



## Complete Summary

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### GUIDELINE TITLE

Heart failure.

### BIBLIOGRAPHIC SOURCE(S)

American Medical Directors Association (AMDA). Heart failure. Columbia (MD): American Medical Directors Association (AMDA); 2002. 18 p. [31 references]

### GUIDELINE STATUS

This is the current release of the guideline. This guideline updates a previous version: Columbia (MD): The American Medical Directors Association (AMDA); 1996. 12 p.

## COMPLETE SUMMARY CONTENT

SCOPE  
METHODOLOGY - including Rating Scheme and Cost Analysis  
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## SCOPE

### DISEASE/CONDITION(S)

Heart failure

### GUIDELINE CATEGORY

Diagnosis  
Evaluation  
Management  
Prevention  
Screening  
Treatment

## **CLINICAL SPECIALTY**

Geriatrics

## **INTENDED USERS**

Advanced Practice Nurses  
Allied Health Personnel  
Dietitians  
Health Care Providers  
Nurses  
Pharmacists  
Physicians  
Social Workers

## **GUIDELINE OBJECTIVE(S)**

- To improve the quality of care delivered to patients in long-term care facilities
- To guide the recognition, assessment, and management of patients with heart failure who reside in nursing facilities

## **TARGET POPULATION**

Elderly residents of long-term care facilities

## **INTERVENTIONS AND PRACTICES CONSIDERED**

### **Screening/Diagnosis/Evaluation**

1. Identification of patients with a history of heart failure
2. Assessment for signs, symptoms, and risk factors for heart failure
3. Initial workup (if determined appropriate) for reversible etiologies of heart failure [detailed cardiopulmonary history, physical examination, laboratory tests (complete blood count, electrolytes, thyroid stimulating hormone, blood urea nitrogen, serum creatinine, urinalysis), chest x-ray, electrocardiogram]
4. Echocardiography to determine systolic and diastolic left ventricular (LV) performance, cardiac output (ejection fraction), and pulmonary artery and ventricular filling pressures
5. Chest x-ray (as indicated) to help identify the presence of vascular congestion, infiltrates, and effusions
6. Radionuclide scanning for measurement of ejection fraction
7. Evaluation and classification of severity of heart failure

### **Management/Treatment**

1. Pharmacotherapy
  - Loop diuretics (furosemide, bumetanide, torsemide, and ethacrynic acid) to treat fluid volume overload if present, with possible addition of metolazone
  - Management of systolic dysfunction with an angiotensin-converting enzyme (ACE) inhibitor (e.g., captopril, enalapril, lisinopril, fosinopril,

quinapril, ramipril) followed by a beta blocker (e.g., carvedilol, metoprolol XL, bisoprolol,) with possible additions of digoxin and spironolactone (Note: angiotensin receptor II blockers [losartan and others] are considered as an alternative in patients intolerant of ACE inhibitors)

- Management of diastolic dysfunction with diuretics, nitrates, calcium-channel blockers, beta-blockers, angiotensin-converting enzyme inhibitors
  - Vaccinations (pneumococcal vaccine and annual influenza vaccinations)
2. Nonpharmacologic treatment as indicated
    - Psychosocial and spiritual support
    - Dietary counseling
    - Rehabilitation consultation
  3. Palliative care as appropriate
  4. Monitoring of patient's condition and response to treatment (signs and symptoms, weight, vital signs, functional performance, electrolytes, renal function, magnesium, drug levels where indicated)

## **MAJOR OUTCOMES CONSIDERED**

- Accuracy of diagnostic instruments
- Survival
- Quality of life
- Symptoms of heart failure
- Exercise tolerance and functional capacity
- Effects of medications to treat systolic dysfunction on morbidity and mortality in patients with heart failure
- Adverse effects of drug treatments
- Left ventricular function as assessed by echocardiogram and/or radionuclide exam
- Hospitalization rate

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Hand-searches of Published Literature (Primary Sources)  
Hand-searches of Published Literature (Secondary Sources)  
Searches of Electronic Databases

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

For the original guideline, the guideline developer relied on the references listed in the Agency for Health Care Policy and Research's 1994 guideline, "Heart failure: evaluation and care of patients with left-ventricular systolic dysfunction," as well as references identified via additional Medline searches, pertinent journal articles, and knowledge of current practice.

