

records (EMR). As adoption of EMRs accelerates among emergency medicine (EM) departments, postgraduate programs will need to adapt curricula related to communication in the patient record. In order to make targeted changes, clinician-educators need a better understanding of how the documentation practices of trainees develop and change over residency, as well as the challenges they face in effectively charting. We gathered the perspectives of EM residents on data entry in the EMR to identify opportunities for such change. **Methods:** We recruited residents from all five years of the Royal College EM residency program at Queen's University and conducted focus groups from August to October 2018. Data collection was audio recorded and later transcribed. Line-by-line coding was performed independently by both AR and NP. A final codebook was validated by ZH. The codebook was then thematically analyzed to identify and characterize themes from the data. The study was approved by the Queen's University Health Sciences Research Ethics Board. **Results:** 15 EM residents participated. Groups discussed similar challenges with charting, including time constraints, ensuring sufficient, but appropriate detail, variable preceptor expectations, and an inability to draw diagrams. All residents noted formal teaching of the SOAP note framework during medical school and reported receiving an introductory EMR session. Groups highlighted the importance of feedback, especially from physicians with medicolegal experience. They also described more informal learning strategies, including receiving tips from preceptors during shifts and reading the notes of others. They also reported that changes in their documentation practices as junior and senior residents were largely due to a graduation of responsibility and medicolegal considerations. **Conclusion:** Our results suggest there is a lack of formal postgraduate training for EM residents with respect to documentation in the EMR with reliance on informal teaching and feedback. Future work should explore opportunities to address this gap with various educational strategies, including the development of specific objectives, application of consistent expectations, modelling of excellent chart notes in teaching, and instruction by preceptors with medicolegal experience.

Keywords: documentation, electronic medical record, postgraduate education

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The HINTS exam: An often misused but potentially accurate diagnostic tool for central causes of dizziness

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Introduction: Dizziness is a common presentation in emergency departments (ED), accounting for 2-3% of all visits. The HINTS (Head impulse test, Nystagmus, Test of skew) exam has been proposed as a accurate test to help differentiate central from peripheral causes of vertigo. It is only applicable to patients presenting with acute vestibular syndrome (acute onset dizziness or vertigo, ataxia, nystagmus, nausea and/or vomiting, and head motion intolerance). We aimed to assess the diagnostic accuracy of HINTS in detecting central causes of dizziness and vertigo in adult patients presenting with AVS. **Methods:** We performed a medical records review of all patients with a presenting complaint of dizziness to a tertiary care ED between Sep 2014 and Mar 2018. We excluding those with symptoms >14days, recent trauma, GCS <15, hypotensive, or syncope/loss of consciousness. Data were extracted by 5 trained reviewers using a standardized data collection sheet. Individual patient data were linked with the

Institute of Clinical Evaluation Science (ICES) database to assess for any patients with a missed central cause. The primary outcome measure was a central cause of dizziness; cardiovascular accident (CVA), transient ischemic attack (TIA), brain tumour (BT) or multiple sclerosis (MS) as diagnosed on either computed tomography, magnetic resonance imaging, neurology consult or diagnostic codes within ICES. **Results:** 3109 patients were identified and 2309 patients met the inclusion criteria, of those 450 patients (44% male) were assessed using HINTS exam. Of those examined with HINTS, 7 patients (1.6% - 4 CVA 2 TIA 1 MS) were determined to have a central cause for their dizziness. HINTS had a sensitivity of 28.6% (95% CI 3.7 - 71%), specificity 95% (95% CI 92.6-96.9%). Of the individuals assessed with HINTS, only 16 presented with AVS (3.6%), of which three patients were found to have a central cause (CVA 2, TIA 1). HINTS in AVS for all central causes is 66.7% (95% CI 9.4-99.2%) sensitive but is 100% (95% CI 15.8-100%) for CVA alone (excluding TIA). Only 38% (16/42) of patients presenting with AVS were assessed using the HINTS exam. **Conclusion:** The current use of HINTS is inaccurate and it is used inappropriately in a large number of patients. Future studies should focus on the correct implementation of HINTS in the ED only in patients presenting with AVS. **Keywords:** clinical exam, vertigo

