

# Implementation of Guideline Directed Medical Therapy in Hospitalized Patients with New Heart Failure with Reduced Ejection Fraction

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## BACKGROUND

- Heart failure remains a leading cause of morbidity and mortality, with suboptimal use of guideline directed medical therapy (GDMT).
- In-hospital initiation and titration of GDMT may enhance its usage and improve outcomes, particularly during the post-discharge period.
- Previous data indicates that only about 1/3 of patients with heart failure are prescribed each component of GDMT, and less than 1% achieve target doses for all major therapies.
- Even after hospitalization, which is a critical period for initiating these therapies, the rates of GDMT initiation and titration to target doses remain low.

## METHODS

A retrospective chart review was conducted to identify patients with the principal diagnosis of heart failure with reduced ejection fraction (<40%) who were discharged from two cardiac units (4-1600 and 4-3600) at Strong Memorial Hospital.

ICD-10 codes were used to identify admissions over the course of a 6-month period (July 2024 - December 2024).

149 patient charts were identified, out of which 34 patient had newly diagnosed HFrEF.

Our team designed a visual aid outlining an approach to diuresis and including all classes of GDMT medications with starting doses and contraindications (Figure 1).

The visual aid is prominently displayed on the workstation computers of units 4-1600 and 4-3600 and was also distributed to rotating residents in badge-sized card that could be attached to their ID reels.

After a 3-month period we plan on re-evaluation of GDMT initiation rate on the same inpatient units.

**Why:** Only about 50 % of patients are started on quadruple therapy for HFrEF over a 6-month period during inpatient admission at SMH with similar rates nationwide.

**Objective:** to increase initiation rates of the four pillars of GDMT in hospitalized patients with newly diagnosed HFrEF at Strong Memorial Hospital to reduce hospitalization and improve mortality rates associated with HFrEF.

