

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

## **Clinical Quality Measure Quick Reference Guide and Technical Supplement**

### **Provided By:**

The National Learning Consortium (NLC)

### **Developed By:**

Health Information Technology Research Center (HITRC)

*The material in this document was developed by Regional Extension Center staff in the performance of technical support and EHR implementation. The information in this document is not intended to serve as legal advice nor should it substitute for legal counsel. Users are encouraged to seek additional detailed technical guidance to supplement the information contained within. The REC staff developed these materials based on the technology and law that were in place at the time this document was developed. Therefore, advances in technology and/or changes to the law subsequent to that date may not have been incorporated into this material.*

## NATIONAL LEARNING CONSORTIUM

The National Learning Consortium (NLC) is a virtual and evolving body of knowledge and tools designed to support healthcare providers and health IT professionals working towards the implementation, adoption and meaningful use of certified EHR systems.

The NLC represents the collective EHR implementation experiences and knowledge gained directly from the field of ONC's outreach programs ([REC](#), [Beacon](#), [State HIE](#)) and through the [Health Information Technology Research Center \(HITRC\)](#) Communities of Practice (CoPs).

The following resource is an example of a tool used in the field today that is recommended by "boots-on-the-ground" professionals for use by others who have made the commitment to implement or upgrade to certified EHR systems.

## DESCRIPTION

The Clinical Quality Measure (CQM) quick reference guides provide a summary of key information for CQMs and are intended to be shared with clinical staff using an electronic health record (EHR). The first two sections may be distributed as stand-alone references.

The first section, *Quick Facts*, comes from the CQM e-specifications and is intended to provide an overview of the measure. This section provides information on the measure definition, whether the measure is a core, alternate core, or menu set measure, whether it is related to other measures by common data elements, and what data goes into a numerator, denominator, and exclusions or exceptions.

The second section, *Key Clinical Activities* and *Planning Your EHR Documentation*, is intended to be a space to plan EHR documentation. It provides a "to-do list" of clinical and documentation activities for the measure and lists each data element that is required to calculate the numerator, denominator, and exceptions or exclusions. Providers can use this space to assign individuals or roles to tasks in the to-do list.

The third section, *Technical Supplement*, provides clarifications regarding what "counts" toward this measure. First, it provides English "translations" of the numeric SNOMED-CT, HL7, ICD, and CPT codes that may be used in this measure. Second, it includes clarifications on what constitutes a numerator "hit" or a denominator exclusion based on questions that have arisen during technical assistance calls.

To access the official electronic specifications, visit the CMS Electronic Specifications page <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/ElectronicSpecifications.html> and locate the "EP Measure Specifications" zip file, which contains electronic specifications for all 44 Stage 1 Meaningful Use clinical quality measures.

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

Percentage of patients age 18 years and older with a diagnosis of CAD and prior Myocardial infarction (MI) who were prescribed beta-blocker therapy.

Quick Facts	
Type of measure: core, alternate core, or menu?	<ul style="list-style-type: none"> <li>Menu measure</li> </ul>
Related to other measures?	<ul style="list-style-type: none"> <li>Some of the information entered for this clinical quality measure also can be used for calculations in the following measures: <ul style="list-style-type: none"> <li>Ischemic Vascular Disease (IVD): Blood Pressure Management (NQF 0073)</li> <li>Heart Failure (HF): Beta Blocker Therapy for Left Ventricular Systolic Dysfunction (NQF 0083)</li> <li>Ischemic Vascular Disease (IVD): Use of Aspirins or Another Antithrombotic (NQF 0068)</li> </ul> </li> </ul>
Data required to identify the <u>denominator</u> (total cases eligible to be counted in measure)	<ul style="list-style-type: none"> <li>Age;</li> <li>Encounter codes<sup>1</sup>;</li> <li>Active Diagnosis of CAD with no MI, or cardiac surgery procedure<sup>2</sup>;</li> <li>Resolved diagnosis of myocardial infarction<sup>2</sup></li> </ul>
Data required to identify the <u>exceptions</u> or <u>exclusions</u>	<ul style="list-style-type: none"> <li>Active diagnosis of arrhythmia, hypotension, asthma, bradycardia, or atresia and stenosis of aorta<sup>2</sup>; OR</li> <li>Active diagnosis of atrioventricular block, without cardiac pacer<sup>2</sup>; OR</li> <li>Cardiac monitoring<sup>2</sup>; OR</li> <li>Beta blocker therapy allergy, adverse event, or intolerance<sup>2</sup>; OR</li> <li>Patient, medical, or system reason<sup>2</sup>; OR</li> <li>Heart rate &lt; 50bpm<sup>2</sup></li> </ul>
Data required to identify the <u>numerator</u> (cases in which the process or outcome being measure occurred)	<ul style="list-style-type: none"> <li>Beta blocker therapy<sup>1</sup></li> </ul>

