difficult peer review decisions. In addition, the intern learned about CJEM values and norms by participating in monthly videoconference meetings and quarterly editorial board meetings. To enhance an academic career, the intern was assigned two writing projects under the guidance of senior editors for publication in CJEM, and completed an online critical appraisal course. **Conclusion:** The inaugural editorial intern gained experience as an editor and produced scholarly work. We feel the internship met its first two goals, and CJEM has committed to continue the internship annually. The ultimate determination of whether the internship achieved its third goal will only be known after longitudinal tracking of participants career involvement in academic publishing and editing.

Keywords: innovations in emergency medicine education, knowledge translation, medical writing

LO13

Eye care in the emergency department: what proportion of patients presenting to the emergency department with isolated eye related complaints could alternatively be seen by an optometrist?

K. Phillips, MD, L. Thorpe, OD, G. Innes, MD, MSc, University of Calgary, Calgary, AB

Introduction: Approximately 2-3 percent of emergency department (ED) visits are due to eye-related complaints, adding to the ED workload. Many of these could be seen instead by an optometrist who specializes in the examination, diagnosis and treatment of eye-related disorders. We sought to determine the proportion of ED patients with isolated eye-related complaints that could be managed by an optometrist. **Methods:** We performed an administrative database study and descriptive analysis of all patients presenting to Calgary EDs with eye-related complaints during a one-year period. We determined optometry eligibility by reviewing discharge diagnoses and assessing whether that condition was within the Alberta Association of Optometrys (AAO) defined scope of practice. Patients were considered ineligible if their condition was related to bites, stings, thermal burns, assault, MVA or operative complications; if they required hospitalization or referral to a non-eye specialist (e.g. neurology); if they had associated headache, dizziness, syncope, hypertension, neurologic abnormality (e.g. diplopia); if they had facial cellulitis, orbital infections, adverse drug effects, or if they underwent observation in the ED because of concerns about a cardiac or neurological condition. **Results:** In 2015, 7686 patients were seen in Calgarys 5 EDs with eye related complaints. Of these, 76.2% were optometry-eligible and 75% of optometry-eligible patients arrived during day or evening hours (0800-2100). The most common presenting complaints were visual disturbance (24.8%), redness (22.1%), and pain or photophobia (16.4%). Optometry-eligible patients waited an average of 110 min and had an ED LOS of 149 min. **Conclusion:** Approximately 3 in every 4 patients seen in the ED for eye related complaints could alternatively be seen by an optometrist. Further research is required to establish the feasibility of diversion to an optometrist from the ED for eye-related complaints.

Keywords: quality improvement and patient safety, eye care, emergency department

LO14

In emergency department, do serum biomarkers are useful to screen independent frail seniors exposed to functional or mobility impairments after a minor injury?

M. Emond, MD, MSc, M. Blouin, PhD, M. Sirois, PhD, M. Aubertin-Leheudre, PhD, L. Griffith, PhD, L. Nadeau, MD, R. Daoust, MD, MSc, J. Lee, MD, MSC, Université Laval, Department of Emergency Medicine, Laval, QC

Introduction: Frailty is a geriatric syndrome conferring a high risk of declining functional capacities. Some serum biomarkers were associated with frailty, but no study has investigated this possible association among community-dwelling seniors with minor injuries in the emergency department (ED). The aim was to determine if ED serum biomarker assay combined with frailty status improve the prediction of 3-months functional or mobility impairments in this population, beyond frailty status alone. **Methods:** This prospective sub-study of the CETI cohort includes 190 participants (age 65 years, ED consultation within 2 weeks of a minor injury, independent in daily activities 4 weeks prior to injury, and discharged home from EDs). Biomarkers were obtained from blood samples at baseline (ED visit). Normal vs. at risk physiological states were defined according to clinical threshold values. Also, the patients were screened for frailty at baseline) while their functional (OARS scale) and mobility characteristics were assessed at the ED visit and 3 months later. Patients were classified as robust or pre-frail/frail according of the CHSA-CFS and SOF scales. Simple generalized linear models with a binomial distribution and a log link function were used to explore the differences in functional and mobility outcomes at three months across sub-groups (RR). **Results:** When compared to robust ones, ED pre-frail/frail patients were less functional in their instrumental activities of day living ($p = 0.004$), slower walkers ($p = 0.02$), more frequent users of walking aids ($p = 0.03$), more fearful of falling ($p = 0.006$), went outside their home less often weekly ($p = 0.004$) and had higher abnormal creatinine levels ($p = 0.02$). We observed an overall 3-month functional decline in around 10% of patients combined with worsened mobility characteristics. We found that vitamin D [RR: 0.51 (0.07-3.9)], glucose (RR: 0.27 [(0.03-2.16)]) and creatinine (RR: [1.10 [(0.40-2.97]) modulate the prediction of 3-months mobility impairments. However, ED frailty status with CHSA-CFS and SOF scales clearly remained the stronger predictor of mobility impairments [vitamin DRR: 2.93 (1.12-7.65); glucoseRR: 2.36 (0.85-6.55); creatinine: RR2.06 (1.21-3.53)]. **Conclusion:** Since they do not improve the prediction of 3-months functional or mobility impairments associated with frailty status, ED biomarker assays are not useful in adequately screening for frailty among independent seniors with minor injuries.

