of reorientation admissible ED patients between March 2017 and August 2017. Patient safety was evaluated with patient follow-up phone interviews one week after their visit to the ED to identify the number of patients who needed to return to a medical facility after their reorientation. Patient satisfaction with the reorientation program was evaluated during the same follow-ups. **Results:** Of the 980 reoriented patients interviewed, only 57 (5.9%; 95% confidence interval [CI] 4.57.5) had to unexpectedly go back to a health care facility. None of these returns were for severe complications. Over 84% of the reoriented patients were satisfied with their reorientation and 89% say they would use this program again. Having a transportation problem was most common reason mentioned by patients for refusing to be reoriented. **Conclusion:** Reorientation to medical clinics using a new computer-based algorithm was safe and no case of urgent return was seen during the 6-month study period. In addition, patients who were reoriented to medical clinics were satisfied by their treatment experience.
**Keywords:** reorientation, overcrowding

## LO66

### The effect of Alberta's new impaired driving legislation on motor vehicle-related trauma

L. S. Rollick, MSc, B. Nakashima, MD, M. Frey, MD, I. Wishart, MD, Cumming School of Medicine, University of Calgary, Calgary, AB

**Introduction:** Motor vehicle collisions (MVCs) resulting in injuries and death disproportionately involve impaired drivers. Those under the influence of alcohol also have a higher rate of presentation and admission to hospital for traumatic injuries. In an attempt to decrease impaired driving and alcohol-related MVCs and injuries, the government of Alberta introduced stricter impaired driving legislation in the summer of 2012. It has yet to be determined what impact this new legislation has had on traumatic injuries secondary to MVCs and alcohol impairment. The objective of this study was to assess the relationship between the implementation of the new legislation and the proportion of alcohol-related MVC trauma presenting to the emergency department of a Level I Trauma Centre. **Methods:** A retrospective single centre cross-sectional chart review examining adult patients presenting to the ED of a major trauma centre who: a) require trauma team activation or consultation and b) have a MVC related injury. Of those charts meeting these criteria, the proportion of patients with positive blood alcohol concentration (BAC) was compared between the year before and the four years after implementation of the new legislation. Patients were identified using electronic medical record logs. We compared the proportion of impaired drivers by year using the SPSS software package and conducted an interrupted time series analysis in order to determine whether the implementation of the law directly affected the measured outcomes. **Results:** 1470 total MVC related trauma patients were identified during the study period (468 prior to legislation implementation [2010-2012] and 1002 after [2012-2016]). The proportion of drivers with BAC defined as legally impaired decreased significantly over this time period ($p = 0.003$). Based on preliminary interrupted time series analysis we cannot conclude that the implementation of the new laws led to this significant change ($p = 0.524$). When analyzing drivers between 16 to 25 years old, we noted a non-significant but notable decrease in the proportion of impaired drivers from 45.9% in 2011 to 21.1% in 2016 ($p = 0.173$). **Conclusion:** While an impact was not seen immediately following the implementation of Alberta's new impaired driving legislation, the proportion of impaired drivers requiring trauma team activation has decreased significantly since enactment of the new legislation from 28.9% in 2011 to 16.9% in 2016. However, based on interrupted time series analysis we cannot conclude the new legislation independently influenced this change. The impact of other factors including public

education, societal preferences and generational changes cannot be excluded. There continues to be a dramatic decrease in the proportion of impaired drivers presenting with MVC related trauma under 25 years old This has not yet reached statistical significance probably due to small sample size but the trend is most prominent in this age group.
**Keywords:** impaired driving, motor-vehicle related trauma, Alberta's legislation

## LO67

### A variation on Triage Liaison Physicians (TLP): a comparative analysis of the Emergency Department Disposition and Care Consultant (EDC) concept

B. H. Rowe, MD, MSc, A. Haponiuk, MD, J. Lowes, BSc, W. Sevcik, MD, MEd, C. Villa-Roel, MD, PhD, M. Nabipoor, PhD, University of Alberta, Department of Emergency Medicine, Edmonton, AB

