NATIONAL QUALITY FORUM

CARDIOVASCULAR ENDORSEMENT MAINTENANCE, PHASE I STEERING COMMITTEE MEETING

February 15-16, 2011

***Committee Members Present*:** Mary George, MD, MSPH (co-chair); Raymond Gibbons, MD (co-chair); Carol Allred, RN; Rochelle Ayala, MD, FACP; Leslie Cho, MD; Ann de Velasco, RN; Dianne Jewell, PT, DPT, PhD, CCS; Dana King, MD MS; Bruce Koplan, MD, MPH; Thomas Kottke, MD, MSPH; David Magid, MD, MPH; George Philippides, MD, FACC; Jon Rasmussen, PharmD; Devorah Rich, PhD; Andrea Russo, MD; Mark Sanz, MD; Sidney Smith, Jr., MD; Roger Snow, MD, MPH; Christine Stearns, JD, MS; Kathleen Szumanski, MSN, RN, NE-BC; Suma Thomas, MD, FACC

***NQF Staff Present*:** Helen Burstin, MD, MPH (Senior Vice President, Performance Measures); Karen Pace, PhD, RN (Senior Director, Performance Measures); Heidi Bossley, MSN, MBA (Managing Director of Consensus Development Process); Reva Winkler, MD, MPH (Project Senior Advisor); Ashley Morsell, MPH (Program Manager); Kathryn Streeter, MS (Program Manager)

Others Present: Susannah Bernheim, MD; John Bott, MSSW, MBA; Dale Bratzler, DO, MPH; Sheryl Davies, MA; Joseph Drozda, Jr., MD; Susan Fitzgerald, RN, MBA; Jeffrey Geppert, EdM, JD; Rebecca Jones, MSN, RN; Marjorie King, MD, FACC, FACCVPR; Harlan Krumholz, MD; Steven Lichtman, EdD, FACCVPR; Karen Lui, RN, MS, FACCVPR; Frederick Masoudi, MD, MSPH; Kristyne McGuinn, MHS; Collette Pitzen, RN, BSN; Matthew Roe, MD, MHS; Robert Schmitz, PhD; Anne Snowden, MPH; John Spertus, MD, MPH; Randy Thomas, MD, FACCVPR; Samantha Tierny, MPH; Manasi Tirodkar, PhD, MS; Marian Wrobel, PhD.

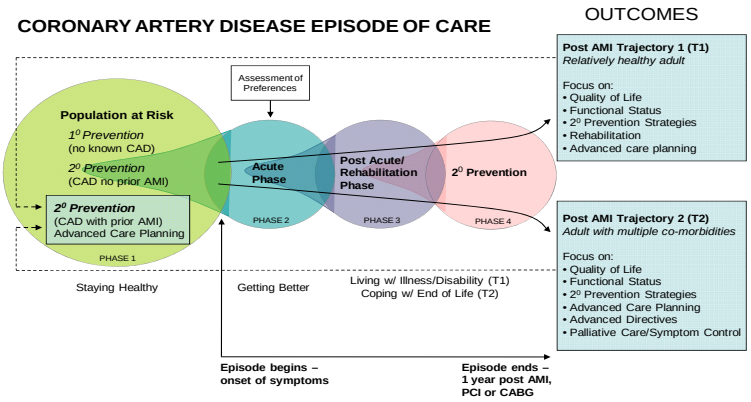
The full transcripts and audio recordings from the meeting can be found here.

MEETING PROCESSS

Drs. Gibbons, George, and Winkler welcomed the Cardiovascular Steering Committee members and thanked them for their participation. Ann Hammersmith, NQF's general counsel, led the Committee members through introductions and disclosures. None of the Committee members disclosed involvement with the measures to be evaluated in this project.

PATIENT-FOCUSED EPISODE OF CARE FRAMEWORK FOR CORONARY ARTERY DISEASE

Dr. Winkler reviewed the patient-focused episode of care framework for patients with coronary artery disease to provide context for evaluating measures in Phase I of the project.



Measure review was organized around the elements of the framework, that is, secondary prevention, acute phase (emergency department, hospitalization, and percutaneous coronary intervention), and rehabilitation.

EVALUATION OF CARDIOVASCULAR MEASURES

The Cardiovascular Steering Committee evaluated 10 new measures and 24 measures undergoing maintenance review against NQF's standard evaluation criteria. To facilitate the evaluation, the committee and candidate measures were divided into four groups for preliminary review of the subcriteria. Ratings for the subcriteria were collected from each group using a Survey Monkey tool and provided to the entire Committee during discussion.

Many of the measures under review were very similar. The Committee was advised that the evaluation would proceed according to the following steps:

- evaluating against the criteria and determining whether an individual measure meets the criteria for endorsement;
- identifying competing measures and selection of "best in class;"
- harmonizing related measures; and
- making final recommendations.

The Measures

The summary of the evaluation of measures reviewed, along with the Steering Committee's votes and rationale, are presented in the tables below. Questions to and answers from the measure developers also are included.

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Coronary Artery Disease (CAD)—Secondary Prevention

- 0073 IVD Blood pressure management
- 1486 CAD Blood pressure management (no testing)
- 0068 IVD Use of aspirin or antithrombotics
- 0067 CAD Antiplatelet therapy
- 0075 IVD Complete lipid profile and LDL control <100
- 0074 CAD Drug therapy
- 0066 CAD ACE/ARB therapy
- 0070 CAD Beta blocker—prior MI
- 0071 AMI Persistence of BB therapy
- 0065 CAD Symptoms and assessment
- 1489 CAD Symptom management
- 0076 Optimal vascular care

Acute Myocardial Infarction (AMI)—Emergency Department (ED)

- 0289 Median to ECG
- 0132 Aspirin at arrival for AMI
- 0286 Aspirin at arrival
- 0163 Primary PCI within 90 minutes of arrival
- 0164 Fibrinolytic therapy received within 30 minutes
- 0288 Fibrinolytic therapy received within 30 minutes of ED arrival
- 0287 Median time to fibrinolysis
- 0290 Median time to transfer to another facility

AMI—HOSPITAL

- 0160 Beta blocker prescribed at discharge (retire)
- 0142 Aspirin prescribed at discharge for AMI (retire)
- 0137 ACEI/ARB at discharge for AMI
- 961 AMI hospital composite
- 0230 AMI 30-day mortality
- 0282 Angina without procedure (PQI 13)

Percutaneous Coronary Interventions (PCI)

- 0355 Bilateral cardiac catheter rate (IQI 25)
- 0133 PCI mortality
- 1495 P2Y12 inhibitor at discharge for PCI
- 1493 Aspirin at discharge for PCI
- 1498 Statins at discharge for PCI

Cardiac Rehabilitation

- 1496 Cardiac rehab—safety standards
- 1494 Cardiac rehab—response to therapy
- 1497 Cardiac rehab—risk for adverse events
- 906 Cardiac rehab composite (ACCF/AACPR)

Overarching Issues

During the Steering Committee's discussion of the measures, several overarching issues emerged and were addressed.

Multiple related measures

The Committee noted that many measures were very similar, such as use of antithrombotics or beta blockers for secondary prevention. The Committee supported consolidating the measures to focus on fewer measures and foster harmonization.

Harmonization

Because of the large number of similar and related measures, the Committee identified the need for harmonization for the majority of measures under review.

Conflicting guidelines

The Committee noted that similar measures for intermediate outcomes such as blood pressure (BP) targets varied based on conflicting guidelines. It recommended that all NQF-endorsed measures align to a single national guideline, such as the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC) for blood pressure measures and National Heart, Lung, and Blood Institute's (NHLBI) Expert Panel on the Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel [ATP]) for lipids.

Composite measures

The Committee encouraged the use of more "all-or-none" composite measures for groups of processes of care, such as discharge medications for AMI and PCI, rather than single-process measures to encourage higher performance for the individual patient.

Retirement of measures

The Committee was asked to review three measures previously endorsed by NQF that have been retired by the developer:

- 0072 CAD Beta-blocker treatment after heart attack (National Committee for Quality Assurance [NCQA])
- 0161 AMI inpatient mortality (risk-adjusted) (Joint Commission [JC])

- 0165 Percutaneous coronary intervention (PCI) volume (American College of Cardiology [ACC])

The developers are no longer maintaining these measures. The Committee agreed that better measures have replaced these in NQF's portfolio.

The Committee also noted that several endorsed measures that have been in use for many years are reporting very high national performance with little room for additional improvement. The Committee recommended that these measures be retired and that NQF develop criteria for retiring measures.

Medication measures

Committee members noted that medication measures that evaluate adherence, such as medication possession ratio, are more meaningful measures of secondary prevention compared to those that capture a single prescription or dispensing of a medication.

Disparities

The Committee was displeased with the lack of data on disparities presented in most measure submissions. It demanded that disparities data be presented before final recommendation for endorsement.

Measure evaluations

LEGEND: Y- 'Yes'; N-'No'; C- Completely; P- Partially; M-Minimally; N-Not at all

SECONDARY PREVENTION MEASURES

0073 IVD Blood pressure management
Description: The percentage of patients 18 years of age and older who were discharged alive with acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI) from January 1–November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had BP reported as under control <140/90. Numerator Statement: The numerator is the number of patients in the denominator whose most recent blood pressure is adequately controlled during the measurement year. For a patient's BP to be controlled, both the systolic and the diastolic BP must meet the desired threshold of <140/90 mm Hg. Denominator Statement: Patients 18 years or older as of December 31 of the measurement year who were discharged alive for AMI, CABG or PCI on or between January 1 and November 1 of the year prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to the measurement year. Exclusions: All patients with ESRD, who are pregnant or who had an admission to a non-acute inpatient setting during the measurement year. Adjustment/Stratification: No risk adjustment necessary N/A Level of Analysis: Clinicians: Individual; Clinicians: Group Type of Measure: Outcome Data Source: Paper medical record/flowsheet; Electronic administrative data/claims; Electronic clinical data; Electronic Health/Medical Record NA Measure Steward: NCQA

0073 IVD Blood pressure management

Does the Measure Meet Criteria for Endorsement: Deferred (Based on measure as submitted: Y -8, No-12)
Rationale:
The Steering Committee deferred final evaluation of this measure citing several concerns:

- Remove 140/80—lack of evidence for this target. (140/90 only is in retooled EHR specifications.)
- Exclusions for elderly patients
- Exclusions for patient's intolerance of lower BP.

If Applicable, Conditions/Questions for Developer:

- Developer removed the BP <140/80 specification.

1. Importance to Measure and Report: Y-21; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale: Extensive evidence of benefit for achieving blood pressure control in patients with ischemic vascular disease.

2. Scientific Acceptability of Measure Properties: C-0; P-16; M-4; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- What is the evidence for BP target of <140/80?
- Evidence base for elderly population and benefit of taking their systolic to less than 140 is lacking.
- Home blood pressure measurements are not being accepted, and the absence of that is considered a real problem.
- Measure submission included evidence supporting importance of excluding end stage renal disease patients from this measure, but they are not listed as exclusion in the measure specifications.

3. Usability: C-4; P-15; M-1; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- Measuring blood pressure only once in the year after a procedure is thought to be not very meaningful in patients who have fluctuated.
- Gap demonstrated with the 10th percentile being 28 and the 90th being 62.
- Step-wise process for identifying patients in medical records. (This submission is a hybrid specification and a physician-level measure.))

4. Feasibility: C-5; P-13; M-2; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- Burden for public reporting purposes to have it as a hybrid measure if only 50 percent of physicians' offices use electronic health records.

1486 Chronic stable coronary artery disease: blood pressure control

Description: Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period with a blood pressure <140/90 mm Hg OR patients with a blood pressure =140/90 mm Hg and prescribed 2 or more antihypertensive medications during the most recent office visit
Numerator Statement: Patients with a blood pressure <140/90 mm Hg* OR
Patients with a blood pressure =140/90 mm Hg and prescribed** 2 or more anti-hypertensive medications during the most recent office visit
*BP value used for measure calculation:
•Must be specified in medical record if >1 value (systolic/diastolic) recorded, and
•Must be value upon which treatment decision was based, and
•May be obtained by measurement during office visit or review of a home blood pressure log, OR of a 24-hour ambulatory blood pressure monitor, but the value on which the treatment decision is being made and which might represent the average of more than 1 reading must be documented as such in the medical record
**Prescribed may include prescriptions given to the patient for two or more anti-hypertensive medications at most recent office visit OR patient already taking 2 or more anti-hypertensive medications as documented in current medication list. (Each anti-hypertensive component in a combination medication should be counted individually.)

1486 Chronic stable coronary artery disease: blood pressure control

Instructions:
All patients aged 18 years and older with a diagnosis of coronary artery disease must have a measurement of blood pressure recorded in order to satisfy the measure.
Report number of patients for 1st numerator component (outcome) AND
Report number of patients for 2nd numerator component (process) AND
Report total number of patients for all numerator components
Denominator Statement: All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period
Exclusions: Documentation of medical reason(s) for not prescribing two or more antihypertensive medications (e.g., allergy, intolerant, postural hypotension, other medical reasons)
Documentation of patient reason(s) for not prescribing two or more anti-hypertensive medications (e.g., patient declined, other patient reasons)
Documentation of system reason(s) for not prescribing two or more antihypertensive medications (e.g., financial reasons, other reasons attributable to the healthcare delivery system)
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Clinicians: Individual; Clinicians: Group Type of Measure: Process
Data Source: Electronic administrative data/claims; Electronic clinical data; Electronic Health/Medical Record; Registry data
Measure Steward: American Medical Association (AMA)

Does the Measure Meet Criteria for Endorsement: Y-8; N-12; A-0
Rationale:
- Testing not completed.

