CONFERENCE CALL OF THE SURGERY ENDORSEMENT MAINTENANCE 2010 STEERING COMMITTEE

September 13, 2011

Committee Members Present: Arden Morris, MD, MPH, FACS (Co-chair), University of Michigan; Nasim Afsar-manesh, MD, UCLA Medical Center; Howard Barnebey, MD, Specialty Eyecare Centre; Paula Graling, DNP, RN, CNS, CNOR, INOVA Fairfax Hospital; Vivienne Halpern, MD, FACS, Carl T Hayden VA Medical Center; Ruth Kleinpell, PhD, RN, FAAN, Rush University Medical Center; Dennis Rivenburgh, MS, ATC, PA-C, St. Anthony's Primary Care; Terry Rogers, MD, The Foundation for Health Care Quality; Carol Wilhoit, MD, MS, Blue Cross Blue Shield of Illinois; Christine Zambricki, CRNA, MS, FAAN, American Association of Nurse Anesthetists.

NQF Staff Present: Sarah Fanta, Project Analyst; Alexis Forman, MPH, Senior Project Manager; Melinda Murphy, RN, MS, NE-BC, Senior Director; Jessica Weber, Project Analyst, MPH.

Measure Developers Present: Lindsey Adams, Society for Vascular Surgeons; John Bott, Agency for Healthcare Research and Quality; Andrea Colon, Morgan Stanley Children's Hospital; Sheryl Davies, Stanford University; Jeffrey Geppert, Battelle Memorial Institute; Jane Han, Society of Thoracic Surgeons; Kathy Jenkins, Children's Hospital of Boston; Pam Phillips, Society for Vascular Surgery; Nina Raucher, Children's Hospital Boston; Patrick Romano, University of California-Davis.

The audio recording from the meeting can be found <u>here</u>.

MEETING PROCESS

Ms. Forman welcomed the Steering Committee and provided a brief overview of the agenda. The purpose of this call was to:

- review the newly combined pediatric heart surgery mortality 0339: RACHS-1 pediatric heart surgery mortality that was created from measures 0339: Pediatric heart surgery mortality (PDI 6) (risk adjusted) and PCS-021-09: Standardized mortality ratio for congenital heart surgery, risk adjustment for congenital heart surgery (RACHS-1) adjusted;
- review the newly combined beta blocker measure derived from measures 0127: Preoperative beta blockade and 0235: Pre-op beta blocker in patient with isolated CABG (1);
- evaluate the measure developer response to the Committee's suggested modifications for Phase II measures in preparation for final recommendations; and
- discuss current gaps in measurement.

The measure developers/stewards were available on the call to respond to questions from the Committee as needed.

Ms. Murphy updated the Committee on the status of the Phase I measures, which were reviewed by the Consensus Standards Approval Committee (CSAC) on September 12. She noted general concerns that were expressed regarding the public reporting of the Society for Thoracic Surgeons' (STS) measures, and whether participation in databases is a valid measure of accountability. Specific questions were also raised about VTE

prophylaxis and the pediatric cardiac surgery volume measures. The measures will be considered next by the NQF Board.

Dr. Morris followed up on Ms. Murphy's review of the Phase I Surgery measures by the CSAC. She further described the CSAC's discussion of registry measures in terms of influencing hospitals to participate in a specific registry and reviewed whether measures should be endorsed that are not currently publicly reported. She also highlighted the Steering Committee's concern that not all of the measure information was readily available within the submission form.

Ms. Murphy reviewed the voting results received from the Committee regarding the remaining Phase I and a number of Phase II measures. She noted that reconsideration of measure 0515: Ambulatory surgery patients with appropriate method of hair removal resulted in recommendation for continued endorsement without placement in reserve status. Three measures were not recommended by the Committee including 1531: Follow-up assessment of stroke or death after carotid revascularization, 0367: Post operative wound dehiscence (PDI 11) and 0368: Post operative wound dehiscence (PSI 14).

Ms. Murphy encouraged the Steering Committee to review the gaps analysis regarding NQF-endorsed surgery related measures, and suggest topic areas and specific measures that should be addressed through future measure development. This information will be added to the final report.

MEASURE EVALUATION SUMMARY

The following summary includes the Committee's original evaluation of the measures and any follow-up since the May 4-5 in-person meeting.

Measures and Evaluations

The summary below displays follow-up of 7 measures considered at the May 4-5 in-person meeting, including actions taken by the Steering Committee on conditional recommendations or preliminary review. (See the <u>summary</u> from the May 4-5 meeting for the original evaluation of the measures.)

Information related to the measures that were discussed on this call is highlighted.

Cardiac, Appendectomy and Pancreatic Resection	
0127 Preoperative beta blockade	3
0365 Pancreatic resection mortality rate (IQI 9) (risk adjusted)	
0366 Pancreatic resection volume (IQI 2)	
Cardiac and Vascular	
0357 Abdominal aortic aneurysm (AAA) repair volume (IQI 4)	7
0359 Abdominal aortic artery (AAA) repair mortality rate (IQI 11)	9

General, Ophthalmology, Orthopedics and Pediatrics 0339 RACHS-1 pediatric heart surgery mortality	11
General, Prophylaxis and Wound Dehiscence 0125 Timing of antibiotic prophylaxis for cardiac surgery patients	
0127 Preoperative beta blockade	
Description: Percent of patients aged 18 years and older undergoing isolated CABG who received beta blockers within 24 hours preceding surgery.	
Numerator Statement: Number of patients undergoing isolated CABG who received beta blockers within 24 hours preceding surgery Denominator Statement: All patients undergoing isolated CABG	
Exclusions: Cases are removed from the denominator if preoperative beta blocker was contraindicated.	
Adjustment/Stratification: no risk adjustment necessary/No stratification is required for this measure.	
Level of Analysis: Clinicians: Group, Clinicians: Individual, Facility/ Agency, Population: Community, Population: Counties or cities,	
Population: National, Population: Regional/ network, Population: States	
Type of Measure: Process	
Data Source: Registry data	
Measure Steward: Society of Thoracic Surgeons 633 North Saint Clair Street, Suite 2320 Chicago Illinois 60611	
Steering Committee Recommendation for Endorsement: Y-23; N-0; A-1	
Detionale. There was strong suidenes to support this massive, and it domenstrated a clear performance can	

Rationale: There was strong evidence to support this measure and it demonstrated a clear performance gap.

