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Risk Factors for Readmission in Patients with Heart Failure

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Background

Heart Failure (HF) patients experience higher rates of readmission than other populations (Rosen, et al.). Centers for Medicare and Medicaid (CMS) are declining healthcare payments for patients with HF who are readmitted within 30 days (Bergethon, et al.). Readmission also adds to strain on patient and family well-being and resources. Chronic HF disproportionately affects older individuals, who typically have extensive comorbidity. However, little is known about how noncardiac comorbidity complicates care in these patients.(Braunstein, et al.).

Palliative care has been shown to prevent readmission and improve patients' quality of life in other populations. For HF patients, the goal of palliative care is to prevent and relieve suffering, to promote quality of life for both the patient and their family (Tiny et al.). The prevention and relief of suffering in the home setting may lead to a decline in hospital readmissions. There is also a paucity of literature describing the impact palliative care has on readmission of patients with HF.

Purpose

The purpose of this descriptive, correlational study was to determine the most common comorbidities in patients with heart failure, and how they correlate to 30 day readmission rates, and to analyze if the lack of palliative care is an additional risk factor for readmission. A secondary purpose was to explore the relationship between disposition at discharge and readmission rates.

Methods

This study is a retrospective chart review of patients with HF. This review study received IRB approval.

Providence St. Vincent Medical Center (PSVMC), a 523-bed tertiary hospital in Portland, Oregon, maintains a database of all patients discharged with the primary diagnoses of HF, and their subsequent disposition.

The inclusion criteria included patients using their DRG (Diagnosis Related Group) that were admitted with the primary diagnosis of heart failure to PSVMC from November 2016 through November 2017. A chart review was conducted from the medical records of all the patients that were readmitted for HF and an equal number of randomly selected HF patients that were NOT readmitted, to determine each patient's risk factors and disposition and whether the patient received palliative care services.

The analysis of the data used Chi-Square test for independence (Pearson's chi square) using SPSS.

