

**Congestive Heart Failure Management Guidelines****DEPARTMENT: Utilization Management Physician Practice Guidelines****EFFECTIVE DATE: 02/06****DATE LAST REVIEWED: 11/21****SOURCES:** Class 1 and Class IIA recommendations from ACC/AHA Practice Guidelines**RECOMMENDED GUIDELINES:**

Encourage heart failure patients to see a cardiologist. Key indicators of effective management of patients with congestive heart failure and a reduced ejection fraction:

- 1) Initial work up should include:
  - a) Initial laboratory evaluation of patients presenting with HF should include:
    - i) Complete blood count, urinalysis, serum electrolytes (including calcium and magnesium), blood urea nitrogen, serum creatinine, glucose, fasting lipid profile, liver function tests, and thyroid-stimulating hormone.
    - ii) Screening for hemochromatosis or HIV is reasonable in selected patients who present with HF.
    - iii) Diagnostic tests for rheumatologic diseases, amyloidosis, or pheochromocytoma are reasonable in patients presenting with HF in whom there is a clinical suspicion of these diseases.
    - iv) 12-lead electrocardiogram should be performed initially on all patients presenting with HF.
    - v) Patients with suspected or new-onset HF, or those presenting with acute decompensated HF, should undergo a chest x-ray to assess heart size and pulmonary congestion and to detect alternative cardiac, pulmonary, and other diseases that may cause or contribute to the patient's symptoms.
    - vi) A 2-dimensional echocardiogram with Doppler should be performed during initial evaluation of patients presenting with HF to assess ventricular function, size, wall thickness, wall motion, and valve function.
    - vii) Other Imaging Studies
    - viii) Noninvasive imaging to detect myocardial ischemia and viability is reasonable in patients presenting with de novo HF, who have known coronary artery disease (CAD) and no angina, unless the patient is not eligible for revascularization of any kind.
    - ix) Viability assessment is reasonable in select situations when planning revascularization in HF patients with CAD.
    - x) Radionuclide ventriculography or magnetic resonance imaging can be useful to assess left ventricular ejection fraction (LVEF) and volume when echocardiography is inadequate.
    - xi) Magnetic resonance imaging is reasonable when assessing myocardial infiltrative processes or scar burden.

- b) Invasive Monitoring
  - i) Invasive hemodynamic monitoring with a pulmonary artery catheter should be performed to guide therapy in patients who have respiratory distress or clinical evidence of impaired perfusion in whom the adequacy or excess of intracardiac filling pressures cannot be determined from clinical assessment.
  - ii) Invasive hemodynamic monitoring can be useful for carefully selected patients with acute HF who have persistent symptoms despite empiric adjustment of standard therapies and
    - (1) whose fluid status, perfusion, or systemic or pulmonary vascular resistance is uncertain;
    - (2) whose systolic pressure remains low, or is associated with symptoms, despite initial therapy;
    - (3) whose renal function is worsening with therapy;
    - (4) who require parenteral vasoactive agents; or
    - (5) who may need consideration for mechanical circulatory support or transplantation.
  - iii) When ischemia may be contributing to HF, coronary arteriography is reasonable for patients eligible for revascularization.
  - iv) Endomyocardial biopsy can be useful in patients presenting with HF when a specific diagnosis is suspected that would influence therapy.
- 2) Long Term Therapy:
  - a) Beta Blockers
    - i) Use of 1 of the 3 beta blockers proven to reduce mortality (e.g., bisoprolol, carvedilol, and sustained-release metoprolol succinate) is recommended for all patients with current or prior symptoms of heart failure with a reduced ejection fraction (HFrEF), unless contraindicated, to reduce morbidity and mortality.
  - b) ACE/ARB
    - i) ACE inhibitors are recommended in patients with HFrEF and current or prior symptoms, unless contraindicated, to reduce morbidity and mortality.
    - ii) ARBs are recommended in patients with HFrEF with current or prior symptoms who are ACE inhibitor intolerant or already taking an ARB, unless contraindicated, to reduce morbidity and mortality
  - c) Hydralazine and isosorbide dinitrate
    - i) The combination of hydralazine and isosorbide dinitrate is recommended to reduce morbidity and mortality for patients self-described as African Americans with NYHA class III–IV HFrEF receiving optimal therapy with ACE inhibitors and beta blockers, unless contraindicated.
    - ii) A combination of hydralazine and isosorbide dinitrate can be useful to reduce morbidity or mortality in patients with current or prior symptomatic HFrEF who cannot be given an ACE inhibitor or ARB because of drug intolerance, hypotension, or renal insufficiency, unless contraindicated
  - d) Aldosterone receptor antagonists
    - i) Aldosterone receptor antagonists (or mineralocorticoid receptor antagonists) are recommended in patients with NYHA class II–IV HF and who have LVEF of 35% or less, unless contraindicated, to reduce morbidity and mortality.
    - ii) Patients with NYHA class II HF should have a history of prior cardiovascular hospitalization or elevated plasma natriuretic peptide levels to be considered for aldosterone receptor antagonists.
    - iii) Creatinine should be 2.5 mg/dL or less in men or 2.0 mg/dL or less in women (or estimated glomerular filtration rate >30 mL/min/1.73 m<sup>2</sup>), and potassium should be less than 5.0 mEq/L. Careful monitoring of potassium, renal function, and diuretic dosing should be performed at initiation and closely followed thereafter to minimize risk of hyperkalemia and renal insufficiency.
    - iv) Aldosterone receptor antagonists are recommended to reduce morbidity and mortality following an acute MI in patients who have LVEF of 40% or less who develop symptoms of HF or have a history of diabetes mellitus, unless contraindicated.

- e) Angiotensin Receptor-Nepriylsin Inhibitor (ARN); (Entresto) should be used to further reduce morbidity and mortality in patients with NYHA Class II-IV HF and EF  $\leq$  40%. This is in place of ACE/ARB.
- 3) Other Guidelines:
- a) Documented blood pressure readings according to current AHA/ACC guidelines.
  - b) Recommend that these cardiovascular risk factors are assessed and documented in the medical record.
  - c) Cardiovascular risk factors include:
    - i) Hypertension
    - ii) Cigarette smoking, including cessation efforts
    - iii) Obesity (BMI  $>30$  kg/m<sup>2</sup>)
    - iv) Physical inactivity
    - v) Dyslipidemia
    - vi) Diabetes mellitus
    - vii) Chronic kidney disease
    - viii) Age ( $>55$  for men,  $>65$  for women)
    - ix) Family history of premature CVD (men age  $<55$ , women age  $<65$ )
    - x) Alcohol and illicit drug abuse
    - xi) Cardio-toxic drugs (Adriamycin, etc.)
  - d) LDL-C or lipid profile every 3 years, unless elevated. If elevated, annual LDL-C or lipid profile.
  - e) Basic metabolic panel every 12 months.
  - f) Flu vaccination within the past year unless declination documented.
  - g) Pneumococcal vaccine documentation present, at a frequency consistent with current guidelines unless declination documented.
  - h) Repeat measurement of EF and measurement of the severity of structural remodeling are useful to provide information in patients with HF who have had a significant change in clinical status; who have experienced or recovered from a clinical event; or who have received treatment that might have had a significant effect on cardiac function; or who may be candidates for device therapy.