

# Initiation of SGLT2 Inhibitors in Patients Hospitalized with Heart Failure Exacerbation

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## BACKGROUND

Sodium-glucose cotransporter-2 inhibitors (SGLT2i) have demonstrated benefit in reduction of hospitalization and mortality for heart failure and cardiovascular death in patients with HFrEF, HFmrEF and HFpEF, regardless of the presence of diabetes. In addition to outpatient prescribing, these medications can also be initiated during hospitalization for acute heart failure exacerbation given their rapidly accrued benefits and good safety and tolerability profile. However, initiation of SGLT2i is often deferred to the outpatient setting despite multiple studies demonstrating that failure to discharge eligible patients on GDMT significantly increases the chance that these therapies will not be initiated.

## OBJECTIVE

To assess what percentage of patients admitted with a principle diagnosis of heart failure exacerbation to general medicine units at Strong Memorial Hospital were prescribed SGLT2 inhibitors prior to discharge.

## METHODS

This is a retrospective chart review study focused on patients with the principal diagnosis of heart failure exacerbation who were discharged from two hospital medicine units (6-1400 and 6-3400) at Strong Memorial Hospital between August 1, 2022 and August 22, 2023. ICD-10 codes were used to identify admissions during this time frame. A total of 125 charts were included in this analysis. A summary of what data were collected via chart review is listed in table 1.

| Was the patient treated with SGLT2i prior to hospitalization?                         | Table 1. Data collected from chart review |
|---|---|
| Was SGLT2i initiated prior to discharge?  |   |
| GFR prior to discharge  |   |
| History of T2DM   |   |
| History of prior amputation   |   |
| LVEF %  |   |
| Presence of Left Atrial Enlargement on Echocardiogram                                 |   |
| BNP on admission  |   |
| Documented reason for deferral of SGLT2i initiation prior to discharge, if applicable |   |

## RESULTS

- Between Aug 1, 2022 and Aug 22, 2023, the overall percentage of patients admitted with heart failure exacerbation with GFR at discharge > 30 who were started on SGLT2 inhibitors during their hospitalization was approximately 11.8% (9 out of 76).
- The most common reason documented for not starting an SGLT2 inhibitor in this population was deferral for outpatient consideration.

# Between August 2022 and August 2023, the rate of initiation of SGLT2 inhibitors in patients admitted to General Medicine units with heart failure exacerbation who had acceptable renal function at discharge was less than 12%.

# Inpatient providers should continue to consider initiation of SGLT2 inhibitors in hospitalized patients given their studied benefits in preventing hospitalization and improving mortality in patients with heart failure.



## DISCUSSION

This retrospective chart review analyzing SGLT2i prescribing is limited by the fact that decisions regarding the initiation of any medication in the hospital can be complex and nuanced in ways that this type of study cannot detect.

However, given the studied benefits of SGLT2i in patients with heart failure, these results do suggest that there is likely room to significantly improve the rate of SGLT2i prescription in patients admitted with heart failure exacerbation.

Inpatient providers should continue to consider prescribing SGLT2i for their patients admitted with heart failure exacerbation. Additionally, future quality improvement efforts may also help improve the rate of initiation of this evidence-based therapy.

## FIGURE 1



**Figure 1. (a)** Total number of admissions for heart failure exacerbation to units 6-1400 and 6-3400 at Strong Memorial Hospital by month (black bars). Also depicted are the number of those admissions with GFR > 30 at discharge not previously on SGLT2i (gold bars), and how many of those patients were or were not started on SGLT2i prior to discharge (green and red bars, respectively). **(b)** Percentage of patients with GFR > 30 not already taking an SGLT2 inhibitor who were started on a medication from this class prior to discharge.

## TABLE 2

| Reason SGLT2i Deferred                        |
|---|
| Consider Outpatient Initiation                |
| Renal function/Acute kidney injury            |
| Cost  |
| Lower extremity wounds/amputation risk        |
| Patient preference                            |
| Recurrent UTIs                                |
| Barrier to Skilled Nursing Facility placement |
| Other   |
| None given                                    |

**Table 2.** Most common documented reasons for deferring SGLT2i initiation in patients hospitalized with heart failure exacerbation with GFR > 30 at discharge.

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