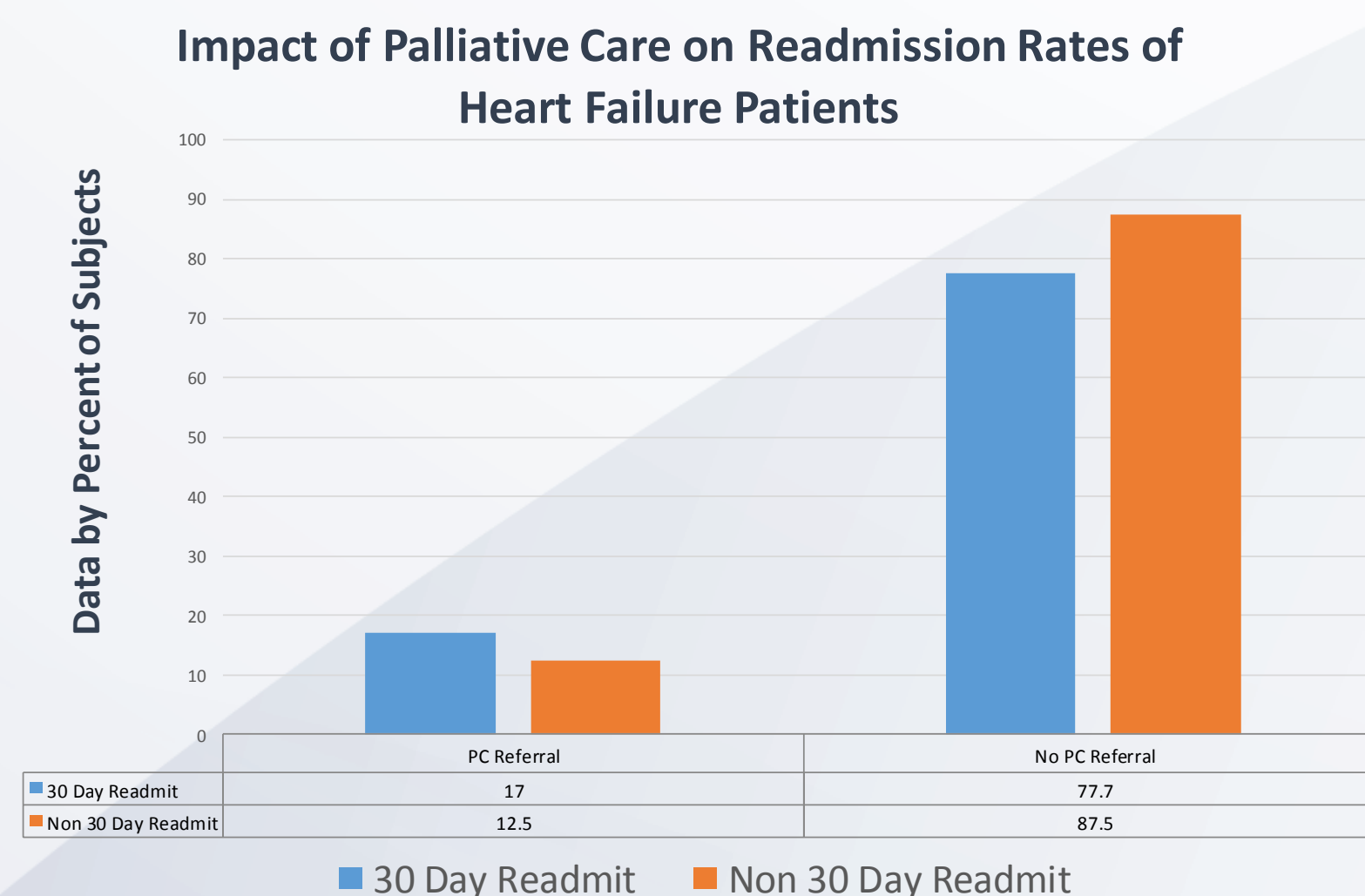


Figure 1. Palliative Care and Readmission Rates

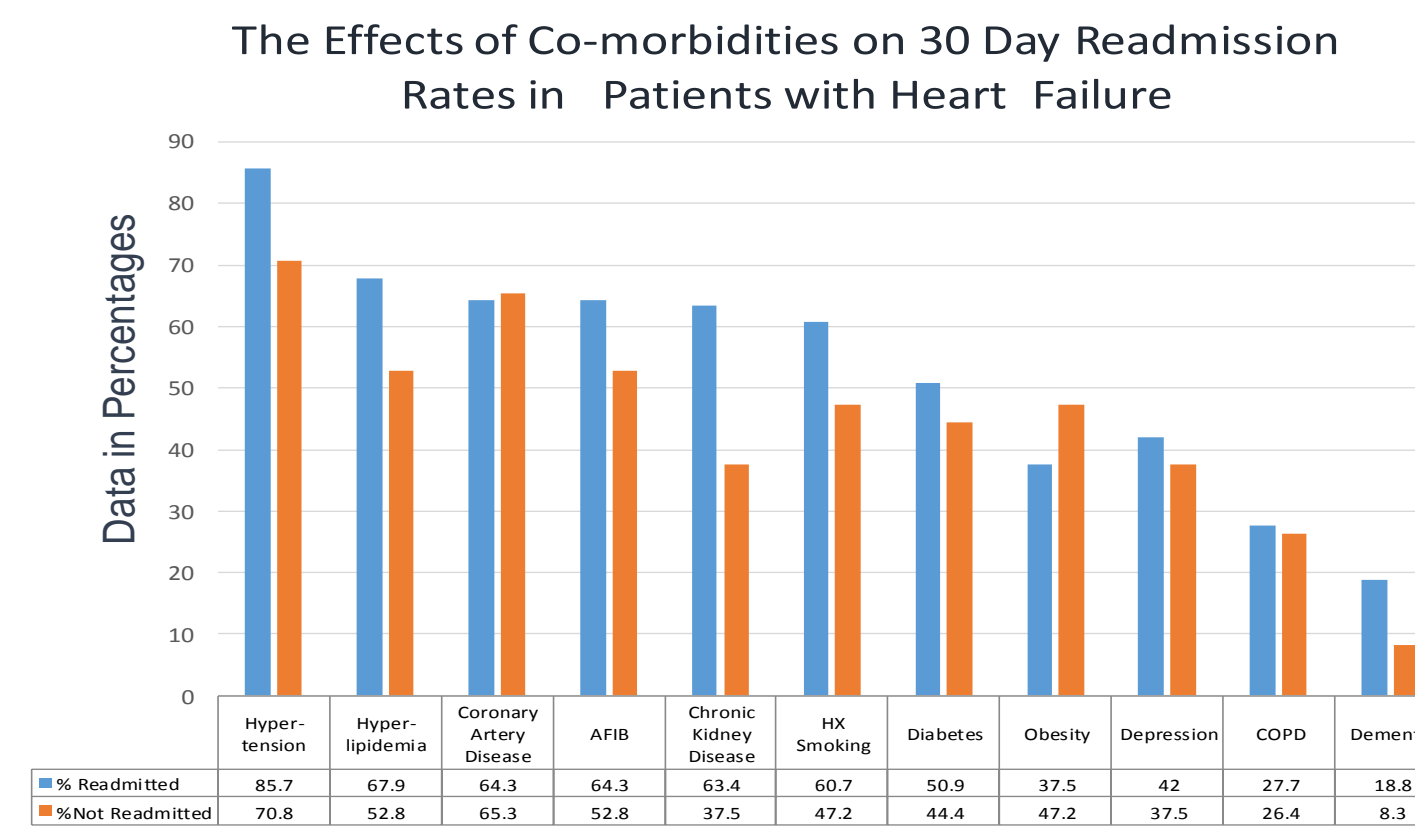


Figure 2. Co-morbidities and Readmission Rates

Results

A total of 184 chart reviews were conducted. The population averaged 72.4 ± 1.64 years old and included 97 (53%) females and 87 (47%) males. Of these, 112 were readmitted within 30 days and 72 were not readmitted.