Steering Committee Follow-Up:

This was one of four related measures considered for potential harmonization. The four included: endorsed measure 0235: Pre-op beta blocker in patient with isolated CABG; maintenance measure 0127: Pre-operative beta blockade; endorsed measure 0236: Pre-op beta blocker in patient with isolated CABG; and maintenance measure 0284: Surgery patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period. Discussion of the four measures is included here. The Steering Committee stated that measure 0284 is unique and harmonization will not be pursued at this time since it applies beyond CABG to other surgical patients receiving beta blocker therapy prior to admission. The Steering Committee identified measures 0235 and 0127 as similar and should be combined into a single measure. The measure developer confirmed that the measures are similar with the exception of the level of measurement and indicated that they would combine them into a single measure from which information at the individual or facility level can be drawn. The developer also noted that measures 0235 and 0236 are identical in their specifications and are two components of a Physician Quality Reporting System (PQRS) measure. The Steering Committee stated that they considered the measures 0235 and 0127) and administrative claims data (measure 0236) to be similar but not competing since the two data sources result in capture of information about different populations; both measures are useful and valid.

On the September 13 conference call, the measure developer confirmed that measures 0127 and 0235 had been combined into this single measure that includes a level of analysis for both facilities and individual clinicians.

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

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

Rationale: There was strong evidence to support this measure and it demonstrated a performance gap of 86.6 percent.

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: Questions regarding number of patients excluded by the measure and concerns over contraindications to preoperative beta blockers were satisfactorily addressed by additional information from the developer. Evidence in support of the measure demonstrates its value.

3. Usability: <u>C-17; P-4; M-0; N-0</u>

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

Rationale: The measure as specified is usable; there may be opportunities for harmonization with other beta blocker measures. At the request of the Committee, the developer combined measures 0127 and 0235 into a single measure.

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: The measure is meaningful for public reporting and quality improvement; though, the cost of data extraction is of some concern.

0365 Pancreatic resection mortality rate (IQI 9) (risk adjusted) Description: Percentage of adult hospital discharges with procedure code of pancreatic resection with an in-hospital death, stratified by benign and malignant disease. Numerator Statement: Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator. Denominator Statement: Hospital discharges, age 18 years and older, with ICD-9-CM pancreatic resection code procedure and a diagnosis code of pancreatic cancer in any field, stratified by benign and malignant disease. Exclusions: Exclude cases: missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), guarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1 =missing) transferring to another short-term hospital (DISP=2) MDC 14 (pregnancy, childbirth, and puerperium) ICD-9-CM codes: 577.0 Acute pancreatitis Adjustment/Stratification: Risk adjustment method widely or commercially available The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, age in years (in 5-year age groups), All Patient Refined-Diagnosis Related Group (APR-DRG) and APR-DRG risk-of-mortality subclass. The reference population used in the model is the universe of discharges for states that participate in the HCUP State Inpatient Databases (SID) for the year 2007 (updated annually), a database consisting of 43 states and approximately 30 million adult discharges. 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., hospital, state, and region). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate/User has the optin to stratify by gender, age (5-year age groups), race/ ethnicity, primary payer, and custom stratifiers./ Malignant Disease: ICD-9-CM pancreatic cancer diagnosis codes: 1520 MALIGNANT NEOPL DUODENUM 1561 MAL NEO EXTRAHEPAT DUCTS 1562 MAL NEO AMPULLA OF VATER 1570 MAL NEO PANCREAS HEAD 1571 MAL NEO PANCREAS BODY 1572 MAL NEO PANCREAS TAIL 1573 MAL NEO PANCREATIC DUCT 1574 MAL NEO ISLET LANGERHANS 1578 MALIG NEO PANCREAS NEC 1579 MALIG NEO PANCREAS NOS Benign Disease: All other cases Level of Analysis: Facility/ Agency Type of Measure: Outcome Data Source: Electronic administrative data/ claims Measure Steward: Agency for Healthcare Research and Quality | 540 Gaither Road | Rockville | Maryland | 20850 Steering Committee Recommendation for Endorsement: Pending final recommendation. Rationale: The measure is based on strong evidence and evaluation criteria are met. With stratification that includes being and malignant disease and both endovascular and open repair, its usefulness is enhanced. If applicable, Conditions/Questions for Developer: Overarching comment: Please provide feasibility of reporting mortality stratified by institutional volume (e.g., high, medium, low volume

with parameters for each) rather than having rate and mortality separated.

0365 Pancreatic resection mortality rate (IQI 9) (risk adjusted)

- 1. De.2 Ensure measure description accurately captures measure focus.
- 2. <u>2a.8 Denominator Details</u>: Do not limit to pancreatic resection for cancer could stratify by malignant and benign. Also, consider providing volume as well as rate.
- 3. <u>2a.9 Denominator Exclusions</u>: Please remove 'transferring to another short-term hospital (DISP=2)' from the exclusions.
- 4. 2a.9 Denominator Exclusions: Add exclusion for pancreatitis.

