



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to subcriterion 1b).

Brief Measure Information

NQF #: 0300

Corresponding Measures:

De.2. Measure Title: Cardiac Surgery Patients With Controlled Postoperative Blood Glucose

Co.1.1. Measure Steward: Centers for Medicare & Medicaid Services

De.3. Brief Description of Measure: Cardiac surgery patients with controlled postoperative blood glucose (less than or equal to 180 mg/dL) in the timeframe of 18 to 24 hours after Anesthesia End Time.

1b.1. Developer Rationale: Controlling hyperglycemia can result in a decrease in infection rates in those undergoing cardiac surgery. Infections increase cost to the patient and to the facility. Monitoring glucose on POD 1 and POD 2 may increase the likelihood of additional monitoring being performed, thus reducing the adverse effects of hyperglycemia in this population.

S.4. Numerator Statement: Cardiac surgery patients with controlled postoperative blood glucose (less than or equal to 180 mg/dL) in the timeframe of 18 to 24 hours after Anesthesia End Time.

S.7. Denominator Statement: Cardiac surgery patients with no evidence of prior infection.

S.10. Denominator Exclusions: Excluded Populations:

- Patients less than 18 years of age
- Patients who have a length of stay greater than 120 days
- Patients who had a principal diagnosis suggestive of preoperative infectious disease (as defined in Appendix A, Table 5.09 for ICD-9-CM codes)
- Burn and transplant patients (as defined in Appendix A, Tables 5.14 and 5.15 for ICD-9-CM codes)
- Patients enrolled in clinical trials
- Patients whose ICD-9-CM principal procedure occurred prior to the date of admission
- Patients with physician/advanced practice nurse/physician assistant (physician/APN/PA) documented infection prior to surgical procedure of interest
- Patients who undergo CPR or surgery, discharge, expire, or leave Against Medical Advice (AMA) prior to 24 hours after Anesthesia End Time.

De.1. Measure Type: Process

S.23. Data Source: Claims, Electronic Health Data, Other, Paper Medical Records

S.26. Level of Analysis: Facility, Other, Population : Regional and State

IF Endorsement Maintenance – Original Endorsement Date: Nov 15, 2007 **Most Recent Endorsement Date:** Jan 31, 2012

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? N/A

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-

than-optimal performance. **Measures must be judged to meet all subcriteria to pass this criterion and be evaluated against the remaining criteria.**

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[0300_Evidence_MSF5.0_Data.doc](#)

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., the benefits or improvements in quality envisioned by use of this measure)

Controlling hyperglycemia can result in a decrease in infection rates in those undergoing cardiac surgery. Infections increase cost to the patient and to the facility. Monitoring glucose on POD 1 and POD 2 may increase the likelihood of additional monitoring being performed, thus reducing the adverse effects of hyperglycemia in this population.

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. (This is required for endorsement maintenance. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included). This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use.

In a national sample of 19,497 Medicare patients undergoing surgery in US hospitals during the first quarter of 2005, the rate of performance for this measure was 80%. In the most recent quarter of data, the national rate was 93.4%.

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

This data is collected on a nation-wide basis, with almost 4000 hospitals reporting data. For first quarter 2010 (most recent data available): In 1,177 facilities with 44,304 eligible cases, the rate was 93.4 %.

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. (This is required for endorsement maintenance. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use.

There are disparities reports for the inpatient core measures that are being reviewed by CMS.

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations.

This is probably supposed to be the data/sample for 1b.4.

1c. High Priority (previously referred to as High Impact)

The measure addresses:

- a specific national health goal/priority identified by DHHS or the National Priorities Partnership convened by NQF; OR
- a demonstrated high-priority (high-impact) aspect of healthcare (e.g., affects large numbers of patients and/or has a substantial impact for a smaller population; leading cause of morbidity/mortality; high resource use (current and/or future); severity of illness; and severity of patient/societal consequences of poor quality).

1c.1. Demonstrated high priority aspect of healthcare

Affects large numbers, Frequently performed procedure, Patient/societal consequences of poor quality

1c.2. If Other:

1c.3. Provide epidemiologic or resource use data that demonstrates the measure addresses a high priority aspect of healthcare.

List citations in 1c.4.

