Long-Term Care Updates

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Guideline Update: 2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure

PharMerica

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Introduction

Heart failure (HF) is a clinical syndrome characterized by signs and symptoms related to structural or functional impairment of the heart's ability for ventricular filling or ejection of blood and is a condition that primarily affects older adults.[1] Reported HF prevalence in the United States from 2015-2018 was 6 million, and in 2014, 1 million new cases of HF were reported.[2] With the increasingly older population, HF prevalence is expected to increase by 46% to more than 8 million persons by 2030. Along with increasing healthcare burden, HF causes a considerable economic burden on the healthcare system, with an estimated $30.7 billion spent on HF-related healthcare in 2012 and an estimated increase to $70 billion by 2030.[3,4]

The increasing prevalence of HF has paved the way for new and enhanced prevention and treatment strategies. The American Heart Association (AHA) and the American College of Cardiology (ACC), along with the Heart Failure Society of American (HFSA) released the 2022 Guideline for the Management of Heart Failure to address these new strategies and provide evidence-based recommendations in the prevention and treatment of HF.[1] These guidelines are to replace the previous 2013 ACCF/AHA Guideline for the Management of Heart Failure and the 2017 ACC/AHA/HFSA Focused Update. This newsletter will highlight some of the major recommendations and changes to the guidelines applicable for clinicians to consider in the management of patients with HF.

Staging and Terminology

In an effort to address patients who are at risk for developing HF and encourage treatment strategies for prevention of HF, new terminologies have been implemented for the stages of HF. The updated staging and definitions are as listed on the next page:[1]

- Stage A: At Risk for HF
    - Patients who are at risk for HF based on other comorbidities but present without symptoms, structural heart disease, or cardiac biomarkers of cardiac changes
- Stage B: Pre-HF
    - Patients who present without symptoms or signs of HF and have evidence of structural heart disease, increased filling pressure, or elevated cardiac biomarkers
- Stage C: Symptomatic HF
    - Patients with structural heart disease with current or previous symptoms of HF
- Stage D: Advanced HF
    - Patients with marked HF symptom that interfere with daily life and recurrent hospitalizations, despite optimal medical treatment

There are specific and unique goals associated with each stage of HF to help guide treatment. For stage A and stage B HF, prevention is the focus, and the guidelines encourage modifying risk factors and treating other comorbidities that increase HF risk. The HF guidelines encourage following associated guidelines in the treatment and modification of certain risk factors (i.e., hypertension, smoking cessation, diabetes).[1]

Another terminology change addressed in the updated guidelines was the change from "recovered EF" to "improved EF" to describe patients who originally had a measured left ventricular ejection fraction (LVEF) ≤40% and had a follow-up measurement of LVEF >40%. This change in terminology was to clarify how these patients should be managed medically. Guidelines recommend that patients with HF with improved ejection fraction (HFimpEF) should continue medical therapy to prevent HF relapse and should not be de-escalated if current regimens are tolerated.[1]

Pharmacological Treatment

Sodium-Glucose Cotransporter 2 Inhibitors (SGLT-2i)

The AHA/ACC/HFSA makes multiple new recommendations for the use of SGLT-2is in the treatment of HF; the recommendations vary based on HF stage (see Table 1). Randomized clinical trials including the DAPA-HF and the EMPEROR-Reduced trials demonstrated an overall 25% reduction in HF-related hospitalizations regardless of HF status and independent of glucose-lowering effects.[1,5] The AHA/ACC/HFSA offer no preference for a specific SGLT-2i agent within the guidelines, and recommendations are made on a medication class basis. Dapagliflozin, empagliflozin, and sotagliflozin were all mentioned within the supportive text for the recommendation and DAPA-HF, EMPEROR-Reduced, and SOLOIST-WHF were referenced. Therapeutic agent selection within the SGLT-2i class should be made based on efficacy-analysis, cost-analysis, and clinical judgment.[1]

Table 1. SGLT-2i-related recommendations in patients with HF.[1]

Stage	Recommendations
A	Recommended SGLT-2i for patients with type 2 diabetes (T2DM) and increased cardiovascular risk to prevent hospitalization (strong recommendation)
B	See Stage A recommendation For HF with moderately reduced EF (HFmrEF) patients – SGLT-2i can be used to reduce HF hospitalizations and cardiovascular (CV) mortality (moderate recommendation) For HF with preserved EF (HFpEF) patients – SGLT-2i can be used to reduce HF hospitalizations and CV mortality (moderate recommendation)
C	Recommended SGLT-2i for patients with symptomatic HF with reduced EF (HFrEF) to reduce HF hospitalizations and cardiac mortality regardless of T2DM status[5]
D	Continue and optimize guideline-directed medical therapy (GDMT) (strong recommendation)

Renin-Angiotensin System Inhibition – ACEIs, ARBs, and ARNi

The AHA/ACC/HFSA's stage-specific recommendations regarding the use of renin-angiotensin system inhibitors are listed in Table 2 below.

