

positive improvement on all learning objectives of the curriculum. A reflective critique provides insight into lessons learned from delivering this curriculum and future directions for this curriculum. This learner-centered curriculum with innovative teaching methods and a considerable number of active learning strategies has encouraged the learners to take responsibility for their own learning. While this curriculum took place in the medical school, it can apply equally to learners completing their EM clerkship in a community or tertiary Emergency Department.

Keywords: innovations in emergency medicine education, undergraduate education, active learning

P157

Pain management post-emergency department discharge: how are analgesics being consumed by patients with ongoing pain?

S. A. Weicker, MSc, B. J. Tuyp, MD, S. Wormsbecker, MD, University of British Columbia, Vancouver, BC

Introduction: Pain management is a cornerstone of emergency department (ED) practice, yet ongoing pain after ED discharge and return visits for inadequate analgesia are common. Over-the-counter (OTC) acetaminophen and nonsteroidal anti-inflammatory drugs are widely accepted first line agents for mild to moderate pain. Previous research has not investigated how patients actually consume such agents after discharge, and if they consume them synergistically and at sufficient doses for optimal analgesia. We sought to determine the proportion of patients in ongoing pain post-discharge that were utilizing analgesics as well as the type and dose of agent(s) used. **Methods:** Adults presenting to our ED with an acutely painful musculoskeletal complaint during research assistant hours were eligible for enrollment. After excluding non-English speakers as well as admitted, pregnant/breast-feeding, and chronic pain patients, consenting subjects completed in-person questionnaires during their ED stay and a follow-up telephone interview 2-3 days later. **Results:** 158 individuals were approached during the study period, of which 99 enrolled. 78 completed follow-up. At follow-up, 71 (91%) individuals experienced ongoing pain with a median score of 5 (interquartile range (IQR) 3-6) on an 11-point scale. 48 (67%) of patients still in pain consumed analgesics in the preceding 24 hours. The most commonly used agents were acetaminophen by 18 individuals (38% of analgesic users), ibuprofen by 16 (33%), and naproxen by 9 (19%). 29 respondents (60% of analgesic users) were using solely oral OTC analgesics. Only 15 (31% of analgesic users) used multiple agents concurrently, and 11 (23%) used prescription opioids. Acetaminophen was used at a median daily dose of 1500mg (IQR 1000-2000mg), much lower than that recommended for maximal analgesia (4000mg). Ibuprofen daily doses (1200mg, IQR 800-1300mg) were slightly lower than typical recommended doses (1600mg, 400mg every 6 hours). **Conclusion:** Only two-thirds of patients with ongoing pain at 2-3 days post-ED discharge were consuming analgesics, most commonly acetaminophen and ibuprofen. Of patients using analgesics, less than one-third used multiple agents. OTC medications are not used by most patients at doses for maximal analgesia. It may be possible to reduce pain burden and repeat-visits in discharged ED patients by optimizing the use of OTC analgesics.

Keywords: analgesia, pain management

P158

Sensitivity analysis of CTAS temperature modifier in the emergency department

M. A.J. Weldon, MSc, MD, M. Bullard, MD, A. Gauri, MSPH, G. Golberg, J. Priya, Red Deer Regional Hospital, Red Deer, AB

Introduction: The importance of early recognition and treatment of Sepsis has been emphasized over the last several years. In an attempt to better prioritize these patients, the Canadian Triage and Acuity Scale (CTAS) revised the adult temperature modifier after 2008 to define fever as 38.0C or higher and apply SIRS criteria, appearance and immunocompromise to assign a CTAS level of 2, 3, or 4. Prior to 2008, the fever threshold was defined as 38.5C and SIRS criteria were not included. This study looks to see if these changes increased the sensitivity of the temperature modifier. **Methods:** This study is a retrospective cohort analysis of patients presenting with a temperature of <36.0C or >38.0C to six Edmonton-area EDs in calendar years 2008 (n = 26181) and 2012 (n = 51622). Outcomes of interest included the temperature modifier predicted score and the actual assigned CTAS score. Data was extracted from the HASS/iSoft EDIS database including: presenting complaint, vital signs, CTAS score, and applied CTAS modifier to generate a before and after comparison of the actual and theoretical impact of temperature modifier revisions on the CTAS score, for both time periods. **Results:** Applying the pre-2008 temperature modifier to the 2008 patient cohort assigned 11.5% to CTAS 2, 39.8% to CTAS 3, and 33.3% to CTAS 4. Applying the post-2008 revised temperature modifier assigned 22.2% CTAS 2, 41.9% CTAS 3, and 27.6% CTAS 4. Carrying out the same analysis on the 2012 patients pre-results were 12.4% CTAS 2, 46.4% CTAS 3, 30.2% CTAS 4; and the post results were 21% CTAS 2, 47.7% CTAS 3, and 25% CTAS 4. Differences between pre- and post-results were statistically significant (p < 0.0001) in both years. The actual triage scores in 2012 were 18.7% CTAS 2 indicating the temperature modifier was not always correctly applied and 50.6% CTAS 3 as other modifiers were sometimes applied. **Conclusion:** There was a significant increase in sensitivity following the post 2008 revisions to the CTAS temperature modifier when applied to two large ED patient cohorts. The differences between theoretical and actual CTAS scores was less dramatic as nurses were able to apply other first order or special modifiers to assign an appropriate score. Further analysis will be carried out to determine the impact of the temperature modifier revisions on time to antibiotic and admission rates.

Keywords: triage, sepsis, sensitivity

P159

Identifying the cause for inappropriate urine cultures in a Canadian urban academic emergency department

A. M. Wu, MD, L. Matukas, MD, L. Hicks, MD, MSc, P. O'Brien, MA, M. McGowan, MHK, A. Cheng, MD, MBA, University of Toronto, Toronto, ON

Introduction: Inspired by the Choosing Wisely® campaign, St. Michaels Hospital (SMH) launched an initiative to reduce unnecessary tests, treatments and procedures that may cause patient harm. Stakeholder engagement identified inappropriate ordering of urine culture & sensitivities (C&S) in the emergency department (ED) as a focus area. Inappropriate urine C&S increase workload, healthcare costs and detection of asymptomatic bacteriuria which can lead to unnecessary antibiotics. The project's purposes were to describe the scope of inappropriately ordered urine C&S in the SMH ED and to conduct a root-cause analysis to inform future quality improvement interventions. **Methods:** Criteria for determining appropriateness was developed a priori using evidence-based guidelines from the University Health Network together with additional literature review. A retrospective chart review was performed on all urine C&S ordered in the ED from Jun 1 Aug 30, 2016. Each chart was reviewed for order appropriateness, demographic information and ordering provider. All inappropriate urine C&S were reviewed to identify root causes which were then grouped