

intrauterine pregnancy of uncertain viability, and with pregnancy of unknown location. Management of confirmed early pregnancy loss in the ED and family medicine clinics was addressed. Barriers to an early pregnancy loss clinic included lack of funding, space, and staffing as well as lack of resources and uncertain patient volumes. A feasible alternative to an early pregnancy loss clinic was for willing providers to keep appointment times available to facilitate confirmation of follow-up prior to discharge. Other suggested alternatives included an early pregnancy loss clinic, a nurse educator, and having a standardized guideline in the ED. **Conclusion:** Through a consensus approach, several recommendations were agreed upon for improving care for patients presenting to the ED with early pregnancy complications.

**Keywords:** complications, emergency department, pregnancy

#### P025

##### **Improving senior resident engagement at academic core rounds**

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**Introduction:** Royal College Emergency Medicine (EM) trainees at the University of Ottawa participate in weekly Academic Full Days (AFD) that consist of didactic activities, simulation-based learning, and core content sessions referred to as Core Rounds (CR). Despite CR being intentioned for all EM trainees, an attendance attrition has been noted as trainees progress towards their senior (SR) years (PGY3-5). The objectives of this study were to (1) identify barriers to SR trainee CR attendance and (2) identify areas for CR improvement. **Methods:** An on-line survey was administered to SR EM trainees (PGY3-5, n=28) and recent graduates from our program (practice year 1-2, n=20) to explore perceptions of the value of AFDs, CR attendance barriers, and areas for CR improvement. The survey consisted of 5-point Likert scales and free-text responses. Quantitative responses were analyzed using Microsoft Excel. Free-text responses were analyzed qualitatively using thematic analysis. Each free-text response was reviewed independently by two investigators (JML, MCL) and underwent line-by-line coding. Through joint discussions, the codes from each response were synthesized and themes were identified. **Results:** Of the 48 trainees and attendings surveyed, 32 responded (response rate 67%). Most respondents (90%) stated they benefited from SR trainee attendance when they were at a junior (JR) level. The majority perceived they benefited less from CR as a SR trainee compared to when they were a JR trainee (85%). Further, 87% responded that CR were not tailored to a SR level, and that they would attend more frequently if sessions were geared to their level (81%). From our thematic analysis, three themes emerged relating to SR trainee absenteeism: 1) CR quality, 2) External Factors (eg. trainee fatigue) and 3) Malalignment with trainees' own education plan. We also identified three themes relating to areas for CR improvement: 1) CR content, 2) CR format and 3) SR trainee involvement. **Conclusion:** Respondents indicated a benefit to having SR trainee presence at CR. This study identified barriers to SR resident attendance at CR and areas for improvement. With the transition to competency based medical education it is critical that trainees engage in effective educational experiences, especially as the RCPSC does not mandate AFDs for EM training in this new curriculum. A culture-change initiative and CR reformat is now underway at our institution with planned post-implementation analysis.

**Keywords:** attendance, engagement, rounds

#### P026

##### **Dominating the vent: A flipped classroom approach to enhance emergency medicine resident ventilator management**

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**Innovation Concept:** Ventilator management is an essential skill and a training objective for emergency medicine (EM) specialists in Canada. EM trainees obtain the majority of this training during off-service rotations. Previous attempts to strengthen ventilator knowledge include lectures and simulation – both of which are time and resource intensive. Given the unique features of ventilator management in the ED, we developed an ED-specific ventilator curriculum. The purpose of this study is to 1) identify resident needs regarding ventilator curricula and 2) assess resident response to this pilot curriculum. **Methods:** A needs-assessment survey administered to RCPSC- and CCFP-EM residents at The Ottawa Hospital (TOH) showed the majority of residents (87%, n = 31 respondents) believe there is a need for more ED-focused ventilator management training, and only 13% felt confident in ventilator management. Ten on-line modules were prepared by an EM-Critical Care attending, and distributed on-line to all EM trainees at TOH (n = 52). Mid- and post-implementation surveys are used to assess residents' confidence in ventilator management, and perceived usefulness of the curriculum. User feedback from focus groups constitutes part of the curriculum evaluation. **Curriculum, Tool or Material:** Employing a flipped classroom approach, ten on-line modules were distributed to RCPSC- and CCFP-EM trainees at TOH. Each module requires less than ten minutes to complete and focuses on a single aspect of ventilation. The modules are available for residents to complete at their own pace and convenience. At curriculum completion, an EM-Critical Care attending physician facilitates an interactive session. **Conclusion:** Mid-implementation survey results demonstrate increased confidence in independently managing ventilated patients in the ED (13% pre- vs. 56% mid-implementation), and an increased perception of having sufficient ventilator training (26% pre- vs. 78% mid-implementation). All respondents felt the modules were of appropriate length, content was easy to follow, and that the modules should be part of the residency curriculum. Our ED-specific online ventilator modules are a viable tool to increase residents' confidence in ventilator management. This novel curriculum could be adopted by other residency programs and continuing professional development initiatives. Future work will include post-implementation data-gathering, and formal curriculum evaluation.

**Keywords:** flipped-classroom, innovations in EM education, ventilators

#### P027

##### **Who should discuss goals of care during acute deteriorations in patients with life threatening illnesses? A survey of clinicians from diverse pediatric specialties**

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**Introduction:** Discomfort exists discussing goals of care with families of children with advanced life-threatening illnesses. There also exists important variability in the management of these patients. This study seeks to explore the perceptions of pediatric specialists involved in the care of children with life-threatening illnesses with regards to goals of

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 ( $\pm 10$ ) 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 ( $\pm 10$ ). 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 ( $\leq 2$  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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