New Drug: **Entresto (Sacubitril/Valsartan)**

**What It Is**

*Entresto* oral tablets contain sacubitril (a neprilysin inhibitor) plus valsartan (an angiotensin II receptor blocker [ARB]).¹ Sacubitril is the first in the new class of neprilysin inhibitors to be marketed for the treatment of heart failure. This article reviews *Entresto’s* mechanism of action, dosing, efficacy, safety, and place in therapy.

**How It Works**

Sacubitril inhibits neprilysin which increases levels of peptides that are normally degraded by neprilysin.¹ More of these peptides (natriuretic peptides, bradykinin, adrenomedullin) means more vasodilation and sodium loss plus less cardiac and vascular hypertrophy and remodeling. This helps to improve many of the pathophysiological abnormalities of heart failure.² In patients with heart failure, neprilysin may actually have increased activity, so blocking it with *Entresto* may provide even more favorable results to these patients.²

Valsartan selectively blocks the angiotensin II type-1 receptor and inhibits the release of angiotensin II-dependent aldosterone.¹ This action is needed in addition to sacubitril because inhibiting neprilysin is accompanied by the activation of the renin-angiotensin system, possibly because angiotensin itself may be a substrate for neprilysin.² Therefore, sacubitril will not be used alone.

This combination of valsartan and sacubitril is described as an angiotensin receptor-neprilysin inhibitor (ARNI).

**Indications**

*Entresto* is indicated to reduce the risk of cardiovascular death and hospitalization for heart failure in patients with NYHA Class II to IV chronic heart failure and reduced ejection fraction.¹

When used, this drug will be administered with other heart failure therapies, in place of an ACEI or ARB.¹

**How Supplied**

*Entresto* comes as film-coated, unscored, ovaloid-shaped tablets containing sacubitril/valsartan 24/26 mg, 49/51 mg, and 97/103 mg.¹ Note that tablets are not proportionately the same (i.e., two 24/26 mg tablets does not equal one 49/51 mg tablet). And, also be aware that in some references you’ll see the 24/26 mg tablet referred to as 50 mg, the 49/51 mg tablet as 100 mg, and the 97/103 tablet as 200 mg.

Tablets are supplied in bottles of 60 (i.e., a one-month supply) at a cost of $375 (WAC) or 180 for $1125 and blister packages of 100 for $625 (WAC). Tablets should be protected from moisture and stored in their original container.¹

**Dosage**

Starting dose for *Entresto* is 49/51 mg twice daily. The dose should be increased every two to four weeks, as tolerated, to a target dose of 97/103 mg twice daily as maintenance. A reduced starting dose of 24/26 mg twice daily should be given to patients if they have not had previous therapy with an ACEI or an ARB, been on only low-dose ACEI or ARB, have severe renal impairment (eGFR <30 mL/min/1.73m²), or have moderate hepatic impairment.¹

If a patient is switching from an ACEI to *Entresto*, they should wait 36 hours from the last dose before giving the first dose of *Entresto*. Overlapping these two medications can increase the risk of angioedema.¹

It is important to note that the 103 mg of valsartan in *Entresto’s* target dose is equivalent to 160 mg of valsartan in Diovan due to the fact that they are different salts.¹

**Adverse Effects**

The most commonly reported adverse reactions with *Entresto* (>5% and more often than
Drug Interactions

To avoid duplication of activity on the renin-angiotensin system, Entresto should not be given with ACEIs (e.g., enalapril), aliskiren in patients with diabetes, or another ARB. The combination of Entresto and ACEIs increases the risk of angioedema. For more information on the effects of combining these drugs, see our PL Detail-Document, ACEI, ARB, and Aliskiren Comparison.

Using Entresto with potassium-sparing diuretics, potassium supplements, and salt substitutes can increase serum potassium levels. Combining Entresto with NSAIDs may increase the risk of renal impairment. And, you may see an increased risk of lithium toxicity with concomitant use of lithium.