**Introduction:** Despite evidence that triage liaison physicians (TLP) effectively reduce emergency department (ED) overcrowding, support for these interventions is patchy. The aim of this study was to evaluate the implementation of a TLP-like ED Disposition and Care Consultant (EDC) shift at an academic tertiary care ED. **Methods:** A 24-week pilot project was conducted 11/16-04/17. Physicians worked 8- hour day (07-15:00) and/or evening (15:00-23:00) EDC shifts and performed immediate triage and patient care when needed, assisted triage RNs, answered all incoming calls, and managed administrative matters. Due to their voluntary nature, not all shifts were filled. This study compared active (EDC) and control (C) shifts on the following ED metrics: length of stay (LOS), proportions of patients who left without being seen (LWBS), and safety (return visits to ED). Descriptive (median and interquartile range {IQR} and proportions) and simple (Wilcoxson-Mann-Whitney, chi-square, z-proportion) tests are presented for continuous and dichotomous outcomes, respectively. Multiple linear regression identified factors associated with LOS. **Results:** Of 112 possible EDC shifts, 58 (52%) were filled involving 4289 patients and compared to 276 C shifts involving 21,358 patients. ED volume, patient age (49; IQR: 31, 66), mode of arrival (~30% EMS), triage levels (~51% level 3), and complaints were similar between the groups. Overall, the EDC group reduced LWBS by 16% (8.7% vs. 10.4%; $p = 0.001$), ED LOS for discharged patients by 30 minutes (5.5 vs. 6.0 hours; $p < 0.001$), and ED LOS for admitted patients by 42 minutes (9.7 vs. 10.4 hours; $p = 0.02$). The EDC increased the proportion discharged <4 hours by 28% (20.1 vs. 15.7%; $p < 0.001$) and increased the proportion admitted <8 hours by 17% (8.2% vs. 9.6%, $p = 0.002$). ED relapses <72 hours were similar (9.3% vs. 8.9%; $p = 0.4$); however, admissions were higher in the EDC shifts (25.3% vs. 23.8%; $p = 0.04$). In addition to EDC coverage status, LOS was influenced by triage level (1.7%, $p < 0.001$), disposition (19.6%, $p < 0.001$), and age (4.8%, $p < 0.001$). **Conclusion:** Our results indicate that an EDC shift, while unpopular with many physicians, provides valuable services to an overcrowded ED and that the implementation of this type of shift could reduce LOS and LWBS statistics in a tertiary care institution. Additional evaluations to examine this and other front-end interventions in other ED centers are indicated.
**Keywords:** triage liaison physicians, emergency department operations, length of stay

## LO68

### Patterns and predictors of emergency physician productivity

S. Campbell, MB, BCh, S. Weerasinghe, PhD, D, Urquhart Dalhousie University, Department of Emergency Medicine, Charles V. Keating Emergency & Trauma Centre, Halifax, NS

**Introduction:** Emergency Physician (EP) performance comprises both quality of care and quantity of patients seen in a set time. Emergency Department (ED) overcrowding increases the importance of the ability of EPs to see patients as rapidly as is safely possible. Maximizing efficiency requires an understanding of variables that are associated with individual physician performance. While using the incidence of return visits within 48 hours as a quality measure is controversial, repeat visits do consume ED resources. **Methods:** We analysed the practice variables of 85 EPs working at a single academic ED, for the period from June 1, 2013 to May 31, 2017, using data from an emergency department information system (EDIS). Variables analysed included: number of shifts worked, number of patients seen per hour (pt/hr), an adjusted workload measurement (assigning a higher score to CTAS 1-3 patients), percentage of patients whose care involved an ED learner, and the percentage of patients who returned to the ED within 48 hours of ED discharge. Resource utilization was measured by percentage of diagnostic imaging (ultra sound (US), CT scan (CT), x-ray (XR)) ordered and percentage of patients referred to consulting services. We performed principal component analyses to identify bench marks of resource use, demographic (age, EM qualification, gender) and other practice related predictors of performances. **Results:** Mean pt/hr differed significantly by EM Qualification for CTAS 2-4, with 1.71/hr (95% Confidence Interval = 1.63-1.77) by FRCPS physicians, compared to 1.89/hr by CCFP(EM) (CI = 1.81-1.97). There were no differences for CTAS 1 and 5. Other variables associated with a significantly lower pt/hr, included a greater use of imaging, (CT: $p = 0.0003$, XR: $p = 0.0008$) although this was did not reach statistical significance with US ($p = 0.06\%$). Female gender, older age, number of patient consultations for CTAS 3 and more patients seen by a learner were all associated with lower pt/hr. Pt/hr was a better predictor ($R2 = 45\%$) for EP resource utilization than adjusted workload measurement ($R2 = 35\%$). Higher use of CT was associated with fewer return visits in <48 hrs (0.13% lower). Male gender, younger age, number of patient consultation for CTAS 3 and fewer patients seen by a learner were all associated with an increase in return visits. **Conclusion:** We found a significant difference in pt/hr rates and return visits within 48 hours between EPs with different age ranges, gender, and EM certification. Increased use of CT scan and x-ray, and consultation for patients CTAS 3 were associated with lower pt/hr. Return visit rates also varied in association with diagnostic imagine use, age, gender and number of patients seen by a learner. Further research is needed to assess the association with these variables on quality of care.

