

Clinical Pharmacy Interventions to Improve Transitions of Care and Reduce Hospital Readmissions in End-Stage Renal Disease Patients with Heart Failure and Infection

Principal Investigator

Joanna Q. Hudson, PharmD, FCCP, FASN, FNKF

Background: Rates of hospital readmission for patients with end-stage renal disease(ESRD) are double those of the general Medicare population. Because the ESRD program is a leading resource utilizer within Medicare, readmission rates among dialysis patients have come to the forefront of both policy and quality improvement initiatives. ESRD patients admitted for heart failure and infections have a high likelihood of being rehospitalized for the same indication. A contributing factor is the lack of transitions of care between the inpatient setting and outpatient dialysis facilities. Pharmacists are uniquely qualified to fill this gap and improve patient care.

Objectives: Our central hypothesis is that implementation of a pharmacist-led medication evaluation and transitions of care program will increase the number of ESRD patients with heart failure discharged and continued on guideline-directed medication therapy (GDMT), reduce hospital length of stay in patients with a documented infection requiring intravenous (IV) or intraperitoneal (IP) antibiotics, and reduce 30-day hospital readmissions in these patients compared to ESRD patients not receiving formalized intervention.

Methods: ESRD patients admitted to Methodist University Hospital will be evaluated by one of the nephrology clinical pharmacists using a standardized process and form developed by the investigators. The outpatient dialysis facility will be contacted to obtain information including all medications administered during dialysis, home medications, labs available within the last month related to the co-morbid conditions, the patient's last hospitalization and reason, and an assessment of adherence (using a 10-point scale as determined by the patient's dialysis nurse). Patients with heart failure will be evaluated to determine if the patient is receiving GDMT. GDMT will be recommended for patients not receiving such treatment unless the patient has a contraindication to therapy. A follow up plan will be developed with the outpatient dialysis unit to ensure adherence with therapy for those prescribed GDMT. Patients requiring continuation of IV antibiotics in the outpatient dialysis units will have follow up at discharge, which includes communication of the antibiotic treatment plan to the outpatient center and follow up to ensure completion of antibiotic therapy and resolution of infection. Outcomes of interest that will be compared in the pharmacist intervention group compared to a control group include the percent of patients with heart failure receiving GDMT at discharge, length of hospitalization for patients requiring IV or IP antibiotic therapy, and 30-day hospital readmissions in each group and by sub-groups.

Significance: Our goal is to provide evidence that implementation of a pharmacist-led medication evaluation and transitions of care program for ESRD patients who have heart failure or infections is a valuable addition to improve patient outcomes and reduce health care costs.