

11% of the sample reported that they did not have access to clean drinking water; 35% worried that their food would run out, and 47% reported cutting the size of meals due to a lack of money. **Conclusion:** This study lends evidence towards the circumstances in which patients presenting to the ED with an AMHC live and work. A considerable proportion of patients reported homelessness or being marginally housed, lack access to clean drinking water and sufficient food, and high rates of unemployment. Mitigating the effects of harmful social determinants is critical for optimal health of this population. Future work is needed to clarify the role of the ED in the surveillance, screening, and intervention of SDoH for this vulnerable patient group.

Keywords: social determinants of health, mental health

P112

Predicting patient admission from the emergency department using triage administrative data

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Introduction: Emergency department (ED) over-crowding and increased wait times are a growing problem. Many interventions have been proposed to decrease patient length of stay and increase patient flow. Early disposition planning is one method to accomplish this goal. In this study we developed statistical models to predict patient admission based on ED administrative data. The objective of this study was to predict patient admission early in the visit with goal of preparation of the acute care bed and other resources. **Methods:** Retrospective administrative ED data from the Thunder Bay Regional Health Sciences Centre was obtained for the period May 2014 to April 2015. Data were divided into training and testing groups with 80% of data used to train the statistical models. Logistic regression models were developed using administrative variables (i.e., age, sex, mode of arrival, and triage level). Model accuracy was evaluated using sensitivity, specificity, and area under the curve measures. To predict hourly bed requirements, the probability of admission was summed to calculate a pooled bed requirement estimate. The estimated hourly bed requirement was then compared to the historical hourly demand. **Results:** The logistic regression models had a sensitivity of 23%, specificity of 97%, and an area under the curve of 0.78. Although, admission prediction for a particular individual was satisfactory, the hourly pooled probabilities showed better results. The predicted hourly bed requirements were close to historical demand for beds when compared. **Conclusion:** I have shown that the number of acute care beds required on an hourly basis can be predicted using triage administrative data. Early admission bed planning would allow resources to be managed more effectively. In addition, during periods of hospital over capacity, managers would be able to prioritize transfers and discharges based on early estimates of ED demand for beds.

Keywords: admission, triage, overcrowding

P113

Comparison of age-adjusted and clinical probability-adjusted D-dimer for diagnosing pulmonary embolism

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Introduction: Diagnosing pulmonary embolism (PE) in the emergency department can be challenging due to non-specific signs and symptoms; this often results in the over-utilization of CT pulmonary angiography (CT-PA). In 2013, the American College of Chest Physicians identified

CT-PA as one of the top five avoidable tests. Age-adjusted D-dimer has been shown to decrease CT utilization rates. Recently, clinical-probability adjusted D-dimer has been promoted as an alternative strategy to reduce CT scanning. The aim of this study is to compare the safety and efficacy of the age-adjusted D-dimer rule and the clinical probability-adjusted D-dimer rule in Canadian ED patients tested for PE. **Methods:** This was a retrospective chart review of ED patients investigated for PE at two hospitals from April 2013 to March 2015 (24 months). Inclusion criteria were the ED physician ordered CT-PA, Ventilation-Perfusion (VQ) scan or D-dimer for investigation of PE. Patients under the age of 18 were excluded. PE was defined as CT/VQ diagnosis of acute PE or acute PE/DVT in 30-day follow-up. Trained researchers extracted anonymized data. The age-adjusted D-dimer and the clinical probability-adjusted D-dimer rules were applied retrospectively. The rate of CT/VQ imaging and the false negative rates were calculated. **Results:** In total, 1,189 patients were tested for PE. 1,129 patients had a D-dimer test and a Wells score less than 4.0. 364/1,129 (32.3%, 95%CI 29.6-35.0%) would have undergone imaging for PE if the age-adjusted D-dimer rule was used. 1,120 patients had a D-dimer test and a Wells score less than 6.0. 217/1,120 patients (19.4%, 95%CI 17.2-21.2%) would have undergone imaging for PE if the clinical probability-adjusted D-dimer rule was used. The false-negative rate for the age-adjusted D-dimer rule was 0.3% (95%CI 0.1-0.9%). The false-negative rate of the clinical probability-adjusted D-dimer was 1.0% (95%CI 0.5-1.9%). **Conclusion:** The false-negative rates for both the age-adjusted D-dimer and clinical probability-adjusted D-dimer are low. The clinical probability-adjusted D-dimer results in a 13% absolute reduction in CT scanning compared to age-adjusted D-dimer.

