



Complete Summary

GUIDELINE TITLE

Evaluation and management of patients with acute decompensated heart failure: HFSA 2006 comprehensive heart failure practice guideline.

BIBLIOGRAPHIC SOURCE(S)

Heart Failure Society of America. Evaluation and management of patients with acute decompensated heart failure. J Card Fail 2006 Feb;12(1):e86-103. [80 references] [PubMed](#)

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Heart Failure Society of America. Heart Failure Society of America (HFSA) practice guidelines. HFSA guidelines for management of patients with heart failure caused by left ventricular systolic dysfunction--pharmacological approaches. J Card Fail 1999 Dec;5(4):357-82.

** REGULATORY ALERT **

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s)/intervention(s) for which important revised regulatory and/or warning information has been released.

- [June 8, 2007, Troponin-I Immunoassay](#): Class I Recall of all lots of the Architect Stat Troponin-I Immunoassay. The assay may report falsely elevated or falsely decreased results at and near a low level, which may impact patient treatment.
- [July 18, 2005, Natreacor \(nesiritide\)](#): Due to recent questions raised about worsened renal function and mortality, recommendations were made on the appropriate use of the drug and on utilizing educational campaigns for clinicians.
- [May 19, 2005, Natreacor \(nesiritide\)](#): Revisions to the ADVERSE REACTIONS/Effect on Mortality section of the prescribing information for patients with acutely decompensated congestive heart failure.

COMPLETE SUMMARY CONTENT

** REGULATORY ALERT **

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SCOPE

DISEASE/CONDITION(S)

Acute decompensated heart failure

GUIDELINE CATEGORY

Evaluation
Management
Treatment

CLINICAL SPECIALTY

Cardiology
Emergency Medicine
Internal Medicine

INTENDED USERS

Advanced Practice Nurses
Pharmacists
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To provide recommendations for the evaluation and management of patients with acute decompensated heart failure

TARGET POPULATION

Patients with acute decompensated heart failure

INTERVENTIONS AND PRACTICES CONSIDERED

1. Evaluation of signs and symptoms
2. Determination of plasma B-type natriuretic peptide (BNP) or N-terminal pro-B-type natriuretic peptide (NT-proBNP) when necessary

3. Hospital admission, as indicated, and careful monitoring of weight, fluid intake and output, vital signs, signs, symptoms, electrolytes, and renal function
4. Loop diuretics
5. Careful observation for the development of renal dysfunction and other side effects
6. Sodium and fluid restriction, increased doses of loop diuretics, continuous infusion of a loop diuretic, addition of a second type of diuretic orally or intravenously, or ultrafiltration, if needed
7. Intravenous nitroglycerin, nitroprusside, or nesiritide
8. Intravenous inotropes
9. Invasive hemodynamic monitoring in specific patients
10. Evaluation of admitted patients for precipitating factors
11. Discharge planning

MAJOR OUTCOMES CONSIDERED

- Hospitalization rate
- Survival rate
- Sensitivity and specificity of diagnostic tests

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases
Searches of Unpublished Data

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Databases searched included Medline and Cochrane. In addition, the guideline developers polled experts in specific areas for data.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Level A: Randomized, Controlled, Clinical Trials
May be assigned based on results of a single trial

Level B: Cohort and Case-Control Studies
Post hoc, subgroup analysis, and meta-analysis
Prospective observational studies or registries

Level C: Expert Opinion
Observational studies – epidemiologic findings
Safety reporting from large-scale use in practice

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The Heart Failure Society of America (HFSA) Guideline Committee sought resolution of difficult cases through consensus building. Written documents were essential to this process, because they provided the opportunity for feedback from all members of the group. On occasion, consensus of Committee opinion was sufficient to override positive or negative results of almost any form or prior evidence.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

"Is recommended": Part of routine care
Exceptions to therapy should be minimized.

"Should be considered": Majority of patients should receive the intervention.
Some discretion in application to individual patients should be allowed.

