

Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD) (NQF 0081)

EMeasure Name	Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	EMeasure Id	Pending
Version Number	1	Set Id	Pending
Available Date	No information	Measurement Period	January 1, 20xx through December 31, 20xx
Measure Steward	American Medical Association – Physician Consortium for Performance Improvement		
Endorsed by	National Quality Forum		
Description	Percentage of patients aged 18 years and older with a diagnosis of heart failure and LVSD (LVEF < 40%) who were prescribed ACE inhibitor or ARB therapy.		
Measure scoring	Proportion		
Measure type	Process		
Rationale	In the absence of contraindications, ACE Inhibitors or ARBs are recommended for all patients with symptoms of heart failure and reduced left ventricular systolic function, as measured by left ventricular ejection fraction (LVEF). Both drugs have been shown to decrease mortality and hospitalizations. Heart Failure: Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD).		
Clinical Recommendation Statement	Angiotensin converting enzyme inhibitors are recommended for all patients with current or prior symptoms of HF and reduced LVEF, unless contraindicated. (Class I Recommendation, Level of Evidence: A)(ACC/AHA) Angiotensin II receptor blockers approved for the treatment of HF are recommended in patients with current or prior symptoms of HF and reduced LVEF who are ACEI-intolerant. (Class I Recommendation, Level of Evidence: A) (ACC/AHA) Angiotensin II receptor blockers are reasonable to use as alternatives to ACEIs as first-line therapy for patients with mild to moderate HF and reduced LVEF, especially for patients already taking ARBs for other indications (Class IIa Recommendation, Level of Evidence: A) (ACC/AHA).		
References			
Definitions			

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Please refer to the spreadsheet for this measure for detail regarding data criteria and code lists.

Population criteria

- **Initial Patient Population =**
 - AND: “Patient characteristic: birth date” (age) ≥ 18 years;
 - AND: “Diagnosis active: heart failure”;
 - AND:
 - OR: ≥ 2 count(s) of “Encounter: encounter outpatient”;
 - OR: ≥ 2 count(s) of “Encounter: encounter nursing facility”;
 - OR: ≥ 1 count(s) of “Encounter: encounter inpatient discharge”;
- **Denominator =**
 - AND: All patients in the initial patient population;
 - AND:
 - OR: “Diagnostic study result: LVF ASSMT”, result $< 40\%$;
 - OR: “Diagnostic study result: ejection fraction”, result $< 40\%$;
- **Numerator =**
 - AND:
 - OR: “Medication order: ACE inhibitor or ARB”;
 - OR: “Medication active: ACE inhibitor or ARB”;
- **Exclusions =**
 - OR: “Medication allergy: ACE inhibitor or ARB”;
 - OR: “Medication adverse event: ACE inhibitor or ARB”;
 - OR: “Medication intolerance: ACE inhibitor or ARB”;
 - OR: “Diagnosis active: pregnancy”;
 - OR: “Diagnosis active: deficiencies of circulating enzymes”;
 - OR: “Diagnosis active: disease of aortic and mitral valves”;
 - OR: “Diagnosis active: non-rheumatic mitral (valve) disease”;
 - OR: “Diagnosis active: chronic kidney disease with and without hypertension”;
 - OR: “Diagnosis active: hypertensive renal disease with renal failure”;
 - OR: “Diagnosis active: atherosclerosis of renal artery”;
 - OR: “Diagnosis active: renal failure and ESRD”;
 - OR: “Diagnosis active: acute renal failure”;
 - OR: “Diagnosis active: atresia and stenosis of aorta”;
 - OR: “Medication not done: medical reason”;
 - OR: “Medication not done: patient reason for ACE inhibitor or ARB decline”;
 - OR: “Medication not done: patient reason”;
 - OR: “Medication not done: system reason”;

Data Criteria (QDS Data Elements)

- **Initial Patient Population =**

- "Patient characteristic: birth date" using "birth date code list" before the "measurement period";
- "Diagnosis active: heart failure" using "heart failure code list grouping" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Encounter: encounter outpatient" using "encounter outpatient code list" during the "measurement period";
- "Encounter: encounter nursing facility" using "encounter nursing facility code list" during the "measurement period";
- "Encounter: encounter inpatient discharge" using "encounter inpatient discharge code list" during the "measurement period";

- **Denominator =**

- All patients in the initial patient population;
- "Diagnostic study result: LVF ASSMT" using "LVF ASSMT code list" before "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Diagnostic study result: ejection fraction" using "ejection fraction code list" before "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";

- **Numerator =**

- "Medication order: ACE inhibitor or ARB" using "ACE inhibitor or ARB code list" during the "measurement period";
- "Medication active: ACE inhibitor or ARB" using "ACE inhibitor or ARB code list" during the "measurement period";

- **Exclusions =**

- "Medication allergy: ACE inhibitor or ARB" using "ACE Inhibitor or ARB code list" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Medication adverse event: ACE inhibitor or ARB" using "ACE Inhibitor or ARB code list" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Medication intolerance: ACE inhibitor or ARB" using "ACE Inhibitor or ARB code list" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Diagnosis active: pregnancy" using "pregnancy code list grouping" during "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Diagnosis active: deficiencies of circulating enzymes" using "deficiencies of circulating enzymes code list grouping" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";

- “Diagnosis active: disease of aortic and mitral valves” using “disease of aortic and mitral valves code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
- “Diagnosis active: non-rheumatic mitral (valve) disease” using “nonrheumatic mitral (valve) disease code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
- “Diagnosis active: chronic kidney disease with and without hypertension” using “chronic kidney disease with and without hypertension code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
- “Diagnosis active: hypertensive renal disease with renal failure” using “hypertensive renal disease with renal failure code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
- “Diagnosis active: atherosclerosis of renal artery” using “atherosclerosis of renal artery code list code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
- “Diagnosis active: renal failure and ESRD” using “renal failure and ESRD code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
- “Diagnosis active: acute renal failure” using “acute renal failure code list grouping” before or simultaneously to “Encounter: outpatient” OR “Encounter: nursing facility” OR “Encounter: inpatient discharge”;
- “Diagnosis active: atresia and stenosis of aorta” using “atresia and stenosis of aorta code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
- “Medication not done: medical reason” using “medical reason code list” for “Medication order: ACE inhibitor or ARB” OR “Medication active: ACE inhibitor or ARB”;
- “Medication not done: patient reason for ACE inhibitor or ARB decline” using “patient reason for ACE inhibitor or ARB decline code list” for “Medication order: ACE inhibitor or ARB” OR “Medication active: ACE inhibitor or ARB”;
- “Medication not done: patient reason” using “patient reason code list” for “Medication order: ACE inhibitor or ARB” OR “Medication active: ACE inhibitor or ARB”;
- “Medication not done: system reason” using “system reason code list” for “Medication order: ACE inhibitor or ARB” OR “Medication active: anti-platelet therapy”;

Summary Calculation

Calculation is generic to all measures:

- Calculate the final denominator by adding all that meet denominator criteria.
- Subtract from the final denominator all that do not meet numerator criteria yet also meet exclusion criteria. Note some measures do not have exclusion criteria.
- The performance calculation is the number meeting numerator criteria divided by the final denominator.

- For measures with multiple patient populations, repeat this process for each patient population and report each result separately.
- For measures with multiple numerators, calculate each numerator separately within each population using the paired exclusion.

Measure set	CLINICAL QUALITY MEASURE SET 2011 - 2012
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