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-19; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:
- Questions regarding scientific evidence supporting measure specifications.

2. Scientific Acceptability of Measure Properties: C-2; P-4; M-11 N-4
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:
- Errors in measure submission form were addressed: developers confirmed that the numerator includes patients with BP ≥140/90.
- Testing has not been completed. No data were provided.

3. Usability: C-2; P-5; M-12; N-2
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:
- Clear need for harmonization.
- Developer stated the measure will be revised to reflect guidelines changes or updates as needed.

4. Feasibility: C-11; P-9; M-0; N-1
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:
- Measure includes exceptions that address end stage renal disease and elderly patients.

0068 Ischemic vascular disease (IVD): use of aspirin or another antithrombotic

Description: The percentage of patients 18 years and older with ischemic vascular disease who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG), or percutaneous coronary interventions (PCI) from January 1-November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had the following during the measurement year.
-Use of aspirin or another antithrombotic
Numerator Statement: Use of aspirin or another antithrombotic.
Electronic specification:
Documentation of use of aspirin or another antithrombotic during the measurement year. Refer to TTable IVD-D to identify the code for

0068 Ischemic vascular disease (IVD): use of aspirin or another antithrombotic

prescribed oral anti-platelet therapy. Refer to Table IVD-E to identify medications for oral anti-platelet therapy.
Medical Record Specification:
Documentation of use of aspirin or another antithrombotic during the measurement year. At a minimum, documentation in the medical record must include a note indicating the date on which aspirin or another antithrombotic was prescribed or documentation of prescription from another treating physician.
Denominator Statement: Patients 18 years or older as of December 31 of the measurement year discharged alive for AMI, CABG, or PCI on or between January 1 and November 1 of the year prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to the measurement year.
Exclusions: None
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Clinicians: Individual; Clinicians: Group Type of Measure: Process
Data Source: Paper medical record/flowsheet; Electronic administrative data/claims; Electronic clinical data; Electronic Health/Medical Record NA
Measure Steward: NCQA

Does the Measure Meet Criteria for Endorsement: Y-20; N-1; A-0
Rationale:

- Important effective care process.
- Gap in care— further opportunity for improvement.

If Applicable, Conditions/Questions for Developer:
Title and description do not match numerator—developer clarified the description as above.

1. Importance to Measure and Report: Y-21; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Performance gap demonstrated. The 25th percentile has not broken 90%.
- Cost-effective.

2. Scientific Acceptability of Measure Properties: C-2; P-14; M-4; N-1
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- Clearly specified with no significant exclusions.
- Sufficient supplemental reliability and validity documentation was provided.
- Title and description do not match numerator.
- According to the measure developer, exclusions for clinical reasons thought to have been less than 5% aren't listed as an exclusion.

3. Usability: C-12; P-7; M-0; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- Overlap with other measures using aspirin or other antithrombotics.

4. Feasibility: C-13; P-7; M-1; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- Data will be generated as a byproduct of the care process during healthcare delivery as well as electronically.
- Important to note this measure has been retooled for meaningful use.

0067 Chronic stable coronary artery disease: antiplatelet therapy

Description: Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who were prescribed aspirin or clopidogrel.
Numerator Statement: Patients who were prescribed aspirin or clopidogrel* within a 12-month period.
*Prescribed may include prescription given to the patient for aspirin or clopidogrel at one or more visits in the measurement period OR

0067 Chronic stable coronary artery disease: antiplatelet therapy

patient already taking aspirin or clopidogrel as documented in current medication list.
Denominator Statement: All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period.
Exclusions: Documentation of medical reason(s) for not prescribing aspirin or clopidogrel (e.g., allergy, intolerant, receiving other thienopyridine therapy, bleeding coagulation disorders, receiving warfarin therapy, other medical reasons).
Documentation of patient reason(s) for not prescribing aspirin or clopidogrel (e.g., patient declined, other patient reasons).
Documentation of system reason(s) for not prescribing aspirin or clopidogrel (e.g., lack of drug availability, other reasons attributable to the healthcare system).
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Clinicians: Individual; Clinicians: Group
Type of Measure: Process
Data Source: Electronic administrative data/claims; Electronic clinical data; Electronic Health/Medical Record; Registry data. This measure, in its previous specifications, is currently being used in the ACCF PINNACLE registry for the outpatient office setting.
Measure Steward: AMA

Does the Measure Meet Criteria for Endorsement: Y-21; N-0; A-0
Rationale:

- High impact aspect of healthcare.
- Aspirin as part of a secondary prevention plan is a very important and proven intervention.
- Easy to understand and use this metric.

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-21; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale: 1 a.

- Secondary prevention of coronary artery disease is a high impact aspect of healhcare.
- Quality gap has been extablished.
- This measured process leads to improved health outcomes.

2. Scientific Acceptability of Measure Properties: C-16; P-5; M-0; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- Well-specified measure.
- Important to monitor the "other" exclusion option to prevent increasing percentages over time that may be misleading.

3. Usability: C-16; P-5; M-0; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- Meaningful and easily understandable to providers and consumers.
- Not used yet in public reporting initatives. AHA Get With The Guidelines uses this metric.
- Harmonization will need to be addressed.

4. Feasibility: C-19; P-2; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- Data elements are readily available and retreiveable.
- Exlcusions are available with routine evaluation of the data that exist.
- Retooled eMeasure.

0075 IVD: Complete lipid profile and LDL control <100

Description: The percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG), or percutaneous coronary interventions (PCI) from January 1–November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to measurement year, who had each of the following during the measurement year.
• Complete lipid profile

0075 IVD: Complete lipid profile and LDL control <100

• LDL-C control <100 mg/dL

Numerator Statement: A complete lipid profile performed during the measurement year. A LDL-C control result of <100mg/dL using the most recent LDL-C screening test during the measurement year.

Denominator Statement: Patients 18 years of age an older as of December 31 of the measurement year who were discharged alive for AMI, CABG, or PCI on or between January 1 and November 1 of the year prior to the measurement year or who had a diagnosis of IVD during both the measurement year and the year prior to the measurement year.

Exclusions: None

Adjustment/Stratification: no risk adjustment necessary NA NA

Level of Analysis: Clinicians: Individual; Clinicians: Group Type of Measure: Outcome

Data Source: Paper medical record/flowsheet; Electronic administrative data/claims; Electronic clinical data; Electronic Health/Medical Record; Lab data NA

Measure Steward: NCQA

Does the Measure Meet Criteria for Endorsement: Y-21; N-0; A-0

Rationale:

- LDL <100 in IVD is an accepted standard backed by evidence.
- There is a gap in performance.
- The measurement is being done, it is feasible, and improvement would likely lead to health benefits.

If Applicable, Conditions/Questions for Developer:

- Clarify age inclusion. Response: The submission has been corrected in the description to read 18 years of age and older.
- What about intolerance to statins? Response: While some exclusions to statins are coded and included in administrative data and are relatively easily accessible for chart review, a recent paper by Kmetik et al., indicates that MOST exclusions are relative so that the majority of patients who have "contraindications" to statins are actually ON statins. Many of the relative contraindications (muscle cramping, GI disturbance, etc.) appear to be either minor in nature, or can be overcome by use of different medications. In terms of exceptions (patients removed from the denominator by the clinician at the time of service), the same research showed that the rates of physician added exceptions were quite low, inconsistent in rate, and many had to come from extensive manual chart review even from an EMR.

1. Importance to Measure and Report: Y-19; N-0

(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)

Rationale:

- Evidence-based, intermediate outcome.

2. Scientific Acceptability of Measure Properties: C-15; P-6; M-0; N-0

(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)

Rationale:

- Reliability testing is in process and currently not available.
- Clarifications needed in the specifications for the target population's age: 18 years and older or 18 years to 75 years.

3. Usability: C-20; P-0; M-0; N-0

(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)

Rationale:

- Already in use as part of HEDIS measures and will need to be harmonized with other lipid measures.
- Data is generated as a byproduct of care processes during delivery and is available as electronic data.

4. Feasibility: C-20; P-1; M-0; N-0

(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)

Rationale:

- Measure has been retooled for EHR meaningful use.

0074 Chronic stable coronary artery disease: lipid control

Description: Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who have a LDL-C result <100 mg/dL OR patients who have a LDL-C result ≥100 mg/dL and have a documented plan of care to achieve LDL-C <100mg/dL, including at a minimum the prescription of a statin.

Numerator Statement: Patients who have a LDL-C result <100 mg/dL OR

0074 Chronic stable coronary artery disease: lipid control

Patients who have a LDL-C result ≥100 mg/dL and have a documented plan of care1 to achieve LDL-C <100 mg/dL, including at a minimum the prescription of a statin within a 12-month period.
Definitions:
*Documented plan of care may also include: documentation of discussion of lifestyle modifications (diet, exercise); scheduled re-assessment of LDL-C.
*Prescribed may include prescription given to the patient for a statin at one or more visits in the measurement period OR patient already taking a statin as documented in current medication list.
Numerator Instructions:
The first numerator option can be reported for patients who have a documented LDL-C < 100 mg/dL at any time during the measurement period.
Denominator Statement: All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period.
Exclusions: Documentation of medical reason(s) for not prescribing a statin (e.g., allergy, intolerance to statin medication(s), other medical reasons).
Documentation of patient reason(s) for not prescribing a statin (e.g., patient declined, other patient reasons).
Documentation of system reason(s) for not prescribing a statin (e.g., financial reasons, other system reasons).
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Clinicians: Individual; Clinicians: Group Type of Measure: Process
Data Source: Electronic administrative data/claims; Electronic clinical data; Electronic Health/Medical Record; Registry data. This measure, in its previous specifications, is currently being used in the ACCF PINNACLE registry for the outpatient office setting.
Measure Steward: AMA

Does the Measure Meet Criteria for Endorsement: Y-17; N-4; A-0
Rationale:

- Opportunity for improvement.
- Evidence-based.

If Applicable, Conditions/Questions for Developer:

- How are patients who have not had an LDL test performed counted in the measure? Response: All patients aged 18 years and older with a diagnosis of coronary artery disease must have an LDL-C recorded in order to satisfy the measure. The measure specifications will be clarified that patients who have not had an LDL test performed would not meet the measure.

1. Importance to Measure and Report: Y-20; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Considerable evidence in terms of opportunity for improvement and impact.
- Performance gaps demonstrated across insured populations and across provider.
- A process measure based on clinical guidelines.

2. Scientific Acceptability of Measure Properties: C-9; P-8; M-4; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- Concerns regarding patient preference type or patient refusal type of exclusion; however, in general, exceptions are used rarely.

3. Usability: C-6; P-11; M-4; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- Deomonstrated through multiple quality improvement programs.
- Not in use for public reporting at this time, but will be in the future.
- Additive values need to be addressed, and measure will need to be harmonized with other lipid measures.

4. Feasibility: C-8; P-11; M-1; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- Data can be extracted electronically.

0066 Chronic stable coronary artery disease: ACE inhibitor or ARB therapy—diabetes or left ventricular systolic dysfunction (LVEF <40%)

Description: Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have diabetes or a current or prior LVEF <40% who were prescribed ACE inhibitor or ARB therapy.
Numerator Statement: Patients who were prescribed ACE inhibitor or ARB therapy.*
*Prescribed may include prescription given to the patient for ACE inhibitor or ARB therapy at one or more visits in the measurement period OR patient already taking ACE inhibitor or ARB therapy as documented in current medication list.
Denominator Statement: All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have diabetes or a current or prior LVEF <40%.
Exclusions: Documentation of medical reason(s) for not prescribing ACE inhibitor or ARB therapy (e.g., allergy, intolerant, pregnancy, renal failure due to ACE inhibitor, diseases of the aortic or mitral valve, other medical reasons).
Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB therapy (e.g., patient declined, other patient reasons.)
Documentation of system reason(s) for not prescribing ACE inhibitor or ARB therapy (e.g., lack of drug availability, other reasons attributable to the healthcare system).
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Clinicians: Individual; Clinicians: Group
Type of Measure: Process
Data Source: Electronic administrative data/claims; Electronic clinical data; Electronic Health/Medical Record; Registry data. This measure, in its previous specifications, is currently being used in the ACCF PINNACLE registry for the outpatient office setting.
Measure Steward: AMA

Does the Measure Meet Criteria for Endorsement: Y-21; N-0; A-0
Rationale: An important clinical measure; however, a more stringent numerator criteria (i.e., must have X number of refills within defined time frame) would make it a stronger measure.

If Applicable, Conditions/Questions for Developer:

- Why are patients with CAD + hypertension or CAD + chronic kidney disease not included—these are also indications for ACEI/ARB use? Response: Whereas the guidelines on which these measures are based list CAD with heart failure or diabetes as specific indications for ACEI, they do not explicitly recommend ARB for patients with HTN or CKD. Because this measure combines ACEI and ARB therapy, including HTN or CKD in the denominator would be problematic with respect to the underlying guideline support for the measure.