Measures 0365 and 0366 should be fully harmonized in order to properly report as a pair. This will involve including all pancreatic disease in both the numerator and denominator of both measures. They can then be stratified by malignant and benign disease. Note: Discussion of Related and Competing measures may result in additional requests to developers specific to harmonization. **Developer Response:**

- 1. AHRQ agrees to revise the measure description to more accurately capture the measure focus
- 2. AHRQ agrees to harmonize the mortality and volume indicator denominators to include benign disease in the mortality measure. Note that the mortality and volume indicator (0366) are designated as paired measures
- 3. This request is problematic for a few reasons. First, the outcome of interest (in-hospital mortality) is not observed for these cases. Second, it is possible that a single case may be counted twice (once for the transferring hospital, once for the receiving hospital). Third, removing this exclusion would require using data that linked patients across hospitalizations (in order to avoid the issues #1 and #2), which is not readily available for individual hospitals across institutions. Therefore, we respectively defer a definitive response to this request pending the routine availability of linked hospitalization data, or at a minimum additional analysis using such data of the potential impact of removing the exclusion.
- 4. AHRQ agrees to add an exclusion for pancreatitis

Steering Committee Follow-up:

- The Steering Committee expressed their concern about transferred patients being excluded from the measure. AHRQ
 responded that the number is less that 1 percent and the majority is transfer of convenience for the patient. The Steering
 Committee agreed that the response from the developer was adequate.
- 2. This was one of three related measures considered for potential harmonization. The three included: maintenance measure 0365: Pancreatic resection mortality rate (IQI 9); maintenance measure 0366: Pancreatic resection volume (IQI 2); and endorsed measure 0738: Survival predictor for pancreatic resection surgery. Discussion of the three measures is included here. The Steering Committee requested the measure developer continue its expedited work to combine measures 0365 and 0366, including benign disease. After some discussion, the Members agreed that because measures 0365 and 0366 are risk adjusted and measure 0738 is not, that recommendations related to harmonization of numerator and denominator should not be advanced at this time.

On the September 13 conference call, the Steering Committee reviewed Measures 0365 and 0366 which have been harmonized to reflect both benign and malignant disease. The developer stated that empirical literature has predominately focused on resections for cancer and there is a substantial difference in short term outcomes between high volume and low volume centers. They noted the potential value of including benign disease as a separate stratum. The developer also indicated that they continue to work on combining the measures into a single measure. Progress to this end will be reviewed on a subsequent conference call.

1. Importance to Measure and Report:

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

Rationale: The evidence supports the measure's focus on pancreatic resections for cancer and while it is a low-volume procedure, mortality rates are high and merit tracking.

2. Scientific Acceptability of Measure Properties:

(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 was considered scientifically acceptable. The Committee discussed the importance of separate measures focusing on a pancreatic resection for cancer and a pancreatic resection for benign disease and determined that both could be captured in a single measure that is stratified to report each.

3. Usability:

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

Rationale: This measure is in use in multiple states and healthcare systems and is reported on HCUPnet as well as used in the MONAHRQ system that is provided for public reporting and quality improvement.

4. Feasibility:

(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: This measure was considered feasible; data is obtained from electronic claims and chart abstraction.

0366 Pancreatic resection volume (IQI 2) Description: Number of adult hospital discharges with procedure for pancreatic resection, stratified by benign and malignant disease. Numerator Statement: Hospital discharges, age 18 years and older, with ICD-9-CM codes for pancreatic resection procedure, stratified by benign and malignant disease. Denominator Statement: Not applicable Exclusions: Not applicable Adjustment/Stratification: No risk adjustment necessary/. Malignant Disease: ICD-9-CM pancreatic cancer diagnosis codes: 1520 MALIGNANT NEOPL DUODENUM 1561 MAL NEO EXTRAHEPAT DUCTS 1562 MAL NEO AMPULLA OF VATER 1570 MAL NEO PANCREAS HEAD 1571 MAL NEO PANCREAS BODY 1572 MAL NEO PANCREAS TAIL 1573 MAL NEO PANCREATIC DUCT 1574 MAL NEO ISLET LANGERHANS 1578 MALIG NEO PANCREAS NEC 1579 MALIG NEO PANCREAS NOS Benign Disease: All other cases Level of Analysis: Facility/ Agency Type of Measure: Structure/management Data Source: Electronic administrative data/ claims Measure Steward: Agency for Healthcare Research and Quality | 540 Gaither Road | Rockville | Maryland | 20850 Steering Committee Recommendation for Endorsement: Pending final recommendation. Rationale: The measure was considered important and cited strong evidence. With reporting as a pair with 0365 and stratification that includes benign and malignant disease and both endovascular and open repair, its usefulness is enhanced. If applicable, Conditions/Questions for Developer: De.2 Ensure measure description accurately captures measure focus. 1. 2a.3 Numerator Details: Partial resections and partial operations should be included in 0366, 2. 2a.8 Denominator Details: Do not limit to pancreatic resection for cancer. 3. 2a.9 Denominator Exclusions: Please remove 'transferring to another short-term hospital (DISP=2)' from the exclusions. 4. 5. 2a.9 Denominator Exclusions: Add exclusion for pancreatitis. 2b.3 and 2.c.3 Testing Results: Text speaks to esophageal resection. Please provide correct information and advise if there 6. are other such errors within the submission that have required correction. Measures 0365 and 0366 should be fully harmonized in order to properly report as a pair. This will involve including all pancreatic disease in both the numerator and denominator of both measures. They can then be stratified by malignant and benign disease. Note: Discussion of Related and Competing measures may result in additional requests to developers specific to harmonization. **Developer Response:** 1. AHRQ agrees to revise the measure description to more accurately capture the measure focus 2. AHRQ agrees to include partial resections and partial operations 3. The volume measure contains no such exclusion. However, in general AHRQ agrees to harmonize the mortality and volume indicator denominators to include benign disease in the mortality measure. Note that the mortality (0365) and volume indicator are designated as paired measures.