P107

Understanding the sensory experience of performing a rare, high-stakes clinical procedure: a qualitative study of clinicians with lived experience

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Introduction: Emergency physicians (EP) are expected to be competent in a variety of uncommon but life-saving procedures, including the bougie assisted cricothyrotomy (BAC). Given the rarity and high-stakes nature of the BAC, simulation is often used as the primary learning and training modality. However, mental practice (MP), defined as the "cognitive rehearsal of a skill in the absence of overt physical movement", has been shown to be as effective as physical practice in several areas, including athletics, music, team-based resuscitation and surgical skill acquisition. MP scripts incorporate cues from different sensory modalities to supplement instructions of how to complete the skill. We sought to explore EPs perspectives on the kinesthetic, visual and cognitive aspects of performing a BAC to inform the development of a MP BAC script. **Methods:** We undertook a qualitative interview study of EPs at a single tertiary care centre who had done a BAC in clinical practice. Participants were recruited using purposive sampling. The primary method for data collection was in-depth semi-structured qualitative interviews, which were recorded and transcribed verbatim. Data collection and analysis were concurrent; transcripts were coded independently by two researchers using qualitative content analysis on a coding framework based on the previously developed BAC checklist. At each procedural step, the kinesthetic, visual and cognitive cues that enhance MP were identified. **Results:** Eight EPs (5 staff; 3 Royal College residents) participated in the interviews. All participants had completed at least one BAC in their clinical practice. Data analysis revealed recurrent themes signifying successful completion of each procedural step. These include visual (ie. seeing a spray of blood upon entry into the airway) and kinesthetic (ie. feel of the tracheal rings on a finger) cues that describe aspects of the procedure not found in traditional teaching

modalities, such as textbooks. **Conclusion:** Knowledge gleaned from the interviews of EPs with lived experience gives us a deeper insight into the sensory aspects of performing a BAC in clinical practice. We expect that using these experientially derived cues to inform the development of a MP script will increase its validity and applicability to learners and for skill maintenance. Future work includes evaluating the utility of the developed script in acquiring and maintaining competence performing the BAC.

Keywords: mental practice, script

P108

Characterizing use of next-day ultrasound from the emergency department

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Introduction: Formal ultrasound imaging, with use of ultrasound technicians and radiologists, provides a valuable diagnostic component to patient care in the Emergency Department (ED). Outside of regular weekday hours, ordering formal ultrasounds can produce logistical difficulties. EDs have developed protocols for next-day ultrasounds, where the patient returns the following day for imaging and reassessment by an ED physician. This creates additional stress on ED resources – personnel, bed space, finances – that are already strained. There is a dearth of literature regarding the use of next-day ultrasounds or guidelines to direct efficient use. This study sought to accumulate data on the use of ED next-day ultrasounds and patient oriented clinical outcomes. **Methods:** This study was a retrospective chart review of 150 patients, 75 from each of two different tertiary care hospitals in Saskatoon, Saskatchewan. After a predetermined start date, convenience samples were collected of all patients who had undergone a next-day ultrasound ordered from the ED until the quota was satisfied. Patients were identified by an electronic medical record search for specific triage note phrases indicating use of next-day ultrasounds. Different demographic, clinical, and administrative parameters were collected and analyzed. **Results:** Of the 150 patients, the mean age was 35.9 years and 75.3% were female. Median length of stay for the first visit was 4.1 hours, and 2.2 hours for the return visit. Most common ultrasound scans performed were abdomen and pelvis/gyne (34.7%), complete abdomen (30.0%), duplex extremity venous (10.0%). Most common indications on the ultrasound requisition were nonspecific abdominal pain (18.7%), vaginal bleeding with or without pregnancy (17.3%), and hepatobiliary pathology (15.3%). Ultrasounds results reported a relevant finding 56% of the time, and 34% were completely normal. After the next-day ultrasound 5.3% of patients had a CT scan, 10.7% had specialist consultation, 8.2% were admitted, and 7.3% underwent surgery. **Conclusion:** Information was gathered to close gaps in knowledge about the use of next-day ultrasounds from the ED. A large proportion of patients are discharged home without further interventions. Additional research and the development of next-day ultrasound guidelines or outpatient pathways may improve patient care and ED resource utilization.