1. Importance to Measure and Report: Y-18; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Very high impact and strong evidence for this measure.

2. Scientific Acceptability of Measure Properties: C-12; P-8; M-1; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- Why not include patients with coronary artery disease and hypertension, and patients with coronary artery disease and chronic kidney disease?
- "Most recent LVEF" would be better than "prior LVEF," particularly in recovery from STEMI.
- This is not a patient adherence measure but a provider adherence measure.
- A single point estimate is not a great way to measure adherence.

3. Usability: C-12; P-9; M-0; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- Not yet publicly reported; however, it does have signifigant amount of value if approved as it relates to clinical care.
- This measure will need to be harmonized with hospital measures.

4. Feasibility: C-13; P-8; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- Data for this measure are easily extractable.
- Concerns about relative contraindications; however, including an explicit list of contraindications increases abstraction burden and raises clinical acceptability issues.

0070 Chronic stable coronary artery disease: beta-blocker therapy—prior myocardial infarction (MI) or left ventricular systolic dysfunction (LVEF <40%)

Description: Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have prior MI or a current or prior LVEF <40% who were prescribed beta-blocker therapy.
Numerator Statement: Patients who were prescribed* beta-blocker therapy.**
*Prescribed may include prescription given to the patient for beta-blocker therapy at one or more visits in the measurement period OR patient already taking beta-blocker therapy as documented in current medication list.
** Beta-blocker therapy:
•For patients with prior MI, no recommendations or evidence cited in current chronic stable angina guidelines for preferential use of specific agents.
•For patients with prior LVEF <40%, beta-blocker therapy should include bisoprolol, carvedilol, or sustained release metoprolol succinate.
Denominator Statement: All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period who also have prior MI or a current or prior LVEF <40%.
Exclusions: Documentation of medical reason(s) for not prescribing beta-blocker therapy (eg, allergy, intolerant, bradycardia, AV block without permanent pacemaker, arrhythmia, hypotension, asthma, other medical reasons).
Documentation of patient reason(s) for not prescribing beta-blocker therapy (eg, patient declined, other patient reasons).
Documentation of system reason(s) for not prescribing beta-blocker therapy (eg, other reasons attributable to the health care system.
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Clinicians: Individual; Clinicians: Group Type of Measure: Process
Data Source: Electronic administrative data/claims; Electronic clinical data; Electronic Health/Medical Record; Registry data This measure, in its previous specifications, is currently being used in the ACCF PINNACLE registry for the outpatient office setting.
Measure Steward: AMA

Does the Measure Meet Criteria for Endorsement: Y-17; N-4; A-0
Rationale:

- Has a strong positive impact on lowering mortality among patients with chronic CAD and LVEF <40%.
- It is in use, and feasibility has been documented.
- Abstraction of the paper record is prone to error, however.

If Applicable, Conditions/Questions for Developer:

- What is the evidence beyond 3 years post MI? Response: The newly released AHA guidelines for the prevention of cardiovascular disease in women do note that "Beta-blockers should be used for up to 12 mo (Class I; Level of Evidence A) or up to 3 y (Class I; Level of Evidence B) in all women after MI or ACS with normal left ventricular function unless contraindicated." As a result of this change to the evidence base, the Work Group will be consulted, and any necessary modifications will be made to the measure.

1. Importance to Measure and Report: Y-17; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Cohort studies have demonstrated significant gaps in care regarding the measure.
- The measure takes into account specific beta blockers mentioned in the guidelines for patients with left ventricular systolic dysfuntion. However, data are lacking on beta-blocker therapy with normal left ventricular function more than three years after a myocardial infarction.

2. Scientific Acceptability of Measure Properties: C-4; P-9; M-2; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- Measure can be modified to reflect any changes in the guideline recommendations.
- Exclusions include system reasons for not prescribing the beta blocker therapy. Examples provided: insurance, medication availability, and the availability of local cardiac rehabilitation programs.

3. Usability: C-9; P-10; M-2; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- The measure is already in use but is not in any public reporting initiative.
- Useful measure if it can be revised as needed to be consistent with guidelines.

4. Feasibility: C-9; P-8; M-2; N-0

0070 Chronic stable coronary artery disease: beta-blocker therapy—prior myocardial infarction (MI) or left ventricular systolic dysfunction (LVEF <40%)

(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)

Rationale:

- Data are generated as part of the care process and are sometimes available from the EHR.
- Sixty-four percent of the submissions were rejected due to an inaccurate diagnoses code. This was an implementaiton issue that has been addressed.

0071 Acute myocardial infarction (AMI): persistence of beta-blocker treatment after a heart attack

Description: The percentage of patients age 18 years and older during the measurement year who were hospitalized and discharged alive July 1 of the year prior to the measurement year through June 30 of the measurement year with a diagnosis of acute myocardial infarction (AMI) and who received persistent beta-blocker treatment for six months after discharge.

Numerator Statement: A 180-day course of treatment with beta-blockers post discharge.

Denominator Statement: Patients 18 years and older as of December 31 of the measurement year discharged alive from an acute inpatient setting with an AMI from July 1 of the year prior to the measurement year through June 30 of the measurement year.

Exclusions: Exclude patients who are identified as having a contraindication to beta-blocker therapy or previous adverse reaction to beta-blocker therapy. Also exclude from the denominator hospitalizations in which the patient was transferred directly to a nonacute care facility for any diagnosis.

Adjustment/Stratification: No risk adjustment necessary NA None

Level of Analysis: Clinicians: Individual; Clinicians: Group; Health Plan Type of Measure: Process

Data Source: Paper medical record/flowsheet; Electronic administrative data/claims; Pharmacy data; Electronic clinical data; Electronic Health/Medical Record NA

Measure Steward: NCQA

Does the Measure Meet Criteria for Endorsement: Y-13; N-8; A-0

Rationale:

- Adherence is a better measure of medication use.
- The immediate post-MI timeframe is the most beneficial.

If Applicable, Conditions/Questions for Developer:

- Clarify age inclusion. Response: The measure looks at patients 18 years and older.

1. Importance to Measure and Report: Y-21; N-0

(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)

Rationale:

- There is a significant performance gap for persistence of beta-blockers after acute myocardial infarction.

2. Scientific Acceptability of Measure Properties: C-8; P-11; M-2; N-0

(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)

Rationale:

- Very specific exclusion criteria. Discussion regarding whether the exclusion criteria are too strict.
- HEDIS health plan and clinician-level measure.

3. Usability: C-12; P-0; M-2; N-1

(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)

Rationale:

- The measure is currently in use and publicly reported.
- No known issues on implementation.

4. Feasibility: C4; P-11; M-5; N-1

(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions— no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)

Rationale:

- The data are generated as a byproduct of care proceses during care delivery.
- The data elements are all collected electronically, but feasibility for a physician with paper records is questionable.
- Mainly based on pharmacy claims; questions raised regarding claims that are not adjudicated or patients without insurance.

0065 Chronic stable coronary artery disease: symptom and activity assessment

Description: Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period for whom there is documented results of an evaluation of level of activity AND an evaluation of presence or absence of anginal symptoms in the medical record.
Numerator Statement: Patients for whom there are documented results of an evaluation of level of activity AND an evaluation of presence or absence of anginal symptoms* in the medical record.
*Evaluation of level of activity and evaluation of presence or absence of anginal symptoms should include:
•Documentation of Canadian Cardiovascular Society (CCS) Angina Class OR
•Completion of a disease-specific questionnaire (eg, Seattle Angina Questionnaire or other validated questionnaire) to quantify angina and level of activity.
Numerator Definition:
Canadian Cardiovascular Society (CCS) Angina Classification
Class 0: Asymptomatic
Class 1: Angina with strenuous exercise
Class 2: Angina with moderate exertion
Class 3: Angina with mild exertion
1. Walking 1-2 level blocks at normal pace
2. Climbing 1 flight of stairs at normal pace
Class 4: Angina at any level of physical exertion
Denominator Statement: All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12-month period.
Exclusions: None
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Clinicians: Individual; Clinicians: Group Type of Measure: Process
Data Source: Electronic administrative data/claims; Electronic clinical data; Electronic Health/Medical Record; Registry data. This measure, in its previous specifications, is currently being used in the ACCF PINNACLE registry for the outpatient office setting.
Measure Steward: AMA

Does the Measure Meet Criteria for Endorsement: Did not pass Importance to Measure and Report.
Rationale:

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-8; N-13
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Measure introduced as a means to ensure there was documentation of the system burden and the activity that precipitated those symptoms. Not an outcomes measure.
- Evidence lacking; no documentation of gap.
- Testing data not provided.

0076 Optimal vascular care

Description: Percentage of adult patients ages 18 to 75 who have ischemic vascular disease with optimally managed modifiable risk factors (LDL, blood pressure, tobacco-free status, daily aspirin use).
Numerator Statement: Patients ages 18 to 75 with ischemic vascular disease (IVD) who meet all of the following targets from the most recent visit during the measurement period: LDL <100, blood pressure (two targets) <140/90 if patient has co-morbidity of diabetes OR <130/80 for all other IVD patients, tobacco-free status, daily aspirin use (unless contraindicated). Please note: On 7/27/2010, the blood pressure component of this measure was changed for patients with a comorbidity of diabetes (target <140/90). MNCM's technical advisory group recommended this changed based on ACCORD results, ICSI's most recent guideline changes (July 2010), and the national meaningful use measures for diabetes blood pressure control. A target of <140/90 allows for individualization of patient goals.
Denominator Statement: Patients ages 18 to 75 with ischemic vascular disease who have at least 2 visits for this condition over the last 2 years (established patient) with at least 1 visit in the last 12 months.
Exclusions: Valid exclusions include patients who only had one coded visit to the clinic during the last two years, patients who had died during the measurement period, patients who were in hospice during the measurement period, patients who were permanent nursing home residents during the measurement period, or patients who were coded with IVD in error.
Adjustment/Stratification: Case-mix adjustment risk adjustment for this measure is based on case mix (health plan product). Health plan product was selected because it can serve as a proxy for socioeconomic status if more specific variables are not available. Socioeconomic status can be a variable in a patient's ability to comply with a treatment plan for achieving the intermediate outcomes that

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can postpone or prevent the long-term complications of cardiovascular disease.
The overall average state-wide distribution of patients across three major insurance types (Commercial, Medicare, and MN Healthcare Programs plus self-pay/uninsured) is calculated, and then each reporting site's patient distribution is adjusted to match the average mix. Rates are re-weighted based on the new distribution of patients and then rates are re-calculated.
Background and Evolution of Risk Adjustment:
MN Community Measurement has been publicly reporting unadjusted ambulatory outcome rates at the clinic site level for several years dating back to 2004. Currently, the lowest level of reporting is at the clinic site, and we do not publicly report any practitioner level information. As our state begins moving toward utilizing cost and quality measures to demonstrate value and utilizing these measures for incentive-based payment and tiering by health plans, we began to explore risk adjustment of measures used for these purposes.
Our subcommittee of the Board of Directors, the Measurement and Reporting Committee (MARC), has reviewed several methods for risk adjusting these measures. Part of their discussion included the potential use of the risk-adjusted measures for public reporting to consumers on our MN HealthScores website. The group agreed that risk adjustment would be more beneficial for tiering and incentive-based programs and that there was value in reporting the unadjusted clinic site level rate for consumers for the following reasons: rates reflect actual performance, confusion for consumers in terms of explaining risk adjustment or displaying two rates (adjusted and unadjusted), or creating a mindset that it is acceptable for patients in public programs to have different treatment standards than those with commercial insurance.
There are no current plans to report risk-adjusted data on our consumer facing website; however, we will provide both adjusted and unadjusted clinic site level rates on our corporate website (pdf format). The ischemic vascular disease population is not currently stratified when publicly reported on MNCM's consumer website, MN HealthScores. MNCM does collect the following fields that will allow for future stratification:
Insurance coverage code (used to determine public and private purchasers): from list of MNCM-designated codes [number]
Patient's health plan member ID (used to determine public and private purchasers): unique patient health plan member ID [text]
Date of birth: [MM/DD/YYYY]
Race/ethnicity: from list of MNCM-designated codes [number]
Primary language: from list of MNCM-designated codes [number]
Country of origin: from list of MNCM-designated codes [number]
Zip code: 5-digit zip code of patient [text]
Gender: M (male), F (female), U (unknown) [text]
Co-morbidity of diabetes: 1 (yes), 2 (no) [number]
Co-morbidity of depression: 1 (yes), 2 (no) [number]
Level of Analysis: Clinicians: Group; Clinicians: Other Clinic site location
Type of Measure: Outcome
Data Source: Paper medical record/flowsheet; Electronic Health/Medical Record; Registry data. An Excel template with formatted columns for data fields is provided. Many medical groups extract the information from their EMR. Registries can be used as a source of information to create the data file; however, groups must ensure that all of their eligible patients are included. Paper abstraction forms are provided for those clinics who wish to use them as an interim step to creating their data file. All data is uploaded in electronic format (.csv file) to a HIPAA-secure, encrypted, and password-protected data portal.
Measure Steward: MN Community Measurement

Does the Measure Meet Criteria for Endorsement: As submitted: Y-5, N-16
If developer changes BP target to <140/90: Y-19; N-1; A-0
Rationale: This measure meets criteria with conditions if the specifications are changed to <140/90.