Contraindications

Entresto is contraindicated in patients with a history of angioedema with a previous ACEI or ARB, concomitant use of an ACEI, and concomitant use with aliskiren in patients with diabetes.

Precautions

Patients on Entresto should be closely monitored for signs and symptoms of angioedema and hypotension. Renal function and serum potassium levels should be monitored periodically. See our PL Chart, Lab Monitoring for Common Medications, for information on monitoring labs in patients on ARBs.

Entresto is not recommended in patients with severe hepatic impairment.

Use in Pregnancy

There is no information on the use of Entresto in lactating women and it is not recommended. Animal studies do show it is present in breast milk.

Entresto can cause fetal harm when administered to pregnant women and is not recommended. The use of drugs that act on the renin-angiotensin system, such as Entresto, during the second and third trimesters of pregnancy can reduce fetal renal function and increase fetal and neonatal morbidity and death. If a patient becomes pregnant while taking Entresto, the drug should be discontinued as soon as possible.

Manufacturer

Novartis Pharmaceuticals Corporation
East Hanover, NJ 07936-1080
www.us.novartis.com
888-669-6682

Commentary

For most patients with systolic heart failure, the standard regimen for treatment includes a beta-blocker, an angiotensin-converting enzyme inhibitor (ACEI) or an angiotensin II receptor blocker (ARB), and an aldosterone antagonist. A diuretic can be added if the patient is volume overloaded. This standard therapy has been shown to improve survival and quality of life for patients with systolic heart failure.

Entresto is a new option for the treatment of patients with systolic (i.e., low ejection fraction) heart failure. It has been shown to be effective in the treatment of systolic heart failure, preventing one more cardiovascular death or heart failure hospital admission for every 21 patients treated for two years, compared to enalapril. It has also been shown to decrease the all-cause mortality and reduce the symptoms of heart failure.

The PARADIGM-HF (Prospective comparison of ARNI with ACEI to Determine Impact on Global Mortality and morbidity in Heart Failure) trial looked at 8442 patients with NYHA class II to IV symptoms (i.e., mild to moderate) with a reduced ejection fraction (≤40%). Seventy-two percent of patients had NYHA class II heart failure. Patients had a plasma B-type natriuretic peptide (BNP) level of ≥150 pg/mL or, if they had been hospitalized for heart failure within the previous year, a BNP of ≥100 pg/mL. The average age was 64 years and approximately 22% of patients were female, 66% were white, 5% black, and 18% Asian. Patients were randomized to one of two groups, Entresto 200 mg (97/103 mg tablet) twice daily or enalapril 10 mg twice daily. Most patients were also on recommended heart failure therapy.

This trial had a run-in phase with each drug to make sure the study medications were tolerated at target doses. This allowed Entresto to be compared to the enalapril dose that has been proven to reduce mortality in heart failure patients. The run-in phase began with 10,513
patients. Just over 20% (2079 patients) withdrew from the study during this run-in phase, with 1358 patients (13% of the initial group) withdrawing due to adverse events, abnormal lab or test results, and death. These adverse effects were not included in the analysis of data for the study’s results.4,5

The primary outcome of PARADIGM-HF was a composite of death from cardiovascular causes and hospitalization for heart failure.5 At follow-up at 27 months, more patients on enalapril died or were hospitalized vs Entresto (26.5% vs 21.8%, respectively; HR 0.80 [95% CI 0.73 to 0.87]; p=<0.001).5

In the PARADIGM-HF trial, 18% of patients on Entresto vs 12% on enalapril had hypotension.1 (Note that patients with SBP <100 mmHg were not enrolled in the trial.)5 Volume or salt depletion should be corrected prior to starting Entresto or the initial dose should be lowered. If a patient experiences hypotension, consider adjusting diuretics, decreasing or stopping other antihypertensive drugs, and treating other causes of hypotension, such as hypovolemia. If the hypotension persists, reduce the dose or temporarily discontinue Entresto. It’s not usually necessary to permanently discontinue Entresto.1 Standard heart failure medications should remain at target doses. Do not reduce the doses of these meds (e.g., beta-blockers) to decrease the hypotension caused by Entresto.

