

**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<sup>®</sup>. 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 PIH 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**

K. Eppler, BSc, C. Pendrith, BSc, MSc, E. Wishart, MD, D. Goodyear, MD, D. Jenkins, MD, MHPE, E. Cheng, MD, Cumming School of Medicine, Calgary, AB

**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**

K. Eppler, BSc, D. Wang, MSc, T.P. Pollak, MD, PhD, E.S. Lang, MD, CM, Cumming School of Medicine, Calgary, AB

**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**

J. P. French, MB, BSc, K. David, BN, S. Benjamin, BN, J. Fraser, BN, J. Mekwan, MBBS (Lond), P. Atkinson, MB, BCh, BAO, MA, Dalhousie University, Rothesay, NB

**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