"May be considered": Individualization of therapy is indicated

"Is not recommended": Therapeutic intervention should not be used

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The process of moving from ideas of recommendations to a final document includes many stages of evaluation and approval. Every section, once written, had a lead reviewer and 2 additional reviewers. After a rewrite, each section was assigned to another review team, which led to a version reviewed by the Committee as a whole and then the Heart Failure Society of America (HFSA) Executive Council, representing 1 more level of expertise and experience. Out of this process emerged the final document.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The strength of evidence (A, B, C) and strength of recommendations are defined at the end of the "Major Recommendations" field.

- The diagnosis of decompensated heart failure (HF) should be based primarily on signs and symptoms. (Strength of Evidence = C)

When the diagnosis is uncertain, determination of plasma B-type natriuretic peptide (BNP) or N-terminal pro-B-type natriuretic peptide (NT-proBNP) concentration should be considered in patients being evaluated for dyspnea who have signs and symptoms compatible with HF. (Strength of Evidence = A)

The natriuretic peptide concentration should not be interpreted in isolation, but in the context of all available clinical data bearing on the diagnosis of HF.

- Hospital admission is recommended for patients presenting with acute decompensated heart failure (ADHF) when the clinical circumstances listed in Table 12.1(section a), below, are present. Patients presenting with ADHF should be considered for hospital admission when the clinical circumstances listed in Table 12.1(section b), below, are present. (Strength of Evidence = C)

Table 12.1: Recommendations for Hospitalizing Patients Presenting with ADHF

Recommendation	Clinical Circumstances
(a) Hospitalization Recommended	Evidence of severely decompensated HF, including: <ul style="list-style-type: none"> • Hypotension • Worsening renal function • Altered mentation Dyspnea at rest <ul style="list-style-type: none"> • Typically reflected by resting tachypnea • Less commonly reflected by oxygen saturation <90% Hemodynamically significant arrhythmia

Recommendation	Clinical Circumstances
	<ul style="list-style-type: none"> Including new onset of rapid atrial fibrillation <p>Acute coronary syndromes</p>
(b) Hospitalization Should be Considered	<p>Worsened congestion</p> <ul style="list-style-type: none"> Even without dyspnea Typically reflected by a weight gain of ≥ 5 kg <p>Signs and symptoms of pulmonary or systemic congestion</p> <ul style="list-style-type: none"> Even in the absence of weight gain <p>Major electrolyte disturbance</p> <p>Associated comorbid conditions</p> <ul style="list-style-type: none"> Pneumonia Pulmonary embolus Diabetic ketoacidosis Symptoms suggestive of transient ischemic accident or stroke <p>Repeated implantable cardioverter defibrillators (ICD) firings</p> <p>Previously undiagnosed HF with signs and symptoms of systemic or pulmonary congestion</p>

Table 12.2: Signs and Symptoms of Congestion in HF

	Pulmonary	Systemic
Symptoms	Dyspnea Orthopnea Paroxysmal nocturnal dyspnea (PND)	Edema Abdominal (or hepatic) swelling and pain
Signs	Rales Wheezing Pleural effusion Hypoxemia Third heart sound (left-sided)* Worsening mitral regurgitation	Edema Elevated jugular venous pressure (JVP) Hepatic enlargement and tenderness Ascites Third heart sound (right-sided)* Worsening tricuspid regurgitation Hepatojugular reflux

* May occur without congestion

- It is recommended that patients admitted with ADHF be treated to achieve the goals listed in the Table 12.3, below. (Strength of Evidence = C)

Table 12.3: Treatment Goals for Patients Admitted for ADHF

<ul style="list-style-type: none"> • Improve symptoms, especially congestion and low-output symptoms • Optimize volume status • Identify etiology (see Table 4.6 in the National Guideline Clearinghouse (NGC) summary of the Heart Failure Society of American (HFSA) guideline Evaluation of Patients for Ventricular Dysfunction and Heart Failure) • Identify precipitating factors • Optimize chronic oral therapy • Minimize side effects • Identify patients who might benefit from revascularization • Educate patients concerning medications and self assessment of HF • Consider and, where possible, initiate a disease management program

- Patients admitted with ADHF should be carefully monitored. It is recommended that the items listed in Table 12.4, below, be assessed at the stated frequencies. (Strength of Evidence = C)