If Applicable, Conditions/Questions for Developer:

- Change the BP target to <140/90. Response: Yes, MN Community Measurement agrees to align measures to JNC8 going forward. We took the Cardiovascular E&M Steering Committee's recommendation to modify the blood pressure target to <140/90 to our Measurement and Reporting Committee on March 9, and they approved this change. This modification is supported by the 2009 European Hypertension update (cited during the February 15 call), as well as ICSI Guidelines on Hypertension Diagnosis and Treatment, released in November 2010.

1. Importance to Measure and Report: Y-20; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- All-or-none-composite of important care processes.
- Patient-oriented measure.

2. Scientific Acceptability of Measure Properties: C-1; P-13; M-5; N-2
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)

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Rationale:

- BP target values have been changing due to recent studies but seem to be <140/90 for most patients. New JNC 8 guidelines to be released early 2012, at which time the developer will modify the measure specifications accordingly.

3. Usability: C-14; P-7; M-0; N-0

(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)

Rationale:

- Measure in use in Minnesota, reported by a large number of practices and patients.
- There will be a need for harmonizaton with this measure.

4. Feasibility: C-18; P-3; M-0; N-0

(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)

Rationale:

- Data are generated from the process of care and are easily extracted.
- Very few exclusions and contraindications have been rolled ino the definitions.
- Data are carefully audited for naccuracies, errors, and unintended consequences.

ACUTE MYOCARDIAL INFARCTION—EMERGENCY DEPARTMENT AND HSOPITAL MEASURES

0289 Median time to ECG

Description: Median time from emergency department arrival to ECG (performed in the ED prior to transfer) for acute myocardial infarction (AMI) or chest pain patients (with probable cardiac chest pain).

Numerator Statement: Continuous Variable Statement:

Time (in minutes) from emergency department arrival to ECG (performed in the ED prior to transfer) for acute myocardial infarction (AMI) or chest pain patients (with Probable Cardiac Chest Pain).

Included Populations:

• ICD-9-CM Principal or other diagnosis code for AMI as defined in Appendix A1, OP Table 6.1, or an ICD-9-CM Principal or other diagnosis code for angina, acute coronary syndrome, or chest pain as defined in Appendix A1, OP Table 6.1a, and

• E/M Code for emergency department encounter as defined in Appendix A1, OP Table 1.0a, and

• Patients receiving an ECG as defined in the Appendix A1, and

• Patients discharged/transferred to a short term general hospital for inpatient care, to a Federal healthcare facility, or to a critical access hospital.

Denominator Statement: Continuous Variable Statement:

Time (in minutes) from emergency department arrival to ECG (performed in the ED prior to transfer) for acute myocardial infarction (AMI) or chest pain patients (with probable cardiac chest pain)

Exclusions: Patients less than 18 years of age.

Adjustment/Stratification: No risk adjustment necessary

Level of Analysis: Facility/Agency; Population: national

Type of Measure: Process

Data Source: Paper medical record/flow-sheet; Electronic administrative data/claims; Electronic Health/Medical Record N/A

Measure Steward: Centers for Medicare & Medicaid Services (CMS)

Does the Measure Meet Criteria for Endorsement: Y-17; N-2; A-0

Rationale:

- Important time marker in patients to be transferred. Not as important for patients that will get PCI or fibrinolytics as this time is included in other measures.

If Applicable, Conditions/Questions for Developer:

- What is the evidence for patients other than STEMI needing urgent evaluation? Response: Current guidelines from the ACCF/AHA for STEMI note that ECG should be completed within 10 minutes for patients with persistent chest pain. You cannot diagnosis a STEMI until the ECG is completed.
- Where is Appendix A, OP Table 1.1 referred to in the submission? Response: Appendix A 1.1 (Acute Myocardial Infarction Diagnosis Codes) is found within the previously submitted documents. The table includes codes:
  - 410.00 Anterolateral wall, acute myocardial infarction—episode of care unspecified
  - 410.01 Anterolateral wall, acute myocardial infarction—initial episode

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410.10 Other anterior wall, acute myocardial infarction—episode of care unspecified
410.11 Other anterior wall, acute myocardial infarction—initial episode
410.20 Inferolateral wall, acute myocardial infarction—episode of care unspecified
410.21 Inferolateral wall, acute myocardial infarction-initial episode
410.30 Inferoposterior wall, acute myocardial infarction—episode of care unspecified
410.31 Inferoposterior wall, acute myocardial infarction—initial episode
410.40 Other inferior wall, acute myocardial infarction—episode of care unspecified
410.41 Other inferior wall, acute myocardial infarction—initial episode
410.50 Other lateral wall, acute myocardial infarction—episode of care unspecified
410.51 Other lateral wall, acute myocardial infarction—initial episode
410.60 True posterior wall, acute myocardial infarction—episode of care unspecified
410.61 True posterior wall, acute myocardial infarction—initial episode
410.70 Subendocardial, acute myocardial infarction—episode of care unspecified
410.71 Subendocardial, acute myocardial infarction—initial episode
410.80 Other specified sites, acute myocardial infarction—episode of care unspecified
410.81 Other specified sites, acute myocardial infarction—initial episode
410.90 Unspecified site, acute myocardial infarction—episode of care unspecified
410.91 Unspecified site, acute myocardial infarction—initial episode

1. Importance to Measure and Report: Y-17; N-4
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Big disparity in performance in emergency departments until time of ECG.
- Questions raised regarding using the measure of median time as being useful and meaningful as an indicator of performance in an emergency room.
- Highest mismatched data element on measure was probable cardiac chest pain. Physician educational sessions and a quality assurance program have been implemented to help reduce error.

2. Scientific Acceptability of Measure Properties: C-7; P-10; M-4; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- No disparities information provided, Steering Committee requested to have that information included.
- What is the evidence for other than STEMI?
- Concerns regarding reliability and validity. Time stamps on ECG machines are often inaccurate and are not as reliable as time stamps for arrival to ED or for administration of therapy.

3. Usability: C-7; P-12; M-2; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- Currently being used in outpatient quality data programs.
- Patients not transferred are not included.

4. Feasibility: C-11; P-8; M-2; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- Data are generated as a byproduct of care.

0132 Aspirin at arrival for acute myocardial infarction (AMI)

Description: Percentage of acute myocardial infarction (AMI) patients who received aspirin within 24 hours before or after hospital arrival.
Numerator Statement: AMI patients who received aspirin within 24 hours before or after hospital arrival.
Denominator Statement: AMI patients (International Classification of Diseases, 9th revision, Clinical Modification [ICD-9-CM] principal diagnosis code of AMI: 410.00, 410.01, 410.10, 410.11, 410.20, 410.21, 410.30, 410.31, 410.40, 410.41, 410.50, 410.51, 410.60, 410.61, 410.70, 410.71, 410.80, 410.81, 410.90, 410.91).
Exclusions:

0132 Aspirin at arrival for acute myocardial infarction (AMI)

•<18 years of age
•Patients who have a length of stay >120 days.
•Patients enrolled in clinical trials.
•Discharged to another hospital on day of or day after arrival.
•Discharged on day of arrival.
•Expired on day of or day after arrival.
•Left against medical advice on day of or day after arrival.
•Patients with comfort measures only documented on day of or day after arrival.
•Patients with a documented reason for no aspirin on arrival.
Adjustment/Stratification: no risk adjustment necessary
Level of Analysis: Facility/Agency; Population: national; Program: QIO
Type of Measure: Process
Data Source: Paper medical record/flow-\sheet; Electronic Health/Medical CMS Abstraction & Reporting Tool (CART). Vendor tools also available.
Measure Steward: CMS

Does the Measure Meet Criteria for Endorsement: Y-18; N-1; A-0
Rationale:

- Not as large a performance gap, but a large impact.
- In use; data readily available.

If Applicable, Conditions/Questions for Developer:

- Does taking a daily low-dose aspirin 8 hours before the ED/hospital arrival for AMI count in the numerator? Response: Yes, patients with documentation in the record of receiving aspirin (any dosage) within 24 hours prior to arrival are included in the numerator.
- What is the aspirin dose and timeframe required to meet the measure? Response: Aspirin (any dosage) within 24 hours prior to arrival or 24 hours after arrival.

1. Importance to Measure and Report: Y-21; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Performance rates for this measure are very high, and there is not much variability but high impact.
- Early aspirin use has same effectivene as reperfusion.

2. Scientific Acceptability of Measure Properties: C-19; P-2; M-0; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- Well-specified and good reliability and validity data provided.

3. Usability: C-18; P-2; M-1; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- Existing measure that is meaningful and useful for public reporting.
- Measure is not harmonized with ambulatory CAD but concentrated on in-patient care of AMI.

4. Feasibility: C-19; P-1; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions – no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- Data are readily available and generated in care.
- No additional data sources are required for exclusions.

0286 Aspirin at arrival

Description: Percentage of emergency department acute myocardial infarction (AMI) patients or chest pain patients (with probable cardiac chest pain) without aspirin contraindications who received aspirin within 24 hours before ED arrival or prior to transfer.
Numerator Statement: Emergency department AMI or chest pain patients (with probable cardiac chest pain) who received aspirin within

0286 Aspirin at arrival

24 hours before ED arrival or prior to transfer.
Denominator Statement: Emergency department AMI or chest pain patients (with probable cardiac chest pain) without aspirin contraindications.
Exclusions: Excluded Populations:
• Patients less than 18 years of age.
• Patients with a documented reason for no aspirin on arrival.
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Facility/Agency; Population: national
Type of Measure: Process
Data Source: Paper medical record/flowsheet; Electronic administrative data/claims; Electronic Health/Medical Record N/A
Measure Steward: CMS

Does the Measure Meet Criteria for Endorsement: Y-19; N-1; A-0
Rationale:
- Essentially the same measure as 0132, but applies to patients being transferred.

If Applicable, Conditions/Questions for Developer:
- The title and description do not accurately describe what is being measured. Significant explanation from the developer was needed for the Committee to understand the intent of the measure. Using the same name for measures 0132 and 0286 is confusing to audiences, and some may assume they are redundant or competing measures. Response: This measure includes both AMI and chest pain patients with probable cardiac chest pain. The population is emergency department patients who are transferred out to another facility and subsequently are not captured through measure 0132. This population differs from 0132 as patients with suspected cardiac chest pain are also included in the measure.

1. Importance to Measure and Report: Y-18; N-3
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:
- 25% below 94% indicates there may be more room for improvement here than in the previous 24-hour measure.
- No clear evidence to say patients outside of those having a myocardial infarction will benefit.

2. Scientific Acceptability of Measure Properties: C-7; P-11; M-3; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:
- No data provided for disparities.
- Validity is questionable, recalling about 20% of those patients who were initially identified as meeting criteria then found to be invalid.

3. Usability: C-14; P-4; M-1; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:
- In use.

4. Feasibility: C-16; P-4; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions— no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:
- Data elements are easily generated from electronic or chart review.

0163 Primary PCI received within 90 minutes of hospital arrival

Description: Percentage of acute myocardial infarction (AMI) patients with ST-segment elevation or LBBB on the ECG closest to arrival time receiving primary percutaneous coronary intervention (PCI) during the hospital stay with a time from hospital arrival to PCI of 90 minutes or less.
Numerator Statement: AMI patients whose time from hospital arrival to primary percutaneous coronary intervention (PCI) is 90 minutes or less.
Denominator Statement: Principal diagnosis of AMI (International Classification of Diseases, 9th revision, Clinical Modification [ICD-9-CM] principal diagnosis code of AMI: 410.00, 410.01, 410.10, 410.11, 410.20, 410.21, 410.30, 410.31, 410.40, 410.41, 410.50, 410.51, 410.60, 410.61, 410.70, 410.71, 410.80, 410.81, 410.90, 410.91); and PCI procedure (International Classification of Diseases, 9th

0163 Primary PCI received within 90 minutes of hospital arrival

revision, Clinical Modification [ICD-9-CM] principal or other procedure code for PCI: 00.66); and ST-segment elevation or LBBB on the ECG performed closest to hospital arrival; and PCI performed within 24 hours after hospital arrival.

Exclusions:

•<18 years of age.
•Patients who have a length of stay >120 days.
•Patients enrolled in clinical trials.
•Patients received as a transfer from an inpatient or outpatient department of another hospital.
•Patients received as a transfer from the emergency/observation department of another hospital.
•Patients received as a transfer from an ambulatory surgery center.
•Patient administered fibrinolytic agent prior to PCI.
•PCI described as non-primary by physician, advanced practice nurse, or physician assistant.
•Patients who did not receive PCI within 90 minutes and had a reason for delay documented by a physician, advanced practice nurse, or physician assistant (e.g., social, religious, initial concern or refusal, cardiopulmonary arrest, balloon pump insertion, respiratory failure requiring intubation).

Adjustment/Stratification: No risk adjustment necessary

Level of Analysis: Facility/Agency; Population: national; Program: QIO

Type of Measure: Process

Data Source: Paper medical record/flowsheet; Electronic Health/Medical Record CMS Abstraction & Reporting Tool (CART). Vendor tools also available.

