

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

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

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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

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

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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

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

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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