

care discussions and management during acute unexpected deteriorations. **Methods:** This single center survey study used 4 scenarios of children presenting to the emergency department with respiratory distress. Scenarios included patients with hypoplastic left heart syndrome, static encephalopathy, spinal muscular atrophy and refractory leukemia. Questions following each vignette were identical. Physicians from the specialties most involved in these scenarios completed the survey by email or in person. Data analysis used SPSS v.20 (IBM Inc.). Related samples non-parametric tests compared participants' Likert scale answers. **Results:** Between May 2015 and May 2016, 60 participants completed the study; 14 were excluded (>60% missing answers). Most (80.4%) participants reported an interest in pediatric palliative care; 71.7% had 0-3 formal trainings. Participants believed goals of care were best discussed before an acute deterioration. Acute deteriorations were not seen as an opportune moment to initiate discussions about goals of care. However, validating these previous wishes was necessary, given that not discussing them was judged unacceptable by the participants. Pediatric specialists were seen as the most suitable teams to initiate these discussions, while the emergency department's role in these discussions was unclear. Several management options were less acceptable for the patient with static encephalopathy. **Conclusion:** Discussing goals of care during acute illness exacerbation involves many stakeholders, who may not always be available at critical times. Advanced care planning with these families is essential to prepare them for acute health events.

Keywords: acute deteriorations, goals of care, pediatric palliative care

P028

Quel est le meilleur moment de départ vers le centre hospitalier pour les patients souffrant d'un arrêt cardiaque extrahospitalier potentiellement éligible à une réanimation par circulation extracorporelle?

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Introduction: La réanimation par circulation extracorporelle (R-CEC) permet potentiellement d'améliorer la survie de patients souffrant d'un arrêt cardiaque extrahospitalier (ACEH) réfractaire aux traitements habituels. Cette technique, se pratiquant généralement en centre hospitalier (CH), doit être réalisée le plus précocement possible. Un transport vers le CH en temps opportun est donc nécessaire. Cette étude vise à décrire la durée nécessaire des manœuvres de réanimation préhospitalières afin d'optimiser le moment du départ vers le CH dans le but d'obtenir un maximum de retour de circulation spontanée (RCS) préhospitalier. **Methods:** La présente étude de cohorte a été réalisée à partir des bases de données collectées de la Corporation d'Urgences-santé dans la région de Montréal entre 2010 et 2015. Les patients éligibles à une R-CEC selon les critères locaux ont été inclus (<65 ans, rythme initial défibrillable, arrêt témoigné avec réanimation par un témoin). Les patients ayant eu un arrêt devant les paramédics ont été exclus, tout comme ceux avec un RCS avant l'arrivée des services préhospitaliers. Nous avons calculé la sensibilité et la spécificité à différents seuils afin de prédire un RCS préhospitalier et une survie au congé hospitalier. Une courbe ROC a également été construite. **Results:** Un total de 236 patients

(207 hommes et 29 femmes) d'un âge moyen de 52 ans (± 10) ont été inclus dans l'étude, parmi lesquels 93 (39%) ont survécu jusqu'à leur congé hospitalier et 136 (58%) ont obtenu un RCS préhospitalier. Le délai moyen avant leur RCS était de 13 minutes (± 10). Plus de 50% des survivants avaient eu un RCS moins de 8 minutes après l'initiation des manœuvres de réanimation par les intervenants préhospitaliers, et plus de 90% avant 24 minutes. Plus de 50% de tous les RCS survenaient dans les 10 premières minutes de réanimation et plus de 90% dans les 31 premières minutes. La courbe ROC montrait visuellement que le délai avant le RCS maximisant la sensibilité et la spécificité pour prédire la survie chez ces patients était à 22 minutes (Sensibilité = 90%, spécificité = 78%; aire sous la courbe = 0,89 [intervalle de confiance à 95% 0,84-0,93]). **Conclusion:** Le départ vers le CH pourrait être considéré pour ces patients entre 8 et 24 minutes après l'initiation des manœuvres. Une période de réanimation de 22 minutes semble être le meilleur compromis à cet égard.

Keywords: extracorporeal resuscitation, out-of-hospital cardiac arrest, prognosis

P029

Are acute pain trajectories after an emergency department visit associated with chronic pain at 3 months?

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Introduction: Studies suggest that acute pain evolution after an emergency department (ED) visit has been associated with the development of chronic pain. Using group-based trajectory modeling (GBTM), we aimed to evaluate if ED discharged patients with similar pain intensity profiles of change over 14 days are associated with chronic pain at 3 months. **Methods:** This is a prospective cohort study of patients aged 18 years or older who visited the ED for an acute pain condition (≤ 2 weeks) and were discharged with an opioid prescription. Patients completed a 14-day diary in which they listed their daily pain intensity level (0-10 numeric rating scale). Three months post-ED visit, participants were interviewed by phone to report their pain intensity related to the initial pain. **Results:** A total of 305 patients were retained at 3 months (mean age \pm SD: 55 \pm 15 years, 49% women). Using GBTM, six distinct pain intensity trajectories were identified during the first 14 days of the acute pain period; two linear one with moderate or severe pain during the follow-up (representing almost 40% of the patients) and four cubic polynomial order trajectories, with mild or no-pain at the end of the 14 days (low final pain). Twelve percent (11.9; $\pm 95\%$ CI: 8.2-15.4) of the patients had chronic pain at 3 months. Controlling for age, sex and types of pain condition, patients with trajectories of moderate or severe pain and those with only severe pain were 5.1 (95% CI: 2.2-11.8) and 8.2 (95% CI: 3.4-20.0) times more likely to develop chronic pain at 3 months, respectively, compared to the low final pain group. **Conclusion:** Trajectories could be useful to early identification of patients at risk of chronic pain.

