



TARGET: HEART FAILURE™ HONOR ROLL MEASURE LOGIC/RATIONALE

BACKGROUND: This document is intended to provide a brief rationale as to each of the measures that are measured under Target: Heart Failure for each of the three key categories: (1) Medication Optimization, (2) Early Follow-up Care Coordination, and (3) Enhanced Patient Education. To qualify for the Target: Heart Failure Honor Roll, hospitals must demonstrate 50% or greater compliance on the following measures within those key areas for at least one calendar quarter.

For more information on Target: Heart Failure go to www.heart.org/targethf.

HEART FAILURE: MEDICATION OPTIMIZATION MEASURES

ACE Inhibitor (ACEI) and Angiotensin Receptor Blocker (ARB) at Discharge:

Guideline Recommendations:

Class I

Angiotensin converting enzyme inhibitors are recommended for all patients with current or prior symptoms of HF and reduced LVEF, unless contraindicated (Level of Evidence: A).

In patients with reduced ejection fraction experiencing a symptomatic exacerbation of HF requiring hospitalization during chronic maintenance treatment with oral therapies known to improve outcomes, particularly ACE inhibitors or ARBs and beta-blocker therapy, it is recommended that these therapies be continued in most patients in the absence of hemodynamic instability or contraindications (Level of Evidence: C).

In patients hospitalized with HF with reduced ejection fraction not treated with oral therapies known to improve outcomes, particularly ACE inhibitors or ARBs and beta-blocker therapy, initiation of these therapies is recommended in stable patients prior to hospital discharge (Level of Evidence: B).

Class IIa

Angiotensin II receptor blockers are reasonable to use as alternatives to ACE inhibitors as first-line therapy for patients with mild to moderate HF and reduced LVEF, especially for patients already taking ARBs for other indications (Level of Evidence: A).

ACC/AHA 2009 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult

<http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.109.192064>.

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Rationale

ACE inhibitors have been shown to decrease morbidity, mortality, and hospitalizations for patients with heart failure and left ventricular systolic dysfunction. The efficacy of ARB therapy has been strengthened by several large-scale prospective randomized clinical trials demonstrating reduction in mortality and hospitalization for heart failure among patients with heart failure and LVSD. ACE inhibitors should be prescribed to all patients with HF due to LV systolic dysfunction unless they have a contraindication to their use or have been shown to be unable to tolerate treatment with these drugs. ACE inhibitors remain the first choice for inhibition of the renin-angiotensin system in chronic HF, but ARBs can now be considered a reasonable alternative. Even if the patient has responded favorably to the diuretic, treatment with ACE inhibitor or ARBs should be initiated and maintained in patients who can tolerate them, because they have been shown to favorably influence the long-term prognosis of HF.

Measure Sets

ACC/AHA/PCPI HF Performance Measure
TJC/CMS HF Hospital Compare Measure
GWTG HF Achievement Measure

Evidence-Based Specific Beta-Blockers:

Guideline Recommendations:

Class I

Beta-blockers (using 1 of the 3 proven to reduce mortality, i.e., bisoprolol, carvedilol, and sustained release metoprolol succinate) are recommended for all stable patients with current or prior symptoms of HF and reduced LVEF, unless contraindicated (Level of Evidence: A).

In patients with reduced ejection fraction experiencing a symptomatic exacerbation of HF requiring hospitalization during chronic maintenance treatment with oral therapies known to improve outcomes, particularly ACE inhibitor or ARBs and betablocker therapy, it is recommended that these therapies be continued in most patients in the absence of hemodynamic instability or contraindications (Level of Evidence: C).

In patients hospitalized with HF with reduced ejection fraction not treated with oral therapies known to improve outcomes, particularly ACE inhibitors or ARBs and beta-blocker therapy, initiation of these therapies is recommended in stable patients prior to hospital discharge (Level of Evidence: B).

Initiation of beta-blocker therapy is recommended after optimization of volume status and successful discontinuation of intravenous diuretics, vasodilators, and inotropic agents. Beta-blocker therapy should be initiated at a low dose and only in stable patients. Particular caution should be used when initiating beta blockers in patients who have required inotropes during their hospital course (Level of Evidence: B).

