



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 #: 0529

Corresponding Measures:

De.2. Measure Title: Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time

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

De.3. Brief Description of Measure: Surgical patients whose prophylactic antibiotics were discontinued within 24 hours after Anesthesia End Time. The Society of Thoracic Surgeons (STS) Practice Guideline for Antibiotic Prophylaxis in Cardiac Surgery (2006) indicates that there is no reason to extend antibiotics beyond 48 hours for cardiac surgery and very explicitly states that antibiotics should not be extended beyond 48 hours even with tubes and drains in place for cardiac surgery.

1b.1. Developer Rationale: The rates for discontinuation from a national sample of 39,000 Medicare patients undergoing surgery in 2001 (baseline) showed that antibiotics were discontinued in a timely manner 40.7% of the time. Discontinuation of prophylactic antibiotics within 24 hours may reduce the rate of Clostridium difficile in patients compromised because of surgery. Antibiotic overuse leads to resistant pathogens that make infections more difficult and costly to treat. All of these issues increase the cost of healthcare to consumers as well as providers.

S.4. Numerator Statement: Number of surgical patients whose prophylactic antibiotics were discontinued within 24 hours after Anesthesia End Time (48 hours for CABG or Other Cardiac Surgery).

S.7. Denominator Statement: All selected surgical patients with no evidence of prior infection.

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 5.01-5.08 for ICD-9-CM codes)

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 whose Principal Procedure was on Table 5.25
- Patients who had a principal diagnosis suggestive of preoperative infectious diseases (as defined in Appendix A, Table 5.09 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 expired perioperatively
- Patients who had other procedures requiring general or spinal anesthesia that occurred within three days (four days for CABG or Other Cardiac Surgery) prior to or after the procedure of interest (during separate surgical episodes) during this hospital stay
- Patients who received urinary antiseptics only (as defined in Appendix C, Table 3.11)
- Patients with Reasons to Extend Antibiotics
- Patients who received antibiotics prior to arrival and did not receive any antibiotics during this hospitalization
- Patients who received ONLY antibiotics with the route unable to be determined (UTD)
- Patients who did not receive any antibiotics within the timeframe 24 hours before Surgical Incision Date and Time (i.e., patient did not receive prophylactic antibiotics) through discharge
- Patients who received ALL antibiotics greater than 1440 minutes prior to Surgical Incision Date and Time
- Patients who received ALL antibiotics greater than 3 days after Anesthesia End Date OR greater than 2 days after Anesthesia End

Date for Principal Procedures on Tables 5.03-5.08

• Patients who received ALL antibiotics greater than 4320 minutes after Anesthesia End Time OR greater than 2880 minutes after Anesthesia End Time for Principal Procedures on Tables 5.03-5.08

De.1. Measure Type: Process

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

S.26. Level of Analysis: Facility, Other

IF Endorsement Maintenance – Original Endorsement Date: Aug 10, 2009 **Most Recent Endorsement Date:** May 01, 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?

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

[0529_MeasSubm_Evidence_3.7.14.docx](#)

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)
The rates for discontinuation from a national sample of 39,000 Medicare patients undergoing surgery in 2001 (baseline) showed that antibiotics were discontinued in a timely manner 40.7% of the time.

Discontinuation of prophylactic antibiotics within 24 hours may reduce the rate of Clostridium difficile in patients compromised because of surgery. Antibiotic overuse leads to resistant pathogens that make infections more difficult and costly to treat. All of these issues increase the cost of healthcare to consumers as well as providers.

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.

National rates from hospital-reported data to the clinical data warehouse for the second quarter in 2010 shows that facilities are discontinuing antibiotic prophylaxis 95.5% of the time.

The national rate of performance for second quarter 2013 (most recent data) was 98.1% with a denominator of 249,682 cases and a numerator of 244,823 cases. 3523 hospitals reported this data. The benchmark rate was 99.9% (105 hospitals in the top 10% with 25,034 denominator cases and 24,998 numerator cases).

Trends (BM= benchmark rate; Natl = National rate)

2Q 2012 BM 99.8 %; Natl 97.5%

3Q 2012 BM 99.9; Natl 97.6

4Q 2012 BM 99.9; Natl 97.7

1Q 2013 BM 99.9; Natl 98.0

2Q 2013 BM 99.9; Natl 98.1

Percentiles from 1Q2013; 3503 hospitals reporting 245,725 denominator cases (240,823 cases in the numerator):

Minimum = 0%, Maximum 100%.