For the guideline update, MEDLINE/PubMed searches were performed.

**NUMBER OF SOURCE DOCUMENTS**

Not stated

**METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Expert Consensus

**RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

Not applicable

**METHODS USED TO ANALYZE THE EVIDENCE**

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 guideline was developed by an interdisciplinary work group using a process that combined evidence- and consensus-based thinking. The groups were composed of practitioners involved in patient care in the institutional setting. Using pertinent articles and information and a draft outline, the group worked to make a simple, user-friendly guideline that focused on application in the long term care institutional setting.

**RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

**COST ANALYSIS**

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

**METHOD OF GUIDELINE VALIDATION**

External Peer Review  
Internal Peer Review

**DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

All American Medical Directors Association (AMDA) clinical practice guidelines undergo external review. The draft guideline is sent to approximately 175+ reviewers. These reviewers include American Medical Directors Association physician members and independent physicians, specialists, and organizations that are knowledgeable of the guideline topic and the long-term care setting.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

#### I. Recognition

##### Step 1

- **Identify individuals with a history of heart failure.** Heart failure is a syndrome (a collection of signs and symptoms with various causes). Use the transfer summary and other referral data as well as the nursing facility clinical record to help identify patients with heart failure. Copies of electrocardiogram, echocardiogram, and chest x-ray reports may be particularly useful at the time the patient is transferred from the hospital to the nursing facility. Look for documentation that suggests or supports a diagnosis of coronary artery disease, hypertension, or diabetes, as well as for evidence of previous treatment of or hospitalization for heart failure.

##### Step 2

- **Identify individuals who currently have heart failure.** Physicians, midlevel practitioners, and nurses should evaluate the patient for signs and symptoms (see below) of heart failure and document the findings. They should also be aware that recognition of heart failure may be complicated in the nursing facility patient because of common comorbidities such as chronic obstructive pulmonary disease (COPD), other lung conditions, and venous insufficiency or anginal equivalents.
- Direct care staff should be trained to recognize and report a patient's decreased activity level, shortness of breath, unexplained cough, unexpected weight gain, or new or increasing lower-extremity swelling. Patients should be weighed at about the same time of day and in the same state of dress. Staff who weigh patients should know how to accurately calibrate and operate the scales.

#### **Signs that suggest heart failure include:**

- Tachycardia
- Third heart sound (S3)
- Increased jugular venous pressure
- Positive hepatojugular reflux
- Bilateral rales
- Peripheral edema not due to venous insufficiency
- Laterally displaced apical impulse
- Weight gain

### **Symptoms that suggest heart failure include:**

- Dyspnea on exertion
- Dyspnea at rest
- Orthopnea
- Paroxysmal nocturnal dyspnea
- Fatigue
- Decreased exercise tolerance
- Unexplained cough, especially at night
- Acute confusional state, delirium
- Abdominal symptoms (nausea, abdominal pain or distention)
- Decreased food intake
- Decline in functional status

### **Step 3**

- **Evaluate the patient for the presence of risk factors for heart failure.** If the patient does not have signs and symptoms but has a history of heart failure, summarize past and current assessment and treatment. Evaluate the patient's risk factors for heart failure (see below) and document the findings in the patient's medical record. If no risk factors are found, continue to review the patient at least quarterly for the emergence of risk factors.
- If the patient has risk factors, determine the effect that addressing these risk factors would have on the goals of therapy. For example, if a patient with a history of heart failure has known coronary artery disease and an advance directive that expresses a desire for palliative care, lipid-lowering agents may not be appropriate.

### **Risk factors for heart failure include:**

- Coronary artery disease (angina or myocardial infarction)
- Chronic hypertension
- Idiopathic dilated cardiomyopathy
- Valvular heart disease (e.g., mitral regurgitation, aortic stenosis)
- Other cardiomyopathy (e.g., sarcoidosis)
- Arrhythmia (e.g., atrial fibrillation)
- Anemia
- Fluid volume overload with noncardiac causes
- Thyroid disease (hypo- or hyperthyroidism)

### **Step 4**

- **Decide if a workup is appropriate.** A workup may not be indicated if the patient has a terminal or end-stage condition, if the workup would not change the management course, or if the patient would refuse treatment. Always consider the effects of the workup on the patient. If the burden of the workup is greater than the benefit of treatment, the workup may not be indicated. Also keep in mind reversible etiologies that can be treated. Reasons for not doing a workup should be carefully documented in the patient's medical record.

