

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

Measure Information Form

Measure Set: Acute Myocardial Infarction

Set Measure ID#: AMI-8

Performance Measure Name: Mean Time to PCI

Description: Mean time from arrival to percutaneous coronary intervention (PCI) in patients with ST segment elevation or left bundle branch block (LBBB) on the electrocardiogram (ECG) performed closest to hospital arrival time.

Rationale: The early use of primary angioplasty in patients with acute myocardial infarction who present with ST-segment elevation or LBBB results in a significant reduction in mortality and morbidity. The earlier primary coronary intervention is provided, the more effective it is (Brodie, 1998). National guidelines recommend the prompt initiation of PCI in patients presenting with ST elevation myocardial infarction (Ryan, 1999). Despite these recommendations, few older patients hospitalized with AMI receive primary angioplasty within a timely manner (Jencks, 2000).

Type of Measure: Process

Improvement Noted As: A decrease in the mean value

Continuous Variable Statement: Time (in minutes) from hospital arrival to PCI in patients with ST segment elevation or LBBB on the ECG performed closest to hospital arrival.

Included Populations: Discharges with:

- An *ICD-9-CM Principal Diagnosis Code* for AMI as defined in Appendix A, Table 1.1
AND
- PCI (*ICD-9-CM Principal and Other Procedure Codes* for PCI as defined in Appendix A, Table 1.2)
AND
- ST segment elevation or LBBB on the ECG performed closest to hospital arrival
AND
- PCI performed within 24 hours after hospital arrival

Excluded Populations:

- Patients less than 18 years of age
- Patients received in transfer from another acute care hospital, including another emergency department
- Patients administered thrombolytic agents

Data Elements:

- *Admission Date*
- *Admission Source*
- *Arrival Date*
- *Arrival Time*
- *Birthdate*
- *First PCI Date*
- *First PCI Time*
- *ICD-9-CM Other Procedure Codes*
- *ICD-9-CM Principal Diagnosis Code*
- *ICD-9-CM Principal Procedure Code*
- *Initial ECG Interpretation*
- *Thrombolytic Administration*
- *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: The mean time to PCI should be analyzed in conjunction with the measure rate for PCI received within 120 minutes of hospital arrival (AMI-8a). These measures, used together, will assist in understanding the mean time to PCI, and will identify the number of AMI patients that are receiving PCI within 120 minutes of hospital arrival and potential opportunities for improvement to decrease the mean time to PCI.

