

Grenoble Alpes University Hospital (Grenoble, France) between October 2017 and April 2018. Non severe adult trauma patients with a numerical pain rating scale (NRS) score ≥ 4 and receiving MEOF were included. The primary efficacy criterion was the proportion of patients with an NRS score ≤ 3 at 15 min post-administration. Pain intensity was measured for 60 min as well as during radiography. Data on adverse events and satisfaction were also recorded. Data are presented as median [interquartile (IQR)] and were compared using non parametric tests. **Results:** A total of 200 adult patients were included (age: 32 [IQR: 23–49] years; 126 men (63%)). Patients presented at triage with a pain score of 7 [IQR: 6–8]. Sixty-six patients (33%) reported an NRS score ≤ 3 at 15 min post-administration. The time required to achieve a decrease of at least 2 points in the NRS score was 10 [IQR 5–20] min. The pain intensity was 4 [IQR: 2–5] before radiography and 4 [IQR: 2–6] during radiography. Adverse events were frequent ($n = 128$, 64%), mainly dizziness. No serious adverse events were reported and 89% of minor adverse events resolved at one hour. Both patients and health care providers reported good levels of satisfaction. **Conclusion:** The administration of a nurse-driven multimodal analgesia protocol combining paracetamol, oxycodone, and low-dose methoxyflurane was feasible on triage. It rapidly produced long-lasting analgesia in adult trauma patients.

Keywords: low-dose methoxyflurane, nurse-driven protocol, trauma pain

P090

A scoping review on patient race, ethnicity, and care in the emergency department

A. Owens, BA, B. Holroyd, MBA, MD, P. McLane, PhD, University of Alberta, Edmonton, AB

Introduction: Health disparities between racial and ethnic groups have been well documented in Canada, the United States, and Australia. Despite evidence that differences in emergency department (ED) care based on patient race and ethnicity exist, there is a lack of scientific reviews in this important area. The objective of this review is to provide an overview of the literature on the impact of patient race and ethnicity on ED care. **Methods:** A scoping review guided by the framework described by Arksey and O'Malley was undertaken. This approach was taken because it was best suited to the goal of providing an overview of all of the literature, given the broad nature of the topic. All studies with primary outcomes considering the impact of patient race and ethnicity on "throughput" factors in the ED as defined by Asplin et al., were considered. Outcomes considered included triage scores, wait times, analgesia, diagnostic testing, treatment, leaving without being seen, and patient experiences. Literature from Canada, the United States, Australia, and New Zealand was considered. A database search protocol was developed iteratively as familiarity with the literature developed. Inclusion and exclusion decisions were made using an established model. **Results:** The original search yielded 1157 citations, reduced to 453 after duplicate removal. 153 full texts were included for screening, of which 85 were included for final data extraction. Results indicate there is evidence that minority racial and ethnic groups experience disparities in triage scores, wait times, analgesia, treatment, diagnostic testing, leaving without being seen, and subjective experiences. Authors' suggested explanations for these disparities can be placed in the following categories: (1) communication differences; (2) conscious or unconscious bias; (3) facility and resource factors in hospitals with higher minority presentation rates; and (4) differences in clinical presentations. **Conclusion:** This

scoping review provides an overview of the literature on the impacts of race and ethnicity on ED care. As disparities have been shown to exist in numerous contexts, further research on the impact of race and ethnicity in ED care is warranted, especially in the Canadian literature. Such explorations could aid in the informing and creation of policy, and guide practice.

Keywords: disparities, ethnicity, race

P091

Lumbosacral spinal imaging and narcotic prescription for patients presenting to the emergency department with non-traumatic low back pain

L. Berezin, BSc, C. Thompson, MSc, V. Rojas-Luengas, MSc, B. Borgundvaag, MD, PhD, S. McLeod, MSc, Schwartz/Reisman Emergency Medicine Institute, Sinai Health System, Toronto, ON

