

for misuse in our cohort: 5,600 pills. **Conclusion:** After an ED visit for acute pain a significant portion of opioids prescribed is unused and available for misuse. A large pragmatic study should be done to confirm that an opioid prescription strategy based on our results will limit unused opioid pills while maintaining pain relief.

Keywords: opioids

LO11

Opiate prescribing in Ontario emergency departments

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Introduction: Increased prescribing of high potency opioids has been associated with increasing opioid addiction and linked to serious adverse outcomes including misuse, diversion, overdose and death. Problems related to opioids are a major Canadian public health concern yet few data are available on prescribing in most Canadian provinces. The objective of this study was to describe opioid prescribing in Ontario EDs and patient harms associated with this practice. **Methods:** We conducted a population-based cohort study among Ontario residents aged 15-64 years who were eligible for public drug coverage between April 2008 and March 2012. Using administrative databases, we identified patients with no opioid use in the past 12 months who received a prescription opioid from an emergency or family physician. Patients were followed for 2 years following their index prescription. The primary outcome was hospital admission for opioid toxicity and secondary outcome was dose-escalation exceeding 200 mg morphine equivalents (MEQ). **Results:** Of the 77,270 unique patients included, 33,492 (43.3%) and 43,778 (56.7%) prescriptions were issued by emergency physician (EP) and family physicians (FP), respectively. FP patients were older (45.9 vs 41.2 yr, MSD 0.35), had fewer ED visits (0.9 vs 2.3, MSD 0.46), and more FP visits (11.5 vs 8.7 MSD 0.31) in the year prior to their index visit. For combination products, EPs were more likely to prescribe oxycodone compared to FPs (37.2% vs 16.7%, Δ 20.5, 95% CI: 19.9, 21.2). For single agent products, EPs were more likely to prescribe hydromorphone compared to FPs (44.5% vs 21.7%, Δ 22.8, 95% CI: 20.4, 25.2). FPs were more likely to prescribe codeine either as a combination or single agent formulation. EP prescriptions led to significantly more hospital admissions for opioid toxicity (0.5% vs 0.3%, Δ 0.2, 95% CI: 0.1, 0.3), while FP prescriptions more often resulted in dose escalation beyond 200 mg MEQs (0.1% vs 0.7%, Δ 0.6, 95% CI: 0.4, 0.7). **Conclusion:** A large percentage of opioid-naïve patients receive an initial opiate prescription in the ED, where the use of high potency opioids is much more common, with 1/200 of these patients subsequently hospitalized for opioid toxicity. Creation of a physician accessible provincial registry would be useful to monitor opioid prescribing and dispensing, inform clinical practice, and identify patients at high-risk who may benefit from early interventions.

Keywords: opioid, physician prescribing, toxicity

LO12

The utility of femoral nerve blocks in the emergency department; a national survey of practice

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Introduction: Approximately 30,000 hip fractures occur annually in Canada, and the incidence will increase with an aging population. Pain control remains a challenge with these patients, as many are elderly and prone to delirium. Regional anesthesia has shown to be very effective with minimal risks, but it is not clear how often emergency physicians

are using this technique to provide analgesia for patients with proximal hip fractures. This is the first Canada-wide survey to evaluate the use of regional anaesthesia in the emergency department for hip fractures. It also evaluates physician comfort level with performing these blocks, perceived educational needs in this area, and barriers to performing nerve blocks. **Methods:** A 13-question survey was sent to 1041 members of the Canadian Association of Emergency Physicians via email in January and February of 2016. Data was collected and analysed using an online collection program called "Survey Monkey". Ethics approval was obtained through the University of Manitoba Research Ethics Board. **Results:** 272 Emergency physicians and residents took part in the survey. The majority of respondents (75.9%) choose intravenous opioids as their first line of analgesia and only 7.6% use peripheral nerve blocks (PNB) as their first line choice for analgesia in hip fracture. In response to practitioner comfort with PNBs for hip fractures, most were not at all confident (45.0%) in their ability and many respondents have never performed a nerve block for a hip fracture (53.9%). The most commonly identified barriers to performing PNBs include lack of training, the time to perform the procedure and a lack of confidence. A larger percentage of respondents (34.2%), identified having had no training and no knowledge of how to perform PNBs for hip fractures. **Conclusion:** The vast majority of Canadian emergency physicians who took part in this survey do not utilize PNBs as a method of pain management for hip fractures. Over half have never performed one of these procedures and many have never received training in how to do so. Future efforts should focus on improving access to education, disseminating information regarding the effectiveness of PNB, and addressing logistical barriers in the ED.

Keywords: survey, regional anesthesia, emergency department

LO13

GridlockED: an emergency medicine game and teaching tool

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Introduction/Innovation Concept: In the controlled chaos of the emergency department (ED) it can be difficult for medical trainees similarly recognize that there is definite order to the chaos, and many may never truly appreciate its complexity. How should medical learners develop this skill? Didactic teaching cannot effectively portray the complexities of managing the ED. Much like education in cardiac arrest, trauma, and multi-casualty incident management, it is our belief that the management of patient flow through the ED is best learned through simulation. Thus, we developed GridlockED, a board game that requires players to work cooperatively to manage a simulated ED to win the game. **Methods:** GridlockED development took place over a six-month period during which iterative cycles of gameplay and redevelopment were used to optimize game mechanics and improve player engagement. The patient cases were created by medical students (PS, DT, JR) and subsequently reviewed for content validity by two attending emergency physicians (TC, AP). Input from attending emergency physicians, residents, medical students, and laypeople was integrated into the game through a Plan-Do-Study-Act (PDSA) model. **Curriculum, Tool, or Material:** Our game includes: 1) The game board; 2) Patient cards, which describe a patient, their level of acuity, and the tasks that must be completed in order to disposition the patient; 3) Event cards, which cause random positive or negative events to occur-much like random events occur in real life that change the dynamics of the ED; 4) Game Characters, which move around the board to denote where tasks are being completed; 5) A tracking sheet to follow how many tasks each character has performed in each turn; 6) A shift-time clock, which is