Hyperglycemia has been associated with increased in-hospital morbidity and mortality for multiple medical and surgical conditions. In a study by Zerr, et al (1997), the risk of infection was significantly higher for patients undergoing coronary artery bypass graft (CABG) if blood glucose levels were elevated. Furthermore, Zerr, et al (2001), demonstrated that the incidence of deep wound

infections in diabetic patients undergoing cardiac surgery was reduced by controlling mean blood glucose levels below 200mg/dL in the immediate postoperative period. Latham, et al (2001), found that hyperglycemia in the immediate postoperative phase increases the risk of infection in both diabetic and nondiabetic patients and the higher the level of hyperglycemia, the higher the potential for infection in both patient populations. A study conducted in Leuven, Belgium (Van den Berghe, 2001), demonstrated that intensive insulin therapy not only reduced overall in-hospital mortality but also decreased blood stream infections, acute renal failure, red cell transfusions, ventilator support, and intensive care. Hyperglycemia is a risk factor that, once identified, could minimize adverse outcomes for cardiac surgical patients.

1c.4. Citations for data demonstrating high priority provided in 1a.3

Gordon SM, Serkey JM, Barr C, et al. The relationship between glycosylated hemoglobin (HgA1c) levels and postoperative infections in patients undergoing primary coronary artery bypass surgery (CABG.) Infect Control Hosp Epidemiol. 1997;18(No.5, Part 2):29(58.) PMID: 00000.

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Furnary AP, Zerr KJ, Grunkemeier GL, et al. Continuous intravenous insulin infusion reduces the incidence of deep sternal wound infection in diabetic patients after cardiac surgical procedures. Ann Thorac Surg. 1999;67:352-360. PMID: 10197653.

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Golden SH, Peart-Vigilance C, Kao WH, et al. Perioperative glycemic control and the risk of infectious complications in a cohort of adults with diabetes. Diabetes Care. 1999 Sep;22(9):1408-1414. PMID: 10480501.

?

Trick WE, Scheckler WE, Tokars JJ, et al. Modifiable risk factors associated with deep sternal site infection after coronary artery bypass grafting. J Thorac Cardiovasc Surg. 2000 Jan;119(1):108-114. PMID: 10612768.

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Trick WE, Scheckler WE, Tokars JJ, et al. Risk factors for radial artery harvest site infection following coronary artery bypass graft surgery. Clin Infect Dis. 2000 Feb;30(2):270-275. PMID: 10671327.

?

Menzin J, Langly-Hawthorn C, Friedman M, et al. Potential short-term economic benefits of improved glycemic control: a managed care prospective. Diabetes Care. 2001 Jan;24(1):51-55. PMID: 11194241.

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Dellinger E. Preventing Surgical-Site Infections: The importance of timing and glucose control. Infect Control Hosp Epidemiol. 2001;22(10):604-606. PMID: 11776344.

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Latham R, Lancaster AD, Covington JF, et al. The association of diabetes and glucose control with surgical-site infections among cardiothoracic surgery

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patients. Infect Control Hosp Epidemiol. 2001 Oct;22(10):607-612. PMID: 11776345.

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McAlister FA, Man J, Bistritz L, et al. Diabetes and coronary artery bypass surgery: an examination of perioperative glycemic control and outcomes. Diabetes Care. 2003 May;26(5):1518-1524. PMID: 12716815.

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Estrada CA, Young JA, Nifong LW, et al. Outcomes and perioperative hyperglycemia in patients with or without diabetes mellitus undergoing coronary artery bypass grafting. Ann Thorac Surg. 2003 May;75(5):1392-1399. PMID: 12735552.

?

Terranova A. The effects of diabetes mellitus on wound healing. Plast Surg Nurs. 1991;11(1):20-25. PMID: 2034714.

?

Woodruff RE, Lewis SB, McLeskey CH, et al. Avoidance of surgical hyperglycemia in diabetic patients. JAMA. 1980 Jul 1;244(2):166-168. PMID: 6991732.

?

Dellinger EP, Gross PA, Barrett TL, et al: Quality standard for antimicrobial prophylaxis in surgical procedures. Infectious Diseases Society of America. Clin Infect Dis. 1994;18: 422-427. PMID: 8207176.

?

Zerr KJ, Furnary AP, Grunkemeier GL, et al. Glucose control lowers the risk of wound infection in diabetics after open heart operations. Ann Thorac Surg. 1997 Feb;63(2):356-361. PMID: 9033300.

