

## Health Plan of Michigan Clinical Practice Guideline Management of Adults Chronic Heart Failure

**The following guideline recommends diagnostic evaluation, education and pharmacologic treatment and education that support effective patient self-management**

Eligible Population	Key Components	Recommendation and Level of Evidence
Adults with suspicion of left-ventricular systolic dysfunction, including heart failure	Evaluation	<p><u>Initial assessment should include:</u></p> <ul style="list-style-type: none"> <li>• Thorough history and physical examination [C] including consideration of obstructive sleep apnea</li> <li>• Chest x-ray [C]</li> <li>• 12 lead electrocardiogram [C]</li> <li>• Laboratory tests and other studies should include: CBC, serum electrolytes (including calcium, magnesium), BUN, serum creatinine, blood glucose, liver function tests, TSH, urinalysis [C]</li> <li>• Two-dimensional echocardiography with Doppler or radionuclide ventriculography [C]</li> <li>• Assessment for coronary artery disease risk factors</li> <li>• <b>Serial monitoring should include: weight, volume status, electrolytes, renal function and activity tolerance</b></li> </ul>
Adults diagnosed with left-ventricular systolic dysfunction, including heart failure	Pharmacological Management	<p><u>Drugs recommended for routine use:</u></p> <ul style="list-style-type: none"> <li>• ACE inhibitors in all patients, unless contraindicated<sup>1</sup> [A]</li> <li>• <b>Recommend beta-blockers (carvedilol, sustained-release metoprolol, bisoprolol) in all stable patients, unless contraindicated<sup>1,2</sup> [A]</b></li> </ul> <p><u>Drugs recommended for use in select patients:</u></p> <ul style="list-style-type: none"> <li>• Diuretics and <b>sodium restriction</b> for evidence of fluid retention [A]</li> <li>• Spironolactone for patients with recent or current symptoms of heart failure, normal renal function &amp; potassium concentration [B]</li> <li>• In patients who cannot tolerate ACE inhibitors due to cough or angioedema, angiotensin receptor blockers (ARBs) are recommended [A]</li> <li>• In patients who cannot tolerate ACE inhibitors or ARBs due to angioedema, hypotension or renal insufficiency, hydralazine and nitrate combination is recommended [B]</li> <li>• <b>African-American patients may be candidates for adding the combination of hydralazine and isosorbide dinitrite [A]</b></li> </ul>
	Education, counseling and risk factor modification	<p><u>Educate patient/family regarding:</u></p> <ul style="list-style-type: none"> <li>• Daily self monitoring of weight and adherence to recommended patient action plan</li> <li>• Recognition of symptoms and when to seek medical attention</li> <li>• Moderate dietary sodium restriction (e.g., 2000-2500 mg sodium/day)</li> <li>• Risk factor modification (regular <b>exercise 3 times per week</b> as tolerated [B] ; smoking cessation; control of BP, DM, lipids, etc.)</li> <li>• Avoid excessive alcohol intake, illicit drug use, and the use of NSAIDS</li> <li>• Vaccination against influenza and pneumococcal disease</li> </ul>

<sup>1</sup>Contraindications include: life-threatening adverse reactions (angioedema or anuric renal failure), pregnancy, hypotensive patients at immediate risk of cardiogenic shock, systolic blood pressure < 80 mm Hg, serum creatinine >3 mg/dL, bilateral renal artery stenosis, or serum potassium > 5.5 mmol/L

<sup>2</sup>Contraindications include: patients with current or recent fluid retention history, unstable or poorly controlled reactive airway disease, symptomatic bradycardia or advanced heart block (unless treated with a pacemaker), or recent treatment with an intravenous positive inotropic agent.

**Levels of Evidence for the most significant recommendations:** A=randomized controlled trials; B=controlled trials, no randomization; C=observational studies; D=opinion of expert panel

This guideline represents core management steps. It is based on the ACC/AHA 2005 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult: A Report of the American College of Cardiology/American Heart Association Task Force on Practice guidelines (www.acc.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.