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Rationale:

Three beta-blockers have been shown to be effective in reducing the risk of death in patients with chronic HF. Positive findings with these 3 agents, however, should not be considered indicative of a beta-blocker class effect, as shown by the lack of effectiveness of bucindolol and the lesser effectiveness of short-acting metoprolol in clinical



trials. Patients who have Stage C HF should be treated with 1 of these 3 beta-blockers. While the relative efficacy among these 3 agents is not known, available evidence does suggest that beta-blockers can differ in their effects on survival. In one trial, carvedilol (target dose 25 mg twice daily) was compared with immediate-release metoprolol tartrate (target dose 50 mg twice daily). In that trial, carvedilol was associated with a significantly reduced mortality compared with metoprolol tartrate. Although both the dose and the formulation of metoprolol (metoprolol tartrate) used in the above-referenced trial are commonly prescribed by physicians for the treatment of HF, they were neither the dose nor the formulation used in the controlled trial that showed that sustained-release metoprolol (metoprolol succinate) reduces the risk of death. There have been no trials to explore whether the survival benefits of carvedilol are greater than those of sustained-released metoprolol when both are used at the target doses.

Measure Sets

ACC/AHA/PCPI HF Performance Measure

GWTG HF Achievement Measure

Aldosterone Antagonist at Discharge:

Guideline Recommendations:

Class I

Addition of an aldosterone antagonist is recommended in selected patients with moderately severe to severe symptoms of HF and reduced LVEF who can be carefully monitored for preserved renal function and normal potassium concentration. Creatinine should be 2.5 mg/dL or less in men or 2.0 mg/dL or less in women and potassium should be less than 5.0 mEq/L. Under circumstances where monitoring for hyperkalemia or renal dysfunction is not anticipated to be feasible, the risks may outweigh the benefits of aldosterone

antagonists (Level of Evidence: B).

In patients with reduced ejection fraction experiencing a symptomatic exacerbation of HF requiring hospitalization during chronic maintenance treatment with oral therapies known to improve outcomes it is recommended that these therapies be continued in most patients in the absence of hemodynamic instability or contraindications (Level of Evidence: C).

In patients hospitalized with HF with reduced ejection fraction not treated with oral therapies known to improve outcomes initiation of these therapies is recommended in stable patients prior to hospital discharge. (Level of Evidence: B).

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<http://circ.ahajournals.org/cgi/reprint/>

CIRCULATION 109:192064

Rationale:

The addition of low-dose aldosterone antagonists is recommended in carefully selected patients with moderately severe or severe heart failure symptoms and recent decompensation or with LV dysfunction early after myocardial infarction. This recommendation is based on data demonstrating reduced death and rehospitalization in two clinical trial populations. To minimize the risk of life-threatening hyperkalemia in patients with low LVEF and symptoms of HF, patients should have initial serum creatinine less than 2.0 to 2.5 mg per dL without recent worsening and serum potassium less than 5.0 mEq per dL without a history of severe hyperkalemia. Patients should be monitored very carefully for changes in serum potassium and renal function. It is worth noting that because the safety and efficacy of aldosterone

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antagonist therapy have not been shown in the absence of loop diuretic therapy, it is not currently recommended that such therapy be given without other concomitant diuretic therapy in chronic HF. Although aldosterone antagonists usually have a relatively weak diuretic effect, some patients may experience marked potentiation of other diuretic therapy after the addition of aldosterone antagonists. Volume should

be carefully followed. Patient education should include a list of high potassium containing foods, should hyperkalemia be a problem. Some salt substitutes are potassium.

Measure Sets

GWTG-HF only
GWTG Quality Measure

HEART FAILURE: EARLY FOLLOW-UP AND CARE COORDINATION

Follow-Up Visit Within 7 Days or Less:

Guideline Recommendations:

Class I

Comprehensive written discharge instructions for all patients with a hospitalization for HF and their caregivers is strongly recommended, with special emphasis on the following 6 aspects of care: diet, discharge medications, with a special focus on adherence, persistence, and up-titration to recommended doses of ACE inhibitor/ARB and beta-blocker medication, activity level, follow-up appointments, daily weight monitoring, and what to do if HF symptoms worsen (Level of Evidence: C).

Post discharge systems of care, if available, should be used to facilitate the transition to effective outpatient care for patients hospitalized with HF.(Level of Evidence: B) .

