**FACTORS AFFECTING LENGTH OF STAY AND TIME TO READMISSION IN A RETROSPECTIVE HEART FAILURE READMISSION COHORT**

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**Background:**The 30-day readmission rate for heart failure (HF) patients is 25%, with the average length of stay (LOS) of 6 days. The Hospital Readmissions Reduction Program has mandated public reporting of readmission rates and this has resulted in financial penalties for hospitals with higher readmission rates.

**Purpose of Quality Improvement Project:** Retrospective cohort study to evaluate patient related characteristics affecting length of stay (LOS > 6 days) and the time to readmission (TTR) [Early: < 7 days versus Late: >7 days] in a readmission cohort.

**Methods:**Heart failure patients readmitted within 30-days of discharge from St. Elizabeth’s Medical Center between June 2014 and June 2016. Demographic characteristics, medical history, LOS, TTR were obtained. Patients readmitted within 30 days of their heart failure admission were identified. A logistic regression (using forward stepwise approach) was used to identify risk factors (age, hypertension, diabetes mellitus, ejection fraction, baseline blood pressure and pulse pressure, Charlson Comorbidity Index (CHI), chronic kidney disease), associated with LOS > 6 days (dependent variable). Same analysis was done for early and late TTR (dependent variable).

**Results:**152 patients were identified, 8 were excluded because of incomplete data. The mean age was 79 ± 12 with a male predominance (72%) and an average length of stay of 7.29 days. Patients were readmitted within 13.91 ± 8.69 days. Additional characteristics include ejection fraction (49.51 ± 15.41), ACC/AHA class C (82.89%), NYHA III-IV (59.87% - 38.15%).The multivariate analysis showed that patients with higher LVEF (OR: 0.97, p=0.032) are less likely to have LOS beyond 6 days and patients with lower CHI are less likely to have TTR < 7 days (OR: 0.80, p: 0.008) or LOS > 6 days (OR: 0.86, p: 0.049).

**Conclusions:** Charlson Comorbidity Index and ejection fraction should be factored into the management of readmission patients. The study is limited the relatively small sample and the retrospective design.