5th percentile = 88.8%

10th = 93%

25th = 97%

50th = 99%

75th = 100%

90th = 100%

95th = 100% National rates from hospital-reported data to the clinical data warehouse for the second quarter in 2010 shows that facilities are discontinuing antibiotic prophylaxis 95.5% of the time. The rates for discontinuation from a national sample of 39,000 Medicare patients undergoing surgery in 2001 (baseline) showed that antibiotics were discontinued in a timely manner 40.7% of the time. A trend report is provided with this submission.

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.

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.

Data at patient level for 1Q 2013

Race/Ethnicity White; Rate 98%; STD 13; total cases 195,979

Race/Ethnicity Black; Rate 98%; STD 15; total cases 21,873

Race/Ethnicity Hispanic; Rate 96%; STD 20; total cases 13,925

Race/Ethnicity Other; Rate 98%; STD 14; total cases 13,948

Disparities data also provided in testing report attachment.

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.

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.

High resource use

CDC statistics from 2010 (most recent data on CDC website)

Total number of procedures performed: 51.4 million

Number of selected procedures performed:

Arteriography and angiocardiology using contrast material: 2.4 million

Cardiac catheterizations: 1.0 million

Endoscopy of small intestine with or without biopsy: 1.1 million

Endoscopy of large intestine with or without biopsy: 499,000

Diagnostic ultrasound: 1.1 million

Balloon angioplasty of coronary artery or coronary atherectomy: 500,000

Hysterectomy: 498,000
 Cesarean section: 1.3 million
 Reduction of fracture: 671,000
 Insertion of coronary artery stent: 454,000
 Coronary artery bypass graft: 395,000
 Total knee replacement: 719,000
 Total hip replacement: 332,000
 Administration of antibiotics for more than a few hours after the incision is closed offers no additional benefit to the surgical patient. Prolonged administration does increase the risk of Clostridium difficile infection and the development of antimicrobial resistant pathogens.

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

Selected References:

CDC FASTSTATS Inpatient Surgery 2010 data:

http://www.cdc.gov/nchs/data/nhds/4procedures/2010pro4_numberprocedureage.pdf

*Crabtree TD, Pelletier SJ, Gleason TG, et al. Clinical characteristics and antibiotic utilization in surgical patients with Clostridium difficile-associated diarrhea. Am Surg. 1999;65:507-511.

- Edwards FH, Engelman RM, Houck P, Shahian DM, Bridges CR. The Society of Thoracic Surgeons Practice Guideline Series: Antibiotic prophylaxis in cardiac surgery, Part I: Duration, 2006. Ann Thoracic Surg 2006; 81: 397-404.
- Mangram AJ, Horan TC, Pearson ML, et al. Guidelines for prevention of surgical site infection, 1999. Infect Control Hosp Epidemiol. 1999;20:247-280.
- McDonald M, Grabsch E, Marshall C, et al. Single- versus multiple-dose antimicrobial prophylaxis for major surgery: a systemic review. Aust N Z J Surg. 1988;68:388-396.
- Scher KS. Studies on the duration of antibiotic administration for surgical prophylaxis. Am Surg. 1997;63:59-62.

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.)

N/A

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

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

Safety

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.)

<http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1228773564870>

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: [AppA_C_for_NQF-635297897179406638.xls](#)

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

See Release Notes at end of submission, Release Notes tab.

We have updated code and medication tables and clarified Notes for Abstraction in data elements. See Release Notes at end of submission, Release Notes tab.

We have updated code and medication tables and clarified Notes for Abstraction in data elements.

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.

Number of surgical patients whose prophylactic antibiotics were discontinued within 24 hours after Anesthesia End Time (48 hours for CABG or Other Cardiac Surgery).

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.)

Facilities report this data quarterly.

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 Elements:

- Anesthesia End Date
- Anesthesia End Time
- Antibiotic Administration Date
- Antibiotic Administration Time

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

All selected surgical patients with no evidence of prior infection.

