AdventHealth
Provider Network

Clinical Care Pathways

Clinical Protocol

Heart Failure

Executive Summary

HEART FAILURE (HF), as defined by the 2022 American Heart Association (AHA)/American College of Cardiology (ACC) Joint Committee on Clinical Practice, is a clinical syndrome with symptoms and signs that result from any structural or functional impairment of ventricular filling or ejection of blood. It is a commonly occurring disease with projected future increases in both prevalence and cost of care.

Current Guideline-directed Medical Therapy (GDMT) is cognizant in the appropriate staging and classification of heart failure. This stratification is performed by utilizing the AHA/ACC 2022 staging system, via classification of a patient's current left ventricular ejection fraction and further classification of AHA/ACC 2022 stage C and D patients utilizing the New York Heart Association (NYHA) HF classification system.

Screening for HF should be performed for patients with a history of coronary artery disease, hypertension, diabetes, valvular heart disease, cardiomyopathy, persistent or recurrent tachyarrhythmia, alcohol or substance abuse, obesity, sleep apnea, exposure to chemotherapeutic, antipsychotic, anti-retroviral or immunotherapeutic cardiotoxic agents, or patients with a family history of premature death, heart disease or HF. These patients should be screened for HF at every applicable visit as part of a patient's normal history and physical exam. Of these multiple conditions, special attention should be paid to a personal history of cardiovascular disease (CVD), hypertension or diabetes, as these three conditions underlie more than 70% of all cases of HF.

Diagnostic evaluation of a patient with suspected or known HF typically begins with a thorough history and physical examination, followed by additional testing. These tests routinely include an EKG, HF biomarkers such as natriuretic peptide or NT-proBNP, and a transthoracic echocardiogram. Additional diagnostic testing may be necessary on a case-by-case basis.

Treatment of HF patients is dependent on appropriate staging and classification. Patients at risk for HF (stage A) should be treated with lifestyle modifications, and the specific drivers of their heart failure risk should be managed. A blood pressure treatment goal of less than 130/80 mm Hg is recommended for those with a cardiovascular disease risk of ≥10%. If possible, use angiotensin-converting enzyme inhibitors (ACEi), angiotensin receptor blockers

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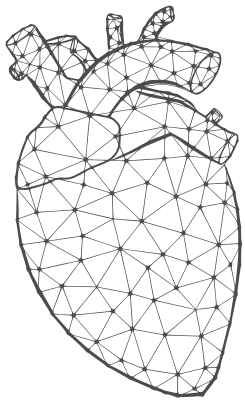


1 in 4
people will develop heart failure in their lifetime

INSIDE

May 2025

(ARB), or beta-blockers as first line agents to control blood pressure. Managing diabetes in patients with cardiovascular disease or who are at high risk for cardiovascular disease is also of critical importance, with an A1c goal of less than or equal to 8%. Sodium glucose linked co-transporter 2 inhibitor (SGLT2i) use is a recommended first-line in this patient group.

Recommended treatments for patients in stage B or pre-HF include controlling co-morbid or underlying conditions. Statin therapy is also recommended in all patients with a history of a myocardial infarction or acute coronary syndrome. Additionally, patients with left ventricular ejection fraction of less than or equal to 40% should be started on an ACEi, and if intolerant of ACEi, on an ARB. Finally, patients with a left ventricular ejection fraction of less than or equal to 40% should be started on HF appropriate beta blockers.

GDMT includes treating AHA/ACC stage C and D HF patients utilizing multidisciplinary teams including primary care physicians, cardiologists, pharmacists, physical therapists, case managers, nurses and/or palliative care specialists, as clinically appropriate. Use of loop diuretics as needed for fluid overload is strongly recommended. Additionally, starting Omega 3 polyunsaturated fatty acids for all symptomatic heart failure patients may be considered as a supplement to treatment.

In addition to the above, GDMT of AHA/ACC Stage C and D HF patients with reduced Ejection Fraction (HFrEF), includes four medication classes for patients with NYHA stage II-IV disease. These medication classes include Renin Angiotensin System inhibitors (RASi) to include ACEi, ARB or ARNi, HF appropriate beta blockers, mineralocorticoid receptor antagonists (MRA), and SGLT2i.

Evidence for pharmacologic treatment of AHA/ACC stage C and D HF patients with mildly reduced ejection fraction (HFmrEF) and heart failure with preserved ejection fraction (HFpEF) is less robust than for the HFrEF HF patient. Loop Diuretic therapy should be used for treatment of these patients. It is reasonable to initiate SGLT2i in these patients. RASi, HF appropriate beta blockers (in HFmrEF only), and MRA may additionally be considered for use in this population.

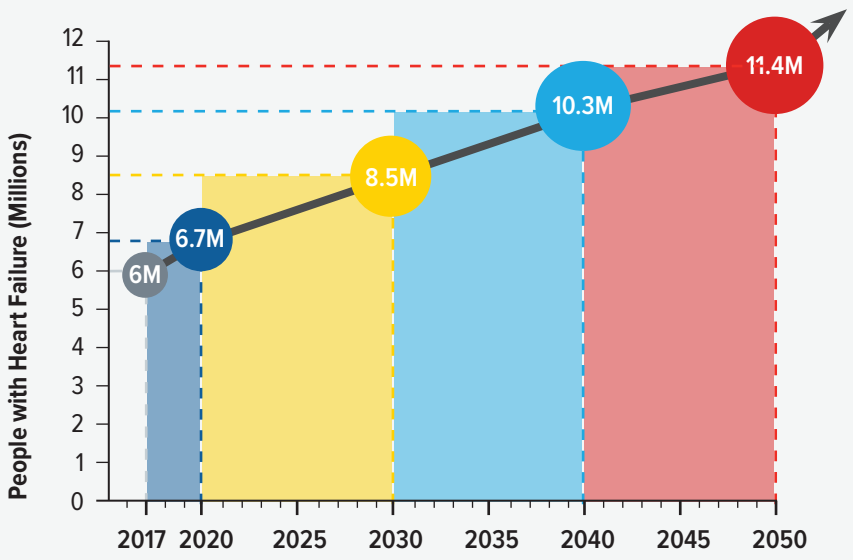
AHPN-preferred per-class medications and associated initial doses, target doses and minimum titration intervals are identified in the guideline.

