

****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARD FOR HOSPITAL CARE****

Measure Information Form

Measure Set: Acute Myocardial Infarction (AMI)

Set Measure ID #: AMI-1

Performance Measure Name: Aspirin at Arrival

Description: Acute myocardial infarction (AMI) patients without aspirin contraindications who received aspirin within 24 hours before or after hospital arrival

Rationale: The early use of aspirin in patients with acute myocardial infarction results in a significant reduction in adverse events and subsequent mortality. Aspirin therapy provides a percent reduction in mortality that is comparable to thrombolytic therapy and the combination provides additive benefit for patients with ST-elevation myocardial infarction (ISIS-2, 1988) and is also effective in patients with non-ST-elevation myocardial infarction (Theroux, 1988 and RISC Group, 1990). National guidelines strongly recommend early aspirin for patients hospitalized with AMI (Braunwald, 2002 and Antman, 2004). Despite these recommendations, aspirin remains under-utilized in eligible older patients hospitalized with AMI (Jencks, 2000).

Type of Measure: Process

Improvement Noted As: An increase in the rate

Numerator Statement: AMI patients who received aspirin within 24 hours before or after hospital arrival

Included Populations: Not Applicable

Excluded Populations: None

Data Elements:

Aspirin Received Within 24 Hours Before or After Hospital Arrival

Denominator Statement: AMI patients without aspirin contraindications

Included Populations:

Discharges with an *ICD-9-CM Principal Diagnosis Code* for AMI as defined in Appendix A, Table 1.1

Excluded Populations:

- 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 another acute care hospital, including another emergency department
- 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, nurse practitioner, or physician assistant
- Patients with one or more of the following aspirin contraindications/reasons for not prescribing aspirin documented in the medical record:
 - o Active bleeding on arrival or within 24 hours after arrival
 - o Aspirin allergy
 - o Coumadin/warfarin as pre-arrival medication
 - o Other reasons documented by a physician, nurse practitioner, or physician assistant for not giving aspirin within 24 hours before or after hospital arrival

Data Elements:

- *Admission Date*
- *Admission Source*
- *Arrival Date*
- *Birthdate*
- *Comfort Measures Only*
- *Contraindication to Aspirin on Arrival*
- *Discharge Date*
- *Discharge Status*
- *ICD-9-CM Principal Diagnosis Code*
- *Transfer From Another ED*

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:

- Antman EM, Anbe DT, Armstrong PW, Bates ER, Green LA, Hand M, Hochman JS, Krumholz HM, Kushner FG, Lamas GA, Mullany CJ, Ornato JP, Pearle DL, Sloan MA, Smith SC Jr. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1999 Guidelines for the Management of Patients With Acute Myocardial Infarction). 2004. Available at www.acc.org/clinical/guidelines/stemi/index.pdf
- Braunwald E, Antman EM, Beasley JW, Califf RM, Cheitlin MD, Hochman JS, Jones RH, Kereiakes D, Kupersmith J, Levin TN, Pepline CJ, Schaeffer JW, Smith EE III, Steward DE, Theroux P. ACC/AHA 2002 guideline update for the management of patients with unstable angina and non-ST-segment elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on the Management of Patients with Unstable Angina). 2002. Available at www.acc.org/clinical/guidelines/unstable/unstable.pdf
- Krumholz HM, Anderson JL, Brooks NH, Fesmire FM, Lambrew CT, Landrum MB, Weaver WD, Whyte J. ACC/AHA Clinical Performance Measures for Adults With ST-Elevation and Non-ST-Elevation Myocardial Infarction: a report of the ACC/AHA Task Force on Performance Measures (ST-Elevation and Non-ST-Elevation Myocardial Infarction Performance Measures Writing Committee). *J Am Coll Cardiol* 2006;47:236–65. Available at <http://www.acc.org> and <http://www.americanheart.org>.
- Randomized trial of intravenous streptokinase, oral aspirin, both or neither among 17,187 cases of suspected acute myocardial infarction: ISIS-2. ISIS-2 (Second International Study of Infarct Survival) Collaborative Group. *Lancet*. 1988 Aug 13;2(8607):349-60.
- 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.
- Risk of myocardial infarction and death during treatment with low dose aspirin and intravenous heparin in men with unstable coronary artery disease. The RISC Group. *Lancet* 1990; 336(8719):827-830.
- Theroux P, Ouimet H, McCans J et al. Aspirin, heparin, or both to treat acute unstable angina. *N Engl J Med* 1988; 319(17):1105-1111.

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