Keywords: emergency department, next-day ultrasound, ultrasound

P109

A retrospective cohort comparing symptom management of breathlessness and pain in cancer versus non-cancer conditions

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Introduction: In Nova Scotia, under the Paramedics Providing Palliative Care program, paramedics can now manage symptom crises in patients with palliative care goals and often at home without the need to transport to hospital. Growing recognition that non-cancer conditions benefit from a palliative approach is expanding the program. Our team previously found treatment of pain and breathlessness is not optimized, pain scores are underutilized, and paramedics were more comfortable (pre-launch) with a palliative approach in cancer versus non-cancer conditions. Our objective was to compare symptom management in cancer versus non-cancer subgroup. **Methods:** We conducted a retrospective cohort study. The Electronic Patient Care Record and Special Patient Program were queried for patients with palliative goals from July 1, 2015 to July 1, 2016. Descriptive analysis was conducted and results were compared with a t-test and Bonferroni correction ($\alpha = p < 0.007$). **Results:** 1909 unique patients; 765/1909 (40.1%) cancer and 1144/1909 (59.9%) non-cancer. Female sex: cancer 357/765 (46.7%), non-cancer 538/1144 (47.0%). Mean age cancer: 73.3 (11.65), non-cancer 77.7 (12.80). Top non-cancer conditions: COPD (495/1144, 43.3%), CHF (322/1144, 28.1%), stroke (172/1144, 15.0%) and dementia (149/1144, 13.0%). Comorbidities for cancer patients (range): 0 to 3; non-cancer 0 to 5. Most common chief complaint (CC) for cancer and non-cancer: respiratory distress, 10.8% vs 21.5%. Overall, no difference in proportion treated cancer vs non-cancer, 11.5% vs 10.1%, $p = 0.35$. Some difference in individual therapies: morphine 83/765 (10.8%) vs 55/1144 (4.8%), $p < 0.001$, hydromorphone 9/765 (1.2%) vs 2/1144 (0.2%), $p = 0.014$, salbutamol 38/765 (5.0%) vs 5/1144 (0.4%), $p < 0.001$ and ipratropium 27/765 (3.5%) vs 134/1144 (11.7%), $p < 0.001$, in addition to any support with home medication which is not queriable. Pre-treatment pain scores were documented more often than post-treatment in both groups (58.7% vs 25.6% ($p < 0.001$), 57.4% vs 26.9% ($p < 0.001$)). **Conclusion:** Non-cancer patients represent an important proportion of palliative care calls for paramedics. Cancer and non-cancer patients had very similar CC and received similar treatment, although low proportions, despite pre-launch findings that non-cancer conditions were likely to be under-treated. Pain scores remain underutilized. Further research into the underlying reason(s) is required to improve the support of non-cancer patients by paramedics.

Keywords: non-cancer, palliative care, paramedics

P110

Are there differences in student academic and clinical performance after rotations at tertiary or community care Emergency Medicine teaching sites?

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Introduction: Canadian undergraduate medical Emergency Medicine (EM) rotations are often completed at either tertiary care centres or regional community hospitals. While the latter offer students exposure to different practice settings and population needs, many students perceive that teaching at tertiary care EM departments is superior to that in community hospitals. At our institution, third year undergraduate medical students complete three-week EM rotation at either a tertiary centre or a community hospital. We compared academic and clinical performance between students trained in tertiary care centres and students trained in community hospitals. **Methods:** Academic and clinical performance in EM was evaluated based on the results of an EM-specific multiple choice examination