physicians alone (0.88%, CI 0.09) (p < 0.0001). Return rates were statistically higher for PGY2 (1.67% CI 0.35) and PGY3 (1.66% CI 0.28) residents compared to staff physicians alone (p < 0.0001). There was no difference in return visit rates between staff physicians and third year medical students (1.07% CI 0.27), fourth year medical students (1.21% CI 0.37), PGY1 (1.42% CI 0.22), PGY4 (1.23% CI 0.54) or PGY5 (1.33% CI 0.49) residents. **Conclusion**: This study demonstrated that the involvement of learners in ED patient assessments increased the rate of short-term unscheduled return visits. Moreover, return visit rates were highest for PGY2 and PGY3 residents. Further work is needed to understand the factors that contribute to this phenomenon.

Keywords: bounce backs, short-term unscheduled return visits

P042

Pilot study for the inter-arm blood pressure systematic measurement during the diagnosis of transient ischemic attack in the emergency department

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Introduction: Our principal aim was to document the feasibility of the systematic measurement of the inter-arm blood pressure difference (IABPD) during an episode of transient ischemic attack (TIA) or mild stroke diagnosed in the Emergency Department (ED). As secondary goal was to compare the systolic blood pressure (BP) at triage with the systolic BPs measured during the IABPD. **Methods**: This is a single center pilot study. Patients presenting in the ED for a diagnosis of TIA were recruited. Once patient has been triaged and diagnosed of TIA, a research assistant made sure that the patient lay on a stretcher for at least 5 minutes. Two automated sphygmomanometers were applied, on each arm. No specific device or device calibration were required. Three consecutive simultaneous BP readings were performed, inverting cuffs arm to arm between each reading. Only the last two set of readings were used to calculate the mean IABPD. This method enables to minimize the error coming from the potential sphygmomanometers' inaccuracies. **Results**: 32 patients were recruited from June to September 2017 and all had a successful IABPD measurement. Four patients had an IABPD >10 mmHg, varying from 1.5 to 13 mmHg when the left arm was higher and from 1 to 61 mmHg when the right arm was higher. Of the 22 patients where the triage BP arm side selection was recorded, only 11 were congruent with the arm presenting the highest BP during the IABPD measurement. Selecting of the arm with the highest BP value may better reflect cerebrovascular risk exposition. The mean systolic BP at triage was 159.3 mmHg (95%CI: 144.9-173.7) compared to 144.8 mmHg (95%CI: 132.9-156.7) if the arm with the highest value during the IABPD measurement is selected and 142.4 mmHg (95%CI: 130.8-154.0) if the same arm as triage is selected. The p-value for these differences were 0.003 and 0.001 respectively. The patient which presented the IABPD of 61 mmHg, had a stroke 3 days after its ED visit which subsequently led to her death 10 days later. **Conclusion**: Our results show that the systematic IABPD measurement using a pragmatic approach in the ED is feasible and is ready to investigate its use in the context of a new TIA or mild stroke. This information may contribute to a better discrimination of the short-term risk of stroke and may help to diagnose acute aortic dissection, monitor more accurately BP during hyperacute stroke or estimate intracerebral hemorrhage risk if systemic thrombolysis is considered.

Keywords: Interarm blood pressure, pragmatic method, transient ischemic attack

P043

Trauma team leaders in Canada: A national survey

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Introduction: It was demonstrated that the early trauma team activation (TTA) could improve younger trauma patients outcomes and mortality rates. However, the link between older patient prognosis improvement and the activation / effectiveness of the Trauma team (TT) is still unclear. There is also a lack of information about the exact and optimal structure of TTs and their activation criteria, which may differ across centers. The main objective of this study is to provide a description of the current TT available in level 1 and 2 centres across Canada. **Methods**: In 2017, a survey using a modified Dillman technique was sent to 210 health professionals scattered across all Canadian trauma care facilities. The survey included questions regarding 1) the presence and the composition of a TT, 2) the established TT activation criteria, and finally 3) the initial patient care. **Results**: A total of 107 (57%) completed surveys were received. Among them, only 22 (11.7%) were from level 1 or 2 centres and were therefore considered for analyses. Seventeen respondents had a TT in their centre, and they all shared their TT activation criteria (1 to 27 different indications). Most frequently mentioned criteria were: suspected injuries (58.8%), judgment of the emergency physician (41.2%), systolic blood pressure (47.1%), Glasgow Coma score (35.3%) and respiratory rate (28%). In presence of a prehospital care warning trauma, the initial assessment of a severely injured patient is exclusively completed by a member of the TT for only 35.1% of the respondents. For 11.8% of respondents, TT coordinates airway management. For 64.7% of participants, the TT leader is the dedicated care provider to accompany patients until final orientation. **Conclusion**: These results suggest a great variability across Canada regarding the roles assumed by the TT, but also regarding the activation criteria leading them to take action.

