

Kristin Watson

Background: Self administration of medication (SAM) programs in hospital settings have been shown to improve patient preparation prior to discharge, improve medication knowledge and improve adherence upon discharge. Clinical outcomes associated with SAM programs are unknown. Despite improvements in medical therapy up to 40% of patients discharged after hospitalization for heart failure (HF) die or are hospitalized in 3 months. Heart failure also significantly impacts the quality of life of patients. Formal HF education programs have demonstrated decreases in hospital admission rates and subsequent cost. The overwhelming utilization of healthcare resources by patients with HF and the high prevalence of HF makes this population ideal to evaluate the effects of a SAM program with education on clinical outcomes.

Methods: This prospective trial will evaluate the effect of an inpatient structured education and SAM program compared to usual care. The primary endpoint is to determine is the composite of hospitalizations, emergency department (ED) visits, worsening quality of life or death. One hundred and forty patients 18 years of age or older admitted to the University of Maryland Medical Center – cardiology service with an ejection fraction of < 40% will be enrolled. Patients who are non-English speaking, involved in another research study, in cardiogenic shock, actively listed for heart transplantation, or have a life expectancy < 1 year will be excluded. All patients will be educated through a formal program by pharmacist or pharmacy student (under supervision of the pharmacist). Caretakers who are responsible for delivering patients medications at home will be included in the intervention process. All patients/caretakers included will work with their nurse at all medication dosing times to determine their ability to self administer medications. Patients will complete a test to assess their retention of core HF concepts that they were instructed on prior to discharge.

Results: The primary objective of this study is to compare the rate hospitalizations, ED visits, worsening quality of life or death between the two groups. The difference in time to hospitalizations, death or ED visits will be compared between groups. The differences in events rates between patients/caretakers based on their ability to self administer medications in the intervention group will be reported. Additionally, the association of scores on the disease state test and improvement in the primary endpoint will be evaluated. This data will be used in to determine if this instrument is reliable and valid in the future.

Conclusion: The results of this study will provide guidance on methods that can be employed to improve outcomes in patients with HF. The results can lead to the development and evaluation of similar programs in patients with other chronic disease states such as diabetes mellitus and coronary artery disease. This type of program could potentially assist hospitals in achieving the Joint Commission's 2009 Patient Safety Goal of actively involving patients in their care. Implementation of similar programs can expand the responsibilities of inpatient pharmacist.