**P035**

**Improving emergency department outcomes for Alberta seniors**

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**Introduction:** In 2010, Alberta Health Services (AHS) introduced Transition Coordinators (TC), a unique nursing role focused on assessment of elderly patients to support safe discharge home. The objective of this study is to describe patient characteristics to predict safe discharge for seniors (≥65 years of age) and identify barriers that can be used to improve ED outcomes for these patients. **Methods:** Two trained research assistants conducted a chart review of the TC referral form and the ED Information System (EDIS) for patients seen by TCs between April and June 2017. Information on patient characteristics, existing home care and community services, the index ED visit and subsequent revisits were extracted. Data were entered into a purpose-built database in REDCap. A descriptive analysis was conducted; results are reported as mean ± standard deviation (SD), median (interquartile range [IQR]), or proportions, as appropriate. **Results:** A total of 1411 patients with TC referral forms were included (779 [55%] female). The majority of these patients were ≥65 (1350 [96%]) with a mean age of 82 ± 9.6. The majority of patients were triaged as a CTAS of 3 (835 [59%]) with the most common reasons for presentation including: shortness of breath (128 [9%]), abdominal pain (94 [6.7%]), and general weakness (81 [5.7%]). Nearly one third of patients (391 [30%]) were already receiving home care services; (96 [7%]) received a new home care referral as a result of their ED visit. Of all the patients, 1111 (79%) had comorbidities (median: 3 [IQR: 1 to 5]). Overall, 38% (n = 536) patients had visited the ED in the 12 months prior to the index with a median of 2 [IQR: 1 to 4) visits. On average, patient's length of stay for their index visits was 12 ± 0.35 hours. Admissions occurred for 599 [42%] patients with delays being common; the mean time between the decision to admit and the patient leaving the ED was 6 hrs ± 0.23. **Conclusion:** Seniors in the ED are complex patients who experience long lengths of stay and frequent delays in decision-making. Upon discharge, few patients receive referrals to community supports, potentially increasing the likelihood of revisits and readmissions. Future studies should assess whether the presence of TCs is associated with better outcomes in the community. **Keywords:** transitions in care

**P036**

**Sensitivity and false negatives in the use of a prehospital sepsis alert**

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**Introduction:** Prehospital sepsis alerts assist paramedics in identifying patients with sepsis and in communicating this diagnosis to receiving facilities. Following the prospective implementation study of our regional systemic inflammatory response syndrome-based alert criteria (Alert), the purpose of this sub-study was to determine the cause of Alert false negatives (patients without an Alert that subsequently met sepsis criteria in the Emergency Department (ED)). Additionally, the sensitivity of the Alert for detecting sepsis was compared to the Quick Sequential Organ Failure Assessment (qSOFA) and Hamilton Early Warning Score (HEWS). **Methods:** This study was an additional analysis of the prospective Alert implementation study. Included patients were ≥ 18 years old, transported by a regional Emergency Medical Service and met severe sepsis or septic shock criteria (SS/SS, 2012 Surviving Sepsis Guidelines) in regional EDs in 2013. False negative patients were identified prospectively and reviewed by comparing paramedic determined Alert status to the retrospective application of the Alert criteria to Paramedic Call Report (PCR) data. The Alert sensitivity was first calculated from prospective data, then retrospective sensitivities of the Alert, qSOFA and HEWS were calculated by retrospectively applying these tools to PCRs, using ED diagnosis of SS/SS as reference standard. **Results:** In 2013, 229 patients met SS/SS criteria in the ED and had PCRs available; 115 (50.2%) were male and median age [interquartile range] was 76.0 [63.0-84.0]. Of 229, 149 (65.0%) arrived in the ED without an Alert (false negatives) and 46 (30.9%) of these met Alert criteria retrospectively and were therefore missed by paramedics. Sensitivity of the Alert was 34.9% when applied by paramedics and 41.5% when applied retrospectively to PCRs. The retrospective sensitivities of the qSOFA and HEWS were 37.6% and 67.7%, respectively. **Conclusion:** In ED patients diagnosed with SS/SS who arrived with no Alert, the majority (69.1%) were missed by the Alert criteria, rather than by paramedic application of the tool. The Alert had a sensitivity of 34.9%. When applied retrospectively and compared to the Alert, qSOFA had similar sensitivity and HEWS had increased sensitivity. Future research should focus on deriving improved alerts or implementing those with higher accuracy, such as HEWS. **Keywords:** emergency medical services, pre-alert, sepsis

**P037**

**Adherence to the Canadian CT Head Rule in a Nova Scotian emergency and trauma centre**

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**Introduction:** Choosing Wisely Nova Scotia (CWNS), an affiliate of Choosing Wisely Canada™ (CWC), aims to address unnecessary care and testing through literature-informed lists developed by various disciplines. CWC has identified unnecessary head CTs among the top five interventions to question in the Emergency Department (ED). Zyluk (2015) determined the Canadian CT Head Rule (CCHR) as the most effective clinical decision rule in adults with minor head injuries. To better understand the current status of CCHR use in Nova Scotia, we conducted a retrospective audit of patient charts at the Charles V. Keating Emergency and Trauma Center, in Halifax, Nova Scotia. **Methods:** Our mixed methods design included a literature review, retrospective chart audit, and a qualitative audit-feedback component with participating physicians. The chart audit applied the guidelines for adherence to the CCHR and reported on the level of compliance within the ED. Analysis of qualitative data is included here, in parallel with in-depth to contextualize findings from the audit. **Results:** 302 charts of patients having presented to the surveyed site were retrospectively reviewed. Of the 37 cases where a CT head was indicated as per the CCHR, a CT was ordered 32 (86.5%) times. Of the 176 cases where a CT head was not indicated, a CT was not ordered 155 (88.1%) times. Therefore, the CCHR was followed in 187 (87.8%) of the total 213 cases where the CCHR should be applied. **Conclusion:** Our study reveals adherence to the CCHR in 87.8% of cases at this ED. Identifying contextual factors that facilitate or hinder the application of CCHR in practice is critical for reducing unnecessary CTs. This work has been presented to the physician group to gain physician engagement and to elucidate enablers and barriers to guideline adherence. In light of the frequency of CT heads ordered EDs, even a small reduction would be impactful.