Keywords: D-dimer, clinical decision rule, pulmonary embolism

P114

Critical objectives for a pediatric emergency medicine fellowship point of care ultrasound curriculum

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Introduction: Emergency Medicine Physicians have been incorporating Point-of-Care Ultrasound (POCUS) into their practice for over twenty years. Only recently has its use become more widespread in the practice of Pediatric Emergency Medicine (PEM). Recent guidelines have described the scope of applications for PEM physicians. However, no consensus exists as to which applications should be prioritized and routinely taught to PEM fellowship trainees and therefore expected of PEM graduates as they enter practice. The PEM POCUS Network, a multinational group of Physicians with POCUS expertise formed in 2014, set out to reach expert consensus as to which applications should be incorporated into PEM fellowship training curricula. **Methods:** A multinational group of PEM POCUS experts was recruited from the PEM POCUS Network via a screening process that identified PEM physicians who have performed over 1000 pediatric POCUS scans and met any of one of the following criteria: having 3 years or more experience teaching POCUS to PEM fellows, being local academic POCUS leaders or had completed a dedicated PEM POCUS fellowship. These experts rated each of the 60 possible PEM POCUS applications using a modified Delphi consensus building technique for their importance in inclusion into a PEM Fellowship curriculum. Consensus was reached when >80% of respondents agreed to include or exclude each item. **Results:** In the first round, 66 out of 92 (72%) PEM POCUS Network members responded to the survey email, of whom 45 met expert criteria and completed the first round. During round 1, consensus

was reached to include 18 of the 60 applications in a PEM fellowship curriculum and to exclude 2 applications from a PEM fellowship curriculum. Eighty-two percent (37/45) of the experts completed Round 2 where 40 items were rated; consensus was reached to include 3 additional applications and exclude 5 applications. The decision was made not to carry on with future rounds after this stage, since no significant changes were observed between the two rounds, with regard to items that had not reached consensus. **Conclusion:** This project of the PEM POCUS Network reached consensus on 21 applications that should be included in a PEM Fellowship curriculum. This project will have significant impact on how PEM fellowships teach POCUS to their trainees. **Keywords:** ultrasound, curriculum, consensus

P115

Limiting functional decline in seniors evaluated for minor injuries in the ED

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Introduction: In its prospective cohorts of independent seniors with minor injuries, the CETIe (Canadian Emergency Team Initiative) has shown that minor injuries trigger a spiral of mobility and functional decline in 18% of those seniors up to 6 months post-injury. Because of their effects on multiple physiological systems, multicomponent **mobility interventions with physical exercises** are among the best methods to limit frailty and improve mobility & function in seniors. **Methods:** Pilot clinical trial among 4 groups of seniors, discharged home post-ED consultation for minor injuries. **Interventions:** 2x 1 hour/week/12 weeks with muscle strengthening, functional and balance exercises under kinesiology supervision either at home (**Jintronix tele-rehabilitation platform**) or at community-based programs (**YWCA, PIED**) vs usual ED-discharge (**CONTROL**). **Measures:** Functional Status in ADLs (*Older American Resources Scale*); Global physical & social functioning (*SF-12 questionnaire*), physical activity level (*RAPA questionnaire*) at initial ED visit and at 3 months. **Results:** 135 seniors were included (Controls: n = 50; PIED: n = 28; Jintronix: n = 27; YWCA: n = 18). Mean age was 72.6 ± 6.2 years, 45% were prefrail, 86% and 8% had a fall or motor vehicle-related injuries (e.g. fractures: 30%; contusions: 37%). Intervention could start as early as 7 days post-injury. Seniors in interventions (Home, YWCA or PIED) **maintained or improved their functional status** (84% vs 60%, p ≤ 0.05), **their physical** (73% vs 59%, p = 0.05) and **social** (45% vs 23%, p ≤ 0.05) **functioning**. While 21% of CONTROLS improved their **physical activity level** three months post-injury, **46% of seniors in intervention did** (p ≤ 0.05). **Conclusion:** Exercises-based interventions can help improve seniors' function and mobility after a minor injury.