## II. Assessment

- The severity of heart failure can be classified symptomatically by the use of a scheme such as the New York Heart Association (NYHA) functional classification, which groups patients according to the amount of effort needed to produce heart failure symptoms.
  - **Class I.** Patients exhibit symptoms only at exertion levels similar to those of relatively healthy individuals.
  - **Class II.** Patients exhibit symptoms with ordinary exertion.
  - **Class III.** Patients exhibit symptoms with minimal exertion.
  - **Class IV.** Patients exhibit symptoms at rest.
- Reports about the effects of drug treatment for heart failure often categorize patients' responses by NYHA class rather than by age. However, practitioners should be aware that because of age-related changes in pharmacokinetics and pharmacodynamics, an 85-year-old patient with NYHA Class IV heart failure may respond very differently to a drug than a 50-year-old patient with equally severe disease.
- In the absence of valvular disease, pericardial disease, and arrhythmia, heart failure is classified by myocardial dysfunction which may be systolic or diastolic. Left ventricular (LV) systolic dysfunction refers to reduced myocardial contractility. Diastolic dysfunction refers to decreased LV filling. Contributors to diastolic dysfunction include ventricular stiffness, a decreased rate of relaxation, and a rapid heart rate. Coronary artery disease and hypertension are the most common causes of both types of LV dysfunction. LV function can be measured by imaging studies.
- If a workup is determined to be appropriate, initial studies (see "Initial work-up for reversible etiologies of heart failure" below) should be done to look for reversible etiologies (see "Reversible etiologies of heart failure" below). Patients with heart failure should be considered for an imaging study (echocardiogram, radionuclide scan) if one has not been performed, unless the study is precluded by an advance directive or by the patient's or advocate's informed decision to decline the study.
- *Echocardiography.* Two-dimensional and Doppler echocardiography can determine systolic and diastolic LV performance, cardiac output (ejection fraction), and pulmonary artery and ventricular filling pressures. Echocardiography also can identify clinically important valvular disease. Although the procedure is simple and noninvasive, it may be inadequate in 8 percent to 10 percent of cases and it is difficult to interpret in patients with lung disease.
- *Radionuclide scanning.* Radionuclide scans provide more precise measurement of ejection fraction but require venous injection of radioactive material.
- *Chest x-ray.* The weak negative correlation between cardiothoracic ratio and ejection fraction does not permit accurate determination of systolic function in individual patients with heart failure. For this reason a chest x-ray is not useful for determining type of left ventricular dysfunction, although it may be useful to identify the presence of vascular congestion, infiltrates, and effusions.
- Initial work-up for reversible etiologies of heart failure:
  - Detailed cardiopulmonary history

- Physical examination
- Laboratory tests (complete blood count, electrolytes, thyroid stimulating hormone, blood urea nitrogen [BUN], serum creatinine, urinalysis)
- Chest x-ray
- Electrocardiogram
- Reversible etiologies of heart failure:
  - Arrhythmia (e.g., atrial fibrillation)
  - Pulmonary embolism
  - Accelerated or malignant hypertension
  - Thyroid disease (hypo- or hyperthyroidism)
  - Valvular heart disease
  - Unstable angina
  - High output failure
  - Renal failure
  - Medication-induced problems
  - High salt intake
  - Severe anemia

### Step 5

- **Decide if interventions for risk factors or treatment for reversible etiologies are appropriate.** After conducting a detailed cardiopulmonary history, performing a careful physical examination, reviewing laboratory data, and completing or obtaining the results of an imaging study (if indicated), the next step is to determine whether interventions for risk factors or treatment for reversible etiologies are appropriate, available, and consistent with the patient's or advocate's wishes. Treatment of reversible causes of heart failure (see "Reversible etiologies of heart failure" above) and some exacerbations of chronic heart failure may require transferring the patient to the acute care setting. In all cases, the reasons for performing or not performing a workup, or for undertaking or not undertaking treatment, should be documented in the patient's medical record.

