

LOS at the time of O3DY completion was 1:40 (IQR 1:34-1:46). Characteristics of patients eligible, yet who declined to participate, were similar to the study population. The sensitivity of the O3DY for AMS was 71.4% (95%CI 47.8-95.1), and specificity was 56.3% (46.7-65.9). Sensitivity of the SBT was 85.7% (67.4-99.9) and specificity was 58.3% (48.7-67.8). Inter-rater reliability for the O3DY ($k = 0.64$) and SBT ($k = 0.63$) were moderate. **Conclusion:** In a cohort of geriatric patients presenting to an inner-city, academic ED the O3DY and SBT tools demonstrate moderate sensitivity and specificity for the detection of AMS. **Keywords:** geriatrics, altered mental status, Ottawa

MP15

Profile and circumstances of cycling injuries: Data from an urban emergency department

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Introduction: Cycling as a form of active transportation is popular in many urban communities. However, little is known about the prevalence and circumstances of cycling injuries, particularly injuries resulting from single bicycle crashes which are not recorded in road trauma surveillance systems based on police crash reports. This study aimed to examine the profile and circumstances of cycling injuries seen in an urban emergency department (ED). **Methods:** This was a cross-sectional historical chart review study. All injured patients attending our ED are electronically flagged according to mechanism of injury. We reviewed the medical charts of all ED visits in 2015 that were flagged as "Cyclist Injury" or "Fall" to identify all cyclists who were injured while travelling on public roads (including sidewalks). Off road injuries were excluded. **Results:** In 2015, a total of 6450 ED presentations were flagged as cyclist injury ($n = 694$) or fall ($n = 5756$), and 667 cycling injuries met our inclusion criteria. Of these, 73 (11%) were admitted to hospital. The most common mechanisms of injury were fall from bicycle (51%), crash into stationary object (16%), and collisions with moving motor vehicles (25%). Potential contributing factors included alcohol or drug impairment (11%), road hazards (9%), avoidance manoeuvre (5%) and dooring (3%), although the cause of the crash was generally poorly documented in the medical charts. The most common injured body regions were upper extremity (55%) followed by head and neck (34%). Most injuries were abrasions/lacerations and fractures. **Conclusion:** Two thirds of cyclist injuries in this series were caused by single bicycle incidents, events not captured in official road trauma statistics which are based on police crash reports. The large majority of injured cyclists were treated and released from the ED. In most cases, the cause of the crash was poorly documented. This data highlights the limitations of using police crash reports or hospital admission records for road trauma surveillance and the significant knowledge gap in our understanding of causative factors leading to cycling injuries.

Keywords: road trauma, cyclists

MP16

Quality of work life among nurses and physicians in Québec rural emergency departments

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Introduction: Recruitment and retention of healthcare staff are difficult in rural communities. Poor quality of work life (QWL) may be an underlying factor as rural healthcare professionals are often isolated and work with limited resources. However, QWL data on rural emergency (ED) staff is limited. We assessed QWL among nurses and physicians as part of an ongoing study on ED care in Québec. **Methods:** We selected EDs offering 24/7 medical coverage, with hospitalization beds, in rural or small towns (Stats Canada definition). Of Québec's 26 rural EDs, 23 (88%) agreed to participate. The online Quality of Work Life Systemic Inventory (QWLSI, with 1 item per 34 "life domains"), was sent to all non-locum ED nurses and physicians (about 500 potential participants). The QWLSI is used for comparing QWL scores to those of a large international database. We present overall and subscale QWL scores as percentiles (PCTL) of scores in the large database, and comparisons of nurses' and physicians' scores (t test). **Results:** Thirty-three physicians and 84 nurses participated. Mean age was 39.8 years ($SD = 10.1$): physicians = 37 (7.7) and nurses = 40.9 (10.7). Overall QWL scores for all were in the 32nd PCTL, i.e. low. Nurses were in the 28th PCTL and physicians in the 44nd ($p > 0.05$). For both groups, QWL was below the 25th PCTL i.e. very low, for "sharing workload during absence of an employee", "working equipment", "flexibility of work schedule", "impact of working hours on health", "possibility of being absent for familial reasons", "relations with employees". The groups differed ($p < 0.05$) on only two subscales: remuneration and career path. For remuneration, scores were similar on fringe benefits (nurses 22nd PCTL, physicians 32nd) and income security (nurses 72nd, physicians 74th), but differed on income level (nurses 74th, physicians 93rd). The groups differed on all 3 career path items: advancement possibilities (nurses 53th, physicians 91st), possibilities for transfer (nurses 51nd, physicians 84th) and continuing education (nurses 18th, physicians 49th). **Conclusion:** Overall QWL among rural ED staff is poor. Groups had similar QWL scores except on career path, with physicians perceiving better long-term prospects. Given difficulties in rural recruitment and retention, these findings suggest that QWL should be assessed in rural and urban EDs nationwide.