used to track the 'hours' of your shift; 7) A 'Gridlock counter', which tracks how many ED backups or adverse patient outcomes occur ('Gridlocks'). The goal of the game is to work cooperatively with your teammates to complete patient tasks and move patients through the ED to an ultimate disposition (e.g. admission, discharge). The game is won if you finish your shift before reaching the maximum number of 'Gridlocks' allowed. **Conclusion:** Initial responses to GridlockED have been very positive, supporting it as both an engaging board game and potential teaching tool. We are excited to see it validated through research trials and possibly incorporated into emergency medicine training at both student and postgraduate training levels.

Keywords: emergency department flow, simulation, board game

LO14

The CanadiEM Digital Scholars Program: An innovative international digital collaboration curriculum

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Introduction/Innovation Concept: Digital media are a new frontier in medical education scholarship. Asynchronous education resources facilitate a multi-modal approach to teaching, and allows residents to personalize their learning to achieve mastery in their own time. The CanadiEM Digital Scholars Program is a nationwide initiative that provides residents with practical experiences in creating digital educational materials under the supervision of experts in the field. The program allows for collaboration and access to mentorship from top digital educators from across North America. **Methods:** Interested residents accepted into the program spent a period of their PGY4 year completing modules developed in the theory and science behind digital education. Four modules, developed in an iterative process, have been built on the topics of podcasting, blogging, digital identity, and patient communication. Each fellow was supervised members of the CanadiEM team, a faculty member from the resident's home institution, and digital experts from across North America. **Curriculum, Tool, or Material:** The first fellow completed all aspects of the designed curriculum. Above this, he also engaged in blog content creation, initiated research on digital scholarship, and managed the editorial section of CanadiEM. The second fellow is currently halfway through his year (and is expected to complete the program within the year) and has co-authored 30 blog posts and 53 podcasts in 6 months. **Conclusion:** The CanadiEM Digital Scholars Program utilizes a novel approach to foster development of digital educators utilizing experts across North America. We have demonstrated the feasibility and sustainability with our initial pilot years. This program is being scaled next year to include two scholars per year, which will facilitate cross-collaboration between the scholars.

Keywords: innovations in emergency medicine education, social media, free open access education (FOAM)

LO15

Not a hobby anymore: Establishment of the Global Health Emergency Medicine organization at the University of Toronto to facilitate academic careers in global health for faculty and residents
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Introduction/Innovation Concept: Demand for training in global health emergency medicine (EM) practice and education across Canada is high and increasing. For faculty with advanced global health EM

training, EM departments have not traditionally recognized global health as an academic niche warranting support. To address these unmet needs, expert faculty at the University of Toronto (UT) established the Global Health Emergency Medicine (GHEM) organization to provide both quality training opportunities for residents and an academic home for faculty in the field of global health EM. **Methods:** Six faculty with training and experience in global health EM founded GHEM in 2010 at a UT teaching hospital, supported by the leadership of the ED chief and head of the Divisions of EM. This initial critical mass of faculty formed a governing body, seed funding was granted from the affiliated hospital practice plan and a five-year strategic academic plan was developed. **Curriculum, Tool, or Material:** GHEM has flourished at UT with growing membership and increasing academic outputs. Five governing members and 9 general faculty members currently run 18 projects engaging over 60 faculty and residents. Formal partnerships have been developed with institutions in Ethiopia, Congo and Malawi, supported by five granting agencies. Fifteen publications have been authored to date with multiple additional manuscripts currently in review. Nineteen FRCP and CCFP-EM residents have been mentored in global health clinical practice, research and education. Finally, GHEM's activities have become a leading recruitment tool for both EM postgraduate training programs and the EM department. **Conclusion:** GHEM is the first academic EM organization in Canada to meet the ever-growing demand for quality global health EM training and to harness and support existing expertise among faculty. The productivity from this collaborative framework has established global health EM at UT as a relevant and sustainable academic career. GHEM serves as a model for other faculty and institutions looking to move global health EM practice from the realm of 'hobby' to recognized academic endeavor, with proven academic benefits conferring to faculty, trainees and the institution.

Keywords: global health education, global health training, global health research

LO16

Safety and efficiency of emergency physician supplementation in a provincially nurse-staffed telephone service for urgent caller advice

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Introduction: In 2008 British Columbia created a nurse (RN) staffed telephone triage service, (TTS) to provide timely advice to non-911 callers (811). A perception exists that some callers are inappropriately directed to emergency departments (EDs) thereby worsening crowding. We sought to determine whether supplementary emergency physician (EP) triage would decrease ED visits while preserving caller safety and satisfaction. **Methods:** TTS RNs use computer algorithms and judgment to triage callers. Potentially sick callers are directed to "seek care now" (red calls). Often this is to an ED depending on acuity and time of day. In the Vancouver Health Region from April-September 2016 between 8:00-24:00 hours, a co-located EP also spoke with "red" callers to provide further guidance. Callers were followed up with 1 week and satisfaction was evaluated on a 5-point Likert scale. The TTS data was linked to the regional ED database to assess ED attendance within 7 days, and the provincial vital statistics database for 30-day mortality. Our primary outcome was the proportion of unique "red" callers who did not attend the ED compared with a historical cohort one year earlier without EP triage in place. Secondary outcomes were the proportion of "red" callers advised not to attend the ED but (a) attended, (b) admitted, or (c) died. **Results:** In the study period there were 5105 "red" calls of