Introduction

Heart Failure (HF) is defined by the 2022 American Heart Association (AHA)/American College of Cardiology (ACC) Joint Committee on Clinical Practice Guidelines as a clinical syndrome with symptoms and signs that result from any structural or functional impairment of ventricular filling or ejection of blood. HF is a common disease. Approximately 6.7 million Americans over the age of 20 have HF and approximately one in four people will develop heart failure in their lifetime. The number of people with heart failure is expected to rise over the next three decades (Figure 1). Exacerbating the rise in HF prevalence is the fact that the cost of treatment also continues to rise. In 2012, the American Heart Association estimated the annual cost of heart failure as approximately $5,300 per patient. By 2030, annual HF costs are expected to increase more than five times that level, to approximately $30,000 per patient. While these facts are sobering, Primary Care Providers have the ability to improve patient health and reduce low value spend by implementing heart failure GDMT. For example, initiating GDMT in a 55-year-old patient with heart failure with reduced ejection fraction adds an average of 8.3 years to their life.

Clinical recommendations in this pathway are classified to reflect the quality of evidence and the strength of the recommendation. Table 1 lists the recommendation grading system that is currently followed by the American Heart Association and American College of Cardiology.

FIGURE 1 HF Projected Prevalence



HF STATS 2024: Heart Failure Epidemiology and Outcomes Statistics, an Updated 2024 Report from the Heart Failure Society of America. Bozkurt, Biykem et al. Journal of Cardiac Failure, Volume 31, Issue 1, 66 - 116

8.3 years

Added life expectancy for a 55-year-old on Guideline-directed Medical Therapy

TABLE 1 | AHAACC Recommendations system

Class 1 Recommendation	***Strong Recommendation*** Potential benefit to patient significantly outweighing potential patient harm.	• Is recommended • Is indicated/useful/effective/beneficial • Should be performed/administered
Class 2a Recommendation	***Moderate Recommendation*** Potential benefit to patient moderately outweighing potential for patient harm.	• Is reasonable • Can be useful/effective/beneficial
Class 2b Recommendation	***Weak Recommendation*** Potential benefit to patient slightly outweighing potential for patient harm.	• May/might be reasonable/be considered • Usefulness/effectiveness is unknown/ unclear/uncertain or not well established
Class 3 Recommendation	***No Benefit*** Benefit to patient does not outweigh potential for patient harm.	• Is not recommended • Is not indicated/useful/effective/beneficial • Should not be performed/administered
CLASS III Recommendation	***Harmful*** Potential for patient harm exceeds any potential benefit.	• Potentially harmful • Causes harm • Associated with excess morbidity/mortality • Should not be performed/administered/other

Heart Failure Staging and Classification

The AHA/ACC 2022 HF management guideline recognizes multiple HF stages (Figure 2) and classes. Understanding this model of HF staging and classification is important because appropriate disease staging and classification guides appropriate disease treatment.

Stage A: At Risk for Heart Failure

These patients have hypertension, cardiovascular disease, diabetes, obesity, genetic variance for cardiomyopathy, family history of cardiomyopathy and/or have been exposed to cardiotoxic agents but have no current or prior symptoms or signs of HF, have no functional or structural heart disease, and do not have any abnormal HF biomarkers.

Stage B: Pre-Heart Failure

These patients have no symptoms or signs of HF but have evidence of structural heart disease, evidence of increased filling pressures, increased natriuretic peptide levels, or persistently elevated cardiac troponin levels in the absence of competing diagnoses.

Stage C: Symptomatic Heart Failure

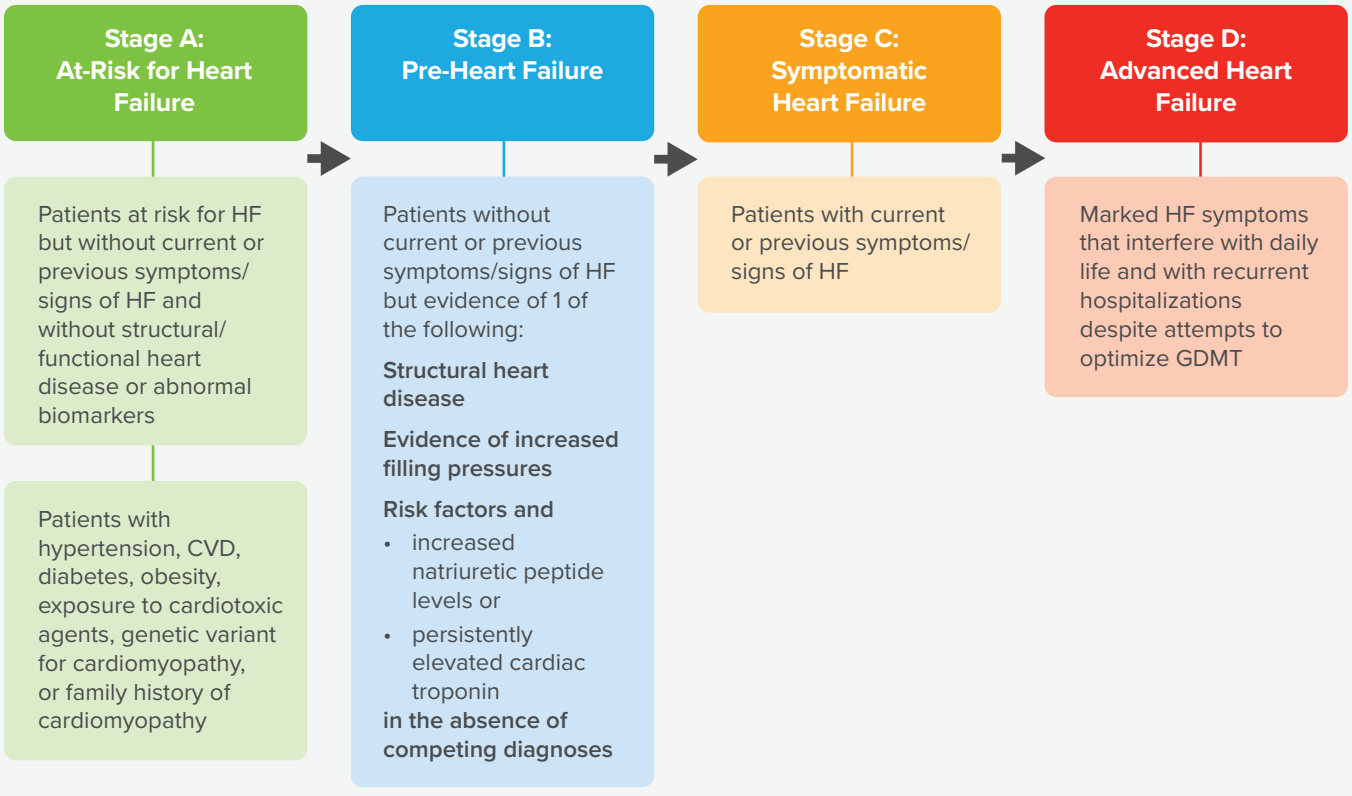
These patients have current or prior symptoms or signs of HF. They may be completely asymptomatic at present.