4. The volume measure contains no such exclusion; however, see note above regarding harmonization

5. The volume measure contains no such exclusion; however, see note above regarding harmonization

0366 Pancreatic resection volume (IQI 2)

6. Such erroneous references shall be corrected

Steering Committee Follow-up:

1. The Steering Committee agreed that the response from the developer was adequate.

2. This was one of three related measures considered for potential harmonization. The three included: maintenance measure 0365: Pancreatic resection mortality rate (IQI 9); maintenance measure 0366: Pancreatic resection volume (IQI 2); and endorsed measure 0738: Survival predictor for pancreatic resection surgery. Discussion of the three measures is included here. The Steering Committee requested the measure developer continue its expedited work to combine measures 0365 and 0366, including benign disease. After some discussion, the Members agreed that because measures 0365 and 0366 are risk adjusted and measure 0738 is not, that recommendations related to harmonization of numerator and denominator should not be advanced at this time.

On the September 13 conference call, the Steering Committee reviewed Measures 0365 and 0366 which have been harmonized to reflect both benign and malignant disease. The developer stated that empirical literature has predominately focused on resections for cancer and there is a substantial difference in short term outcomes between high volume and low volume centers. They noted the potential value of including benign disease as a separate stratum. The developer also indicated that they continue to work on combining the measures into a single measure. Progress to this end will be reviewed on a subsequent conference call.

1. Importance to Measure and Report:

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

Rationale: The evidence supports the measure's focus on pancreatic resections for cancer and while it is a low-volume procedure, the impact in terms of mortality is important to track and report.

2. Scientific Acceptability of Measure Properties:

(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 was considered scientifically acceptable. The Committee discussed the importance of separate measures focusing on a pancreatic resection for cancer and a pancreatic resection for benign disease and determined that both could be captured in a single measure to be stratified to report each.

3. Usability:

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

Rationale: This measure is in use in multiple states and healthcare systems and is reported on HCUPnet as well as used in the MONAHRQ system that is provided for public reporting and quality improvement.

4. Feasibility:

(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: This measure was considered feasible; data is obtained from electronic claims and chart abstraction.

0357 Abdominal aortic aneurysm (AAA) repair volume (IQI 4)

Description: Count of adult hospital discharges in a one year time period with a procedure code of AAA repair. **Numerator Statement:** Discharges, age 18 years and older, with an abdominal aortic aneurysm (AAA) repair procedure and a primary or secondary diagnosis of AAA.

Denominator Statement: Not applicable.

Exclusions: Not applicable.

Adjustment/Stratification: no risk adjustment necessary/ The stratification of the denominator for open vs. endovascular and ruptured vs. unruptured involve the following codes in the denominator specification:

AAA Repair (ICD-9-CM Procedure Codes: OPEN ; '3834´ = ´1´ /* AORTA RESECTION & ANAST * '3844´ = ´1´ /* RESECT ABDM AORTA W REPL */ '3864´ = ´1´ /* RUCISION OF AORTA */ /* ENDOVASCULAR */; '3971´ = ´1´ /* ENDO IMPL GRFT ABD AORTA */ /* Include Only: AAA */ /* ICD-9-CM Diagnosis Codes: */ /* RUPTURED */; '4413´ = ´1´ /* RUPT ABD AORTIC ANEURYSM */

NATIONAL QUALITY FORUM
0357 Abdominal aortic aneurysm (AAA) repair volume (IQI 4)
/* UNRUPTURED */;
<pre>'4414 ' = '1' /* ABDOM AORTIC ANEURYSM */</pre>
Level of Analysis: Facility/ Agency
Type of Measure: Structure/management
Data Source: Electronic administrative data/ claims
Measure Steward: Agency for Healthcare Research and Quality 540 Gaither Road Rockville Maryland 20850 Steering Committee Recommendation for Endorsement: Conditional <u>No did not pass Importance to Measure and Report Y-10; N-</u>
11. Pending final recommendation.
Rationale: The measure initially did not pass the importance criterion; however, the Committee asked for additional information. With
that information, the Committee reconsidered the measure. Final action is pending receipt and consideration of a measure that
combines 0357 and 0359.
If applicable, Conditions/Questions for Developer:
1. Overarching Comment: The Steering Committee vote regarding the NQF evaluation criterion of "Importance" was split with 10
voting yes and 11 voting no and a number of members noted the measure should only be reported with the related mortality
measure. The developer will want to review the measure in its entirety in this light and provide whatever additional
information/specification including value as a paired measure with mortality that it believes appropriate. Should specifications
change, it is important to provide information regarding testing with the changes.
2. <u>2a. 11 Stratification Details/Variables</u> : Measure should stratify the measure by endovascular and open repairs.
Note: Discussion of Related and Competing measures may result in additional requests to developers specific to harmonization. As
discussed the developer should meet with SVS to harmonize or blend measures concerning AAA Developer Response:
1. AHRQ agrees to stratify the measure by endovascular and open repairs, but notes that additional methodological development
will be required to ensure the measures have adequate reliability.
2. AHRQ noted at the meeting that the volume and mortality measures are to be reported as paired measures though some
users may not have the information to report both.
Steering Committee Follow-Up:
The Steering Committee was concerned about volume being reported as a singular measure.
1. The Steering Committee requested information regarding needed methodological changes for the measure based on the
endovascular and open repair stratification and will further consider the measure with that information. AHRQ will also further
clarify the risk adjustment model.
2. The Steering Committee was concerned that the developer had not addressed creating a composite of the volume (0357) and
morbidity measure (0359). Members noted that the developer had agreed to stratify the measure by endovascular and open
repairs but that the measure did have reliability testing for the requested change. The Steering Committee asked for additional
information about how the developer would redevelop their risk stratification model. On the August 3 conference call, the
developer discussed the measure together with Measure 0359 and highlighted preliminary results of revising the measure with
four strata. The developer is continuing to explore how the outcomes information can be put back together with volume for the requested composite/combined measures. The measure will move forward as a composite rather than as two measures.
requested composite/compined measures. The measure will move forward as a composite father than as two measures.
On the September 13 conference call, the Steering Committee reviewed the developer's revisions to reflect four strata, ruptured or
unruptured aneurysms repaired by open or endovascular approaches. These four components will be reported separately within this
measure in addition to reporting overall measure performance. The developer also responded to questions about testing results and
public reporting details to the satisfaction of the Committee.
1. Importance to Measure and Report: Y-10; N-11
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale: The measure would provide key information to the public about AAA mortality, but does not provide separate information on
EVARs and open repairs. The vote is reflective of the debate related to the value and implications of separately reporting open and
endovascular repairs. AHRQ representatives indicated that the stratification is a component of the current software; however the