Sampling: Yes, for additional information see the Sampling section

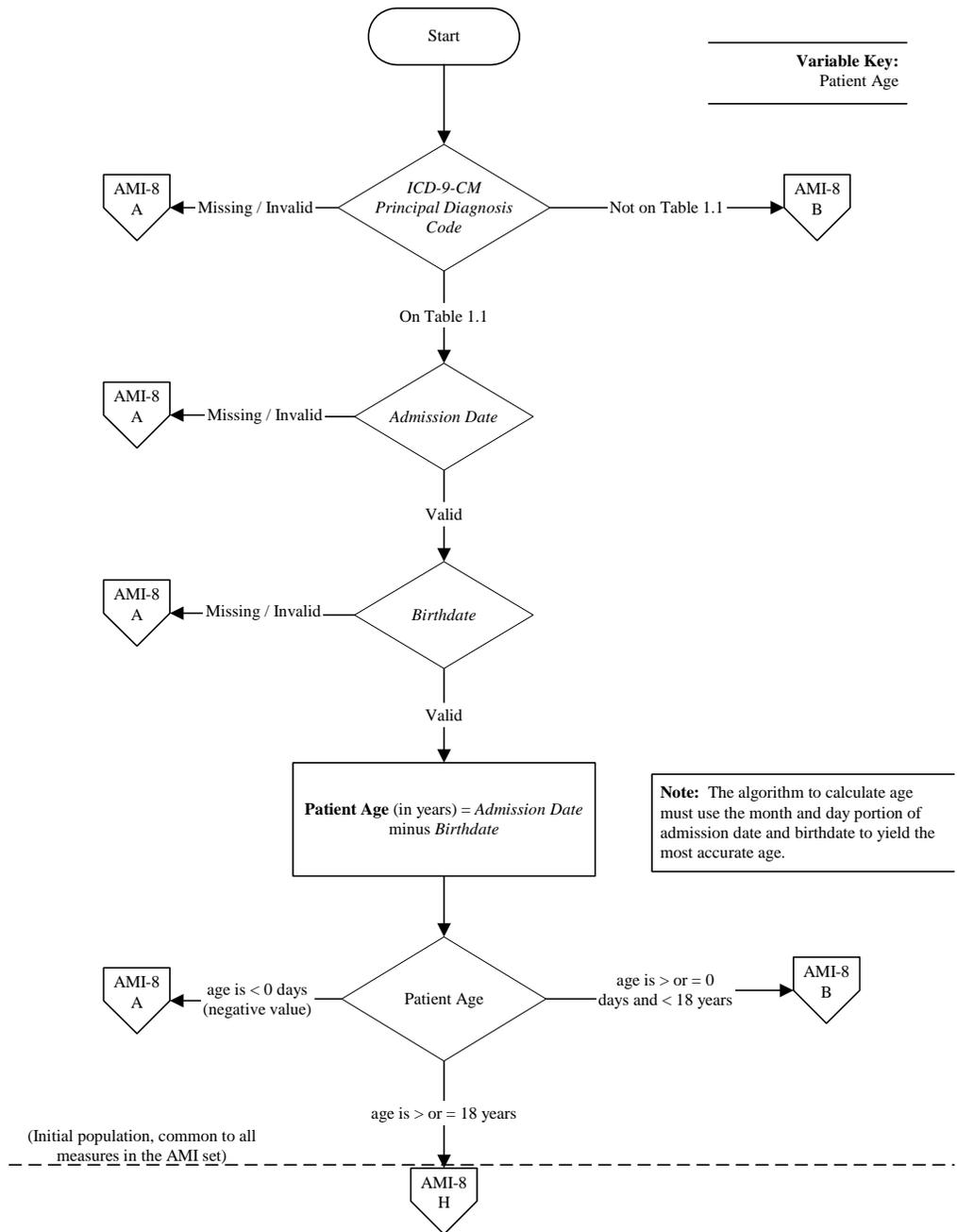
Data Reported As: Aggregate measure of central tendency