Stage D: Symptomatic Advanced Heart Failure

These patients have marked HF symptoms that interfere with daily life despite attempts to optimize their disease.

FIGURE 2

HF Staging



In addition to the above staging system, HF is also classified via a patient's current left ventricular ejection fraction.

HF with preserved ejection fraction (HFpEF), historically known as diastolic HF, identifies patients with left ventricular ejection fractions of greater or equal to 50%.

HF with reduced ejection fraction (HFrEF), historically known as systolic HF, identifies patients with left ventricular ejection fractions of less than or equal to 40%.

HF with mildly reduced ejection fraction (HFmrEF), identifies patients with left ventricular ejection fractions of 41-49%.

It is important to note that a patient's HF status can be reclassified based on future testing. For example, a patient with reduced or mildly reduced ejection fraction who is receiving Guideline-directed Medical Therapy (GDMT) may show an improvement in their left ventricular ejection fraction to values greater or equal to 50%. These patients should be identified as patients with ***HF with improved ejection fraction (HFimpEF)*** and should be treated based on their initial HF classification (that is HFrEF or HFmrEF).

AHA/ACC Class C and D HF patients with a diagnosis of HFrEF are additionally classified utilizing the New York Heart Association HF classification system (Table 2). This system is based on a patient's current HF associated symptoms, ranging from NYHA Class I patients with no limitations of their physical activity, to NYHA Class IV patients that have HF associated symptoms even at rest.

TABLE 2 | New York Heart Association (NYHA) HF Classification

CLASS	PATIENT SYMPTOMS
I	No limitations of physical activity. Ordinarily physical activity does not cause undue fatigue, palpitations, or shortness of breath.
II	Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitations, shortness of breath or chest pain.
III	Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitations, shortness of breath or chest pain.
IV	Symptoms of heart failure at rest. Any physical activity causes further discomfort.

Screening for Heart Failure

Guidelines differ on the exact population that should be screened for HF. The AdventHealth Provider Network (AHPN) Board of Managers define this population as patients with a history of coronary artery disease, hypertension, diabetes, valvular heart disease, cardiomyopathy, persistent or recurrent tachyarrhythmia, alcohol or substance abuse, obesity, sleep apnea, exposure to chemotherapeutic, antipsychotic, current or historical use of anti-retroviral or immunotherapeutic cardiotoxic agents, or patients with a family history of premature death, heart disease or HF. These patients should be screened for HF at every applicable patient visit. Of these multiple conditions, special attention should be paid to a personal history of cardiovascular disease, hypertension or diabetes, as these three conditions underlie more than 70% of all cases of HF.

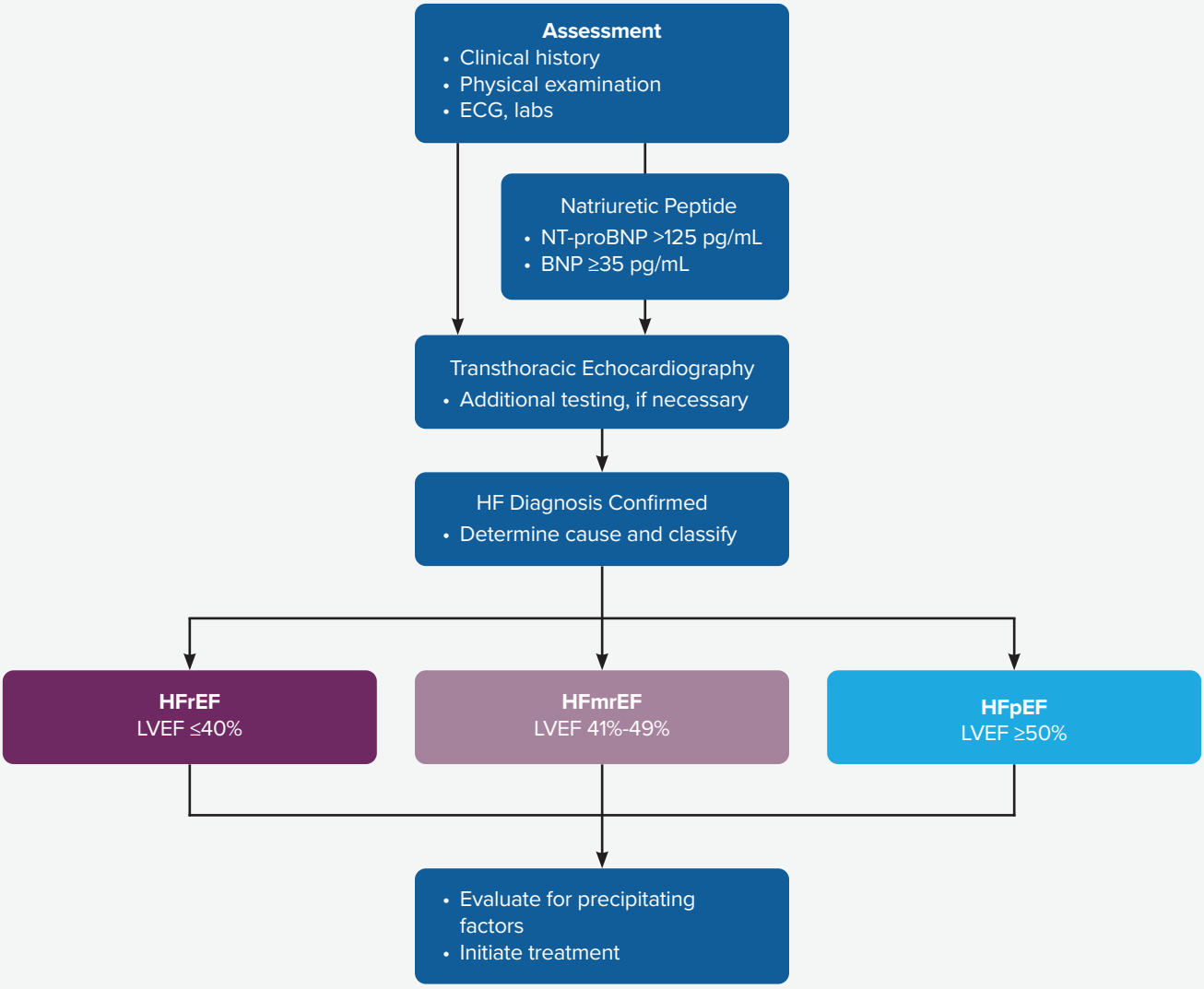
Screening for HF should be done as part of a patient's normal history and physical exam. For example, a patient with dyspnea, paroxysmal nocturnal dyspnea, fatigue, weakness, edema, rapid weight gain, persistent cough or wheezing may be having symptoms secondary to HF. Likewise, on physical exam, the presence of jugular venous distension, orthopnea, lower extremity edema or unexplained weight gain may point to an undiagnosed HF.

