

literacy (marginalized populations) and “super-users” of emergency departments, health policy (government and not-for-profit), physicians (emergency and primary care) and other health care workers. Infographics will be available for presentation at CAEP 2016. **Conclusion:** Information graphics will be used to facilitate clinician-patient discussions for empowered decision making, facilitate clinician-learner decisions based on evidence based guidelines, and improve knowledge translation for health system administrators and policy makers regarding appropriate emergency department resource allocation.

Keywords: innovations in EM education, knowledge translation, patient centered

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The Family Medicine Obstetrical Ultrasound (FaMOUS) course: a model for training office-based family physicians in first trimester point of care ultrasound

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Introduction / Innovation Concept: In Canada, family physicians (FPs) provide the majority of 1st trimester pregnancy care and are often first to evaluate complications, including threatened and spontaneous abortion and ectopic pregnancy. To receive a same day urgent US, most patients will be sent to the emergency department (ED). With increasing availability and affordability of point of care ultrasound (PoCUS), FPs are starting to use US in their offices, potentially diverting some ED visits for patients with reassuring US findings. To date, no formal certification process exists for FPs who wish to use PoCUS for 1st trimester indications. **Methods:** The objective of this educational initiative was to implement and evaluate a novel, 2-day didactic and hands-on certification process for FPs utilizing office-based PoCUS to identify intrauterine pregnancy and fetal cardiac activity. The FaMOUS course was modeled after the Canadian Emergency Ultrasound Society Emergency Department Echo (CEUS EDE) curriculum and adapted with permission for FPs. **Curriculum, Tool, or Material:** The curriculum consisted of a deliberate practice mastery model utilizing on-line materials, seminars and hands-on training. Prior to the 2-day course, FPs completed an e-learning module comprised of core competency material specific to obstetrical practice. Learners were required to score 100% on a post-module exam to participate in the 2-day course. Attendees participated in a 4-hour training session to learn US image generation and interpretation. This was followed by 10 hours of hands-on training with CEUS instructor supervision to complete the certification process (50 determinate scans). Thirteen FPs from 3 family practice units successfully completed the certification process. Cumulative knowledge and skill levels were assessed throughout the 2-day workshop through feedback from CEUS supervisors to confirm key concepts were learned. All 13 participants agreed to utilize PoCUS in their clinical assessments of patients with 1st trimester complaints using handheld PoCUS equipment provided to the sites. FPs will be surveyed at 3 month intervals for 12 months following the FaMOUS course to assess provider confidence, satisfaction and perceived impact on clinical decision-making. **Conclusion:** The FaMOUS certification course is a standardized curriculum by which FPs can learn PoCUS safely to improve quality and timeliness of care for patients experiencing 1st trimester complaints. If PoCUS is adopted by FPs, lengthy ED visits may be decreased for this patient population.

Keywords: innovations in EM education, point-of-care ultrasound (PoCUS), pregnancy

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Procedural sedation by advanced care paramedics for emergency GI endoscopy

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Introduction: Acute upper gastrointestinal (UGI) bleeding is a relatively common emergency resulting in death in 6 to 8% of cases. UGI endoscopy is the intervention of choice which requires procedural sedation and analgesia (PSA). The Halifax Infirmery emergency department (ED) performs 1000 PSAs annually, performed by advanced care paramedics (ACPs). This has been shown safe for other indications for PSA, such as orthopedic procedures. Considering that UGI endoscopy involves upper airway manipulation, and patients are at an increased risk of massive bleeding, this procedure would be expected to be more complex and have an increased risk of adverse events (AEs). This study aims to compare PSA for UGI endoscopy performed by ACPs to that for orthopedic procedures for AEs, airway intervention and medication use. **Methods:** This study is a retrospective review of an ACP-performed ED PSA quality control database. A dataset was built matching 64 UGI endoscopy PSAs to 192 orthopedic PSAs by propensity scores calculated using age, gender and ASA classification. Outcomes assessed were hypotension (SBP < 100, or 15% decrease from baseline), hypoxia (SaO₂ < 90), apnea (> 30sec), vomiting, arrhythmias and death in the ED. The need for airway intervention and medication use was assessed. **Results:** The UGI endoscopy group was 4.60 times more likely to suffer hypotension than the orthopedic group (OR = 4.6, CI:2.2-9.6), and a fifth as likely to require airway repositioning (OR = 0.2, CI:0.1-0.5). One endoscopy patient required endotracheal intubation. No patient died in either group. Compared to the orthopedic group, the UGI endoscopy group was one-third as likely to receive fentanyl (OR = 0.3, CI:0.2-0.6). When fentanyl was administered, endoscopy patients received an average 26.7 mcg less than orthopedic patients. The endoscopy group was 15.4 times more likely to receive ketamine (OR = 15.4, CI:4.7-66.5), and received 34.4 mg less on average. Four endoscopy patients received phenylephrine compared to none in the orthopedic group. There were no other differences. **Conclusion:** ED PSA for UGI endoscopy appears to differ significantly from that performed for orthopedic procedures. It was associated with more frequent hypotension and increased use of ketamine as a sedative. Patients undergoing UGI endoscopy were less likely to receive fentanyl and require airway repositioning. Only patients in the endoscopy group required intubation or a vasopressor agent.

Keywords: procedural sedation and analgesia (PSA), paramedicine, endoscopy

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Emergency department decision-making for incapacitated and unrepresented patients: a comprehensive review of the literature

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Introduction: Incapacitated patients who lack substitute decision-makers (SDM) are commonly encountered in the emergency department (ED). The number of these patients will rise dramatically as the Baby Boomers age. We can expect an influx of elderly patients who lack decisional capacity due to dementia and other illnesses, and who present without family. It is estimated that 3 to 4 percent of U.S. nursing home residents have no SDM or advance directives. Medical decision-making for this cohort poses an ethical challenge, particularly in the ED setting.