Introduction: Choosing Wisely Canada guidelines suggest that in the absence of red flags or clinical indicators suggestive of serious underlying conditions, physicians should not order radiological images for patients presenting with non-specific low back pain, and current recommendations do not endorse routine prescribing of opioids for this condition. The objective of this study was to determine how many patients presenting to the ED with non-traumatic low back pain have spinal imaging and how many are discharged home on opioids. **Methods:** We conducted a retrospective medical record review for adult (>17 years) patients presenting to an academic tertiary care ED with non-traumatic low back pain from April 1st 2014 to March 31st 2015 (pre-guideline) and April 1st 2017 to March 31st 2018 (post-guideline). Patients were excluded if they were >70 years old, were not discharged home, had a traumatic injury, features of cauda equina syndrome, weight loss, history of cancer, fever, night sweats, chronic use of systemic corticosteroids, chronic use of illicit intravenous drugs, first episode of low back pain over 50 years of age, abnormal reflexes, loss of motor strength or loss of sensation in the legs. **Results:** 1060 (545 pre-guideline, 515 post-guideline) were included. Mean (SD) age was 39.6 (12.3) years and 549 (51.8%) were female. Pre-guideline, 45 (8.3%) patients had spinal imaging, compared to 39 (7.6%) post-guideline (Δ 0.7%; 95% CI: -2.6% to 4.0%). Of the 84 (7.9%) patients who had spinal imaging, 4 (8.9%) had pathologic findings pre-guideline, compared to 10 (25.6%) patients post-guideline. The proportion of patients discharged home with a prescription for opioids was lower after the Choosing Wisely Canada guidelines (40.9% vs. 11.1%; Δ 29.8%; 95% CI: 24.8% to 34.7%). **Conclusion:** Choosing Wisely Canada guidelines did not appear to alter the rate of imaging for patients presenting to the ED with non-traumatic low back pain. Overall the rate of spinal imaging was lower than expected. The proportion of patients who were discharged home with a prescription for opioids was lower after the Choosing Wisely Canada guidelines, however we don't know if this represents an overall trend in the reduction of opioid prescribing, or a specific change in practice related to the ED management of low back pain.

Keywords: low back pain, opioids, spinal imaging

P092

Volunteer engagement in the emergency department: A scoping review

S. Glanz, BSc, B. Ellis, MD, MPH, M. Nelson, PhD, C. Thompson, MSc, S. McLeod, MSc, D. Melady, MD, MEd, Schwartz/Reisman Emergency Medicine Institute, Sinai Health System, Toronto, ON

Introduction: Little is known about the variety of roles volunteers play in the emergency department (ED), and the potential impact they have on patient experience. The objective of this scoping review was to identify published and unpublished reports that described volunteer programs in EDs, and determine how these programs impacted patient experiences or outcomes. **Methods:** Electronic searches of Medline, EMBASE, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews and CINAHL were conducted and reference lists were hand-searched. A grey literature search was also conducted (Web of Science, ProQuest, Canadian Business and Current Affairs Database ProQuest Dissertations and Theses Global). Two reviewers independently screened titles and abstracts, reviewed full text articles, and extracted data. **Results:** The search strategy yielded 4,589 potentially relevant citations. After eliminating duplicate citations and articles that did not meet eligibility criteria, 87 reports were included in the review. Of the included reports, 18 were peer-reviewed articles, 6 were conference proceedings, 59 were magazine or newspaper articles, and 4 were graduate dissertations or theses. Volunteer activities were categorized as non-clinical tasks (e.g., provision of meals/snacks, comfort items and mobility assistance), navigation, emotional support/communication, and administrative duties. 52 (59.8%) programs had general volunteers in the ED and 35 (40.2%) had volunteers targeting a specific patient population, including pediatrics, geriatrics, patients with mental health and addiction issues and other vulnerable populations. 20 (23.0%) programs included an evaluative component describing how ED volunteers affected patient experiences and outcomes. Patient satisfaction, follow-up and referral rates, ED and hospital costs and length of stay, subsequent ED visits, medical complications, and malnutrition in the hospital were all reported to be positively affected by volunteers in the ED. **Conclusion:** This scoping review demonstrates the important role volunteers play in enhancing patient and caregiver experience in the ED. Future volunteer engagement programs implemented in the ED should be formally described and evaluated to share their success and experience with others interested in implementing similar programs in the ED. **Keywords:** emergency department, patient experience, volunteers