Diagnostic Evaluation of Suspected Heart Failure

A patient who has suspected HF based on history or clinical exam should be further evaluated with additional testing (Figure 3). Typically, this evaluation begins with a reassessment of the history and physical examination, followed by additional testing. These tests include an electrocardiogram, HF biomarkers such as natriuretic peptide or NT- proBNP, and transthoracic echocardiogram. Additional diagnostic testing may be necessary on a case-by-case basis.

FIGURE 3

Diagnostic Evaluation for Patients with Suspected HF



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Diagnostic Evaluation of Heart Failure

Patients with a diagnosis of HF should have specific evaluation starting with a disease-specific history and examination, looking for symptoms or signs of HF exacerbation at every clinical visit. Additionally, if echocardiogram, or HF biomarkers were not performed during the diagnostic evaluation of suspected HF, they should be performed on diagnosis and then as clinically warranted.

When performing the patient's initial diagnostic evaluation of HF, a useful guide is to ask yourself, "Why did the patient develop HF?" and, "How severe is this patient's HF?" Answering these questions will aid in correctly classifying, staging and treating HF. Additional HF disease appropriate testing, and reasons for testing, are listed in Table 3.

Please note that repeat noninvasive imaging of cardiac structure and function for routine surveillance is rarely appropriate in the absence of change in clinical status or treatment interventions. It is, however, wise to consider more frequent HF diagnostic evaluations in alcoholic HF, valvular HF, or other HF with structural remodeling.

TABLE 3 | Diagnostic Evaluation in Patients with HF

TEST RECOMMENDED	REASON FOR TESTING
CBC, CMP, US, lipid testing, iron studies (serum iron, ferritin, transferrin saturation), TSH	Assess for disease drivers and co-morbidities.
BNP or NT-ProBNP	Stage disease and evaluate for HF exacerbation.
EKG	Assess for disease drivers and co-morbidities. Assess for arrhythmia, ischemia or myocardial injury, conduction, or other cardiac abnormalities.
Chest X-Ray	Stage disease and evaluate for HF exacerbation.
Transthoracic Echocardiogram (TEE)	Stage disease and evaluate for changes in EF, structural remodeling, and valvular function in response to evidence-based medical, revascularization, and device therapies as clinically relevant.

Heart Failure Treatment

Stage A

Patients at risk for heart failure (stage A) should be treated with lifestyle modifications, and the specific drivers of their heart failure risk should be managed (Figure 4). Clinicians should additionally recommend weight loss if clinically indicated and a healthy diet that is low in salt, low in red meat and low in simple carbohydrates. Physical activity with a minimum threshold of 150 min/week and moderate intensity should additionally be recommended, along with smoking cessation, if applicable.

Of the many risk factors for heart failure, cardiovascular disease (CVD), hypertension, and diabetes are the most likely to be noted. Blood pressure treatment goal of less than 130/80 mm Hg is recommended for those with a CVD risk of ≥10%. If possible, use ACEi, ARB or beta-blockers as first-line agents to control blood pressure.

AHPN preferred ACEi:
enalapril, fosinopril, lisinopril, ramipril

AHPN preferred ARB: ***losartan, valsartan***

AHPN preferred beta blocker:
bisoprolol, carvedilol

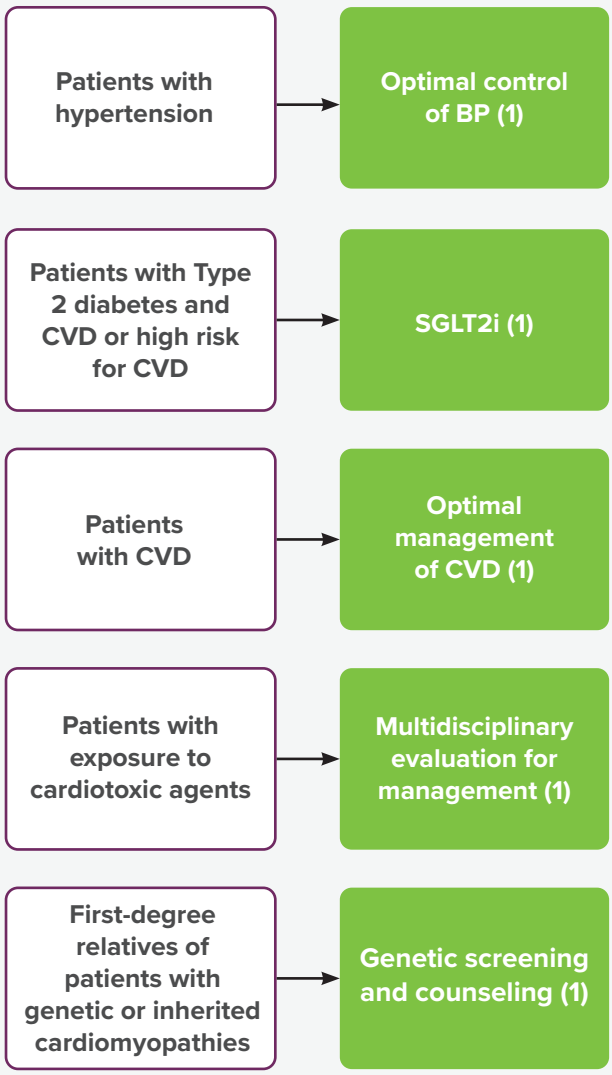
Managing diabetes in patients with cardiovascular disease or who are at high risk for cardiovascular disease is also of critical importance, with an A1c goal of less than or equal to 8%. Sodium glucose linked co-transporter two inhibitor (SGLT2i) use is recommended as first-line agents in this patient group.