Table 12.4: Monitoring Recommendations for Patients Hospitalized With ADHF

Frequency	Value	Specifics
At least daily	Weight	Determine after voiding in the morning Account for possible increased food intake due to improved appetite
At least daily	Fluid intake and output	
More than daily	Vital signs	Including orthostatic blood pressure
At least daily	Signs	Edema Ascites Pulmonary rales Hepatomegaly Increased jugular venous pressure (JVP) Hepatojugular reflux Liver tenderness
At least daily	Symptoms	Orthopnea Paroxysmal nocturnal dyspnea (PND) Nocturnal cough Dyspnea Fatigue
At least daily	Electrolytes	Potassium Sodium
At least daily	Renal function	Blood urea nitrogen (BUN) Serum creatinine*

See background section in the original guideline document for additional recommendations on laboratory evaluations.

- Routine and frequent laboratory tests recommended in ADHF are shown in Table 12.5, below.

Table 12.5: Laboratory Evaluation for Patients With ADHF

Routinely	Electrolytes BUN and creatinine Blood glucose Troponin Complete blood count International normalized ratio (INR) if using Coumadin Oxygen saturation
Frequently	BNP or NT-proBNP Liver function tests Urinalysis D-dimer Arterial blood gases

- It is recommended that patients admitted with ADHF and evidence of fluid overload be treated initially with loop diuretics—usually given intravenously rather than orally. (Strength of Evidence = B)
- It is recommended that diuretics be administered at doses needed to produce a rate of diuresis sufficient to achieve optimal volume status with relief of signs and symptoms of congestion (edema, elevated jugular venous pressure, dyspnea), without inducing an excessively rapid reduction in intravascular volume, which may result in symptomatic hypotension and/or worsening renal function. (Strength of Evidence = C)
- Careful repeated assessment of signs and symptoms of congestion and changes in body weight is recommended, because clinical experience suggests it is difficult to determine that congestion has been adequately treated in many patients. (Strength of Evidence = C)
- Monitoring of daily weights, intake, and output is recommended to assess clinical efficacy of diuretic therapy. Routine use of a Foley catheter is not recommended for monitoring volume status. However, placement of a catheter is recommended when close monitoring of urine output is needed. (Strength of Evidence = C)
- Careful observation for development of a variety of side effects, including renal dysfunction, electrolyte abnormalities, and symptomatic hypotension, is recommended in patients treated with diuretics, especially when used at high doses and in combination. Patients should undergo routine laboratory studies and clinical examination as dictated by their clinical response. (Strength of Evidence = C)

Serum potassium and magnesium levels should be monitored at least daily and maintained in the normal range. More frequent monitoring may be necessary when diuresis is rapid. (Strength of Evidence = C)

Overly rapid diuresis may be associated with severe muscle cramps, which should be treated with potassium replacement if indicated. (Strength of Evidence = C)

- Careful observation for the development of renal dysfunction is recommended in patients treated with diuretics. Patients with moderate to severe renal dysfunction and evidence of fluid retention should continue to be treated with diuretics. In the presence of severe fluid overload, renal dysfunction may improve with diuresis. (Strength of Evidence = C)
- When congestion fails to improve in response to diuretic therapy, the following options should be considered:
 - Sodium and fluid restriction
 - Increasing doses of loop diuretic
 - Continuous infusion of a loop diuretic, or
 - Addition of a second type of diuretic orally (metolazone or spironolactone) or intravenously (chlorothiazide).

A fifth option, ultrafiltration, may be considered. (Strength of Evidence = C)

- A low sodium diet (2 g daily) is recommended, as is supplemental oxygen as needed for hypoxemia. (Strength of Evidence = C)

In patients with recurrent or refractory volume overload, stricter sodium restriction may be considered. (Strength of Evidence = C)

- Fluid restriction (<2 L/day) is recommended in patients with moderate hyponatremia (serum sodium <130 mEq/L) and should be considered to assist in treatment of fluid overload in other patients. (Strength of Evidence = C)

In patients with severe (serum sodium <125 mEq/L) or worsening hyponatremia, stricter fluid restriction may be considered. (Strength of Evidence = C)