Keywords: rural, quality of work life, emergency

MP17

Improving Communications during Aged Care Transitions (IMPACT): lessons learned

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Introduction: When patients transition from long term care (LTC) to emergency departments (ED), communication among clinicians in different settings is often poor. We pilot tested a transfer form to facilitate communications of handover information among LTCs, emergency medical services (EMS), and EDs regarding LTC residents transitioning to and from the ED. We interpret implementation challenges in light of the "theoretical domains" implementation framework in order to produce lessons for future healthcare communication interventions. **Methods:** We provided setting specific training and a user guide to 13 participating sites, collected 90 forms to assess completion rates, and assessed perspectives on the form from 266 surveys of healthcare providers. Throughout the study, staff kept detailed notes on implementation of the form. We retrospectively categorized implementation challenges reported by survey respondents, and/or recorded in staff implementation notes, according to the theoretical domains framework. **Results:** The LTC patient transfer forms were used in 36.4% of

transitions (90/247), and were completed most often by staff in the LTC (57/90, 63%). Survey results indicated that ED and EMS staff felt the information on the form was useful to them, although they rarely completed their sections of the form. Implementation challenges included low awareness/recognition of the form among healthcare providers, belief that the form distracted from patient care, lack of time for form completion, negative reinforcement for LTC staff (who saw little return for the time they invested in completing the form), and mistrust among clinicians who work in different settings. **Conclusion:** Future efforts to improve healthcare communications must be acceptable for all clinicians. Innovation should balance the workload required among sites/clinicians and the benefits that the intervention offers to sites/clinicians should be explicitly tracked and reported. For this intervention, more effort should be made to inform LTC sites that the transfer information they provide is useful for EMS and ED clinicians. Moreover, gaps in perspectives and lack of trust among clinicians who work in different settings must be recognized and addressed in any multi-site communication intervention.

Keywords: handover, communication, seniors

MP18

A patient focused information design intervention to support the mTBI Choosing Wisely recommendation

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Introduction: Within Alberta, 30% of patients presenting to emergency with minor traumatic brain injury (mTBI) will receive a CT scan before being sent home, regardless of whether it was clinically indicated. Choosing Wisely (CW) Canada recommends using validated clinical decision support to determine whether a CT scan is necessary for patients presenting with a mTBI. In order to provide patients with information on the risks and benefits of CT scans in mTBI and to encourage discussions between patients and their doctor, the Emergency Strategic Clinical Network (ESCN) designed a patient focused information visualization on CT scans for head injuries. **Methods:** The ESCN, Physician Learning Program and CW Alberta partnered with the Mount Royal University Department of Information Design to develop a patient information visualization (infographic) intervention. Students spent a semester developing these infographics on Choosing Wisely recommendations, which were then presented to stakeholders. A student was then selected to develop a final design. Refinement of the design took place in consultation with clinical experts and tested in two patient focus groups. The final design was evaluated against the International Patient Decision Aid Standards checklist. The infographic was posted in 2 local emergency department waiting rooms. A survey was administered to any patients in the waiting room when volunteers were available. The survey was designed to evaluate whether the tool influenced patient beliefs about the risks and benefits of CT scans, and their willingness to engage in a discussion with their doctor. **Results:** In a 26 day period, 90 patients consented and completed the survey. Before reading the infographic, 33% of patients thought that after a head injury a CT was always a good idea and 63% thought it was sometimes a good idea. 82% and 91% of patients stated the poster helped them understand the indications and risks of CT imaging for mTBI. After viewing the poster, only 15% of patients felt that a CT was always a good idea after a mTBI. **Conclusion:** The mTBI patient infographic significantly changed patient perceptions regarding the need for CT scans in the setting of mTBI. This study demonstrates that targeted patient education materials can help support CW recommendations.

