

## **IMPACT OF PHARMACIST-LED MEDICATION EDUCATION ON HEART FAILURE READMISSION RATES**

Kristina Milewski, Melanie Smith, Jacob Sumner, Austin Wilson; Research Medical Center, 2316 E. Meyer Blvd, Kansas City, MO 64132. kristina.milewski@hcamidwest.com

Heart failure continues to be the leading cause of 30-day hospital readmissions. The high pill burden of the average heart failure patient makes management more complex and may affect patient outcomes. With increasing heart failure rates in the United States, it is important to ensure patients are educated on their disease state and treatment. This project assesses the impact of pharmacist involvement on readmission rates and patient satisfaction following heart failure medication education and counseling.

The institutional review board approved this open-label, non-randomized, controlled group study. Patients aged 18 and older provided consent and were enrolled if they had a new diagnosis of heart failure or a heart failure exacerbation. As patients approached discharge, pharmacists, pharmacy students, and pharmacy interns provided comprehensive heart failure medication counseling with emphasis on adherence. After discharge, patients were monitored for 30-day all-cause and heart failure-related readmission. Readmission data were then compared to corresponding data for those not counseled. The primary outcome measure was a change in all-cause 30-day readmission rate following pharmacist intervention. Secondary outcomes included change in heart failure-related 30-day readmission rates and patient satisfaction.

The final analysis included 94 patients admitted with a new diagnosis of heart failure or a heart failure exacerbation. Following admission, pharmacist-led medication counseling was provided to 58 patients. Patients that were counseled were more likely to be African American and have a higher BMI than those that weren't counseled. These differences in baseline characteristics were found to be predictors of all-cause 30-day hospital readmission ( $p < 0.05$ ). Only two patients responded to the patient satisfaction survey within this time frame, no further statistical analysis was completed due to low response rate. In patients who received pharmacist counseling versus those that did not, all cause readmission was 31% versus 19.4% (difference 11.6%,  $p = 0.24$ ). Heart failure readmission rates were 15.5% versus 16.7% (difference 1.2%,  $p = 1.00$ ), respectively.

In patients admitted for heart failure exacerbation or newly diagnosed heart failure, pharmacist-led medication counseling trended towards a reduction in 30-day heart failure readmission. All-cause 30-day readmission was not associated with a significant reduction following medication counseling. Based on time frame constraints, power was not met. Future considerations include focusing counseling on patient groups at high risk for readmission and improving nursing and provider satisfaction.

### **Learning Objective:**

- Investigate the impact of a pharmacist-led heart failure patient counseling program.