Home hospital heart failure admissions are an opportunity to initiate goal directed medical therapy - a retrospective analysis

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Background: There is growing recognition of the importance of goal directed medical therapy (GDMT) initiation for heart failure (HF) during hospitalization. Home hospital provides traditional inpatient hospital care in the patient’s home. Data describing GDMT initiation in home hospital is lacking.

Purpose: We described the rate of GDMT prescription on admission to and on discharge from home hospital for HF exacerbations, and compared the rate of sodium/glucose cotransporter-2 inhibitors (SGLT2i) prescription before and after home hospitalization.

Methods: This retrospective cohort is derived from all HF hospitalizations in two home hospital programs in the US between February 2020 and October 2022. Patients with heart failure with reduced ejection fraction (HFrEF; EF <50%) and patients with heart failure with preserved ejection fraction (HFpEF) who were hospitalized after February 2022 (when the FDA approved SGLT2i for HFpEF) were included. Exclusion criteria were if care was escalated to the traditional hospital setting, if patient goals of care were comfort care only, or if patients were receiving palliative inotropes. We report the rate of GDMT prescription immediately prior to home hospital admission and at discharge. GDMT for HFrEF was defined as beta-blocker, angiotensin-converting enzyme inhibitors/angiotensin receptor blockers (ACEi/ARB), angiotensin receptor-neprilysin inhibitor (ARNI), mineralocorticoid receptor antagonists (MRA), and SGLT2i; for HFpEF, only SGLT2i were considered. For the entire cohort, McNemar’s chi-squared test was performed to compare the rate of SGLT2i prescription before and after admission. Other GDMT therapies were not compared due to insufficient power. Reasons for not initiating GDMT are reported. Data were collected through manual chart review.

Results: We studied 173 hospitalizations; 95 patients had HFrEF and 78 had HFpEF. Mean age was 77.3 years; 65% had atrial fibrillation, 57% had diabetes mellitus, and 51% had chronic kidney disease. For patients with HFrEF, rates of beta-blocker, ACEi/ARB, ARNI, MRA, and SGLT2i prescription on admission were 88%, 56%, 16%, 34%, and 14% and on discharge were 85%, 49%, 17%, 35%, and 23% respectively; Figure 1. For the entire cohort – patients with HFrEF or HFpEF, the difference between the rate of SGLT2i prescription before and after the admission was statistically significant (12.1% vs 20.8%, p-value < 0.001); Figure 2. In 89% of hospitalizations GDMT was not initiated; the three most common reasons were no reason cited (68%), deferral to outpatient follow-up (14%), and kidney dysfunction (10%).

Conclusion: Home hospital admission for HF represents a feasible opportunity to initiate GDMT. Patients admitted to home hospital for HF had a statistically significant increase in the rate of SGLT2i prescription, although the overall rate remained low. Future study will investigate if GDMT prescription rates are improved with cardiology e-consultation in home hospitalizations.