

focused on patients with acute (<48 hours and/or <7 days with adequate anticoagulation) presentations of AFF and for whom rhythm control is considered safe. This study explored the demographic characteristics, risk factors, anticoagulant/anti-platelet prescription, and outcomes for patients with symptomatic AFF. **Methods:** A convenience sample of adult patients presenting to the one of three hospitals affiliated with the University of Alberta with symptoms of acute AFF were enrolled, within a fee-for-service billing environment. Following informed consent, a trained researcher administered a survey to each patient, recorded administrative details (e.g., triage, times, laboratory tests) from the ED information system, a chart review on treatments was conducted and patients were contacted for follow-up at 7 days via telephone. Descriptive (median and interquartile range {IQR} and proportions) and simple (t-tests, chi-square) statistics are presented for continuous and dichotomous outcomes, respectively. **Results:** Overall, 217 patients were enrolled; the median age was 64 (IQR: 55, 73) and 132 (61%) were male. Overall, 42 (19.4%) patients arrived by ambulance; 8 (4%) spontaneously converted or were diagnosed with another arrhythmia between arrival and obtaining an ECG. A prior history of AFF was common 152 (71%), as were the following cardiovascular and other risk factors: 176 (81.1%) consumed alcohol, 104 (48%) were current or former smokers, 86 (39.6%) had hypertension, 22 (10%) had CAD, and 10 (5%) had COPD. These patients most commonly reported palpitations 183 (84%) as their dominant symptom. Anti-platelets and anticoagulants were common prior to the ED 145 (67%), and 36 (17%) of patients were discharged from the ED without one of these medications. Overall, 80 (37%) patients had chronic AFF or an unknown timeline; no efforts were made to restore NSR in these patients. A dominant pattern for electrical cardioversion was observed; of 129 cases where cardioversion was attempted, 84 (65%) had electrical first and 45 (35%) had chemical first cardioversion attempts. Overall, 22 (49%) of 45 patients receiving chemical first were successfully converted to NSR. Patients with AFF history who were cardioverted were less likely hospitalized than those not-cardioverted (3% vs. 16%, $p=0.006$); 21 (10%) were admitted to hospital. **Conclusion:** In this center, patients with AFF often present to the ED with high acuity, with severe symptoms and receive aggressive care. The use of anticoagulants suggests an appreciation of thrombo-embolic risks, both in the community and ED settings. Like many EDs, this center appears to have a signature for AFF management, related to evidence gaps, physician preferences, and perhaps funding models.

Keywords: emergency department, atrial fibrillation or flutter, health outcomes

P128

Time of transfer of admitted patients from the ED: a potential area for improvement of patient flow in very high-volume emergency departments

L. Salehi, MD, MPH, P. Phalpher, MD, V. Jegatheeswaran, BHSc, R. Valani, MD, MBA, J. Herman, MD, M. Mercuri, PhD, McMaster University, Hamilton, ON

Introduction: Bed boarding of admitted patients in the Emergency Department (ED) is widely recognized as a major contributor to overcrowding, particularly in very high-volume hospitals. The issue of bed boarding is directly tied to hospital-wide capacity, flow and operations. Early morning discharge from inpatient units has been identified as a low-cost intervention to decrease bed boarding, as it allows earlier transfer of admitted patients from the ED. Several hospitals have instituted discharge before noon, or discharge before 10AM policies, practices and targets. Our objectives were 1) to assess the current status

of flow within 3 high-volume community hospitals with respect to time of day of discharges from the in-patient units and time of day of transfers from the ED to in-patient units, and 2) to assess the association between time of transfer from the ED and total ED Length of Stay (EDLOS) of admitted patients. **Methods:** We conducted a retrospective multi-centre observational study during the period of January 1, 2015 to December 31, 2015 at three high-volume community hospitals within Ontario, Canada. All patients admitted to the Medicine service were identified. Time of discharge from the in-patient units and time of transfer from the ED were collected for all patients. EDLOS was calculated for all patients as a function of time of transfer from the ED. **Results:** Preliminary findings show that, for the three community hospitals, only 11.7% - 19.6% of admitted patients were discharged from the in-patient units during the period between 6AM and 12PM, with a peak discharge time of 2PM in all three hospitals. A concurrent lag was observed in the time of transfer of patients from the ED, with peak transfer times occurring the late afternoon between 3PM and 9PM, and coinciding with a peak in patient volume in the ED. Patients transferred out of the ED earlier in the day (between 12AM 11:59AM) had between 1.4 hours to 8.0 hours lower mean EDLOS when compared to those patients transferred later in the day (between 12PM 11:59PM). **Conclusion:** Hospital-wide flow and operational issues have a significant impact on ED bed boarding, and potential efficiencies seem at the current time to be underutilized. Interventions aimed at optimizing flow must be implemented alongside those aimed at increasing capacity in order to improve bed boarding. ** These findings are best communicated in graphic form to better represent the dynamics of the flow in and out of the ED over a 24-hour period, and will be presented in graphic format if selected for the conference.