A serum creatinine ≥2.5 mg/dL was reported in 5% of patients in both the Entresto and enalapril groups in the PARADIGM-HF trial.1 In patients with severe congestive heart failure, renal function is dependent on the activity of the renin-angiotensin aldosterone system (RAAS) and the use of ARBs and ACEIs has resulted in oliguria, progressive azotemia, and, rarely, severe renal failure and death. Patients on Entresto must be closely monitored for changes in their serum creatinine. If there is a clinically significant decrease in renal function, Entresto should be decreased or temporarily stopped.1

Angioedema has been reported in patients taking Entresto and is attributed to the sacubitril component. The molecular mechanism of angioedema with sacubitril is not clear; however, bradykinin appears to contribute.6 Sacubitril was designed to have a lower incidence of angioedema than some of the preceding neprilysin inhibitors that have been studied and it only inhibits one of the enzymes responsible for the breakdown of bradykinin.7 In PARADIGM-HF, 0.5% of patients on Entresto vs 0.2% on enalapril had angioedema. This difference was not statistically significant. Of note, the study population included <5% African Americans, a group at higher risk for developing angioedema. If a patient experiences angioedema, Entresto should be permanently discontinued.1 Angioedema is characterized by large, thick, firm welts that most often appear around the eyes, cheeks, or lips. Antihistamines can be used to treat face and lip swelling but it usually resolves without treatment.1 Laryngeal edema with angioedema can be fatal, so if there is any swelling of the tongue, glottis, or larynx, the patient must seek immediate medical attention.1

In the brain, neprilysin contributes to the degradation of beta amyloid plaque, one of the hallmarks of Alzheimer’s disease.8 Therefore there has been some discussion of the theoretical risk of a neprilysin inhibitor increasing the risk of dementia.8 To date, there have been no reports of increased dementia with sacubitril or with a previously studied neprilysin inhibitor, omapatrilat.

In order to lower the cost of Entresto, Novartis is discussing novel pricing models. For example, payment for the medication may be based on clinical outcomes, with an initial discounted price and further payments if outcomes, such as avoidance of hospital admissions, are met.9 When used, this drug replaces the ACEI or ARB in a treatment regimen which costs as little as $10 per month.

Conclusion

Standard heart failure therapy with optimal doses should still be recommended as first-line treatment in most patients with systolic heart failure. If there are persistent symptoms, with recent exacerbations or hospitalization while on this optimized treatment, consider changing the ACEI or ARB to Entresto [Evidence level A; High-quality RCT].5

Of note, this drug is not indicated for patients with preserved ejection fraction. There is an ongoing study to assess the efficacy of Entresto in this group, PARAGON-HF, scheduled to run from 2013 to 2019.

For more about the treatment and management of patients with heart failure, see our PL Toolbox, Improving Heart Failure Care.

More...
Users of this PL Detail-Document are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national organizations. Information and internet links in this article were current as of the date of publication.

Levels of Evidence

In accordance with the trend towards Evidence-Based Medicine, we are citing the LEVEL OF EVIDENCE for the statements we publish.

<table>
<thead>
<tr>
<th>Level</th>
<th>Definition</th>
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<tr>
<td>A</td>
<td>High-quality randomized controlled trial (RCT) High-quality meta-analysis (quantitative systematic review)</td>
</tr>
<tr>
<td>B</td>
<td>Nonrandomized clinical trial Nonquantitative systematic review Lower quality RCT Clinical cohort study Case-control study Historical control Epidemiologic study</td>
</tr>
<tr>
<td>C</td>
<td>Consensus Expert opinion</td>
</tr>
<tr>
<td>D</td>
<td>Anecdotal evidence In vitro or animal study</td>
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Project Leader in preparation of this PL Detail-Document: Annette Murray, BScPharm