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 5.01-5.08 for ICD-9-CM codes)

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)

Data Elements:

- Admission Date
- Anesthesia Start Date
- Antibiotic Administration Route
- Antibiotic Name
- Antibiotic Received
- Birthdate
- Clinical Trial

- Discharge Date
- ICD-9-CM Principal Diagnosis Code
- ICD-9-CM Principal Procedure Code
- Infection Prior to Anesthesia
- Oral Antibiotics
- Other Surgeries
- Perioperative Death
- Reasons to Extend Antibiotics
- Surgical Incision Date
- Surgical Incision Time

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 whose Principal Procedure was on Table 5.25
- Patients who had a principal diagnosis suggestive of preoperative infectious diseases (as defined in Appendix A, Table 5.09 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 expired perioperatively
- Patients who had other procedures requiring general or spinal anesthesia that occurred within three days (four days for CABG or Other Cardiac Surgery) prior to or after the procedure of interest (during separate surgical episodes) during this hospital stay
- Patients who received urinary antiseptics only (as defined in Appendix C, Table 3.11)
- Patients with Reasons to Extend Antibiotics
- Patients who received antibiotics prior to arrival and did not receive any antibiotics during this hospitalization
- Patients who received ONLY antibiotics with the route unable to be determined (UTD)
- Patients who did not receive any antibiotics within the timeframe 24 hours before Surgical Incision Date and Time (i.e., patient did not receive prophylactic antibiotics) through discharge
- Patients who received ALL antibiotics greater than 1440 minutes prior to Surgical Incision Date and Time
- Patients who received ALL antibiotics greater than 3 days after Anesthesia End Date OR greater than 2 days after Anesthesia End Date for Principal Procedures on Tables 5.03-5.08
- Patients who received ALL antibiotics greater than 4320 minutes after Anesthesia End Time OR greater than 2880 minutes after Anesthesia End Time for Principal Procedures on Tables 5.03-5.08

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)*

Clinical Trial

Infection Prior to Anesthesia

Other Surgeries

Perioperative Death

Reasons to Extend Antibiotics

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)*

The antibiotic prophylaxis measures are stratified according to surgery type. The tables are subsets of Table 5.10 (see link for Specification Manual and Appendix A, Tables 5.01 to 5.08. The specific procedures must be in the large table (Table 5.10) to be eligible for the SCIP measures. The measure specific tables for SCIP-Inf-3 are 5.01 to 5.08.

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)

NA

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)

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)-3: Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time

See attachment in "Additional" section

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)

Available 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.

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.

The Centers for Medicare & Medicaid Services (CMS) and the Joint Commission developed and implemented a missing data policy for hospital measures. The policy was applied to reduce missing and invalid data in order to minimize the bias to a measure rate. The QIO Clinical Warehouse and the Joint Commission's Data Warehouse processed data submitted by hospitals using the missing, invalid and data integrity edits. All cases with missing or invalid data were rejected from the warehouse. Hospitals were required to re-collect the missing data and re-submit the case.

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

If other, please describe in S.24.

Claims, 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.

Most facilities use vendors to collect the data electronically. CMS provides a free, downloadable tool called CART. A paper tool modeled after the data collected electronically is provided as an attachment. CART downloads can be found on QualityNet.org 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)

Available at measure-specific web page URL identified in S.1

S.26. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Facility, Other

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

[0529_MeasSubm_MeasTesting_3.5.14.docx](#)

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.

Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

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)

Some data elements are in defined fields in electronic sources

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.

The eCQM is close to the paper-based medical record measure, but not identical. For example, the clinical trial exclusion utilizes a value set containing 1 SNOMED code that is not specific to the measure population. In the paper-based measure, the data element specifically instructs the abstractor to answer "yes" ONLY if the clinical trial relates to the SCIP measure set.

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.

[No feasibility assessment](#) 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.

Specifications (including codes and data elements) are modified every six months according to feedback provided by clinicians and hospital staff collecting data for the measure. Data is available in the medical record and there are no feasibility or implementation issues identified.

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).

Measure is in the public domain

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)
	Public Reporting HIQR Program https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1138115987129 Payment Program HIQR Program https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1138115987129 Regulatory and Accreditation Programs Joint Commission Accreditation http://www.jointcommission.org/accreditation_process_overview/

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

HIQR: The Hospital Inpatient Quality Reporting (Hospital IQR) program was originally mandated by Section 501(b) of the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003. This section of the MMA authorized CMS to pay hospitals that successfully report designated quality measures a higher annual update to their payment rates. Initially, the MMA provided for a 0.4 percentage point reduction in the annual market basket (the measure of inflation in costs of goods and services used by hospitals in treating Medicare patients) update for hospitals that did not successfully report. The Deficit Reduction Act of 2005

increased that reduction to 2.0 percentage points.

In addition to giving hospitals a financial incentive to report the quality of their services, the hospital reporting program provides CMS with data to help consumers make more informed decisions about their health care. Some of the hospital quality of care information gathered through the program is available to consumers on the Hospital Compare website at:

www.hospitalcompare.hhs.gov.