P093

Quality assurance programs for tests pending at discharge from emergency departments: a systematic review

J. Mikhaeil, BSc, H. Jalali, BMSc, A. Orchanian-Cheff, BA, MISSt, L. Chartier, MD, MPH, University of Toronto, Toronto, ON

Introduction: Emergency department (ED) care allows for the rapid assessment of patient concerns, but often leads to tests being performed that are not finalized or reviewed prior to patients leaving the ED. The follow-up for these tests pending at discharge (TPADs), most commonly final diagnostic imaging (DI) reports and microbiology cultures, is a major medico-legal concern for ED providers and significant safety concern for patients. We therefore performed a systematic review of the literature to identify existing ED quality assurance (QA) processes to address TPADs relating to final DI reports and microbiology cultures. **Methods:** Comprehensive literature searches were developed with a medical librarian and conducted in Ovid Medline, EMBASE, Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials, and CINAHL from inception through May 8, 2018. Studies were included if they described an intervention or program designed to follow-up relevant ED TPADs, and excluded if they pertained to

communication between departments or clinicians only rather than with patients. Study selection was performed independently by two reviewers in two steps (title and abstract review, then full-text review), with all discrepancies resolved by consensus with a senior reviewer. The primary outcome was the description of any QA process to follow-up on TPADs and secondary outcomes included quantifiable results of successful interventions or programs. **Results:** From the 11,685 articles identified, 58 were selected for full-text review, and 12 met eligibility criteria. In the included studies, the responsibility for following up on TPADs was owned by different members of the care team (e.g., ED physicians, nurses or radiologists) and recorded in a variety of ways (e.g., electronic medical record, paper chart, system designed for TPADs). Follow-up pathways with variable standardization were described, ranging from dedicated assignment for TPAD duties with protected/remunerated time to do so, to follow-up completion done by the first clinician to receive the TPAD result. Studies that evaluated their QA process implementation found that more patients were notified of abnormal test results, follow-up times decreased, and fewer unnecessary antibiotics were used. **Conclusion:** A variety of QA processes have been implemented to follow up on ED TPADs in terms of personnel involved, charting and logistics, and when evaluated, they have improved patient care.

Keywords: patient discharge, patient safety, quality improvement

P094

Evaluation of the National Early Warning Score (NEWS) to guide the orientation of patients with sepsis in the emergency department

D. Negreanu, S. Hegg, PhD, C. Malo, MD, MSc, O. Yaccarini, MD, MDCM, M. Émond, MD, MDCM, MSc, Hopital de l'enfant Jésus, Québec, QC

Introduction: The Canadian Triage and Acuity Scale (CTAS) identifies the level of urgency when patients arrive to the Emergency department (ED). Sepsis is challenging to recognize and is associated with significant mortality (30 to 50%). The integration of the COP criteria allows for earlier detection and management of sepsis. The CTAS's validity and reliability are debated. The NEWS score has been suggested to allow a timely recognition of sepsis. Objectives: To describe patient orientation at ED triage with the NEWS vs. the CTAS and COP criteria and to identify the NEWS's ability to detect patients who will require admission to critical care. **Methods:** Design: A retrospective cohort study of ED 225 patients (January-November 2018) is constituted. **Participants:** Patients were included if they were aged ≥ 18 , consulting to the ED, presented one of the 32 diagnoses included in the CMI-10. **Measurements:** Retained variables are sex, age, CTAS score and level of care. The NEWS score was calculated from triage vital signs. Main outcome was Patient orientation after ED triage using CTAS vs the NEWS score. Descriptive statistics to determine patient orientation based on the NEWS and CTAS were performed. Fisher tests ($\alpha = 0.05$) were used to assess a possible association between both triage scales and identify the NEWS's ability to detect patients who will require admission to critical care during. Sample size was calculated in order to detect a 15% difference between actual orientation and theoretical orientation based on the NEWS. **Results:** The retained cohort (45% men) were aged 66 ± 21 years. 67% were admitted, 14% of which to a critical care unit. Average length of hospital stay was 6.3 ± 7.8 days. Primary objective: patient orientation after triage using CTAS vs the NEWS was: 29% vs. 18% for high risk patients; 2% vs. 67% for low risk patients