endovascular repairs. AHRQ representatives indicated that the stratification is a component of the current software; however the Committee would like to see this specifically reflected in the specifications of the measure. AHRQ representatives indicated that a separate risk adjustment model could be developed for open and endovascular procedures with both ruptured and unruptured aneurysms. The majority of AAA repairs are done endovascularly and open repairs have become more complicated.

2. Scientific Acceptability of Measure Properties:

(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:

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

0357 Abdominal aortic aneurysm (AAA) repair volume (IQI 4)

measures)

Rationale: 4. Feasibility:

(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:

0359 Abdominal aortic artery (AAA) repair mortality rate (IQI 11)

Description: Percent of adult hospital discharges in a one-year time period with a procedure code of AAA repair and a diagnosis of AAA with an in-hospital death.

Numerator Statement: Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator. Denominator Statement: Discharges, age 18 years and older, with ICD-9-CM AAA repair code procedure and a diagnosis of AAA in any field. The denominator may be stratified by open vs. endovascular procedures, and ruptured vs. un-ruptured AAA. Exclusions: Exclude cases:

• missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year

(YEAR=missing) or principal diagnosis (DX1 =missing)

• transferring to another short-term hospital (DISP=2)

• MDC 14 (pregnancy, childbirth, and puerperium)

Adjustment/Stratification: risk adjustment method widely or commercially available The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, age in years (in 5-year age groups), All Patient Refined-Diagnosis Related Group (APR-DRG) and APR-DRG risk-of-mortality subclass. The reference population used in the model is the universe of discharges for states that participate in the HCUP State Inpatient Databases (SID) for the year 2007 (updated annually), a database consisting of 43 states and approximately 30 million adult discharges. 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., hospital, state, and region). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Risk adjustment factors: sex age 18-24; age 25-29; age 30-34; age 35-39; age 40-44; age 45-49; age 50-54; age 55-59; age 60-64; age 65-69; age 70-74; age 75-79; age 80-84; age 85+ ADRG 1731 (other vascular procedures-minor) ADRG 1732 (other vascular procedures-moderate)

ADRG 1733 (other vascular procedures model)

ADRG 1734 (other vascular procedures-extreme)

ADRG 1691 (major thoracic and abdominal vascular procedures-minor)

ADRG 1692 (major thoracic and abdominal vascular procedures-moderate)

ADRG 1693 (major thoracic and abdominal vascular procedures-major)

ADRG 1694 (major thoracic and abdominal vascular procedures-extreme

MDC 5 (Cardiovascular)

Transfer-in status

Gender, age (5-year age groups), race/ ethnicity, primary payer, custom

The stratification of the denominator for open vs. endovascular and ruptured vs. unruptured involves the following codes in the denominator specification:

AAA Repair

ICD-9-CM Procedure Codes:

OPEN

'3834' = '1' /* AORTA RESECTION & ANAST */

'3844' = '1' /* RESECT ABDM AORTA W REPL */

'3864' = '1' /* EXCISION OF AORTA */

ENDOVASCULAR

'3971' = '1' /* ENDO IMPL GRFT ABD AORTA */

AAA

ICD-9-CM Diagnosis Codes: RUPTURED

ΛΛΓΙΟΝΕΟ ΄ΛΛΙ2΄ - ΄Ι΄ /* DUDT Λ

'4413 ' = '1' /* RUPT ABD AORTIC ANEURYSM */ UNRUPTURED

'4414 ´ = ´1´ /* ABDOM AORTIC ANEURYSM */

0359 Abdominal aortic artery (AAA) repair mortality rate (IQI 11)

Level of Analysis: Facility/ Agency

Type of Measure: Outcome

Data Source: Electronic administrative data/ claims

Measure Steward: Agency for Healthcare Research and Quality | 540 Gaither Road | Rockville | Maryland | 20850

Steering Committee Recommendation for Endorsement: Pending final recommendation.

Rationale: The measure initially did not pass the importance criterion; however, the Steering Committee engaged in extensive discussion of the volume and mortality measures as noted in review of 0357 above. The Committee asked for additional information and with that information, reconsidered the measure. Final action is pending receipt and consideration of a measure that combines 0357 and 0359.