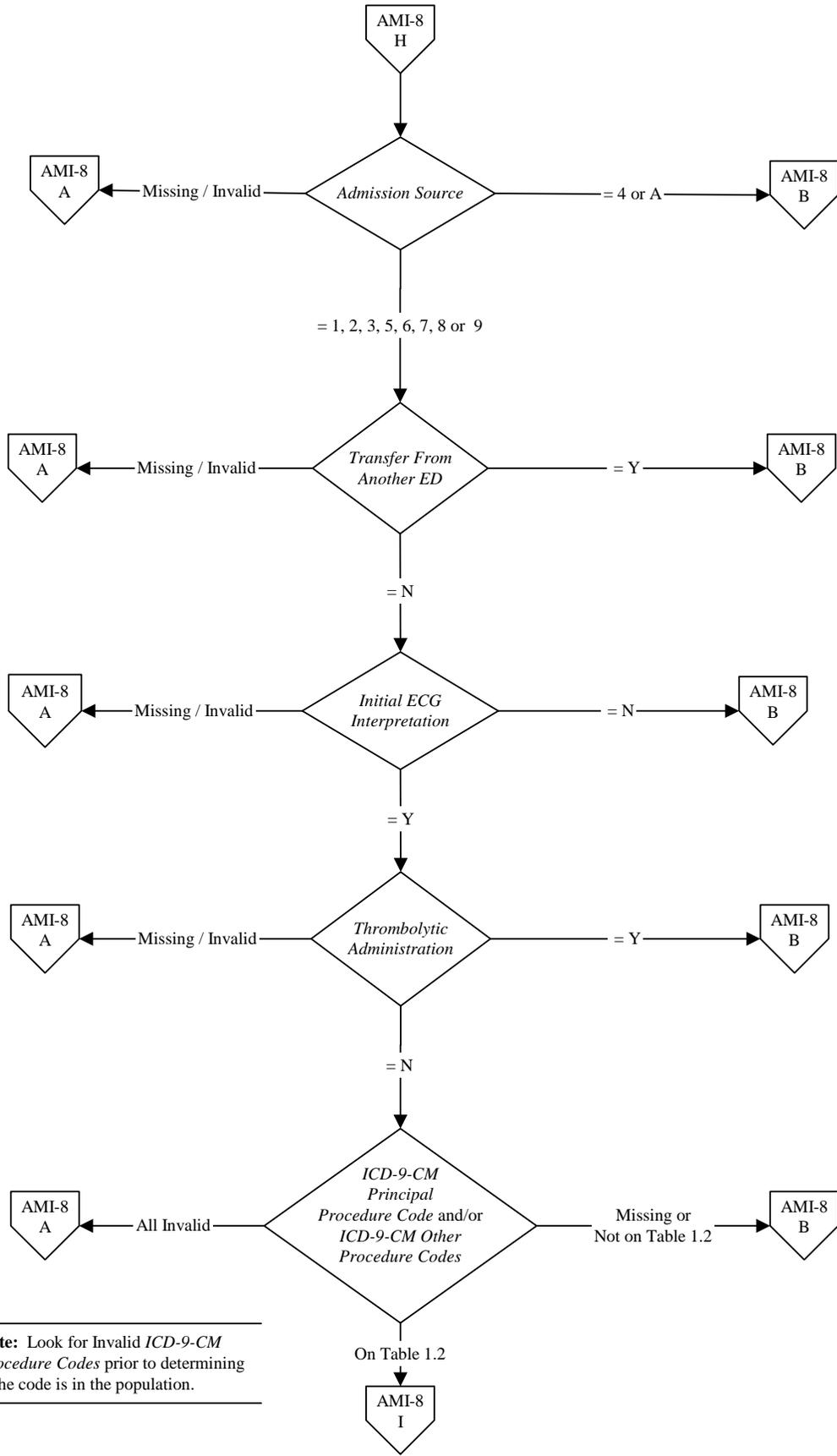
Selected References:

- Brodie BR, Stuckey TD, Wall TC, Kissling G, Hansen CJ, Muncy DB, Weintraub RA, Kelly TA. Importance of time to reperfusion for 30-day and late survival and recovery of left ventricular function after primary angioplasty for acute myocardial infarction. *J Am Coll Cardiol*. 1998;32:1312-9.
- 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.
- Ryan TJ, Antman EM, Brooks NH, Califf RM, Hillis LD, Hiratzka LF, Rapaport E, Riegel B, Russell RO, Smith EE III, Weaver WD. 1999 update: ACC/AHA guidelines for the management of patients with acute myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Management of Acute Myocardial Infarction). *J Am Coll Cardiol* 1999; 34:890-911. Available at <http://www.acc.org> and <http://www.americanheart.org>.
- Ryan, TJ, Anderson, JL, Antman, EM, Braniff, BA, Brooks NH, Califf, RM, Hillis LD, Hiratzka L F, Rapaport E, Riegel BJ, Russell RO, Smith EE III, Weaver WD. ACC/AHA guidelines for the management of patients with acute myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Management of Acute Myocardial Infarction). *J Am Coll Cardiol* 1996;28:1328-1428. Available at <http://www.acc.org> and <http://www.americanheart.org>.