**Note:** This document is meant to supplement and not replace the official electronic specifications for the measure. To access the official specifications, please visit: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/ElectronicSpecifications.html>

<sup>1</sup> This data element(s) must be documented during the measurement period

<sup>2</sup> This data element(s) must be documented prior to or during the encounter

Key Clinical Activities		Planning Your EHR Documentation	
To-Do List	Why Needed?	Data Elements Needed	Responsible Person or Role
1. <b>Confirm the patient's date of birth</b>	<ul style="list-style-type: none"> <li>Ensures only patients who are at least 18 years of age during the measurement period are included in the <b>denominator</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Date of birth</li> </ul>	
2. <b>Record the date and type of visit</b>	<ul style="list-style-type: none"> <li>Ensures only appropriate visits are captured in the <b>denominator</b>. For this measure, at least two outpatient or nursing facility encounters are required during the measurement period.</li> </ul>	<ul style="list-style-type: none"> <li>Date of visit</li> <li>Codes for outpatient, nursing facility, or inpatient discharge encounters<sup>3</sup></li> </ul>	
3. <b>Check patient record or assess patient for active diagnosis of CAD with no MI or check record to see if patient has received cardiac surgery</b>	<ul style="list-style-type: none"> <li>Ensures only patients with an active diagnosis of CAD with no MI or with documentation of cardiac surgery are included in the <b>denominator</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Active diagnosis of CAD with no MI; or</li> <li>Cardiac surgery procedure</li> </ul>	
4. <b>Check patient record for or assess for diagnosis of myocardial infarction resolved</b>	<ul style="list-style-type: none"> <li>Ensures only patients with a resolved diagnosis of myocardial infarction are included in the <b>denominator</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Documentation of diagnosis resolved: myocardial infarction</li> </ul>	
5. <b>Check patient record for or assess for active diagnosis of arrhythmia, hypotension, asthma, bradycardia, or atresia and stenosis of aorta</b>	<ul style="list-style-type: none"> <li>Ensures patients with active diagnoses of any of the conditions listed are identified as <b>exclusions or exceptions</b>.</li> </ul>	<ul style="list-style-type: none"> <li>If appropriate, document active diagnosis of arrhythmia, hypotension, asthma, bradycardia, or atresia and stenosis of aorta<sup>2</sup></li> </ul>	

<sup>3</sup> See Technical Supplement for denominator inclusion details (encounter types): [pp. TS-2](#)

Key Clinical Activities		Planning Your EHR Documentation	
To-Do List	Why Needed?	Data Elements Needed	Responsible Person or Role
6. Check patient record for or assess patient for active diagnosis of atrioventricular block; if present, check for cardiac pacer	<ul style="list-style-type: none"> <li>Ensures patients with an active diagnosis of atrioventricular block but without a cardiac pacer are identified as <b>exclusions or exceptions</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Document active diagnosis of atrioventricular block<sup>2</sup></li> <li>Document cardiac pacer in situ, or cardiac pacer applied<sup>4</sup></li> </ul>	
7. Check patient record or assess patient for cardiac monitoring procedure	<ul style="list-style-type: none"> <li>Ensures patients with documentation of cardiac monitoring procedure identified as <b>exclusions or exceptions</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Document cardiac monitoring performed</li> </ul>	
8. If applicable, ascertain why medication is not ordered or active.	<ul style="list-style-type: none"> <li>Ensures patients with documentation of a medical, patient, or system reason blocker therapy not prescribed or documentation of medication adverse event, allergy, or intolerance to beta blocker therapy are identified as <b>exclusions or exceptions</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Document reason beta blocker therapy not prescribed, if applicable<sup>5</sup></li> </ul>	
9. Check patient record for two consecutive heart rate measurements or measure patient heart rate.	<ul style="list-style-type: none"> <li>Ensures patients with heart rate measurement of less than 50 beats per minute on two separate and consecutive occasions are identified as <b>exclusions or exceptions</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Document heart rate results, especially if &lt;50 bpm</li> </ul>	
10. Check patient record for prescription of beta blocker therapy or, if appropriate, prescribe beta blocker therapy.	<ul style="list-style-type: none"> <li>Ensures only patients with beta blocker therapy active or ordered during measurement period are counted in the <b>numerator</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Documentation of active or ordered beta blocker therapy</li> </ul>	

<sup>4</sup> See Technical Supplement for exclusion or exception details (cardiac pacer applied, cardiac monitoring performed): [pp. TS-2](#)

<sup>5</sup> See Technical Supplement for exclusion or exception details (patient, medical, or system reason): [pp. TS-3](#)

## Technical Supplement

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The following pages list the technical definitions of the codes that could be included in the calculation of this measure. Use these lists as needed to confirm that your clinical documentation includes item(s) that are on this list, where appropriate, to ensure accurate calculation of your quality measure denominator and numerator.