AHPN preferred SGLT2i: ***dapagliflozin***

Patients with a history of exposure to cardiotoxic agents should be a referred for a multidisciplinary evaluation. Patients with first degree relatives who are identified to have genetic or inherited cardiomyopathies should be referred for genetics screening and counseling.

FIGURE 4

Stage A HF treatment



(1) : Level 1 clinical recommendations

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Stage B

Patients without current or previous symptoms or signs of heart failure are identified as stage B or "pre-HF" if one of the three following conditions are met:

1. Evidence of structural heart disease,
2. Evidence of increased ventricular filling pressures on echocardiogram, or
3. Increased natriuretic peptide levels or persistent elevated cardiac troponin levels (in patients with heart failure risk factors and in the absence of competing diagnoses).

Recommended treatments for patients in stage B or pre-HF (Figure 5) include controlling co-morbid or underlying conditions. Statin therapy is also recommended in all patients with a history of myocardial infarction or acute coronary syndrome.

AHPN preferred statin:
atorvastatin, rosuvastatin

Additionally, patients with left ventricular ejection fraction of less than or equal to 40% should be started on an angiotensin-converting enzyme inhibitor (ACEi), and if intolerant of ACEi, on an angiotensin receptor blocker (ARB).

AHPN preferred ACEi: **enalapril, fosinopril, lisinopril, ramipril**

AHPN preferred ARB: **losartan, valsartan**

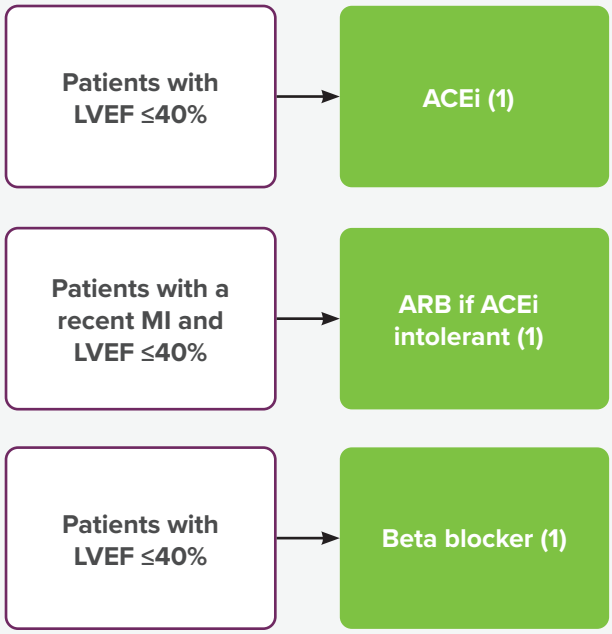
Finally, patients with left ventricular ejection fraction of less than or equal to 40% should be started on HF-appropriate beta-blockers.

AHPN preferred beta blocker:
bisoprolol, carvedilol

In all stage B or higher heart failure patients, it is also important to avoid medication classes that significantly increase a patient's likelihood of developing acute heart failure. These medication classes include thiazolidinediones (pioglitazone or rosiglitazone) and non-dihydropyridine calcium channel blockers (diltiazem or verapamil). (Class III recommendation)

FIGURE 5

Stage B HF treatment



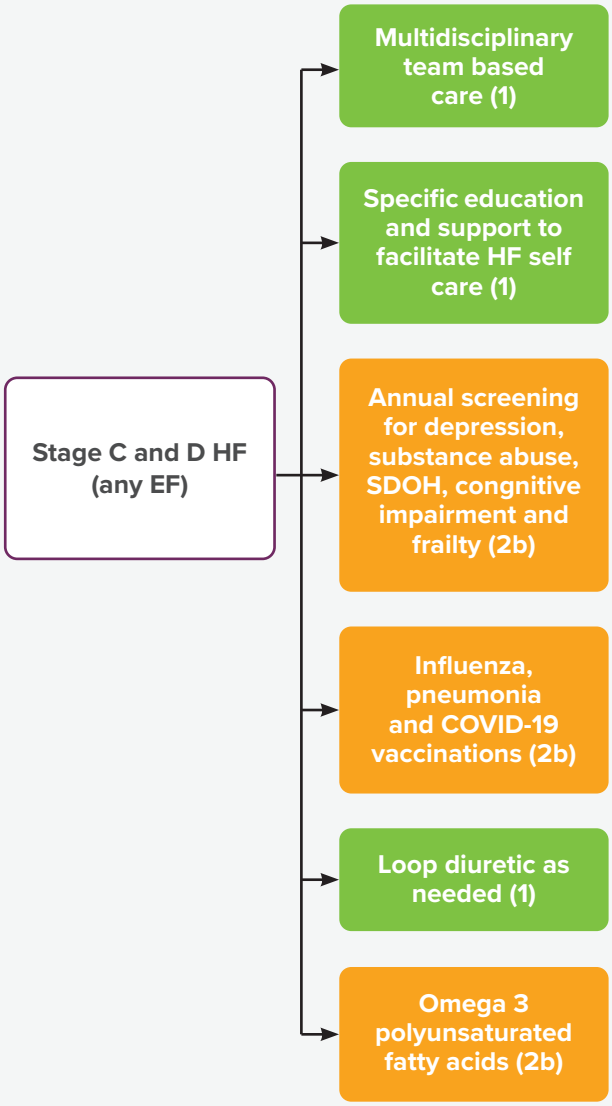
(1) : Level 1 clinical recommendations

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

As heart failure disease advances from class A through D, maintain prior class recommendations.

FIGURE 6

Stage C and D HF Treatment (any EF)



Stage C and Stage D

Stage C and D HF patients have or have had symptoms associated with their heart failure diagnosis. Current disease symptoms may range from completely asymptomatic (New York Heart Association class I), to severe symptoms of heart failure at rest (New York Heart Association class IV). Current guidelines (Figure 6) recommend treating all these patients by multidisciplinary teams including primary care physicians, cardiologists, pharmacists, physical therapists, case managers, nurses and/or palliative care specialists as clinically appropriate. All patients should also receive specific education and support to facilitate heart failure self-care, and all patients should be considered for participation in a cardiac rehab program (level 1 recommendation). It is also important to screen and treat all stage C and D heart failure patients annually for depression, substance abuse, cognitive impairment and frailty. Screening for social determinants of health (financial, housing, food insecurity, intimate partner violence, social isolation, or transportation issues) annually, is strongly recommended. Screening and correcting for language barriers and low health literacy, is also recommended. Finally, administering or referring for administration of influenza, pneumococcal, and COVID-19 vaccinations is recommended (all level 2a recommendations).

