

Compliance to ACC/AHA Guidelines for management of heart failure among patients with reduced ejection fraction in the cardiology fellow outpatient clinic at Veterans Affairs East Orange Campus

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Background

- Guidelines have been established by the American College of Cardiology Foundation (ACC) and American Heart Association (AHA) for the management of heart failure (HF), a clinical syndrome with high levels of patient morbidity and mortality
- While guidelines exist to help clinicians optimize management of their HF patients with goal directed medical therapy (GDMT), adherence to the treatment regimens has been highly variable
- We aim to assess compliance to 2013/2017 ACC/AHA Guidelines for management of HF among patients with reduced ejection fraction in the cardiology fellow outpatient clinic at the Veterans Affairs East Orange Campus (EOVA)

Methods

- Study population:** Patients evaluated in cardiology fellow clinic at EOVA with diagnosis of heart failure (ICD 10 code I50), LVEF <50%, and ACC/AHA Stage C or D (28 patients)
- Exclusion criteria:** no documented LVEF <50%, ACC/AHA Stage A or B
- Study Period:** November 2021 to January 2022
- Data collection:** Retrospective chart review
- Statistical Analysis:** Descriptive analysis

Conclusions

Key findings

- Demographics:** 100% males ranging 55-94 years of age. Just over 60% of the patients identified as African American with 35.7% identifying as Caucasian. Regarding etiology of cardiomyopathy, 39.2% had ischemic, 53.6% had non-ischemic (including tachycardia-induced, drug-induced, valvular, infiltrative), and 7% had unknown etiology
- BB adherence:** 96.4% were on a beta-blocker, 60.7% were at maximally tolerated dose (35.7% at target, 25% unable to tolerate higher doses), 7% were being up-titrated
- ARNI/ACE-I/ARB adherence:** 82.1% were on an ARNI/ACE/ARB (43.5% on ARNI, 39.1% on ACE-I, 17.4% on ARB), 42.9% were at maximally tolerated dose (21.4% at target, 21.4% unable to tolerate higher doses), 14.2% were being up-titrated
- ARA adherence:** 60.7% were on an ARA, 53.6% were at maximally tolerated dose (50% at target, 3.6% unable to tolerate higher doses), 7.1% were being up-titrated

Study Limitations

- Limited sample size of 28 patients (low statistical significance) who were all elderly male patients (low generalizability)

Future directions

- Obtain and analyze data regarding use of SGLT-I, vasodilators, ivabradine – especially in context of new HF guidelines
- Obtain and analyze data regarding non-medication related guideline treatment recommendations (CRT, AICD)
- Incorporate strategies (like clinical reminders) to improve guideline adherence to help reduce HF hospitalizations and minimize morbidity and mortality