If applicable, Conditions/Questions for Developer:

- 1. <u>2a.11 Stratification Details/Variables</u>: a) Stratify the measure by endovascular and open repairs as well as emergency vs. elective repair; b) specify the risk stratification model used; 3) identify settings where the model has been validated in addition to the training data set in which it was developed or provide other supporting data as to its validity.
- 2. <u>2b.3 Testing Results</u>: Please provide information about signal to noise ratio.

Note: Discussion of Related and Competing measures may result in additional requests to developers specific to harmonization. As discussed, the developer should meet with SVS to harmonize or blend measures concerning AAA.

Developer Response:

- a) As noted above, AHRQ agrees to stratify the measure by endovascular and open repairs; in addition, AHRQ agrees to stratify by ruptured vs. un-ruptured aneurysm (which is what we assume you mean by emergency vs. elective repair); but AHRQ again notes that additional methodological development will be required to ensure the measures have adequate reliability; b) the risk stratification model is specified below; c) the model has been validated on the State Inpatient Databases (SID), which consists of hospital discharge data from 40 states (constituting about 90% of hospital discharges in the U.S) for the years 2001-2008
- 2. The signal to noise ratio is the ratio of the between hospital variance (signal) to the within hospital variance (noise). The formula is signal / (signal + noise). The ratio itself is only a diagnostic for the degree of variance in the risk-adjusted rate systematically associated with the provider. Therefore, what matters is the magnitude of the variance in the "smoothed" rate (that is, the variance in the risk-adjusted rate after the application of the univariate shrinkage estimator based on the signal ratio). What the data demonstrate is systematic variation in the provider level rate of 2.6 to 7.6 per 100 from the 5th to 95th percentile <u>after</u> a signal ratio of 0.307 is applied as the shrinkage estimator (that is, after accounting for variation due to random factors).

Table 3. Risk Adjustment Coefficients for IQI #11— AAA Repair Mortality

Parameter	Label	DF	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
Intercept		1	-6.6044	0.1713	1486.04	0.0000
Sex	Female	1	0.4539	0.0747	36.95	0.0000
Age	65 to 74	1	0.4879	0.1072	20.72	0.0000
Age	75 to 79	1	0.8737	0.1201	52.97	0.0000
Age	80 to 84	1	1.1092	0.1200	85.50	0.0000
Age	85+	1	1.4440	0.1359	112.97	0.0000
APR-DRG	'1691' to '1692'	1	1.6789	0.1623	107.05	0.0000
APR-DRG	'1693' to '1694'	1	3.9127	0.1523	659.72	0.0000
APR-DRG	'1733' to '1734'	1	3.1568	0.1676	354.55	0.0000
MDC	5	1	2.6400	0.1483	316.85	0.0000
MDC	Other	1	2.9536	0.2252	172.05	0.0000
RUPTURED		1	2.0565	0.0808	647.42	0.0000

c-statistic 0.937

Note: The APR-DRG consists of the DRG and the risk-of-mortality subclass (minor (1), moderate (2), major (3) and extreme (4)). Steering Committee Follow-Up:

1. The Steering Committee requested information regarding needed methodological changes for the measure based on the endovascular and open repair stratification and will further review the measure with that information. AHRQ will also further clarify the risk adjustment model.

2. The Steering Committee was concerned that the developer had not addressed creating a composite of the volume (0357) and morbidity measure (0359). It noted that the developer had agreed to stratify the measure by endovascular and open repairs

0359 Abdominal aortic artery (AAA) repair mortality rate (IQI 11) but that the measure did not have any reliability testing for the requested change. The Steering Committee asked for additional information about how the developer would redevelop their risk stratification model. On the August 3 conference call, the developer highlighted preliminary results about the measure's stratification. A Steering Committee member questioned whether the measure was useful for endovascular un-ruptured repairs, if the difference between the best performing hospitals was 0.00 percent and worst performing hospitals was 0.75 percent repairs, which was considered minimal. Additionally, it was noted that open ruptured repairs also showed little difference between the best performing hospitals at 24.74 percent and the worst performing hospitals at 26.53 percent. The Steering Committee resolved that while some of the collected data may show small differences, the measure would also show areas of variation. The developer further explained that they could use the data to identify hospitals that performed at better or worse than average but for other subsets. On the August 3 conference call, the developer highlighted preliminary results of revising the measure with four strata – ruptured vs. unruptured; and open vs. endovascular repair using available data from a period of years using data from 1700 hospitals, of which 500 do endovascular repair of ruptured aneurysms. Based on the preliminary data of that stratification, a number of issues were discussed including whether the measure was useful for endovascular un-ruptured repairs, given minimal differences between the best performing hospitals (0.00 percent) and worst performing hospitals (0.75 percent); small differences in open ruptured repairs between hospitals that performed better than expected (24.74 percent) and those that performed worse than expected (26.53 percent); risk stratification approaches using inpatient diagnoses vs. clinical data or outpatient diagnoses. The Steering Committee opined that while some of the collected data may show small differences, the breakdown can show areas of variation that warrant measurement and follow up. The developer is continuing to explore how the outcomes information can be put back together with volume for the requested composite/combined measures. On the September 13 conference call, the Steering Committee reviewed the developer's revisions to reflect four strata, ruptured or unruptured aneurysms repaired by open or endovascular approaches. These four components will be reported separately within this measure in addition to reporting overall measure performance. The developer also responded to questions about testing results and public reporting details to the satisfaction of the Committee. 1. Importance to Measure and Report: Y-10; N-11 (1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence) Rationale: The measure would provide key information to the public about AAA volume, but does not provide separate information on EVARs and open repairs. The majority of AAA repairs are done endovascularly and open repairs have become more complicated 2. Scientific Acceptability of Measure Properties: (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: (3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing measures) Rationale: 4. Feasibility: (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: 0339 RACHS-1 pediatric heart surgery mortality Description: Risk-adjusted rate of in-hospital death for pediatric cases undergoing surgery for congenital heart disease, along with ratio of observed to expected in-hospital mortality rates. Numerator Statement: Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator with a code of pediatric heart surgery with ICD-9-CM diagnosis of congenital heart disease in any field. Denominator Statement: Discharges under age 18 with ICD-9-CM procedure codes for congenital heart disease (1P) in any field or non-specific heart surgery (2P) in any field with ICD-9-CM diagnosis of congenital heart disease (2D) in any field. Exclusions: Exclude cases: • MDC 14 (pregnancy, childbirth and pueperium)

