

# Beta blocker use and outcomes among Medicare beneficiaries with heart failure with reduced ejection fraction

In this presentation I will claim:

1. Medicare beneficiaries do not seem to fill prescriptions as often as we thought, which was based on data of providers prescribing them.

2. Among Medicare beneficiaries with HFrEF, who have many comorbidities, increasing beta blocker use may not cause a big decrease in overall hospitalizations.

The study design was a retrospective cohort study of Medicare beneficiaries with heart failure with reduced ejection fraction (HFrEF).

## Who was in this cohort?

- Primary discharge diagnosis indicating HFrEF and discharged alive between 2007 and 2013
- Excluded if: not living in US year prior to hospitalization, did not have continuous Part A, B, and D coverage in prior year, were not in Medicare 5% sample in prior year, or were  $\geq 110$  years old
- Only the first hospitalization was included for each beneficiary

## What types of variables were collected?

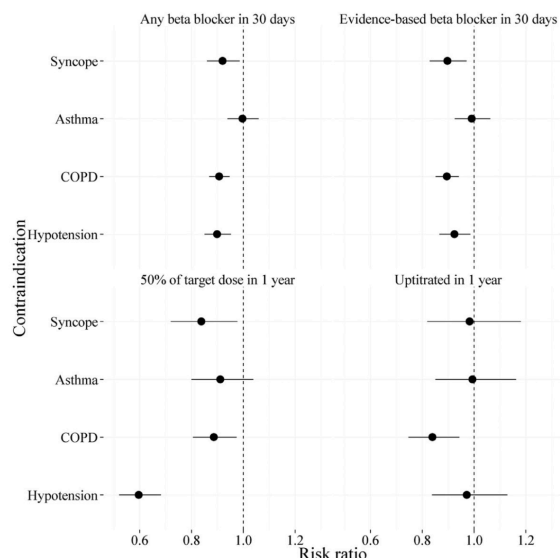
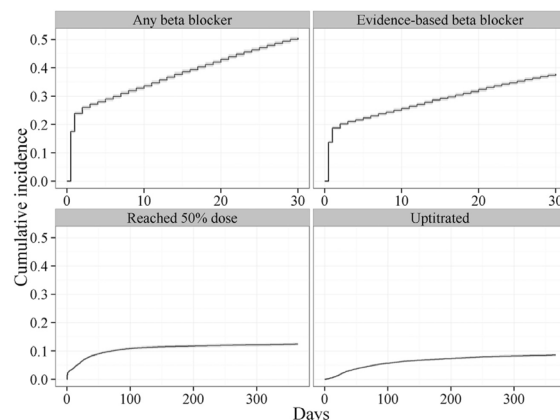
**Demographics** age, race, sex, region of residence, Medicaid eligibility on hospital admission, cost-sharing group/Medicare Part D subsidy

**Health services** beta blocker use, nursing home residence, hospitalization, skilled nursing facility stay, length of hospital stay

**Comorbidities** implanted cardiac device, CHD, stroke, hypertension, hyperlipidemia, diabetes, valvular or rheumatic heart disease, atrial fibrillation, other arrhythmia or conductive disorder

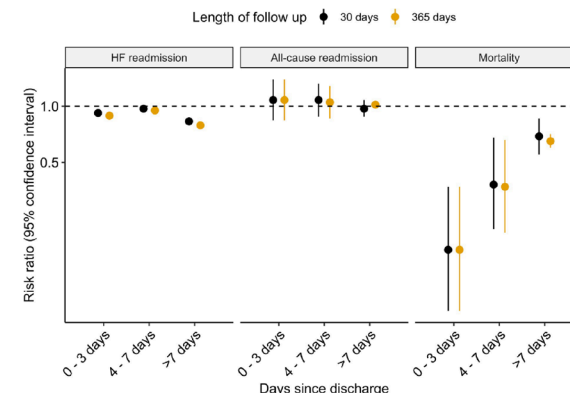
**Comorbidities continued** inflammatory or autoimmune disease, cancer, malnutrition, liver disease, anemia, depression

Beginning with 60,640 Medicare beneficiaries who met the study criteria, we excluded the majority because they did not have specification of type of HF or had isolated diastolic heart failure.

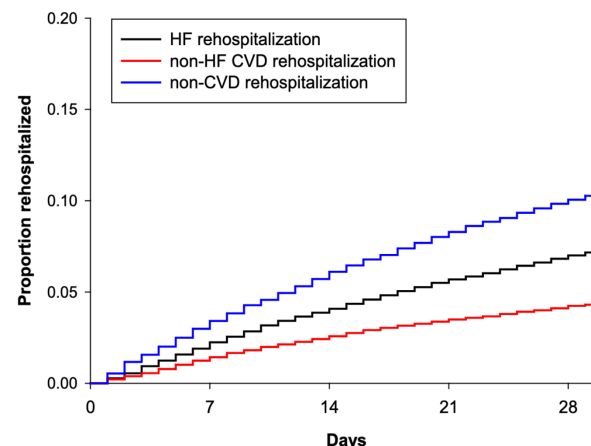


Loop MS, van Dyke MK, Chen L, Safford MM, Kilgore ML, Brown TM, et al. Low Utilization of Beta-Blockers Among Medicare Beneficiaries Hospitalized for Heart Failure With Reduced Ejection Fraction. J Card Fail. 2018. doi:10.1016/j.cardfail.2018.10.005

We additionally excluded those discharged to a skilled nursing facility for this next analysis.



Loop MS, Van Dyke MK, Chen L, Brown TM, Durant RV, Safford MM, et al. Evidence-based beta blocker use associated with lower heart failure readmission and mortality, but not all-cause readmission, among Medicare beneficiaries hospitalized for heart failure with reduced ejection fraction. PLoS One. 2020;15: e0233161.



Goyal P, Loop M, Chen L, Brown TM. Causes and temporal patterns of 30-day readmission among older adults hospitalized with heart failure with preserved or reduced ejection fraction. Journal of the. 2018. Available: <https://www.ahajournals.org/doi/abs/10.1161/jaha.117.007785>

Increasing beta blocker use among older adults with HFrEF may not have a large causal effect on reducing overall hospitalizations.