Introduction: It is critical for planning, clinical care and resource optimization to understand patterns of emergency department (ED) utilization. Individuals who have experienced adverse childhood experiences (ACE) are known to have more unhealthy behaviors and worse health outcomes as adults and therefore may be more frequent ED users. Adverse childhood experiences include physical, sexual and emotional abuse or neglect, substance abuse in the family, witnessing violence, having a parent incarcerated or parents getting divorced or separated. To date there are few studies exploring the relationship between ACE and ED utilization. **Methods:** This a mixed qualitative and quantitative study. It includes analysis of data collected through a survey, a retrospective chart review and focus group discussions. The survey was administered to a convenience sample of adult patients (CTAS 2-5) presenting to EDs in Kingston Ontario, and consisted of two validated tools that measured exposure to ACE and resiliency. Demographic data and ED utilization frequency for 12 months prior to the index visit were extracted from an electronic medical record for each patient completing the survey. A sample of participants with a high ACE burden (ACE score >4) were invited to participate in focus groups to explore their experiences of care in the ED. Demographic, ED utilization and health status data were summarized and statistically significant patterns between high ACE and lower ACE patients were determined using Chi2t or t-tests. Transcripts from the focus groups were thematically analyzed using NVivo software by 2 independent researchers. **Results:** 1693 surveys were collected, 301 (18%) were deemed to have a high ACE score, data analysis is ongoing. The primary outcome is the relationship between ACE and the frequency of ED utilization among adult patients presenting to EDs in Kingston, ON. Secondary outcomes include evaluating the role of resilience as a potential mitigating factor, describing the demographics of high ACE burden frequent ED visitors, and the experiences of care for individuals with high ACE burden in the ED. These outcomes will be utilized to inform hypotheses for future studies and potential interventions aimed at optimizing ED utilization and patient care experience. **Conclusion:** This study provides novel insight into the relationship between ACE burden and ED utilization while also describing the demographics and experiences of care for ED patients with a high ACE score. Data analysis is on-going.

Keywords: abuse, utilization, resilience

P083

Developing an interview guide to explore physicians perceptions about unmet palliative care needs in Albertas emergency departments

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Introduction: Many patients with advanced or end-stage diseases spend months or years in need of optimal physical, spiritual, psychological, and social care. Despite efforts to provide community care, those with severe illness often present to emergency departments (EDs). This abstract presents preliminary results on the qualitative component of an ED-based mixed methods pilot study. The objective of this qualitative component is to develop and test an interview guide to collect qualitative data on physicians perceptions about unmet palliative care (PC) and end of life care (EOLC) needs in EDs. **Methods:** A scan of the literature on PC and EOLC in EDs was conducted to develop propositions about what might be expected through the clinician interviews, as well as an interview guide. The interview guide will be piloted with up to four ED physicians. During the interview each physician will describe a case where a PC patient had unmet care needs and the impacts they believe these unmet needs had on patients and families. Interview transcripts will be coded descriptively and then conceptually themed by the researcher who conducted the interview. Interpretations drawn from the interview data, with supporting quotations and comparison to initial propositions, will be presented to members of the research team with experience providing ED care, for further interpretation. Advice of a second trained qualitative researcher will be sought on the richness and relevance of data obtained and how the interview guide could be improved to elicit richer and/or more relevant data. A revised interview guide will be produced alongside rationales for why the proposed revisions will elicit richer data. **Results:** After reviewing 27 articles on PC and EOLC, propositions and an initial interview guide were developed based on themes from the literature and the study groups experiences. One of the primary results of this pilot work will be an enhanced understanding of PC and EOLC in our local ED context, as reflected in an interview guide revised to elicit richer data than achieved through the initial interview guide. **Conclusion:** The comparison between our propositions and the study findings will help identify how biases may have influenced interview questions and/or the interpretation of the data. This pilot work to develop an interview guide enhances the rigour of this qualitative work on unmet PC and EOLC needs in EDs.