Use of loop diuretics for fluid overload as needed for fluid overload is strongly recommended (level 1 recommendation).

AHPN preferred loop diuretics: ***Furosemide, Torsemide***

Additionally, starting Omega 3 polyunsaturated fatty acids for all symptomatic heart failure patients may be considered as an adjunct to treatment. Ideally, this should come from dietary sources, such as fatty fish such as salmon or mackerel but supplementation may be appropriate (Level 2b recommendation).

AHPN preferred Omega 3 polyunsaturated fatty acids: ***Omega-3-Acid Ethyl Esters***

HFrEF

GDMT for patients with heart failure with reduced ejection fraction (HFrEF) Stage C or D is determined using the NYHA classification system (Figure 7). GDMT for heart failure with reduced ejection fraction (HFrEF) includes four medication classes for patients with NYHA stage II-IV disease. It is important to titrate all medications to target doses or to a patient's maximallly tolerated dose as quickly as possible (see reference materials for maximum dosing and appropriate titration intervals). The four recommended medication classes are:

1. **Renin Angiotensin System inhibitors (RASi) to include ACEi, ARB or ARNi:**

   AHPN preferred ACEi: ***Enalapril, Fosinopril, Lisinopril, Ramipril***

   AHPN preferred ARB: ***Losartan, Valsartan***

   AHPN preferred ARNi: ***Sacubitril-valsartan***

2. **HF appropriate Beta-Blockers**

   AHPN preferred beta-blockers: ***Bisoprolol, Carvedilol***

3. **Mineralocorticoid Receptor Antagonists (MRA)**

   AHPN preferred: ***Spironolactone***

4. **Sodium-Glucose Cotransporter-2 Inhibitors (SGLT2i)**

   AHPN preferred SGLT2i: ***Dapagliflozin***

Stage C or D, NYHA class II-IV HFrEF patients should be treated with four medication classes.

- Do not administer ARNI within 36 hours of an ACEi
- Do not administer ACEi in a patient with any history of angioedema
- Discontinue MRA if serum potassium cannot be maintained below 5.5 mEq/L

NYHA stage I, Stage C or D HFrEF

NYHA stage I patients in stage C or D HFrEF patients should be treated with the following medication classes:

1. **ACEi (preferred) or ARB (second line)**
2. **HF appropriate beta blockers**
3. **SGLT2i**

Note: ARNi (Entresto) and Mineralocorticoid receptor antagonists (MRA) use are not recommended in this population as data on their effectiveness in this population is lacking.

NYHA stage II-III, Stage C or D HFrEF

NYHA stage II-III patients in stage C or D HFrEF should be treated with the following medication classes:

1. **RASi: ARNi (preferred), ACEi (second line), or ARB (third line)**
2. **HF appropriate beta-blockers**
3. **SGLT2i**
4. **MRA**

Note: In this population, ARNi is preferred to ACEi and ARB, but given the performance delta between the 3 classes is small, it is also appropriate to use ACEi (second line) or ARB (third line) in patients who cannot afford or who are unwilling to pay for an ARNi (level 1 recommendation).

NYHA stage IV, Stage C or D HFrEF

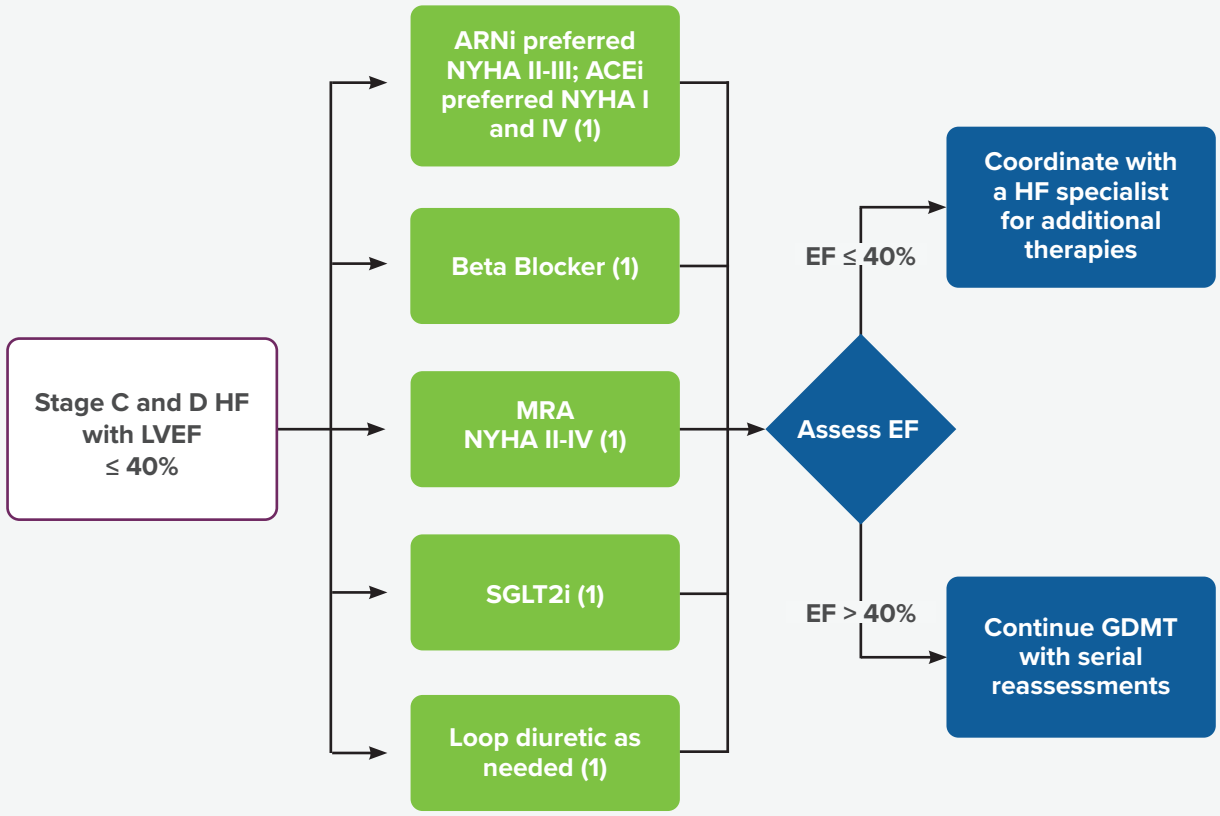
NYHA stage IV patients in stage C or D HFrEF should be treated with:

1. **ACEi (preferred), or ARB (second line)**
2. **HF appropriate beta blockers**
3. **SGLT2i**
4. **MRA**

Note: ARNi (Entresto) use is not recommended in this population as data on its superiority to ACEi or ARB therapy in this population is lacking.

