

SELF-MANAGEMENT WITH MAWDS

Self-management is key to heart failure treatment. Teach Intermountain's MAWDS mnemonic to help promote compliance with these important self-care steps:

MEDICATION

"Take your medicines"

Make sure your patients understand the importance of medications in their heart failure management. Tell them which medications they are taking and why. Most importantly, make sure they understand the necessity of taking their medications every day, even when they are feeling well.



ACTIVITY

"Stay active each day"

Many patients with heart failure are afraid to be active. For others, it just seems like too much of an effort. Encourage your patients to participate in some form of physical activity every day. Participation in a supervised cardiac rehabilitation program is a good way to help patients overcome their fears and understand their limits.



WEIGHT

"Weigh yourself each day"

It is critical that your patients understand the importance of weighing themselves daily. Patients will be more likely to comply with daily weighing if they understand that you are concerned about fluid retention as it relates to heart failure. Patients should notify their provider when they gain more than 2 pounds in one day or 5 pounds from their usual/target weight.



DIET

"Follow your diet"

A good diet — especially sodium restriction — is critical to heart failure management. Helping patients understand how to restrict their sodium and learn other important diet elements can be time consuming. A referral to a registered dietitian is recommended for most patients.



SYMPTOMS

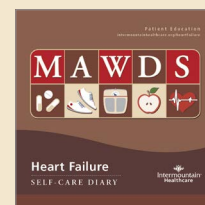
"Recognize your symptoms"

Make sure your patients know how to recognize the signs and symptoms of heart failure, and tell them what you want them to do when they experience them. The MAWDS Self-Care Diary and Living with Heart Failure booklets described at right provide an action plan to guide patients.



MAWDS Self-Care Diary:

Encourage your patients to use the MAWDS Self-Care Diary to record their daily weight and symptoms, and keep track of their medications and appointments. Reviewing the diary at every office visit promotes a partnership between you and your patient, and may help you better coordinate with other physicians involved in the patient's care — thereby improving treatment outcomes and quality of life.

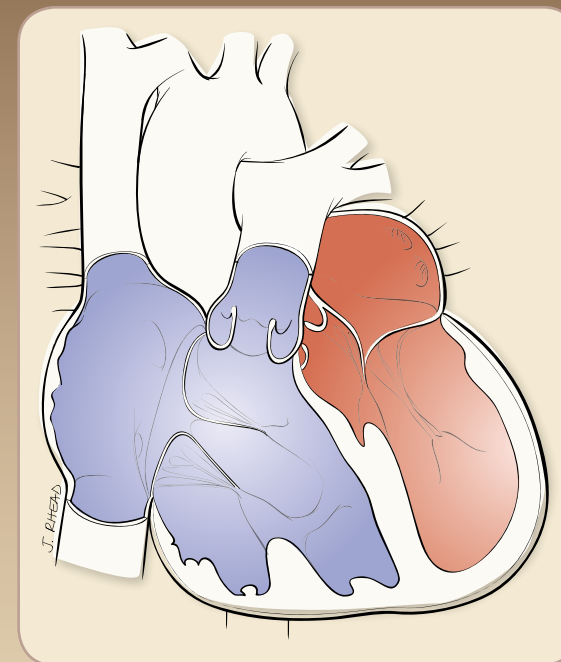
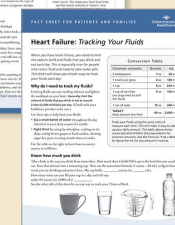


If your patient smokes, provide resources to help them quit. Intermountain provides a smoking cessation booklet for this purpose.



Other patient education resources:

Intermountain also provides a Living with Heart Failure booklet, Heart Failure and Heart Failure Fluid Tracker fact sheets, and a Managing Heart Failure DVD for patients. View and order these and other resources from iprintstore.org.



Intermountain
Healthcare

Quick Reference for
Heart Failure
2016 Update

MANAGEMENT AND DRUG
RECOMMENDATIONS

HEART FAILURE AND TRANSPLANT PROGRAM

PROVIDER SUPPORT HOTLINE and
CONSULTATION CLINIC:

PHONE (801) 507-4000

FAX (801) 507-4811

intermountainheartinstitute.org/heartfailure
or use the referral form in
Clinical Workstation (CW) hot text

FOR MORE INFORMATION

Intermountain heart failure patient
education materials:

- Clinicians can view and order materials from iprintstore.org
- Send patients to intermountainhealthcare.org/heartfailure

Other helpful websites:

- Heart Failure Society of America (HFSA)
 - Provider: hfsa.org
 - Patient: aboutHF.org
- American College of Cardiology: acc.org
- American Association of Heart Failure Nurses
 - Provider: aahfn.org
 - Patient: aahfnpatienteducation.com
- American Heart Association: heart.org