Figure 1 shows that patients receiving a palliative care referral were readmitted more often than those not receiving the palliative care referral. ($p < .0001$).

A focused analysis of how the 11 comorbidities that were most common in heart failure patients affected the 30 day readmission rate is represented in Figure 2. Patients with the following comorbidities were more likely to be readmitted: Hypertension ($p = .0006$), Hyperlipidemia ($p = 0.04$) Chronic Kidney Disease ($p = .0006$) and Dementia ($p = .05$).

Figure 3 shows the effects of a patient's disposition at discharge on their on 30 day readmission rate. Patients who were discharged home alone were less likely to be readmitted ($p = .0414$). Patients discharged to Skilled Nursing Facility (SNF) were the most likely to be readmitted ($p = .0169$).

References

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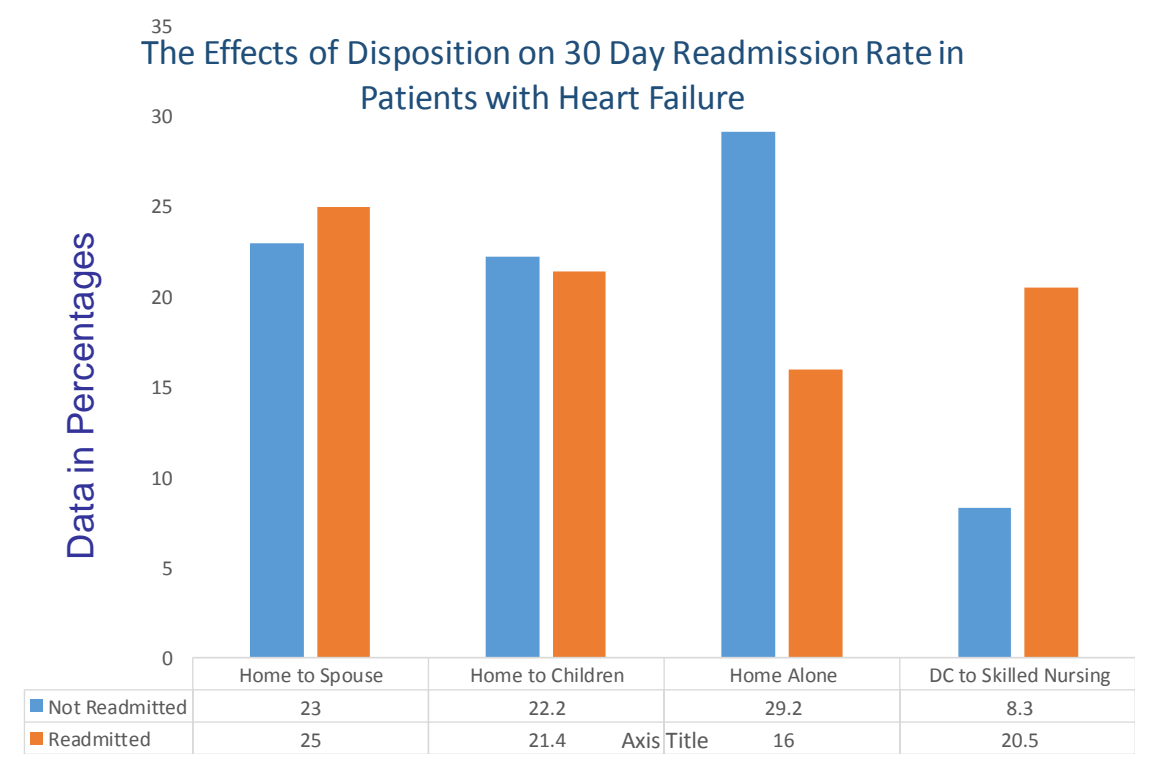


Figure 3. Disposition and Readmission Rates

Discussion/Conclusions

The comorbidities results indicate patients with hypertension, hyperlipidemia, chronic kidney disease, and dementia are more likely to be readmitted than other comorbidities, indicating that providing more education and support to patients with these conditions at discharge and additional follow up supports in the community, might improve outcomes. Or perhaps these comorbidities are a cause of or part of the advancement of the CHF disease process.

The patients being discharged on palliative care were a small percentage of the patients analyzed. This suggests a missed opportunity in quality patient care. The implications for nursing are to increase emphasis on referring patients to palliative care to benefit from this additional support. A multi-disciplinary task force is being formed on the cardiology unit to find the best way to provide these services to inpatients and follow up in the community.

The disposition results were the biggest surprise. Patients going home alone represented the lowest readmission rate. This could be because they are the healthiest, but this opens the door for additional research and analysis.

