



ABSTRACTS IN URGENT CARE

■ Use of Head CT by ED Physicians

■ NAHUM KOVALSKI, BSc, MDCM

■ Treatment of Pediatric Fracture Pain in the ED

Each month, Dr. Nahum Kovalski reviews a handful of abstracts from, or relevant to, urgent care practices and practitioners. For the full reports, go to the source cited under each title.

ED Physicians Vary Widely in Use of Head CT

Key point: ED physicians vary widely, by as much as 300% for patients who presented with atraumatic headache, in their ordering patterns for head CTs.

Citation: Prevedello LM, Raja AS, Zane RD, et al. Variation in use of head computed tomography by emergency physicians. *Am J Med.* 2012;125(4):356-364.

A research team led by Dr. Luciano Prevedello, a fellow at the Center for Evidence-Based Imaging at Brigham and Women's Hospital, conducted a study of variation in head CT exam ordering by emergency physicians. The researchers' primary objective was to quantify the extent of variation among individual emergency physicians, including a subanalysis of ordering brain CT exams for patients with atraumatic headaches. They also wanted to determine if any variation remained after controlling for factors believed to be associated with differences in ordering head CT exams.

The researchers identified 55,281 patient visits to the hospital's emergency department in 2009. Of these, head CT exams were ordered for 4,919 patients, or 8.9% of the total patient population. The researchers determined that the rate of ordering head CT exams ranged from 4.4% to 16.9%. After controlling for pertinent variables, a twofold variation existed, with a range of 6.5% to 13.5%.

There was a threefold variation in the number of CT scans ordered by emergency physicians to diagnose patients with atraumatic headaches. After adjusting for factors such as patient mix and degree of trauma, head CT ordering rates for patients presenting with atraumatic headaches ranged from 21.2% to 60.1%.

No correlation in head CT ordering frequency could be es-

tablished based on physician age, gender, or experience. Time of day and the location within the hospital where the patients received emergency treatment also were unrelated.

The study confirms earlier peer-review published findings of wide variation in imaging use, the authors concluded. They attributed the variation to issues such as physician knowledge gaps and practice style variations. ■

Pediatric Pain from Fractures Is Undertreated in the ED

Key point: Only 70% of children with isolated long bone fractures received pain medication during their emergency department stays.

Citation: Dong L, Donaldson A, Metzger R, Keenan H. Analgesic administration in the emergency department for children requiring hospitalization for long-bone fracture. *Pediatr Emerg Care* 2012;28(2):109-114.

To evaluate the frequency and predictors of analgesic use for pediatric pain, investigators reviewed charts for 773 children <15 years (mean, 6.4 years) with isolated long bone fractures who presented within 12 hours of injury to a single level I pediatric trauma center during 2 years.

During the first hour after arrival in the emergency department (ED), 10% of patients received adequate pain medication (standard doses of opioids, nonsteroidal anti-inflammatory agents, or acetaminophen), 31% received inadequate pain medication, and 59% received no pain medication. Overall, 71% of patients received pain medication during their ED stays. In multivariate analysis, children aged 10 to 15 years were more likely to receive adequate pain medication within the first hour than those <2 years (adjusted odds ratio, 2.5). Longer time from injury to ED arrival, closed fractures, and upper-extremity fractures were associated with lower likelihood of receiving adequate analgesia.

Published in *J Watch Emerg Med.* March 2, 2012 — Katherine Bakes, MD. ■



Nahum Kovalski is an urgent care practitioner and Assistant Medical Director/CIO at Terem Emergency Medical Centers in Jerusalem, Israel. He also sits on the JUCM Editorial Board.