ACC/AHA 2009 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult

<http://circ.ahajournals.org/cgi/reprint/>

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Rationale:

Several studies have examined the effect of providing more intensive delivery of discharge instructions coupled tightly with subsequent well-coordinated follow-up care for patients hospitalized with heart failure, many with positive results. Comprehensive discharge planning plus post discharge support for older patients with heart failure can significantly reduce readmission rates and may improve health outcomes such as survival and quality of life without increasing costs. While the types of post discharge support varied by study, nearly all of them resulted in significantly fewer readmissions compared with usual care. A recently published study found that early outpatient follow-up (within 7 days) after discharge from a heart failure hospitalization is associated with a lower risk of 30-day readmission.

Measure Sets

GWTG- Heart Failure

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HEART FAILURE: ENHANCED PATIENT EDUCATION

Enhanced Patient Education can be achieved by through completion of one or more of the following measures:

Heart Failure Disease Management Program Referral

Guideline Recommendations:

Discharge planning should address the following issues:

- Details regarding medication, dietary sodium restriction, and recommended activity level
- Follow-up by phone or clinic visit early after discharge to reassess volume status
- Medication and dietary compliance
- Alcohol moderation and smoking cessation
- Monitoring of body weight, electrolytes and renal function
- Consideration of referral for formal disease management. (Strength of Evidence C).

Patients recently hospitalized for HF and other patients at high risk for HF decompensation should be considered for comprehensive HF disease management. High-risk patients include those with renal insufficiency, low output state, diabetes, chronic obstructive pulmonary disease, persistent NYHA class III or IV symptoms, frequent hospitalization for any cause, multiple active comorbidities, or a history of depression, cognitive impairment, inadequate social support, poor health literacy, or persistent nonadherence to therapeutic regimens (Strength of Evidence A).

It is recommended that HF disease management programs include the components shown in Table 8.3 based on patient characteristics and needs (Strength of Evidence B). [Disease Management programs include: (a) comprehensive education and counseling individualized to patient needs, (b) promotion of self care, including self-adjustment of diuretic therapy in appropriate patients (or with family member/caregiver assistance), (3) emphasis on behavioral strategies to increase adherence, (4) vigilant follow-up after hospital discharge or after periods of instability, (5) optimization of medical therapy, (6) increased access to providers, (7) early attention to signs and symptoms of fluid overload, (9) assistance with social and financial concerns].

It is recommended that HF disease management include integration and coordination of care between the primary care physician and HF care specialists and with other agencies, such as home health and cardiac rehabilitation (Strength of Evidence C).

It is recommended that patients in a HF disease management program be followed until they or their family/ caregiver demonstrate independence in following the prescribed treatment plan, adequate or improved adherence to treatment guidelines, improved functional capacity, and symptom stability. Higher risk patients with more advanced HF may need to be followed permanently. Patients who experience increasing episodes of exacerbation or who demonstrate instability after discharge from a program should be referred again to the service (Strength of Evidence B).

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HFSA 2010 Comprehensive Heart Failure Practice Guideline: Section 8: Disease Management, Advance Directives, and End-of-Life Care in Heart Failure Education and Counseling http://www.heartfailureguideline.org/_assets/document/Guidelines.pdf.

Rationale:

Disease management is "a comprehensive, integrated system for managing patients by using best practices, clinical practice improvement and other resources and tools to reduce overall cost and improve measurable outcomes in the quality of care."

A number of disease management programs have been studied, including HF clinics, care delivered in the home or to patients who are at home, and telemonitoring. These programs focus on multiple aspect of patient care, including optimization of drug counseling, emphasis on self-care, vigilant follow-up, early attention to signs and symptoms of fluid overload, coordination of care with other providers, quality assessment, and increased access to the health care provider.

Measure Sets

GWTG-HF only

GWTG Reporting Measure

Provision of at least 60 minutes of heart failure education by a qualified heart failure educator

Guideline Recommendations:

Class I

Comprehensive written discharge instructions for all patients with a hospitalization for HF and their caregivers is strongly recommended, with special emphasis on the

following 6 aspects of care: diet, discharge medications, with a special focus on adherence, persistence, and uptitration to recommended doses of ACE inhibitor/ARB and beta-blocker medication, activity level, follow-up appointments, daily weight monitoring, and what to do if HF symptoms worsen (Level of Evidence: C).

Post discharge systems of care, if available, should be used to facilitate the transition to effective outpatient care for patients hospitalized with HF (Level of Evidence: B).