- Routine administration of supplemental oxygen in the absence of hypoxia is not recommended. (Strength of Evidence = C)
- In the absence of symptomatic hypotension, intravenous nitroglycerin, nitroprusside, or nesiritide may be considered as an addition to diuretic therapy for rapid improvement of congestive symptoms in patients admitted with ADHF. (Strength of Evidence = B) Frequent blood pressure monitoring is recommended with these agents. (Strength of Evidence = B)

These agents should be decreased in dosage or discontinued if symptomatic hypotension develops. (Strength of Evidence = B) Reintroduction in increasing doses may be considered once symptomatic hypotension is resolved. (Strength of Evidence = C)

- Intravenous vasodilators (intravenous nitroglycerin or nitroprusside) and diuretics are recommended for rapid symptom relief in patients with acute pulmonary edema or severe hypertension. (Strength of Evidence = C)

- Intravenous vasodilators (nitroprusside, nitroglycerin, or nesiritide) may be considered in patients with ADHF and advanced HF who have persistent severe HF despite aggressive treatment with diuretics and standard oral therapies. (Strength of Evidence = C)
- Intravenous inotropes (milrinone or dobutamine) may be considered to relieve symptoms and improve end-organ function in patients with advanced HF characterized by left ventricular (LV) dilation, reduced left ventricular ejection fraction (LVEF), and diminished peripheral perfusion or end-organ dysfunction (low output syndrome), particularly if these patients have marginal systolic blood pressure (<90 mm Hg), have symptomatic hypotension despite adequate filling pressure, or are unresponsive to, or intolerant of, intravenous vasodilators. (Strength of Evidence = C)

These agents may be considered in similar patients with evidence of fluid overload if they respond poorly to intravenous diuretics or manifest diminished or worsening renal function. (Strength of Evidence = C)

When adjunctive therapy is needed in other patients with ADHF, administration of vasodilators should be considered instead of intravenous inotropes (milrinone or dobutamine). (Strength of Evidence = B)

Intravenous inotropes (milrinone or dobutamine) are not recommended unless left heart filling pressures are known to be elevated based on direct measurement or clear clinical signs. (Strength of Evidence = B)

Administration of intravenous inotropes (milrinone or dobutamine) in the setting of ADHF should be accompanied by continuous or frequent blood pressure monitoring and continuous monitoring of cardiac rhythm. (Strength of Evidence = C)

If symptomatic hypotension or worsening tachyarrhythmias develop during administration of these agents, discontinuation or dose reduction should be considered. (Strength of Evidence = C)

- The routine use of invasive hemodynamic monitoring in patients with ADHF is not recommended. (Strength of Evidence = A)
- Invasive hemodynamic monitoring should be considered in a patient:
 - Who is refractory to initial therapy
 - Whose volume status and cardiac filling pressures are unclear
 - Who has clinically significant hypotension (typically systolic blood pressure [SBP] <80mm Hg) or worsening renal function during therapy, or
 - In whom documentation of an adequate hemodynamic response to the inotropic agent is necessary when chronic outpatient infusion is being considered. (Strength of Evidence = C)
- It is recommended that patients admitted with ADHF undergo evaluation for the following precipitating factors: atrial fibrillation or other arrhythmias (e.g., atrial flutter, other supraventricular tachycardia [SVT] or ventricular tachycardia [VT]), exacerbation of hypertension, myocardial ischemia/infarction, exacerbation of pulmonary congestion, anemia, thyroid disease, significant drug interactions, and other less common factors. (Strength of Evidence = C)

- It is recommended that every effort be made to use the hospital stay for assessment and improvement of patient compliance via patient and family education and social support services (see the NGC summary of the HFSA guideline [Disease Management in Heart Failure](#)). (Strength of Evidence = C)
- It is recommended that criteria in Table 12.7, below, be met before a patient with HF is discharged from the hospital. (Strength of Evidence = C)

In patients with advanced HF or recurrent admissions for HF, additional criteria listed in Table 12.7, below, should be considered. (Strength of Evidence = C)