DRUG RECOMMENDATIONS for LVEF <40%



	ACE Inhibitors (ACE-I)	ARBs (if ACE-I intolerant)	If ACE-I and ARB intolerant	BETA BLOCKERS	DIGOXIN	ALDOSTERONE ANTAGONISTS ‡	ARNI **	IVABRADINE
Medication Choices	<ul style="list-style-type: none"> lisinopril (Prinivil, Zestril): Start at 2.5–5 mg daily; target 20 mg daily; max 40 mg daily enalapril (Vasotec): Start at 2.5 mg 2x daily; target 10 mg 2x daily; max 20 mg 2x daily captopril (Capoten): Start at 6.25 mg 3x daily; target/max 50 mg 3x daily quinapril (Accupril): Start at 5 mg 2x daily; target/max 20 mg 2x daily trandolapril (Mavik): Start at 1 mg daily; target/max 4 mg daily* ramipril (Altace): Start at 1.25–2.5 mg daily; target/max 10 mg daily* <p>*FDA-approved for post-MI — Altace for left ventricular (LV) dysfunction, Mavik for LV dysfunction or heart failure.</p>	<ul style="list-style-type: none"> valsartan (Diovan): Start at 20–40 mg 2x daily; target/max 160 mg 2x daily candesartan (Atacand): Start at 4–8 mg daily; target/max 32 mg daily losartan (Cozaar): Start at 12.5–25 mg daily; target/max 150 mg daily† <p>† Not FDA-approved for heart failure.</p>	<ul style="list-style-type: none"> isosorbide dinitrate (Isordil, Sorbitrate): Start at 25–50 mg, 3 to 4x daily; target/max 120 mg daily† <p>AND</p> <ul style="list-style-type: none"> hydralazine HCl (Apresoline): Start at 25–50 mg, 3 to 4x daily; target 75 mg 4x daily; max dose 300 mg daily <p>OR</p> <ul style="list-style-type: none"> isosorbide dinitrate/hydralazine HCl combination (BiDiL): Start at 1 tablet (20 mg / 37.5 mg) 3x daily; target/max 2 tablets 3x daily isosorbide mononitrate (Imdur): Start at 30 mg daily; max 240 mg daily† <p>† Not FDA-approved for heart failure.</p>	<ul style="list-style-type: none"> carvedilol (Coreg): Start at 3.125 mg 2x daily; double dose every 2 weeks until at target dose; target for <85 kg = 25 mg 2x daily; target for ≥85 kg = 50 mg 2x daily carvedilol CR (Coreg CR): Start at 10 mg daily; target/max 80 mg daily metoprolol succinate (Toprol XL): Start at 12.5 mg daily (if NYHA III) and 25 mg daily (if NYHA II); double dose every 2 weeks daily until at target dose; target/max 200 mg daily bisoprolol (Zebeta): Start at 1.25 mg daily; target/max 10 mg daily † <p>† Not FDA-approved for heart failure.</p>	<ul style="list-style-type: none"> digoxin (Lanoxin): Start at 0.125 mg daily, depending on lean body mass, renal function, and concomitant medications 	<ul style="list-style-type: none"> spironolactone (Aldactone): Start at 12.5–25 mg daily; target 25 mg daily; max 50 mg daily § eplerenone (Inspra): Start at 25 mg daily; target/max 50 mg daily §¶ <p>‡ Aldosterone antagonists are approved for patients with: –LVEF ≤ 35%, NYHA Class II–IV –LVEF ≤ 40% post acute MI § Prescribe only if K+ < 5.0 mEq/dL, creatinine is < 2.5 mg/dL in men or < 2.0 mg/dL in women, or estimated GFR > 30 mL/min/1.73 m². ¶ FDA-approved for treatment of heart failure following acute MI.</p>	<ul style="list-style-type: none"> sacubitril/valsartan (Entresto): Discontinue ACE at least 36 hours prior to initiation of an ARNI <p>If NOT currently taking an ACE or ARB (or taking low doses): Start at 24 mg / 26 mg 2x daily; target 97 mg / 103 mg 2x daily</p> <p>If taking standard dose ACE or ARB: Start at 49 mg / 51 mg 2x daily; target 97 mg / 103 mg 2x daily</p> <p>Double dose every 2 to 4 weeks to target dose, as tolerated</p> <p>** Recommended in place of ACE or ARB in patients with chronic symptomatic HFrEF NYHA class II or class III</p>	<ul style="list-style-type: none"> ivabradine (Corlanor): Titrate beta-blocker therapy to target doses as tolerated (unless contraindicated) prior to initiation of ivabradine <p>Start at 5 mg 2x daily with meals (unless the patient has conduction defects or bradycardia that could lead to hemodynamic compromise)</p> <p>Adjust dose after 2 weeks based on resting heart rate (HR): > 60 bpm: Increase dose by 2.5 mg 2x daily 50–60 bpm: Continue current dose < 50 bpm: Decrease dose by 2.5 mg twice daily (discontinue therapy if current dose is 2.5 mg 2x daily)</p> <p>Assess resting HR prior to initiation and assess cardiac rhythm and HR 1 to 2 weeks after initiation or dosage adjustments and regularly thereafter.</p>
Labs and other notes:	<ul style="list-style-type: none"> Obtain BMP to check K+ and creatinine. If K+ > 5.0, decrease K+ supplementation, aldosterone antagonists, or modify target dose of ACE-I. Use ACE-I with caution in patients with renal impairment (creatinine > 3.0). 		<ul style="list-style-type: none"> Combination isosorbide dinitrate and hydralazine is recommended for African Americans with persistent symptoms on ACE-I and beta blocker therapy. 	<ul style="list-style-type: none"> Before starting or titrating beta blockers, ensure patient is euvolemic (with HR > 55 bpm and systolic BP > 90) and hasn't recently required pressors/inotrope therapy. Educate about initial side effects (fatigue, hypervolemia). 	<ul style="list-style-type: none"> Consider adding digoxin for continued symptoms (NYHA Class III–IV) despite optimum medical therapy. Monitor: Adjust dose to keep serum digoxin < 1.0 ng/mL. 	<ul style="list-style-type: none"> Consider reducing/stopping potassium supplements. Monitor serum K+ 3 days after starting therapy, at 1 week, then monthly for the first 3 months, and with changes in renal function. 	<ul style="list-style-type: none"> Obtain BMP to check K+ and creatinine. If K+ > 5.0, decrease K+ supplementation, aldosterone antagonists, or modify target dose of ARNI. Use ARNI with caution in patients with renal impairment (eGFR < 30 mL/min/1.73 m² or creatinine > 3.0). 	<ul style="list-style-type: none"> Indicated in patients with stable, symptomatic chronic heart failure in order to reduce hospitalization for worsening heart failure by slowing the patient's HR. Not indicated in acute decompensated heart failure. Monitor for drug interactions (CYP3A4 inducers and inhibitors).