Keywords: emergency care, polytrauma, trauma team

P044

Use of a gait tracking device to count steps of older emergency department patient

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Introduction: Delirium is a common complication among older people who need care in the emergency department (ED). Mobility is an evidence-based non-pharmacologic strategy shown to reduce delirium and functional decline among older patients in the acute care setting. However, previous research has shown that compliance with mobility is important to achieve this decreased incidence of delirium. Gait tracking devices have been used in previous studies to accurately measure steps, engagement and intensity of physical activity in older hospitalized patients. The objectives of this study are to compare the feasibility and validate the accuracy of three accelerometer-based gait tracking devices. This is the first step in a program of research to objectively measure mobility among older ED patients as a potential marker of delirium risk. **Methods**: This is a prospective, observational study of patients 65 years of age and older during their ED visit. We excluded those with critical illness, unable to communicate or

provide consent (language barrier, aphasia); and those with any ambulatory impediments. Consenting participants wear the gait trackers for the duration of their stay or for a minimum of 8 hour, and ambulate as normally as they would in their home. Devices were retrieved when the patient was admitted, discharged or, after 8 hours and the steps count was then recorded from an online interface. Our primary feasibility measure is the proportion of eligible patient for which we are be able to recover the tracker and record their steps. The primary validation endpoint will be the concordance between steps recorded by the gait tracking device compared to a gold standard manual step count over a fixed distance. We will report proportions with exact binomial 95% confidence intervals (CI) for feasibility and validity endpoints. **Results**: Preliminary data from an initial pilot phase includes 7 participants who wore a gait tracking device during their ED visit. Mean age was 79.7 years (+/−5.76) and 57% were females. Devices were worn by participants and recovered by research staff in all 7 cases (100%, 95% CI: 59 – 100). Data from online interface has been collected from 6 participants (85%, 95%CI: 42 – 99). Mean step count by observer was 86.17 +/− 4 (95% CI 82.2 – 90.2) and 70.3 +/− 4 (95%CI 66-74.3) by gait tracker. **Conclusion**: Our preliminary data suggests that use of gait-tracking devices in the ED is feasible.
Keywords: delirium prevention, gait tracking device, mobility

P045
Palliative care nurse specialist in the emergency department: a pilot project
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Background: Patients presenting to the Emergency Department (ED) with unmet palliative care needs are often admitted to hospital and this can be a pivotal point in their subsequent health care journey. Literature from the United States supports the integration of palliative care resources in the ED and to our knowledge, this has yet to be done in a Canadian setting. **Aim Statement:** To develop, implement, and evaluate a model to support patients presenting to the ED with unmet palliative care needs. **Measures & Design**: A pilot project was implemented in one campus of the ED at a tertiary care academic center in Ottawa, Ontario. A palliative care nurse specialist was available for consultation with goals to: a) reduce admission to hospital for patients choosing to have a palliative approach to their care; b) increase coordination between ED and community resources; and c) be a resource for ED staff. Referral criteria were developed after systematic review of the literature and in consultation with palliative and emergency medicine experts. **Evaluation/Results:** Over the course of the study period (9 months), 50 referrals were made. The primary reason for referral was for increased community supports. Patient outcomes: 10 patients were discharged to hospice/palliative care units from the ED, 38 patients were discharged home. Of those discharged home, 66% had no returns to ED within 30 days. Qualitative feedback collected via pre and post survey has been extremely supportive from ED health care practitioners and community palliative care providers. **Discussion/Impact:** This ongoing project has led to positive, patient centered outcomes and decreased admission to acute care hospital. Ongoing evaluation will include consideration of Ontario Palliative Care Network quality indicators and cost-analysis to determine impact on health care system.
Keywords: palliative care, patient centered care, quality improvement and patient safety

P046
Students as first responders: A survey of Canadian campus emergency medical response teams
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Introduction: Canadian post-secondary campuses are densely-populated communities and the first home-away-from-home to many students participating in various academic programs, new social activities, and on-campus athletic activities. The diversity of on-campus activities combined with the high-stress of academic programs results in illness and injury rates that may increase the strain on emergency medical systems. Existing on some campuses for more than 30 years, campus emergency medical response teams (CEMRTs) address the need for a local emergency medical service that can provide first-aid in low-acuity situations and rapid response to high-acuity emergencies. In Canada, many student-run volunteer-responder CEMRTs exist but the range of their service capabilities, operations, and their call-volumes have not been described previously. This study aims to fill this knowledge gap. **Methods**: We surveyed the 30 known campus emergency medical response teams identified through membership in the Canadian Association of Campus Emergency Response Teams. The 32-question survey asked information on their level of training (standard first aid [SFA], first responder [FR], emergency medical responder [EMR]), service operations including call volume, and funding model. This study was approved by the Western University Institutional Review Board. **Results**: Twenty-four teams completed the survey (80%); the majority of which are located in Ontario (70%, 16 teams). One team reported that they are no longer in operation. Eleven teams (48%) have medical directors. Nine teams (39%) reported responding to ≤100 calls/year, 11 teams (48%) reported 100-500 calls/year, and 3 teams (13%) reported >500 calls/year. Responders of two teams (9%) maintain training at SFA level; 14 teams (61%) have some or all responders with FR training; and 6 teams (26%) have some or all members certified at EMR level. Twenty-one teams (91%) are equipped with AEDs and 19 teams (83%) are equipped with oxygen. Common medications carried include epinephrine (13 teams, 57%), naloxone (12 teams, 52%), and acetylsalicylic acid (9 teams, 39%). **Conclusion**: Canadian post-secondary campuses have highly-active student-run volunteer CMERTs. Considerable variability in the services provided may reflect the unique needs of the campuses they serve. CEMRTs may reduce low-acuity case demand on local emergency medical response and emergency department services in some communities; their impact on system demand and costs is the subject of future work.
Keywords: first responder, pre-hospital care, volunteer

P047
Understanding the expert approach to managing frailty in the emergency department
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Introduction: Frailty is a state of vulnerability affecting older adults, and has been associated with adverse events such as increased risk of institutionalization, falls, functional decline, and mortality. Previous research suggests that emergency department (ED) physicians are much less comfortable managing the complex care needs of frail, older adults. The objective of this study was to identify successful