Table 12.7: Discharge Criteria for Patients With HF

Recommended for all HF Patients	<ul style="list-style-type: none"> • Exacerbating factors addressed. • At least near optimal volume status achieved. • Transition from intravenous to oral diuretic successfully completed. • Patient and family education completed. • At least near optimal pharmacologic therapy achieved (see the NGC summaries of the HFSA guidelines Heart Failure in Patients with Left Ventricular Systolic Dysfunction and Evaluation and Management of Patients with Heart Failure and Preserved Left Ventricular Ejection Fraction) • Follow-up clinic visit scheduled, usually for 7 to 10 days
Should be considered for patients with advanced HF or recurrent admissions for HF	<ul style="list-style-type: none"> • Oral medication regimen stable for 24 hours • No intravenous vasodilator or inotropic agent for 24 hours • Ambulation before discharge to assess functional capacity after therapy • Plans for postdischarge management (scale present in home, visiting nurse or telephone follow up generally no longer than 3 days after discharge) • Referral for disease management

- Discharge planning is recommended as part of the management of patients with ADHF. 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
 - Monitoring of body weight, electrolytes and renal function
 - Consideration of referral for formal disease management (Strength of Evidence = C)

Definitions:

Strength of Evidence

Level A: Randomized, Controlled, Clinical Trials
May be assigned based on results of a single trial

Level B: Cohort and Case-Control Studies
Post hoc, subgroup analysis, and meta-analysis
Prospective observational studies or registries

Level C: Expert Opinion
Observational studies – epidemiologic findings
Safety reporting from large-scale use in practice

Strength of Recommendations

"Is recommended": Part of routine care
Exceptions to therapy should be minimized.

"Should be considered": Majority of patients should receive the intervention.
Some discretion in application to individual patients should be allowed.

"May be considered": Individualization of therapy is indicated

"Is not recommended": Therapeutic intervention should not be used

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations").

The recommendations are supported by randomized controlled clinical trials, cohort and case-control studies, and expert opinion.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Accurate evaluation and appropriate management of patients with acute decompensated heart failure

POTENTIAL HARMS

- High-dose diuretic therapy is a marker for increased mortality during hospitalization for heart failure (HF), as it is in chronic HF. Whether this is a direct adverse effect of diuretics or a reflection of the severity of the HF is unclear. However, complications of diuretic therapy that could result in poor outcomes include electrolyte disturbance, hypotension, and volume depletion. Treatments that effectively relieve symptoms in patients with acute decompensated heart failure (ADHF), such as diuretics, vasodilators, and inodilators, can be associated with significant short- and even long-term adverse effects on renal function.
- Troponin release has been documented during hospitalization for ADHF. These findings suggest that myocyte loss from necrosis and apoptosis may be accelerated in patients admitted with acute decompensated heart failure. Mechanisms potentially accounting for cell death are still being determined but may include neurohormonal activation and pharmacologic therapy. Medications that increase myocardial oxygen demand have the potential to induce ischemia and may damage hibernating but viable myocardium, especially in patients with ischemic heart disease. Experimental data indicate that dobutamine can cause necrosis in hibernating myocardium. One outcome study comparing dobutamine to levosimendan suggested greater risk in patients randomized to dobutamine.
- Administration of intravenous furosemide has been associated with neurohormonal activation, which may result in worsening of hemodynamics secondary to vasoconstriction in the early stages of therapy.
- Despite beneficial effects in acute HF, diuretics may be associated with a variety of adverse effects that often require alterations in their use or the use of concomitant medications. Patients treated with diuretics should be monitored carefully for excessive urine output, development of hypotension, and reductions in serum potassium, magnesium, and renal function. Serial determinations of creatinine and blood urea nitrogen (BUN) are particularly important when these side effects are present or anticipated. Diuretic therapy must be highly individualized based on the degree of fluid overload present and the degree of volume loss produced to minimize these side effects. (See the original guideline document for further details about hypokalemia, hypotension, neurohormonal activation, and other side effects of diuretics.)
- The adverse effects of nitroglycerin therapy include headache and symptomatic hypotension. Hypotension is more likely when preload is low, which may occur as filling pressures decline in response to diuretic therapy.
- The potential side effects of nesiritide include hypotension, headache, and worsening renal function. The risk of hypotension appears to be dose dependent and was less frequent in the Vasodilator in the Management of Acute Heart Failure (VMAC) study than in earlier trials that used higher maintenance doses. The incidence of symptomatic hypotension in the VMAC trial was similar in patients treated with nitroglycerin versus nesiritide. Because of the longer effective half-life of nesiritide, hypotension may last longer with nesiritide than with nitroglycerin. The risk of hypotension appears to be reduced in the absence of volume depletion, so correct assessment of fluid status will help to minimize this side effect. If rapid onset of hemodynamic effect is not needed, the bolus dose of nesiritide can be omitted, which may lessen the risk of symptomatic hypotension, although this strategy has not been tested in controlled trials. Headache is not a common side effect and only infrequently is severe enough to warrant discontinuation of the drug.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