References


---Below are practical tips and resources to help improve care in your heart failure patients and prevent readmissions.--

**Abbreviations:** ACEI = angiotensin-converting enzyme inhibitor; ARB = angiotensin receptor blocker; CrCl = creatinine clearance; EF = ejection fraction; MI = myocardial infarction; NYHA = New York Heart Association; SBP = systolic blood pressure

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<th>Goal</th>
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<td><strong>Review the principles of heart failure management.</strong></td>
<td>- See our PL Chart, <em>Heart Failure Treatment at a Glance.</em>&lt;br&gt;- Heart failure treatment includes medications (addressed below), education to facilitate self-care (addressed below), sodium restriction (e.g., &lt;3 g/day), and exercise (i.e., regular physical activity or cardiac rehab).&lt;sup&gt;1&lt;/sup&gt;</td>
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<tr>
<td><strong>Get patients on the right heart failure medications at the right dose.</strong></td>
<td>- Use evidence-based pharmacotherapy to reduce morbidity and mortality in systolic heart failure patients.&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;  - “Systolic heart failure” is also known as “heart failure with reduced ejection fraction” (HFrEF). These patients have an ejection fraction (EF) of 40% or less.&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;  - Heart failure with preserved ejection fraction (HFpEF) has been called “diastolic heart failure.” These patients have an EF of 50% or higher. Definitive pharmacotherapy has not been identified for HFpEF.&lt;sup&gt;1&lt;/sup&gt; HFpEF is treated with cautious diuresis, treatment of underlying causes and exacerbating conditions, and risk factor reduction (e.g., treatment of hypertension, diabetes, obesity, myocardial ischemia, arrhythmias, etc).&lt;sup&gt;6&lt;/sup&gt;&lt;br&gt;  - Ensure patients with systolic heart failure are on, at minimum, an ACEI or ARB, and a beta-blocker with evidence of efficacy (e.g., bisoprolol, metoprolol succinate [not tartrate], or carvedilol), at evidence-based doses (e.g., lisinopril 20 mg, metoprolol succinate 200 mg, or spironolactone 25 mg daily). See our PL Chart, <em>Target Doses of Meds for Systolic Heart Failure,</em> for dosing of other medications.&lt;br&gt;  - Other medications to consider include:&lt;br&gt;    - diuretics for fluid retention.&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;    - <em>Entresto</em> (sacubitril/valsartan) for NYHA Class II-IV heart failure (U.S.) (Class II or III; Canada),&lt;sup&gt;11,12&lt;/sup&gt; in place of an ACEI or ARB, for persistent symptoms/exacerbations/hospitalizations despite optimized therapy, in patients with SBP &gt;100 mmHg.&lt;br&gt;    - an aldosterone antagonist (spironolactone or eplerenone) for Class II-IV heart failure with EF ≤35%, or post-MI patients with EF ≤40% with symptoms or diabetes (provided CrCl &gt;30 mL/min and potassium &lt;5 mEq/L).&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;    - hydralazine plus isosorbide dinitrate for African Americans with Class III or IV heart failure despite optimal therapy, or patients who cannot take an ACEI or ARB.&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;    - digoxin (level of 0.5 to 0.9 ng/mL [0.6 to 1.2 nmol/L]) for persistent symptoms despite optimized therapy.&lt;sup&gt;1&lt;/sup&gt;</td>
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| Avoid meds that may worsen heart failure.                           | • Avoid NSAIDs, glitazones, diltiazem, verapamil, nifedipine, saxagliptin, sotalol, and dronedarone.¹²¹⁰  
                                                                 |                                                                                                                                                                                                                                  |
| Provide transitional care interventions to reduce hospital readmissions and emergency department visits | • One in four heart failure patients is readmitted within 30 days. Major causes are medication nonadherence, poor understanding of the treatment plan or signs of exacerbation, and poor follow-up.³  
                                                                 • Get the discharge summary. Call the discharging prescriber if it is unavailable or anything is unclear.  
                                                                 • Identify labs pending at discharge that need follow up.  
                                                                 • Transitional care prevents one emergency department visit for every nine patients, and one readmission for every 52 heart failure patients.³  
                                                                 • Consider combining interventions up for the most benefit (e.g., telephone follow-up plus clinic visit).³  
                                                                 • Our PL Toolbox, Reducing Hospital Readmissions, provides other strategies and resources to help you keep “frequent fliers” grounded, with a focus on pharmacotherapy.  
                                                                 • Our PL Detail-Document, Transitions of Care and Reducing Hospital Readmissions, includes information about the use of two new CPT codes (99495, 99496) that U.S. providers can use to cover transitional care management services.  
                                                                 • Code 99495 can be used to bill Medicare when a provider has communicated with the patient within two business days after discharge, made a complex medical decision, and had a face-to-face visit within 14 calendar days of discharge.  
                                                                 • Code 99496 can be used if the medical decision is highly complex and the face-to-face visit occurs within seven calendar days of discharge. |
| Screen for medication-related problems.                             | • Review the medication list at each point of contact. Get our PL Worksheet for Med Review to use as a guide to help you prevent, identify, and resolve medication-related problems, such as unnecessary medications, ineffective therapy, need for additional medication, side effects, and nonadherence.  
                                                                 • Communicate with appropriate colleagues (e.g., prescriber, pharmacist) when problems are identified.  
                                                                 • U.S. pharmacists can get our PL Toolbox, Medication Therapy Management, to assist with comprehensive medication reviews, and a PL CE, Implementing MTM into a Community Pharmacy Practice. Canadian pharmacists can get our PL Toolbox, Medication Reviews.  
                                                                 • Providing comprehensive medication reviews yearly for eligible U.S. patients on Medicare Part D and Advantage Plans improves Star ratings.⁴ |