Over 3500 hospitals across the nation report data to the HIQR Program. The number of patients included (denominators) vary by measure.

Information about the Joint Commission Accreditation Program is available via the url above.

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

Rates remain high for the top 10% of hospitals nationwide. There is incremental improvement across the nation. Please see attachment in "Additional" section.

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.

No unintended consequences have been identified with the antibiotic discontinuation measure. In fact most studies show that infection risk, particularly with resistant organisms, goes up with prolonged antibiotics.

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)

0128 : Duration of Antibiotic Prophylaxis for Cardiac Surgery Patients

0271 : Perioperative Care: Discontinuation of Prophylactic Parenteral Antibiotics (Non-Cardiac Procedures)

0637 : Perioperative Care: Discontinuation of Prophylactic Antibiotics (Cardiac Procedures)

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?

No

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

Based on information provided on NQF website, 0128 uses the same specifications as 0529; 0271 is physician level with a claims-based reporting; 0637 comes up in the search but does not appear to be endorsed. It is a PCPI measure, so physician reporting with claims-based data.

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.)

NA

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](#) Attachment: 0529_SCIPInf3_NQF_AddlAnalysis.xlsx

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): Centers for Medicare & Medicaid Services

Co.2 Point of Contact: Corette, Byrd, MMSSupport@Battelle.org, 202-786-1158-

Co.3 Measure Developer if different from Measure Steward: Centers for Medicare & Medicaid Services

Co.4 Point of Contact: Wanda, Johnson, wjohnson@ofmq.com, 405-302-3278-

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 Surgical Care Improvement Project's Infection TEP was involved in this measure's development and remains involved in its maintenance.

SCIP Technical Expert Panel

Anton Sidawy, MD	Veterans Affairs (Department of)
Barbara Bass, MD FACS	Houston Methodist Hospital
Candace Jackson	Telligen
Christopher Daly, MD	American College of Surgeons
Dale Bratzler, DO, MPH	OFMQ
David Flum, MD	University of Washington
David Hunt, MD	Centers for Medicare & Medicaid Services
Denise Krusenowski	The Joint Commission
E. Patchen Dellinger, MD	Infectious Disease Society of America
Elvira Ryan, RN, MBA	The Joint Commission
Felicia Diggs, RN, BSN, MSN	Centers for Medicare & Medicaid Services
Fiona Larbi, RN, BSN, CPAN	Centers for Medicare & Medicaid Services
Frank Padberg, MD	Veterans Affairs (Department of)
Fred Edwards, MD	Society for Thoracic Surgeons
Frederick Anderson, PhD	University of Massachusetts
Frederick Grover, MD	University of Colorado - Denver
Garry Brydges, CRNA, DNP, ACNP-BC	American Association of Nurse Anesthetists
Gary Raskob, PhD	University of Oklahoma
Gianna Zuccotti, MD, MPH	The Medical Letter
Glenn Lytle, MD, CPHQ	OFMQ
Heidi Wald, MD	University of Colorado - Denver
Jason Calhoun, MD	Spectrum Health Medical Group Grand Rapids Michigan
Jay Lieberman, MD	University of Southern California
John Bartlett, MD	Johns Hopkins Antibiotic Guide & Infectious Disease Society of America
John Carroll	The Joint Commission
John Hitt, MD	Avera McKennon
Joseph Rapp, MD, FACS	Veterans Affairs (Department of)
Karen Nakano	Centers for Medicare & Medicaid Services
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Mary Pat Aust, RN, CCRN	Health Services Advisory Group
Matthew Levison, MD	American Heart Association
Neil Hyman, MD	American Society for Colon & Rectal Surgeons
Paul Auwaerter, MD	Johns Hopkins Antibiotic Guide
Peter Houck, MD	Centers for Disease Control & Prevention
Peter Lindenauer MD, MSC	Tufts Univ. School of Med./Baystate Medical Center

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<p>Measure Developer/Steward Updates and Ongoing Maintenance Ad.2 Year the measure was first released: 2001 Ad.3 Month and Year of most recent revision: 10, 2014 Ad.4 What is your frequency for review/update of this measure? Every 6 months Ad.5 When is the next scheduled review/update for this measure? 07, 2015</p>
<p>Ad.6 Copyright statement: N/A Ad.7 Disclaimers: N/A</p>
<p>Ad.8 Additional Information/Comments:</p>