Keywords: emergency department overcrowding, hospital administration, length of stay

P129

Variability in ordering of computed tomography (CT) scans among emergency physicians

L. Salehi, MD, MPH, P. Phalpher, MD, R. Valani, MD, MBA, Y. Hou, M. Mercuri, PhD, McMaster University, Hamilton, ON

Introduction: The increased availability and increased utilization of Computed Tomography (CT) imaging as a diagnostic tool has in the past several years led to concerns regarding the unknown and potentially harmful effects of ionizing radiation exposure to patients, as well as the increased cost to the health care system. Multiple education campaigns (e.g. Choosing Wisely) and institution-wide interventions have been implemented in order to limit the use of potentially unnecessary CT imaging. Two specific modalities CT head and CT angiography to rule out pulmonary embolism (CT PE) have been identified as potential targets of these interventions due to their likely overutilization in the clinical ED setting. The objective of this study was to determine the interphysician variability in the ordering rates of CT head and CT PE, and to determine if any correlation existed between CT head and CT PE ordering rates among physicians. **Methods:** Data was collected on all diagnostic imaging ordered by ED physicians at two very high volume community hospitals during the 4-year period between 2013 and 2016. Analysis was limited to those physicians who worked at least 3 of the 4 years at either site and saw at least 1000 patients per year. The ordering rates for each physician were calculated by dividing the number of the imaging modality ordered over the total number of patients seen. Correlation coefficients (r values) were calculated to determine if a linear correlation existed between increased CT head and increased CT PE ordering rates. **Results:** The DI ordering data for a

total of 44 ED physicians were analyzed. Results show average 4-year ordering rates for CT heads among ED physicians ranging from 4.0% to 13.9%, and CT PE ordering rates ranging from 0.1% - 1.7%. The correlation coefficient between CT head and CT PE ordering rates was positive for all 4 years, with a statistically significant ($p < 0.05$) correlation coefficient of 0.53. **Conclusion:** There is a wide degree of variability in DI ordering patterns among physicians working within the same clinical environment. Further exploration of this interphysician variability will be helpful in designing strategies to mitigate overutilization of diagnostic imaging.

Keywords: diagnostic imaging, physician practice patterns, computer tomography utilization

P130

Cumulative daily boarding time: a new way to measure emergency department congestion and hospital-wide flow

L. Salehi, MD, MPH, V. Jegatheeswaran, BHSc, P. Phalpher, MD, R. Valani, MD, MBA, M. Mercuri, PhD, McMaster University, Hamilton, ON

Introduction: Bed boarding of admitted patients in the Emergency Department (ED) is one of the major contributors to ED overcrowding, and an indicator of hospital-wide deficiencies in capacity and flow. Most indicators of ED overcrowding have measured either counts or percentages of patient subgroups (e.g. number/percentage of patients waiting in triage or number/percentage of admitted patients as compared to full ED census), or specific process time intervals related to patient movement through the hospital (e.g. Physician to Initial Assessment (PIA) time or total ED Length of Stay (EDLOS)). We sought to 1) devise an alternative measure of ED overcrowding that captured the dynamic and disproportionate resource utilization of admitted versus non-admitted patients in the ED, and to 2) determine the association of this measure with selected ED quality metrics for non-admitted patients. **Methods:** We conducted a retrospective multi-centre observational study at three very high-volume community hospitals in the Greater Toronto Area. Data on all patients visiting the ED during the period between January 1, 2015 and December 31, 2016 were included in the study. We calculated the total daily cumulative boarding time - or time to bed (TTB) - for each day of the study duration. The daily cumulative TTB was calculated as the time from decision to admit to transfer from the ED for all admitted patients within a 24-hour period. We conducted linear regression analysis to determine the association between our measured daily cumulative TTB and daily median and 90th percentile PIA and EDLOS times for non-admitted patients. **Results:** Preliminary results for 2015 indicate a total cumulative TTB time ranging from 50,973 hours to 191,093 patient-hours for the year, with daily mean cumulative TTB ranging from 140 524 patient-hours/day among the three hospitals. In all three hospitals, there was a statistically significant ($p < 0.01$) positive association between daily cumulative TTB and both median and 90th percentile PIA times for all patients, and median EDLOS times for non-admitted CTAS 1-3 patients. There was a statistically significant ($p < 0.05$) positive association between daily cumulative TTB and 90th percentile EDLOS for non-admitted CTAS 1-3 patients in two of the three hospitals, with the third hospital showing a positive but non-significant association. **Conclusion:** Bed boarding constitutes a significant resource cost for EDs, and has a negative impact on timeliness of ED care for the general ED population, particularly more complex (CTAS 1-3) non-admitted patients.