• with transcatheter interventions (either 3AP, 3BP, 3CP, 3DP, 3EP with 3D, or 3FP) as single cardiac procedures, performed without bypass (5P) but with catheterization (6P)

• with septal defects (4P) as single cardiac procedures without bypass (5P)

• with diagnosis of ASD or VSD (5D) with PDA as the only cardiac procedure

0339 RACHS-1 pediatric heart surgery mortality
• heart transplant (7P)
• premature infants (4D) with PDA closure (3D and 3EP) as only cardiac procedure;
age less than or equal to 30 days with PDA closure as only cardiac procedure
• missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year
(YEAR=missing) or principal diagnosis (DX1 =missing)
• transferring to another short-term hospital (DISP=2)
neonates with birth weight less than 500 grams (Birth Weight Category 1)
Adjustment/Stratification: risk adjustment method widely or commercially available PDI: The predicted value for each case is
computed using a logistic regression model and covariates for gender and age in years (in 5-year age groups). The reference
population used in the model is the universe of discharges for states that participate in the HCUP State Inpatient Databases (SID) for the
year 2007 (updated annually), a database consisting of 43 states and approximately 30 million adult discharges. 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,
state, and region). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate,
multiplied by the reference population rate
The model includes additional covariates for RACHS-1 risk categories.
Required data elements: CMS Diagnosis Related Group (DRG); CMS Major Diagnostic Category (MDC); age in days up to 364, then
age years at admission; International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) principal and
secondary diagnosis codes/ The user has the option to stratify by Gender, birthweight, age in days, age in years, race/ ethnicity, primary
payer, and custom stratifiers.
Level of Analysis: Facility/ Agency
Type of Measure: Outcome
Data Source: Electronic administrative data/ claims
Measure Steward: Agency for Healthcare Research and Quality 540 Gaither Road Rockville Maryland 20850
Steering Committee Recommendation for Endorsement: Y-24; N-0; A-0 Retingely Measuring pediatric heart curgory martality is important and the measure is valid and measure ariteria DACUS is supported in
Rationale: Measuring pediatric heart surgery mortality is important and the measure is valid and meets criteria RACHS is supported in the literature.
If applicable, Conditions/Questions for Developer:
1. This measure and Measure 0340 should continue to be reported as a pair.
Developer Response:
1. AHRQ agrees to continue to note the Pediatric heart surgery mortality and volume (339 and 340 respectively) are to be
reported as a paired measure in related AHRQ QI documents.
Steering Committee Follow-up:
At the Steering Committee's request, the developer explained that they were working to combine measures 0339: Pediatric heart surgery
mortality (PDI 6) (risk adjusted) and PCS-021-09: Standardized mortality ratio for congenital heart surgery, risk adjustment for congenital
heart surgery (RACHS-1) adjusted) for submission by August 15, 2011.
On the September 13 conference call, the Steering Committee reviewed this newly combined measure which represents the
harmonization of the former 0339 and PCS-021-09. Members determined that it adequately addressed their request and met criteria.
The developer indicated that this measure remains appropriate to be paired with measure 0340: Pediatric Heart Surgery Volume (PDI 7).
1. Importance to Measure and Report: Y-22; N-0
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale: The measure was considered important and the performance gap suggests room for improvement.
The Committee requested timely updated citations in the future.
2. Scientific Acceptability of Measure Properties: C-17; 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: The measure was considered scientifically acceptable. 2 Usability: C 17: D 5: M 0: N 0
3. Usability: <u>C-17; P-5; M-0; N-0</u> (3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing
(sa. Meaningrui/userui foi public reporting and quality improvement; sb. Harmonized; sc. Distinctive of additive value to existing measures)
Rationale: This measure has been in wide use over a number of years and is considered usable.
4. Feasibility: C-19; 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: This measure uses claims data thus was considered feasible.

