Complete Summary

TITLE

Acute myocardial infarction: percent of patients without beta-blocker contraindications who received a beta-blocker within 24 hours after hospital arrival.

SOURCE(S)

Specifications manual for national hospital quality measures, version 2.3b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2007 Oct. various p.

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the Measure Validity page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percent of acute myocardial infarction (AMI) patients without beta-blocker contraindications who received a beta-blocker within 24 hours after hospital arrival.

RATIONALE

The early use of beta-blockers in patients with acute myocardial infarction (AMI) reduces mortality and morbidity and has demonstrated effectiveness in a wide range of AMI patients. National guidelines strongly recommend early beta-blockers for patients hospitalized with AMI. Despite these recommendations, beta-blockers remain underutilized in eligible older patients hospitalized with AMI.

PRIMARY CLINICAL COMPONENT

Acute myocardial infarction (AMI); beta-blocker

DENOMINATOR DESCRIPTION

Acute myocardial infarction (AMI) patients without beta-blocker contraindications (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

NUMERATOR DESCRIPTION

Acute myocardial infarction (AMI) patients who received a beta-blocker within 24 hours after hospital arrival

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Overall poor quality for the performance measured

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Jencks SF, 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. JAMA2000 Oct 4;284(13):1670-6. PubMed

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Accreditation
Collaborative inter-organizational quality improvement
External oversight/Medicaid
External oversight/Medicare
Internal quality improvement

National reporting
Pay-for-performance

Application of Measure in its Current Use

CARE SETTING

Hospitals

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Each year 900,000 people in the United States (U.S.) are diagnosed with acute myocardial infarction (AMI); of these, approximately 225,000 cases result in death and, it is estimated that an additional 125,000 patients die before obtaining medical care.

EVIDENCE FOR INCIDENCE/PREVALENCE

American College of Cardiology, American Heart Association Task Force on Practice Guidelines, Committee on Management of Acute Myocardial Infarction. Ryan TJ, Antman EM, Brooks NH, Califf RM, Hillis LD, Hiratzka LF, Rapaport E, Riegel B, Russell RO, Smith EE III, Weaver WD. ACC/AHA guidelines for the management of patients with acute myocardial infarction: 1999 Update. Bethesda (MD): American College of Cardiology (ACC), American Heart Association (AHA); 1999. Various p.

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Cardiovascular disease, including acute myocardial infarction (AMI), is the leading cause of death in the United States (U.S.).

EVIDENCE FOR BURDEN OF ILLNESS

French WJ. Trends in acute myocardial infarction management: use of the National Registry of Myocardial Infarction in quality improvement. Am J Cardiol2000 Mar 9;85(5A):5B-9B; discussion 10B-12B. PubMed

UTILIZATION

Cardiovascular disease, including acute myocardial infarction (AMI), is the primary disease category for hospital patient discharges.

EVIDENCE FOR UTILIZATION

French WJ. Trends in acute myocardial infarction management: use of the National Registry of Myocardial Infarction in quality improvement. Am J Cardiol2000 Mar 9;85(5A):5B-9B; discussion 10B-12B. PubMed

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness
Timeliness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

Discharges, 18 years of age and older, with a principal diagnosis of acute myocardial infarction (AMI)

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

Discharges, 18 years of age and older, with an International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Principal Diagnosis Code for acute myocardial infarction (AMI) as defined in Appendix A, Table 1.1, of the original measure documentation

Exclusions

- Patients less than 18 years of age
- Patients transferred to another acute care hospital or federal hospital on day of or day after arrival
- Patients received in transfer from an acute care facility where they were an inpatient or outpatient
- Patients received as a transfer from one distinct unit of the hospital to another distinct unit of the same hospital
- Patients received as a transfer from an emergency department of another hospital
- Patients discharged on day of arrival
- Patients who expired on day of or day after arrival
- Patients who left against medical advice on day of or day after arrival
- Patients with comfort measures only documented by a physician/advanced practice nurse/physician assistant (physician/APN/PA)
- Patients involved in clinical trials
- Patients with one or more of the following beta-blocker contraindications/reasons for not prescribing a beta-blocker documented in the medical record:
    - Beta-blocker allergy
    - Bradycardia (heart rate less than 60 beats per minute [bpm]) on arrival or within 24 hours after arrival while not on a beta-blocker
    - Heart failure on arrival or within 24 hours after arrival
    - Second- or third-degree heart block on electrocardiogram (ECG) on arrival or within 24 hours after arrival and does not have a pacemaker
    - Shock on arrival or within 24 hours after arrival
    - Other reasons documented by a physician/APN/PA for not giving a beta-blocker within 24 hours after hospital arrival