Keywords: emergency department, geriatrics, frailty

LO15

Treatment of asymptomatic bacteriuria in elderly patients with delirium: a systematic review

A. Suleman, BHSc, J. Krakovsky, P. Joo, MD, University of Ottawa, Ottawa, ON

Introduction: It is typical to look for UTI in delirious elderly patients, despite a high prevalence of asymptomatic bacteriuria (ASB) in this population. A common presentation of infection is delirium, which often has a non-specific and multifactorial etiology. Therefore, when bacteriuria is present with delirium in the absence of urinary symptoms, physicians prescribe antibiotics for the suspected UTI-induced delirium. We set to determine whether antibiotic treatment in the elderly presenting with delirium in the presence of ASB resulted in resolution of delirium. **Methods:** Literature searches were performed in MEDLINE, EMBASE, CINAHL and Cochrane Library. Abstracts were independently reviewed by two authors for decision to include for full-text review. Inclusion criteria included female gender, >65 years of age, presenting in an acute care setting with delirium and ASB. The primary outcome was resolution of delirium. The secondary outcomes were mortality, frequency of side effects from antibiotics, length of hospital stay and readmission for delirium. **Results:** 930 abstracts published from 1946-2017 were screened, and 42 were included for full text

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review. No studies were eligible for inclusion in the systematic review, as none addressed the primary outcome. One study addressed the outcomes of poor functional recovery after delirium and the rate of improvement of delirium symptoms after presentation of delirium with ASB. **Conclusion:** Even though current guidelines recommend against treatment of ASB, no guideline states whether ASB should be treated in elderly patients with delirium. Little evidence exists to elucidate whether treating delirious patients with ASB results in improvement in outcomes. Future studies should focus on demonstrating the relationship between resolution of delirium with antibiotic treatment. This will clarify whether delirium is a true symptom of ASB and whether treatment results in faster resolution of delirium.
Keywords: bacteriuria, asymptomatic, delirium

LO16

Showing your work: experiences with mind maps and faculty teaching

K. L. Gossack-Keenan, T. M. Chan, MD, MHPE, E. Gardiner, MD, M. Turcotte, K. de Wit, MBChB, MSc, MD, J. Sherbino, MD, MEd, McMaster University, Hamilton, ON

Introduction: Cognitive processing theories postulate that decision making depends on both fast and slow thinking. Experienced physicians (EPs) make diagnoses quickly and with less effort by using fast, intuitive thinking, whereas inexperienced medical students rely on slow, analytical thinking. This study used a cognitive task analysis to examine EPs cognitive processes and ability to provide knowledge translation to learners. **Methods:** A novel mind mapping approach was used to examine how EPs translate their clinical reasoning to learners, when evaluating a patient for a possible venous thromboembolism (VTE). Nine EPs were interviewed and shown two different videos of a medical student patient interview (randomized from six possible videos). **Results:** EPs were asked to demonstrate their clinical approach to the scenario using a mind map, assuming they were teaching a learner in the Emergency Department. EPs were later re-interviewed to examine response stability, and given the opportunity to make clarifying or substantive mind map modifications. Maps were broken into component pieces and analyzed using mixed-methods techniques. A mean of 15.7 component pieces were identified within each mind map (standard deviation (SD) 7.8). Maps were qualitatively coded, with a mean of 2.8 clarifying amendments (e.g. adding a time course caveat) (SD 1.5-5.75) and 4.4 substantive modifications (e.g. changing the flow of the map) (SD 2-5). **Conclusion:** Resulting mind maps displayed significant heterogeneity in teaching points and the degree to which EPs used slow thinking. EPs frequently made fast thinking jumps, although learners could prompt slow thinking by questioning unclear points. This is particularly important as learners engage in cognitive apprenticeship throughout their training. An improved understanding of EPs cognitive processes through mind mapping will allow learners to improve their own clinical reasoning (Merrit et al., 2017). Educating EPs on these processes will allow modification of their teaching styles to better suit learners.
Keywords: innovations in emergency medicine education, mind mapping, fast thinking