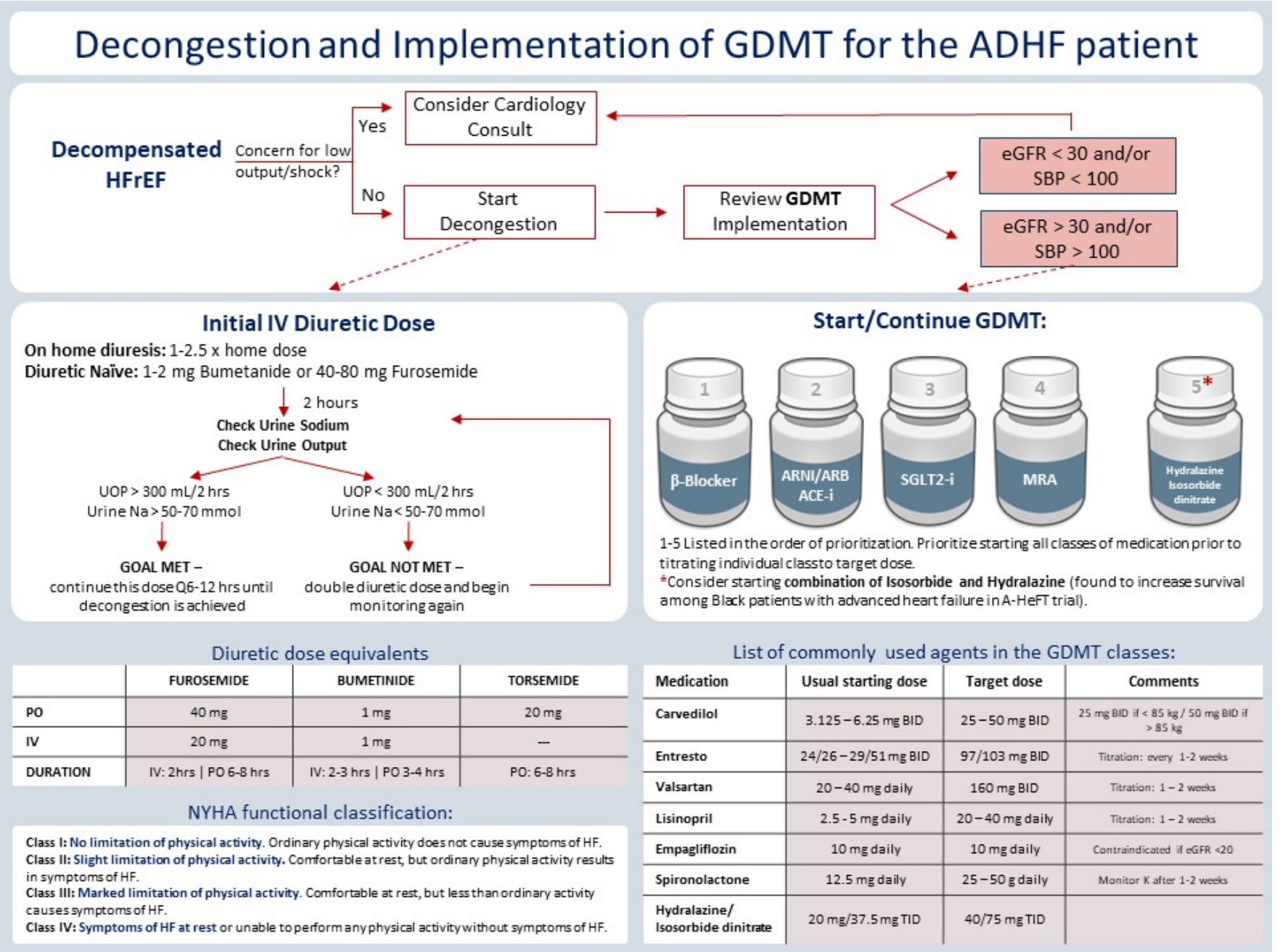


Figure 1: Visual aid displayed at computer workstations on inpatient units 436-00 and 416-00 at SMH.

## INITIAL RESULTS

- Retrospective chart review identified 34 patient patents discharged from units 436-00 and 416-00 at SMH who were newly diagnosed with HFrEF.
- Out of 34 patients, initiation rates were 37.5% for Triple Therapy (Beta blocker, ACE/ARB/ARNI, MRA) and 50% for Quadruple Therapy (Beta blocker, ACE/ARB/ARNI, MRA, and SGLT2i) (Fig.3)

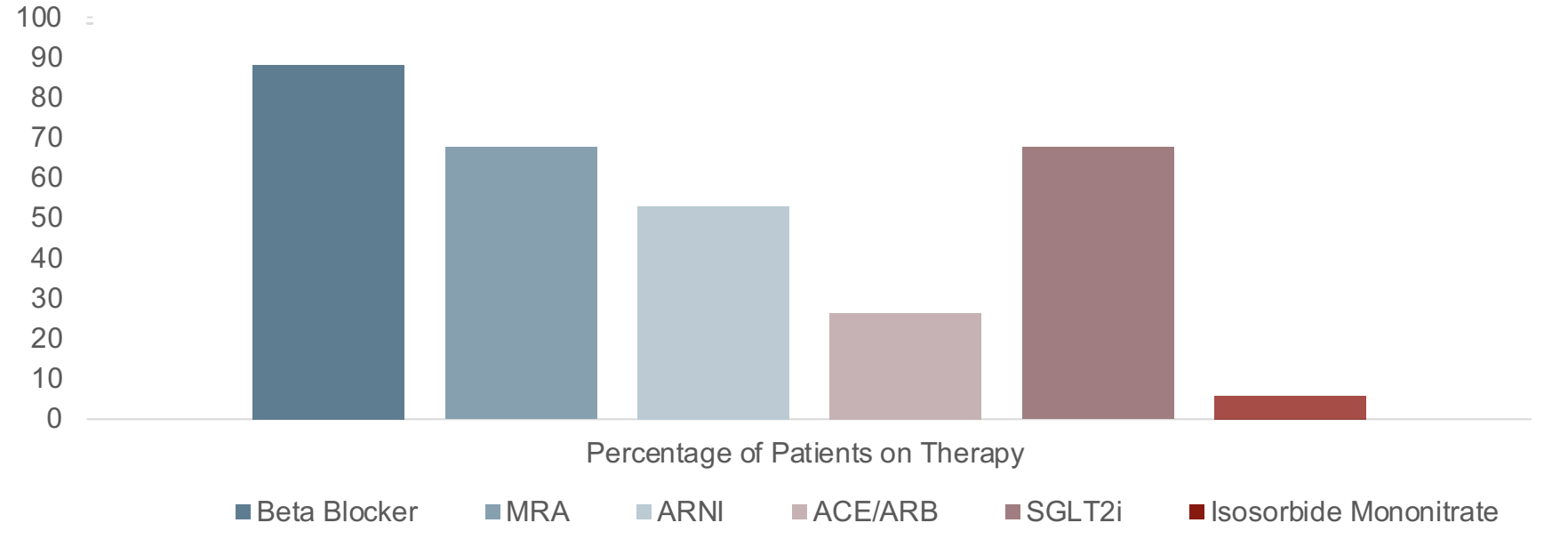


Figure 3: GDMT Initiation Rates (%) for new diagnosis of HFrEF by medication class at SMH prior to QI project intervention.

## NEXT STEPS

- Review rates of initiation of GDMT in newly diagnosed HFrEF on the same inpatient units after 3 months of visual aid being displayed and cards being distributed.
- Propose expanding this initiative to other inpatient units such as general medicine floor and observation unit.
- Modify existing visual aid to adjust for different unit's staged of GDMT implementation

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