies should be a research priority.
Keywords: acute alcohol intoxication, substance use/misuse, youth

LO68

Kelowna emergency department buprenorphine/naloxone for opioid use disorder: a program evaluation study

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Introduction: Emergency department (ED) buprenorphine/naloxone inductions for opioid use disorder are an effective and safe way to initiate addictions care in the ED. Kelowna General Hospital's ED buprenorphine/naloxone (KEDSS) program was implemented in September 2018 in order to respond to a community need for accessible and evidence-based addictions care. The objective of our program evaluation study was to examine the implementation of the first five months of the KEDSS program through evaluating patient characteristics and service outcomes. **Methods:** The KEDSS treatment pathway consists of a standardized protocol (pre-printed order set) to facilitate buprenorphine/naloxone induction and stabilization in the acute care setting (ED and inpatient wards) at Kelowna General Hospital, a community academic hospital. All patients referred to the outpatient addictions clinic via the order set during September 2018-January 2019 (the first 5 months) were included in the study population. A retrospective descriptive chart review was completed. Outcome measures included population characteristics (sociodemographic information, clinical characteristics) and service outcomes (number of patients initiated, patient follow-up). Descriptive statistics and bivariate analyses using t-tests or Pearson's $\chi 2$ statistic, as appropriate, were conducted to compare the ED-initiated group with the inpatient-initiated group. **Results:** During the first five months of the KEDSS program, a total of 35 patients (26% female, mean age 36.6 years, 54% homeless) were started on the treatment pathway, 16 (46%) in the ED. Compared to the inpatient-initiated group, the ED-initiated group were less likely to have psychiatric comorbidities (ED 1.0 vs. inpatient 1.5, $p = 0.002$), require methadone or sustained-release oral morphine (ED 13% vs. inpatient 37%, $p = 0.048$), and have attended follow-up (ED 56% vs. inpatient 84%, $p = 0.004$). **Conclusion:** This study provides a preliminary look at a new opioid agonist therapy (OAT) treatment pathway (KEDSS) at Kelowna General Hospital, and provides insight into the population that is accessing the program. We found that the majority of patients who are started on buprenorphine/naloxone in the ED are seen in follow-up at the addictions clinic. Future work will examine ongoing follow-up and OAT adherence rates in the study population to quantify the program's impact on improving access to addictions treatment within this community hospital setting.
Keywords: program evaluation, addictions, buprenorphine-naloxone

LO69

Haloperidol versus ondansetron for hyperemesis due to cannabis (HaVOC): a randomized, controlled clinical trial

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Introduction: One of the most common adverse effects of habitual cannabis use is hyperemesis—recurrent bouts of protracted vomiting, retching and abdominal pain superimposed on a baseline of daily nausea and anorexia. Largely anecdotal evidence supports the use of haloperidol, benzodiazepines or topical capsaicin over traditional antiemetics, yet little is known about the cause or optimal treatment of this newly recognized disorder. We report the results of one of the first clinical trials on so-called cannabis hyperemesis syndrome (NCT03056482). **Methods:** We approached adults with a working diagnosis of hyperemesis due to cannabis, provided they had ongoing emesis for >2 hours, a cyclic pattern of 3+ episodes in the last 2 years, and near daily use of cannabis by inhalation. We excluded those who were pregnant, deemed unreliable, or using opioids. Subjects provided written consent to be randomized during the index or any subsequent visit to either haloperidol (with a nested randomization to either 0.05 mg/kg or 0.1 mg/kg) or ondansetron 8 mg intravenously in a quadruple-blind fashion, and to be followed for 7 days. The primary

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