

this study was to assess the effect of multitasking on cognitive load when learning a common trauma skill. **Methods:** Sixteen students who had no previous experience with the one-handed square knot were randomly assigned to one of the two groups: practice and non-practice groups. A pre-recorded instructional video of a one-hand knot tying was presented to all participants. Next, the practice group completed a single session of 10 trials of the one-hand knot tying using a benchtop simulator, while the non-practice group did not. All returned a week later for a transfer task on a different simulator. On trials 1, 4, 7, 10 and during the transfer performance the participants performed under dual task conditions, where they were asked to focus on the knot-tying task, but also to react as fast as possible to the illumination of an incandescent light bulb by pressing a foot pedal. Subjective ratings of mental effort, and reaction time to the visual stimulus were used as indices of cognitive load. **Results:** A repeated measure ANOVA showed a significant effect of dual task on subjective measure of mental effort ($F_{(4, 28)} = 10.35, p = .001, \omega = .60$) and reaction time ($F_{(4, 28)} = 7.93, p = .001, \omega = .53$), with plots indicating cognitive load plateaued by the 7th trial. **Conclusion:** These findings highlights the number of trials necessary to attain a level of proficiency in a basic trauma skill such as the one-hand knot tying, ease the level of cognitive load and possibly enhance transfer to more challenging tasks.

Keywords: dual-task, trauma skills, cognitive load

P005

Pre-hospital dexamethasone administration in children with croup: the Edmonton experience

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Introduction: Croup is one of the most common childhood respiratory illnesses, affecting more than 80,000 Canadian children per year. Early dexamethasone administration in croup can reduce admission rates and length of stay (LOS), as well as return visits to the emergency department (ED). Pre-hospital emergency medical services (EMS) teams in Edmonton administer dexamethasone to children with croup. The objectives of this study were to (a) assess the clinical impact of pre-hospital administration of dexamethasone to children with croup and (b) compare clinical outcomes of these patients to those who did not receive their first dose of dexamethasone via the EMS providers. **Methods:** This study was a retrospective medical record review that included children between 6 months and 6 years of age who were brought via EMS to the Stollery Children's Hospital ED with a final diagnosis of croup, between January 1st 2010 and December 31st 2012. Data were collected regarding pre-hospital presentation and management, ED presentation and management, ED LOS and final disposition, and patient demographics. **Results:** 188 patients were enrolled, 35.1% (66/188) of whom received a pre-hospital diagnosis of croup. The mean age of the participants was 32.96 months (SD \pm 17.18). Overall, 10.6% patients (20/188) were given dexamethasone in the pre-hospital setting, while 30.3% patients (57/188) were given nebulized epinephrine by EMS. Out of the 66 patients with a pre-hospital diagnosis of croup, 10.6% (n = 7) were given dexamethasone by EMS. In the ED, dexamethasone was administered to 88.3% of patients (166/188) while 56/188 participants (29.8%) received nebulized epinephrine. There was no statistically significant difference in ED LOS stay between those who received pre-hospital dexamethasone (2.6 hours, SD \pm 1.6, n = 18) and those who did not (3.3 hours, SD \pm 2.7, n = 159). The number of in-hospital epinephrine doses per patient was influenced by the administration of pre-hospital dexamethasone (p = 0.010). **Conclusion:** Pre-hospital

administration of dexamethasone likely influences the severity and short-term persistence of croup symptoms, as evidenced by less epinephrine use in the ED. Contrary to current EMS guidelines, very few patients with a pre-hospital diagnosis of croup received dexamethasone by EMS personnel. This likely represents a missed opportunity to decrease the severity of the patients' disease.

Keywords: emergency medical services (EMS), croup, dexamethasone

P006

A qualitative study of the language of satisfaction for children in the emergency department

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Introduction: Measures of satisfaction are essential to understanding patient experience, and pain management. Currently, there are no validated tools to quantify children's satisfaction. To develop such a tool, we must first understand which words children use to communicate satisfaction. Our objectives were to (A) to identify the words commonly used by children of different ages to communicate satisfaction, in general, and in the context of pain management, and (B) to determine if this vocabulary is similar to that used by their caregiver. **Methods:** A qualitative study of 105 children-parent pairs, aged 3-16 years, who were evaluated at a pediatric emergency department (PED) from July-November 2014 was conducted. Children were interviewed using a semi-structured format of ten open-ended questions. They were asked to describe their feelings when 1) they received something they wanted/needed, 2) their expectations were met or not met in the ED, and 3) their pain was or was not relieved. A written survey was also completed by the caregiver. Interviews were transcribed and grounded theory was employed for data coding and analysis. **Results:** 105 child interviews were completed (n = 53 female, mean age 9.91 SD 3.71, age range 4-16). 105 caregiver surveys were completed (n = 80 female). "Good", "better," and "happy" were most commonly used by all children (n = 99) to express satisfaction with pain management (27%, 21% and 22%, respectively), with PED care (31%, 14% and 33%) and in general (13%, 5% and 49%). Children (n = 99) used the words "sad", "bad," and "not good" to communicate dissatisfaction with pain management (21%, 7% and 11% respectively), and with PED care (21%, 13% and 12%, respectively). Only 55% of children understood the meaning of the word 'satisfaction'. Children used words that were similar to their caregiver 14% of the time. **Conclusion:** The word "satisfaction" should not be used to communicate with children in the emergency department, as many lack understanding of the term. The vocabulary that children use to describe satisfaction does not largely vary with context and involves simpler words than their parents. Caregiver vocabulary should not be used as a surrogate for pediatric patients. This study will inform the development of a validated tool to measure children's satisfaction with pain management.

Keywords: children, pain, satisfaction

P007

Association between serum biomarkers and frailty level in seniors with minor injuries

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Introduction: Frailty is associated with mobility & physical impairment in seniors with minor injuries. Serum biomarkers have also been