**Keywords:** emergency physician productivity, emergency department efficiency

### LO69
**Factors related to the eventual publication of abstracts presented at the Canadian Association of Emergency Physicians annual meeting from 2013-2017**

V. Srivatsav, BHSc, I. Nadeem, B. Zhang, S. Upadhye, MD, MSc, Michael G. Degroote, School of Medicine, McMaster University, Hamilton, ON

**Introduction:** Much of the research presented at conference meetings never go on to be published in peer-reviewed literature, thereby limiting the dispersion of these findings to a larger audience. We sought to assess if this was true with regard to CAEP meetings, by establishing the publication rate and factors correlated with publication of CAEP abstracts in peer-reviewed journals from 2013-2017. **Methods:** We conducted a scoping review that included all CAEP abstracts from 2013-2017, obtained through the Canadian Journal of Emergency Medicine. Two reviewers screened and extracted data from all abstracts individually, with any conflicts resolved by a third reviewer. Data extracted from abstracts included province of authors, sample size, study design, the presence of statistically positive or negative findings, status of publication, date of acceptance to a journal, and journal of publication. Databases searched for publication status included MEDLINE, EMBASE, The Cochrane Library and Ovid Health Star. A level of evidence (LOE) was assigned using the 2011 Oxford Centre for Evidence-Based Medicine criteria. **Results:** All abstracts (1090) from 2014-2017 have been analyzed thus far. Inter-rater agreement for data extraction was high ( value 0.85). 17.1% (186/1090) of abstracts presented at the conference had a corresponding full text publication in the peer-reviewed literature. Articles were published in 102 different journals, with the greatest number of publications in the Canadian Journal of Emergency Medicine (CJEM) (15.1%, 28/186), followed by Academic Emergency Medicine (10.2%, 19/186). The mean time to publication was 51 weeks (95% CI 43,59). 30.6% (57/186) of published abstracts had statistically positive findings, while 10.8% (20/186) had negative findings. A significant difference was present between publication findings and publication status ($p < 0.0001$, chi-squared). 68.8% (128/186) of published articles were of level III evidence. A statistical difference was found between LOE and publication status ($p < 0.0001$, chi-squared). **Conclusion:** A large number of abstracts presented at CAEP are presently unpublished. There may be a publication bias in the literature as a greater number of studies with positive findings have been published. Additionally, two-thirds of studies published are of level III evidence. An increasing emphasis should be placed in publishing studies with higher levels of evidence, and more studies with negative findings.

**Keywords:** evidence-based medicine, level of evidence, quality of research

### LO70
**Interrater agreement and time it takes to assign a Canadian Triage and Acuity Scale score pre and post implementation of eCTAS**

S. McLeod, MSc, J. McCarron, T. Ahmed, BSc, S. Scott, BSc, H. Ovens, MD, N. Mittmann, PhD, B. Borgundvaag, MD, PhD, Schwartz/Reisman Emergency Medicine Institute, University of Toronto, Toronto, ON

**Introduction:** In addition to its clinical utility, the Canadian Triage and Acuity Scale (CTAS) has become an administrative metric used by governments to estimate patient care requirements, ED funding and workload models. The Electronic Canadian Triage and Acuity Scale (eCTAS) initiative aims to improve patient safety and quality of care by establishing an electronic triage decision support tool that standardizes the application of national triage guidelines (CTAS) across Ontario. The objective of this study was to evaluate the implementation of eCTAS in a variety of ED settings. **Methods:** This was a prospective, observational study conducted in 7 hospital EDs, selected to represent a mix of triage processes (electronic vs. manual), documentation practices (electronic vs. paper), hospital types (rural, community and teaching) and patient volumes (annual ED census ranged from 38,000 to 136,000). An expert CTAS auditor observed on-duty triage nurses in the ED and assigned independent CTAS in real time. Research assistants not involved in the triage process independently recorded the triage time. Interrater agreement was estimated using unweighted and quadratic-weighted kappa statistics with 95% confidence intervals (CIs). **Results:** 1200 (738 pre-eCTAS, 462 post-implementation) individual patient CTAS assessments were audited over 33 (21 pre-eCTAS, 11 post-implementation) seven-hour triage shifts. Exact modal