Measure Steward: CMS

Does the Measure Meet Criteria for Endorsement: Y-16; N-0; A-0

Rationale:

If Applicable, Conditions/Questions for Developer:

- How often is the exclusion for "system reason for delay" used? Given the potential for gaming, is this being monitored? Response: Current overall trends in measure numerator and denominator counts do not suggest gaming. There is no increasing trend in the use of this reason data element. In our last analysis, Reason for Delay in PCI was occurring in only 0.9% of cases (1Q10). Nevertheless, yes, this is being monitored.

1. Importance to Measure and Report: Y-21; N-0

(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)

Rationale:

- Good evidence and data that early PCI is very important.

2. Scientific Acceptability of Measure Properties: C-19; P-2; M-0; N-0

(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)

Rationale:

- CDAC comparison to hospital data provided demonstrates reasonable reliability and validity.
- More data needed on disparities; 7% difference in rates Caucasians going for PCI in a timely fashion, compared to African Americans.
- Measure excludes very unstable patients and patients transferred from another facility.

3. Usability: C-21; P-0; M-0; N-0

(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)

Rationale:

- Information produced is meaningful and understandable. Has been used in different registries in the past.

4. Feasibility: C-21; P-0; M-0; N-0

(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions— no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)

Rationale:

- Data elements are easily obtainable through routine care processes.

0164 Fibrinolytic therapy received within 30 minutes of hospital arrival

Description: Percentage of acute myocardial infarction (AMI) patients with ST-segment elevation or LBBB on the ECG closest to arrival time receiving fibrinolytic therapy during the hospital stay and having a time from hospital arrival to fibrinolysis of 30 minutes or less.

Numerator Statement: AMI patients whose time from hospital arrival to fibrinolysis is 30 minutes or less.

0164 Fibrinolytic therapy received within 30 minutes of hospital arrival

Denominator Statement: Principal diagnosis of AMI (International Classification of Diseases, 9th revision, Clinical Modification [ICD-9-CM] principal diagnosis code of AMI: 410.00, 410.01, 410.10, 410.11, 410.20, 410.21, 410.30, 410.31, 410.40, 410.41, 410.50, 410.51, 410.60, 410.61, 410.70, 410.71, 410.80, 410.81, 410.90, 410.91); and ST-segment elevation or LBBB on the ECG performed closest to hospital arrival; and fibrinolytic therapy within 6 hours after hospital arrival; and fibrinolytic therapy is primary reperfusion therapy.
Exclusions:
•<18 years of age.
•Patients who have a length of stay >120 days.
•Patients enrolled in clinical trials.
•Patients received as a transfer from an inpatient or outpatient department of another hospital.
•Patients received as a transfer from the emergency/observation department of another hospital.
•Patients received as a transfer from an ambulatory surgery center.
•Patients who did not receive fibrinolytic therapy within 30 minutes and had a reason for delay documented by a physician, advanced practice nurse, or physician assistant (e.g., social, religious, initial concern or refusal, cardiopulmonary arrest, balloon pump insertion, respiratory failure requiring intubation).
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Facility/Agency; Population: national; Program: QIO
Type of Measure: Process
Data Source: Paper medical record/flowsheet; Electronic Health/Medical Record CMS Abstraction & Reporting Tool (CART). Vendor tools also available.
Measure Steward: CMS

Does the Measure Meet Criteria for Endorsement: Y-20; N-0; A-0
Rationale:
- Disparities differences.

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-21; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:
- Signifigant disparities difference.

2. Scientific Acceptability of Measure Properties: C-19; P-1; M-0; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:
- Patients who have long lengths of stay, >120 days, are excluded from this measure. These patients are a small proportion of the patients.
- This is a medium-to-large-hospital measure. Only those with more than 25 AMI cases per year are eligible (regardless whether the number who receive fibrinolytics is small).

3. Usability: C-19; P-2; M-0; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:
- Important and meaningful for public reporting.

4. Feasibility: C-20; P-1; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:
- Data can be collected either from electronic health records or chart review.
- Good information provided on susceptibility to inaccuracies, errors, or unintended consequences.
- Developers included a nice discussion of suceptibilty to inaccuracies.

0288 Fibrinolytic therapy received within 30 Minutes of ED arrival

Description: Emergency department acute myocardial infarction (AMI) patients receiving fibrinolytic therapy during the ED stay and having a time from ED arrival to fibrinolysis of 30 minutes or less.
Numerator Statement: Emergency department AMI patients whose time from ED arrival to fibrinolysis is 30 minutes or less.
Denominator Statement: Emergency department AMI patients with ST-segment elevation or LBBB on ECG who received fibrinolytic

0288 Fibrinolytic therapy received within 30 Minutes of ED arrival

therapy.
Exclusions: Excluded Populations:
• Patients <18 years of age.
• Patients who did not receive fibrinolytic administration within 30 minutes AND had a reason for delay in fibrinolytic therapy as defined in the Data Dictionary.
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Facility/Agency; Population: national
Type of Measure: Process
Data Source: Paper medical record/flowsheet; Electronic administrative data/claims; Electronic Health/Medical Record. See specifications at http://qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1196289981244.
Measure Steward: CMS21244-1850

Does the Measure Meet Criteria for Endorsement: Y-20; N-0; A-0
Rationale:
- Same measure as 164 but different reporting mechanism for patients being transferred.
- Steering Committee duplicated voting on this measure as the previous one, measure 164.

If Applicable, Conditions/Questions for Developer:
- The Committee concluded that these are the same measure with different representation of the results rather than competing measures and should be listed under the same NQF number. Response: Measures are the same specifications, except 0288 and 0287 capture patients who are seen in the emergency department and are subsequently transferred out to another facility and thus are not captured by measure 0164.

0287 Median time to fibrinolysis

Description: Median time from emergency department arrival to administration of fibrinolytic therapy in ED patients with ST-segment elevation or left bundle branch block (LBBB) on the electrocardiogram (ECG) performed closest to ED arrival and prior to transfer.
Numerator Statement: Continuous Variable Statement:
Time (in minutes) from emergency department arrival to administration of fibrinolytic therapy in AMI patients with ST-segment elevation or LBBB on the ECG performed closest to ED arrival and prior to transfer.
Denominator Statement: Continuous Variable Statement:
Time (in minutes) from emergency department arrival to administration of fibrinolytic therapy in AMI patients with ST-segment elevation or LBBB on the ECG performed closest to ED arrival and prior to transfer.
Exclusions:
• Patients <18 years of age.
• Patients who did not receive fibrinolytic administration within 30 minutes and had a reason for delay in fibrinolytic therapy.
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Facility/Agency; Population: national
Type of Measure: Process
Data Source: Paper medical record/flowsheet; Electronic administrative data/claims; Electronic Health/Medical Record. See specifications at http://qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1196289981244.
Measure Steward: CMS

Does the Measure Meet Criteria for Endorsement: Y-20; N-0; A-0
Rationale:
- No significant difference between this measure and the previous two that were discussed, 164 and 288.
- Uses the same data as 288 but is presented in different ways. Justification for both is that median times may be more actionable in terms of quality improvement, and proportion facilitates comparisons among sites.
- Both measures have been reported on Hospital Compare for many years, and users are thought to find both of them useful based on implementation needs.
- Steering Committee chose to duplicate voting from measure 288.

If Applicable, Conditions/Questions for Developer:
- The Committee concluded that these are the same measure with different representation of the results rather than competing measures and should be listed under the same NQF number. Response: Measures are the same specifications, except 0288 and 0287 capture patients who are seen in the emergency department and are subsequently transferred out to another facility and thus are not captured by measure 0164.

0290 Median time to transfer to another facility for acute coronary intervention

Description: Median time from emergency department arrival to time of transfer to another facility for acute coronary intervention.
Numerator Statement: Continuous Variable Statement:
Time (in minutes) from emergency department arrival to transfer to another facility for acute coronary intervention.
Included Populations:
• ICD-9-CM Principal Diagnosis Code for AMI as defined in Appendix A, OP Table 6.1, and
• E/M Code for emergency department encounter as defined in Appendix A, OP Table 1.0a, and
• Patients discharged/transferred to a short-term general hospital for inpatient care, to a Federal healthcare facility, or to a Critical Access Hospital, and
• Patients not receiving Fibrinolytic Administration as defined in the Data Dictionary, and
• Patients with Transfer for Acute Coronary Intervention as defined in the Data Dictionary.
Denominator Statement: Time (in minutes) from emergency department arrival to transfer to another facility for acute coronary intervention.
Exclusions:
• Patients <18 years of age.
• Patients receiving fibrinolytic administration as defined in the Data Dictionary.
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Facility/Agency; Population: national; Can be measured at all levels
Type of Measure: Process
Data Source: Paper medical record/flowsheet; Electronic administrative data/claims; Electronic Health/Medical Record N/A
Measure Steward: CMS

Does the Measure Meet Criteria for Endorsement: Y-21; N-0; A-0
Rationale:
- Addresses timeliness of transfer for intervention.
- In use and harmonized with other measures.

If Applicable, Conditions/Questions for Developer:
The measure needs a better title and description of what is being measured. Response:
Measure Name: Median time to transfer to another facility for acute coronary intervention.
Description: Median time from emergency department arrival to time of transfer to another facility for acute coronary intervention.

1. Importance to Measure and Report: Y-21; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:
- Measure supports national efforts on making the transfers more efficiently.

2. Scientific Acceptability of Measure Properties: C-13: P-8; M-0, N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:
- Strictly defined population of patients with AMI/STEMI.LBBB who are specifically transferred for acute coronary intervention.
- Reliability of arrival time documentation considered. Data shows there was 20% error rate in arrival time when it was audited.
- Disparities are not defined but can be captured and calculated. Committee recommended the disparities element be included.

3. Usability: C-13; P-8;, M-0; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:
- Measure is currently in use, reported, and harmonized.

4. Feasibility: C-0; P-21; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:
- Abstractor collect data and needs to have a clear understaing of data defintions to accurately provide a data report.
- E-specifications not developed yet; funding is pending.
- Susceptibility to error not provided.

0160 Beta-blocker prescribed at discharge for AMI

0160 Beta-blocker prescribed at discharge for AMI
Description: Percentage of acute myocardial infarction (AMI) patients who are prescribed a beta-blocker at hospital discharge. Numerator Statement: AMI patients who are prescribed a beta-blocker at hospital discharge. Denominator Statement: AMI patients (International Classification of Diseases, 9th revision, Clinical Modification [ICD-9-CM] principal diagnosis code of AMI: 410.00, 410.01, 410.10, 410.11, 410.20, 410.21, 410.30, 410.31, 410.40, 410.41, 410.50, 410.51, 410.60, 410.61, 410.70, 410.71, 410.80, 410.81, 410.90, 410.91). Exclusions: Exclusions •<18 years of age. •Patients who have a length of stay >120 days. •Patients enrolled in clinical trials. •Discharged to another hospital. •Expired. •Left against medical advice. •Discharged to home for hospice care. •Discharged to a healthcare facility for hospice care. •Patients with comfort measures only documented •Patients with a documented reason for no beta blocker at discharge. Adjustment/Stratification: No risk adjustment necessary Level of Analysis: Facility/Agency; Population: national; Program: QIO Type of Measure: Process Data Source: Paper medical record/flowsheet; Electronic Health/Medical Record CMS Abstraction & Reporting Tool (CART). Vendor tools also available. Measure Steward: CMS
Does the Measure Meet Criteria for Endorsement: Rationale: Did not pass Importance to Measure and Report because of high performance and limited opportunity for improvement.
If applicable, Conditions/Questions for Developer:
1. Importance to Measure and Report: Y-0; N-21 *(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)* Rationale: • Important measure in terms of reducing morbidity and mortality; ongoing use is designed to ensure high performance. • Very high performance, concern about not being enough room for improvement to justify the effort.

0142 Aspirin prescribed at discharge for AMI
Description: Percentage of acute myocardial infarction (AMI) patients who are prescribed aspirin at hospital discharge Numerator Statement: AMI patients who are prescribed aspirin at hospital discharge. Denominator Statement: AMI patients (International Classification of Diseases, 9th revision, Clinical Modification [ICD-9-CM] principal diagnosis code of AMI: 410.00, 410.01, 410.10, 410.11, 410.20, 410.21, 410.30, 410.31, 410.40, 410.41, 410.50, 410.51, 410.60, 410.61, 410.70, 410.71, 410.80, 410.81, 410.90, 410.91). Exclusions: •<18 years of age. •Patients who have a length of stay >120 days. •Patients enrolled in clinical trials. •Discharged to another hospital. •Expired. •Left against medical advice. •Discharged to home for hospice care. •Discharged to a healthcare facility for hospice care. •Patients with comfort measures only documented. • Patients with a documented reason for no aspirin at discharge. Adjustment/Stratification: No risk adjustment necessary Level of Analysis: Facility/Agency; Population: national; Program: QIO Type of Measure: Process Data Source: Paper medical record/flowsheet; Electronic Health/Medical Record CMS Abstraction & Reporting Tool (CART). Vendor tools also available. Measure Steward: CMS

0142 Aspirin prescribed at discharge for AMI
Does the Measure Meet Criteria for Endorsement: Rationale: Did not meet Importance to Measure and Report because of high current performance and limited opportunity for improvement.
If Applicable, Conditions/Questions for Developer:
1. Importance to Measure and Report: Y-4; N-17 *(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)* Rationale: • Very important and high impact; however, room for improvement when 98.5% of performance rates are documented is extremely small. • Suggest an all-or-none composite for the AMI discharge medication measures.

