Coronary Artery Disease (CAD): Beta-Blocker Therapy for CAD Patients with Prior Myocardial Infarction (MI) (NQF 0070)

EMeasure Name	Coronary Artery Disease (CAD): Beta-Blocker Therapy for CAD Patients with Prior Myocardial Infarction (MI)	**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 CAD and prior MI who were prescribed beta-blocker therapy.		
Measure scoring	Proportion		
Measure type	Process		
Rationale	In the absence of contraindications, beta-blocker therapy has been shown to reduce the risk of a recurrent MI and decrease mortality for those patients with a prior MI.		
Clinical Recommendation Statement	Chronic Stable Angina: Class I – Beta-blockers as initial therapy in the absence of contraindications in patients with prior MI. Class I – Beta-blockers as initial therapy in the absence of contraindications in patients without prior MI (ACC/AHA/ACP-ASIM). Unstable Angina and Non-ST-Segment Elevation Myocardial Infarction: Class I – Drugs required in the hospital to control ischemia should be continued after hospital discharge in patients who do not undergo coronary revascularization, patients with unsuccessful revascularization, or patients with recurrent symptoms after revascularization. Upward or downward titration of the doses may be required. Class I – Beta-blockers in the absence of contraindications (ACC/AHA). Acute Myocardial Infarction: Class I – All but low-risk patients without a clear contraindication to ß-adrenoceptor blocker therapy. Treatment should begin within a few days of the event (if not initiated acutely) and continue indefinitely. Class IIa – Low-risk patients without a clear contraindication to ß-adrenoceptor blocker therapy. Survivors of non-ST-elevation MI. Class IIb – Patients with moderate or severe LV failure or other relative contraindications to ß-adrenoceptor blocker therapy, provided they can be monitored closely (ACC/AHA). Although no study has determined if long-term ß-adrenoceptor blocker therapy should be administered to survivors of MI who subsequently have satisfactorily undergone revascularization, there is no reason to believe that these agents act differently in coronary patients who have undergone revascularization (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:
        - OR: “Diagnosis active: coronary artery disease no MI”;
        - OR: “Procedure performed: cardiac surgery”;
    - AND:
        - >= 2 count(s) of:
            - OR: “Encounter: encounter nursing facility”;
            - OR: “Encounter: encounter outpatient”;
        - OR: >= 1 count(s) of “Encounter: encounter inpatient discharge”;
- **Denominator** =
    - AND: All patients in the initial patient population;
    - AND: “Diagnosis resolved: myocardial infarction”;
- **Numerator** =
    - AND:
        - OR: “Medication order: beta blocker therapy”;
        - OR: “Medication active: beta blocker therapy”;
- **Exclusions** =
    - OR: “Diagnosis active: arrhythmia”;
    - OR: “Diagnosis active: hypotension”;
    - OR: “Diagnosis active: asthma”;
    - OR: “Diagnosis active: bradycardia”;
    - OR: “Diagnosis active: atresia and stenosis of aorta”;
    - OR:
        - AND: “Diagnosis active: atrioventricular block”;
        - AND NOT:
            - OR: “Diagnosis active: cardiac pacer in situ”;
            - OR: “Device applied: cardiac pacer”;
    - OR: “Procedure performed: cardiac monitoring”;
    - OR: “Medication adverse event: beta blocker therapy”;

- OR: “Medication allergy: beta blocker therapy”;
- OR: “Medication intolerance: beta blocker therapy”;
- OR: “Medication not done: medical reason”;
- OR: “Medication not done: patient reason”;
- OR: “Medication not done: system reason”;
- OR: >1 consecutive count(s) of “Physical exam finding: heart rate”, < 50 bpm;

Data criteria (QDS Data Elements)

- **Initial Patient Population =**
  - "Patient characteristic: birth date” using “birth date code list” before the beginning of the “measurement period”;
  - “Diagnosis active: coronary artery disease no MI” using “coronary artery disease no MI code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
  - “Procedure performed: cardiac surgery” using “cardiac surgery code list grouping” before or simultaneously to the “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
  - “Encounter: encounter nursing facility” using “encounter nursing facility code list” during the “measurement period”;
  - “Encounter: encounter outpatient” using “encounter outpatient 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;
  - “Diagnosis resolved: myocardial infarction” using “myocardial infarction code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
- **Numerator =**
  - “Medication order: beta blocker therapy” using “beta blocker therapy code list” during the “measurement period”;
  - “Medication active: beta blocker therapy” using “beta blocker therapy code list” during the “measurement period”;
- **Exclusions =**
  - “Diagnosis active: arrhythmia” using “arrhythmia code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
  - “Diagnosis active: hypotension” using “hypotension code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;
  - “Diagnosis active: asthma” using “asthma code list grouping” before or simultaneously to “Encounter: encounter outpatient” OR “Encounter: encounter nursing facility” OR “Encounter: encounter inpatient discharge”;

- "Diagnosis active: bradycardia" using "bradycardia code list grouping" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: 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";
- "Diagnosis active: atrioventricular block" using "atrioventricular block code list grouping" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Diagnosis active: cardiac pacer in situ" using "cardiac pacer in situ code list grouping" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Device applied: cardiac pacer device" using "cardiac pacer device code list" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Procedure performed: cardiac monitoring" using "cardiac monitoring code list" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Medication adverse event: beta blocker therapy" using "beta blocker therapy code list" before or simultaneously to "En counter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Medication allergy: beta blocker therapy" using "beta blocker therapy code list" before or simultaneously to "En counter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";
- "Medication intolerance: beta blocker therapy" using "beta blocker therapy code list" before or simultaneously to "En counter: 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: beta blocker therapy" OR "Medication active: beta blocker therapy";
- "Medication not done: patient reason" using "patient reason code list" for "Medication order: beta blocker therapy" OR "Medication active: beta blocker therapy";
- "Medication not done: system reason" using "system reason code list" for "Medication order: beta blocker therapy" OR "Medication active: beta blocker therapy";
- "Physical exam finding: heart rate" using "heart rate code list" before or simultaneously to "Encounter: encounter outpatient" OR "Encounter: encounter nursing facility" OR "Encounter: encounter inpatient discharge";

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