ACC/AHA 2009 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult <http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.109.192064>.

Rationale:

The goals of heart failure patient education are to help patients and their caregiver(s) acquire the knowledge, skills, strategies, problem solving abilities, and motivation necessary for adherence to the treatment plan and effective participation in self-care. Upon discharge, patient and caregiver(s) should be aware and supportive of self-care follow-up plans, how to carry out self-care follow-up plans, and understand the importance of adherence to a patient's health-related quality of life. At least 60 minutes of patient education is recommended in order to ensure that the patient and/or their caregiver(s) understand what actions must be taken post discharge. Patient education should include discussion on (1) recognition of escalating symptoms and concrete plan for response to particular symptoms; (2) activity/exercise recommendations; (3) indications, use, and need for adherence with each medication prescribed at discharge; (4) importance of daily weight monitoring; (5) modifying risk

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for heart failure progression; (6) specific diet recommendations, individualized low sodium diet, recommendation for alcohol intake; (7) end of life; (8) follow up appointments; and (9) discharge instructions.

Education and counseling should be delivered by providers with the required knowledge base and using a team approach. RNs with expertise in heart failure management should provide the majority of education and counseling, supplemented by physician input and, when available and needed, input from dietitians, pharmacists, and other health care providers. In one study a 60 minute teaching session delivered by an RN educator at the time of hospital discharge to patients with heart failure using standardized instructions resulted in improved clinical outcomes, increased self-care measure adherence, and reduced cost of care.

For additional resources, please review the Target: Heart Failure Patient Education Fact Sheet at http://www.heart.org/idc/groups/heart-public/@wcm/@private/@hcm/@gwtg/documents/downloadable/ucm_428949.pdf

Measure Sets

GWTG-HF only

GWTG Reporting Measure

Provision of AHA heart failure interactive workbook

Guideline Recommendations:

It is recommended that patients with HF and their family members or caregivers receive individualized education and counseling that emphasizes self-care. This education and counseling should be delivered by providers using a team approach in which nurses with expertise in HF

management provide the majority of education and counseling, supplemented by physician input and, when available and needed, input from dietitians, pharmacists, and other health care providers (Strength of Evidence B).

Teaching is not sufficient without skill building and specification of critical target behaviors. It is recommended that essential elements of patient education (with associated skills) are utilized to promote self-care with associated skills shown in Table 8.1 (Strength of Evidence B).

It is recommended that educational sessions begin with an assessment of current HF knowledge, issues about which the patient wants to learn, and the patient's perceived barriers to change. Education sessions should address specific issues (eg, medication non adherence) and their causes (eg, lack of knowledge vs cost vs forgetting) and employ strategies that promote behavior change, including motivational approaches (Strength of Evidence B).

It is recommended that the frequency and intensity of patient education and counseling vary according to the stage of illness. Patients in advanced HF or with persistent difficulty adhering to the recommended regimen require the most education and counseling. Patients should be offered a variety of options for learning about HF according to their individual preferences:

- Videotape
- One-on-one or group discussion
- Reading materials, translators, telephone calls, mailed information
- Internet
- Visits

Repeated exposure to material is recommended because a single session is never sufficient (Strength of Evidence B).

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HFSA 2010 Comprehensive Heart Failure Practice Guideline:
Section 8: Disease Management, Advance Directives, and
End-of-Life Care in Heart Failure Education and Counseling
[http://www.heartfailureguideline.org/_assets/
document/Guidelines.pdf](http://www.heartfailureguideline.org/_assets/document/Guidelines.pdf).

Rationale:

Education of heart failure patients and their families is critical and often complex. Failure of these patients to understand how best to comply with physician's and other healthcare providers' instructions is often a cause of heart failure exacerbation leading to subsequent hospital readmission. It is, therefore, incumbent on healthcare professionals to be certain that patients and their families have an understanding of the causes of heart failure, prognosis, therapy, dietary restrictions, activity, importance of compliance, and signs and symptoms of recurrent heart failure. Use of tools such as the AHA interactive workbook can provide valuable information to patients and caregivers. To access the interactive workbooks register at

[http://www.heart.org/HEARTORG/General/Interactive-Workbo
oks-Registration_UCM_312907_Article.jsp](http://www.heart.org/HEARTORG/General/Interactive-Workbooks-Registration_UCM_312907_Article.jsp).

Measure Sets

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