Purpose:
Interdisciplinary care coordination during transitions has been demonstrated to reduce readmissions, but published studies have not always included a pharmacist as part of the team or measured outcomes specific to pharmacist-provided care. Pharmacists should assume increased accountability for medication-related outcomes, particularly during vulnerable times such as transitions. PMIT is a demonstration project that is meant to guide transformation of the practice model with an enhanced emphasis on interdisciplinary transitions and prevention of post discharge hospital utilization. The model demonstrates responsiveness to healthcare reform. The overall aim of the study is to develop clearly delineated processes and resources for PMIT in a targeted group of patients with expansion to hospital-wide implementation on the main campus and at four rural affiliate hospitals (two critical access) in our health system. Development of a PMIT resource tool kit will assist with education and implementation of the program throughout our hospital system and make it generalizable to other community-based settings.

Methods:
The primary objective is to evaluate the effect of a hospital to home pharmacist-provided medication management program on hospital utilization rates within 30 days of discharge. Secondary endpoints include a comparative assessment of: (1) hospital readmission at 60, 90, 180 and 365 days (2) the Hospital Care Assessment of Health Care Provider and Systems (HCAHPS) scores (3) pharmacist return on investment (4) identification of risk factors that influence hospital utilization (5) patient-targeted pharmacist satisfaction surveys. Institutional Review Board (IRB) approval will be obtained.

For Phase 1 of the study, patients who are admitted to either of two medical surgical progressive care units of the hospital are being evaluated. These patients are being targeted due to a 20.2% readmission rate, a high percentage of International Classification of Disease (ICD-9) associated pulmonary/chronic obstructive pulmonary disease (COPD) patients, and due to opportunities for improvement in medication focused HCAHPS scores. The intervention group will consist of patients in whom PMIT was included as part of their team-based care. Inclusion criteria for the intervention group are all patients admitted to MHS between 9/23/13 and 3/31/14 to either of two patient care units. The control group will consist of historical control patients in whom PMIT was not included as part of team-based transitional care.

Inclusion criteria for the control group are all patients admitted to MHS one year prior to PMIT, between 9/23/12 and 3/31/13 to either of the same two patient care units utilized in the intervention group. Variables that will be collected in each group include: age, gender, ethnicity, distance from access healthcare, index length of stay, principle ICD-9, number of chronic diseases, presence of primary care physician and payer sources. Metrics that will be collected for the intervention group include: volume and percentage of each transitional stage completed, number and types of medication discrepancies identified and resolved, percentage of high risk medications implicated, time spent by the pharmacist or student pharmacist, and estimated cost avoidance associated with interventions. Student pharmacists are being utilized for assistance with medication histories and medication reconciliation. Phase 2 will include an expansion of PMIT to other patient care units and rural affiliate hospitals, implementation of post discharge follow up phone calls by technicians and/or student pharmacists, and expansion of 30 day prescription fills at discharge and pharmacy targeted patient satisfaction surveys.

For Phase 1, a transitions of care pharmacist was added to the interdisciplinary team for two units in September 2013. Preliminarily, PMIT care has been provided in 203 patients who met inclusion criteria. Phase 2 will begin in June 2014 and will continue through March 2015. Statistical analysis is being conducted by our health system’s Research Institute. The baseline hospital utilization frequency for the control group is 20.2%. Considering a change in the primary outcome of 7 percent as clinically meaningful, and using a type I error rate of 0.05 and a type II error rate of 0.20 (80% power), it is estimated that 440 patient per group would be needed for comparison.