0137 ACEI or ARB for left ventricular systolic dysfunction- acute myocardial infarction (AMI) patients
Description: Percentage of acute myocardial infarction (AMI) patients with left ventricular systolic dysfunction (LVSD) who are prescribed an ACEI or ARB at hospital discharge. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction. Numerator Statement: AMI patients who are prescribed an ACEI or ARB at hospital discharge. Denominator Statement: AMI patients (International Classification of Diseases, 9th revision, Clinical Modification [ICD-9-CM] principal diagnosis code of AMI: 410.00, 410.01, 410.10, 410.11, 410.20, 410.21, 410.30, 410.31, 410.40, 410.41, 410.50, 410.51, 410.60, 410.61, 410.70, 410.71, 410.80, 410.81, 410.90, 410.91); with chart documentation of a left ventricular ejection fraction (LVEF) <40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction. Exclusions: •<18 years of age. •Patients who have a length of stay >120 days. •Discharged to another hospital. •Expired. •Left against medical advice. •Discharged to home for hospice care. •Discharged to a healthcare facility for hospice care. •Patients with comfort measures only documented. •Patients enrolled in clinical trials. •Patients with a documented reason for no ACEI and no ARB at discharge. Adjustment/Stratification: No risk adjustment necessary Level of Analysis: Facility/Agency; Population: national; Program: QIO Type of Measure: Process Data Source: Paper medical record/flowsheet; Electronic Health/Medical Record CMS Abstraction & Reporting Tool (CART). Vendor tools also available. Measure Steward: CMS
Does the Measure Meet Criteria for Endorsement: Y-21; N-0; A-0 Rationale: • Strong evidence of benefit.
If Applicable, Conditions/Questions for Developer: • There are a large number of exclusions due to lack of assessment of LVEF. Is this a quality problem? Response: Uncertain. The ACC/AHA STEMI/NSTEMI Performance Measure set includes an LVSF Evaluation specific to AMI patients. The Heart Care team has recommended addition of such a measure. Issue is currently under discussion at CMS.
1. Importance to Measure and Report: Y-21; N-0 *(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)* Rationale: • High-impact measure. • Strong evidence with multiple randomized trials showing ACE inhibitors reduce morbidity and mortality in post MI patients with LVSD and ARBs are shown to be good alternative for patients unable to tolerate ACE inhibitors.

0137 ACEI or ARB for left ventricular systolic dysfunction- acute myocardial infarction (AMI) patients

- Concern regarding assumptions made on samples and bias to better results with voluntarily reported data.

2. Scientific Acceptability of Measure Properties: C-18; P-3; M-0; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)

Rationale:

- This is a measure of inpatient performance and is not a subset of measure 66, which is a measure of outpatient performance.
- Reliability has been tested and documented to be adequate. Face validity is adequate.
- Almost 62% of exclusions were due to undocumented EF or description of LV dysfunction.
- Disparities can be identified but appear not to be present.

3. Usability: C-19; P-2; M-0; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- Useful for public reporting and quality improvement.
- This is the only inpatient ACEI/ARb measure.

4. Feasibility: C-21; P-0; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- The data are collected during the process of care.
- Abstraction can lead to errors of exclusion and inclusion, but efforts to limit these errors are continuous.
- The data collection system is already in use and does not impose an undue burden.

960 Composite measure of hospital quality for acute myocardial infarction (AMI)

Description: A composite measure of in-hospital process and outcome of care for acute myocardial infarction (AMI) patients.
Components of the Composite: Hospital process-of-care indicators

1. Percent of AMI patients given aspirin on arrival (NQF #0132; Endorsed May 9, 2007)
2. Percent of AMI patients given aspirin at discharge (NQF #0142; Endorsed May 9, 2007)
3. Percent of AMI patients given ACE inhibitor or ARB for LVSD (NQF #0137; Endorsed May 9, 2007)
4. Percent of AMI patients given smoking cessation advice/counseling (NQF #0027; Endorsed May 1, 2006)
5. Percent of AMI patients given beta blocker at discharge (NQF #0160; Endorsed May 9, 2007)
6. Percent of AMI patients given fibrinolytic medication within 30 min. of arrival (NQF #0164; Endorsed May 9, 2007)
7. Percent of AMI patients given PCI within 90 min. of arrival (NQF #0163; Endorsed May 9, 2007)

Hospital outcome-of-care indicators

1. AMI 30-day risk-standardized mortality (NQF #0230; Endorsed May 9, 2007)
2. AMI 30-day risk-standardized readmission (NQF #0505; Endorsed Oct. 28, 2008)

Numerator Statement: The sum of all successes for acute myocardial infarction process-of-care indicators, weighted by one-half the reciprocal of the share of opportunities represented by acute myocardial infarction process-of-care indicators in total opportunities, plus the sum of all successes for acute myocardial infarction outcome-of-care indicators, weighted by one-half the reciprocal of the share of opportunities represented by acute myocardial infarction outcome-of-care indicators in total opportunities.
Denominator Statement: The total number of opportunities for success on all acute myocardial infarction indicators used in the composite.
Exclusions: Hospitals missing three or more acute myocardial infarction process-of-care indicators and one or more outcome-of-care indicator were excluded.
Adjustment/Stratification: None
Level of Analysis: Facility Type of Measure: Composite
Data Source: Paper medical record/flowsheet; Electronic Health/Medical Record CMS Abstraction & Reporting Tool (CART). Vendor tools also available.
Measure Steward: CMS

Does the Measure Meet Criteria for Endorsement: Y-7; N-14; A-0
Rationale:

- Includes invalid smoking measure no longer endorsed by NQF.
- Limited variation in results.
- Question handling of large amount of missing data by imputation of national means.
- Complicated composite methodology—harder to understand compared to an "all or none."

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-21; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Composite measure of NQF endorsed measures for AMI.

2. Scientific Acceptability of Measure Properties: C-0; P-9; M-7; N-5
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)

Rationale:

- Lots of imputation of values due to missing data.
- Narrow range of results: 25 percentil = 83.1% 75th percentile = 84.9%.
- Includes smoking cessation measure that has been determined to be invalid.

3. Usability: C-1; P-9; M-8; N-3
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- Narrow range of results limts usefulness.
- Providers will find it hard to understand.

4. Feasibility: C-7; P-10; M-1; N-2
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- Uses existing data from component measures.

0230 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute myocardial infarction (AMI) hospitalization

Description: The measure estimates a hospital-level risk-standardized mortality rate (RSMR), defined as death from any cause within 30 days after the index admission date, for patients discharged from the hospital with a principal diagnosis of AMI.
Numerator Statement: This outcome measure does not have a traditional numerator and denominator like a core process measure (e.g., percentage of adult patients with diabetes aged 18-75 years receiving one or more hemoglobin A1c tests per year); thus, we are using this field to define the outcome.
The outcome for this measure is 30-day all-cause mortality. We define mortality as death from any cause within 30 days of the index admission date for patients discharged from the hospital with a principal diagnosis of AMI.
Denominator Statement: Note: This outcome measure does not have a traditional numerator and denominator like a core process measure; thus, we are using this field to define the patient cohort.
The cohort includes admissions for Medicare FFS beneficiaries age 65 years or older discharged from the hospital with a principal diagnosis of AMI (ICD-9-CM codes 410.xx except for 410.x2) and with a complete claims history for the 12 months prior to admission. Patients who are transferred from one acute care facility to another must have a principal discharge diagnosis of AMI at both hospitals. The initial hospital for a transferred patient is designated as the responsible institution for the episode.
If a patient has more than one AMI admission in a year, one hospitalization is randomly selected for inclusion in the measure.
Exclusions: The measures exclude admissions for patients:
• Who were discharged on the day of admission or the following day and did not die or get transferred (because it is less likely they had a significant AMI).
• Who were transferred from another acute care hospital (because the death is attributed to the hospital where the patient was initially admitted).
• With inconsistent or unknown mortality status or other unreliable data (e.g., date of death precedes admission date).
• Enrolled in the Medicare Hospice program any time in the 12 months prior to the index hospitalization including the first day of the index admission (since it is likely these patients are continuing to seek comfort measures only).

• Who were discharged alive and against medical advice (AMA) (because providers did not have the opportunity to deliver full care and prepare the patient for discharge).
• Who were not the first hospitalization in the 30 days prior to a patient's death. We use this criteria to prevent attribution of a death to two admissions.

Adjustment/Stratification: Risk adjustment devised specifically for this measure/condition. Our approach to risk adjustment was tailored to and appropriate for a publicly reported outcome measure, as articulated in the American Heart Association (AHA) Scientific Statement, "Standards for Statistical Models Used for Public Reporting of Health Outcomes" (Krumholz et al., 2006).

The measure employs a hierarchical logistic regression model (a form of hierarchical generalized linear model [HGLM]) to create a hospital level 30-day RSMR. This approach to modeling appropriately accounts for the structure of the data (patients clustered within hospitals), the underlying risk due to patients' comorbidities, and sample size at a given hospital when estimating hospital mortality rates. In brief, the approach simultaneously models two levels (patient and hospital) to account for the variance in patient outcomes within and between hospitals (Normand et al., 2007). At the patient level, each model adjusts the log-odds of mortality within 30 days of admission for age, sex, selected clinical covariates, and a hospital-specific intercept. The second level models the hospital-specific intercepts as arising from a normal distribution. The hospital intercept, or hospital specific effect, represents the hospital contribution to the risk of mortality, after accounting for patient risk and sample size, and can be inferred as a measure of quality. The hospital-specific intercepts are given a distribution in order to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then after adjusting for patient risk, the hospital intercepts should be identical across all hospitals.

Candidate and Final Risk-adjustment Variables: Candidate variables were patient-level risk-adjustors that are expected to be predictive of mortality, based on empirical analysis, prior literature, and clinical judgment, including demographic factors (age, sex) and indicators of comorbidity and disease severity. For each patient, covariates were obtained from Medicare claims extending 12 months prior to and including the index admission. The model adjusted for case differences based on the clinical status of the patient at the time of admission. We used condition categories (CCs), which are clinically meaningful groupings of more than 15,000 ICD-9-CM diagnosis codes. We did not risk adjust for CCs that were possible adverse events of care and that were only recorded in the index admission. In addition, only comorbidities that conveyed information about the patient at that time or in the 12 months prior, and not complications that arose during the course of the hospitalization were included in the risk adjustment.

The final set of risk-adjustment variables are:

Demographic
• Age-65 (years above 65, continuous)
• Male

Cardiovascular
• History of PTCA
• History of CABG
• Congestive heart failure
• History of AMI
• Unstable angina
• Anterior myocardial infarction
• Other location of myocardial infarction
• Chronic atherosclerosis
• Cardio-respiratory failure and shock
• Valvular and rheumatic heart disease

Comorbidity
• Hypertension
• Stroke
• Cerebrovascular disease
• Renal failure
• Chronic Obstructive Pulmonary Disease
• Pneumonia
• Diabetes and DM complications
• Protein-calorie malnutrition
• Dementia and senility
• Hemiplegia, paraplegia, paralysis, functional disability
• Peripheral vascular disease
• Metastatic cancer, acute leukemia, and other severe cancers
• Trauma in the last year
• Major psychiatric disorders
• Chronic liver disease

References:
Krumholz HM, Brindis RG, Brush JE, et al., Standards for statistical models used for public reporting of health outcomes: an American Heart Association Scientific Statement From the Quality of Care and Outcomes Research Interdisciplinary Writing Group: cosponsored by the Council on Epidemiology and Prevention and the Stroke Council Endorsed by the American College of Cardiology Foundation, *Circulation*, 2006;113:456-462.
Normand S-LT, Shahian DM, Statistical and clinical aspects of hospital outcomes profilin, *Stat Sci*, 2007;22(2):206-226. Results of this measure will not be stratified.
Level of Analysis: Facility/Agency Type of Measure: Outcome
Data Source: Electronic administrative data/claims. Two data sources were used to create the measure:
1. Medicare Part A Inpatient and Outpatient and Part B outpatient claims: This database contains claims data for fee-for-service inpatient and outpatient services including: Medicare inpatient hospital care, outpatient hospital services, skilled nursing facility care, some home health agency services, and hospice care, as well as inpatient and outpatient claims for the 12 months prior to an index admission.
2. Medicare Enrollment Database (EDB): This database contains Medicare beneficiary demographic, benefit/coverage, and vital status information. This dataset was used to obtain information on several inclusion/exclusion indicators such as Medicare status on admission as well as vital status. These data have previously been shown to accurately reflect patient vital status (Fleming, Fisher, et al., 1992).
The measure was originally developed with claims data from 1998. The models have been maintained and re-evaluated each year since public reporting of the measures began in 2007.
Fleming C., Fisher ES, Chang CH, et al., Studying outcomes and hospital utilization in the elderly: the advantages of a merged data base for Medicare and Veterans Affairs Hospitals, *Medical Care*, 1992;30(5):377-391.
Measure Steward: CMS

Does the Measure Meet Criteria for Endorsement: Y-18; N-0; A-0
Rationale:
- Risk-adjusted outcome measure.
- Well developed and tested.
- In use for public reporting.
- Complete measure information in submission, including disparities data.