It must be recognized that the evidence supporting recommendations is based largely on population responses that may not always apply to individuals within the population. Therefore, data may support overall benefit of 1 treatment over another but cannot exclude that some individuals within the population may respond better to the other treatment. Thus guidelines can best serve as evidence-based recommendations for management, not as mandates for management in every patient. Furthermore, it must be recognized that trial data on which recommendations are based have often been carried out with background therapy not comparable to therapy in current use. Therefore, physician decisions regarding the management of individual patients may not always precisely match the recommendations. A knowledgeable physician who integrates the guidelines with pharmacologic and physiologic insight and knowledge of the individual being treated should provide the best patient management.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Pocket Guide/Reference Cards
Slide Presentation

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Heart Failure Society of America. Evaluation and management of patients with acute decompensated heart failure. J Card Fail 2006 Feb;12(1):e86-103. [80 references] [PubMed](#)

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1999 (revised 2006 Feb)

GUIDELINE DEVELOPER(S)

Heart Failure Society of America, Inc - Disease Specific Society

SOURCE(S) OF FUNDING

Heart Failure Society of America, Inc

GUIDELINE COMMITTEE

Comprehensive Heart Failure Practice Guideline Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Committee members and reviewers from the Executive Council received no direct financial support from the Heart Failure Society of America (HFSA) or any other source for the development of the guideline. Administrative support was provided by the Heart Failure Society of America staff, and the writing of the document was performed on a volunteer basis by the Committee. Financial relationships that might represent conflicts of interest were collected for all members of the Guideline Committee and of the Executive Council, who were asked to disclose

potential conflicts and recuse themselves from discussions when necessary. Current relationships are shown in Table 1.5 of the "Development and Implementation" companion document (see the "Availability of Companion Documents" field).

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Heart Failure Society of America. Heart Failure Society of America (HFSA) practice guidelines. HFSA guidelines for management of patients with heart failure caused by left ventricular systolic dysfunction--pharmacological approaches. J Card Fail 1999 Dec;5(4):357-82.

GUIDELINE AVAILABILITY

Electronic copies: Available from the [Heart Failure Society of America, Inc. Web site](#).

Print copies: Available from the Heart Failure Society of America, Inc., Court International - Suite 240 S, 2550 University Avenue West, Saint Paul, Minnesota 55114; Phone: (651) 642-1633

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Heart Failure Society of America. Executive summary: HFSA 2006 comprehensive heart failure practice guideline. J Card Fail 2006 Feb;12(1):10-38.
- Heart Failure Society of America. Development and implementation of a comprehensive heart failure practice guideline. J Card Fail 2006 Feb;12(1):e3-9.
- Heart Failure Society of America. Conceptualization and working definition of heart failure. J Card Fail 2006 Feb;12(1):e10-11.

Electronic copies: Available from the [Heart Failure Society of America, Inc. Web site](#).

- PowerPoint slides. HFSA 2006 comprehensive heart failure guideline.

Electronic copies: Available from the [Heart Failure Society of America, Inc. Web site](#).

The following is also available:

- Heart Failure Society of America. Pocket guide. HFSA 2006 comprehensive heart failure practice guideline.

Electronic copies: Not available at this time.

Print copies: Available from the Heart Failure Society of America, Inc., Court International - Suite 240 South, 2550 University Avenue West, Saint Paul, Minnesota 55114; Phone: (651) 642-1633

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on July 31, 2006. The information was verified by the guideline developer on August 10, 2006. This summary was updated by ECRI Institute on July 12, 2007 following the U.S. Food and Drug Administration (FDA) advisory on Troponin-1 Immunoassay.

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