## DENOMINATOR INCLUSION CRITERIA

### What constitutes a nursing facility encounter? (CPT codes)

- Initial nursing facility care, per day, for the evaluation and management of a patient, which requires these 3 key components: a history, an examination, and medical decision making.
- Subsequent nursing facility care, per day, for the evaluation and management of a patient, which requires at least 2 of these 3 key components: a history, an examination, and medical decision making.

### What constitutes an outpatient encounter? (CPT codes)

- Office or other outpatient visit for the evaluation and management of a new patient, which requires these 3 key components: a history, an examination, and medical decision making.
- Office or other outpatient visit for the evaluation and management of an established patient, which requires at least 2 of these 3 key components: a history, an examination, and medical decision making.
- Office consultation for a new or established patient, which requires these 3 key components: history, an examination, and medical decision making.
- Domiciliary or rest home visit for the evaluation and management of a new patient, which requires these 3 key components: a history, an examination, and medical decision making.
- Domiciliary or rest home visit for the evaluation and management of a new patient, which requires at least 2 of these 3 key components: a history, an examination, and medical decision making.
- Home visit for the evaluation and management of a new patient, which requires these 3 key components: a history, an examination, and medical decision making.
- Home visit for the evaluation and management of an established patient, which requires 2 of these 3 key components: a history, an examination, and medical decision making.

### What constitutes an outpatient encounter? (CPT codes)

- Hospital discharge day management; 30 minutes or less
- Hospital discharge day management; more than 30 minutes

## EXCLUSION OR EXCEPTION CRITERIA

### What constitutes cardiac pacer device application activity? (SNOMED-CT codes)

- Cardiac pacemaker, device (physical object)
- Intravenous cardiac pacemaker system
- Intravenous triggered cardiac pacemaker system
- Permanent cardiac pacemaker, device
- Cardiac transvenous pacemaker, device

### What constitutes cardiac monitoring activity? (SNOMED-CT codes)

- Atrial fibrillation monitoring (regime/therapy)
- Cardiac treatment changed (regime/therapy)
- 24 hr blood pressure monitoring (regime/therapy)
- Cardiac monitoring (regime/therapy)
- Cardiac disease monitoring (regime/therapy)
- Fetal heart monitoring (regime/therapy)



#### What constitutes cardiac monitoring activity? (SNOMED-CT codes)

- Intrapartum cardiotachogram monitoring (regime/therapy)
- Monitoring of pacemaker (regime/therapy)
- Cardiac event recording (regime/therapy)
- Continuous fetal heart monitoring during labor (regime/therapy)
- Cardiovascular disease monitoring (regime/therapy)
- Cardiovascular disease interim monitoring (regime/therapy)
- Cardiovascular disease annual review (regime/therapy)
- Cardiac telemetry (regime/therapy)
- Cardiotachometry (regime/therapy)
- Monitoring of pulse (regime/therapy)
- Cardiotachometer monitoring (regime/therapy)
- Tracing of carotid pulse with ECG lead (regime/therapy)
- Cardiac monitor surveillance (regime/therapy)

#### What constitutes a medical reason for medication not done? (HL7 codes)

- The therapy has been found to not have the desired therapeutic benefit on the patient.
- The underlying condition has been resolved or has evolved such that a different treatment is no longer needed.
- A new therapy will be commenced when current supply exhausted.
- Testing has shown that the patient already has immunity to the agent targeted by the immunization.
- The patient currently has a medical condition for which the vaccine is contraindicated or for which precaution is warranted.
- The prescribed product has specific clinical release or other therapeutic characteristics not shared by other substitutable medications.
- The patient has an intolerance to the medication.
- Patient has had a prior allergic intolerance response to alternate product or one of its components.
- The specific manufactured drug is part of a clinical trial.
- Contraindication identified

#### What constitutes a patient reason for medication not done? (HL7 codes)

- The Patient requested the action
- Moved at the request of the patient.
- Client deceased.
- The patient is not (or is no longer) able to use the medication in a manner prescribed. Example: Can't swallow.
- The patient refused to take the product.
- The patient or their guardian objects to receiving the vaccine on religious grounds.
- The patient or their guardian objects to receiving the vaccine because of concerns over its safety.
- The intended vaccine has expired or is otherwise believed to no longer be effective. Example: Due to temperature exposure.
- Patient has compliance issues with medication such as differing appearance, flavor, size, shape or consistency.
- Patient changed their mind regarding obtaining medication

#### What constitutes a system reason for medication not done? (HL7 codes)

- Client was registered in error.