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-19; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:
- This is an important indicator, as mortality rates after MI are high..
- There is wide variation in performance among hospitals, and this variation persists after adjustment for patient-level characteristics.

2. Scientific Acceptability of Measure Properties: C-19; P-1; M-0; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:
- The measure is precise.
- Reliability demonstrated in split-half analysis. Validity demonstrated by chart-based audit.
- Fully risk adjusted with hierarchical general linear modeling.
- Analysis indicates that disparities are small at the hospital level.
- Limited to patients great than or over 65 years.

3. Usability: C-18; P-2; M-0; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:
- The measure is publicly reported.
- The statistical adjustment method is the same one used for heart failure and pneumonia.
- AHRQ reports in-hospital mortality, but 30-day mortality is independent of length of stay and cannot be influenced by care decisions like early discharge.

NOTE: Developer indicates it is working on expanding the age range to include all patients in the near future.

4. Feasibility: C-20; P-0; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:
- Data are byproduct of routine medical record coding.

- Data are available electronically, and no additional sources are required.
- Measure is already in use.

0282 Angina without procedure (PQI 13)

Description: All non-maternal discharges of age 18 years and older with ICD-9-CM principal diagnosis code for angina.
Numerator Statement: All discharges of age 18 years and older with ICD-9-CM principal diagnosis code for angina.
Denominator Statement: Population in Metro area or county, age 18 years and older.
Exclusions: None
Adjustment/Stratification: Risk adjustment method widely or commercially available. The predicted value for each case is computed using standard logistic regression and covariates for gender and age (in 5-year age groups). The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Databases (SID) for the year 2007, a database consisting of approximately 35 million discharges from 43 states. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., county or state). The risk-adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Observed rates may be stratified by age and sex.
Level of Analysis: Population: states; Population: counties or cities
Type of Measure: Access
Data Source: Electronic administrative data/claims; Hospital administrative discharge data. See data requirements in the AHRQ QI Windows Application Documentation: http://www.qualityindicators.ahrq.gov/software.htm
Measure Steward: Agency for Healthcare Research and Quality (AHRQ)

Does the Measure Meet Criteria for Endorsement: Did not pass Importance to Measure and Report.
Rationale:

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-0; N-21
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Coding of angina has demonstrated high variability and therefore reliability concerns. Changes in coding practices lead to significant changes in results.
- Should all admissions get a procedure? Seems to encourage procedures—wrong incentive.
- Developer states: "This indicator has unclear construct validity, because it has not been validated except as part of a set of indicators."
- There is wide variation in hospitalization rates by zip code.
- This is a community/population/geographic measure, not a hospital level measure.

PERCUTANEOUS CORONARY INTERVENTIONS (PCI)

0355 Bilateral cardiac catheterization rate (IQI 25)

Description: Percent of discharges with heart catheterizations in any procedure field with simultaneous right and left heart (bilateral) catheterizations.
Numerator Statement: Discharges with ICD-9-CM procedure code for right and left heart catheterization in any procedure code field.
Denominator Statement: Discharges with ICD-9-CM procedure code for heart catheterizations in any procedure code field.
Exclusions: None
Adjustment/Stratification: No risk adjustment necessary. None Observed (raw) rates may be stratified by gender, age groups, race/ethnicity categories, and payer categories.
Risk adjustment of the data is recommended using age and sex. Reliability adjustment is also recommended.
Level of Analysis: Facility/Agency
Type of Measure: Outcome
Data Source: Electronic administrative data/claims; Hospital administrative discharge data. See data requirements in the AHRQ QI Windows Application Documentation: http://www.qualityindicators.ahrq.gov/software.htm
Measure Steward: AHRQ

Does the Measure Meet Criteria for Endorsement: Y-17; N-3; A-0
Rationale:

- An indicator of overuse; looking at appropriateness.

0355 Bilateral cardiac catheterization rate (IQI 25)

- Hospital-level measure.

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-18; N-3
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:
- Recently modified to add the list of procedure indications. Implemented in Version 4.0 of RQI software. Was viewed as an indicator of overuse or unnecessary procedure or a component of a procedure performed without appropriate indications.
- Downward trend over past 10 years resulted from changes in the specifications.

2. Scientific Acceptability of Measure Properties: C-10; P-9; M-2; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:
- Looks at heart catherizations in any procedure field but only to include cases with coronary disease.
- Long list of exclusions including diagnoses that would lead to an indication for right heart catherization.
- Reliabilty and validity testing have been done using large databases.
- Disparaties across payers probably reflect difference across ages.
- There is a 1.3% difference in the rate of inappropriate right heart catherizations between the 5th and 95th percentile.
- Steering Committee interested in seeing more recent regional variation numbers to give more weight to the issue.

3. Usability: C-15; P-5; M-0; N-1
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:
- Measures in use across multiple states and national reporting agencies.
- No harmonization issues are apparent.

4. Feasibility: C-17; P-4; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:
- Data are collected from coding; easily obtainable from electronic record sounces.

0133 PCI mortality (risk-adjusted)©

Description: Risk-adjusted PCI mortality rate.
Numerator Statement: Patients 18 years of age and older with a PCI procedure performed during admission who expired.
Denominator Statement: Patients 18 years of age and older with a PCI procedure performed during admission.
Exclusions: 1. NCDR Registry patients who did not have a PCI (Patient admissions with a diagnostic cath only during that admission);
2. Data submissions that do not pass the data quality and completeness reports.
3. Procedure variables for subsequent PCIs during the same admission (if the patient had more than one PCI procedure during that admission).
4. Patient admissions with PCI who transferred to another facility on discharge.
5. Patient admissions with PCI who have more than two variables in the risk model that are missing.
Adjustment/Stratification: Risk-adjustment devised specifically for this measure/condition. Risk adjustment methodology is a logistic regression analysis.
Weights were assigned to risk factors or variables reflecting the strength of their association to PCI in-hospital mortality. Each patient in a facilities submission is given a risk score to predict risk of in hospital mortality and accurately report risk-adjusted mortality rates during hospitalization.
Data from 181,775 procedures performed from January 2004 to March 2006 were used to develop risk models based on pre-procedural and/or angiographic factors using logistic regression.
The most noteworthy risk factors or variables in the model include:
1. ST-segment elevation MI defined as a patient who had a STEMI on admission, with an onset within 24 hours, or the procedure indication was primary, rescue, or facilitated PCI.
2. Discharge status (alive or expired). The interaction between this variable with other variables were key in the analysis.
3. The glomerular filtration rate (GFR) variable is calculated using abbreviated MDRD formula [GFR = 186 ×?(last creatinine)-1.154 × (age)-0.203 × (gender factor) × (race factor) where (gender factor) = 1 for male and 0.742 for female, (race factor) = 1.21 for black and 1

0133 PCI mortality (risk-adjusted)©

for others].
4. The body mass index (BMI) (kg/m2) is calculated from height (cm) and weight (kg): BMI = weight × 10000 / (height) 2.
All Risk Adjustment Variables
STEMI patients
Age (for age ≤70, for age >70)
Cardiogenic Shock at Admission
Previous History—CHF
Peripheral Vascular Disease
Chronic Lung Disease
GFR (for STEMI, for non-STEMI)
NYHA Class IV (for STEMI, for non-STEMI)
PCI Status (for STEMI, for non STEMI)
- Urgent
- Emergency
- Salvage
Previous Vascular Disease
Cerebrovascular Disease
Previous PCI
PreOp IABP
Ejection Fraction Percentage
Coronary Lesion ≥50%: Subacute
Thrombosis? Yes vs. No
Highest Risk Pre-Procedure TIMI Flow = None vs. Yes
1.19 1.02 1.38 4.84
Diabetes/Control (Non-Insulin Diabetes vs. No Diabetes; Insulin Diabetes vs. No Diabetes)
Highest Risk Lesion: SCAI Lesion Class (II or III vs. I; IV vs. I)
BMI [kg/m2] (for STEMI, for Non-STEMI)
Highest Risk Lesion - Segment Category (for STEMI, for non STEMI)
-pRCA/mLAD/pCIRC
-pLAD
-Left Main N/A
Level of Analysis: Facility/Agency
Type of Measure: Outcome
Data Source: Registry data National Cardiovascular Data Registry (NCDR) CathPCI Registry®
Measure Steward: ACC

Does the Measure Meet Criteria for Endorsement: Y-21; N-0; A-0
Rationale:

- Includes all PCIs performed (30% with AMI; 70% "elective")—data from NCDR registry.
- In-patient mortality—outpatient sites not captured in the registry.

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-21; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Outcome measure; is a very frequently performed procedure that can have major impact on patients' lives.
- Expensive procedure so information and knowledge about how centers are performing and where improvements can be made is very important.
- There is a gap in terms of mortality after PCI among different hospitals, and database allows hospitals to compare themselves against each other and against a national baseline.
- Goal is to have a composite measure.

2. Scientific Acceptability of Measure Properties: C-13; P-7; M-0; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- Concerns included: data submissions that don't pass a data quality and completeness assessment are excluded; the fact that excluding reports because of completeness might bias the mortality to be lower than it actually it is; how to handle patients

0133 PCI mortality (risk-adjusted)©

taken back for a second procedure as a result of a poorly performed first procedure.
- Transfers excluded; can lower mortality by transferring to another facility; however, this includes only about 0.7%.

3. Usability: C-8; P-12; M-0; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:
- Has been in use by many hospitals.
- Outpatient sites are not captured in registry.

4. Feasibility: C-21; P-0; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:
- Data are available and retrievable.

1495 P2Y12 Inhibitor at discharge for patients with percutaneous coronary intervention (PCI) (with stents)

Description: Proportion of adult patients (age 18 or older) who undergo a percutaneous coronary intervention (PCI) (without a documented contraindication) with a stent implanted that had a P2Y12 inhibitor prescribed at discharge.
Numerator Statement: Count of patients with a PCI procedure with a P2Y12 inhibitor (Clopidogrel, Prasugrel, or Ticlopidine) prescribed at discharge.
Denominator Statement: Count of patients with a PCI procedure with a stent implanted.
Exclusions:
-P2Y12 coded as contraindicated or blinded.
-Discharge status of expired.
-Discharge location of "other acute care hospital," "hospice," or "against medical advice."
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Facility/Agency
Type of Measure: Process
Data Source: Registry data National Cardiovascular Data Registry (NCDR®) CathPCI Registry®
Measure Steward: ACC

Does the Measure Meet Criteria for Endorsement: Y-21; N-0; A-0
Rationale: Steering Committee would like to see this measure as a composite score with measure 1498.

If Applicable, Conditions/Questions for Developer:
- Have you considered an all or none composite for the PCI medication measures (1495, 1493, 1498)? Response: Developer submitted a new composite measure.

1. Importance to Measure and Report: Y-21; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:
- This is based off a guideline that is the most widely recognized professional guideline in the United States for cardiovascular medicine in the area of PCI care.
- The value of the measure is high, but the performance gap is small and may represent reporting issues rather than true performance given the small gap of 7%.
- When the performance gap gets low, why not eliminate most exclusions? A key factor in terms of exclusions is they are the same as CMS inpatient measures as a means to reduce provider burden.

2. Scientific Acceptability of Measure Properties: C-19; P-2; M-0; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

3. Usability: C-17; P-4; M-0; N-0
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:
- Harmonized to the extent possible with existing CMS measure and are specified identically.
- Is being used everywhere the NCDR is.

1495 P2Y12 Inhibitor at discharge for patients with percutaneous coronary intervention (PCI) (with stents)

- Harmonization suggested with measure 558 and combined with 1493.

4. Feasibility: C-17; P-4; M-0; N-0
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- Getting the outcome of transfers should not be too difficult.

1493 Aspirin at discharge for patients with percutaneous coronary intervention (PCI)

Description: Proportion of adult patients (age 18 or older) who undergo a percutaneous coronary intervention (PCI) and are prescribed aspirin at discharge.
Numerator Statement: Count of patients with a PCI procedure with aspirin prescribed at discharge.
Denominator Statement: Count of patients with a PCI procedure.
Exclusions:
-Aspirin coded as contraindicated or blinded.
-Discharge status of deceased.
-Discharge location of "other acute care hospital," "hospice," or "against medical advice."
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Facility/Agency
Type of Measure: Process
Data Source: Registry data National Cardiovascular Data Registry (NCDR®) CathPCI Registry®
Measure Steward: ACC

Does the Measure Meet Criteria for Endorsement: Y-21; N-0; A-0
Rationale: The Steering Committee agreed to duplicate voting on this measure to be the same as measure 1495. Unanimous agreement to recommend developer to combine 1495 and 1493.

If Applicable, Conditions/Questions for Developer:

1498 Statins at discharge for patients with percutaneous coronary intervention (PCI)

Description: Proportion of adult patients (age 18 or older) who undergo a percutaneous coronary intervention (PCI) and are prescribed a statin at discharge.
Numerator Statement: Count of patients with a PCI procedure with statin prescribed at discharge.
Denominator Statement: Count of patients with a PCI procedure.
Exclusions:
-Discharge status of deceased.
-Discharge location of "other acute care hospital," "hospice," or "against medical advice."
-Statins coded as contraindicated or blinded.
Adjustment/Stratification: N/A N/A
Level of Analysis: Facility/Agency
Type of Measure: Process
Data Source: Registry data National Cardiovascular Data Registry (NCDR®) CathPCI Registry®
Measure Steward: ACC

Does the Measure Meet Criteria for Endorsement: Y-21; N-0; A-0
Rationale:

If applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-21; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Measure will encourage improvement in the rates of statin prescribing, which reduces the risk of coronary events and coronary artery disease followin PCI.
- There is a performance gap. Prescribing rate fom the 5th to the 98th percentile was from 72% to 98%.
- Stratified analysis indicated the lower SES hospitals did as well as or better than others.