Keywords: palliative care, end of life, emergency department

P084

Substituting capillary blood for urine in point-of-care pregnancy tests

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Introduction: When a female presents with abdominal pain and vaginal bleeding, a positive b-hcg level helps in the diagnosis of an ectopic pregnancy. A timely diagnosis as well as management is required for these cases. In many emergency departments, there can be delays in laboratory processing of quantitative b-hcg levels as well as qualitative urine pregnancy tests. In others, especially in rural hospitals in Canada, the laboratory closes at night and these tests cannot be processed until the morning. This may also help decrease length of stay for some patients in the emergency department. There are currently new point-of-care b-hcg tests on the market using capillary blood, but these are expensive and not readily available. The purpose of the study is to validate the most inexpensive point of care urine pregnancy tests readily available on the market for use with capillary blood samples. These point-of-care tests have only been studied with urine and whole blood. If validated with capillary blood, it would allow for a very practical, rapid, and inexpensive test which could help doctors and nurses to triage patients in a timely and more efficient fashion. **Methods:** In our emergency department, 385 patients between the ages of 18-50 with possible pregnancy, abdominal pain or vaginal bleeding will be included in the study. A capillary blood sample will be taken and applied to a cassette point-of-care pregnancy test with four drops of saline. Two independent investigators will assess the test. The results will be compared to a quantitative serum hCG assay and urine. If these tests are not done as part of the patients medical care, the patient will be contacted one month after to enquire if the patient is pregnant or not. The sensitivity, specificity, positive and negative predictive values will be calculated. **Results:** Data colleciton will begin in January 2018. **Conclusion:** No conclusions can yet be drawn.

Keywords: ectopic pregnancy, point-of-care testing, triage

P085

Potential benefits of incentive spirometry following a rib fracture: a propensity-score analysis.

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Introduction: Incentive spirometry (IS) is commonly used in post-operative patients for respiratory recovery. Literature suggest that it can possibly improve lung function and reduce post-operative pulmonary complication. There is no recommendation about the use of IS in the emergency department (ED). However, rib fractures, a common complaint, increase the risk of pulmonary complications. There is heterogeneous ED practice for the management of rib fractures. The objective of this study is to assess the benefits of IS to reduce potential delayed complications in ED discharged patients with confirmed rib fracture. **Methods:** This is a prospective observational planned sub-study in 4 canadians ED between November 2006 and May 2012. Non-admitted patients over 16 y.o. with a main complaint of minor thoracic injury and at least one suspected/confirmed rib fracture on radiographs were included. Discharge recommendations of IS use was left to attending physician. IS training was done by ED nurses. Main outcomes were pneumonia, atelectasis and hemothorax within 14 days. Analyses were made with propensity score matching. **Results:** 450 patients with at least one rib fracture were included. Of these, 182 (40%) received IS with a mean age of 57.0 y.o. Patients with IS seem to have worse condition. 61 (33.5%) had 3 fractures comparatively to 56 (20.9) for patient without IS. Although, the groups were similar for mean age, sex and mechanism of injury. There were in total 76 cases of delayed hemothorax (16.9%), 69 cases of atelectasis (15.3%) and five cases of pneumonia (1.1%). The use of IS was not protector for delayed hemothorax (RR = 0.80, 95% CI [0.45 1.36]) and nor for atelectasis or pneumonia (RR = 0.74, 95% CI [0.45 1.36]) **Conclusion:** Our results suggest that unsupervised and broad incentive spirometry use does not seem to add a protective effect against the development of delayed pulmonary complications after a rib fracture. Further study should be made to assess the usefulness of IS in specific injured population in the ED.

