

**\*\*NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE\*\***

## **Measure Information Form**

**Measure Set:** Heart Failure (HF)

**Set Measure ID#:** HF-3

**Performance Measure Name:** ACEI or ARB for LVSD

**Description:** Heart failure patients with left ventricular systolic dysfunction (LVSD) and without both angiotensin converting enzyme inhibitor (ACEI) and angiotensin receptor blocker (ARB) contraindications who are prescribed an ACEI or ARB at hospital discharge. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction.

**Rationale:** ACEI therapy reduces mortality and morbidity in patients with heart failure and left ventricular systolic dysfunction (The SOLVD Investigators, 1991 and CONSENSUS Trial Study Group, 1987) and are effective in a wide range of patients (Masoudi, 2004). Recent clinical trials have also established ARB therapy as an acceptable alternative to ACEI, especially in patients who are ACEI intolerant (Granger, 2003 and Pfeffer, 2003). National guidelines strongly recommend ACEIs for patients hospitalized with heart failure (Hunt, 2005 and HFSA, 1999). Guideline committees have also supported the inclusion of ARBs in performance measures for heart failure (Executive Council of the Heart Failure Society of America, 2004). Despite these recommendations, ACEIs and ARBs remain underutilized in eligible older patients hospitalized with heart failure (Jencks, 2000 and Masoudi, 2004).

**Type of Measure:** Process

**Improvement Noted As:** An increase in the rate

**Numerator Statement:** Heart failure patients who are prescribed an ACEI or ARB at hospital discharge

**Included Populations:** Not Applicable

**Excluded Populations:** None

**Data Elements:**

- *ACEI Prescribed at Discharge*
- *ARB Prescribed at Discharge*

**Denominator Statement:** Heart failure patients with LVSD and without both ACEI and ARB contraindications

**Included Populations:** Discharges with:

- An *ICD-9-CM Principal Diagnosis Code* for heart failure as defined in Appendix A, Table 2.1  
AND
- Chart documentation of a LVEF less than 40% or a narrative description of LVS function consistent with moderate or severe systolic dysfunction

**Excluded Populations:**

- Patients less than 18 years of age
- Patients transferred to another acute care hospital or federal hospital
- Patients who expired
- Patients who left against medical advice
- Patients discharged to hospice
- Patients with comfort measures only documented by a physician, nurse practitioner, or physician assistant
- Patients with BOTH a potential contraindication/reason for not prescribing an ACEI at discharge AND a potential contraindication/reason for not prescribing an ARB at discharge, as evidenced by one or more of the following:
  - o ACEI allergy AND ARB allergy
  - o Moderate or severe aortic stenosis
  - o Physician, nurse practitioner, or physician assistant documentation of BOTH a reason for not prescribing an ACEI at discharge AND a reason for not prescribing an ARB at discharge
  - o Reason documented by physician, nurse practitioner, or physician assistant for not prescribing an ARB at discharge AND an ACEI allergy
  - o Reason documented by physician, nurse practitioner, or physician assistant for not prescribing an ACEI at discharge AND an ARB allergy
- Patients who had a left ventricular assistive device (LVAD) or heart transplant procedure during hospital stay (ICD-9-CM procedure code for LVAD and heart transplant as defined in Appendix A, Table 2.2)

**Data Elements:**

- *Admission Date*
- *Birthdate*
- *Comfort Measures Only*
- *Contraindication to Both ACEI and ARB at Discharge*
- *Discharge Status*
- *ICD-9-CM Other Procedure Codes*
- *ICD-9-CM Principal Diagnosis Code*
- *ICD-9-CM Principal Procedure Code*
- *LVSD*

**Risk Adjustment:** No

**Data Collection Approach:** Retrospective data sources for required data elements include administrative data and medical records.

**Data Accuracy:** Variation may exist in the assignment of ICD-9-CM codes; therefore, coding practices may require evaluation to ensure consistency.

**Measure Analysis Suggestions:** None

**Sampling:** Yes, for additional information see the Sampling Section.

**Data Reported As:** Aggregate rate generated from count data reported as a proportion

**Selected References:**

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- Effects of enalapril on mortality in severe congestive heart failure. Results of the Cooperative North Scandinavian Enalapril Survival Study (CONSENSUS). The CONSENSUS Trial Study Group. *N Engl J Med*. 1987;316:1429-1435.
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- Heart Failure Society of America (HFSA) practice guidelines. HFSA guidelines for management of patients with heart failure caused by left ventricular systolic dysfunction-pharmacological approaches. *J Card Fail*. 1999 Dec;5(4):357-82.
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- Jencks SJ, Cuerdon T, Burwen DR, Fleming B, Houck PM, Kussmaul AE, Nilasena DS, Ordin DL, Arday DR. Quality of medical care delivered to Medicare beneficiaries: a profile at state and national levels. *JAMA*. 2000;284:1670-1676.
- Masoudi FA, Rathore SS, Wang Y et al. National patterns of use and effectiveness of angiotensin-converting enzyme inhibitors in older patients with heart failure and left ventricular systolic dysfunction. *Circulation*. 2004;110:724-731.

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- The SOLVD Investigators. Effect of enalapril on survival in patients with reduced left ventricular ejection fractions and congestive heart failure. *N Engl J Med.* 325:293-302, 1991.

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**Numerator:** Heart failure patients who are prescribed an ACEI or ARB at hospital discharge .

**Denominator:** Heart failure patients with LVSD and without both ACEI and ARB contraindications .