0125 Timing of antibiotic prophylaxis for cardiac surgery patients Description: Percent of patients aged 18 years and older undergoing cardiac surgery who received prophylactic antibiotics within one hour of surgical incision or start of procedure if no incision was required (two hours if receiving vancomycin or fluoroquinolone) Numerator Statement: Number of patients undergoing cardiac surgery patients who received prophylactic antibiotics within one hour of surgical incision or start of procedure if no incision was required (two hours if vancomycin or fluoroquinolone) **Denominator Statement:** Number of patients undergoing cardiac surgery Exclusions: Cases are removed from the denominator if the patient had a documented contraindication or rationale for not administering antibiotic in medical record. Other exclusions include: -Patients who had a principal diagnosis suggestive of preoperative infectious diseases -Patients whose ICD-9-CM principal procedure was performed entirely by Laparoscope -Patients enrolled in clinical trials -Patients with documented infection prior to surgical procedure of interest -Patients who were receiving antibiotics more than 24 hours prior to surgery -Patients who were receiving antibiotics within 24 hours prior to arrival This list will be provided in the STS Adult Cardiac Surgery Database Data Manager's Training Manual as acceptable exclusions. Adjustment/Stratification: no risk adjustment necessary/No stratification is required for this measure. Level of Analysis: Clinicians: Group, Facility/ Agency, Population: Counties or cities, Population: National, Population: Regional/ network, Population: States Type of Measure: Process Data Source: Registry data Measure Steward: Society of Thoracic Surgeons | 633 North Saint Clair Street, Suite 2320 | Chicago | Illinois | 60611 Steering Committee Recommendation for Endorsement: Withdrawn Rationale: The evidence supporting the measure was considered strong. If applicable, Conditions/Questions for Developer: 1c.5 Rating of Strength/Quality of Evidence: Address the rating of evidence. 2a.1 Numerator Statement: Provide the exact timing of the prophylactic antibiotic. Note: Discussion of Related and Competing measures may result in additional requests to developers specific to harmonization. Developer Response: This is addressed in the measure submission form. Exact timing was provided in the original measure submission form. 2. Steering Committee Follow-up: The Steering Committee requested additional information on the gaps and the link to outcomes, noting that individual 1. measures may not have the effect on SSI rates that bundles can. Members also stated that antibiotic stewardship should be addressed. With developer response, the Committee agreed that the developer provided an adequate response to its auestions. 2. This was one of five related measures considered for potential harmonization. The five included: maintenance measure 0125: Timing of antibiotic prophylaxis for cardiac surgery patients; endorsed measure 0269. Timing of prophylactic antibioticsadministering physician; endorsed measure 0270: Timing of antibiotic prophylaxis-ordering physician; maintenance measure 0527: Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1; and endorsed measure: 0472: Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery-cesarean section. Discussion of the five measures is included here. The Steering Committee requested that the developer of measures 0270 and 0269, neither of which are under consideration in this project, be approached by NQF staff to determine the current state of these measures and encourage them to consider combining them into a single measure that focuses on administration. Based on their opinion that timing of antibiotics administration prior to surgical incision, including for cardiac surgery, should not be different, Members asked that the developers of the five measures be asked to collaborate on the potential for combining the measures into a single measure that most closely mirrors measure 0527 to the extent possible. As part of that effort, they asked that the developer of measure 0472 provide information about any differences that would make administration of antibiotic at delivery unique. They did not view incision for cesarean unique With respect to measure 0125, they asked that the developer provide information about whether registry data would provide significantly different outcomes than administrative/claims data across institutions. For the measures not within the current project (AMA-PCPI measure 0269 and 270 and Mass General measure 0472), NQF staff will relay the request of the Committee for their consideration and feedback.

On the September 13 conference call, the developer noted that they had provided the Steering Committee information on the direct link of timing to outcomes as an excerpt from a guideline. They also explained that measure 0527 addresses all cardiac surgery and stated that measure 0125 may have had more relevance historically. The Steering Committee noted that measure 0125 was redundant when considered against competing measure 0527. The developer agreed and indicated that measure 0125 would be withdrawn from further

0125 Timing of antibiotic prophylaxis for cardiac surgery patients
consideration.
1. Importance to Measure and Report: Y-17; N-2
(1a. Impact; 1b. Performance gap; 1c. Outcome or Evidence)
Rationale: The Committee noted controversy regarding the one hour timeframe for antibiotic prophylaxis. The performance gap for the measure was considered small but the outcome of mediastinitis and potentially death suggests measuring continued improvement effort is warranted.
2. Scientific Acceptability of Measure Properties: C-11; 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: The Committee noted that laparoscopic procedures were excluded but in the future would be included in the measure.
3. Usability: <u>C-13; P-6; M-0; N-0</u>
(3a. Meaningful/useful for public reporting and quality improvement; 3b. Harmonized; 3c. Distinctive or additive value to existing
measures)
Rationale: The Committee indicated that there were similar measures that may need to be harmonized including:
#0269: Timing of prophylactic antibiotics - administering physician
#0270: Timing of antibiotic prophylaxis- ordering physician
#0472: Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section
#0527: Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1.
4. Feasibility: <u>C-15; P-4; M-0; N-0</u>
(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: While data for the measure is drawn from registry, the measure was considered feasible.

NQF MEMBER AND PUBLIC COMMENT

No comments were made.

NEXT STEPS

Ms. Murphy stated that the follow-up related to measures 0365: Pancreatic resection mortality rate (IQI 9) (risk adjusted) and 0366: Pancreatic resection volume (IQI 2) would need to be received by October 14. They will be included in a Phase II addendum to the draft report. Ms. Forman stated that the Committee would receive a survey to vote on the measures discussed on the call, with the exception of measure 0365 and 0366.

Ms. Forman revisited the Committee's request, on the August 3-4 meeting regarding related and competing measures, that each of the following groups of prophylactic measures be combined into single measures:

Prophylactic antibiotics: Selection

- 0268: Selection of prophylactic antibiotic: First or second generation cephalosporin (endorsed measure)
- 0528: Prophylactic antibiotic selection for surgical patients (maintenance measure)

Prophylactic antibiotics: Timing/Received

- 0125: Timing of antibiotic prophylaxis for cardiac surgery patients (maintenance measure)
- 0527: Prophylactic antibiotic received within 1 hour prior to surgical incision (maintenance measure)
- 0269: Timing of prophylactic antibiotics-administering physician (endorsed measure)
- 0270: Timing of antibiotic prophylaxis-ordering physician (endorsed measure)
- 0472: Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery-cesarean section (endorsed measure)

Due to project time constraints, staff has requested the developers to submit the newly combined measures under the next Surgery Endorsement Maintenance project that will launch in 2013. Committee members who vote to recommend the prophylactic maintenance measures should do so with the understanding that the newly combined measures will be submitted under the new project. Ms. Forman also stated she would be sending an availability survey regarding the conference call date to review the submitted comments on the Phase II draft report.