?

Pomposelli JJ, Baxter JK 3rd, Babineau TJ, et al. Early postoperative glucose control predicts nosocomial infection rate in diabetic

patients. J Parenter Enteral Nutr. 1998 Mar-Apr;22(2):77-81. PMID: 9527963.

?

Van den Berghe G, Wouters P, Weekers F, et al. Intensive insulin therapy in the critically ill patients. N Engl J Med. 2001 Nov 8;345(19):1359-1367. PMID: 11794168.

1c.5. If a PRO-PM (e.g. HRQoL/functional status, symptom/burden, experience with care, health-related behaviors), provide evidence that the target population values the measured PRO and finds it meaningful. (Describe how and from whom their input was obtained.)

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the subcriteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):

Surgery, Surgery : Cardiac

De.6. Non-Condition Specific (check all the areas that apply):

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

https://www.qualitynet.org/dcs/BlobServer?blobkey=id&blobnocache=true&blobwhere=1228890291048&blobheader=multipart%2Foctet-stream&blobheadername1=Content-Disposition&blobheadervalue1=attachment%3Bfilename%3D2.4_SCIP_v4_3b%2C0.pdf&blobcol=urldata&blobtable

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

Attachment Attachment: Appendix_A_Tablea_5.10-_5.09-_5.11-_5.14-_5.15.xlsx

S.3. For endorsement maintenance, please briefly describe any changes to the measure specifications since last endorsement date and explain the reasons.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome)

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm.

Cardiac surgery patients with controlled postoperative blood glucose (less than or equal to 180 mg/dL) in the timeframe of 18 to 24 hours after Anesthesia End Time.

S.5. Time Period for Data (What is the time period in which data will be aggregated for the measure, e.g., 12 mo, 3 years, look back to August for flu vaccination? Note if there are different time periods for the numerator and denominator.)

18-24 hours after Anesthesia End Time. If no blood glucose levels are documented for that timeframe, the timeframe of 12-18 hours

after Anesthesia End Time will be evaluated.

S.6. Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)
IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm.

Data Element:

Glucose

S.7. Denominator Statement (Brief, narrative description of the target population being measured)

Cardiac surgery patients with no evidence of prior infection.

S.8. Target Population Category (Check all the populations for which the measure is specified and tested if any):

Elderly

S.9. Denominator Details (All information required to identify and calculate the target population/denominator such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

Included Populations:

- An ICD-9-CM Principal Procedure Code of selected surgeries (as defined in Appendix A, Table 5.10 for ICD-9-CM codes)
- AND
- An ICD-9-CM Principal Procedure Code of selected surgeries (as defined in Appendix A, Table 5.11 for ICD-9-CM codes)

S.10. Denominator Exclusions (Brief narrative description of exclusions from the target population)

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a length of stay greater than 120 days
- Patients who had a principal diagnosis suggestive of preoperative infectious disease (as defined in Appendix A, Table 5.09 for ICD-9-CM codes)
- Burn and transplant patients (as defined in Appendix A, Tables 5.14 and 5.15 for ICD-9-CM codes)
- Patients enrolled in clinical trials
- Patients whose ICD-9-CM principal procedure occurred prior to the date of admission
- Patients with physician/advanced practice nurse/physician assistant (physician/APN/PA) documented infection prior to surgical procedure of interest
- Patients who undergo CPR or surgery, discharge, expire, or leave Against Medical Advice (AMA) prior to 24 hours after Anesthesia End Time.

S.11. Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

Data Elements:

- Anesthesia Start Date
- Admission Date
- Birthdate
- Clinical Trial
- Discharge Date
- ICD-9-CM Principal Diagnosis Code
- ICD-9-CM Principal Procedure Code
- Infection Prior to Anesthesia

S.12. Stratification Details/Variables (All information required to stratify the measure results including the stratification variables, definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b)

No stratification

S.13. Risk Adjustment Type (Select type. Provide specifications for risk stratification in S.12 and for statistical model in S.14-15)

No risk adjustment or risk stratification

If other:

S.14. Identify the statistical risk model method and variables (Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development and testing should be addressed with measure testing under Scientific Acceptability)

N/A

S.15. Detailed risk model specifications (must be in attached data dictionary/code list Excel or csv file. Also indicate if available at measure-specific URL identified in S.1.)

