

unobtainable) vs. NIRS 12 [8, 17] cmH₂O (13 unobtainable). Agreement and correlation between the two devices was extremely low ($R^2 = 0.04$). While neither technique demonstrated a strong association with the treating physicians estimate of volume status, only the ultrasound values increased monotonically with physician estimate. With regards to secondary outcomes, ultrasound measurements took less time (paired difference 50 seconds [95% CI 7, 93]), and operators were more confident (0.63 [0.02, 1.23] out of 10) and at ease (0.78, [0.13, 1.43]) with ultrasound; patients rated discomfort equally (-0.06 [-0.30, 0.18]). **Conclusion:** Non-invasive measurement of CVP remains a challenge in the emergency department. The external jugular pressure by NIRS has very high variability and poor agreement with ultrasound-enhanced inspection of the internal jugular, suggesting that this technique is not yet practical for use by non-experts.

Keywords: central venous pressure, ultrasound, preload

P057

A systematic review of the efficacy of opioid analgesics for the management of acute pain in older adults in the emergency department

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Introduction: Emergency department (ED) providers are frequently challenged with how best to treat acute pain in older patients, specifically when non-opioid analgesics are insufficient or contraindicated. Studies have documented older patients presenting to the ED with painful conditions are less likely to receive pain medications than younger patients, and this inadequate pain control has been associated with increased risk of delirium and longer hospital stays. As there are no guidelines informing best practice of analgesia in the older adult population, emergency physicians often report uncertainty regarding the ideal choice of opioid analgesic. The objective of this study was to compare the efficacy of opioid analgesics for acute pain in older adults (70 years) in the ED. **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. Randomized controlled trials (RCTs) comparing the efficacy of 2 or more opioid analgesics for acute pain in older patients (70 years) in ambulatory settings (i.e., EDs, clinics) were included. Two reviewers independently screened abstracts, assessed quality of the studies, and extracted data. **Results:** After screening titles and abstracts of 1297 citations, the full-texts of 63 studies were reviewed, and 1 study met the inclusion criteria. This study allocated patients to receive either single dose of 0.0075-mg/kg IV hydromorphone versus 0.05-mg IV morphine and found no clinical or statistical difference between the two treatments in older adults presenting to an urban academic ED with acute, severe pain. **Conclusion:** The lack of published research in this area demonstrates a significant gap in the existing knowledge of the comparative efficacy of opioid analgesics in this growing patient population and that well-designed RCTs are urgently needed.

Keywords: analgesia/opioids, elderly, systematic review

P058

Paramedic recognition and management of anaphylaxis in the prehospital setting

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Introduction: Anaphylaxis is a life-threatening condition that paramedics are equipped to treat effectively in the field. Current literature suggests improvements in paramedic recognition and treatment of anaphylaxis could be made. The aim of this study was to compare the proportion of cases of anaphylaxis appropriately treated with epinephrine by paramedics before and after a targeted educational intervention. **Methods:** This was a retrospective medical records review of patients with anaphylaxis managed by primary or advanced care paramedics in five Emergency Medical Service areas in Ontario, before and after an educational module was introduced. This module included education on anaphylaxis diagnosis, recognition, treatment priorities, and feedback on the recognition and management from the before period. All paramedic call records (PCRs) coded as local allergic reaction or anaphylaxis during 12-month periods before and after the intervention were reviewed by trained data abstractors to determine if patients met an international definition of anaphylaxis. The details of interventions performed by the paramedics were used to determine primary and secondary outcomes. **Results:** Of the 600 PCRs reviewed, 99/120 PCRs in the before and 300/480 in the after period were included. Of the charts included, 63/99 (63.6%) in the before and 136/300 (45.3%) in the after period met criteria for anaphylaxis ($p = 0.002$). Of the cases meeting anaphylaxis criteria, 41/63 (65.1%) in the before and 88/136 (64.7%) in the after period were correctly identified as anaphylaxis ($p = 0.96$). Epinephrine was administered in 37/63 (58.7%) of anaphylaxis cases in the before period and 76/136 (55.9%) in the after period ($p = 0.70$). Anaphylactic patients with only two-system involvement received epinephrine in 20/40 (50.0%) cases in the before period and 45/93 (48.4%) in the after period ($p = 0.86$). **Conclusion:** There are gaps in paramedic recognition and management of anaphylaxis, particularly in cases of two-system involvement. These gaps persisted after the implementation of an educational intervention. Other quality interventions and periodic refreshers may be necessary to improve pre-hospital treatment of anaphylaxis. Limitations include an increase in overall cases and decrease in rate of true anaphylaxis in the after period, which may relate to better case identification after electronic PCR implementation and changes in paramedic recognition.

Keywords: anaphylaxis, prehospital, paramedic

P059

Who will be ready to fly? Characteristics of successful and unsuccessful geriatric discharges from the Nanaimo Regional General Hospital emergency department through the ED2Home program

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Introduction: As the baby-boomer generation ages, the number of elderly patients with complex health issues visiting emergency departments (EDs) will continue to increase. Evidence suggests elderly patients often have better health outcomes if they can be managed at home with appropriate community and primary care supports in place, rather than being admitted to hospital. ED2Home is a program that launched March 1, 2016 in the Nanaimo Regional General Hospital (NRGH) ED. It aims to assess admitted patients aged 70 and over and discharge them with community supports and follow-up. The aim of this Quality Improvement project was to evaluate how many patients were successfully discharged by the ED2Home program in its first few months, and to characterize which patients were more likely to be successfully discharged versus bounce back to the ED. **Methods:** This Quality Improvement project audited the charts of 87 patients discharged by ED2Home from June-Sept. 2016. Variables examined included the following: age, gender, chief complaint, mobility status,