addiction (OR 1.12, 95% CI 1.01-1.25) and side effects (OR 1.25, 95% CI 1.11-1.42) increased the odds of rejecting opioids in the emergency department, while fears of addiction (OR 1.19, 95% CI 1.07-1.32) and overdose (OR 1.15, 95% CI 1.04-1.27) increased the odds of rejecting opioids for at-home use. **Conclusion**: Only half of caregivers reported that they would accept opioids for moderate pain, despite ongoing pain following non-opioid analgesics. Caregiver fears of addiction, side effects, overdose, and masking their child's diagnosis influence their behaviours. These findings are a first step in understanding caregiver decision-making and can guide healthcare providers in their conversations about acute pain treatment with families.
Keywords: opioid, pain, pediatric

LO33

External cold and vibration for pain management of children undergoing needle-related procedures in the emergency department: a randomized controlled non-inferiority trial

A. Ballard, BSc, C. Khadra, S. Adler, E. Parent, E. D. Trottier, MD, B. Bailey, MD, N. Poonai, MD, MSc, S. Le May, PhD, Université de Montréal, Montréal, QC

Introduction: Needle-related procedures are considered the most important source of pain and distress in children in hospital settings. Time constraints, heavy workload, busy and noisy environment represent barriers to the use of available interventions for pain management during needle-related procedures. Therefore, the use of a rapid, easy-to-use intervention could improve procedural pain management practices. The objective was to determine if a device combining cold and vibration (Buzzy) is non-inferior (no worse) to a topical anesthetic (Maxilene) for pain management in children undergoing needle-related procedures in the Emergency Department (ED). **Methods**: This study was a randomized, controlled, non-inferiority trial. We enrolled children aged between 4-17 years presenting to the ED and requiring a needle-related procedure. Participants were randomly assigned to the Buzzy or Maxilene group. The primary outcome was the mean difference in pain intensity during the procedure, as measured with the CAS (0-10). Secondary outcomes were procedural distress, success of the procedure at first-attempt and satisfaction of parents. **Results**: A total of 352 participants were enrolled and 346 were randomized (Buzzy = 172; Maxilene = 174). Mean difference in procedural pain scores between groups was 0.64 (95%CI -0.1 to 1.3), showing that the Buzzy device was not non-inferior to Maxilene according to a non-inferiority margin of 0.70. No significant differences were observed for procedural distress (p = .370) and success of the procedure at first attempt (p = .602). Parents of both groups were very satisfied with both interventions (Buzzy = 7.8 ±2.66; Maxilene = 8.1 ±2.4), but there was no significant difference between groups (p = .236). **Conclusion**: Non-inferiority of the Buzzy device over a topical anesthetic was not demonstrated for pain management of children during a needle-related procedure in the ED. However, considering that topical anesthetics are underused in the ED setting and require time, the Buzzy device seems to be a promising alternative as it is a rapid, low-cost, easy-to-use and reusable intervention.
Keywords: emergency department, pain management, pediatrics

LO34

Predictors of intravenous rehydration in children with acute gastroenteritis in the United States and Canada

N. Poonai, MD, MSc, E. Powell, MD, D. Schnadower, MD, MPH, T. Casper, PhD, C. Roskind, MD, C. Olsen, MSc, P. Tarr, MD, P. Mahajan, MD, MPH, A. Rogers, MD, S. Schuh, MD, K. Hurley, MD, S. Gouin, MDCM, C. Vance, MD, K. Farion, MD, R. Sapien, MD, K. O'Connell, MD, A. Levine, MD, S. Bhatt, MD, S. Freedman, MDCM, MSc, on behalf of Pediatric Emergency Research Canada (PERC) and Pediatric Emergency Care Applied Research Network (PECARN), Western University, London, ON

Introduction: Although oral rehydration therapy is recommended for children with acute gastroenteritis (AGE) with none to some dehydration, intravenous (IV) rehydration is still commonly administered to these children in high-income countries. IV rehydration is associated with pain, anxiety, and emergency department (ED) revisits in children with AGE. A better understanding of the factors associated with IV rehydration is needed to inform knowledge translation strategies. **Methods**: This was a planned secondary analysis of the Pediatric Emergency Research Canada (PERC) and Pediatric Emergency Care Applied Research Network (PECARN) randomized, controlled trials of oral probiotics in children with AGE-associated diarrhea. Eligible children were aged 3-48 months and reported > 3 watery stools in a 24-hour period. The primary outcome was administration of IV rehydration at the index ED visit. We used mixed-effects logistic regression model to explore univariable and multivariable relationships between IV rehydration and a priori risk factors. **Results**: From the parent study sample of 1848 participants, 1846 had data available for analysis: mean (SD) age of 19.1 ± 11.4 months, 45.4% females. 70.2% (1292/1840) vomited within 24 hours of the index ED visit and 34.1% (629/1846) received ondansetron in the ED. 13.0% (240/1846) were administered IV rehydration at the index ED visit, and 3.6% (67/1842) were hospitalized. Multivariable predictors of IV rehydration were Clinical Dehydration Scale (CDS) score [compared to none: mild to moderate (OR: 8.1, CI: 5.5-11.8); severe (OR: 45.9, 95% CI: 20.1-104.7), P < 0.001], ondansetron in the ED (OR: 1.8, CI: 1.2-2.6, P = 0.003), previous healthcare visit for the same illness [compared to no prior visit: prior visit with no IV (OR: 1.9, 95% CI: 1.3-2.9); prior visit with IV (OR: 10.5, 95% CI: 3.2-34.8), P < 0.001], and country [compared to Canada: US (OR: 4.1, CI: 2.3-7.4, P < 0.001]. Significantly more participants returned to the ED with symptoms of AGE within 3 days if IV fluids were administered at the index visit [30/224 (13.4%) versus 88/1453 (6.1%), P < 0.001]. **Conclusion**: Higher CDS scores, antiemetic use, previous healthcare visits and country were independent predictors of IV rehydration which was also associated with increased ED revisits. Knowledge translation focused on optimizing the use of antiemetics (i.e. for those with dehydration) and reducing the geographic variation in IV rehydration use may improve the ED experience and reduce ED-revisits.
Keywords: gastroenteritis, intravenous, paediatric

LO35

Characterizing pain in children with acute gastroenteritis presenting to the emergency department

S. Ali, MDCM, C. Maki, BN, J. Xie, MD, MPH, B. Lee, MD, T. Graham, MD, MSc, O. Vanderkooi, MD, S. MacDonald, BN, PhD, N. Poonai, MD, MSc, J. Thull-Freedman, MD, M. Rajagopal, MSc, N. Dow, BA, BN, M. Sivakumar, BN, S. Freedman, MDCM, MSc, Alberta Provincial Pediatric EnTeric Infection TEam (APPETITE), Pediatric Emergency Research Canada (PERC), University of Alberta, Edmonton, AB

Introduction: Although acute gastroenteritis is an extremely common childhood illness, there is a paucity of literature characterizing

https://doi.org/10.1017/cem.2019.77 Published online by Cambridge University Press