2. Scientific Acceptability of Measure Properties: C-18; P-3; M-0; N-0
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f.

1498 Statins at discharge for patients with percutaneous coronary intervention (PCI)
Meaningful differences; 2g. Comparability; 2h. Disparities) Rationale: • Content validity tested by review by an expert consensus panel. • Measure describes appropriate exclusions as well as option for contraindications. • Consistent results reported for derivation cohort and testing cohort.
3. Usability: C-20; P-1; M-0; N-0 *(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)* Rationale: • This voluntarily reported measure is currently in use. Participating institutions receive an outcomes report each quarter with their individual results.
4. Feasibility: C-20; P-0; M-0; N-0 *(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)* Rationale: • Electronic sources are used. • Reasonable information was provided about their efforts to reduce inaccuracies and follow-up on the process.

CARDIAC REHABILITATION

1496 Cardiac rehabilitation/secondary prevention (CR) program structure-based measurement set to set safety standards for CR programming
Description: Cardiac rehabilitation/secondary prevention (CR) program measurement set to assess the presence of four safety standards. Numerator Statement: The cardiac rehabilitation/secondary prevention (CR) program has policies in place that demonstrate all of the below: 1. A physician-director is responsible for the oversight of CR program policies and procedures and ensures that policies and procedures are consistent with evidence-based guidelines, safety standards, and regulatory standards. This includes appropriate policies and procedures for the provision of alternative CR program services, such as home-based CR. 2. An emergency response team is immediately available to respond to medical emergencies. (See numerator details for care setting details). 3. All professional staff have successfully completed the national Cognitive and Skills examination in accordance with the AHA curriculum for BLS with at least one staff member present who has completed the National Cognitive and Skills examination in accordance with the AHA curriculum for ACLS and has met state and hospital or facility medical-legal requirements for defibrillation and other related practices. 4. Functional emergency resuscitation equipment and supplies for handling cardiovascular emergencies are immediately available in the exercise area. Denominator Statement: All CR programs. Exclusions: None Adjustment/Stratification: No risk adjustment necessary Level of Analysis: Clinicians: Group; Facility/Agency; Integrated delivery system; Other Interdisciplinary teams of cardiac rehabilitation/secondary prevention professionals providing CR services. Type of Measure: Structure/management Data Source: Paper medical record/flowsheet; Organizational policies and procedures; Program policies and procedures and documentation of compliance using departmental records. This can be submitted electronically. Measure Steward: American Association of Cardiovascular and Pulmonary Rehabilitation/American College of Cardiology Foundation/American Heart Association (AACVPR/ACCF/AHA)
Does the Measure Meet Criteria for Endorsement: Y-6; N-15; A-0 Rationale: • Linkage to being certified in order to meet the measure. • Absence of noncertification data.
If Aapplicable, Conditions/Questions for Developer:
1. Importance to Measure and Report: Y-20; N-1

1496 Cardiac rehabilitation/secondary prevention (CR) program structure-based measurement set to set safety standards for CR programming

(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)

Rationale:

- Cardiac rehabilitation is an important and effective care process.
- Steering Committee questioned the evidence for the criteria.
- Only looks at 40% of programs that are certified.

2. Scientific Acceptability of Measure Properties: C-3; P-11; M-3; N-4

(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)

Rationale:

- The program initially had to deny two-thirds of applications for remediation efforts, whereas more recently, all but two met criteria for safety.
- Measure is dependent on AACVPR certification, but can a program be just as compliant without being certified?
- Stewards state they are not aware of alternative data sources and note controversy regarding the applicability of the requirement for resuscitation equipment and supplies be available in the testing area when the testing area is in the home or other alternative settings.

3. Usability: C-2; P-12; M-4; N-3

(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)

Rationale:

- Currently in use for those programs that are currently certified.
- No data available for programs using the measure but are not certified. About 60% of the programs are not certified.
- NQF criteria does not require widespread national testing.

4. Feasibility: C-2; P-7; M-8; N-3

(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)

Rationale:

- Feasible if certified; not that feasible if not certified.

1494 Cardiac rehabilitation/secondary prevention (CR) program measurement set related to monitoring response to therapy and documenting program effectiveness

Description: Cardiac rehabilitation/secondary prevention (CR) program measurement set to assess the presence of a written policy in place that demonstrates program effectiveness.

Numerator Statement: The cardiac rehabilitation/secondary prevention (CR) program is monitoring a response to therapy, and the program effectiveness has a written policy in place to capture all four of the elements below:

1. Document the percentage of patients for whom the CR program has received a formal referral request who actually enroll in the program.
2. Document for each patient a standardized plan to assess completion of the prescribed course of CR as defined on entrance to the program.
3. Document for each patient a standardized plan to assess outcome measurements at the initiation and again at the completion of CR, including at least one outcome measure for the core program components as outlined in the Proposed AACVPR/ACCF/AHA Performance Measure: Individualized Assessment and Evaluation of Modifiable Cardiovascular Risk Factors, Development of Individualized Interventions, and Communication With Other Health Care Providers.
4. Describe the program's methodology to document program effectiveness and initiate quality improvement strategies.

Denominator Statement: All CR programs.

Exclusions: None

Adjustment/Stratification: No risk adjustment necessary

Level of Analysis: Clinicians: Group; Facility/Agency; Integrated delivery system; Program: Other

Type of Measure: Structure/management

Data Source: Paper medical record/flow-sheet; Organizational policies and procedures; Program policies and procedures and documentation of compliance using departmental records.

In addition, a National Outcomes Data Registry is being established by AACVPR to use in future to collect and analyze this data.

Measure Steward: (AASVPR/ACCF/AHA)

1494 Cardiac rehabilitation/secondary prevention (CR) program measurement set related to monitoring response to therapy and documenting program effectiveness

Does the Measure Meet Criteria for Endorsement: Y-3; N-17; A-0

Rationale:

- Similar to 1496. Standard is measured through certification; however, 60% cardiac programs do not participate in the certification program.

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-20; N-1

(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)

Rationale:

- Similar construct and comments as measure 1496.
- 55% patients are referred, but only 19% actually enroll.
- Not known if there is a gap in performance because no data are available beyond the remidation efforts of the overall certification.

2. Scientific Acceptability of Measure Properties: C-3; P-15; M-3; N-0

(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)

Rationale:

- Disparities information included: less prescribed for elderly, women, and minorities.
- Results of reliability testing show good agreement (kappa inter-rater reliability testing), and Delphi-like peer review was used for validity testing.
- Four components in the numerator; three patient level and one system level.
- Impact of CR is four times the impact of timely PCI.
- No exclusions and no known disparities.

3. Usability: C-7; P-8; M-6; N-0

(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)

Rationale:

- Currently in use and publicly reported on several websites.
- Harmonized with other cardiac rehabilitation measures being reviewed.
- Stimulates quality improvement strategies for cardiac rehabilitation professionals, if they are certified.

4. Feasibility: C-1; P-12; M-4; N-4

(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)

Rationale:

- If the patient fails to complete the program it may affect the program's ability to capture the individual outcomes and accurately reflect the program effectiveness.
- Feasible and relatively low cost, although dependent on the AASCPR.

1497 Cardiac rehabilitation/secondary prevention (CR) program measurement set to assess risk for adverse cardiovascular events

Description: Cardiac rehabilitation/secondary prevention (CR) program measurement set to assess the presence of two assessments of risk for adverse cardiovascular events.

Numerator Statement: The cardiac rehabilitation/secondary prevention (CR) program performs assessments of risk for adverse cardiovascular events:

1. Documentation, at program entry, that each patient undergoes an assessment of clinical status (e.g., symptoms, medical history) in order to identify high-risk conditions for adverse cardiovascular events.

2. A policy to provide recurrent assessments for each patient during the time of participation in the CR program in order to identify any changes in clinical status that increase the patient's risk of adverse cardiovascular events.

Denominator Statement: All CR Programs.

Exclusions: None

Adjustment/Stratification: No risk adjustment necessary

Level of Analysis: Clinicians: Group; Facility/Agency; Integrated delivery system

Type of Measure: Structure/management

1497 Cardiac rehabilitation/secondary prevention (CR) program measurement set to assess risk for adverse cardiovascular events

Data Source: Organizational policies and procedures program policies and procedures and documentation of compliance using departmental records. This can be submitted electronically.
Measure Steward: (AAVCPR/ACCF/AHA)

Does the Measure Meet Criteria for Endorsement: Y-2; N19; A-0
Rationale:

- The Steering Committee encouraged the measure developers to rework this measure in to something that would be much more usable.
- The Steering Committee felt it was important to note that because they voted the measures down does not reflect the idea that there should not be a standard in America for cardiac rehabilitation programs.

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-19; N-2
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- Much of the discussion from the previous two measures, 1496 and 1494, applies here.
- The measure submitters use program certification data to indicate a gap. Information submitted is unclear whether failure to obtain certification is directly related to the lack of the policies and behaviors included in the measure or for other reasons.

2. Scientific Acceptability of Measure Properties: C-1; P-13; M-6; N-1
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- Much of the discussion from the previous two measures, 1496 and 1494, applies here.
- Stewards state that there is no standardized risk assessment method in use. This is a concern for a performance measure.
- The measure did not meet criteria for endorsement because there is no "one best or standard" method of screening.
- Reliability testing minimally addressed this specific measure.
- Evidence for scoring seems to be on the composite of all CR measures taken together, but not individually.

3. Usability: C-2; P-10; M-7; N-1
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- Much of the discussion from the previous two measures, 1496 and 1494, applies here.

4. Feasibility: C-0; P-11; M-8; N-1
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- Much of the discussion from the previous two measures, 1496 and 1494, applies here.
- Electronic sources were not addressed.
- Review is audit of policies, not an audit of actual use in patients.

960 Cardiac rehabiltation composite

Description: This measure evaluates whether a cardiac rehabilitation/secondary prevention program has processes in place for individualized assessment and evaluation of modifiable cardiovascular risk factors, development of individualized interventions, and communication with other health care providers.
Numerator Statement: The cardiac rehabilitation/secondary prevention (CR) program has all 11 processes in place for an individualized assessment and evaluation of modifiable cardiovascular risk factors, development of individualized interventions, and communication with other healthcare providers.
Denominator Statement: All CR Programs.
Exclusions: None
Adjustment/Stratification: No risk adjustment necessary
Level of Analysis: Clinicians: Group; Facility/Agency; Integrated delivery system
Type of Measure: Structure/management

960 Cardiac rehabiltation composite

Data Source: Organizational policies and procedures program policies and procedures and documentation of compliance using departmental records. This can be submitted electronically.
Measure Steward: (AACVPR/ACCF/AHA)

Does the Measure Meet Criteria for Endorsement: Y-2; N19; A-0
Rationale:

- The Steering Committee encouraged the measure developers to rework this measure in to something that would be much more usable.
- The Steering Committee felt it was important to note that because they voted the measures down does not reflect the idea that there should not be a standard in America for cardiac rehabilitation programs.
- Specific issues:
  - The absence of noncertified validity and reliability data.
  - The linkage of these measures to certification.
  - The absence of outcomes, favorable outcomes related to certification.
  - The need for patient-level measures.

If Applicable, Conditions/Questions for Developer:

1. Importance to Measure and Report: Y-19; N-2
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale:

- The discussion from the previous three measures applies here.
- The measure submitters use program certification data to indicate a gap. Information submitted is unclear whether failure to obtain certification is directly related to the lack of the policies and behaviors included in the measure or for other reasons.

2. Scientific Acceptability of Measure Properties: C-1; P-13; M-6; N-1
(2a. Precise specifications; 2b. Reliability testing; 2c. Validity testing; 2d. Exclusions justified; 2e. Risk adjustment/stratification; 2f. Meaningful differences; 2g. Comparability; 2h. Disparities)
Rationale:

- Much of the discussion from the previous two measures, 1496 and 1494, applies here.
- Stewards state that there is no standardized risk assessment method in use. This is a concern for a performance measure.
- The measure did not meet criteria for endorsement because there is no "one best or standard" method of screening.
- Evidence for scoring seems to be on the composite of all CR measures taken together, but not individually.

3. Usability: C-2; P-10; M-7; N-1
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures)
Rationale:

- See discussion of component measures.

4. Feasibility: C-0; P-11; M-8; N-1
(4a. Clinical data generated during care process; 4b. Electronic sources; 4c. Exclusions—no additional data source; 4d. Susceptibility to inaccuracies/ unintended consequences identified; 4e. Data collection strategy can be implemented)
Rationale:

- The discussion from the previous three measures applies here.
- Electronic sources were not addressed.
- Review is audit of policies, not an audit of actual use in patients.

NEXT STEPS

- NQF staff will follow up with the measures developer with questions from the Committee.
- NQF staff will identify competing measures for the Committee to determine “best in class.”
- The Steering Committee will meet on April 7-8, 2011, to review the Phase II measures.