Keywords: emergency department overcrowding, quality metrics, hospital administration

P131

Antimicrobial stewardship and best practices for the treatment of STIs in ED sexual assault patients

K. Sampsel, MD, MSc, T. Leach, K. Muldoon, MPH, PhD, A. Drumm, BSc, F. Blaskovits, BSc, M. Heimerl, BA, MSW, University of Ottawa, Department of Emergency Medicine, Ottawa, ON

Introduction: It is assumed that sexual assault cases presenting at Emergency Departments (ED) are frequently lost to follow-up and should be considered an eligible population for presumptive antimicrobial treatment of sexual transmitted infections (STIs) at initial assessment without lab confirmation. With the growing burden of antibiotic resistance, antimicrobial stewardship guidelines caution against this practice. Among sexual assault cases, our study evaluated STI prevalence, follow-up and retention patterns, and described the prevalence of STI presumptive treatment. **Methods:** The Sexual Assault and Partner Abuse Care Program (SAPACP) at The Ottawa Hospital is the only program in Ottawa offering emergency and forensic care for survivors of sexual assault and domestic violence. Descriptive statistics were used to summarize information on demographics, clinical presentation, STI testing and results using data from the SAPACP case registry (January 1 - December 31, 2015). **Results:** Among the 406 patients seen by the SAPACP, there were 262 (64.5%) sexual assault cases that were included in this analysis. STI testing was completed for 209 (79.8%) patients at the initial visit, 90 (43.1%) completed via urine nucleic acid testing (NAAT), 140 (67.0%) via culture swab and 20 (9.6%) via both. Laboratory results detected no cases of gonorrhea, 8 (3.8%) cases of chlamydia, 33(15.8%) cases of bacterial vaginosis (BV), 17 (8.1%) cases of yeast vaginitis and 16 (7.7%) indeterminate testing results. Antimicrobial STI presumptive treatment was given to 12 (5.7%) patients at the time of their initial visit prior to lab confirmation. Patient follow-up occurred in 172 (82.3%) patients, with all chlamydia cases treated. Of the 37 (17.7%) patients lost to follow up, 9 were positive for BV, 1 was positive for yeast and 10 were indeterminate, all of which may be underlying vaginal flora. Follow up testing/test of cure was completed in 91 (52.9%) of patients, with 4 (2.3%) positive results, all of which were BV. **Conclusion:** In our ED, up to 15.8% of sexual assault patients had at least one laboratory confirmed STI and over 80% of all patients returned for follow-up. Our results show that it is safe and effective to only treat STI screen positive cases at follow-up, reducing the frequency of presumptive antimicrobial STI treatment. Benefits of this strategy include decreased patient side effects, cost savings and better antimicrobial stewardship.

Keywords: sexual assault, sexually transmitted infections, antibiotic stewardship

P132

Real life management of patients presenting with upper gastrointestinal bleeding in a tertiary care emergency department - Are we delivering the standard of care?

S. Sandha, M. Bullard, MD, B. Halloran, MD, C. Joseph, MSc, D. Grigat, MA, E. S. Lang, MD, CM, S. Veldhuyzen van Zanten, MD, MSc, MPH, PhD, University of Alberta, Edmonton, AB

Introduction: Upper gastrointestinal bleeding (UGIB) is a common Emergency Department (ED) presentation. Early endoscopic intervention, supported by Glasgow Blatchford Score (GBS) severity, has been shown to reduce re-bleeding rates and lower morbidity and mortality. However, emergent endoscopy is not necessary for all patients. Low-risk patients can be managed with outpatient follow-up. Other important