Keywords: chronic pain, trajectory

P030

Acute pain resolution after an emergency department visit: a 14-day trajectory analysis

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Introduction: The objective of the study was to evaluate the acute pain intensity evolution in ED discharged patients using Group-based trajectory modeling (GBTM). This method identified patient groups with similar profiles of change over time without assuming the existence of a particular pattern or number of groups. **Methods:** This was a prospective cohort study of ED patients aged ≥ 18 years with an acute pain condition (≤ 2 weeks) and discharged with an opioid prescription. Patients completed a 14-day diary assessing daily pain intensity level (0-10 numeric rating scale) and pain medication use. **Results:** Among the 372 included patients, six distinct post-ED pain intensity trajectories were identified: two started with severe levels of pain, one remained with severe pain intensity (12.6% of the sample) and the other ended with moderate pain intensity level (26.3%). Two other trajectories had severe initial pain, one decreased to mild pain (21.7%) and the other to no-pain (13.8%). Another trajectory had moderate initial pain which decreased to a mild level (15.9%) and the last one started with mild pain intensity and had no pain at the end of the 14-day (9.7%). The pain trajectory patterns were significantly associated with age, type of painful conditions, pain intensity at ED discharge, and with opioid consumption. **Conclusion:** Acute pain resolution following an ED visit seems to progress through six different trajectory patterns that are more informative than simple linear models and could be useful to adapt acute pain management in future research.

Keywords: pain, trajectory

P031

Naltrexone initiation for alcohol use disorder in the emergency department: A systematic review

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Introduction: Alcohol use disorder (AUD) is a chronic relapsing and highly comorbid disease. Patients suffering from AUD are frequently seen in the emergency department (ED) presenting intoxicated or in withdrawal. Brief interactions in the ED are often the only portal of entry to the healthcare system for many of these patients. Oral naltrexone and long acting injectable naltrexone are effective treatment options for AUD associated with decreased cravings, shorter length of hospital stay, and lower cost of healthcare utilization. This study's objective was to perform a systematic review of the literature evaluating initiation of naltrexone 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 initiation of naltrexone in patients (≥ 18 years) to standard care in the ED were included. Two reviewers independently screened titles and abstracts, reviewed full text articles for inclusion, assessed quality of the studies, and extracted data. **Results:** The search strategy yielded 183 potentially relevant citations. After eliminating duplicate citations and studies that did not meet eligibility criteria, 10 articles were retrieved for full text review. There were no published RCTs that examined naltrexone initiation in the ED. There is one ongoing study being conducted in New York, which aims to assess naltrexone initiation in the ED and measure health outcomes and quality of life of study participants, as well as potential healthcare cost savings. **Conclusion:** The lack of published research in this area demonstrates a significant gap in knowledge. It is clear that well-designed RCTs are needed to evaluate the effectiveness of initiating naltrexone for those with AUD at the ED visit.

Keywords: alcohol use disorder, emergency department, naltrexone

P032

Video-based learning modules as an adjunct for teaching emergency medicine procedural skills

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Innovation Concept: Competence in procedural skills is vital within the emergency department. Challenging procedures such as cricothyroidotomy are difficult to master as they are rare and hard to train for. Additionally, common procedures such as chest tube insertions require practice to become sufficiently competent. Opportunities to hone these skills are essential in residency training. This project aimed to create instructional video modules for specific emergency medicine (EM) procedures and to gauge its utility as an adjunctive resource for procedural learning in the EM residency curriculum. **Methods:** Tutorial videos for clamshell thoracotomy, cricothyroidotomy, and chest tube insertion were filmed within a cadaver lab with step-by-step instructions. The footage was edited and overlaid with a prepared audio narration using Camtasia®/Apple® Video Editing software. These videos were embedded within modules that included foundational knowledge relevant to the procedures including anatomy, physiology and pathophysiology. The modules were peer-edited by licensed EM staff physicians and distributed to EM residents and staff physicians for analysis. Qualitative and quantitative analysis relied upon participants' answers to questions and a Modified Task Value Scale (measures the value of a module for overall learning), respectively. **Curriculum, Tool or Material:** Ten participants were included in the analysis, including EM residents ($n = 6$) and staff emergency physicians ($n = 4$). Qualitative feedback suggested that positive aspects of the modules included visuals, content, narration, and review of anatomy. Negative aspects included the lack of indications for procedures, technical details, real patient examples, and a speed up function. Quantitative feedback resulted in scores of 4 and above out of 5 (1 = lowest value, 5 = highest value) on the Motivated Task Value Scale across all aspects for all the modules. Furthermore, analysis revealed an average score of 3.9/5 for inclination to access more modules such as these, and a score of 4.4/5 for overall perception of the modules. **Conclusion:** Participants found the video modules valuable to their learning, both qualitatively and quantitatively. This study was limited by a small sample size of modules and a low number of participants. Furthermore, a more detailed analysis with further measures, including self-efficacy and self-confidence, would yield more comprehensive conclusions. However, video modules provide an effective and easily accessible adjunctive tool to acquire skill and confidence with EM procedures, for medical learners and staff physicians.

Keywords: EM procedural skills, innovations in EM education, video-based learning

P033

Clinical and laboratory characteristics of patients presenting to a tertiary care centre emergency department with invasive Group A Streptococcus infections

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Introduction: According to the Public Health Agency of Canada, the rate of invasive Group A Streptococcus (iGAS) has more than doubled