It is important to reassess a patient's response to medication therapy initiation or titration. A patient in Stage C or D HFrEF that is receiving optimal GDMT that continues to exhibit an ejection fraction of 40% or lower may benefit from additional therapies. Coordination with a heart failure specialist is especially helpful in this population.

FIGURE 7 Stage C & D HFrEF Treatment



HFmrEF

Evidence for pharmacologic treatment of patients in stage C or D HFmrEF patients is less robust than for HFrEF patients. Loop Diuretic therapy should be used for treatment of these patients. It is reasonable to initiate SGLT2i in these patients. RASi, HF appropriate beta-blockers and MRA may additionally be considered for use (Figure 8).

1. **ACEi (preferred), ARB (second line), or ARNi (third line) (level 2b recommendation).**
2. **HF appropriate beta-blockers (level 2b recommendation).**
3. **SGLT2i (level 2a recommendation).**
4. **MRA (level 2b recommendation).**

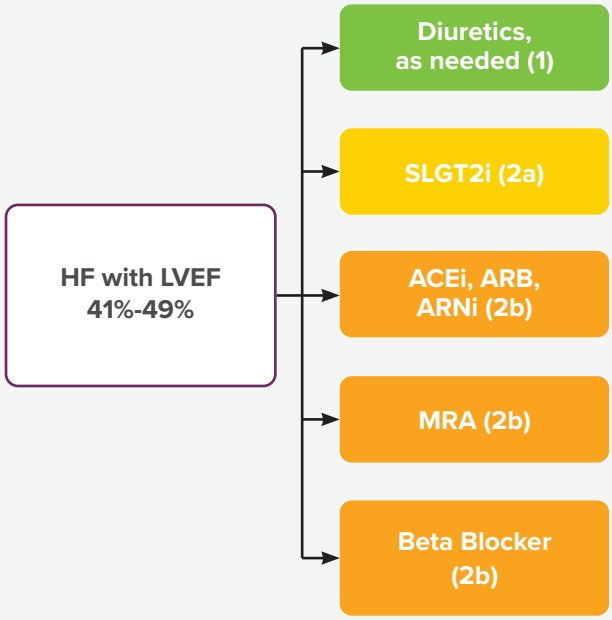
Left Ventricular Ejection Fraction (LVEF) is a spectrum, and among patients with LVEF 41% to 49%, patients with LVEF on the lower end of this spectrum appear to respond to medical therapies similarly to patients with HFrEF. Thus, it may be reasonable to treat these patients with GDMT used for treatment of HFrEF. Patients with HFmrEF should have repeat evaluation of LVEF to determine the trajectory of their disease process.

HFpEF

Evidence for pharmacologic treatment of patients in stage C or D, HFpEF patients is less robust than the treatment of the HFrEF patient. Loop Diuretic therapy should be used for treatment of these patients. It is reasonable to initiate SGLT2i in these patients. ARB or ARNi, and MRA may additionally be considered for use (Figure 9).

1. **SGLT2i (level 2a recommendation).**
2. **ARB (preferred), or ARNi (second line) (level 2b recommendation).**
3. **MRA (level 2b recommendation).**

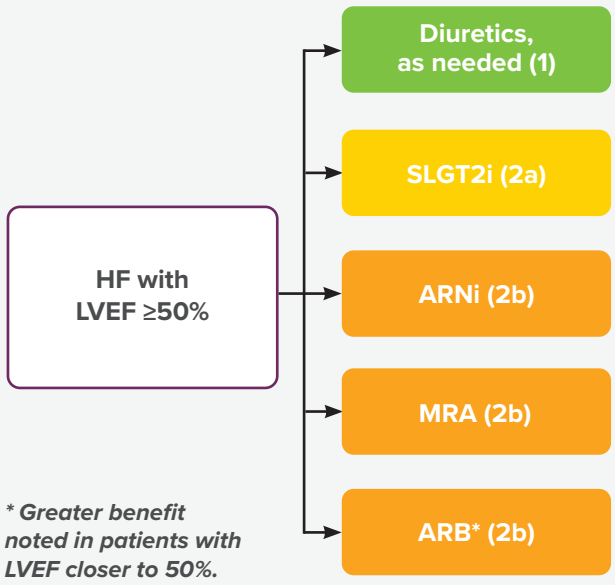
FIGURE 8 Stage C and D HFmrEF Treatment



(1) : Level 1 clinical recommendations

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

FIGURE 9 Stage C and D HFpEF Treatment



HF Pharmacologic Agent Estimated Monthly Cost
(Payor + Member)

¢: ≤ $20.00
$: $20.01 - $50.00
$$: $50.01 - $100.00
$$$: $100.01- $250
$$$$: $250.01 - $500.00
$$$$$: ≥$500

TYPE OF THERAPY	DRUG	TOTAL COST (Member & Plan)	TYPICAL INITIAL DOSE (ORAL)	TARGET DOSE	MINIMUM DOSE TITRATION INTERVAL
Angiotensin – receptor/ neprilysin inibitors (ARNi)	**Sacubitril-valsartan*** Entresto	$$$$$	24/26 to 49/51 mg twice daily*	97/103 mg twice daily	Double dose after 1 to 2 weeks or as tolerated
Antiotensin system inhibitors (ACEi)	**Captopril** (Capoten)	$	6.25 mg three times daily	50 mg three times daily	
	Enalapril (Epaned, Vasotec)	¢	2.5 mg twice daily	10 to 20 mg twice daily	
	Fosinopril (Monopril)	¢	5 to 10 mg once daily	20-40 mg once daily	
	Lisinopril (Prinivil, Zestril)	¢	2.5 to 5 once daily	40 mg once daily	
	Peridopril (Concersyl, Aceon)	¢	2 mg once daily	8 to 16 mg once daily	
	Ramipril (Altace)	¢	1.25 to 2.5 once daily	10 mg once daily	
	Quinapril (Accupril)	¢	5 mg twice daily	20 mg twice daily	
	Trandolapril (Mavik)	¢	1 mg once daily	4 mg once daily	
Angiotensin II receptor blockers (ARB)	**Candesartan** (Atacand)	$	4 to 8 mg once daily	32 mg once daily	
	Losartan (Cozaar)	¢	25 to 50 mg once daily	150 mg once daily	
	Valsartan (Diovan)	¢	20 to 40 mg twice daily	160 mg twice daily	

