

**MP45****What to do with #MeToo: pre and post presenting patterns of intimate partner violence**

A. Sobiesiak, BHSc, K. Muldoon, MPH, PhD, L. Shipeolu, BA, M. Heimerl, BA, MSW, K. Sampsel, MD, University of Ottawa, Ottawa, ON

**Introduction:** The #MeToo social media movement gained international status in October 2017 as millions disclosed experiences of sexual and intimate partner violence. People who experience violence from a former/current intimate partner may not present for care for many reasons, among them not knowing where to go for care, or not realizing they were experiencing abuse since the behavior was portrayed as 'normal'. Empirical research identified increased police reporting, internet searches, and new workplace regulations on sexual assault/harassment after #MeToo. Less is known about how #MeToo has influenced hospital-based care, particularly among IPV cases. We aimed to investigate if the #MeToo social movement influenced patterns of IPV cases presenting for emergency care. **Methods:** This study took place at the Sexual Assault and Partner Abuse Care Program (SAPACP), within the Emergency Department of The Ottawa Hospital. Patients seen from November 1st, 2016 through to September 30th, 2017 was considered Pre-#MeToo and those seen November 1st, 2017 to September 30th, 2018 was considered Post-#MeToo. All patients seen in October 2017 were excluded. Analyses compare the proportion and characteristics of IPV cases seen Pre- and Post-#MeToo. Log-binomial regression models were used to calculate relative risk and 95% CI. **Results:** 890 cases were seen by the SAPACP during the total study period, of which 564 (63%) were IPV cases. 258 IPV cases were seen Pre-#MeToo and 306 IPV Post-#MeToo. The clinical presentation for IPV cases was similar between both periods where approximately 42% of IPV cases presented for sexual assault, 50% presented for physical assault. An increase in frequency and proportion of IPV cases was observed post-#MeToo. Post-#MeToo there were 48 additional cases of IPV, corresponding to almost a 20% increase in risk compared to the Pre-#MeToo period. (RR: 1.19, 95% CI: 1.07-1.31) Post-#MeToo, there were more presenting cases of IPV among male/trans cases (9 vs 26) and youth cases (82 vs 116). **Conclusion:** #MeToo is a powerful social movement that corresponded with a significant increase in IPV cases presenting for emergency care. While the assault characteristics among IPV cases remained similar, an important contribution of this research is the increase in youth, male/transgender patients who presented for care post-#MeToo. Continued investigations into pre- post-#MeToo trends is needed to understand more about the changing clinical population and to inform resource and service allocation.

**Keywords:** domestic violence, intimate partner violence, trauma

**MP46****Clinically significant traumatic intracranial haemorrhage following minor head trauma in older adults: a retrospective cohort study**

E. Mercier, MD, MSc, T. O'Brien, MBBS, B. Mitra, PhD, MBBS, N. Le Sage, MD, PhD, P. Tardif, MSc, M. Emond, MD, MSc, M. D'Astous, MD, PhD, Hôpital de l'Enfant-Jésus, Québec, QC

**Introduction:** The primary objective of this study was to determine the incidence of clinically significant traumatic intracranial haemorrhage (T-ICH) following minor head trauma in older adults. Secondary objective was to investigate the impact of anticoagulant and antiplatelet therapies on T-ICH incidence. **Methods:** This

retrospective cohort study extracted data from electronic patient records. The cohort consisted of patients presenting after a fall and/or head injury and presented to one of five ED between 1st March 2010 and 31st July 2017. Inclusion criteria were age  $\geq 65$  years old and a minor head trauma defined as an impact to the head without fulfilling criteria for traumatic brain injury. **Results:** From the 1,000 electronic medical records evaluated, 311 cases were included. The mean age was 80.1 (SD 7.9) years. One hundred and eighty-nine (189) patients (60.8%) were on an anticoagulant (n = 69), antiplatelet (n = 130) or both (n = 16). Twenty patients (6.4%) developed a clinically significant T-ICH. Anticoagulation and/or antiplatelets therapies were not associated with an increased risk of clinically significant T-ICH in this cohort (Odds ratio (OR) 2.7, 95% CI 0.9-8.3). **Conclusion:** In this cohort of older adults presenting to the ED following minor head trauma, the incidence of clinically significant T-ICH was 6.4%.