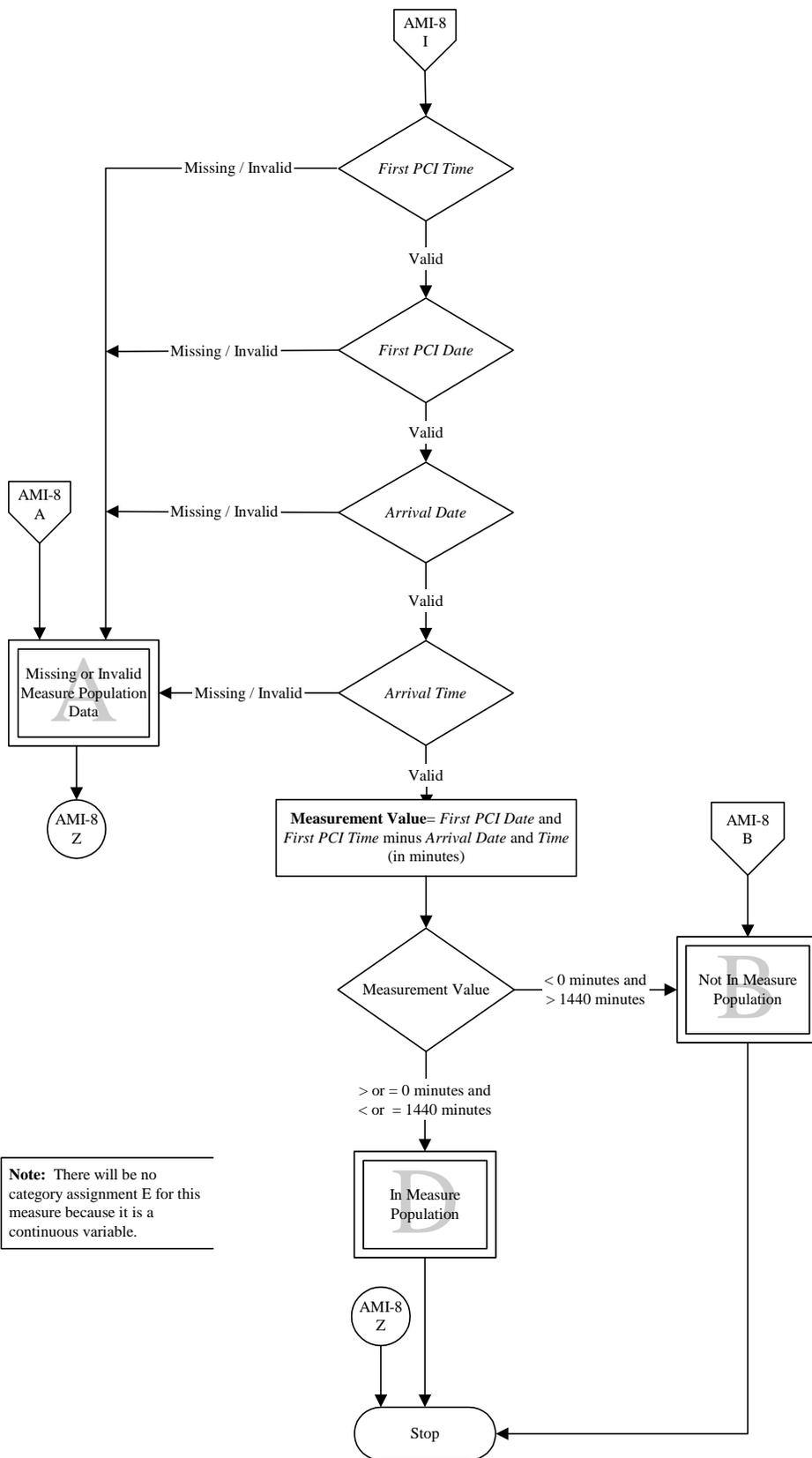
AMI-8: Mean Time to PCI

Continuous Variable Statement: Time (in minutes) from hospital arrival to PCI in patients with ST segment elevation or LBBB on the ECG performed closest to hospital arrival.





Note: Look for Invalid *ICD-9-CM Procedure Codes* prior to determining if the code is in the population.



Note: There will be no category assignment E for this measure because it is a continuous variable.