torso hemorrhage while arranging definitive surgical management. Although initially postulated in the 1950s, limited research regarding its therapeutic use in trauma has been available until recently. Here, we present a systematic review of the literature pertaining to the use of REBOA in severe trauma. **Methods:** An experienced medical librarian searched electronic databases for terms relating to REBOA, aortic balloon occlusion, hemorrhage, trauma and shock. Articles were identified, screened, retrieved and reviewed in accordance with PRISMA systematic review guidelines. English case reports, case series, cohort studies, randomized-controlled trials, systematic reviews and meta-analyses pertaining to the use of REBOA in human trauma patients were included. Customized inclusion and data extraction forms were created and used to form an electronic database of relevant studies. **Results:** After exclusion of duplicates, 2147 potentially relevant articles were identified and screened by title/abstract and 136 articles meeting inclusion criteria were retrieved for full-text review. Final analysis of 26 articles included 5 case reports, 13 case series, 7 observational cohort studies and 1 systematic review. Data spanning 771 patients undergoing REBOA were collected (weighted average age: 49.5, gender: 67.7% male, injury severity score: 35.1). Where data available, REBOA increased systolic blood pressure by a weighted average of 54.7mmhg and overall survival was 32.6%. **Conclusion:** Limited evidence pertaining to the use of REBOA in severe trauma exists with the majority of available data coming from individual case studies and case series. By extension, quantitative analysis regarding outcome data of this intervention requires further research in the form of larger studies with subgroup analysis to identify the subset of patients for which REBOA may benefit and to further delineate the risks of implementing this intervention.
Keywords: resuscitative endovascular balloon occlusion of the aorta

P043

Standards for change: developing international minimum standards for the care of older people in the emergency department

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Introduction: Emergency departments (ED) across Canada acknowledge the need to transform in order to provide high quality care for the increasing proportion of older patients presenting for treatment. Older people are more complex than younger ED users. They have a disproportionately high use of EDs, increased rates of hospitalization, and are more likely to suffer adverse events. The objective of this initiative was to develop minimum standards for the care of older people in the emergency department. **Methods:** We created a panel of international leaders in geriatrics and emergency medicine to develop a policy framework on minimum standards for care of older people in the ED. We conducted a literature review of international guidelines, frameworks, recommendations, and best practices for the acute care of older people and developed a draft standards document. This preliminary document was circulated to interdisciplinary members of the International Federation of Emergency Medicine (IFEM) geriatric emergency medicine (GEM) group. Following review, the standards were presented to the IFEM clinical practice group. At each step, verbal, written and online feedback were gathered and integrated into the final minimum standards document. **Results:** Following the developmental process, a series of eight minimum standard statements were created and accepted by IFEM. These standards utilise the IFEM Framework for Quality and Safety in the ED, and are centred on the recognition that older people are a core population of emergency health service users whose care needs are different from those of children and younger adults. They cover key areas, including the overall approach to older patients, the physical environment and equipment, personnel and training, policies and protocols, and strategies for navigating the health-care continuum. **Conclusion:** These standards aim to improve the evaluation, management and integration of care of older people in the ED in an effort to improve outcomes. The minimum standards represent a first step on which future activities can be built, including the development of specific indicators for each of the minimum standards. The standards are designed to apply across the spectrum of EDs worldwide, and it is hoped that they will act as a catalyst to change.
Keywords: quality improvement and patient safety, geriatric emergency medicine, international standards

P044

Register to donate while you wait: assessing public acceptability of utilizing the emergency department waiting room for organ and tissue donor registration

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Introduction: Our study objectives were to assess the acceptability of using the emergency department (ED) waiting room to provide knowledge on, and offer opportunities for organ and tissue donor registration; and to identify barriers to the donor registration process in Ontario. **Methods:** We conducted a paper based in-person survey over nine days for eight hour blocks in March and April 2017. The survey instrument was created in English using existing literature and expert opinion, pilot tested and then translated into French. The study collected data from patients and visitors in an urban academic Canadian tertiary care ED waiting room. All adults in the waiting room were approached to participate during the study periods. Individuals waiting in clinical care areas were excluded, as well as those who required immediate treatment. **Results:** The number of attempted surveys was 324; 67 individuals (20.7%) refused to partake. A total of 257 surveys were distributed and five were returned blank. This gave us a response rate of 77.8% with 252 completed surveys. The median age group was 51-60 years old with 55.9% female. Forty-six percent were Christian (46.0%) and 34.1% did not declare a religious affiliation. Nearly half of participants (44.1%) were registered organ donors. The majority of participants agreed or were neutral (83.3%) that the ED waiting room was an acceptable place to provide information on organ and tissue donation. Further, 82.1% agreed or were neutral that the ED was an acceptable place to register as an organ donor. Nearly half (47.2%) agreed that they would consider registering while in the ED waiting room. A number of barriers to registering as an organ and tissue donor were identified. The most common were: not knowing how to register (22.0%), a lack of time to register (21.1%), and having unanswered questions regarding organ and tissue donation (18.7%). **Conclusion:** Individuals waiting in the ED are supportive of using the ED waiting room for distributing information regarding organ and tissue donation, and facilitating organ and tissue donation registration. Developing such a practice could help to reduce some of the identified barriers, including a lack of time and having unanswered questions regarding donation.
Keywords: organ and tissue donation

P045

Impact of post-intubation hypotension on mortality of patients in the emergency department (ED)