### What constitutes a system reason for medication not done? (HL7 codes)

- When a client has no contact with the health system for an extended period, coverage is suspended. Client will be reinstated to original start date upon proof of identification, residency etc. Example: Coverage may be suspended during a strike situation, when employer benefits for employees are not covered (i.e. not in effect).
- The covered party (patient) specified with the Invoice is not correct.
- The policy specified with the Invoice is not correct. For example, it may belong to another Adjudicator or Covered Party.
- The billing information, specified in the Invoice Elements, is not correct. This could include incorrect costing for items included in the Invoice.
- The provider specified with the Invoice is not correct.
- In the case of 'substitution', indicates that the substitution occurred because the ordered item was not in stock. In the case of 'no substitution', indicates that a cheaper equivalent was not substituted because it was not in stock.
- Indicates that the decision to substitute or to not substitute was driven by a jurisdictional regulatory requirement mandating or prohibiting substitution.
- Indicates that the decision to substitute or to not substitute was driven by a desire to maintain consistency with a pre-existing therapy. I.e. The performer provided the same item/service as had been previously provided rather than providing exactly what was ordered, or rather than substituting with a lower-cost equivalent.
- Indicates that the decision to substitute or to not substitute was driven by a policy expressed within the formulary.
- Code assigned to indicate the rationale for not performing an evaluation investigation on a device for which a defect has been reported.
- Examples include: device received in a condition that made analysis impossible, device evaluation anticipated but not yet begun, device not made by company.
- Identifies the reason or rationale for why a person is eligible for benefits under an insurance policy or program. Examples: A person is a claimant under an automobile insurance policy are client deceased & adopted client has been given a new policy identifier. A new employee is eligible for health insurance as an employment benefit. A person meets a government program eligibility criteria for financial, age or health status.
- The reason a referral was made. Examples: Specialized Medical Assistance, Other Care Requirements.
- The medication is no longer being manufactured or is otherwise no longer available.
- The manufacturer or other agency has requested that stocks of a medication be removed from circulation.
- The product does not have (or no longer has) coverage under the patients insurance policy.
- Patient must see prescriber prior to further fills.
- Patient no longer or has never been under this prescribers care.
- Original prescriber is no longer available to prescribe and no other prescriber has taken responsibility for the patient.
- Request for further authorization must be done through patient's family physician.
- Patient has already been given a new (renewal) prescription.
- Therapy has been changed and new prescription issued
- This medication is on hold.
- The patient should have medication remaining.
- There was no supply of the product on hand to perform the service.
- The information was recorded incorrectly or was recorded in the wrong record.
- The decision on which the recorded information was based was changed before the decision had an effect.
- Example: Aborted prescription before patient left office, released prescription before suspend took effect.
- Identifies the reason or rationale for coverage of a service or product based on coverage exclusions related to the risk of adverse selection by covered parties.
- Identifies the reason or rationale for coverage of a service or product based on financial participation responsibilities of the covered party.

#### What constitutes a system reason for medication not done? (HL7 codes)

- Identifies the reason or rationale for limitations on the coverage of a service or product based on coverage contract provisions.  
Example: The maximum cost per unit; or the maximum number of units per period, which is typically the policy or program effective time.
- Identifies the reason or rationale for coverage of a service or product based on characteristics of the provider, e.g., contractual relationship to payor, such as in or out-of-network; relationship of the covered party to the provider.  
Example: In closed managed care plan, a covered party is assigned a primary care provider who provides primary care services and authorizes referrals and ancillary and non-primary care services.
- Identifies the reason or rationale for coverage of a service or product based on clinical efficacy criteria or practices prescribed by the payor.
- Patient does not meet required protocol
- Patient not eligible for drug
- Provider is not authorized to prescribe or dispense
- The user does not have permission
- The target facility does not recognize the dispensing facility
- This product is not available or manufactured
- There is no match
- There is no match for the product in the master file repository
- There is no permission
- The agent does not have permission