Results

Etiology of Cardiomyopathy

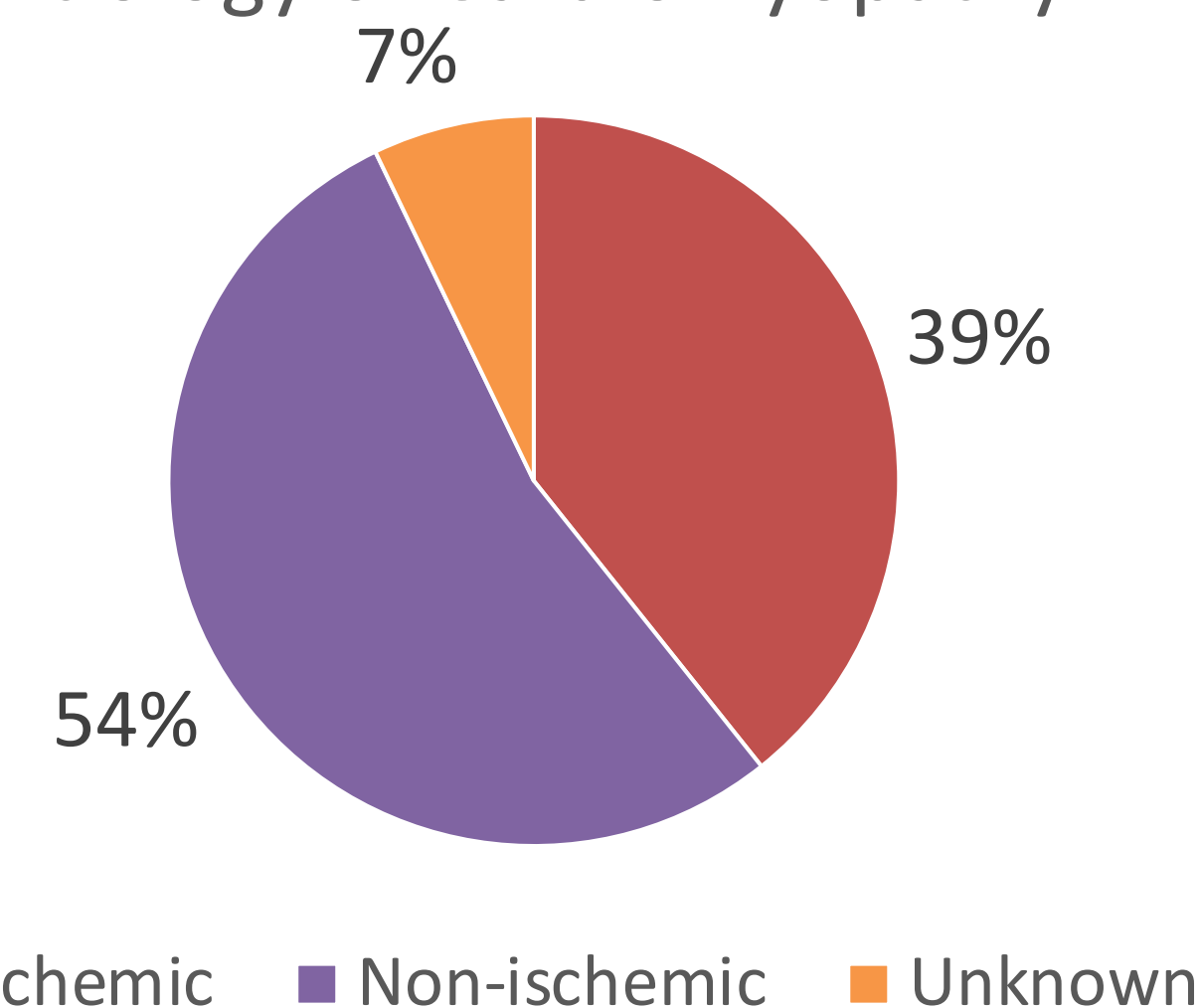


Figure 1: Etiology of cardiomyopathy
Non-ischemic included tachycardia-induced, drug-induced, valvular, and infiltrative

