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Heart Failure Transitions of Care: A Pharmacist-Led Post-Discharge Pilot Experience

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ABSTRACT

Objective To perform a pilot evaluation of a pharmacist-led, multidisciplinary transitional care clinic for heart failure (HF) patients.

BackgroundTransitions of care in HF should include: medication reconciliation, multidisciplinary care, early post-discharge follow-up, and prompt intervention on HF signs and symptoms. We hypothesized that combining these elements with optimization of medications would impact outcomes.

Methods In the SERIOUS HF Medication Reconciliation Transitional Care Clinic (HF MRTCC), patients were seen by a clinical pharmacist trained in HF. The pharmacist performed medication reconciliation, a basic physical exam, and a HF symptom history. Medications were adjusted by the clinical pharmacist or medical provider. Data were retrospectively collected for a quality improvement evaluation of this novel clinic on medication discrepancies, medications optimized, and 30-day readmissions. Descriptive statistics and paired *t*-tests were used for medication doses.

Results All patients (n = 135) had a diagnosis of HF, 59% were recently discharged. The mean time from discharge to the clinic appointment was 10 ± 6 days, and the 30 day all-cause readmission rate was 9%. Medication discrepancies were detected in 53% of patients. Medications were optimized in 70%, most frequently beta blockers, ace inhibitors, and diuretics. In patients with an ejection fraction ≤40%, significantly higher doses of beta blockers and ace inhibitors were prescribed after the clinic visit.

Conclusion The HF MRTCC identified and corrected numerous medication discrepancies, up-titrated medications, and was associated with a 30-day readmission rate of 9%. These encouraging pilot results are hypothesis-generating and warrant further controlled trials.

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Abbreviations and Acronyms

ACC = American College of Cardiology

ACE = angiotensin converting enzyme

ADHF = acute decompensated heart failure

AHA = American Heart Association

CMR = comprehensive medication reconciliation

CMS = Centers for Medicare and Medicaid

ED = emergency department

EF = ejection fraction

EMR = electronic medical record

GDMT = guideline-directed medical therapy

GWTG = Get With the Guidelines

H2H = Hospital to Home

HF = heart failure

HF MRTCC = Heart Failure Medication Reconciliation Transitional Care Clinic

HFSA = Heart Failure Society of America

HFpEF = heart failure with a preserved ejection fraction

HFrEF = heart failure with a reduced ejection fraction

MRA = mineralocorticoid receptor antagonists

VA = Veterans Affairs

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Introduction

Heart failure (HF) continues to burden the Centers for Medicare and Medicaid (CMS) budget. HF hospitalizations for Americans >65 years old are more prevalent than any other medical condition.[1,2] Due to the aging population and high incidence, the total costs of HF are projected to be 70 billion by 2030.[1] Not only is HF the most prevalent diagnosis for hospitalizations of Medicare recipients but also the highest diagnosis for potentially preventable 30 day readmissions.[3] Reducing readmission rates by 2% potentially saves more than $100 million a year for the U.S. health care system.[4]

Medication discrepancies are found in 50–60% of all patients who are discharged from the hospital.[5] The Joint Commission National Patient Safety Goals recommend medication reconciliation at all transitions of care.[6] System level and patient-related factors are equally prevalent causes for post-discharge medication discrepancies. Unintentional medication errors account for 30–50% of discrepancies, and post-discharge medication discrepancies are associated with a higher risk of readmission.[7] A best practices model has been developed for discharge counseling in patients with HF that describes optimal processes for comprehensive medication reconciliation (CMR) to overcome these barriers.[8]

After discharge for acute decompensated heart failure (ADHF), patients exhibit variable levels of improvement and self-management skills to maintain symptomatic stability. These factors, coupled with a high incidence of medication errors, demonstrate why early and effective post-discharge follow up has become a strategic intervention impacting readmission rates.[9] In an observational study by Hernandez et al.[10] of 225 hospitals (>30,000 hospitalized patients) participating in Get With the Guidelines (GWTG), the hospitals with the lowest percentage of patients who had follow-up within 7 days had a significantly higher 30-day readmission rate. The Hospital to Home (H2H) initiative, led

Table 1 – Recommended components of a transitional care program.

- Medication reconciliation
- Very early telephone contact (within 24–72 h)
- Early office follow-up within 7–14 days of discharge
- Clinical assessment (weight, volume status, functional status, symptoms)
- Patient education on symptom recognition and chronic self-care behaviors
- Communication of patient health record with the patient and post-discharge providers
- Integrated interdisciplinary collaboration and coordination
- Framework that ensures education is initiated during hospitalization and continues during initial community care setting
- Screen patients for features that confer a higher risk for poor outcomes (e.g. cognitive impairment, non-English speaking, long travel time to healthcare appointments)
- Ensure that health care providers are adequately trained to provide HF education
- Allot adequate time to deliver complex HF interventions and assess patient/caregiver response
- Use health informatics to assist in program sustainability with patient and provider-centric tools

Adapted from: American Heart Association, Inc.[12]