Heart failure? Perform diagnostic work-up, including measuring ventricular function:

- Echocardiogram (or other diagnostic test to measure LVEF)
- Vital signs and pulse oximetry
- 12-lead EKG
- Blood work (CMP, CBC, BNP, lipid panel, TSH, and ferritin)
- Urinalysis
- Chest x-ray

Establish etiology: Assess for coronary artery disease.

ACE Inhibitors: (ACE-I/ARB/ARNI) if LVEF < 40%. See Drug Recommendations at left for medication choices and recommended doses.

Reassess: Adjust ACE-I dose upwards and diurese to euvolemia (e.g., decrease ACE-I for low BP, increase diuretic for increased volume).

Teach patient self-management (MAWDS): Use MAWDS self-care diary and other patient education tools (see back of pocket guide).

Beta-blocker initiation: Begin once patient is euvolemic for LVEF < 40%. See table at left for beta blocker guidelines.

Educate the patient about the course of heart failure and possible future need for devices, other medications, etc.

Adjust background medications as necessary (e.g., diuretics, digoxin, aldosterone, antagonists).

Titrate dose of beta blocker and ACE-I/ARB/ARNI upwards.

Plus — follow up:

- Measure LV function 3 months after maximum medical therapy is reached.
- Even if LVEF has normalized, continue beta blocker.
- If LVEF < 35%, consider ICD therapy.
- If LVEF < 35%, NYHA class II–IV, and QRS > 150 ms, consider BiViCD therapy.
- If LVEF < 25%, consider referral for specialty disease management or advanced heart failure therapies.

KEY CARE PROCESSES for HOSPITALIZED PATIENTS

If your heart failure patient is hospitalized, always follow — and document — the following care processes:

- Assess left ventricular function (LVF) before arrival, during hospitalization, or planned after discharge — or document reason for not doing this.
- Provide an ACE-I/ARB/ARNI and beta blocker at discharge to patients with LVEF < 40% (unless otherwise documented as contraindicated).
- Give smoking cessation advice/counseling to all current smokers during the hospital stay.
- Provide a hospital follow-up appointment within 7 days.
- Consider HF disease management for high-risk patients (with > 1 admission, numerous comorbidities, or lack of social/financial support).
- Provide written discharge instructions and educational materials to all patients, including information on discharge medications, activity, weight, diet, symptom management, and follow-up instructions. (See back of pocket card for information on self-management with MAWDS.)

HEART FAILURE with PRESERVED EF

The following strategies should be used to manage heart failure with preserved EF:

- Control volume overload.
- Treat hypertension.
- Control the rate of atrial fibrillation.
- Treat ischemic heart disease.
- Control obesity and diabetes.