*Metoprolol tartrate is not recommended for use for HF

TYPE OF THERAPY	DRUG	TOTAL COST (Member & Plan)	TYPICAL INITIAL DOSE (ORAL)	TARGET DOSE	MINIMUM DOSE TITRATION INTERVAL
Beta Blockers	**Bisoprolol** (Monocor, Zabeta)	¢	1.25 mg once daily	10 mg once daily	Double every 2 weeks
	Carvedolol (Coreg)	¢	3.125 mg twice daily	≤85 kg: 25 mg twice daily	
		¢		>85 kg: 50 mg twice daily	
	Carvedolol (CR) (Coreg CR)	$$$$	10 mg once daily	80 mg once daily	
	Metoprolol succinate* (Toprol XL)	$	12.5 to 25 mg once daily	200 mg once daily	
Mineralocorticoid receptor antagonists	**Eplerenone** (Inspra)	$$	25 mg once daily	50 mg once daily	Double every 4 weeks
	Spironolactone (Aldactone)	¢	12.5 to 25 mg once daily	50 mg once daily or in two divided doses	
SGLT2 inhibitors	**Dapagliflozin** (Farxiga)	$$$$ (note: will transition to generic in 2025)	10 mg once daily	10 mg once daily	Fixed dose
	Trandolapril (Mavik)	$$$$$	10 mg once daily	10 mg once daily	

HF Clinical Care Pathway
Performance Monitoring Program

Federal anti-trust laws and regulations allow independent hospitals, physicians and other providers to form clinical integration networks (CIN) that may negotiate prices with payers only when the CIN engages in the facilitation of interdependence and cooperation between providers to reduce low-value spend and improve clinical quality. The Federal Trade Commission (FTC) specifically requires CIN providers to create and support clinical guidelines that continually improve quality and that are utilized to measure network and individual provider performance. In keeping with the above requirement and following the recommendations made by the AdventHealth Provider Network (AHPN) Heart Failure Focus Group and Medical Management Committee, the AHPN Board of Managers has approved the creation of the ***AHPN HF Clinical Care Pathway Program***. The program is composed of two arms. The first is a summary of current best practice HF treatment guidelines. The second programmatic arm is a performance monitoring assessment that highlights divergence between current HF treatment regimens as compared to best-practice HF treatment protocols at a provider, provider group and network levels.

Performance results will additionally reference AHPN measure specific goals, and provider and provider group performance will additionally be ranked against peer performance.

The following six HF performance monitoring metrics will be utilized to gauge adherence to best practice guidelines. They will be applied to all AHPN patients with a diagnosis of HF who have not enrolled in hospice in the past 12 months and/or have not had a cardiac transplant or left ventricular assistive device. Metric performance will be assessed utilizing a claims-based analysis and will be available to providers, on demand, via the Clinical Care Pathways Dashboard.

All AHPN members with clinical pathway attribution are also eligible to participate in a pathway-specific Performance Improvement (PI) project. Completion of this PI project provides the opportunity to earn 20 AMA PRA Category 1 Credit(s)™, counts as 1 ABIM MOC Part IV project or counts as one ABFM Performance Improvement project and provides 20 ABFM MOC points, as applicable.

For further information, please contact your performance and enablement specialist.

If you do not know who your assigned performance and enablement specialist is, please email PHSO.Network.Support@adventhealth.com or call 800-741-4810.

HF Clinical Care Pathway: Performance Monitoring Metrics

1. **Percentage of patients with HFrEF on a RASi for ≥ 80% of the past six months.**
   Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current left ventricular ejection fraction (LVEF) ≤ 40% that are/were not enrolled in hospice in the past 12 months and/or have not had a cardiac transplant or left ventricular assistive device with proportion of days covered (PDC) for ACE inhibitor or ARB or ARNI therapy greater than or equal to 80% within the past six months.

2. **Percentage of patients with HFrEF on a Beta Blocker for ≥ 80% of the past six months.**
   Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current left ventricular ejection fraction (LVEF) ≤ 40% that are/were not enrolled in hospice in the past 12 months and/or have not had a cardiac transplant or left ventricular assistive device with proportion of days covered (PDC) for beta blocker greater than or equal to 80% within the past six months.

3. **Percentage of patients with HF on a SGLT2i for ≥ 80% of the past six months.**
   Percentage of AHPN members with a diagnosis of heart failure that are/were not enrolled in hospice in the past 12 months and/or have not had a cardiac transplant or left ventricular assistive device that are/were not enrolled in hospice in the past 12 months and/or have not had a cardiac transplant or left ventricular assistive device with proportion of days covered (PDC) for SGLT2i therapy greater than or equal to 80% within the past six months.

4. **Percentage of patients with HF who were prescribed a non-dihydropyridine calcium channel blocker in the past six months.**
   The percentage of AHPN members with a diagnosis of heart failure that are/were not enrolled in hospice in the past 12 months and/or have not had a cardiac transplant or left ventricular assistive device who are prescribed a non-dihydropyridine calcium channel blocker (diltiazem or verapamil) in the past six months.

5. **Percentage of patients with HF who are up to date for influenza vaccination.**
   The percentage of AHPN members with a diagnosis of heart failure that are/were not enrolled in hospice in the past 12 months and/or have not had a cardiac transplant or left ventricular assistive device who received their influenza vaccine between July 1 and December 31 of the measure year.

6. **Percentage of patients with HFrEF who are receiving Guideline-directed Medical Therapy (GDMT) for ≥ 80% of the past six months.**
   The percentage of AHPN members with a diagnosis of HFrEF that are/were not enrolled in hospice in the past 12 months and/or have not had a cardiac transplant or left ventricular assistive device with proportion of days covered (PDC) for RASi, Beta Blocker, MRA and SGLT2i therapy greater than or equal to 80% within the past six months.

AHPN-FL HF Clinical Care Pathway
Program Development and Approval

The AdventHealth Provider Network (AHPN) Heart Failure Program is based on the 2022 AHA/ACC heart failure guidelines. These guidelines and measures were approved at the December 2024 and the February 2025 meetings of the AHPN Board of Managers.

The Population Health Services Organization's (PHSO) clinical team heartfully thanks the following AHPN providers and AdventHealth team members who participated in the creation of the Clinical Care Pathway Program.

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