Keywords: Choosing Wisely, head injury, patient education

MP19

Comparison of the psychometric properties of the VAS, FPS-R and CAS in the pediatric emergency department

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Introduction: Appropriate pain management relies on the use of valid, reliable and age-appropriate tools that are validated in the setting in which they are intended to be used. The aim of the study was to assess the psychometric properties of pain scales commonly used in children presenting to the pediatric emergency department (PED) with an acute musculoskeletal injury. **Methods:** Convergent validity was assessed by determining the Spearman's correlations and the agreement using the Bland-Altman method between the Visual Analogue Scale (VAS), Faces Pain Scale-Revised (FPS-R) and Color Analogue Scale (CAS). Responsiveness to change was determined by performing the Wilcoxon signed-rank test between the pre-post analgesia mean scores. Reliability of the scales was estimated using relative (Spearman's correlation, Intraclass Correlation Coefficient) and absolute indices (Coefficient of Reliability). **Results:** A total of 495 participants was included in the analyses. Mean age was 11.9 ± 2.7 years and participants were mainly boys (55.3%). Correlation between each pair of scales was 0.79 (VAS/FPS-R), 0.92 (VAS/CAS) and 0.81 (CAS/FPS-R). Limits of agreement (80%CI) were -2.71 to 1.27 (VAS/FPS-R), -1.13 to 1.15 (VAS/CAS) and -1.45 to 2.61 (CAS/FPS-R). Responsiveness to change was demonstrated by significant differences in mean pain scores, among the three scales, between pre- and post-medication administration ($p < 0.0001$). ICC and CR estimates suggested acceptable reliability for the three scales at 0.79 and ± 1.49 for VAS, 0.82 and ± 1.35 for CAS, and 0.76 and ± 1.84 for FPS-R. **Conclusion:** The scales demonstrated good psychometric properties with a large sample of children with acute pain in the PED. The VAS and CAS showed a stronger convergent validity, while FPS-R was not in agreement with the other scales. Clinically, VAS and CAS scales can be used interchangeably to assess pain intensity of children with acute pain.

Keywords: pain, pediatrics, pain intensity scale

MP20

Prevalence of incidental findings on chest computed tomography in patients with suspected pulmonary embolism in the ED

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Introduction: Computed tomographic pulmonary angiograms (CTPAs) are often ordered to evaluate pulmonary embolism (PE) in the emergency department (ED). However, these studies often yield alternative diagnoses and report incidental findings that lead to additional unnecessary investigations. Our objective was to assess the prevalence and significance of such findings and their implications in patient management. **Methods:** This is a retrospective cohort study of adults presenting to two tertiary care EDs in 2015, being evaluated with CTPA for PE. Data was extracted by two reviewers from electronic CT records with inter-rater reliability reported using kappa statistic. We measured prevalence of PE, incidental findings and alternative diagnoses with data reported as mean and standard deviation (SD). Univariate analyses were performed with t-test for continuous variables and Mantel-Haenszel test for categorical variables. A sample size of 770 was calculated based on an expected difference in prevalence between significant and