Effects of Dapagliflozin on Hospitalizations for Heart Failure According to Severity of Inpatient Treatment Course: Insights from DELIVER and DAPA-HF

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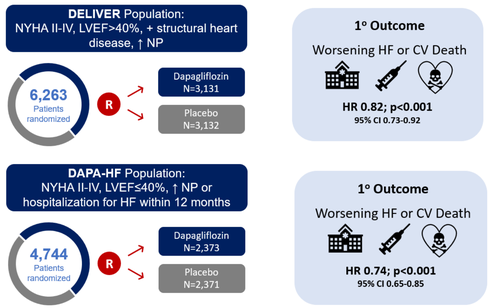
Background

- Dapagliflozin resulted in significant and sustained reductions in first and recurrent HF hospitalizations among patients with HF across the spectrum of ejection fraction.
- HF hospitalizations may vary widely with regard to their complexity, length of stay (LOS), and post-discharge trajectory
- While clinical trials have typically focused on *any* HF hospitalizations, how chronic HF treatment differentially impacts hospitalizations of varying severity is not as well studied.

Objectives

1) To describe the frequency and outcomes of HF hospitalizations requiring management beyond standard intravenous diuretics
2) To examine the effects of dapagliflozin on HF hospitalizations of varying complexity and LOS.

Methods



- 'Complicated hospitalizations' were defined as those requiring intensive therapy including ICU stay, intravenous vasoactive therapies (vasopressor, inotrope or vasodilator), invasive or non-invasive ventilation, mechanical fluid removal, ultrafiltration or mechanical circulatory support (MCS). The balance were classified as 'Uncomplicated'.
- HF hospitalizations were further categorized according to their LOS: longer (≥5 days) or shorter (<5days).

Results

Figure 1. HF Hospitalizations Requiring Escalated Care by Trial

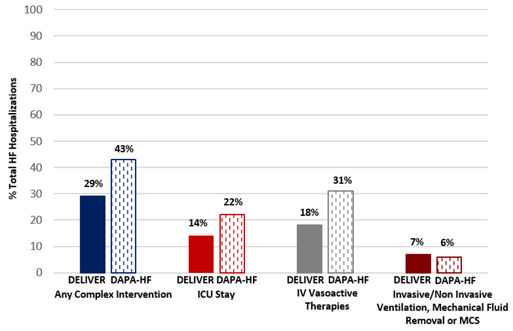


Figure 2. Geographic Distribution of Complicated HF Hospitalizations

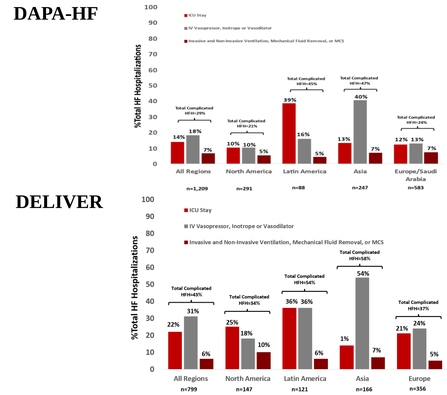


Figure 5. In-hospital Mortality by First HF Hospitalization Complexity Status

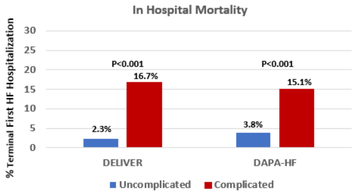


Table. Post-Discharge Mortality by First HF Hospitalization Complexity Status

Outcome	Complicated HF Hospitalization	Uncomplicated HF Hospitalization	P-Value
DELIVER			
Post-Discharge Mortality	HR 0.91; 95%CI: 0.64-1.29		0.59
DAPA-HF			
Post-Discharge Mortality	HR 1.14; 95%CI: 0.84-1.53		0.40

Figure 3. Treatment Effect of Dapagliflozin on Total (First and Recurrent) 'Uncomplicated and 'Complicated' HF Hospitalizations

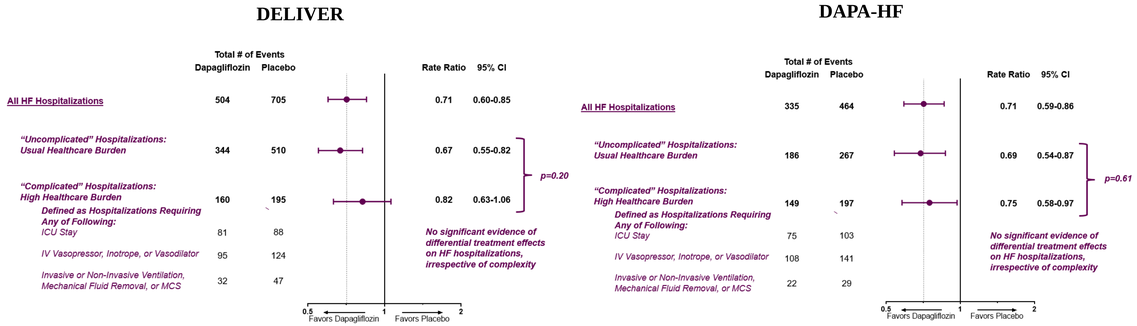
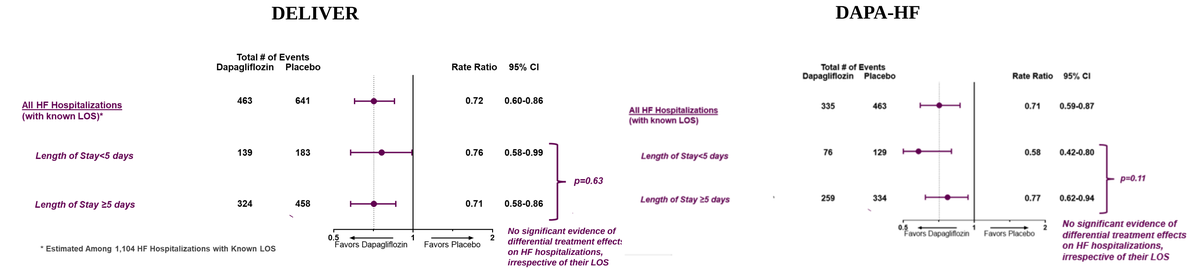


Figure 4. Treatment Effect of Dapagliflozin on Total (First and Recurrent) HF Hospitalizations According to LOS



Conclusions

- In 2 large contemporary trials, a substantial proportion of hospitalizations for HF (~30-40%) required escalation of treatment beyond decongestion with intravenous diuretic.
- Patients experiencing complicated HF hospitalizations had substantially higher in-hospital mortality regardless of ejection fraction.
- Treatment with dapagliflozin consistently reduced HF hospitalizations irrespective of severity of in-hospital treatment course or LOS.

Disclosures

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