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### Goal

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<tr>
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<tr>
<td>Educate patients about their heart failure medications</td>
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<tr>
<td>• Explain what each medication does.</td>
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<tr>
<td>• Cover common side effects and what to do about them.</td>
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<tr>
<td>• For patient information on heart failure medications, and medications to avoid, get the Heart Failure Society of America’s Heart Failure Medicines at <a href="http://www.hfsa.org/wp-content/uploads/2015/07/Mod-3-PDF.pdf">http://www.hfsa.org/wp-content/uploads/2015/07/Mod-3-PDF.pdf</a>.</td>
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<tr>
<td>• Customize our PL Patient Education Handout, Heart Failure Meds and More, with your patient’s medications doses, and directions.</td>
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<tr>
<th>Improve medication adherence.</th>
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<tr>
<td>• Use available technology. For example, direct tech-savvy patients to the Heart Failure Society of America’s app (<a href="http://www.hfsa.org/patient/patient-app/">http://www.hfsa.org/patient/patient-app/</a>). It helps patients track their medications and provides reminders to help them take their medications on time. Other available technology is reviewed in our PL Chart, Medication Adherence Toolbox.</td>
</tr>
<tr>
<td>• If medication cost is a barrier to adherence, U.S. subscribers can get help from our PL Chart, Guide for Helping Patients Afford their Medications. It provides cost-saving tips and a list of programs and other helpful resources to recommend to patients.</td>
</tr>
<tr>
<td>• Minimize the number of medications a patient must take. Use combination products when appropriate.</td>
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<tr>
<td>• Use visual aids such as pill cards to show the medication regimen. Go to <a href="http://www.ahrq.gov/patients-consumers/diagnosis-treatment/treatments/pillcard/index.html">http://www.ahrq.gov/patients-consumers/diagnosis-treatment/treatments/pillcard/index.html</a> to find out how to create a pill card.</td>
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<tr>
<td>• Suggest patients use pill boxes and calendars.</td>
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<td>• Teach patients to relate pill-taking to daily activities such as meals, bedtime, etc.</td>
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<tr>
<td>• Enlist help from family, friends, or community services.</td>
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<tr>
<td>• Get our PL Chart, Medication Adherence Toolbox for more practical tips and resources.</td>
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<tr>
<td>• Give patients our PL Patient Education Handout, Tips for Sticking With Your Meds.</td>
</tr>
<tr>
<td>• U.S. pharmacists will be interested in our PL Chart, The Basics of Med Sync. Med Sync can improve medication adherence, which in turn can improve Medicare Part D Star Ratings (adherence to renin angiotensin system antagonists is a quality measure for Medicare Part D Star Ratings).</td>
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<tr>
<td>• Pharmacists wanting a review on adherence can get our PL CE, Optimizing Outcomes Through Medication Adherence.</td>
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<tr>
<th>Educate patients about diet, exercise, and other lifestyle changes.</th>
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<tr>
<td>• Review risks of smoking. Encourage cessation.¹</td>
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<tr>