## III. Treatment

### Step 6

- **Treat the chronic underlying cardiac condition.** If treatment is acceptable to the patient or advocate, and after treatment has been initiated for reversible causes of heart failure, the next step is to address the consequences of the patient's failing heart. Specific pharmacotherapy is based on the presence or absence of fluid volume overload and the nature of the ventricular dysfunction.
- Nonpharmacologic approaches that should be considered for all patients with heart failure include psychosocial and spiritual support, a no-added-salt diet, and alcohol abstinence. If edema is present, consider restricting fluids to less than 2 liters per day. Moderate restriction of calories and saturated fat may be helpful if obesity is

present. Generally, however, dietary restrictions should be ordered with care on an individual basis, taking quality-of-life considerations into account. There is no convincing evidence that vitamin C and flavonoids are helpful in heart failure and only suggestive evidence that vitamin E, coenzyme Q, and thiamine are helpful.

- Patients with heart failure who develop bacterial or viral respiratory infections may decompensate; for this reason, all patients with heart failure should be offered pneumococcal vaccine and annual influenza vaccinations.

### Step 7

- **Treat fluid volume overload if present.** Retention of salt and water causes fluid volume overload. Patients with fluid volume overload may have orthopnea, paroxysmal nocturnal dyspnea, sleep disturbance, peripheral edema, rales, and congestion on chest x-ray.
- Start the patient with fluid volume overload on a loop diuretic immediately. Diuretics improve symptoms and quality of life but do not necessarily prolong life. However, all available loop diuretics have altered pharmacodynamics and diminished effectiveness in patients with severe heart failure. These agents also have profound effects on electrolyte balance and renal function.
- Consider initiating loop diuretic therapy with oral furosemide 20 mg to 40 mg once daily. Goals of titration should include maintaining renal perfusion, avoiding symptomatic hypotension, and achieving a stable weight. In the patient with more severe heart failure, giving metolazone 2.5 mg to 5 mg 30 minutes before furosemide may improve diuresis. However, this drug combination may increase the potential for hypokalemia and hypomagnesemia.
- Other available loop diuretics include bumetanide, torsemide, and ethacrynic acid. Each of these agents has somewhat different pharmacologic properties. The choice of agent is based on an individual patient's condition and the expertise and experience of the attending physician or consultant.

### Step 8

- **Treat systolic dysfunction.** The patient with heart failure caused by left ventricular systolic dysfunction who has fluid volume overload should receive a loop diuretic. After fluid volume overload has been corrected (or if the patient does not have fluid volume overload), start an angiotensin-converting enzyme inhibitor followed by a beta blocker. Digoxin may be added to improve symptoms and enhance quality of life. Spironolactone may be added cautiously in the patient with stable NYHA Class III–IV heart failure who needs and wants all interventions that have been demonstrated to decrease mortality.

Refer to the original guideline document for a discussion of medications used to treat systolic dysfunction.

### Step 9

- **Treat diastolic dysfunction.** Medication options for treating diastolic dysfunction include:
  - Diuretics
  - Nitrates
  - Calcium-channel blockers
  - Beta-blockers
  - Angiotensin-converting enzyme (ACE) inhibitors

The goals of intervention are to decrease fluid volume overload and treat elevated filling pressures. Many patients with heart failure caused by diastolic dysfunction have underlying hypertension, leading many experts to believe that blood pressure control may be the single most important treatment strategy for diastolic dysfunction.