Table 2. Renin-angiotensin system inhibitor-related recommendations in patients with HF.[1]

Stage	Recommendations
A	Patients with hypertension should be managed in accordance with guideline-based treatment to prevent symptomatic HF (strong recommendation)
B	Angiotensin converting enzyme inhibitors (ACEis)/Angiotensin receptor blockers (ARBs) are recommended for patients with LVEF ≤40% to prevent symptomatic HF and reduce mortality (strong recommendation) Angiotensin receptor neprilysin inhibitor (ARNi) has not been studied in stage B HF For HFpEF patients – ARB and ARNI can be considered to decrease hospitalizations for patients on the lower end of the EF range (weak recommendation)
C	ARNi is recommended to reduce morbidity and mortality (strong recommendation) If an ARNi cannot be used, ACEis/ARBs can be used as alternatives to reduce morbidity and mortality (strong recommendation) If patients tolerate an ACEi/ARB, replacement to an ARNi is recommended to further reduce morbidity/mortality (strong recommendation) ARNi and ACEi should not be administered to patients with a history of angioedema (strong recommendation) ARNi should not be administered with ACEi (strong recommendation)
D	Continue and optimize GDMT (strong recommendation)

Beta Receptor Blockers

The AHA/ACC/HFSA's stage-specific recommendations regarding the use of beta-blockers are listed in Table 3 below.

Table 3. Beta-blocker-related recommendations in patients with HF.[1]

Stage	Recommendations
A	No recommendations made
B	For patients with LVEF ≤40%, evidence-based beta blockers (e.g., bisoprolol, carvedilol, or metoprolol succinate) are recommended to reduce mortality (strong recommendation)
C	For symptomatic patients with HFrEF, evidence-based beta blockers (e.g., bisoprolol, carvedilol, or metoprolol succinate) are recommended to reduce mortality (strong recommendation)
D	Continue and optimize GDMT (strong recommendation)

Mineralocorticoid Receptor Antagonists (MRAs)

The AHA/ACC/HFSA's stage-specific recommendations regarding the use of MRAs are listed in Table 4 below.

Table 4. MRA-related recommendations in patients with HF.[1]

Stage	Recommendations
A	No recommendations made
B	No recommendations made
C	Recommended for patients with HFrEF and NYHA class II to IV symptoms (strong recommendation) • eGFR >30 mL/min/1.73m^2 and serum K^+ <5.0 mEq/L • Careful monitoring of potassium, renal function, and diuretic dosing is recommended MRA should be discontinued if serum potassium cannot be maintained <5.5 mEq/L (strong recommendation) For HFpEF patients, MRAs can be considered to decrease hospitalizations for patients on the lower end of the EF range (weak recommendation)
D	Continue and optimize GDMT (strong recommendation)

Interprofessional Treatment of HF

The AHA/ACC/HFSA make several statements supporting the use and implementation of comprehensive interprofessional care of patients with HF. The guidelines stress the importance of early referral to specialized HF care to achieve optimal patient outcomes and optimize medical treatment to prevent hospitalizations and complications.[1] HF specialists and multidisciplinary teams ensure complete patient education and allow for comprehensive and informed care. A meta-analysis of 30 randomized controlled trials showed reduced hospitalizations and reduced mortality can be attributed to multidisciplinary interventions that included a pharmacist.[6] This recommendation also includes evaluation of potential barriers to self-care that would impact survival and medical therapy and recommends comprehensive HF self-care education. Interventions that aim to improve self-care and enhancing medication adherence are effective at reducing hospitalizations and mortality.[7]

Treatment Value Statements

A new component to the AHA/ACC/HFSA HF guidelines is treatment value statements that are included for various recommended treatment strategies. These statements are made based on a value analysis to determine cost to benefit comparison.[1] These value statements can help practitioners determine which medical treatment strategies are worth the expected cost to the patient and can help educate patients on the cost-benefit of these treatments. Value statements can be found for each recommended treatment within the guidelines.

Conclusion

The AHA/ACC/HFSA 2022 guidelines were updated to reflect the new and changing HF treatment and to guide comprehensive HF care. Changes were made to the HF terminology and staging to clarify to goals of treatment for each stage of HF. Depending on the stage of HF and other comorbidities, care should be tailored to each patient.

References

1. Heidenreich P, Bozkurt B, Aguilar D, et al. 2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. 2022;145(18):e895-e1032.
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