admission from the ED. Secondary objectives were to examine the association between prolonged ED boarding and in-hospital mortality, 30-day mortality, and hospital length of stay (LOS). **Methods:** Using administrative databases from Ontario, we identified adult (≥ 18 years) cancer patients who received chemotherapy within 30 days prior to a hospital admission from the ED between 2013 to 2017. ED boarding time was calculated as the time from the decision to admit the patient to when the patient physically left the ED. Prolonged ED boarding was defined as ≥ 8 hours. Multivariable logistic regression was used to examine predictors of prolonged ED boarding and to determine if prolonged boarding was associated with mortality. Multivariable quantile regression was used to determine the association between prolonged boarding and hospital LOS. **Results:** 45,879 patients were included in the study. Median (interquartile range (IQR)) ED LOS of stay was 11.8 (7.0, 21.7) hours and median (IQR) ED boarding time was 4.2 (1.6, 14.2) hours. 17,053 (37.2%) patients had prolonged ED boarding. Severe ED crowding was the strongest predictor of prolonged ED boarding (odds ratio: 17.7, 95% CI: 15.0 to 20.9). Prolonged ED boarding was not associated with in-hospital mortality or 30-day mortality. Median hospital LOS was over 9 hours (p <0.0001) longer among patients with the longest ED boarding times. **Conclusion:** Severe ED crowding was associated with a significant increase in the odds of prolonged ED boarding. While our study demonstrated that prolonged boarding was not associated with increased mortality, further work is required to understand if ED boarding is associated with other adverse outcomes in this immunocompromised population.

Keywords: boarding, emergency medicine, oncology

MP38

The impact of physician handoffs on the outcomes of emergency department patients: a medical administrative database retrospective cohort study

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Introduction: A physician handoff is the process through which physicians transfer the primary responsibility of a care unit. The emergency department (ED) is a fast-paced and crowded environment where the risk of information loss between shifts is significant. Yet, the impact of handoffs between emergency physicians on patient outcomes remains understudied. We performed a retrospective cohort study in the ED to determine if handed-off patients, when compared to non-handed-off patients, were at higher risk of negative outcomes. **Methods:** We included every adult patient first assessed by an emergency physician and subsequently admitted to hospital in one of the five sites of the CHU de Québec-Université Laval during fiscal year 2016-17. Data were extracted from the local hospital discharge database and the ED information system. Primary outcome was mortality. Secondary outcomes were incidence of ICU admission and surgery and hospital length of stay. We conducted multilevel multivariate regression analyses, accounting for patient and hospital clusters and adjusting for demographics, CTAS score, comorbidities, admitting department delay before evaluation by an emergency physician and by another specialty, emergency department crowding, initial ED orientation and handoff timing. We conducted sensitivity analyses excluding patients that had an ED length of stay > 24 hours or events that happened after 72 hours of hospitalization. **Results:** 21,136 ED visits and 17,150 unique individuals were included in the study. Median[Q1-Q3] age, Charlson index score, door-to-emergency-physician time and ED length of stay were 71 [55-83] years old, 3[1-4], 48 [24,90] minutes, 20.8[9.9,32.7] hours, respectively. In multilevel multivariate analysis (OR handoff/no handoff [CI95%] or GMR[SE]), handoff status was not associated with mortality 0.89[0.77,1.02], surgery 0.95[0.85,1.07] or hospital length of stay (-0.02[0.03]). Non-handed-off patients had an increased risk of ICU admission (0.75[0.64,0.87]). ED occupancy rate was an independent predictor of mortality and ICU admission rate irrespectively of handoff status. Sensitivity and sub-group based analyses yielded no further information. **Conclusion:** Emergency physicians' handoffs do not seem to increase the risk of severe in-hospital adverse events. ED occupancy rate is an independent predictor of mortality. Further studies are needed to explore the impact of ED handoffs on adverse events of low and moderate severity.

Keywords: communication, handoff, retrospective cohort study

MP39

Emergency department triage redesign: can elements designed to improve department flow reduce door-to-ECG times in self-presenting ED patients suspected of myocardial infarction?

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Introduction: ST-Elevation Myocardial Infarction (STEMI) represents irreversible necrosis of myocardial tissue. Prompt time-to-reperfusion in these patients is paramount in reducing morbidity and mortality. This concept, time-to-reperfusion, is the principle focus for improving STEMI care. Prioritizing diagnosis in patients with high-risk cardiac features through rapid electrocardiogram (ECG) is essential, with gold standard time-to-ECG benchmarked at 10-minutes. While substantial literature is established for pre-hospital ECG interventions, there is a paucity of intervention data for self-presenting patients. While evaluating these times within our department, we conducted a redesign of the triage process. These included nurses becoming the first contact and the addition of an extra triage nurse. These changes provided the opportunity to evaluate whether the redesign elements of the triage system meant to improve department flow could improve other patient-centered outcomes, namely time-to-ECG. **Methods:** The first fifty self-presenting patients designated as "cardiac chest pain" in the month preceding changes to the triage system were analyzed to create a baseline time-to-ECG value. Following the alteration to our triage system, three samples of the first 50 patient's time-to-ECG were collected at two, four and six months post-intervention and compared to pre-intervention via non-paired t-test. Data was further stratified into percentages of patients receiving an ECG within 10-minute intervals starting with 0-10 minutes. Proportions pre and post intervention were then compared using z-scores. **Results:** A baseline pre-intervention time-to-ECG value of 26.6 minutes was established. Average post-intervention time-to-ECG was significantly reduced at 15.6min with a mean difference of -11.0min ± 3.0 (95% CI -16.0 – (-5.0)). Interestingly, the proportion of ECGs performed under 20 minutes rose significantly from 58% to 81% (z=−3.2, p < 0.001) while the increase in proportion of ECGs performed under 10 minutes from 26% to 37% was not statistically significant (z=−1.4). **Conclusion:** The results of this analysis suggest that the addition of an extra triage nurse coupled with changing first point of ED contact from the business clerks to triage nurses significantly reduced mean time-to-ECG in self-presenting patients with chest pain deemed high risk for cardiac causes. Additionally, these changes significantly