### Step 10

- **Initiate other appropriate interventions as indicated.** Other interventions by the interdisciplinary team may be helpful. For example, social services intervention is indicated if an advance directive needs to be drawn up or if family counseling would be helpful. Dietary counseling is critical to assessing the need for or extent of dietary salt limitations. A rehabilitation consultation may be indicated to develop an individualized restorative exercise program. It is also important that patients, families, and nursing staff receive education about the dietary needs of patients with heart failure and the side effects of medications used to treat heart failure, as well as about safety issues and environmental modifications.
- If prolonging life or decreasing exacerbations that lead to frequent hospitalizations is a goal of therapy, the consistent and aggressive application of the interventions outlined in this guideline and elsewhere is appropriate. However, for patients at or near the end of life, it may be appropriate to switch to a palliative or comfort mode of care in which maintaining quality of life is the primary care goal. In such cases, each intervention for heart failure must be assessed for the comfort it provides and the intrusiveness and potential discomfort it entails.
- When the patient, family or advocate, and care team decide that palliative care is most appropriate, symptom relief and psychosocial and spiritual considerations become paramount. Management of end-of-life symptoms such as dyspnea, dry mouth, nausea, fatigue, pain, apprehension, and restlessness should be the main focus of the patient's care plan. Consultations with hospice or palliative care experts may be considered. Diuretics may be indicated as a palliative measure to address symptoms associated with fluid volume overload.

### Steps 11-12

- **Monitor the patient's condition and response to treatment.** Ongoing monitoring of the patient's condition and response to treatment is imperative (see "Components of monitoring heart failure patients" below). Assess fluid volume status by monitoring weight at

least three times a week (more frequently if the patient's condition is unstable).

- Monitor levels of electrolytes, blood urea nitrogen, and creatinine in patients receiving pharmacologic therapy. Repeat these measurements as frequently as necessary, depending on the patient's condition and the combination of drugs the patient is receiving.
- Assessment by nursing staff of the patient's general functional status—including both activities of daily living and participation in recreational activities—is an important element of monitoring in the nursing facility patient with heart failure.
- If a patient is not achieving the explicit goals set by the interdisciplinary team, document the reasons in the patient's medical record. Also document how the patient's care plan will be modified in an effort to reach the stated goals. If it is determined that the goals cannot be achieved, document the reasons for this and set more realistic goals. Also, if consultation with a cardiologist or center specializing in heart failure is indicated, make the referral.
- Components of monitoring heart failure patients include:
  - Signs and symptoms
  - Weight
  - Vital signs
  - Functional performance
  - Electrolytes, renal function, and magnesium, where indicated
  - Drug levels where indicated (e.g., digoxin)

## **CLINICAL ALGORITHM(S)**

A clinical algorithm is provided that summarizes the steps involved in addressing heart failure, including recognition, diagnosis, management, and monitoring the condition.

## **EVIDENCE SUPPORTING THE RECOMMENDATIONS**

### **TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

The guideline was developed by an interdisciplinary work group using a process that combined evidence- and consensus-based thinking. Scientific research in the long-term care setting is scarce, and the majority of recommendations are based on the expert opinion of practitioners in the field.

The evidence base reflects the fact that the guideline was developed from the template established by the Agency for Healthcare Research and Quality (AHRQ) (formerly the Agency for Health Care Policy and Research) on heart failure in patients with left ventricular dysfunction. All the published evidence subsequent to the AHRQ guideline, such as the American College of Physicians guideline, the American College of Cardiology/American Heart Association Heart Failure guidelines, and the Heart Failure Society of America guidelines were also considered.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

- Accurate assessment and effective treatment of heart failure
- Improved survival, quality of life and functional status
- Decreased symptoms and reduced need for hospitalization

### POTENTIAL HARMS

- Adverse effects of angiotensin-converting enzyme (ACE) inhibitors for the treatment of volume overload include hypotension, hyperkalemia, hyponatremia, renal failure, angioedema and cough. ACE inhibitors also interact with drugs such as lithium and potassium-sparing agents and increase the potential for toxicity and electrolyte disturbance.
- Adverse effects of beta-blockers include symptomatic bradycardia or heart block, symptomatic hypotension, profound fatigue, increased shortness of breath, and exacerbation of heart failure.
- The combination of metolazone and furosemide may increase the potential for hypokalemia and hypomagnesemia.
- Hyperkalemia may occur in patients treated with spironolactone and other aldosterone antagonists. Spironolactone also blocks androgen receptors, potentially causing gynecomastia and postmenopausal bleeding.