**Keywords:** head injury, intracranial haemorrhage, traumatic brain injury

**MP47****Factors associated with preventable trauma death: a narrative review**

G. Genois, I. Vlahovic, L. Moore, PhD, B. Beck, MD, MSc, P. Blanchard, MD, PhD, M. Émond, MD, MSc, B. Mitra, MD, PhD, MBBS, P. Cameron, MD, MBBS, A. Nadeau, PhD, É. Mercier, MD, MSc, Hôpital de l'Enfant-Jésus, Québec, QC

**Introduction:** Trauma care is highly complex and prone to medical errors. Accordingly, several studies have identified adverse events and conditions leading to potentially preventable or preventable deaths. Depending on the availability of specialized trauma care and the trauma system organization, between 10 and 30% of trauma-related deaths worldwide could be preventable if optimal care was promptly delivered. This narrative review aims to identify the main determinants and areas for improvements associated with potentially preventable trauma mortality. **Methods:** A literature review was performed using Medline, Embase and Cochrane Central Register of Controlled Trials from 1990 to a maximum of 6 months before submission for publication. Experimental or observational studies that have assessed determinants and areas for improvements that are associated with trauma death preventability were considered for inclusion. Two researchers independently selected eligible studies and extracted the relevant data. The main areas for improvements were classified using the Joint Commission on Accreditation of Healthcare Organizations patient event taxonomy. No statistical analyses were performed given the data heterogeneity. **Results:** From the 3647 individual titles obtained by the search strategy, a total of 37 studies were included. Each study included between 72 and 35311 trauma patients who had sustained mostly blunt trauma, frequently following a fall or a motor vehicle accident. Preventability assessment was performed for 17 to 2081 patients using either a single expert assessment (n = 2, 5.4%) or an expert panel review (n = 35, 94.6%). The definition of preventability and the taxonomy used varied greatly between the studies. The rate of potentially preventable or preventable death ranged from 2.4% to 76.5%. The most frequently reported areas for improvement were treatment delay, diagnosis accuracy to avoid missed or incorrect diagnosis and adverse events associated with the initial procedures performed. The risk of bias of the included studies was high for 32 studies because of the retrospective design and the panel review preventability assessment. **Conclusion:** Deaths occurring after a trauma remain often preventable. Included studies

have used unstandardized definitions of a preventable death and various methodologies to perform the preventability assessment. The proportion of preventable or potentially preventable death reported in each study ranged from 2.4% to 76.5%. Delayed treatment, missed or incorrect initial diagnosis and adverse events following a procedure were commonly associated with preventable trauma deaths and could be targeted to develop quality improvement and monitoring projects.  
**Keywords:** errors, preventable trauma death, systematic review

#### MP48

**Head computerized tomography overuse in adults with mild traumatic brain injury in a single Quebec emergency department**  
 S. Thibault, V. Gélinas, MSc, S. Turcotte, MSc, A. Pépin, R. Renald, N. Le Sage, MD, PhD, P. Plante, PhD, H. Witteman, PhD, F. Légaré, MD, PhD, L. Sauvé, PhD, M. Gagnon, PhD, P. Archambault, MD, MSc, Université Laval, Lévis, QC

**Introduction:** Choosing Wisely Canada has reported rates of unnecessary head computed tomography (CT) scans for low-risk mild traumatic brain injury (mTBI) patients in Ontario and Alberta ranging from 14% to 46%. Local data for Quebec is currently not available. We sought to estimate the overuse of CT scans among adults with mTBI in the emergency department (ED) of a single level II trauma center in Quebec. **Methods:** We performed a retrospective chart review of adults who visited the ED of Hôtel-Dieu de Lévis from 04/01/2016 to 03/31/2017. Using an administrative database (Med-GPS, Montreal), we randomly sampled ED patients aged over 18 that had an initial Glasgow Coma Scale score of 13 to 15 and had suffered from a mTBI in the last 24 hours. We excluded patients with an unclear history of trauma, a bleeding disorder/anticoagulation, a history of seizure, any acute focal neurological deficit, a return visit for reassessment of the same injury, unstable vital signs, or a pregnancy. Data was extracted by two reviewers who analyzed separate charts. They used the Canadian CT Head Rule (CCHR) to determine relevance of CT scans. Overuse was determined if a patient without any high or medium risk CCHR criteria underwent a scan. A third reviewer verified a 10% random sample of the data extraction for each primary reviewer and inter-rater reliability was assessed using the kappa statistic. **Results:** From the 942 eligible mTBI patients, we randomly selected 418 patient charts to review, of which 217 met all inclusion and exclusion criteria (56% were men and the mean age was 48 years old (SD = 21)). Among included patients, 101 were determined as low risk. The overuse proportion was 26% (26/101), 95% CI [18-35]. Two CT scans were assessed as abnormal, but none revealed life-threatening injuries and only one was considered clinically significant with a subdural hematoma of 9 mm. Inter-rater reliability was substantial to perfect (kappa = 0.6 and 1.0) for each primary reviewer. **Conclusion:** We identified head CT scan overuse in this ED. This will support local quality improvement initiatives to reduce unnecessary head CT scans for adults with mTBI.