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Introduction: Endotracheal intubation is frequently used in emergency departments and is often life saving, but it is also known to cause adverse events that can potentially lead to death. The main objective of this study is to evaluate mortality rates and duration of hospitalisation in patients who experienced post-intubation hypotension (PIH). **Methods:** A historical cohort of patients admitted between 07/2011 and 11/2014 at the ED of a level-one trauma centre. Patients were included if they were aged 16 years old or more, were intubated in the resuscitation room,had less than 3 intubation attempts, no need of surgical airway access, and had recorded vital signs prior to intubation. All clinical data including vitals were prospectively collected using ReaScribe®. PIH was defined by one measure or more of systolic arterial blood pressure <90 mm Hg. We retrospectively analysed the occurrence of PIH at 4 time points: 5, 15, 30 minutes, and at any moments after intubation. Study outcomes were in-hospital death and hospital length of stay in days (LOS). Univariate and multivariate analyses assessed the relation between PHI and outcomes. **Results:** 261 patients were included in the analyses. Amongst patient who experienced PIH, incidence of mortality was, respectively for each time estimate, of 31.0%, 33.3%, 28.6% and 26.9% compared to 25.4% ($p = 0.5$), 24.2% ($p = 0.1$), 24.9% ($p = 0.5$), and 25.4% ($p = 0.8$) in the normotensive group. The mean duration of hospitalisation in the group exposed to PIH was respectively of 26 (12.9-53.3), 22 (13.5-35.5), 19 (13.6-27.8), and 18 days (13.5-24.8) compared to 15.6 (12.9-18.9), 15.4 (12.6-18.8), 15.3 (12.3-19.1), and 15.5 (12.1-19.7) days ($p = 0.4$). **Conclusion:** There was no association between the presence of post-intubation hypotension at 4 different time estimates and the in-hospital mortality nor the hospital length of stay. Further evaluation in specific sub-group should be foreseen to prevent adverse events from endotracheal intubation.

Keywords: endotracheal intubation, hypotension, mortality

P046

A quality improvement initiative for improving integration of resource stewardship concepts into undergraduate medical education

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Introduction: It is estimated that up to 30% of medical services in Canada are potentially unnecessary, not supported by current evidence or may cause patient harm. This type of practice negatively impacts patients and the healthcare system. Evidence suggests that medical education strongly impacts resource utilization in future practice. Our objective was to integrate Choosing Wisely (CW) recommendations into the undergraduate medical education curriculum to improve students understanding of resource stewardship in their pre-clerkship training. **Methods:** Post-course survey data and written feedback were collected from the Cumming School of Medicines 2019 class. Qualitative analysis of written feedback was used to identify perceived strengths and areas of improvement to inform additional changes for the 2020 class through a Plan-Do-Study-Act (PDSA) cycle. **Results:** The post-course survey was completed by 143 students. 60% reported the inclusion of CW improved their ability to develop a clinical management plan. Using the information gathered from the qualitative analysis, we made the following changes for the 2020 class: create an introductory lecture on resource stewardship, incorporate relevant CW recommendations into case study learning objectives, and create standardized slides on CW recommendations for lecturers. Feedback from the 2020 class revealed that the changes were well received and students reported feeling more comfortable with resource stewardship concepts. **Conclusion:** This data reveals that our efforts have increased students confidence in creating a management plan that integrates resource stewardship and patient safety, and elicited strong faculty support. We will continue to integrate these changes and to obtain student and faculty feedback to help inform additional iterative changes for the subsequent cohort. Our findings are valuable for other medical schools across Canada seeking to incorporate CW material.

Keywords: quality improvement and patient safety, medical education, curricular change

P047

Prevalence and severity of hypertension presenting to Calgary area emergency departments

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Introduction: Hypertension is common and a major cause of morbidity and mortality. Because it is asymptomatic, its diagnosis is often delayed. For many Canadians the Emergency Department (ED) is the only point of entry to the health care system, and therefore the recognition of undiagnosed and untreated hypertension in the ED is increasingly important. This study sought to evaluate the prevalence and severity of hypertension in patients presenting to Calgary area EDs, as well as to determine whether medical therapy was initiated and if patients had primary care providers for follow-up. **Methods:** Multi-centre electronic medical record (EMR) review of all adult patients presenting to Calgary area EDs from January 1, 2016 to December 31st, 2016. Hypertension was coded electronically by triage nurses and defined as systolic blood pressure SBP 140 mmHg and/or diastolic blood pressure DBP 90 mmHg. Hypertensive urgency was defined as SBP 180 mmHg and/or DBP 120 mmHg. Descriptive data was used to show patient demographics and hypertension prevalence. Primary care provider status, previous diagnosis of hypertension, chief complaint, and ED diagnoses were extracted and the EMRs were manually searched to determine whether treatment was initiated in the ED. **Results:** Of 304392 patients presenting to all Calgary sites, 43055 (14%) were found to have hypertension; mean age 52 (range 18 to 104), female 42%. Of these, 32986 (77%) had no known previous hypertension and 31% lacked a primary care provider. 0.2% had documentation of treatment initiated in the ED. 16% met criteria for hypertensive urgency. **Conclusion:** Many patients presenting to the ED have hypertension, often previously undiagnosed and at times severe. Many lack access to primary care. EDs may play an important role in the early recognition of hypertension. Dedicated management and follow-up pathways are indicated for this high-risk population.

Keywords: hypertension, hypertensive urgency, emergency department

P048

Interprofessional airway microskill checklists facilitate the deliberate practice of surgical cricothyrotomy with 3-D printed surgical airway trainers

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Introduction: Deliberate practice (DP) is the evolution of practice using continually challenging and focused practice on a particular task. DP involves immediate feedback, time for problem-solving and evaluation, and opportunities for repeated performance. Microskills training breaks down larger tasks into multiple smaller subtasks and then adds opportunities for feedback and adjustment for each subtask. Microskills

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