## TYPES OF CODES REQUIRED FROM YOUR EHR FOR CALCULATING THIS CLINICAL QUALITY MEASURE

NQF0070	CPT	CPT Modifier	CVX	Grouping	HCPSC	HL7	ICD-9*	ICD-10	LOINC	RxNorm	SNOMED*
Numerator <sup>1</sup>										x	
Denominator <sup>2</sup>	x			x		x	x	x		x	x
Exceptions or exclusions <sup>3</sup>				x		x	x	x		x	x

- Codes with an asterisk (\*) are required from certified EHRs.
- <sup>1</sup> To identify the numerator in this CQM, the following standard code is required: an active or ordered "medication" code from RxNorm.
- <sup>2</sup> To identify the denominator in this CQM, the following standard codes are required: (1) an "individual characteristic" code from HL7, AND (2) "encounter" codes from CPT, AND (3) a "diagnosis/condition/problem" code from ICD-9, ICD-10, SNOMED, or GROUPING, or a "procedure" code from CPT, SNOMED, or GROUPING, AND (4) a "diagnosis/condition/problem" code for resolved MI from ICD-9, ICD-10, SNOMED, or GROUPING.
- <sup>3</sup> To identify the exclusions in this CQM, the following standard codes are required: (1) a "diagnosis/condition/problem" code for arrhythmia, hypotension, asthma, bradycardia, or atresia and stenosis of aorta from ICD-9, ICD-10, SNOMED, or GROUPING, OR (2) a "diagnosis/condition/problem" code for atrioventricular block from ICD-9, ICD-10, SNOMED, or GROUPING, and NOT a "diagnosis/condition/problem" or "procedure" code for cardiac pacer from ICD-

9, ICD-10, SNOMED, or GROUPING, OR (3) a "procedure" code for cardiac monitoring from SNOMED, OR (4) a "medication" code from RxNorm or GROUPING, OR (5) a "negation reason" code from HL7, OR (6) a "physical exam" finding <50 BPM from SNOMED.

Abbreviation	Long Name	Definition/Description
CPT	Current Procedural Terminology	The CPT (Current Procedural Terminology) is produced by the American Medical Association (AMA). CPT codes are used to report medical procedures and services. (Source: CDC)
CVX	Codes for Vaccine Administered	This vocabulary provides terminology for Vaccine Administered. The vocabulary is defined in Health Level Seven (HL7) Version 2.5.1. (Source: USHIK)
HCPCS	Healthcare Common Procedure Coding System	Level I of the HCPCS is comprised of CPT (Current Procedural Terminology), a numeric coding system maintained by the American Medical Association (AMA). Level II of the HCPCS is a standardized coding system that is used primarily to identify products, supplies, and services not included in the CPT codes, such as ambulance services and durable medical equipment, prosthetics, orthotics, and supplies (DMEPOS) when used outside a physician's office. (Source: CMS)
HL7	Health Level Seven	HL7 is an accredited ANSI standard organization that produces the HL7 messaging standard. It is the accepted messaging standard for communicating clinical data. It is supported by every major medical informatics system vendor in the US. (Source: ASPE)
ICD-9	International Statistical Classification of Diseases and Related Health Problems, 9th revision	The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) is based on the World Health Organization's Ninth Revision, International Classification of Diseases (ICD-9). ICD-9-CM is the official system of assigning codes to diagnoses and procedures associated with hospital utilization in the United States. The ICD-9 is used to code and classify mortality data from death certificates. (Source: CDC)
ICD-10	International Statistical Classification of Diseases and Related Health Problems, 10th revision	The International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10), published by the World Health Organization (WHO), is the foundation of ICD-10-CM. ICD-10 continues to be the classification used in cause-of-death coding in the United States. The ICD-10-CM is comparable with the ICD-10 (Source: CDC)
LOINC	Logical Observation Identifiers Names and Codes	A universal code system for identifying laboratory and clinical observations. (Source: LOINC)
RxNorm	RxNorm	RxNorm provides normalized names for clinical drugs and links its names to many of the drug vocabularies commonly used in pharmacy management and drug interaction software, including those of First Databank, Micromedex, MediSpan, Gold Standard Alchemy, and Multum. By providing links between these vocabularies, RxNorm can mediate messages between systems not using the same software and vocabulary. (Source: NLM NIH)
SNOMED-CT	Systematic Nomenclature of Medicine - Clinical Terms	SNOMED CT (Systematized Nomenclature of Medicine--Clinical Terms) is a comprehensive clinical terminology, originally created by the College of American Pathologists (CAP) and, as of April 2007, owned, maintained, and distributed by the International Health Terminology Standards Development Organisation (IHTSDO), a not-for-profit association in Denmark. (Source: NLM NIH)

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