**Keywords:** computed tomography scan, emergency department, mild traumatic brain injury

#### MP49

**Does reduced cough capacity in minor thoracic trauma leads to more atelectasis development?**

M. Emond, MD, MSc, S. Hegg, PhD, E. Thériault, MD, Laval, Quebec, QC

**Introduction:** Minor thoracic trauma (MTT) accounts for approximately 15% of all injuries treated in the emergency

department (ED). Many of which are minor and will be handle on an outpatient basis. MTT and rib fractures especially cause non-negligible pain. The pain experienced by patients can lead to reduce pulmonary function, decrease mucous clearance and decrease cough capacity leading in infectious problems and atelectasis. To our knowledge, there is no study of atelectasis development caused by reduced cough capacity in the setting of MTT. Objective: Evaluate if a variation in cough capacity leads to atelectasis development. Evaluate if there was a difference in cough capacity perception between the nurse, the physician and the patient himself. **Methods:** A prospective observational cohort study (2006-2012) in 4 ED recruited patients with a chief complaint of MTT,  $\geq 16$  years old, discharged home from the ED. Exclusion criteria: 1) a confirmed hemothorax, pneumothorax, fail chest, lung contusion or any other important thoracic or abdominal internal injury at the initial visit or unable to attend follow-up visits. Patients were assessed at 7- and 14- days. For each patient, age, sex, mechanism of injury, dyspnea, COPD/asthma and smoking status were collected. Chest x-ray was done at each visit; pulmonary complications were assessed by a blind radiologist. Cough capacity was assessed on a scale of 0 to 10 by a nurse, physician and patient himself at 0, 7- and 14- days. Pain was scored on a scale of 0 to 10. Chi-squared and odds ratio (IC: 95%.  $p \leq 0.05$ ) were assessed to determine if the cough capacity variation leads to atelectasis development. A Pearson correlation test was assessed the correlation in cough capacity among participants. **Results:** 1474 patients were recruited. Initial visit: 9% had atelectasis, 7 days: 7% and 4.6% at 14 days. 1105 patients were retained for analysis after exclusion of missing data. The median initial pain score was 7-8 for all patient categories. At 7 days, the odds ratio of atelectasis development were (score (0-3) 1.18 (0.42-3.34); score (4-7) 1.20 (0.48-3.03);  $p < 0.05$ ). The Pearson correlation of cough capacity assessment, in patients without atelectasis were (0.53 nurse vs. patient; 0.37 physician vs. patient; 0.51 nurse vs. physician  $p < 0.05$ ). As for the cough capacity perception correlation in patients with atelectasis were (0.62 nurse vs. patient; 0.40 physician vs. patient; 0.51 nurse vs. physician;  $p < 0.05$ ). **Conclusion:** There is no statistically significant difference in atelectasis development depending on cough capacity and there is poor correlation regarding the perception of cough capacity except for the nurse. It would be interesting to develop a patient reported outcome measure questionnaire which targets minor thoracic trauma as it is a common emergency department complaint and it could help us improve medical management and patient quality of life

**Keywords:** atelectasis, cough capacity, minor thoracic trauma

#### MP50

**Vaping, tobacco and cannabis among patients presenting to the emergency department: a cross-sectional study**

K. Zhou, BMSc, D. Junqueira, MSc, PhD, PharmD, S. Couperthwaite, BSc, J. Meyer, BSc, B. Rowe, MD, MSc, University of Alberta, Edmonton, AB

**Introduction:** Inhaled toxins from tobacco smoking, cannabis leaf smoking as well as vaping/e-cigarette products use are known causes of cardio-respiratory injury. While tobacco smoking has decreased among Canadian adults, there are now several other forms of legal inhalant products. While legal, the evidence of benefit and safety of vaping is limited. Of concern, cases of e-cigarette or vaping products use associated lung injury (EVALI) have been accumulating in the U.S. and now in Canada. Despite this, very little is known about the inhalation exposure of emergency department (ED) patients; this