## CONTRAINDICATIONS

### CONTRAINDICATIONS

#### **Contraindications to Use of Angiotensin-converting Enzyme (ACE) Inhibitors**

##### *Absolute contraindications:*

- Angioedema
- Known renal artery stenosis

##### *Relative contraindications:*

- Serum potassium greater than 5.5 mEq/L
- Serum creatinine greater than 3.0 mg/dl
- Systolic blood pressure less than 90 mm Hg (<100 mm Hg when patient is symptomatic)

#### **Contraindications to Use of Beta-blockers**

*Absolute contraindications:* Beta-blockers should not be started in nursing facility patients who have acutely decompensated heart failure as evidenced by any of the following:

- Significant fluid retention requiring intensive diuretic therapy

- Need for intravenous therapy for heart failure
- Requirement for hospitalization for heart failure
- Reactive airways disease (asthma)—this is unrelated to "acutely decompensated heart failure, and should be a separate contraindication
- Symptomatic bradycardia or advanced heart block without a pacemaker

*Relative contraindications:*

- Hypotension
- Peripheral vascular disease
- Chronic obstructive pulmonary disease (COPD)

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

- This clinical practice guideline is provided for discussion and educational purposes only and should not be used or in any way relied upon without consultation with and supervision of a qualified physician based on the case history and medical condition of a particular patient. The American Medical Directors Association, its heirs, executors, administrators, successors, and assigns hereby disclaim any and all liability for damages of whatever kind resulting from the use, negligent or otherwise, of this clinical practice guideline.
- Despite the prevalence of morbidity and mortality related to diastolic dysfunction, no results are available from prospective, randomized, blinded, multicenter trials to guide treatment decisions. Pharmacologic options for treating diastolic dysfunction are listed in the guideline; however, currently there are no widely accepted evidence- or consensus-based guidelines for treating this condition.
- Guidelines and their revisions are meant to be used in consultation with the members of the interdisciplinary care team and in a manner appropriate to the population and practice of a particular facility. Implementation of guidelines will be affected by resources available in the facility, including staffing, and will require the involvement of all those in the facility who have a role in patient care. In addition, those responsible for implementation should identify operational areas within the facility that would be affected by the guideline's implementation and should seek input from staff and managers in those areas on the development of other relevant facility-specific protocols, policies, and procedures.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

The implementation of this clinical practice guideline (CPG) is outlined in four phases. Each phase presents a series of steps, which should be carried out in the process of implementing the practices presented in this guideline. Each phase is summarized below.

#### I. **Recognition**

- Define the area of improvement and determine if there is a CPG available for the defined area. Then evaluate the pertinence and feasibility of implementing the CPG.
- II. **Assessment**
- Define the functions necessary for implementation and then educate and train staff. Assess and document performance and outcome indicators and then develop a system to measure outcomes.
- III. **Implementation**
- Identify and document how each step of the CPG will be carried out and develop an implementation timetable.
  - Identify individual responsible for each step of the CPG.
  - Identify support systems that impact the direct care.
  - Educate and train appropriate individuals in specific CPG implementation and then implement the CPG.
- IV. **Monitoring**
- Evaluate performance based on relevant indicators and identify areas for improvement.
  - Evaluate the predefined performance measures and obtain and provide feedback.

Appendix I of the original guideline document offers suggestions for general process indicators as well as clinical process and outcome indicators specific to measuring facility performance in heart failure management.

## **IMPLEMENTATION TOOLS**

Clinical Algorithm

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**

Getting Better  
Living with Illness

### **IOM DOMAIN**

Effectiveness  
Patient-centeredness

## **IDENTIFYING INFORMATION AND AVAILABILITY**

### **BIBLIOGRAPHIC SOURCE(S)**

American Medical Directors Association (AMDA). Heart failure. Columbia (MD): American Medical Directors Association (AMDA); 2002. 18 p. [31 references]

## **ADAPTATION**

The guideline is based on the U.S. Agency for Health Care Policy and Research's 1994 guideline: Heart failure: evaluation and care of patients with left-ventricular systolic dysfunction. Rockville (MD): U.S. Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research; 1994 Jun. 122 p. (Clinical practice guideline; no. 11). Recommendations are adapted to focus on application in the long-term care institutional setting.