ARNI vs ACE-I vs ARB

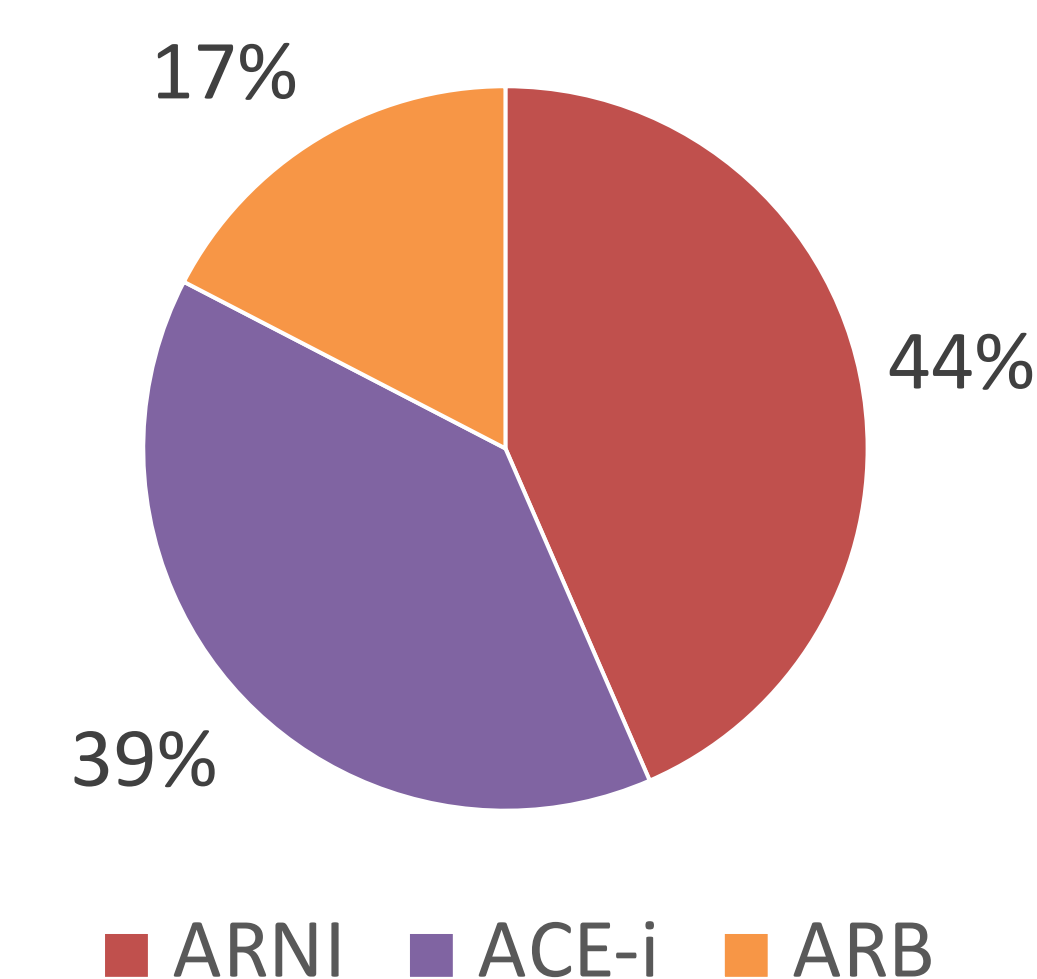


Figure 2: Breakdown of patients on ARNI vs ACE-I vs ARB

Adherence to GDMT by Medication Class

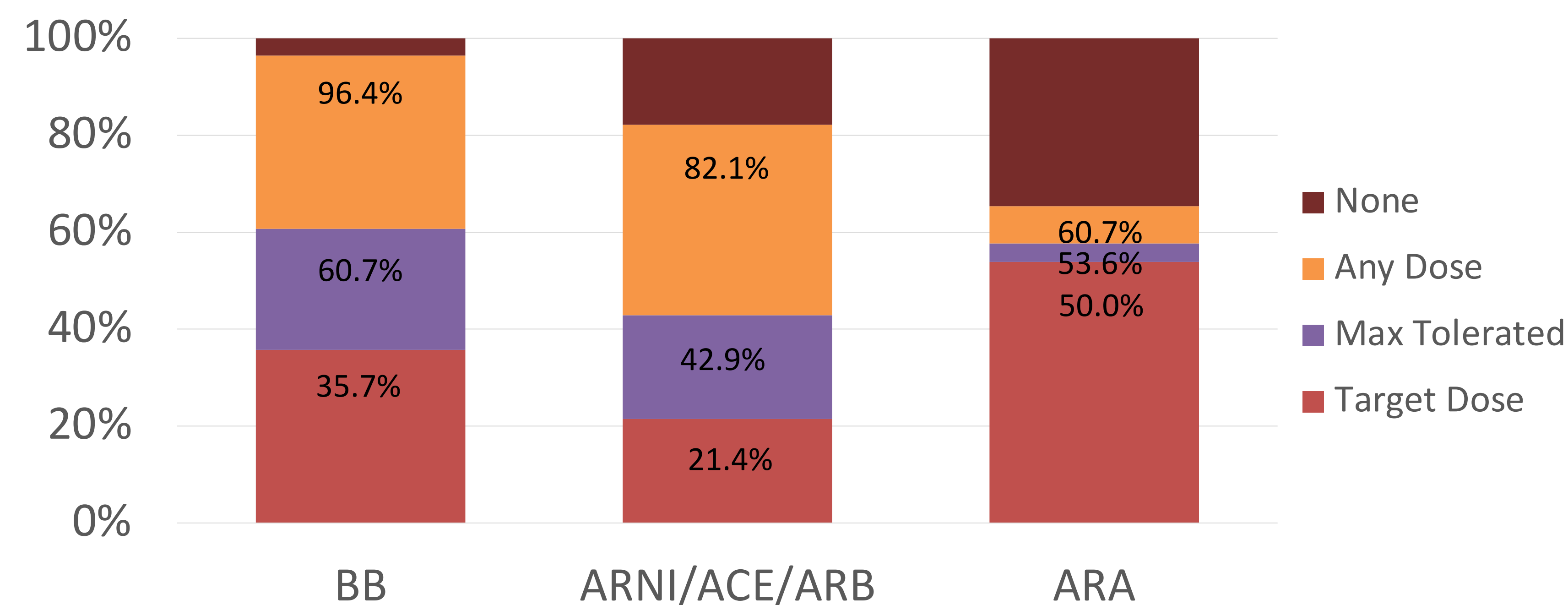


Figure 3: Adherence to GDMT by Medication Class
Any dose represents patients who were on that class of medication regardless of dose. Max tolerated represents the patients who were at target dose in addition to those who were unable to tolerate higher doses due (e.g, hypotension, hyperkalemia). Target dose represents patients who were already at the target dose as outlined in HF guidelines.

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