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition
Institutionalization

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions
Acute myocardial infarction (AMI) patients who received a beta-blocker within 24 hours after hospital arrival

Exclusions
None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

External comparison at a point in time
External comparison of time trends
Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

The core measure pilot project was a collaboration among The Joint Commission, five state hospitals associations, five measurement systems, and 83 hospitals from across nine states. Participating hospitals collected and reported data for acute myocardial infarction (AMI) measures from December 2000 to December 2001.

Core measure reliability visits were completed the summer of 2001 at a random sample of 16 participating hospitals across 6 states.

Preliminary pilot test data reveals a mean rate of 85% for this measure.

EVIDENCE FOR RELIABILITY/VALIDITY TESTING

The Joint Commission. A comprehensive review of development and testing for national implementation of hospital core measures. Oakbrook Terrace (IL): The Joint Commission; 40 p.

Identifying Information

ORIGINAL TITLE

AMI-6: beta-blocker at arrival.

MEASURE COLLECTION

National Hospital Quality Measures

MEASURE SET NAME

Acute Myocardial Infarction

SUBMITTER

Centers for Medicare & Medicaid Services
Joint Commission, The

DEVELOPER

Centers for Medicare & Medicaid Services/The Joint Commission

FUNDING SOURCE(S)

All external funding for measure development has been received and used in full compliance with The Joint Commission's Corporate Sponsorship policies, which are available upon written request to The Joint Commission.

COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE

The composition of the group that developed the measure is available at: http://www.jointcommission.org/NR/rdonlyres/40EDE16E-0ECC-45E0-8CEC-71C97FF515D0/0/CardiovascularConditionsClinicalAdvisoryPanel.pdf.

FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

Expert panel members have made full disclosure of relevant financial and conflict of interest information in accordance with the Joint Commission's Conflict of Interest policies, copies of which are available upon written request to The Joint Commission.

ENDORSER

National Quality Forum

INCLUDED IN

Hospital Compare
Hospital Quality Alliance
National Healthcare Disparities Report (NHDR)
National Healthcare Quality Report (NHQR)

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2000 Aug

REVISION DATE

2007 Oct

MEASURE STATUS

Please note: This measure has been updated. The National Quality Measures Clearinghouse is working to update this summary.

SOURCE(S)

Specifications manual for national hospital quality measures, version 2.3b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2007 Oct. various p.

MEASURE AVAILABILITY

The individual measure, "AMI-6: Beta-Blocker at Arrival," is published in "Specifications Manual for National Hospital Quality Measures." An update of this document is available from The Joint Commission Web site. Information is also available from the Centers for Medicare & Medicaid Services (CMS) Web site. Check The Joint Commission Web site and CMS Web site regularly for the most recent version of the specifications manual and for the applicable dates of discharge.

COMPANION DOCUMENTS

The following are available:

- A software application designed for the collection and analysis of quality improvement data, the CMS Abstraction and Reporting Tool (CART), is available from the CMS CART Web site. Supporting documentation is also available. For more information, e-mail CMS PROINQUIRIES at proinquiries@cms.hhs.gov.
- The Joint Commission. A comprehensive review of development and testing for national implementation of hospital core measures. Oakbrook Terrace (IL): The Joint Commission; 40 p. This document is available from The Joint Commission Web site.
- The Joint Commission. Attributes of core performance measures and associated evaluation criteria. Oakbrook Terrace (IL): The Joint Commission; 5 p. This document is available from The Joint Commission Web site.
- Hospital compare: a quality tool for adults, including people with Medicare. [internet]. Washington (DC): U.S. Department of Health and Human Services; 2005 [updated 2008 Mar 27]; [accessed 2008 May 22]. This is available from the Medicare Web site. See the related QualityTools summary.

NQMC STATUS

This NQMC summary was completed by ECRI on February 7, 2003. The information was verified by the measure developer on February 12, 2003. This NQMC summary was updated by ECRI on October 6, 2005 and on April 16, 2007. The information was verified by the measure developer on July 24, 2007. This NQMC summary was updated again by ECRI Institute on October 26, 2007.

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