<td>• Instruct on sodium restriction to reduce congestive symptoms and help diuretics work better.¹ Advise limiting processed foods, rinsing canned food to remove salt, buying fresh or “no added salt” food, and cutting back on frozen dinners. Discourage use of salt substitutes due to hyperkalemia risk. Rely on herbs and spices for flavors instead.</td>
</tr>
<tr>
<td>• Encourage physical activity to improve functional status. Consider cardiac rehab.¹</td>
</tr>
<tr>
<td>• Give patients our PL Patient Education Handout, How to Eat a Heart-Healthy Diet.</td>
</tr>
<tr>
<td>• Get the American Heart Association’s Lifestyle Changes for Heart Failure for information on diet, physical activity, and more at <a href="http://www.heart.org/HEARTORG/Conditions/HeartFailure/PreventionTreatmentofHeartFailure/Lifestyle-Changes-">http://www.heart.org/HEARTORG/Conditions/HeartFailure/PreventionTreatmentofHeartFailure/Lifestyle-Changes-</a></td>
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¹ More details on these strategies are available in the PL Chart, Lifestyle Changes for Heart Failure.
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| Lifestyle, continued | for-Heart-Failure_UCM_306341_Article.jsp.  
- Get the Heart Failure Society of America’s *How to Follow a Low Sodium Diet* at http://www.hfsa.org/how-to-follow-a-low-sodium-diet/.  
- Get the Heart Failure Society of America’s *Exercise and Activity* at http://www.hfsa.org/module-5/. |
| Ensure appropriate vaccinations (influenza, pneumococcal)\(^1\) | **Annual flu shot**  
- **Pneumonia vaccination:**  
  - **U.S.:** *Pneumovax 23* for immunocompetent heart failure patients aged 19 to 64 years. Then at age 65 years, give *Prevnar 13* (if not previously given) followed by a 2\(^{nd}\) shot of *Pneumovax 23* at least one year later (and at least five years after previous dose). Wait until at least a year has passed since any previous *Pneumovax 23* dose to give *Prevnar 13*\(^6\).  
  - **Canada:** *Pneumovax 23* for immunocompetent adult heart failure patients. Repeat one-time at age 65 or older, at least five years after the most recent dose.\(^9\) |
| Empower patients for self-care. | • Ensure patients have a bathroom scale to monitor for fluid weight gain  
- Explain risks and benefits of medications. Use decision aids, which help patients reach a risk/benefit decision by answering treatment-specific questions, such as those available from the Ottawa Hospital Research Institute Ottawa Hospital Research Institute (http://decisionaid.ohri.ca/index.html) and WebMD (http://www.webmd.com/a-to-z-guides/decision-points-for-medicines-topic-overview).  
- Get trackers and logs from the American Heart Association’s website at http://www.heart.org/HEARTORG/Conditions/More/ToolsForYourHeartHealth/Keep-Track-of-Your-Heart-Health_UCM_318041_Article.jsp and http://www.heart.org/HEARTORG/Conditions/HeartFailure/PreventionTreatmentofHeartFailure/Lifestyle-Changes-for-Heart-Failure_UCM_306341_Article.jsp, and the Heart Failure Society of America at http://www.hfsa.org/patient/patient-app/. |
| Monitor for changes in heart failure status. | • Post hospital discharge, call patient within three days, with clinic follow-up within seven to 14 days.\(^1\) (Also see discussion of transitional care, above).\(^7\)  
- Individualize follow-up. Consider follow-up every three to four months for stable patients based on heart failure clinical trial design. **Unstable** patients or those being titrated on meds usually have more frequent visits.\(^7\)  
- Check electrolytes and renal function within a week of discharge,\(^5\) and at each follow-up visit.\(^1\)  
- Canadian heart failure experts recommend measuring electrolytes and renal function within five to seven days of change in diuretic therapy, and within seven to ten days after change in ACEI/ARB/aldosterone antagonist therapy (within three to five days if potassium is around 5 mEq/L).\(^7\) See our *PL Algorithm, Monitoring ACEIs and ARBs* and *PL Chart, Lab Monitoring*... |