Keywords: intensive spirometry, rib fracture, pulmonary complication

P086

Emergency department visits for upper gastrointestinal bleeding: a population-based Alberta cohort

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Introduction: Upper gastrointestinal bleeding (UGIB) is a common medical condition presenting to emergency departments (ED) and associated with substantial morbidity, mortality, and healthcare expenditures. Our aim was to evaluate the incidence of patients presenting to ED with UGIB in a large population-based surveillance cohort. **Methods:** The National Ambulatory Care Reporting System (NACRS) was used to identify all presentations to emergency departments for UGIB in Alberta from fiscal year 2010 to 2015 (n = 56,519) using the International Classification of Diseases Codes (ICD-10) in any diagnostic position. Baseline characteristics and UGIB incidence were calculated using descriptive statistics. Joinpoint regression models were used to calculate the average annual percent change (AAPC) with 95% confidence intervals (CI). **Results:** The median age of 56519 UGIB presentations was 56 years (interquartile range: 41 to 74 years), 56% were male, and 245% had at least one comorbidity. At time of disposition from the ED, 48.3% were admitted to or transferred to another hospital, 51.4% discharged, and 0.3% died in the emergency department. Further, 10.8% underwent upper endoscopy during their admission to the emergency department. The annual incidence of UGIB were 230.6 (2010), 232.8 (2011), 241.0 (2012), 242.2 (2013), 244.6 (2014), and 242.2 (2015) per 100,000 person-years. Between 2010 and 2015 the incidence of UGIB presenting to ED significantly increased overtime (AAPC = 1.1; 95% CI: 0.3 to 2.0). **Conclusion:** UGIB is a common presentation to emergency departments and has been increasing overtime. Future studies are necessary to evaluate the underlying cause of UGIB and to determine its burden to Albertas healthcare system.

Keywords: epidemiology, upper gastrointestinal bleeding

P087

Procedural sedation in Canadian emergency departments a national survey of pharmacological agent selection and practice variation

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Introduction: Emergency department (ED) physicians strive to provide analgesia, amnesia and sedation for patients when performing painful procedures through the use of procedural sedation (PS). Examination of the literature suggests that the application of PS appears to be variable with institutional influences and clinician disagreement on pharmacology, airway management, and monitoring. The primary goal of this research project was to describe the variability of practice with respect to pharmacologic choices and clinical applications of PS among Canadian ED physicians. **Methods:** An electronic survey was distributed through the Canadian Association of Emergency Physicians (CAEP). Practicing physician members of CAEP were invited to complete the survey. The 20 question survey encompassed various aspects of PS including physician choices regarding PS indications and pharmacology. The primary outcome was the quantification of practice variability among ED physicians with respect to the above listed aspects of PS. The data was presented with simple descriptive statistics. **Results:** To date, 278 ED physicians responded to our survey (response rate 20.3%). Respondents were primarily academic hospital (53.2%) or community hospital based (38.2%). With emergency medicine training as: CCFP-EM (55.2%), FRCPC (30.1%), and CCFP (9.0%). There was relative agreement on the following interventions requiring PS: 98.4% applied PS for electrical cardioversion and 98.1% for brief (<10 mins) orthopedic manipulations. However, only 36.3% utilized PS for burn debridement in the ED. PS was utilized less frequently (78.1%) for prolonged (>10mins) orthopedic manipulations than brief manipulations. For all procedures aggregated, in hemodynamically stable patients with an American Society of Anesthesiology (ASA) score of 1, ED physicians utilized propofol 76.3% of the time. Additional agents were utilized at the following rates: fentanyl-propofol (7.6%), ketamine (7.6%), and fentanyl (4%). This inclination towards propofol alone appears to be consistent across modality of ER training, type of ER setting (rural vs. academic), and volume of PS performed. **Conclusion:** This study demonstrates that Canadian ED physicians have a clear preference for propofol as a first line pharmacologic agent when administering PS in hemodynamically stable, ASA1 patients. Conversely, there appears to be more variation amongst ED physicians with respect to second line pharmaceutical choices for PS.

Keywords: procedural sedation, pharmacology, survey

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