LO17

Examining publication bias among randomized controlled trials in child health research: a follow-up study

L. K. Crockett, MSc, T. Klassen, MD, MSc, George and Fay Yee Centre for Health Care Innovation, Winnipeg, MB

Introduction: Non-publication of trial findings results in research waste and compromises medical evidence and the safety of interventions in child health. The objectives of this study were to replicate, compare and contrast findings of a previous study (Klassen et al., 2002) to determine the impact of ethical and editorial mandates to register and publish findings. **Methods:** Abstracts accepted to the Pediatric Academic Societies meetings (2008-2011) were screened in duplicate to identify Phase-III RCTs enrolling pediatric populations. Subsequent publication was ascertained through a search of electronic databases. Study internal validity was measured using Cochrane Risk of Bias and Jadad Scale, and key variables (e.g., trial design, study stage) were extracted. Pearson X2, t-tests and Wilcoxon rank sum tests were used to examine association between variables and publication status. Logistic regression, log-rank tests, rank correlation and Egger regression were used to assess predictors of publication, time to publication and publication bias, respectively. **Results:** Compared to our previous study, fewer studies remained unpublished (27.9% vs. 40.9%, $p = .007$). Abstracts with higher sample sizes ($p = 0.01$) and those registered in ClinicalTrials.gov were more likely to be published ($p < .0001$). There were no differences in quality measures/risk of bias or in preference for positive results ($p = 0.36$) between published and unpublished studies. Mean time to publication was 26.5 months and published manuscripts appeared most frequently in Pediatrics, the Journal of Pediatrics, and Pediatric Emergency Care. The funnel plot ($p = 0.04$) suggests a reduced but ongoing existence of publication bias among published studies. Overall, we observed a reduction in publication bias and in preference for positive findings, and an increase in study size and publication rates over time. **Conclusion:** Despite heightened safeguards and editorial policy changes in recent decades, publication bias remains commonplace and presents a threat to assessing the efficacy and effectiveness of interventions in child health. Our results suggest a promising trend towards a reduction in publication bias over time and positive impacts of trial registration. Further efforts are needed to ensure the entirety of evidence can be accessed when assessing treatment effectiveness.
Keywords: randomized controlled trials, publication bias, trial registration

LO18

Access to Take Home Naloxone in the Royal Alexandra Hospital's emergency department for patients at risk of an opioid overdose

D. W. Dabbs, BSc, BScN, K. Dong, MD, MSc, K. Lavergne, PhD, H. Brooks, BSc, E. Hyshka, BA, MA, PhD, Faculty of Medicine & Dentistry, University of Alberta, Edmonton, AB

Introduction: Take Home Naloxone (THN) programs prevent death from opioid poisoning by training laypersons to recognize an overdose and administer naloxone. Dispensing THN through the emergency department (ED) is particularly critical because an ED visit for opioid poisoning strongly predicts future mortality. Many EDs have implemented THN programs, yet almost no literature examines the reach of such initiatives. To address this gap, we conducted a chart review of all patients presenting for opioid poisoning to an urban tertiary hospital, with a large ED-based THN program. This exploratory study hypothesized that more than 50% of ED patients presenting for opioid poisoning would be offered a THN kit. **Methods:** Data on demographics, clinical characteristics, and THN kit dispensing were extracted and analyzed from the charts of all ED patients presenting with a primary diagnosis of opioid poisoning between April 1 2016 and April 30 2017. Logistic regression analyzed predictors of being offered a THN kit. **Results:** A total of 347 ED visits for 301 unique patients occurred during the study period. The mean age $\pm$ SD of patients was 38 ± 14 years, and 69% were male. In 49% of ED visits, a THN kit was offered; 73% of these episodes had a THN kit dispensation. Patients who were

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