## **DATE RELEASED**

1996 (revised 2002; reviewed 2007)

## **GUIDELINE DEVELOPER(S)**

American Medical Directors Association - Professional Association

## **GUIDELINE DEVELOPER COMMENT**

Organizational participants included:

- American Association of Homes and Services for the Aging
- American College of Health Care Administrators
- American Health Care Association
- American Society of Consultant Pharmacists
- National Association of Directors of Nursing Administration in Long-Term Care
- National Association of Geriatric Nursing Assistants
- National Conference of Gerontological Nurse Practitioners
- Senior Care Services-Center For Health Information

## **SOURCE(S) OF FUNDING**

Corporate supporters of this guideline include Aventis Pharmaceuticals, Forest Laboratories, Inc, GlaxoSmithKline, LifeScan, Novartis Pharmaceuticals, Pfizer, Inc, Pharmacia Corporation, and Organon, Inc.

## **GUIDELINE COMMITTEE**

Steering Committee

## **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

*Contributors to the Update:* \*Larry W. Lawhorne, MD, CMD CPG Project Chair; \*Steven Levenson, MD, CMD Chair Clinical Practice Committee; \*Donna Brickley, RN; \*Lisa Cantrell, RN, C; \*Charles Cefalu, MD, MS; Woody Eisenberg, MD, FACP; Jesus Evangelista, MD, CMD; \*Joseph Gruber, RPh, FASCP, CGP; \*Susan M. Levy, MD, CMD; \*Betty MacLaughlin-Fransden, RN, NHA; Harlan Martin, RPh, CCP, FASCP; \*Geri Mendelson, RN, CNAA, MEd, NHA; \*Evvie F. Munley; \*Jonathan Musher, MD, CMD; \*Judith A. Passerini, CNHA, CAS, Fellow; \*Mary Pat Rapp, MSN, RN; \*Barbara Resnick, PhD, CRNP; \*William Simonson, PharmD, FASCP, CGP; John Voytas, MD

*\*Steering Committee Member*

*Original Panel Members:* Jerry Johnson, MD, Chair; Manju Beier, PharmD; Ellie Cohn, RN, MS, CRRN; Janet George, RN, Facilitator; Patrick W. Irvine, MD, CMD; Steven Levenson, MD, CMD; Tim Mislán, BSN, MS; Joyce Smith, RN; Ann Wells, RN

*AMDA Staff:* Jacqueline Vance, RNC, CPG Project Manger

## **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Not stated

## **GUIDELINE STATUS**

This is the current release of the guideline. This guideline updates a previous version: Columbia (MD): The American Medical Directors Association (AMDA); 1996. 12 p.

## **GUIDELINE AVAILABILITY**

Electronic copies: Not available at this time.

Print copies: Available from the American Medical Directors Association, 10480 Little Patuxent Pkwy, Suite 760, Columbia, MD 21044. Telephone: (800) 876-2632 or (410) 740-9743; Fax (410) 740-4572. Web site: [www.amda.com](http://www.amda.com).

## **AVAILABILITY OF COMPANION DOCUMENTS**

The following companion document is available:

- Guideline implementation: clinical practice guidelines. Columbia, MD: American Medical Directors Association, 1998, 28 p.

Electronic copies: Not available at this time.

Print and CDROM copies: Available from the American Medical Directors Association, 10480 Little Patuxent Pkwy, Suite 760, Columbia, MD 21044. Telephone: (800) 876-2632 or (410) 740-9743; Fax (410) 740-4572. Web site: [www.amda.com](http://www.amda.com).

The guideline developers recommend that the guideline should be used in conjunction with information recorded in the "Minimum Data Set and relevant Resident Assessment Protocols (RAPs)".

These tools are available from the U.S. Centers for Medicare & Medicaid Services (CMS) (formerly the Health Care Financing Administration [HCFA]), 7500 Security Boulevard, Baltimore, Maryland 21244; Telephone: (410) 786-3000; Web site: [www.cms.hhs.gov](http://www.cms.hhs.gov).

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This summary was completed by ECRI on July 12, 1999. The information was verified by the American Medical Directors Association as of August 8, 1999. This summary was updated on December 3, 2002. The information was verified by the guideline developer on December 10, 2002.

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