\(^{1}\) Canadian heart failure experts recommend measuring electrolytes and renal function within five to seven days of change in diuretic therapy, and within seven to ten days after change in ACEI/ARB/aldosterone antagonist therapy (within three to five days if potassium is around 5 mEq/L).\(^7\) See our *PL Algorithm, Monitoring ACEIs and ARBs* and *PL Chart, Lab Monitoring*...
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| Monitor, continued | *for Common Medications*, for recommendations from other sources.  
- Monitor fluid status at each visit. Almost half of patients will require a diuretic dose increase during the first six weeks post-discharge.  
- Check blood pressure at each visit, and make appropriate adjustments in pharmacotherapy.  
- Use the University of Michigan - College of Pharmacy’s patient assessment questionnaire, *The One Minute Clinic (TOM-C): Community Intervention Program for Heart Failure* (developed by Barry E. Bleske, Pharm.D.). With this questionnaire, pharmacists can assess their patients for signs of worsening heart failure and the need to alert their prescriber. |
| Help patients identify when to seek care. |  
- Give patients our customizable *PL Patient Education Handout, Heart Failure Meds and More*. This handout provides information to help patients recognize when to call their prescriber or seek immediate medical attention.  
- Get the American Heart Association’s *Physical Changes to Report* at http://www.heart.org/HEARTORG/Conditions/HeartFailure/PreventionTreatmentofHeartFailure/Physical-Changes-to-Report_UCM_306356_Article.jsp.  
- The Heart Failure Society of America’s app (http://www.hfsa.org/patient/patient-app/) helps patients track symptoms and side effects to help identify changes that may require medical attention. |
| Explain what heart failure is. |  
- Get the American Heart Association’s *About Heart Failure* for an overview and animation of heart failure at http://www.heart.org/HEARTORG/Conditions/HeartFailure/AboutHeartFailure/About-Heart-Failure_UCM_002044_Article.jsp. |
| Motivate patients. |  
- Use motivational interviewing to create change. See our *PL CE, Enhancing Patient Counseling with Effective Communication Skills*, to help motivate patients to make positive lifestyle changes.  
- Patients can read *Heart Failure Personal Stories* on the American Heart Association’s website: http://www.heart.org/HEARTORG/Conditions/HeartFailure/HeartFailureToolsResources/Heart-Failure-Personal-Stories_UCM_306386_Article.jsp. |
| Learn about quality measures and get related resources. |  
- Learn how the American Heart Association’s *Target: Heart Failure* program can help improve the quality of care and reduce readmission rates at http://www.heart.org/HEARTORG/HealthcareProfessional/TargetHFStroke/TargetHF/Target-HF_UCM_307433_SubHomePage.jsp.  

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<td>Quality measures,</td>
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<td>continued</td>
<td>• U.S. pharmacists can get our PL Toolbox, Quality Measures for Pharmacies.</td>
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<td></td>
<td>• U.S. prescribers can get our PL Toolbox, Quality Measures for Prescribers.</td>
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References


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