Note: Risk model details (including coefficients, equations, codes with descriptors, definitions), should be provided on a separate worksheet in the suggested format in the Excel or csv file with data dictionary/code lists at S.2b.

S.15a. Detailed risk model specifications (if not provided in excel or csv file at S.2b)

N/A

S.16. Type of score:

Rate/proportion

If other:

S.17. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Higher score

S.18. Calculation Algorithm/Measure Logic (Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.)

SCIP Infection (Inf) 4: Cardiac Surgery Patients With Controlled Postoperative Blood Glucose

Numerator: Cardiac surgery patients with controlled postoperative blood glucose (less than or equal to 180 mg/dL) in the time frame of 18 to 24 hours after anesthesia end time.

Denominator: Cardiac surgery patients with no evidence of prior infection.

Variable Key: Patient Age, Surgery Days

1. Start processing. Run cases that are included in the Surgical Care Improvement Project (SCIP) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.

2. Calculate Patient Age. The Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of the admission date and the birthdate to yield the most accurate age.

3. Check Patient Age

a. If Patient Age is less than 18 years, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

b. If Patient Age is greater than or equal to 18 years, continue processing and proceed to ICD-9-CM Principal Procedure Code.

4. Check ICD-9-CM Principal Procedure Code

a. If the ICD-9-CM Principal Procedure Code is not on Table 5.11, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

b. If the ICD-9-CM Principal Procedure Code is on Table 5.11, continue processing and proceed to ICD-9-CM Principal Diagnosis Code.

5. Check ICD-9-CM Principal Diagnosis Code

a. If the ICD-9-CM Principal Diagnosis Code is on Table 5.09, 5.14 or 5.15, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

b. If the ICD-9-CM Principal Diagnosis Code is not on Table 5.09, 5.14 or 5.15, continue processing and proceed to Clinical Trial.

6. Check Clinical Trial

a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

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- b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Clinical Trial equals No, continue processing and proceed to Anesthesia Start Date.
7. Check Anesthesia Start Date
- a. If Anesthesia Start Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. If Anesthesia Start Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
- c. If Anesthesia Start Date equals a Non Unable to Determine Value, continue processing and proceed to the Surgery Days calculation.
8. Calculate Surgery Days. Surgery Days, in days, is equal to the Anesthesia Start Date minus the Admission Date.
9. Check Surgery Days
- a. If Surgery Days is less than zero, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- b. If Surgery Days is greater than or equal to zero, continue processing and proceed to Infection Prior to Anesthesia.
10. Check Infection Prior to Anesthesia
- a. If Infection Prior to Anesthesia is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. If Infection Prior to Anesthesia equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Infection Prior to Anesthesia equals No, continue processing and proceed to Glucose.
11. Check Glucose
- a. If Glucose is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
- b. If Glucose equals 5, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
- c. If Glucose equals 3 or 4, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
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- d. If Glucose equals 1 or 2, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

S.19. Calculation Algorithm/Measure Logic Diagram URL or Attachment (You also may provide a diagram of the Calculation Algorithm/Measure Logic described above at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

S.20. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF a PRO-PM, identify whether (and how) proxy responses are allowed.

The SCIP Topic Population (common to all SCIP measures) is defined as patients admitted to the hospital for inpatient acute care with an ICD-9-CM Principal Procedure Code for SCIP as defined in Appendix A, Table 5.10 and a Length of Stay (Discharge Date - Admission Date) <= 120 days. There are eight distinct strata or sub-populations within the SCIP Topic Population, each identified by a specific group of procedure codes. The patients in each stratum are counted in the Initial Patient Population of multiple measures.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes.

Quarterly Sampling

For hospitals selecting sample cases for SCIP, a modified sampling procedure is required. Hospitals selecting sample cases for this set must ensure that each individual stratum's population and quarterly sample size meets the following conditions:

- Select within each of the seven individual measure stratum (e.g., colorectal surgery, hip arthroplasty, etc.) and the 8th SCIP stratum (Table 5.25 in Appendix A).