Keywords: geriatric, minor injury, mobility

P116

A scoping review of factors affecting patient satisfaction with care in North American adult emergency departments

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Introduction: Patient satisfaction in the emergency department (ED) has been shown to be associated with patient compliance, likelihood to return, and likelihood to recommend the ED. Understanding the factors that affect patient satisfaction in the ED is important but remains poorly understood. This scoping review consolidates the information from the

available literature to offer insight into which key factors influence patient satisfaction. **Methods:** A literature search using initial criteria identified 683 articles. These titles were subjected to inclusion/exclusion criteria and their relevance was independently reviewed by two authors. Consensus was reached on 24 articles to be included, and these were then classified according to study design (class I = observational studies, class II = focus group/qualitative studies, class III = reviews), as well as multiple other factors (ED type, volume of patients, sample size, population, type of study, methodology, study measures, statistical analysis, reliability and conclusions). Using these factors, 25 different ED care attributes were examined in the primary literature, and then narrowed to the 6 most commonly studied factors with 3 categories (wait times, communication/information received in the ED, and interpersonal skills of staff). **Results:** The impact of wait times (WT) on patient satisfaction in the ED was addressed in 58% of the articles and various studies have found that longer perceived WTs (the length of WTs as reported by patients) are associated with poorer patient satisfaction. Information delivery demonstrated statistically significant associations to both patient satisfaction and the likelihood of a positive recommendation. Interpersonal skills of the staff also demonstrated a strong association with patient satisfaction. **Conclusion:** The most common factors affecting patient satisfaction in the ED can be categorized under wait times, communication, and the interpersonal skills of the staff. However, the literature in this area is weak, and well-designed comparative studies of the relative importance of each of these factors are necessary to support evidence-based policy making and ultimately improve patient satisfaction.

Keywords: patient satisfaction, wait times, communication

P117

Emergency physicians are choosing wisely when transfusing patients with non-variceal upper gastrointestinal bleeding and hemoglobins >70 g/L

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Introduction: Acute non-variceal upper gastrointestinal bleeding (NVUGIB) is a common presentation to the Emergency Department (ED) associated with significant mortality and morbidity. Recent evidence suggests that overt-transfusion is associated with poor patient outcomes and that stable patients above a hemoglobin (hgb) above 70 g/L should be transfused judiciously. This retrospective health records review aims to determine the proportion of NVUGIB patients with hemoglobin greater than 70 g/L who were still appropriately transfused based on clinical parameters. **Methods:** A retrospective review was conducted on randomly selected patients that presented to one of two major tertiary hospitals with a primary diagnosis of NVUGIB who received blood products, despite a presenting hemoglobin >70 g/L. Standardized case report forms were developed through chart abstraction using a pilot-tested template. The appropriateness of transfusion was then adjudicated separately by a trained medical student and an emergency physician; discrepancies were resolved by discussion. **Results:** Following independent review of the charts, agreement was met on 94% (45/48) of the charts and after collective discussion 100% consensus was reached and all 48 patients' transfusion appropriateness and categorized into one of three groups: Appropriate, Potentially avoidable, and clearly avoidable. Only in 22.9% (11/48) of the cases was transfusion deemed to be clearly avoidable while emergency physicians appropriately transfused 45.8% (22/48) of patients based on clinical status and other factors. In 31.3% (15/48) of the cases,