Quarterly Sample Size

Based on Initial Patient Population Size for the SCIP Measure Set

Hospital's Measure

Average Quarterly

Stratum Initial Patient Population Size

"N" Minimum Required

Stratum Sample Size

"n"

? 481 49

171-480 10% of Initial Patient Population size

17-170 17

< 17 No sampling; 100% Initial Patient Population required

Monthly Sampling

For hospitals selecting sample cases for SCIP, a modified sampling procedure is required. Hospitals selecting sample cases for this set must ensure that each individual strata population and monthly sample size meets the following conditions:

- Select within each of the seven individual measure stratum (e.g., colorectal surgery, hip arthroplasty, etc.) and the 8th SCIP stratum (Table 5.25 in Appendix A).

Monthly Sample Size

Based on Initial Patient Population Size for the SCIP Measure Set

Hospital's Measure

Average Monthly

Stratum Initial Patient Population Size

"N" Minimum Required

Stratum Sample Size

"n"

? 151 16

61-150 10% of Initial Patient Population size

6-60 6

<6 No sampling; 100% Initial Patient Population required

All of the SCIP measures' specific exclusion criteria are used to filter out cases that do not belong in the measure denominator. Using SCIP-Inf-4 as an example, include cases covering all sampled strata, although the measure-specific exclusion criteria would only allow cases in the cardiac surgery stratum to be included in the denominator.

S.21. Survey/Patient-reported data (If measure is based on a survey, provide instructions for conducting the survey and guidance on minimum response rate.)

IF a PRO-PM, specify calculation of response rates to be reported with performance measure results.

S.22. Missing data (specify how missing data are handled, e.g., imputation, delete case.)

Required for Composites and PRO-PMs.

S.23. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.24.

Claims, Electronic Health Data, Other, Paper Medical Records

S.24. Data Source or Collection Instrument (Identify the specific data source/data collection instrument e.g. name of database, clinical registry, collection instrument, etc.)

IF a PRO-PM, identify the specific PROM(s); and standard methods, modes, and languages of administration.

Vendor tools or CART (both electronic). CART is available for download free at

<http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1138900279093>

S.25. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)
URL

S.26. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)
Facility, Other, Population : Regional and State

S.27. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)
Inpatient/Hospital
If other:

S.28. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

2a. Reliability – See attached Measure Testing Submission Form

2b. Validity – See attached Measure Testing Submission Form

[0300_MeasureTesting_MS5.0_Data.doc](#)

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition, Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims)

If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields? (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields)

No

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources.

[Measure will be re-tooled for EHR use in near future, possibly 2011 or 2012.](#)

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL.

Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.
IF a PRO-PM, consider implications for both individuals providing PROM data (patients, service recipients, respondents) and those whose performance is being measured.
 According to feedback, data collection is not labor-intensive and data is available in the medical record.

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Planned	Current Use (for current use provide URL)
Payment Program	
Regulatory and Accreditation Programs	

4a.1. For each CURRENT use, checked above, provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included

4a.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

4a.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

4b. Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b.1. Progress on Improvement. (Not required for initial endorsement unless available.)

Performance results on this measure (current and over time) should be provided in 1b.2 and 1b.4. Discuss:

- Progress (trends in performance results, number and percentage of people receiving high-quality healthcare)
- Geographic area and number and percentage of accountable entities and patients included

4b.2. If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4c. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4c.1. Were any unintended negative consequences to individuals or populations identified during testing; OR has evidence of unintended negative consequences to individuals or populations been reported since implementation? If so, identify the negative unintended consequences and describe how benefits outweigh them or actions taken to mitigate them.

Susceptibility to inaccuracies, errors or unintended consequences have not been identified.

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

5a. Harmonization

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications completely harmonized?

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):
Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

Attachment:

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): Centers for Medicare & Medicaid Services
Co.2 Point of Contact: Helen, Dollar-Maples, Helen.Dollar-Maples@cms.hhs.gov, 410-786-7214-
Co.3 Measure Developer if different from Measure Steward: Oklahoma Foundation for Medical Quality
Co.4 Point of Contact: Kristie, Baus, Kristie.Baus@cms.hhs.gov, 410-786-8161-

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development
Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

[The panel members names are available upon request.](#)

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: [2006](#)

Ad.3 Month and Year of most recent revision: [10, 2010](#)

Ad.4 What is your frequency for review/update of this measure? [bi-annually](#)

Ad.5 When is the next scheduled review/update for this measure? [04, 2011](#)

Ad.6 Copyright statement: [N/A](#)

Ad.7 Disclaimers:

Ad.8 Additional Information/Comments: