

# NATIONAL QUALITY FORUM

## Related and Competing Measures

### NQF Evaluation Criteria: Comparison of Related or Competing Measures

If a measure meets the NQF evaluation 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.

**Criterion 5a.** The measure specifications are harmonized with related measures; OR the differences in specifications are justified.

**Criterion 5b.** The measure is superior to competing measures (e.g., is a more valid or efficient way to measure); OR multiple measures are justified.

### Guidance for Evaluating Competing Measures

Competing measures are those that essentially address the same target process, condition, event or outcome (numerator) and the same target population (denominator). The goal is to endorse the best measure and minimize confusing or conflicting information.

Competing measures may already be endorsed or may be new submissions. Before competing measures are compared, they must first be evaluated individually and judged to adequately meet all four evaluation criteria to be suitable for a Steering Committee to recommend endorsement. This procedure is intended to give each measure a thorough evaluation and prevent expending time and effort on comparing measures if some competing measures are not evaluated favorably.

If a new measure competes with an NQF-endorsed® measure, the developer should be expected to address how the proposed measure is superior to competing measures, or the added value of endorsing multiple measures. Ideally, the developer will be able to present analyses demonstrating how the submitted measure is superior; however, in many situations that will not be feasible (e.g., no access to an alternative data source) and then the developer should be able to present a rationale for superiority. If the competing measure also is a new submission, the developers can be asked to address that question after the Committee determines that both meet the evaluation criteria.

Determination of the best measure should be based on the evaluation criteria of *Importance to Measure and Report*, *Scientific Acceptability of Measure Properties*, *Usability*, and *Feasibility*. In the absence of empirical data to compare the measures, the Steering Committee will need to compare not only their evaluation ratings, but also the information submitted in support of the criteria. The comparison will require expert judgment and may involve consideration of the pros and cons related to all the criteria. For example, slightly lower reliability, but much greater feasibility might indicate the more feasible measure should be selected.

If the measures are determined to be conceptually the same, then generally they would be expected to be evaluated equally on the subcriteria under *Importance to Measure and Report*, i.e., impact, opportunity for improvement, and evidence supporting the focus of measurement. However, they could differ on opportunity for improvement depending on whether they are new measures or have been in use. For new measures, opportunity for improvement generally will be the same because it is based on epidemiologic and research data. However, measures in use at the time of endorsement maintenance may differ in opportunity for improvement (e.g., one may be “topped out” in terms of performance). When measures are essentially the same on the criterion *Importance to Measure and Report*, the determination of the best measure to recommend for endorsement would be made based on the remaining criteria.

Table 1. Evaluating Competing Measures for Superiority or Justification for Multiple Measures

Determine if need to compare measures for superiority	Determine if need to evaluate competing measures (address the same concepts for measure focus—i.e., the target process, condition, event, or outcome for the same target patient population) for superiority
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<p>Assess competing measures for superiority on NQF evaluation criteria and subcriteria</p>	<p>The comparison will require expert judgment and may involve considerations of pros and cons related to all the criteria.</p> <p><b>Impact, Opportunity, and Evidence—Importance to Measure and Report:</b> Competing measures generally will be the same in terms of impact and evidence for the focus of measurement.</p> <ul style="list-style-type: none"> <li>• Compare measures on opportunity for improvement. For new measures, this generally will be the same. However, measures in use at the time of endorsement maintenance may differ in opportunity for improvement (e.g., one may be “topped out” in terms of performance).</li> </ul> <p><b>Reliability and Validity—Scientific Acceptability of Measure Properties:</b></p> <ul style="list-style-type: none"> <li>• Compare evidence of reliability.</li> <li>• Compare evidence of validity.</li> </ul> <p>Untested measures cannot be considered superior to tested measures because there would be no empirical evidence on which to compare reliability and validity. (However, a new measure, when tested, could ultimately demonstrate superiority and the NQF endorsement maintenance cycles allow for regular submission of new measures.) Compare and identify differences in specifications.</p> <p><i>All else being equal:</i></p> <ul style="list-style-type: none"> <li>• Measures with the broadest application (target patient population, settings, level of analysis) are preferred.</li> </ul> <p><b>Usability:</b></p> <ul style="list-style-type: none"> <li>• Compare evidence of use and usefulness for public reporting.</li> <li>• Compare evidence of use and usefulness for quality improvement.</li> </ul> <p><i>All else being equal:</i></p> <ul style="list-style-type: none"> <li>• Measures that are publicly reported are preferred.</li> <li>• Measures with the widest use (e.g., settings, numbers of entities reporting performance results) are preferred.</li> <li>• Measures that are in use are preferred over those without evidence of use.</li> </ul> <p><b>Feasibility:</b></p> <ul style="list-style-type: none"> <li>• Compare the ease of data collection.</li> <li>• Compare the potential for inaccuracies, errors, and unintended consequences.</li> </ul> <p><i>All else being equal:</i></p> <ul style="list-style-type: none"> <li>• Measures based on data from electronic sources are preferred.</li> <li>• Measures that are freely available are preferred.</li> </ul>
<p><i>If a competing measure does not have clear superiority,</i> Assess justification for multiple measures</p>	<p>If a competing measure does not have clear superiority, is there a justification for endorsing multiple measures? Does the added value offset any burden or negative impact?</p> <p>Measures based on different data types <i>may provide added value if:</i></p> <ul style="list-style-type: none"> <li>• the additional measure allows transition to an EHR-based measure</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• the additional measure is applicable to additional setting(s) or increases the number of individuals and entities for whom performance results are available and cannot be achieved by expanding the target patient population, setting, or level of analysis of one measure.</li> </ul> <p>A rationale for recommending endorsement of multiple competing measures must be provided. Identify analyses needed to conduct a rigorous evaluation of the use and usefulness of the measures</p>

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at the time of endorsement maintenance.
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If the Steering Committee is unable to identify the best (superior) measure, multiple endorsed measures may be acceptable and the Steering Committee needs to identify the additive value of endorsement of more than one measure. That is, does having multiple measures add enough value to offset any potential negative impact?

- Value
  - Is an additional measure necessary?
    - to change to an EHR-based measurement;
    - to have broader applicability (if one measure cannot accommodate all settings, e.g., hospital, home health, etc.); or
    - to increase availability of performance results (if one measure cannot be widely implemented, e.g., if measures based on different data types increase the number of entities for whom performance results are available).
  - Is an additional measure unnecessary?
    - unique developer preferences
- Burden
  - Do the different measures affect interpretability across measures?
  - Does having more than one endorsed measure increase the burden of data collection?

## Related Measures

Related measures should be harmonized. Measure harmonization refers to the standardization of specifications for related measures with the same measure focus (e.g., *influenza immunization* of patients in hospitals or nursing homes), or related measures with the same target population (e.g., eye exam and HbA1c for *patients with diabetes*), or definitions applicable to many measures (e.g., age designation for children) so that they are uniform or compatible, unless differences are justified (e.g., dictated by the evidence). The dimensions of harmonization can include numerator, denominator, exclusions, and data source and collection instructions. The extent of harmonization depends on the relationship of the measures, the evidence for the specific measure focus, and differences in data sources.

NQF staff has been working with the measure developers for a long time on the issue of harmonization and they have encountered several challenges:

- Review and approval of all changes by the developer’s technical panel and organizational leadership takes significant time (sometimes months).
- Developers have different approaches and philosophies about measurement.
- Particularly when there are several related measures, determining which version to harmonize to may be difficult.
- Trending data may be affected by changes in specifications.
- There may be disagreement as to what degree of alignment is needed to achieve harmonization.

Guidance for Steering Committees on [evaluating and making recommendations related to measure harmonization](#) was approved by the NQF Board in 2010. Ultimately, measures should not be recommended for endorsement unless measures are completely harmonized or the lack of harmonization has been justified (Table 2).

Table 2. Sample Considerations to Justify Lack of Measure Harmonization

Related Measures	Lack of Harmonization	Assess Justification for Conceptual Differences	Assess Justification for Technical Differences
Same measure focus (numerator); different target population	Inconsistent measure focus (numerator)	The evidence for the measure focus is different for the different target population so that one measure cannot	<ul style="list-style-type: none"> <li>• Differences in the available data drive differences in the technical specifications for the measure focus.</li> <li>• Effort has been made to reconcile the differences across measures but</li> </ul>

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Related Measures	Lack of Harmonization	Assess Justification for Conceptual Differences	Assess Justification for Technical Differences
(denominator)		accommodate both target populations. Evidence should always guide measure specifications.	important differences remain.
Same target population (denominator); different measure focus (numerator)	Inconsistent target population (denominator) and/or exclusions	The evidence for the different measure focus necessitates a change in the target population and/or exclusions. Evidence should always guide measure specifications.	<ul style="list-style-type: none"> <li>• Differences in the available data drive differences in technical specifications for the target population.</li> <li>• Effort has been made to reconcile the differences across measures but important differences remain.</li> </ul>
For any related measures	Inconsistent scoring/computation	The difference does not affect interpretability or burden of data collection. If it does, it adds value that outweighs any concern regarding interpretability or burden of data collection.	The difference does not affect interpretability or burden of data collection. If it does, it adds value that outweighs any concern regarding interpretability or burden of data collection.

**NQF staff has identified the following related and competing measures**

*Phase I:*

- Cardiac surgery
  - 0113: Participation in a systematic database for cardiac surgery (STS)
  - 0456: Participation in a systematic national database for general thoracic surgery (STS)
  - 0493: Participation by a hospital, physician or other clinician in systematic clinical database registry that includes consensus endorsed quality measures (CMS)
- Cardiac surgery: IMA
  - 0134: Use of internal mammary artery (IMA) in coronary artery bypass graft (CABG) (STS)
  - 0516: Use of IMA in isolated CABG (STS)
- Esophagectomy
  - 0360: Esophageal resection mortality rate (IQI 8) (AHRQ)
  - 0361: Esophageal resection volume (IQI 1) (AHRQ)
  - HOE-023-08: Survival predictor for esophagectomy surgery (Leapfrog Group)
- Venous thromboembolism (VTE)
  - 0218: Surgery patients who received appropriate venous thromboembolism (VTE) prophylaxis within 24 hours prior to surgery to 24 hours after surgery end time (CMS)
  - 0371: Venous thromboembolism (VTE) prophylaxis (TJC)

*Phase II*

- AAA repair
  - 0357: Abdominal aortic aneurysm (AAA) repair volume (IQI 4) (AHRQ)
  - 0359: Abdominal aortic artery (AAA) repair mortality rate (IQI 11) (AHRQ)
  - HOE-021-08: Survival predictor for abdominal aortic aneurysm (AAA) (Leapfrog Group)
  - 1523: In-hospital mortality following elective open repair of small AAAs (Society for Vascular Surgery)
  - 1534: In-hospital mortality following elective EVAR of small AAAs (Society for Vascular Surgery)
- Beta blocker

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- 0235: Pre-op beta blocker in patient with isolated CABG (1) (STS)
- 0127: Pre-operative beta blockage (STS)
- 0236: Pre-op beta blocker in patient with isolated CABG (2) (STS)
- 0284: Surgery patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period (CMS)
- Beta blocker discharge
  - 0117: Beta blockade at discharge
  - 1480: Patient(s) 18 years of age and older on a beta-blocker at admission or within seven days of discharge of an isolated CABG procedure
- Cataracts
  - 1536: Cataracts: Improvement in patient's visual function within 90 days following cataract surgery (AAO and Hoskins Center for Quality Eye Care)
  - 0565: Cataracts: 20/40 or better visual acuity within 90 days following cataract surgery (AMA/PCPI)
- Failure to rescue
  - 0351: Death among surgical inpatients with serious, treatable complications (PSI 4) (AHRQ)
  - 0352: Failure to rescue in-hospital mortality (risk adjusted) (CHOP)
  - 0353: Failure to rescue 30-day mortality (risk adjusted) (CHOP)
- Hair removal
  - 0301: Surgery patients with appropriate hair removal (CMS)
  - 0515: Ambulatory surgery patients with appropriate method of hair removal (ASC Quality Collaboration)
- Pancreatic resection
  - 0365: Pancreatic resection mortality rate (IQI 9) (AHRQ)
  - 0366: Pancreatic resection volume (IQI 2) (AHRQ)
  - HOE-024-08: Survival predictor for pancreatic resection surgery (Leapfrog Group)
- Prophylactic antibiotics: Discontinued
  - 0529: Prophylactic antibiotics discontinued within 24 hours after surgery end time (CMS)
  - 0637: Discontinuation of prophylactic antibiotics (cardiac procedures) (AMA/PCPI)
- Prophylactic antibiotics: Duration
  - 0128: Duration of antibiotic prophylaxis for cardiac surgery patients (STS)
  - 0271: Discontinuation of prophylactic antibiotics (non-cardiac procedures) (AMA/PCPI)
- Prophylactic antibiotics: Selection
  - 0126: Selection of antibiotic prophylaxis for cardiac surgery patients (STS)
  - 0268: Selection of prophylactic antibiotic: First or second generation cephalosporin (AMA/PCPI)
  - 0528: Prophylactic antibiotic selection for surgical patients (CMS)
  - 0473: Appropriate DVT prophylaxis in women undergoing cesarean delivery (HCA)
- Prophylactic antibiotics: Timing/Received
  - 0269: Timing of prophylactic antibiotics-administering physician (NCQA, AMA/PCPI)
  - 0125: Timing of antibiotic prophylaxis for cardiac surgery patients (STS)
  - 0270: Timing of antibiotic prophylaxis-ordering physician (AMA/PCPI)
  - 0527: Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1 (CMS)
  - 0472: Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery-cesarean section (Mass General Hospital/Partners Health Care System)
- Statin medication
  - 0118: Anti-lipid treatment discharge (STS)
  - 1519: Statin therapy at discharge after lower extremity bypass (LEB) (SVS)

**Below is a side by side comparison of measure specifications from the related and competing measures identified in Phase I and Phase II.**

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## Cardiac Surgery

	<b>Maintenance Measure #0113:</b> Participation in a systematic database for cardiac surgery	<b>Endorsed Measure #0456:</b> Participation in a systematic national database for general thoracic surgery	<b>Endorsed Measure #0493:</b> Participation by a hospital, physician or other clinician in systematic clinical database registry that includes consensus endorsed quality measures
<b>Status</b>	Currently undergoing maintenance review	Endorsed 7/2008	Endorsed 9/2010
<b>Steward</b>	Society of Thoracic Surgeons	Society of Thoracic Surgeons	Centers for Medicare & Medicaid Services
<b>Description</b>	Participation in a multicenter data collection and feedback program that provides benchmarking relative to peers and uses process and outcome measures.	Participation in at least one multi-center, standardized data collection and feedback program that provides benchmarking of the physician's data relative to national and regional programs and uses process and outcome measures.	Participation in a systematic qualified clinical database registry involves: a. Hospital, physician or other clinician submits standardized data elements to registry b. Data elements are applicable to consensus endorsed quality measures c. Registry measures shall include at least two (2) representative NQF consensus endorsed measures for registry's clinical topic(s) and report on all patients eligible for the selected measures. d. Registry provides calculated measures results, benchmarking, and quality improvement information to individual hospitals, physicians and clinicians. e. Registry must receive data from more than 5 separate practices and may not be located (warehoused) at an individual hospital or an individual group's practice. Participation in a national or state-wide registry is



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	<b>Maintenance Measure #0113:</b> Participation in a systematic database for cardiac surgery	<b>Endorsed Measure #0456:</b> Participation in a systematic national database for general thoracic surgery	<b>Endorsed Measure #0493:</b> Participation by a hospital, physician or other clinician in systematic clinical database registry that includes consensus endorsed quality measures
			encouraged for this measure. f. Registry may provide feedback directly to the hospital or provider's local registry if one exists.
<b>Type of Measure</b>	Structure/management	Process	Structure/management
<b>Numerator</b>	Whether or not the facility participates in a multicenter, data collection and feedback program that provides benchmarking relative to peers and uses process and outcome measures.  Time window: 12 months	Whether or not the physician participates in at least one multi-center data collection and feedback program.  Time window:	The hospital or clinician participates in a systematic qualified clinical database registry capable of the following: a. hospital, physician, or other clinician submits standardized data elements to registry b. data elements are applicable to consensus endorsed quality measures c. registry measures shall include at least two (2) representative NQF consensus endorsed measures for registry's clinical topic(s) and report on all patients eligible for the selected measures d. registry provides calculated measures results,

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	<b>Maintenance Measure #0113:</b> Participation in a systematic database for cardiac surgery	<b>Endorsed Measure #0456:</b> Participation in a systematic national database for general thoracic surgery	<b>Endorsed Measure #0493:</b> Participation by a hospital, physician or other clinician in systematic clinical database registry that includes consensus endorsed quality measures
			benchmarking, and quality improvement information to individual hospitals, physicians and clinicians e. registry must receive data from more than 5 separate hospitals or practices and may not be located (warehoused) at an individual hospital, or an individual group's practice. Participation in a national or state-wide registry is encouraged for this measure f. registry may provide feedback directly to the hospital or provider's local registry if one exists.
<b>Numerator Details</b>	Participation in the STS Adult Cardiac Surgery Database is initiated by the surgeons and/or hospital and requires quarterly data submission via an approved software system to the Duke Clinical Research Institute (DCRI), the data repository for the three STS Databases.		N/A
<b>Denominator</b>	N/A	N/A	1
<b>Denominator Categories</b>	Female, Male; 18 years or older on date of encounter	Female, Male; 18 years or older	
<b>Denominator Details</b>	N/A		
<b>Exclusions</b>	N/A	N/A	N/A
<b>Exclusions Details</b>	N/A		N/A
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>	N/A		N/A
<b>Type Score</b>	Categorical		
<b>Algorithm</b>	N/A		N/A
<b>Data Source</b>	Registry data	Lab data, paper medical record/flow-sheet	
<b>Level of Measurement /Analysis</b>	Clinicians: Group; Facility/agency; Population: National, regional/network, states, counties or cities	Clinicians: Individual	Clinicians: Individual

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	<b>Maintenance Measure #0113:</b> Participation in a systematic database for cardiac surgery	<b>Endorsed Measure #0456:</b> Participation in a systematic national database for general thoracic surgery	<b>Endorsed Measure #0493:</b> Participation by a hospital, physician or other clinician in systematic clinical database registry that includes consensus endorsed quality measures
<b>Care Settings</b>	Hospital	Ambulatory care: Clinic	

## Cardiac Surgery: IMA

	<b>Maintenance Measure #0134:</b> Use of internal mammary artery (IMA) in coronary artery bypass graft (CABG)	<b>Endorsed Measure #0516:</b> Use of IMA in isolated CABG
<b>Status</b>	Currently undergoing maintenance review	Endorsed 5/2007
<b>Steward</b>	Society of Thoracic Surgeons	Society of Thoracic Surgeons
<b>Description</b>	Percentage of patients aged 18 years and older undergoing isolated coronary artery bypass graft (CABG) who received an internal mammary artery (IMA) graft.	Percent of patients undergoing isolated CABG who received an IMA graft.
<b>Type of Measure</b>	Process	Process
<b>Numerator</b>	Number of patients undergoing isolated coronary artery bypass graft (CABG) who received an internal mammary artery (IMA) graft.  Time window:	Number of patients who receive IMA graft.  Time window:
<b>Numerator Details</b>	Number of isolated CABG procedures in which IMA Artery Used [IMA ArtUs (STS Adult Cardiac Surgery Database Version 2.73)] is marked "Left IMA," "Right IMA," or "Both IMAs"	Number of isolated CABG procedures in which "internal mammary arteries used as graft" [IMA ArtUs (1560)- STS Adult Cardiac Surgery Database, Version 2.61, sequence number 1560] is marked as 'Left IMA', 'Right IMA', or 'Both IMAs'  Please see STS Adult Cardiac Surgery Database Data Collection Form, Version 2.61: <a href="http://www.sts.org/documents/pdf/AdultCV2.61D_Cf_Annotated.pdf">http://www.sts.org/documents/pdf/AdultCV2.61D_Cf_Annotated.pdf</a>
<b>Denominator</b>	All patients undergoing isolated CABG.  Time window: 12 months	Number of patients eligible to receive IMA graft undergoing CABG.  Time window:
<b>Denominator Categories</b>	Female, Male; 18 and older	Female, Male; ≥18 years on date of encounter

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	<b>Maintenance Measure #0134:</b> Use of internal mammary artery (IMA) in coronary artery bypass graft (CABG)	<b>Endorsed Measure #0516:</b> Use of IMA in isolated CABG
<b>Denominator Details</b>	<p>Number of isolated CABG procedures</p> <p>Isolated CABG is determined as a procedure for which all of the following apply:</p> <ul style="list-style-type: none"> <li>- OpCAB is marked "Yes"</li> <li>- (VADProc is marked "No" or "Missing") or (VADProc is marked "Yes, Implanted" and UnplVAD is marked "yes")</li> <li>- OCarASDTy is marked "PFO" or "missing"</li> <li>- OCarAFibAProc is marked "primarily epicardial" or "missing" and</li> <li>- OpValve, VSAV, VSAVPr, ResectSubA, VSMV, VSMVPr, OpTricus, OpPulm, OpONCard, OCarLVA, OCarVSD, OCarSVR, OCarCong, OCarTrma, OCarCrTx, OCAoProcType, EndoProc, OCTumor, OCPulThromDis, OCarOthr are all marked "no" or "missing"</li> </ul>	<p>Number of isolated CABG procedures excluding repeat CABG.</p> <p>Isolated CABG is determined as a procedure for which OpCab (seq no 1280) is marked 'Yes' and OpValve (1290), VAD (1300), OpAortic (1630), OpMitral (1640), OpTricus (1650), OpPulm (1660), OpONCard (1320), OCarLVA (2360), OCarVSD (2370), OCarASD (2380), OCarBati (2390), OCarSVR (2400), OCarCong (2410), OCarLasr (2420), OCarTrma (2430), OCarCrTx (2440), OCarAfib (2470), ONCAoAn (2510), and OCarOthr (2560) are all marked 'No' or 'Missing'.</p> <p>Please see STS Adult Cardiac Surgery Database Data Collection Form, Version 2.61:  <a href="http://www.sts.org/documents/pdf/AdultCV2.61D_CF_Annotated.pdf">http://www.sts.org/documents/pdf/AdultCV2.61D_CF_Annotated.pdf</a></p>
<b>Exclusions</b>	<p>Cases are removed from the denominator if the patient had a previous CABG prior to the current admission or if IMA was not used and one of the following reasons was provided:</p> <ul style="list-style-type: none"> <li>- The IMA is not a suitable conduit due to size or flow</li> <li>- Subclavian stenosis</li> <li>- Previous cardiac or thoracic surgery</li> <li>- Previous mediastinal radiation</li> <li>- Emergent or salvage procedure</li> <li>- No LAD disease</li> </ul>	<p>Emergent operation; Hx mastectomy; Prior use of IMA; Acute AMI; Damaged or stenotic IMA or subclavian</p>
<b>Exclusions Details</b>	<p>Cases are removed from the denominator if the patient had a previous CABG prior to the current admission or if IMA was not used and one of the following reasons was provided:</p> <ul style="list-style-type: none"> <li>- The IMA is not a suitable conduit due to size or flow</li> <li>- Subclavian stenosis</li> <li>- Previous cardiac or thoracic surgery</li> <li>- Previous mediastinal radiation</li> <li>- Emergent or salvage procedure</li> <li>- No LAD disease</li> </ul>	<p>Repeat CABG is identified where PrCAB (600) is marked 'Yes'</p> <p>Please see STS Adult Cardiac Surgery Database Data Collection Form, Version 2.61:  <a href="http://www.sts.org/documents/pdf/AdultCV2.61D_CF_Annotated.pdf">http://www.sts.org/documents/pdf/AdultCV2.61D_CF_Annotated.pdf</a></p>
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>	N/A	N/A
<b>Type Score</b>	Rate/proportion	Rate/proportion
<b>Algorithm</b>	N/A	N/A
<b>Data Source</b>	Registry data	Lab data, paper medical record/flow-sheet
<b>Level of Measurement</b>	Clinicians: Group; Facility/agency; Population: National, regional/network,	Clinicians: Individual

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0134:</b> Use of internal mammary artery (IMA) in coronary artery bypass graft (CABG)	<b>Endorsed Measure #0516:</b> Use of IMA in isolated CABG
<b>/Analysis</b>	states, counties or cities	
<b>Care Settings</b>	Hospital	Hospital

## Esophagectomy

	<b>Maintenance Measure #0360:</b> Esophageal resection mortality rate (IQI 8)	<b>Maintenance Measure #0361:</b> Esophageal resection volume (IQI 1)	<b>Endorsed Measure #HOE-023-08:</b> Survival predictor for esophagectomy surgery
<b>Status</b>	Currently undergoing maintenance review	Currently undergoing maintenance review	Endorsed 9/2010
<b>Steward</b>	Agency for Healthcare Research and Quality	Agency for Healthcare Research and Quality	Leapfrog Group
<b>Description</b>	Number of deaths per 100 esophageal resections for cancer (risk adjusted).	Number of discharges with a procedure for esophageal resection.	A reliability adjusted measure of esophagectomy surgical performance that optimally combines two important domains: esophagectomy hospital volume and esophagectomy operative mortality, to provide predictions on esophagectomy survival rates for hospitals.
<b>Type of Measure</b>	Outcome	Structure/management	Outcome
<b>Numerator</b>	Number of deaths among cases meeting the inclusion and exclusion rules for the denominator  Time window: inpatient admission	Discharges, age 18 years and older, with ICD-9-CM code for esophageal resection in any procedure field OR gastrectomy procedure code ONLY if accompanied by selected diagnosis codes.  Time window: Time period is user defined. Users of the measure typically use a 12 month time period.	Survival of esophageal cancer patients who undergo an esophagectomy  Time window: during the hospital admission
<b>Numerator Details</b>	Discharge disposition of death (DISP=20)	CD-9-CM esophageal resection procedure codes:  424 ESOPHAGECTOMY 4240 ESOPHAGECTOMY NOS 4241 PARTIAL ESOPHAGECTOMY 4242 TOTAL ESOPHAGECTOMY 425 THORAC ESOPHAG ANAST 4251 THORAC ESOPHAGUESOPHAGOS	For the observed mortality, the hospital submits the observed deaths for esophagectomy cases in patients with esophageal cancer as identified using the denominator codes.

# NATIONAL QUALITY FORUM

	Maintenance Measure #0360: Esophageal resection mortality rate (IQI 8)	Maintenance Measure #0361: Esophageal resection volume (IQI 1)	Endorsed Measure #HOE-023-08: Survival predictor for esophagectomy surgery
		<p>4252 THORAC ESOPHAGOGASTROST 4253 THORAC SM BOWEL INTERPOS 4254 THORAC ESOPHAGOENTER NEC 4255 THORAC LG BOWEL INTERPOS 4256 THORAC ESOPHAGOCOLOS NEC 4258 THORAC INTERPOSITION NEC 4259 THORAC ESOPHAG ANAST NEC 426 STERN ESOPHAG ANAST 4261 STERN ESOPHAGUESOPHAGOST 4262 STERN ESOPHAGOGASTROSTOM 4263 STERN SM BOWEL INTERPOS 4264 STERN ESOPHAGOENTER NEC 4265 STERN LG BOWEL INTERPOS 4266 STERN ESOPHAGOCOLOS NEC 4268 STERN INTERPOSITION NEC 4269 STERN ESOPHAG ANAST NEC</p> <p>OR</p> <p>ICD-9-CM gastrectomy procedure code: 4399 OTHER TOTAL GASTRECTOMY</p> <p>ONLY if accompanied by selected diagnosis codes 1500 MALIGNANT NEOPLASM OF ESOPHAGUS, CERVICAL 1501 MALIGNANT NEOPLASM OF ESOPHAGUS, THORACIC 1502 MALIGNANT NEOPLASM OF ESOPHAGUS, ABDOMINAL 1503 MALIGNANT NEOPLASM OF ESOPHAGUS, UPPER THIRD OF 1504 MALIGNANT NEOPLASM</p>	

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0360:</b> Esophageal resection mortality rate (IQI 8)	<b>Maintenance Measure #0361:</b> Esophageal resection volume (IQI 1)	<b>Endorsed Measure #HOE-023-08:</b> Survival predictor for esophagectomy surgery
		<p>OF ESOPHAGUS, MIDDLE THIRD OF 1505 MALIGNANT NEOPLASM OF ESOPHAGUS, LOWER THIRD OF 1508 MALIGNANT NEOPLASM OF ESOPHAGUS, OTHER SPECIFIED PART 1509 MALIGNANT NEOPLASM OF ESOPHAGUS, UNSPECIFIED</p> <p>Exclude cases: MDC 14 (pregnancy, childbirth, and puerperium)</p>	
<b>Denominator</b>	<p>Discharges, ages 18 years and older, with ICD-9-CM esophageal resection procedure code and a diagnosis code of esophageal cancer in any field OR gastrectomy procedure code ONLY if accompanied by selected diagnosis codes.</p> <p>Time window: user defined; usually a calendar year</p>	N/A	<p>Included population: all hospital patients with esophageal cancer who had an esophagectomy.</p> <p>Time window: 12 months</p>
<b>Denominator Categories</b>	Female, Male: 18 and older	Female, Male: 18 and older	
<b>Denominator Details</b>	<p>ICD-9-CM esophageal resection procedure codes: 424 ESOPHAGECTOMY 4240 ESOPHAGECTOMY NOS 4241 PARTIAL ESOPHAGECTOMY 4242 TOTAL ESOPHAGECTOMY 425 THORAC ESOPHAG ANAST 4251 THORAC ESOPHAGOESOPHAGOS 4252 THORAC ESOPHAGOGASTROST 4253 THORAC SM BOWEL INTERPOS 4254 THORAC ESOPHAGOENTER NEC 4255 THORAC LG BOWEL INTERPOS 4256 THORAC ESOPHAGOCOLOS NEC</p>	N/A	<p>For the volume predicted mortality, hospitals count the number of esophagectomy cases using the following codes: ICD-9-CM Procedure Codes: 424 Esophagectomy 4240 Esophagectomy NOS 4241 Partial Esophagectomy 4242 Total Esophagectomy 4399 Total gastrectomy NEC</p> <p>For the observed mortality domain, the hospital submits the observed deaths for esophagectomy cases with a cancer diagnosis using the following codes: ICD-9-CM Procedure Codes: 424 Esophagectomy 4240 Esophagectomy NOS 4241 Partial Esophagectomy 4242 Total Esophagectomy</p>

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0360:</b> Esophageal resection mortality rate (IQI 8)	<b>Maintenance Measure #0361:</b> Esophageal resection volume (IQI 1)	<b>Endorsed Measure #HOE-023-08:</b> Survival predictor for esophagectomy surgery
	4258 THORAC INTERPOSITION NEC 4259 THORAC ESOPHAG ANAST NEC 426 STERN ESOPHAG ANAST 4261 STERN ESOPHAGUESOPHAGOST 4262 STERN ESOPHAGOGASTROSTOM 4263 STERN SM BOWEL INTERPOS 4264 STERN ESOPHAGOENTER NEC 4265 STERN LG BOWEL INTERPOS 4266 STERN ESOPHAGOCOLOS NEC 4268 STERN INTERPOSITION NEC 4269 STERN ESOPHAG ANAST NEC ONLY if selected diagnosis codes: esophageal cancer (see below) gastrointestinal-related cancer (see below)  OR:  ICD-9-CM gastrectomy procedure code: 4399 OTHER TOTAL GASTRECTOMY -  ONLY if selected diagnosis codes: esophageal cancer (see below)  Esophageal cancer: 1500 MALIGNANT NEOPLASM OF ESOPHAGUS, CERVICAL 1501 MALIGNANT NEOPLASM OF ESOPHAGUS, THORACIC 1502 MALIGNANT NEOPLASM OF ESOPHAGUS, ABDOMINAL 1503 MALIGNANT NEOPLASM OF		4399 Total gastrectomy NEC And, one of the following esophageal cancer diagnoses: 1500 MAL NEO CERVICAL ESOPHAG 1501 MAL NEO THORACIC ESOPHAG 1502 MAL NEO ABDOMIN ESOPHAG 1503 MAL NEO UPPER 3RD ESOPH 1504 MAL NEO MIDDLE 3RD ESOPH 1505 MAL NEO LOWER 3RD ESOPH 1508 MAL NEO ESOPHAGUS NEC 1509 MAL NEO ESOPHAGUS NOS Thus, the observed mortality is based on the volume count of esophagectomys and an actual count of deaths occurring for that subset of esophagectomys with cancer as a diagnosis.



# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0360:</b> Esophageal resection mortality rate (IQI 8)	<b>Maintenance Measure #0361:</b> Esophageal resection volume (IQI 1)	<b>Endorsed Measure #HOE-023-08:</b> Survival predictor for esophagectomy surgery
	<p>ESOPHAGUS, UPPER THIRD OF 1504 MALIGNANT NEOPLASM OF ESOPHAGUS, MIDDLE THIRD OF 1505 MALIGNANT NEOPLASM OF ESOPHAGUS, LOWER THIRD OF 1508 MALIGNANT NEOPLASM OF ESOPHAGUS, OTHER SPECIFIED PART 1509 MALIGNANT NEOPLASM OF ESOPHAGUS, UNSPECIFIED</p> <p>Gastrointestinal cancer 1510 MALIGNANT NEOPLASM OF STOMACH, CARDIA 1978 SECONDARY MALIGNANT NEOPLASM OF RESPIRATORY AND DIGESTIVE SYSTEMS, OTHER DIGESTIVE ORGANS AND SPLEEN 2301 CARCINOMA IN SITU OF DIGESTIVE ORGANS, ESOPHAGUS 2355 NEOPLASM OF UNCERTAIN BEHAVIOR OF DIGESTIVE AND RESPIRATORY SYSTEMS, OTHER AND UNSPECIFIED DIGESTIVE ORGANS</p>		
<b>Exclusions</b>	<ul style="list-style-type: none"> <li>• Missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)</li> <li>• Transferring to another short-term hospital (DISP=20)</li> <li>• MDC 14 (pregnancy, childbirth, and puerperium)</li> </ul>	N/A	Patients without a diagnosis of esophageal cancer; Patients < 18 years of age

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0360:</b> Esophageal resection mortality rate (IQI 8)	<b>Maintenance Measure #0361:</b> Esophageal resection volume (IQI 1)	<b>Endorsed Measure #HOE-023-08:</b> Survival predictor for esophagectomy surgery
<b>Exclusions Details</b>	<p>Exclude cases:</p> <ul style="list-style-type: none"> <li>• missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1 =missing)</li> <li>• transferring to another short-term hospital (DISP=2)</li> <li>• MDC 14 (pregnancy, childbirth, and puerperium)</li> </ul>	N/A	Esophagectomy cases without an esophageal cancer diagnosis code
<b>Risk Adjustment</b>	<p>The predicted value for each case is computed using GEE logistic regression and covariates for age (in 5-year age groups), APR-DRG and MDC. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Databases (SID) for the year 2007, a database consisting of approximately 35 million discharges from 43 states. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., county or state). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. The Smoothed Rate is the risk-adjusted rate shrunken to the volume-specific rate and the prior year smoothed rate.</p>	No risk adjustment necessary	<p>Method: We used an empirical Bayes approach to combine mortality rates with information on hospital volume at each hospital. In traditional empirical Bayes methods, a point estimate (e.g., mortality rate observed at a hospital) is adjusted for reliability by shrinking it towards the overall mean (e.g., overall mortality rate in the population). We modified this traditional approach by shrinking the observed mortality rate back toward the mortality rate expected given the volume at that hospital – we refer to this as the “volume-predicted mortality”. With this approach, the observed mortality rate is weighted according to how reliably it is estimated, with the remaining weight placed on the information regarding hospital volume [volume predicted mortality]. Risk adjustment for patient characteristics is not used in the measure because in sensitivity analysis, composite measures based on an unadjusted mortality input and a risk-adjusted mortality input had a correlation of (.95) and thus were equally good at predicting future performance. The formula for calculating the survival predictor has two</p>

# NATIONAL QUALITY FORUM

	Maintenance Measure #0360: Esophageal resection mortality rate (IQI 8)	Maintenance Measure #0361: Esophageal resection volume (IQI 1)	Endorsed Measure #HOE-023-08: Survival predictor for esophagectomy surgery
			<p>components, one is a volume predicted mortality rate, and the second is an observed mortality rate. The volume predicted mortality rate reflects the hospitals experience performing Esophagectomy surgeries (thus, it includes all Esophagectomy surgeries) and uses mortality for all hospitals at that specific volume to create the volume predicted mortality. The input data from the hospitals for this domain is a volume count of all Esophagectomys performed in the hospital. The second domain is the observed mortality, for this domain the population is narrowed to a homogenous group of esophagectomy with a diagnosis of cancer, the data needed for this domain is the number of observed deaths occurring for esophagectomy cases with cancer, within the inpatient setting. The general composite measure calculation is as follows:</p> <p>Predicted Survival = 1- Predicted Mortality</p> <p>Predicted Mortality = (weight)*(mortality) + (1-weight)*(volume predicted mortality)</p> <p>Volume predicted mortality* = intercept - coefficient*ln(caseload), where the intercepts and coefficients are derived from regression using the NIS data and the caseload comes from the Leapfrog Hospital Survey (answer to question #1 for this high-risk procedure, or can be derived from claims data).</p> <p>*Any negative values are reset to "0"</p> <p>Weight = mortality</p>

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0360:</b> Esophageal resection mortality rate (IQI 8)	<b>Maintenance Measure #0361:</b> Esophageal resection volume (IQI 1)	<b>Endorsed Measure #HOE-023-08:</b> Survival predictor for esophagectomy surgery
			signal/(mortality signal + [mortality sigma/caseload]), where mortality signal and sigma are derived from the NIS data and the caseload comes from the Leapfrog Hospital Survey (answer to question #2 for this high-risk procedure; or can be derived from claims data).
<b>Stratification</b>	Observed rates may be stratified by age group, race/ethnicity categories, payer categories and sex.	N/A	N/A
<b>Type Score</b>	Rate/proportion	Count	Rate/proportion
<b>Algorithm</b>	Each Inpatient Quality Indicator (IQI) expressed as a rate, is defined as outcome of interest/population at risk or numerator/denominator. The Quality Indicators software performs five steps to produce the IQI rates. 1) Discharge-level data is used to mark inpatient records containing outcomes of interest. 2) Identify populations at risk. For provider IQIs populations at risk are derived from hospital discharge records. 3) Calculate observed rates. Using output data from steps 1 and 2, IQI rates are calculated for user-specified combinations of stratifiers. 4) Risk adjust the IQI rates. Regression coefficients from a reference population database are applied to the observed rates in the risk-adjustment process. The risk-adjusted rates will then reflect the age and APR-DRG distribution of data in the reference population. 5) Create multivariate signal extraction (MSX) smoothed rates. Shrinkage factors are applied to the risk-adjusted rates for each IQI in the MSX process. For each IQI, the shrinkage	The volume is the number of discharges with a procedure for esophageal resection	

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0360:</b> Esophageal resection mortality rate (IQI 8)	<b>Maintenance Measure #0361:</b> Esophageal resection volume (IQI 1)	<b>Endorsed Measure #HOE-023-08:</b> Survival predictor for esophagectomy surgery
	estimate reflects a reliability adjustment unique to each indicator. Full information on IQI algorithms and specification can be found at <a href="http://qualityindicators.ahrq.gov/iqi_download.htm">http://qualityindicators.ahrq.gov/iqi_download.htm</a> .		
<b>Data Source</b>	Electronic administrative data/claims	Electronic administrative data/claims	Coefficients from NIS, electronic claims (Leapfrog hospital survey)
<b>Level of Measurement /Analysis</b>	Facility/agency	Facility/agency	Facility/agency
<b>Care Settings</b>	Hospital	Hospital	Hospital

## Venous Thromboembolism (VTE)

	<b>Maintenance Measure #0218:</b> Surgery patients who received appropriate venous thromboembolism (VTE) prophylaxis within 24 hours prior to surgery to 24 hours after surgery end time	<b>Endorsed Measure #0371:</b> Venous thromboembolism (VTE) prophylaxis
<b>Status</b>	Currently undergoing maintenance review	Endorsed 5/2008
<b>Steward</b>	Centers for Medicare & Medicaid Services	The Joint Commission
<b>Description</b>	Percentage of surgery patients who <b>received</b> appropriate Venous Thromboembolism (VTE) Prophylaxis within 24 hours prior to surgery to 24 hours after surgery end time.	This measure assesses the number of patients who <b>received</b> VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission.
<b>Type of Measure</b>	Process	Process
<b>Numerator</b>	Surgery patients who received appropriate VTE prophylaxis within 24 hours prior to Surgical Incision Time to 24 hours after Surgery End Time.  Time window: 24 hours prior to incision to 24 hours after surgery end time	Patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given: the day of or the day after hospital admission the day of or the day after surgery end date for surgeries that start the day of or the day after hospital admission.  Time window:
<b>Numerator Details</b>	Data Elements: Anesthesia Type VTE Prophylaxis VTE Timely	Medical and surgical inpatient discharges (if surgery incision time is > 24 hours of admission, patients must have documentation or prophylaxis within 24 hours of hospital admission).
<b>Denominator</b>	All selected surgery patients  Time window: Entire inpatient admission	All patients.  Time window

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Denominator Categories	Female, Male; ≥18 years of age	Female, Male; ≥18 years of age
<b>Denominator Details</b>	<p>Data Elements:            Admission Date            Anesthesia End Date            Anesthesia End Time            Anesthesia Start Date            Anesthesia Start Time            Birthdate            Clinical Trial            Discharge Date            ICD-9-CM Principal Diagnosis Code            ICD-9-CM Principal Procedure Code            Laparoscope            Perioperative Death            Preadmission Warfarin            Reason for Not Administering VTE            Prophylaxis</p> <p><b>*Note:</b> The exclusion for laparoscopic procedures is being removed for discharges beginning 1/1/2012.</p>	
<b>Exclusions</b>	<ul style="list-style-type: none"> <li>• Data elements</li> <li>• Clinical trial</li> <li>• Laparoscope</li> <li>• Perioperative death</li> <li>• Preadmission warfarin</li> <li>• Reason for not administering VTE prophylaxis</li> </ul>	<ul style="list-style-type: none"> <li>• Patients less than 18 years of age</li> <li>• Patients who have a length of stay (LOS) &lt; two days and &gt; 120 days</li> <li>• Patients with Comfort Measures Only documented</li> <li>• Patients enrolled in clinical trials</li> <li>• Patients who are direct admits to intensive care unit (ICU), or transferred to ICU the day of or the day after hospital admission with ICU LOS = one day</li> <li>• Patients with ICD-9-CM Principal Diagnosis Code of Mental Disorders or Stroke as defined in Appendix A, Table 7.01, 8.1 or 8.2</li> <li>• Patients with ICD-9-CM Principal or Other Diagnosis Codes of Obstetrics or VTE as defined in Appendix A, Table 7.02, 7.03 or 7.04</li> <li>• Patients with ICD-9-CM Principal Procedure Code of Surgical Care Improvement Project (SCIP) VTE selected surgeries as defined in Appendix A, Tables 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, 5.24</li> </ul>

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<b>Exclusions Details</b>	<p>Excluded Populations:</p> <ul style="list-style-type: none"> <li>Patients less than 18 years of age</li> <li>Patients who have a Length of Stay greater than 120 days</li> <li>Burn patients (as defined in Appendix A, Table 5.14 for ICD-9-CM codes)</li> <li>Patients with procedures performed entirely by Laparoscope</li> <li>Patients enrolled in clinical trials</li> <li>Patients who are on warfarin prior to admission</li> <li>Patients whose ICD-9-CM principal procedure occurred prior to the date of admission</li> <li>Patients whose total surgery time is less than or equal to 60 minutes</li> <li>Patients with hospital length of stay less than or equal to 3 calendar days</li> <li>Patients who expire perioperatively</li> <li>Patients with reasons for not administering both mechanical and pharmacological prophylaxis</li> <li>Patients who did not receive VTE Prophylaxis (as defined in the Data Dictionary)</li> </ul>	
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>	<p>No stratification except by surgery type and those are</p> <ul style="list-style-type: none"> <li>Intracranial Neurosurgery Appendix A, Table 5.17</li> <li>General Surgery Appendix A, Table 5.19</li> <li>Gynecologic Surgery Appendix A, Table 5.20</li> <li>Urologic Surgery Appendix A, Table 5.21</li> <li>Elective Total Hip Replacement Appendix A, Table 5.22</li> <li>Elective Total Knee Replacement Appendix A, Table 5.23</li> <li>Hip Fracture Surgery Appendix A, Table 5.24</li> </ul>	
<b>Type Score</b>	Rate/proportion	
<b>Algorithm</b>	<p>SCIP- Venous Thromboembolism (VTE)-2: Surgery Patients Who Received Appropriate Venous Thromboembolism Prophylaxis Within 24 Hours Prior to Surgery to 24 Hours After Surgery</p> <p>Numerator: Surgery patients who received Venous Thromboembolism (VTE) prophylaxis 24 hours prior to Anesthesia Start Time to 24 hours after Anesthesia End Time.</p> <p>Denominator: All selected surgery patients.</p> <p>Variable Key: Patient Age, Length of Stay (LOS), Surgery Length, Surgery Days</p> <p>1.Start processing. Run cases that are included in the Surgical Care Improvement Project (SCIP) Initial Patient Population and</p>	

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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 admission date and 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 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, or 5.24, 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 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, or 5.24, 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 5.14, 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 5.14, continue processing and proceed to the LOS calculation.

6. Calculate LOS. LOS, in days, is equal to the Discharge Date minus the Admission Date.

7. Check LOS

a. If the LOS is less than or equal to 3 days, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Calculation. Stop processing.

b. If the LOS is greater than 3 days, continue processing and proceed to Laparoscope.

8. Check Laparoscope

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

b. If Laparoscope equals 1 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

c. If Laparoscope equals 2, continue processing and proceed to Clinical Trial.

9. Check Clinical Trial



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

## 10.Check Preadmission Warfarin

a.If Preadmission Warfarin is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.  
b.If Preadmission Warfarin 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 Preadmission Warfarin equals No, continue processing and proceed to Anesthesia Start Date.

## 11.Check Anesthesia Start Date

a.If the Anesthesia Start Date 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 the 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.

12.Calculate Surgery Days. Surgery Days, in days, is equal to the Anesthesia Start Date minus the Admission Date.

## 13.Check Surgery Days

a.If the 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 the Surgery Days is greater than or equal to zero, continue processing and proceed to Perioperative Death.

## 14.Check Perioperative Death

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

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processing.  
b.If Perioperative Death 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 Perioperative Death equals No, continue processing and proceed to Anesthesia Start Time.

15.Check Anesthesia Start Time  
a.If the Anesthesia Start Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.  
b.If the Anesthesia Start Time 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 the Anesthesia Start Time equals a Non Unable to Determine Value, continue processing and proceed to Anesthesia End Date.

16.Check Anesthesia End Date  
a.If the Anesthesia End Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.  
b.If the Anesthesia End 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 the Anesthesia End Date equals a Non Unable to Determine Value, continue processing and proceed to Anesthesia End Time.

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17.Check Anesthesia End Time  
a.If the Anesthesia End Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.  
b.If the Anesthesia End Time 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 the Anesthesia End Time equals a Non Unable to Determine Value, continue processing and proceed to the Surgery Length calculation.

18.Calculate Surgery Length. Surgery

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Length, in minutes, is equal to the Anesthesia End Date and Anesthesia End Time minus the Anesthesia Start Date and Anesthesia Start Time.

## 19. Check Surgery Length

a. If the Surgery Length is less than or equal to 60 minutes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

b. If the Surgery Length is greater than 60 minutes, continue processing proceed to Reason for Not Administering VTE Prophylaxis.

## 20. Check Reason for Not Administering VTE Prophylaxis

a. If Reason for Not Administering VTE Prophylaxis is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Reason for Not Administering VTE Prophylaxis equals 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

c. If Reason for Not Administering VTE Prophylaxis equals 1, 2, or 4, continue processing and proceed to VTE Prophylaxis.

## 21. Check VTE Prophylaxis

a. If no values are populated in the VTE grid, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If VTE Prophylaxis equals A, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

c. If the VTE grid is populated with any of values 1, 2, 3, 4, 5, 6, 7, or 8, continue processing and proceed to recheck the ICD-9-CM Principal Procedure Code. Note: If VTE Prophylaxis field is populated with an allowable value of 1, 2, 3, 4, 5, 6, 7, or 8 and the corresponding VTE Timely field is Missing, the entire case will be rejected by The Joint

Commission and Centers for Medicare and Medicaid Services (CMS) warehouses.

## 22. Recheck ICD-9-CM Principal Procedure Code

a. If the ICD-9-CM Principal Procedure Code is on Tables 5.17, 5.20, 5.21, 5.22, 5.23, or 5.24, continue processing. Proceed to step 26 and recheck ICD-9-CM Principal Procedure Code for Tables 5.17, 5.20, 5.21, 5.22, 5.23, and 5.24.

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Do not recheck step 23 and step 25 VTE Prophylaxis or step 24 Reason for Not Administering VTE Prophylaxis for Tables 5.17, 5.20, 5.21, 5.22, 5.23, and 5.24 as steps 23 through 26 check for codes on Table 5.19 only.

b.If the ICD-9-CM Principal Procedure Code is on Table 5.19, continue processing and recheck VTE Prophylaxis.

23.Recheck VTE Prophylaxis only if the ICD-9-CM Principal Procedure Code is on Table 5.19

a.If any VTE Prophylaxis equals 1, 2, or 5, continue processing and check VTE Timely.  
Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.

1.If VTE Timely equals Yes for VTE Prophylaxis of 1 or 2 or 5, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

2.If VTE Timely equals No for VTE Prophylaxis of 1 and 2 and 5, continue processing and recheck Reason for Not Administering VTE Prophylaxis.

b.If none of the VTE Prophylaxis equals 1, 2, or 5, continue processing and proceed to recheck Reason for Not Administering VTE Prophylaxis.

24.Recheck Reason for Not Administering VTE Prophylaxis

a.If Reason for Not Administering VTE Prophylaxis equals 1 or 4, continue processing and proceed to Anesthesia Type.

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

2.If Anesthesia Type equals 1 or 4, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

3.If Anesthesia Type equals 2 or 3, continue processing and recheck VTE Prophylaxis.

b.If Reason for Not Administering VTE Prophylaxis equals 2, continue processing and recheck VTE Prophylaxis.

25.Recheck VTE Prophylaxis

a.If any VTE Prophylaxis equals 3 or 4, continue processing and check VTE Timely.  
Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.

1.If VTE Timely equals Yes for VTE Prophylaxis of 3 or 4, the case will proceed to

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a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

2.If VTE Timely equals No for VTE Prophylaxis of 3 and 4, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

b.If none of the VTE Prophylaxis equals 3 or 4, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

26.Recheck ICD-9-CM Principal Procedure Code for Tables 5.17, 5.20, 5.21, 5.22, 5.23, and 5.24 only if the ICD-9-CM Principal Procedure Code was not on Table 5.19

a.If the ICD-9-CM Principal Procedure Code is on Table 5.17, continue processing and recheck VTE Prophylaxis.

1.If any VTE Prophylaxis equals 1, 2, or 3, continue processing and check VTE Timely.  
Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.

i.If VTE Timely equals Yes for VTE Prophylaxis of 1 or 2 or 3, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

ii.If VTE Timely equals No for VTE Prophylaxis of 1 and 2 and 3, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

2.If none of the VTE Prophylaxis equals 1, 2, or 3, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

b.If the ICD-9-CM Principal Procedure Code is on Tables 5.20, 5.21, 5.22, 5.23, or 5.24, continue processing and recheck ICD-9-CM Principal Procedure Code.

27.Recheck ICD-9-CM Principal Procedure Code for Tables 5.20, 5.21, 5.22, 5.23, and 5.24 only if the ICD-9-CM Principal Procedure Code is not on Tables 5.17 or 5.19

a.If the ICD-9-CM Principal Procedure Code is on Table 5.20, continue processing and recheck VTE Prophylaxis.

1.If any VTE Prophylaxis equals 1, 2, 3 or 5, continue processing and check VTE Timely.  
Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.

i.If VTE Timely equals Yes for VTE

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Prophylaxis of 1 or 2 or 3 or 5, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

ii.If VTE Timely equals No for VTE Prophylaxis of 1 and 2 and 3 and 5, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

2.If none of the VTE Prophylaxis equals 1, 2, 3, or 5, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

b.If the ICD-9-CM Principal Procedure Code is on Tables 5.21, 5.22, 5.23, or 5.24, continue processing and recheck ICD-9-CM Principal Procedure Code.

28.Recheck ICD-9-CM Principal Procedure Code for Tables 5.21, 5.22, 5.23, and 5.24 only if the ICD-9-CM Principal Procedure Code is not on Tables 5.17, 5.19, or 5.20

a.If the ICD-9-CM Principal Procedure Code is on Table 5.21, continue processing and recheck VTE Prophylaxis.

1.If any VTE Prophylaxis equals 1, 2, 3, 4, or 5, continue processing and check VTE Timely. Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.

i.If VTE Timely equals Yes for VTE Prophylaxis of 1 or 2 or 3 or 4 or 5, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

ii.If VTE Timely equals No for VTE Prophylaxis of 1 and 2 and 3 and 4 and 5, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

2.If none of the VTE Prophylaxis equals 1, 2, 3, 4, or 5, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

b.If the ICD-9-CM Principal Procedure Code is on Tables 5.22, 5.23, or 5.24, continue processing and recheck ICD-9-CM Principal Procedure Code.

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29.Recheck ICD-9-CM Principal Procedure Code for Tables 5.22, 5.23, and 5.24 only if the ICD-9-CM Principal Procedure Code is not on Tables 5.17, 5.19, 5.20, or 5.21

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a.If the ICD-9-CM Principal Procedure Code is on Table 5.22, continue processing and recheck VTE Prophylaxis.

b.If the ICD-9-CM Principal Procedure Code is on Tables 5.23 or 5.24, continue processing. Proceed to step 34 and recheck ICD-9-CM Principal Procedure Code for Tables 5.23 and 5.24. Do not recheck steps 30, 31 and 33 VTE Prophylaxis or step 32 Reason for Not Administering VTE Prophylaxis.

30.Recheck VTE Prophylaxis only if the ICD-9-CM Principal Procedure Code is on Table 5.22

a.If any VTE Prophylaxis equals 2, 5, 6, or 8, continue processing and check VTE Timely. Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.

1.If VTE Timely equals Yes for VTE Prophylaxis of 2 or 5 or 6 or 8, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

2.If VTE Timely equals No for VTE Prophylaxis of 2 and 5 and 6 and 8, continue processing and recheck VTE Prophylaxis.

b.If none of the VTE Prophylaxis equals 2, 5, 6, or 8, continue processing and proceed to recheck VTE Prophylaxis.

31.Recheck VTE Prophylaxis

a.If any VTE Prophylaxis equals 1, continue processing and check VTE Timely. Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.

1.If VTE Timely equals Yes for VTE Prophylaxis of 1, continue processing and check ICD-9-CM Principal or Other Diagnosis Codes.

i.If any of the ICD-9-CM Principal or Other Diagnosis Codes is on Table 5.13, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

ii.If none of the ICD-9-CM Principal or Other Diagnosis Codes is on Table 5.13, continue processing and recheck Reason for Not Administering VTE Prophylaxis.

2.If VTE Timely equals No for VTE Prophylaxis of 1, continue processing and recheck Reason for Not Administering VTE Prophylaxis.

b.If none of the VTE Prophylaxis equals 1, continue processing and proceed to recheck Reason for Not Administering VTE

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	<p>Prophylaxis.          Specifications Manual for National Hospital Inpatient Quality Measures          Discharges 10-01-10 (4Q10) through 03-31-11 (1Q11) SCIP-VTE-2-19</p> <p>32.Recheck Reason for Not Administering VTE Prophylaxis</p> <p>a.If Reason for Not Administering VTE Prophylaxis equals 1 or 4, continue processing and recheck Anesthesia Type.</p> <p>1.If Anesthesia Type is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>2.If Anesthesia Type equals 1 or 4, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.</p> <p>3.If Anesthesia Type equals 2 or 3, continue processing and recheck VTE Prophylaxis.</p> <p>b.If Reason for Not Administering VTE Prophylaxis equals 2, continue processing and proceed to recheck VTE Prophylaxis.</p> <p>33.Recheck VTE Prophylaxis</p> <p>a.If any VTE Prophylaxis equals 3 or 7, continue processing and check VTE Timely.          Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.</p> <p>1.If VTE Timely equals Yes for VTE Prophylaxis of 3 or 7, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.</p> <p>2.If VTE Timely equals No for VTE Prophylaxis of 3 and 7, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.</p> <p>b.If none of the VTE Prophylaxis equals 3 or 7, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.</p> <p>34.Recheck ICD-9-CM Principal Procedure Code for Tables 5.23 and 5.24 only if the ICD-9-CM Principal Procedure Code is not on Tables 5.17, 5.19, 5.20, 5.21, or 5.22</p> <p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.23, continue processing and recheck VTE Prophylaxis.</p> <p>1.If Any VTE Prophylaxis is equal to 2, 3, 5, 6, 7, or 8, continue processing and check VTE Timely. Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.</p> <p>i.If VTE Timely equals Yes for VTE</p>	
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Prophylaxis of 2 or 3 or 5 or 6 or 7 or 8, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

ii.If VTE Timely equals No for VTE Prophylaxis of 2 and 3 and 5 and 6 and 7 or 8, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

2.If none of the VTE Prophylaxis is equal to 2, 3, 5, 6, 7, or 8, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

b.If the ICD-9-CM Principal Procedure Code is on Table 5.24, continue processing and recheck VTE Prophylaxis.

35.Recheck VTE Prophylaxis

a.If any VTE Prophylaxis equals 1, 2, 5, 6, or 8, continue processing and check VTE Timely. Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.

1.If VTE Timely equals Yes for VTE Prophylaxis of 1 or 2 or 5 or 6 or 8, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

2.If VTE Timely equals No for VTE Prophylaxis of 1 and 2 and 5 and 6 and 8, continue processing and recheck Reason for Not Administering VTE Prophylaxis.

b.If none of the VTE Prophylaxis equals 1, 2, 5, 6, or 8, continue processing and proceed to recheck Reason for Not Administering VTE Prophylaxis.

36.Recheck Reason for Not Administering VTE Prophylaxis

a.If Reason for Not Administering VTE Prophylaxis equals 1 or 4, continue processing and recheck Anesthesia Type.

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

2.If Anesthesia Type equals 1 or 4, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

3.If Anesthesia Type equals 2 or 3, continue processing and recheck VTE Prophylaxis.

b.If Reason for Not Administering VTE Prophylaxis equals 2, continue processing and proceed to recheck VTE Prophylaxis.

37.Recheck VTE Prophylaxis

a.If none of the VTE Prophylaxis equals 3, 4,

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	<p>or 7, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.</p> <p>b.If any VTE Prophylaxis equals 3, 4, or 7, continue processing and check VTE Timely.</p> <p>Note: When evaluating VTE Timely consider only the values corresponding to the recommended VTE Prophylaxis.</p> <p>1.If VTE Timely equals Yes for VTE Prophylaxis of 3 or 4 or 7, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.</p> <p>2.If VTE Timely equals No for VTE Prophylaxis of 3 or 4 or 7, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.</p>	
<b>Data Source</b>	Electronic clinical data, electronic health/ medical record, paper medical record/flow-sheet	Electronic administrative data/claims, electronic health/medical record, paper medical record/flow-sheet
<b>Level of Measurement /Analysis</b>	Facility/agency; Program: Quality improvement organization (QIO); Can be measured at all levels	Facility/agency
<b>Care Settings</b>	Hospital	Hospital

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## Table of Similar, or Competing Measures and those with potential for Harmonization

### Phase II

#### AAA Repair

	<b>Maintenance Measure 0357:</b> Abdominal aortic aneurysm (AAA) repair volume (IQI 4)	<b>Maintenance Measure #0359:</b> Abdominal aortic artery (AAA) repair mortality rate (IQI 11)	<b>Endorsed Measure HOE-021-08:</b> Survival predictor for abdominal aortic aneurysm (AAA)	<b>New Candidate Standard 1523:</b> In-hospital mortality following elective open repair of small AAAs	<b>New Candidate Standard 1534:</b> In-hospital mortality following elective EVAR of small AAAs
<b>Status</b>	Currently undergoing maintenance review	Currently undergoing maintenance review	Endorsed 9/2010	Currently undergoing review	Currently undergoing review
<b>Steward</b>	Agency for Healthcare Research and Quality	Agency for Healthcare Research and Quality	Leapfrog Group	Society for Vascular Surgery	Society for Vascular Surgery
<b>Description</b>	Count of discharges with a procedure code of provider-level AAA repair.	Percent of discharges with procedure code of AAA repair with an in-hospital death.	A reliability adjusted measure of AAA repair performance that optimally combines two important domains: AAA hospital volume and AAA operative mortality, to provide predictions on AAA survival rates for hospitals.	Percentage of asymptomatic patients undergoing open repair of small abdominal aortic aneurysms (AAA) who die while in hospital. This measure is proposed for both hospitals and individual providers.	Percentage of patients undergoing elective endovascular repair of small asymptomatic abdominal aortic aneurysms (AAA) who die while in hospital. This measure is proposed for both hospitals and individual providers.
<b>Type of Measure</b>	Structure/management	Outcome	Outcome	Outcome	Outcome
<b>Numerator</b>	Discharges, age 18 years and older, with an abdominal aortic aneurysm repair procedure and a primary or secondary diagnosis of AAA.  Time window: Time window can be determined by user, but is generally a calendar	Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.  Time window: Time window can be determined by user, but is generally a calendar year.	Survival rate for patients without AAA rupture who undergo an AAA repair.  Time Window: During the hospital admission	Mortality following elective open repair of asymptomatic AAAs in men with < 6 cm dia and women with < 5.5 cm dia AAAs.  Time window: Lifetime for provider reporting, annual for hospital reporting	Mortality following elective endovascular AAA repair of asymptomatic AAAs in men with < 6 cm dia and women with < 5.5 cm dia AAAs.  Time window: Lifetime for provider reporting, annual for hospital reporting

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	<b>Maintenance Measure 0357:</b> Abdominal aortic aneurysm (AAA) repair volume (IQI 4)	<b>Maintenance Measure #0359:</b> Abdominal aortic artery (AAA) repair mortality rate (IQI 11)	<b>Endorsed Measure HOE-021-08:</b> Survival predictor for abdominal aortic aneurysm (AAA)	<b>New Candidate Standard 1523:</b> In-hospital mortality following elective open repair of small AAAs	<b>New Candidate Standard 1534:</b> In-hospital mortality following elective EVAR of small AAAs
	year.				
<b>Numerator Details</b>	<p>Discharges, age 18 years and older, with an abdominal aortic aneurysm repair procedure and a primary or secondary diagnosis of AAA in any field.</p> <p>ICD-9-CM AAA procedure codes: 3834 AORTA RESECTION &amp; ANAST 3844 RESECT ABDM AORTA W REPL 3864 EXCISION OF AORTA 3971 ENDO IMPLANT OF GRAFT IN AORTA</p> <p>ICD-9-CM AAA diagnosis codes: 4413 RUPT ABD AORTIC ANEURYSM 4414 ABDOM AORTIC</p>	<p>Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.</p>		<p>A registry that includes hospitalization details, AAA diameter and discharge status is required to identify patients for numerator inclusion. The Society for Vascular Surgery Vascular Quality Initiative (SVS VQI) and the Vascular Study Group of New England (VSGNE) registries records such information. Patients who died in hospital following elective open infrarenal AAA repair if their aneurysm was asymptomatic and small (&lt; 6cm dia in men, &lt;5.5 cm dia in women, judged by preoperative imaging (CT, MR or ultrasound)).</p>	<p>A registry that includes hospitalization details, AAA diameter and discharge status is required to identify patients for numerator inclusion. The Society for Vascular Surgery Vascular Quality Initiative (SVS VQI) and the Vascular Study Group of New England (VSGNE) registries records such information. Patients who died in hospital following endovascular infrarenal AAA repair (EVAR) if their asymptomatic aneurysm was repaired electively and was asymptomatic and small (&lt; 6cm dia in men, &lt;5.5 cm dia in women, judged by preoperative imaging(CT, MR or ultrasound)).</p>

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	<b>Maintenance Measure 0357:</b> Abdominal aortic aneurysm (AAA) repair volume (IQI 4)	<b>Maintenance Measure #0359:</b> Abdominal aortic artery (AAA) repair mortality rate (IQI 11)	<b>Endorsed Measure HOE-021-08:</b> Survival predictor for abdominal aortic aneurysm (AAA)	<b>New Candidate Standard 1523:</b> In-hospital mortality following elective open repair of small AAAs	<b>New Candidate Standard 1534:</b> In-hospital mortality following elective EVAR of small AAAs
	ANEURYSM  Exclude cases: • MDC 14 (pregnancy, childbirth, and puerperium)				
<b>Denominator</b>	N/A	Discharges, age 18 years and older, with ICD-9-CM AAA repair code procedure and a diagnosis of AAA in any field.  Time window: Time window can be determined by user, but is generally a calendar year.	All hospital patients without rupture who had an AAA repair.  Time Window: 12 months	All elective open repairs of asymptomatic AAAs in men with < 6 cm dia and women with < 5.5 cm dia AAAs.  Time window: Lifetime for provider reporting, annual for hospital reporting	All elective endovascular repairs of asymptomatic AAAs in men with < 6 cm dia and women with < 5.5 cm dia AAAs.  Time window: Lifetime for provider reporting, annual for hospital reporting
<b>Denominator Categories</b>	Female, Male; 18 and older	Female, Male; 18 and older		Female, Male; 18 years or older	Female, Male; 18 years or older
<b>Denominator Details</b>	N/A	Discharges, age 18 years and older, with ICD-9-CM AAA repair code procedure and a diagnosis of AAA in any field. ICD-9-CM AAA repair procedure codes: 3834 AORTA RESECTION & ANAST 3844 RESECT ABDM AORTA W REPL 3864 EXCISION OF AORTA 3971		A registry that includes hospitalization details, AAA diameter and discharge status is required to identify patients for denominator inclusion. The Society for Vascular Surgery Vascular Quality Initiative (SVS VQI) and the Vascular Study Group of New England (VSGNE) registries records such information. Patients who underwent elective open AAA repair	A registry that includes hospitalization details, AAA diameter and discharge status is required to identify patients for denominator inclusion. The Society for Vascular Surgery Vascular Quality Initiative (SVS VQI) and the Vascular Study Group of New England (VSGNE) registries records such information. Patients who underwent endovascular AAA repair are included

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	<b>Maintenance Measure 0357:</b> Abdominal aortic aneurysm (AAA) repair volume (IQI 4)	<b>Maintenance Measure #0359:</b> Abdominal aortic artery (AAA) repair mortality rate (IQI 11)	<b>Endorsed Measure HOE-021-08:</b> Survival predictor for abdominal aortic aneurysm (AAA)	<b>New Candidate Standard 1523:</b> In-hospital mortality following elective open repair of small AAAs	<b>New Candidate Standard 1534:</b> In-hospital mortality following elective EVAR of small AAAs
		<p>ENDO IMPLANT OF GRAFT IN AORTA</p> <p>ICD-9-CM AAA diagnosis codes: 4413 RUPT ABD AORTIC ANEURYSM 4414 ABDOM AORTIC ANEURYSM</p> <p>Exclude cases:</p> <ul style="list-style-type: none"> <li>• missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)</li> <li>• transferring to another short-term hospital (DISP=2)</li> <li>• MDC 14 (pregnancy, childbirth, and puerperium)</li> </ul>		<p>are included if their aneurysm was asymptomatic and small (&lt; 6cm dia in men, &lt;5.5 cm dia in women, judged by preoperative imaging(CT, MR or ultrasound)).</p>	<p>if their aneurysm was asymptomatic and small (&lt; 6cm dia in men, &lt;5.5 cm dia in women, judged by preoperative imaging).</p>
<b>Exclusions</b>	<p>Numerator exclusions</p> <ul style="list-style-type: none"> <li>• MDC 14 (pregnancy, childbirth, and puerperium)</li> </ul>	<p>Exclude cases:</p> <ul style="list-style-type: none"> <li>• missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter</li> </ul>	<p>Patients with ruptured aneurysm; Patients &lt;18 years of Age.</p>	<p>&gt; 6 cm minor diameter - men &gt; 5.5 cm minor diameter - women Symptomatic AAAs that required</p>	<p>&gt; 6 cm diameter - men &gt; 5.5 cm diameter - women Symptomatic AAAs that required urgent/emergent (non-elective) repair</p>

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	<b>Maintenance Measure 0357:</b> Abdominal aortic aneurysm (AAA) repair volume (IQI 4)	<b>Maintenance Measure #0359:</b> Abdominal aortic artery (AAA) repair mortality rate (IQI 11)	<b>Endorsed Measure HOE-021-08:</b> Survival predictor for abdominal aortic aneurysm (AAA)	<b>New Candidate Standard 1523:</b> In-hospital mortality following elective open repair of small AAAs	<b>New Candidate Standard 1534:</b> In-hospital mortality following elective EVAR of small AAAs
		(DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing) <ul style="list-style-type: none"> <li>transferring to another short-term hospital (DISP=2)</li> <li>MDC 14 (pregnancy, childbirth, and puerperium)</li> </ul>		urgent/emergent (non-elective) repair	
<b>Exclusion Details</b>	This volume measure does not have a denominator.	Exclude cases: <ul style="list-style-type: none"> <li>missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)</li> <li>transferring to another short-term hospital (DISP=2)</li> <li>MDC 14 (pregnancy, childbirth, and puerperium)</li> </ul>		Patients undergoing non-elective open repair of symptomatic AAAs or those with AAAs larger than the diameters noted above.	Patients undergoing non-elective open repair of symptomatic AAAs or those with AAAs larger than the diameters noted above.
<b>Risk Adjustment</b>	No risk adjustment necessary	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)	Method: We used an empirical Bayes approach to combine mortality rates with information on hospital volume at each hospital. In traditional empirical Bayes methods, a point estimate (e.g.,	No risk adjustment necessary	No risk adjustment necessary

## NATIONAL QUALITY FORUM

	<b>Maintenance Measure 0357:</b> Abdominal aortic aneurysm (AAA) repair volume (IQI 4)	<b>Maintenance Measure #0359:</b> Abdominal aortic artery (AAA) repair mortality rate (IQI 11)	<b>Endorsed Measure HOE-021-08:</b> Survival predictor for abdominal aortic aneurysm (AAA)	<b>New Candidate Standard 1523:</b> In-hospital mortality following elective open repair of small AAAs	<b>New Candidate Standard 1534:</b> In-hospital mortality following elective EVAR of small AAAs
		<p>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</p>	<p>mortality rate observed at a hospital) is adjusted for reliability by shrinking it towards the overall mean (e.g., overall mortality rate in the population). We modified this traditional approach by shrinking the observed mortality rate back toward the mortality rate expected given the volume at that hospital – we refer to this as the “volume-predicted mortality”. With this approach, the observed mortality rate is weighted according to how reliably it is estimated, with the remaining weight placed on the information regarding hospital volume [volume-predicted mortality].</p> <p>Risk adjustment for patient characteristics is not used in the measure because in sensitivity analysis, composite measures based on an unadjusted mortality input and a risk-adjusted</p>		



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	<b>Maintenance Measure 0357:</b> Abdominal aortic aneurysm (AAA) repair volume (IQI 4)	<b>Maintenance Measure #0359:</b> Abdominal aortic artery (AAA) repair mortality rate (IQI 11)	<b>Endorsed Measure HOE-021-08:</b> Survival predictor for abdominal aortic aneurysm (AAA)	<b>New Candidate Standard 1523:</b> In-hospital mortality following elective open repair of small AAAs	<b>New Candidate Standard 1534:</b> In-hospital mortality following elective EVAR of small AAAs
		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+ each age category*female ADRG 1731 (other vascular procedures-minor) ADRG 1732 (other vascular procedures-moderate) ADRG 1733 (other vascular procedures-major) 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-	mortality input had a correlation of (.95) and thus were equally good at predicting future performance. See the Figure in the Calibration section below.  The formula for calculating the survival predictor has two components, one is a volume predicted mortality rate, and the second is an observed mortality rate.  The volume predicted mortality rate reflects the hospitals experience performing AAA surgeries (thus, it includes all AAA surgeries) and uses mortality for all hospitals at that specific volume to create the volume predicted mortality. The input data from the hospitals for this domain is a volume count of all AAAs performed in the hospital.		

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		extreme ADRG 9999 (other)	<p>The second domain is the observed mortality, for this domain the population is the group of AAA cases without rupture, the data needed for this domain is the number of observed deaths occurring for AAA cases without rupture, within the inpatient setting.</p> <p>The general composite measure calculation is as follows:            Predicted Survival = 1 - Predicted Mortality</p> <p>Predicted Mortality = (weight)*(mortality) + (1-weight)*(volume predicted mortality)</p> <p>Volume predicted mortality* = intercept - coefficient*ln(caseload), where the intercepts and coefficients are derived from regression using the NIS data and the caseload comes from the Leapfrog Hospital Survey (answer</p>		

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			<p>to question #1 for this high-risk procedure, or can be derived from claims data). *Any negative values are reset to "0"</p> <p>Weight = mortality signal/(mortality signal + [mortality sigma/caseload]), where mortality signal and sigma are derived from the NIS data and the caseload comes from the Leapfrog Hospital Survey (answer to question #2 for this high-risk procedure; or can be derived from claims data).</p>		
<b>Stratification</b>	N/A	Gender, age (5-year age groups), race / ethnicity, primary payer, custom		N/A	N/A
<b>Type Score</b>	Count	Rate/proportion		Rate/proportion	Rate/proportion
<b>Algorithm</b>	The volume is the number of discharges with a diagnosis of, and a procedure for AAA.	Each indicator is expressed as a rate, is defined as outcome of interest / population at risk or numerator / denominator. The AHRQ Quality Indicators (AHRQ QI) software performs five steps to produce the rates.		Identify denominator, exclude non-elective repair of symptomatic or ruptured patients and men with AAA >6 cm, and women with AAA >5.5, find number of deaths Outcome = deaths/ #	Identify denominator, exclude non-elective repair of symptomatic or ruptured patients and men with AAA >6 cm, and women with AAA >5.5, find number of deaths Outcome = deaths/ #

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	<b>Maintenance Measure 0357:</b> Abdominal aortic aneurysm (AAA) repair volume (IQI 4)	<b>Maintenance Measure #0359:</b> Abdominal aortic artery (AAA) repair mortality rate (IQI 11)	<b>Endorsed Measure HOE-021-08:</b> Survival predictor for abdominal aortic aneurysm (AAA)	<b>New Candidate Standard 1523:</b> In-hospital mortality following elective open repair of small AAAs	<b>New Candidate Standard 1534:</b> In-hospital mortality following elective EVAR of small AAAs
		<p>1) Discharge-level data is used to mark inpatient records containing the outcome of interest and 2) the population at risk. For provider indicators, the population at risk is also derived from hospital discharge records; for area indicators, the population at risk is derived from U.S. Census data. 3) Calculate observed rates. Using output from steps 1 and 2, rates are calculated for user-specified combinations of stratifiers. 4) Calculate expected rates. Regression coefficients from a reference population database are applied to the discharge records and aggregated to the provider or area level. 5) Calculate risk-adjusted rate. Use the indirect standardization to account for case-mix. 6) Calculate smoothed rate. A Univariate shrinkage factor is applied to the risk-adjusted rates. The shrinkage estimate reflects a reliability adjustment</p>		cases	cases

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	<b>Maintenance Measure 0357:</b> Abdominal aortic aneurysm (AAA) repair volume (IQI 4)	<b>Maintenance Measure #0359:</b> Abdominal aortic artery (AAA) repair mortality rate (IQI 11)	<b>Endorsed Measure HOE-021-08:</b> Survival predictor for abdominal aortic aneurysm (AAA)	<b>New Candidate Standard 1523:</b> In-hospital mortality following elective open repair of small AAAs	<b>New Candidate Standard 1534:</b> In-hospital mortality following elective EVAR of small AAAs
		unique to each indicator. Full information on calculation algorithms and specifications can be found at <a href="http://qualityindicators.aahrq.gov/IQI_download.htm">http://qualityindicators.aahrq.gov/IQI_download.htm</a>			
<b>Data Source</b>	Electronic administrative data/claims	Electronic administrative data/claims		Registry data	Registry data
<b>Level of Measurement /Analysis</b>	Facility/agency	Facility/agency	Facility/agency	Clinicians: Individual, group; Facility/agency; Can be measured at all levels	Clinicians: Individual, group; Facility/agency; Can be measured at all levels
<b>Care Settings</b>	Hospital	Hospital	Hospital	Hospital	Hospital

# NATIONAL QUALITY FORUM

## Beta Blocker

	<b>Endorsed Measure 0235:</b> Pre-op beta blocker in patient with isolated CABG (1)	<b>Maintenance Measure #0127:</b> Pre-operative beta blockade	<b>Endorsed Measure 0236:</b> Pre-op beta blocker in patient with isolated CABG (2)	<b>Maintenance Measure 0284:</b> Surgery patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period
<b>Status</b>	Endorsed 5/2007	Currently undergoing maintenance review	Endorsed 5/2007	Currently undergoing maintenance review
<b>Steward</b>	Society of Thoracic Surgeons	Society of Thoracic Surgeons	Society of Thoracic Surgeons	Centers for Medicare & Medicaid Services
<b>Description</b>	Percentage of procedures for which the patient received Beta Blockers within 24 hours preceding surgery/ Total number of isolated CABG procedures.	Percent of patients undergoing isolated CABG who received beta blockers within 24 hours preceding surgery.	Percentage of patients undergoing CABG with documented pre-operative beta blockade who had a coronary artery bypass graft.	Percentage of patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period
<b>Type of Measure</b>	Process	Process	Process	Process
<b>Numerator</b>	Number of procedures for which the patient received Beta Blockers within 24 hours preceding surgery.	Number of procedures for which the patient received Beta Blockers within 24 hours preceding surgery.	Patients undergoing CABG with documented pre-operative beta blockade. 4115F Beta blocker administered within 24 hours prior to surgical incision	Surgery patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period. (The perioperative period = 24 hours prior to surgical incision through discharge from post-anesthesia care/recovery area.
<b>Numerator Details</b>		Number of isolated CABG procedures in which preoperative beta blockers [MedBeta (STS Adult Cardiac Surgery Database Version 2.73, Sequence number 1710)] is marked "yes".		Data element: Beta-Blocker Perioperative
<b>Denominator</b>	Total number of isolated CABG procedures.	Total number of isolated CABG procedures.	Patients with coronary artery bypass graft.	All surgery patients on beta blocker therapy prior to arrival.
<b>Denominator Categories</b>		Female, Male; 18 and older		Female, Male; Patients >= 18 years of age
<b>Denominator Details</b>		Number of isolated CABG		Data Elements:

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	<b>Endorsed Measure 0235:</b> Pre-op beta blocker in patient with isolated CABG (1)	<b>Maintenance Measure #0127:</b> Pre-operative beta blockade	<b>Endorsed Measure 0236:</b> Pre-op beta blocker in patient with isolated CABG (2)	<b>Maintenance Measure 0284:</b> Surgery patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period
		<p>procedures excluding cases for which preoperative beta blockers were contraindicated.</p> <p>Isolated CABG is determined as a procedure for which all of the following apply (note: full terms for STS field names are provided in brackets []):</p> <ul style="list-style-type: none"> <li>- OpCAB [Coronary Artery Bypass] is marked "Yes"</li> <li>- (VADProc [VAD Implanted or Removed] is marked "No" or "Missing") or (VADProc is marked "Yes, Implanted" and UnplVAD [Unplanned VAD Insertion] is marked "yes")</li> <li>- OCarASDTy [Atrial Septal Defect Repair] is marked "PFO" or "missing"</li> <li>- OCarAFibAProc [Atrial Fibrillation Ablation Procedure] is marked "primarily epicardial" or "missing" and</li> <li>- OpValve [Valve Surgery], VSAV [Aortic Valve Procedure], VSAVPr [Aortic Valve Procedure Performed], ResectSubA [Resection of sub-aortic stenosis], VSMV [Mitral Valve Procedure], VSMVPr [Mitral Valve Procedure Performed], OpTricus [Tricuspid Valve Procedure</li> </ul>		<p>Admission Date Anesthesia Start Date Beta-Blocker Current Medication Beta-Blocker During Pregnancy Birthdate Clinical Trial Discharge Date ICD-9-CM Principal Procedure Code Laparoscope Perioperative Death Reason for Not Administering Beta-Blocker-Perioperative Sex</p>

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	<b>Endorsed Measure 0235:</b> Pre-op beta blocker in patient with isolated CABG (1)	<b>Maintenance Measure #0127:</b> Pre-operative beta blockade	<b>Endorsed Measure 0236:</b> Pre-op beta blocker in patient with isolated CABG (2)	<b>Maintenance Measure 0284:</b> Surgery patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period
		Performed], OpPulm [Pulmonic Valve Procedure Performed], OpONCard [Other Non-Cardiac Procedure], OCarLVA [Left Ventricular Aneurysm Repair], OCarVSD [Ventricular Septal Defect Repair], OCarSVR [Surgical Ventricular Restoration], OCarCong [Congenital Defect Repair], OCarTrma [surgical procedure for an injury due to Cardiac Trauma], OCarCrTx [Cardiac Transplant], OCAoProcType [Aortic Procedure Type], EndoProc [Endovascular Procedure (TEVAR)], OCTumor [resection of an intracardiac tumor], OCPulThromDis [Pulmonary Thromboembolism], OCarOthr [other cardiac procedure] are all marked “no” or “missing”		
<b>Exclusions</b>	Age qualification: For patients =18 years, the data are accepted into the database, but are not included in the national analysis and report.	Age qualification: For patients <20 years, the data are accepted into the database, but are not included in the national analysis and report.	N/A	Age qualification: Patients <18 years of age. Patients: <ul style="list-style-type: none"> <li>• who did not receive beta blockers due to contraindications documented in the medical record,</li> <li>• whose ICD-9-CM principal procedure occurred prior to the date of admission.</li> </ul>



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	<b>Endorsed Measure 0235:</b> Pre-op beta blocker in patient with isolated CABG (1)	<b>Maintenance Measure #0127:</b> Pre-operative beta blockade	<b>Endorsed Measure 0236:</b> Pre-op beta blocker in patient with isolated CABG (2)	<b>Maintenance Measure 0284:</b> Surgery patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period
				<ul style="list-style-type: none"> <li>• whose ICD-9-CM principal procedure was performed entirely by laparoscope.</li> <li>• who expired during the perioperative period.</li> <li>• Pregnant taking a beta-blocker prior to admission.</li> <li>• Patients involved in clinical trials</li> </ul>
<b>Exclusion Details</b>		Procedures with preoperative beta blockers [MedBeta (STS Adult Cardiac Surgery Database Version 2.73, Sequence number 1710)] marked as "Contraindicated"		Data Elements: Beta-Blocker During Pregnancy Clinical Trial Perioperative Death Reason for Not Administering Beta-Blocker-Perioperative
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>		N/A		N/A
<b>Type Score</b>		Rate/proportion		Rate/proportion
<b>Algorithm</b>		N/A		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 admission date and birthdate to yield the

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	<b>Endorsed Measure 0235:</b> Pre-op beta blocker in patient with isolated CABG (1)	<b>Maintenance Measure #0127:</b> Pre-operative beta blockade	<b>Endorsed Measure 0236:</b> Pre-op beta blocker in patient with isolated CABG (2)	<b>Maintenance Measure 0284:</b> Surgery patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period
				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 Laparoscopy. 4. Check Laparoscopy a. If Laparoscopy is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Laparoscopy equals 1 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing. c. If Laparoscopy equals 2, continue processing and proceed to Clinical Trial. 5. 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. b. If Clinical Trial equals Yes,

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				<p>the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.</p> <p>c.If Clinical Trial equals No, continue processing and proceed to Anesthesia Start Date.</p> <p>6.Check Anesthesia Start Date</p> <p>a.If the Anesthesia Start Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b.If the 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.</p> <p>c.If Anesthesia Start Date equals a Non Unable To Determine Value, continue processing and proceed to the Surgery Days calculation.</p> <p>7.Calculate Surgery Days. Surgery Days, in days, is equal to the Anesthesia Start Date minus the Admission Date.</p> <p>8.Check Surgery Days</p> <p>a.If the Surgery Days is less than zero, the case will proceed to a Measure Category</p>

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				Assignment of B and will not be in the Measure Population. Stop processing. b.If the Surgery Days is greater than or equal to zero, continue processing and proceed to Perioperative Death. 9.Check Perioperative Death a.If Perioperative Death is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b.If Perioperative Death 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 Perioperative Death equals No, continue processing and proceed to Beta-Blocker Current Medication. 10.Check Beta-Blocker Current Medication a.If the Beta-Blocker Current Medication is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b.If the Beta-Blocker Current Medication equals No, the case will proceed to a Measure

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	<b>Endorsed Measure 0235:</b> Pre-op beta blocker in patient with isolated CABG (1)	<b>Maintenance Measure #0127:</b> Pre-operative beta blockade	<b>Endorsed Measure 0236:</b> Pre-op beta blocker in patient with isolated CABG (2)	<b>Maintenance Measure 0284:</b> Surgery patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period
				Category Assignment of B and will not be in the Measure Population. Stop processing. c.If the Beta-Blocker Current Medication equals Yes, continue processing and proceed to Sex. 11.Check Sex a.If Sex is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b.If Sex equals Female, continue processing and check Beta-Blocker During Pregnancy. 1.If Beta-Blocker During Pregnancy is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. 2.If Beta-Blocker During Pregnancy equals 1 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing. 3.If Beta-Blocker During Pregnancy equals 2, continue processing and proceed to Beta-Blocker Preoperative. c.If Sex equals Male or Unknown, continue processing

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				<p>and proceed to Beta-Blocker Perioperative.</p> <p>12.Check Beta-Blocker Perioperative</p> <p>a.If Beta-Blocker Perioperative is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b.If Beta-Blocker Perioperative equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.</p> <p>c.If Beta-Blocker Perioperative equals No, continue processing and check Reason for Not Administering Beta-Blocker Perioperative.</p> <p>13.Check Reason for Not Administering Beta-Blocker Perioperative</p> <p>a.If Reason for Not Administering Beta-Blocker Perioperative is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b.If Reason for Not Administering Beta-Blocker Perioperative equals Yes, the case will proceed to a Measure</p>

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	<b>Endorsed Measure 0235:</b> Pre-op beta blocker in patient with isolated CABG (1)	<b>Maintenance Measure #0127:</b> Pre-operative beta blockade	<b>Endorsed Measure 0236:</b> Pre-op beta blocker in patient with isolated CABG (2)	<b>Maintenance Measure 0284:</b> Surgery patients on beta blocker therapy prior to admission who received a beta blocker during the perioperative period
				Category Assignment of B and will not be in the Measure Population. Stop processing. c.If Reason for Not Administering Beta-Blocker Perioperative equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
<b>Data Source</b>	Electronic administrative data/claims	Electronic clinical data	Electronic administrative data/claims	Electronic administrative data/claims; Paper medical record/flow sheet
<b>Level of Measurement /Analysis</b>	Clinicians: Individual	Facility/agency	Clinicians: Individual	Facility/agency,
<b>Care Settings</b>	Hospital	Hospital	Hospital	Hospital

# NATIONAL QUALITY FORUM

## Beta Blocker Discharge

	<b>Maintenance Measure #0117:</b> Beta blockade at discharge	<b>New Candidate Measure #1480:</b> Patient(s) 18 years of age and older on a beta-blocker at admission or within seven days of discharge of an isolated CABG procedure
<b>Status</b>	Currently undergoing maintenance review	Currently undergoing review
<b>Steward</b>	Society of Thoracic Surgeons	Ingenix
<b>Description</b>	Percent of patients aged 18 years and older undergoing isolated CABG who were discharged on beta blockers.	Patient(s) 18 years of age and older hospitalized for an isolated CABG procedure taking a beta-blocker at admission or within seven days of discharge.
<b>Type of Measure</b>	Process	Process
<b>Numerator</b>	Number of patients undergoing isolated CABG who were discharged on beta blockers.  Time window:	Patient(s) who are taking a Beta-blocker at CABG admission date or within seven days of discharge.  Time window: 90 days prior to the CABG admission date through 7 days after hospital discharge.
<b>Numerator Details</b>	Number of isolated CABG procedures in which discharge beta blockers [DCBeta (STS Adult Cardiac Surgery Database Version 2.73)] is marked "yes"	The patient must fulfill at least one of the following three criteria: 1. The patient filled a prescription for a Beta-blocker-containing medication (HEDIS-defined code set RX0228, see attachment at the end of this application, or procedure code set PR0174) during the following time period: CABG admission date through seven days after the hospital discharge 2. The patient either had a claim with a procedure code for Beta-blocker therapy prescribed (procedure code set PR0174) during the 35 days prior to the CABG admission date, OR, the patient filled one or more prescriptions for a Beta-blocker containing medication (HEDIS-defined code set RX0228, see attached) with the days supplied greater than or equal to the number of days between the fill date on the prescription and the CABG admission date. 3. The patient had a claim with a procedure code for Beta-blocker at discharge (CMS-defined, PR0378) during the following time period: CABG admission date through seven days after the hospital discharge  Cd Set Code Set Description Prc Cd Categ Procedure Code Description PR0174 Beta-blocker therapy prescribed 4006F CPT Beta-blocker tx prescribed  Cd Set Code Set Description Prc Cd Categ Procedure Code Descript PR0378 Beta-blocker at discharge (CMS) G8582



# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0117:</b> Beta blockade at discharge	<b>New Candidate Measure #1480:</b> Patient(s) 18 years of age and older on a beta-blocker at admission or within seven days of discharge of an isolated CABG procedure
		HCPCS Beta-blocker at discharge
<b>Denominator</b>	All patients undergoing isolated CABG.	People hospitalized for an isolated CABG procedure.
<b>Denominator Categories</b>	Female, Male; 18 and older	Female, Male: 18 years of age or older on the report start date
<b>Denominator Details</b>	<p>Number of isolated CABG procedures excluding cases with in-hospital mortality or cases for which discharge beta blocker use was contraindicated.</p> <p>Isolated CABG is determined as a procedure for which all of the following apply (note: full terms for STS field names are provided in brackets []):</p> <ul style="list-style-type: none"> <li>- OpCAB [Coronary Artery Bypass] is marked "Yes"</li> <li>- (VADProc [VAD Implanted or Removed] is marked "No" or "Missing") or (VADProc is marked "Yes, Implanted" and UnplVAD [Unplanned VAD Insertion] is marked "yes")</li> <li>- OCarASDTy [Atrial Septal Defect Repair Type] is marked "PFO" or "missing"</li> <li>- OCarAFibAProc [Atrial Fibrillation Ablation Procedure] is marked "primarily epicardial" or "missing" and</li> <li>- OpValve [Valve Surgery], VSAV [Aortic Valve Procedure], VSAVPr [Aortic Valve Procedure Performed], ResectSubA [Resection of sub-aortic stenosis], VSMV [Mitral Valve Procedure], VSMVPr [Mitral Valve Procedure Performed], OpTricus [Tricuspid Valve Procedure Performed], OpPulm [Pulmonic Valve Procedure Performed], OpONCard [Other Non-Cardiac Procedure], OCarLVA [Left Ventricular Aneurysm Repair], OCarVSD [Ventricular Septal Defect Repair], OCarSVR [Surgical Ventricular Restoration], OCarCong [Congenital Defect Repair], OCarTrma [surgical procedure for an injury due to Cardiac Trauma], OCarCrTx [Cardiac Transplant], OCAoProcType [Aortic Procedure Type], EndoProc [Endovascular Procedure (TEVAR)], OCTumor [resection of an intracardiac tumor], OCPulThromDis [Pulmonary Thromboembolism], OCarOthr [other cardiac procedure] are all marked "no" or "missing"</li> </ul>	<p>1. The patient must have a CABG event defined as follows: Note: Build multiple events initiated by a CABG procedure during the study window if denominator requirements are met for all events. During the following time period: 12 months prior to the report period end date through 7 days prior to the report period end date, begin multiple episodes for inpatient encounters based on the inpatient encounter discharge date (Category of Care = Facility Event – Confinement/ Admission ) where the confinement includes a claim with a procedure code for Coronary Artery Bypass Graft (code set PR0224). Define an event as the time period from admission to seven days after discharge.</p> <p>2. Patient must have been continuously enrolled in Medical benefits throughout the event with no breaks in enrollment.</p> <p>Cd Set Code Set Description Prc Cd Categ Proc Code Description PR0224 Coronary artery bypass graft 33510 CPT CABG, vein only; single coronary venous graft PR0224 Coronary artery bypass graft 33511 CPT CABG, vein only; 2 coronary venous grafts PR0224 Coronary artery bypass graft 33512 CPT CABG, vein only; 3 coronary venous grafts PR0224 Coronary artery bypass graft 33513 CPT CABG, vein only; 4 coronary venous grafts PR0224 Coronary artery bypass graft 33514 CPT CABG, vein only; 5 coronary venous grafts PR0224 Coronary artery bypass graft 33516 CPT CABG, vein only; 6 or more coronary venous grafts PR0224 Coronary artery bypass graft 33517 CPT CABG using ven&amp; art graft(s); single vein graft PR0224 Coronary artery bypass graft 33518 CPT</p>

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0117:</b> Beta blockade at discharge	<b>New Candidate Measure #1480:</b> Patient(s) 18 years of age and older on a beta-blocker at admission or within seven days of discharge of an isolated CABG procedure
		<p>CABG using ven&amp; art graft(s);            2 venous grafts            PR0224 Coronary artery bypass graft 33519 CPT            CABG using ven&amp; art graft(s);            3 venous grafts            PR0224 Coronary artery bypass graft 33521 CPT            CABG using ven&amp; art graft(s);            4 venous grafts            PR0224 Coronary artery bypass graft 33522 CPT            CABG using ven&amp; art graft(s);            5 venous grafts            PR0224 Coronary artery bypass graft 33523 CPT            CABG using ven&amp; art graft(s);            6 or more venous grafts            PR0224 Coronary artery bypass graft 33533 CPT            CABG, using arterial graft(s);            single arterial graft            PR0224 Coronary artery bypass graft 33534 CPT            CABG, using arterial graft(s);            2 coronary arterial grafts            PR0224 Coronary artery bypass graft 33535 CPT            CABG, using arterial graft(s);            3 coronary arterial grafts            PR0224 Coronary artery bypass graft 33536 CPT            CABG, using arterial graft(s);            4 or more arterial grafts</p>
<b>Exclusions</b>	Cases are removed from the denominator if there was an in-hospital mortality or if discharge beta blocker was contraindicated.	<ol style="list-style-type: none"> <li>1. Exclude patients who were readmitted to an acute or non-acute care facility for any diagnosis within seven days after discharge</li> <li>2. Exclude the event if the patient died during the admission</li> <li>3. Exclude the patient if the patient did not have pharmacy benefits throughout the CABG event</li> <li>4. Exclude patients who had a contraindication to Beta-blockers or were taking Beta-blocker exclusion medications</li> </ol>
<b>Exclusion Details</b>	Mortality Discharge Status (MtDCStat), Mortality Date (MtDate), and Discharge Date (DischDt) indicate an in-hospital mortality; discharge beta blocker (DCBeta) marked as "Contraindicated"	<ol style="list-style-type: none"> <li>1. Exclude patients if, during the seven days after hospital discharge there was a claim for a Facility Event – Confinement/ Admission.                Note: Transfer to another acute care facility is considered a readmission and will be excluded.</li> <li>2. Exclude the event if the patient died during the admission, as evidenced by the discharge status for the admission was Patient Status Indicator equal to 20 (Expired)</li> <li>3. Exclude patients who did not have continuous enrollment in pharmacy benefits throughout the event (CABG admission date through 7 days after discharge).</li> </ol>

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	Maintenance Measure #0117: Beta blockade at discharge	New Candidate Measure #1480: Patient(s) 18 years of age and older on a beta-blocker at admission or within seven days of discharge of an isolated CABG procedure
		<p>4. Exclude patients who had one of the following during the 24 months prior to the end of the report end date: a diagnosis of contraindications to Beta-blockers (diagnosis code set DX0242), or a prescription for a Beta-blocker exclusion medication (HEDIS-defined code set RX0229, see attached), or a procedure code for Beta-blocker contraindicated/not indicated (procedure code set PR0377).</p> <p>Cd Set Code Set Description Dx Cd Dx Code Description</p> <p>DX0242 Contraindications to Beta-Blockers 426.0 Atrioventricular block, complete</p> <p>DX0242 Contraindications to Beta-Blockers 426.12 Mobitz (type) II AV block</p> <p>DX0242 Contraindications to Beta-Blockers 426.13 Other second degree AV block</p> <p>DX0242 Contraindications to Beta-Blockers 426.2 Left bundle branch hemiblock</p> <p>DX0242 Contraindications to Beta-Blockers 426.3 Other left bundle branch block</p> <p>DX0242 Contraindications to Beta-Blockers 426.4 Right bundle branch block</p> <p>DX0242 Contraindications to Beta-Blockers 426.51 Right bundle branch block and left post fascicular block</p> <p>DX0242 Contraindications to Beta-Blockers 426.52 Right bundle branch block and left ant fascicular block</p> <p>DX0242 Contraindications to Beta-Blockers 426.53 Other bilat bundle branch block</p> <p>DX0242 Contraindications to Beta-Blockers 426.54 Trifascicular block</p> <p>DX0242 Contraindications to Beta-Blockers 426.7 Anomalous AV excitation</p> <p>DX0242 Contraindications to Beta-Blockers 427.81 Sinoatrial node dysfunction</p> <p>DX0242 Contraindications to Beta-Blockers 458.0 Orthostatic hypotension</p> <p>DX0242 Contraindications to Beta-Blockers 458.1 Chronic hypotension</p> <p>DX0242 Contraindications to Beta-Blockers 458.21 Hypotension of hemodialysis</p> <p>DX0242 Contraindications to Beta-Blockers 458.29 Other iatrogenic hypotension</p> <p>DX0242 Contraindications to Beta-Blockers 458.8 Other specified hypotension</p> <p>DX0242 Contraindications to Beta-Blockers 458.9 Unspecified hypotension</p>

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	Maintenance Measure #0117: Beta blockade at discharge	New Candidate Measure #1480: Patient(s) 18 years of age and older on a beta-blocker at admission or within seven days of discharge of an isolated CABG procedure
		<p>DX0242 Contraindications to Beta-Blockers 491.20                      Obstruc chronic bronchitis,                      without exacerbation</p> <p>DX0242 Contraindications to Beta-Blockers 491.21                      Obstruc chronic bronchitis,                      with (acute) exacerbation</p> <p>DX0242 Contraindications to Beta-Blockers 491.22                      Obstruc chronic bronchitis                      with acute bronchitis</p> <p>DX0242 Contraindications to Beta-Blockers 493.00                      Extrinsic asthma, unspecified</p> <p>DX0242 Contraindications to Beta-Blockers 493.01                      Extrinsic asthma with status                      asthmaticus</p> <p>DX0242 Contraindications to Beta-Blockers 493.02                      Extrinsic asthma, with (acute)                      exacerbation</p> <p>DX0242 Contraindications to Beta-Blockers 493.10                      Intrinsic asthma, unspecified</p> <p>DX0242 Contraindications to Beta-Blockers 493.11                      Intrinsic asthma with status                      asthmaticus</p> <p>DX0242 Contraindications to Beta-Blockers 493.12                      Intrinsic asthma, with (acute)                      exacerbation</p> <p>DX0242 Contraindications to Beta-Blockers 493.21                      Chron obstructv asthma, unspec</p> <p>DX0242 Contraindications to Beta-Blockers 493.21                      Chronic obstructive asthma                      with status asthmaticus</p> <p>DX0242 Contraindications to Beta-Blockers 493.22                      Chronic obstructive asthma,                      with (acute) exacerbation</p> <p>DX0242 Contraindications to Beta-Blockers 493.81                      Exercise induced bronchospasm</p> <p>DX0242 Contraindications to Beta-Blockers 493.82                      Cough variant asthma</p> <p>DX0242 Contraindications to Beta-Blockers 493.90                      Asthma, unspec, unspec status</p> <p>DX0242 Contraindications to Beta-Blockers 493.91                      Asthma, unspecified with                      status asthmaticus</p> <p>DX0242 Contraindications to Beta-Blockers 493.92                      Asthma, unspecified, with                      (acute) exacerbation</p> <p>DX0242 Contraindications to Beta-Blockers 496                      Chronic airway obstruction,                      not elsewhere classified</p> <p>DX0242 Contraindications to Beta-Blockers 506.4                      Chronic respiratory conditions                      due to fumes and vapors</p>

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	<b>Maintenance Measure #0117:</b> Beta blockade at discharge	<b>New Candidate Measure #1480:</b> Patient(s) 18 years of age and older on a beta-blocker at admission or within seven days of discharge of an isolated CABG procedure
		Cd Set Code Set Description Prc Cd Categ Prc Cd Description PR0377 Beta-blocker contraindicated/not indicated G8583 HCPCS Beta-blocker contraind/not indicated
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>		N/A
<b>Type Score</b>	Rate/proportion	Rate/proportion
<b>Algorithm</b>		1. Exclude members who meet denominator exclusion criteria 2. Assign a YES or NO result to remaining members based on numerator response 3. Rate = YES/[YES+NO]
<b>Data Source</b>	Registry data	Electronic administrative data/claims, pharmacy data
<b>Level of Measurement /Analysis</b>	Clinicians: Group; Facility/agency; Population: National, regional/network, states, counties or cities	Clinicians: Individual, group; Facility/agency; Health plan; Integrated delivery system; Multi-site/corporate chain; Population: States, counties or cities; Program: Disease management, quality improvement organization (QIO); Can be measured at all levels
<b>Care Settings</b>	Hospital	Ambulatory care: Clinic, emergency department, hospital outpatient; Hospital; Nursing home (NH)/skilled nursing facility (SNF); Rehabilitation facility

## Cataracts

	<b>New Candidate Measure #1536:</b> Cataracts: Improvement in patient's visual function within 90 days following cataract surgery	<b>Endorsed Measure #0565:</b> Cataracts: 20/40 or better visual acuity within 90 days following cataract surgery
<b>Status</b>	Currently undergoing review	Endorsed 10/2009
<b>Steward</b>	American Academy of Ophthalmology and Hoskins Center for Quality Eye Care	American Medical Association-Physician Consortium for Performance Improvement
<b>Description</b>	Percentage of patients aged 18 years and older who had cataract surgery and had improvement in visual function achieved within 90 days following the cataract surgery.	Percentage of patients aged 18 years and older with a diagnosis of uncomplicated cataract who had cataract surgery and no significant ocular conditions impacting the visual outcome of surgery and had best-corrected visual acuity of 20/40 or better (distance or near) achieved within 90 days following the cataract surgery.
<b>Type of Measure</b>	Outcome	Outcome
<b>Numerator</b>	Patients who had improvement in visual function achieved within 90 days following cataract	Patients who had best-corrected visual acuity of 20/40 or better (distance or near) achieved within

# NATIONAL QUALITY FORUM

	<b>New Candidate Measure #1536:</b> Cataracts: Improvement in patient’s visual function within 90 days following cataract surgery	<b>Endorsed Measure #0565:</b> Cataracts: 20/40 or better visual acuity within 90 days following cataract surgery
	surgery.	90 days following cataract surgery.
<b>Numerator Details</b>	<p>Reporting Numerator includes each of the following instances:</p> <p>A. Patients who had an improvement in their visual function achieved within 90 days following cataract surgery</p> <p>C. Patients who did not complete their visual function assessment within 90 days following cataract surgery but for whom there is a documented medical or patient reason for not doing so</p> <p>D. Patients who did not have an improvement in their visual function achieved within 90 days following cataract surgery and there is no documented medical or patient reason for not doing so</p> <p>For the reporting calculation, documented medical and patient reasons for not doing so include the following:</p> <p>Medical reasons:</p> <p>When cataract surgery was performed for these indications:</p> <ul style="list-style-type: none"> <li>• Clinically significant anisometropia in the presence of a cataract</li> <li>• The lens opacity interferes with optimal diagnosis or management of posterior segment conditions</li> <li>• The lens causes inflammation (phacolysis, phacoanaphylaxis)</li> <li>• The lens induces angle closure (phacomorphic or phacotopic)</li> </ul> <p>Patient reasons:</p> <ul style="list-style-type: none"> <li>• The patient refuses to participate</li> <li>• The patient is unable to complete the questionnaire</li> </ul>	<p>Patients who had best-corrected visual acuity of 20/40 or better (distance or near) achieved within 90 days following cataract surgery</p> <p>CPT Category II code: 4175F-Best-corrected visual acuity of 20/40 or better (distance or near) achieved within the 90 days following cataract surgery</p>
<b>Denominator</b>	All patients aged 18 years and older who had cataract surgery.	All patients aged 18 years and older who had cataract surgery and no significant pre-operative ocular conditions impacting the visual outcome of surgery.
<b>Denominator Categories</b>	Female, Male; 18 years and older	
<b>Denominator Details</b>	<p>Denominator (Eligible Population): All patients aged 18 years and older who had cataract surgery</p> <ul style="list-style-type: none"> <li>• CPT Procedure Codes (with or without modifiers): 66840, 66850, 66852, 66920, 66930, 66940, 66982, 66983, 66984</li> </ul>	<p>All patients aged 18 years and older who had cataract surgery and no significant pre-operative ocular conditions impacting visual outcomes of surgery.</p> <p>CPT Procedure Codes (with or without modifiers): 66840, 66850, 66852, 66920, 66930, 66940, 66982, 66983, 66984</p> <p>AND</p>

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	<b>New Candidate Measure #1536:</b> Cataracts: Improvement in patient’s visual function within 90 days following cataract surgery	<b>Endorsed Measure #0565:</b> Cataracts: 20/40 or better visual acuity within 90 days following cataract surgery
		Patients aged 18 years and older
<b>Exclusions</b>	<p>A patient is excluded if the following condition(s) exist:</p> <p>Medical reasons: When cataract surgery was performed for these indications:</p> <ul style="list-style-type: none"> <li>• Clinically significant anisometropia in the presence of a cataract</li> <li>• The lens opacity interferes with optimal diagnosis or management of posterior segment conditions</li> <li>• The lens causes inflammation (phacolysis, phacoanaphylaxis)</li> <li>• The lens induces angle closure (phacomorphic or phacotopic)</li> </ul> <p>Patient reasons:</p> <ul style="list-style-type: none"> <li>• The patient refuses to participate</li> <li>• The patient is unable to complete the questionnaire</li> </ul>	Patients with any of the following comorbid conditions that impact the visual outcome of surgery (See Denominator Exclusions Spreadsheet).
<b>Exclusion Details</b>	<p>Documentation of medical reason for not improving visual function within 90 days of cataract surgery</p> <ul style="list-style-type: none"> <li>• Append modifier to CPT Category II Code: -1P</li> </ul> <p>Documentation of patient reason for not improving visual function within 90 days of cataract surgery</p> <ul style="list-style-type: none"> <li>• Append modifier to CPT Category II Code: -2P</li> </ul>	Patients with any of the following comorbid conditions that impact the visual outcome of surgery (See Denominator Exclusions Spreadsheet)
<b>Risk Adjustment</b>	No risk adjustment necessary	
<b>Stratification</b>	<p>This measure can be stratified into two major groups: those patients with ocular co-morbidities and those patients without ocular co-morbidities. An improvement in visual function after cataract surgery would be expected in both groups, however the magnitude of the difference would vary by group. The Cataract Patient Outcomes Research Team found that an important preoperative patient characteristic that was independently associated with failure to improve on one of the outcomes measured (including the VF-14) was ocular comorbidity. The authors explained that this was expected, because it is reasonable to assume that other diseases that impair visual function would be correlated with a reduced improvement in functional status. The National Eye Care Outcomes Network also found that there were differences in the mean postoperative VF-14 scores across groups of patients with and without ocular co-morbidities, as seen in the table below.</p>	
<b>Type Score</b>	Rate/proportion	

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	<b>New Candidate Measure #1536:</b> Cataracts: Improvement in patient’s visual function within 90 days following cataract surgery	<b>Endorsed Measure #0565:</b> Cataracts: 20/40 or better visual acuity within 90 days following cataract surgery
<b>Algorithm</b>	<p>Calculation for Reporting:</p> <p>For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator.</p> <p>Reporting Numerator includes each of the following instances:</p> <p>A. Patients who had an improvement in their visual function achieved within 90 days following cataract surgery</p> <p>C. Patients who did not complete their visual function assessment within 90 days following cataract surgery but for whom there is a documented medical or patient reason for not doing so</p> <p>D. Patients who did not have an improvement in their visual function achieved within 90 days following cataract surgery and there is no documented medical or patient reason for not doing so</p> <p>Reporting Denominator (RD) includes:</p> <ul style="list-style-type: none"> <li>• Patients aged 18 years and older AND</li> <li>• Had cataract surgery</li> </ul> <p>Reporting Calculation</p> $\frac{A + C}{RD}$ <hr/> <p>A (# of patients meeting measure criteria) + C (# of patients with valid exclusions) + D (# of patients NOT meeting numerator criteria)</p> <p>RD (# of patients in denominator)</p> <p>A (# of patients meeting measure criteria)</p> <p>A (A</p> <p>PD (# of patients in denominator)</p> <p>Components for this measure are defined as:</p> <p>A # of patients who had an improvement in their visual function achieved within 90 days following cataract surgery</p> <p>C # of patients who did not complete their visual function assessment within 90 days following cataract surgery but for whom there is a documented medical or patient reason for not doing so</p> <p>D # of patients who did not have an improvement</p>	



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	<b>New Candidate Measure #1536:</b> Cataracts: Improvement in patient's visual function within 90 days following cataract surgery	<b>Endorsed Measure #0565:</b> Cataracts: 20/40 or better visual acuity within 90 days following cataract surgery
	in their visual function achieved within 90 days following cataract surgery and there is no documented medical or patient reason for not doing so RD # of patients aged 18 years and older who had cataract surgery	
<b>Data Source</b>	Survey: Patient	Electronic administrative data/claims, electronic health/medical record, paper medical record/flow-sheet
<b>Level of Measurement /Analysis</b>	Clinicians: Individual	Clinicians: Individual, group
<b>Care Settings</b>	Ambulatory care: Ambulatory surgery center, clinic, hospital outpatient	Ambulatory care: Clinic, office

## Failure to Rescue

	<b>Maintenance Measure 0352:</b> Failure to rescue in-hospital mortality (risk adjusted)	<b>Maintenance Measure #0351:</b> Death among surgical inpatients with serious, treatable complications (PSI 4)	<b>Maintenance Measure 0353:</b> Failure to rescue 30-day mortality (risk adjusted)
<b>Status</b>	Currently undergoing maintenance review	Currently undergoing maintenance review	Currently undergoing maintenance review
<b>Steward</b>	Children's Hospital of Philadelphia	Agency for Healthcare Research and Quality	Children's Hospital of Philadelphia
<b>Description</b>	Percentage of patients who died with a complications in the hospital.	Percentage of cases having developed specified complications of care with an in-hospital death.	Percentage of patients who died with a complication within 30 days from admission.
<b>Type of Measure</b>	Outcome	Outcome	Outcome
<b>Numerator</b>	Patients who died with a complication plus patients who died without documented complications. Death is defined as death in the hospital. All patients in an FTR analysis have developed a complication (by definition). Complicated patient has at least one of the complications defined in Appendix B (see website <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> ). Complications are defined using the secondary ICD9 diagnosis and procedure codes and the DRG code of the	All discharges with a disposition of "deceased" (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.	Patients who died with a complication plus patients who died without documented complications. Death is defined as death within 30 days from admission. All patients in an FTR analysis have developed a complication (by definition). Complicated patient has at least one of the complications defined in Appendix B (see website <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> ). Complications are defined using the secondary ICD9 diagnosis and procedure codes and the DRG code of the current

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure 0352:</b> Failure to rescue in-hospital mortality (risk adjusted)	<b>Maintenance Measure #0351:</b> Death among surgical inpatients with serious, treatable complications (PSI 4)	<b>Maintenance Measure 0353:</b> Failure to rescue 30-day mortality (risk adjusted)
	current admission. Comorbidities are defined in Appendix C (see website <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> ) using secondary ICD9 diagnosis codes of the current admission and primary or secondary ICD9 diagnosis codes of previous admission within 90 days of the admission date of the current admission. *When physician part B is available, the definition of complications and comorbidities are augmented to include CPT codes.		admission. Comorbidities are defined in Appendix C(see website <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> ) using secondary ICD9 diagnosis codes of the current admission and primary or secondary ICD9 diagnosis codes of previous admission within 90 days of the admission date of the current admission. *When physician part B is available, the definition of complications and comorbidities are augmented to include CPT codes.
<b>Numerator Details</b>	Patients who died with complication and patients who died without documented complications. Death is defined as death in the hospital.	All discharges with a disposition of “deceased” (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.	Patients who died with complication and patients who died without documented complications. Death is defined as death within 30 days from admission.
<b>Denominator</b>	General Surgery, Orthopedic and Vascular patients in specific DRGs with complications plus patients who died in the hospital without complications.  Inclusions: adult patients admitted for one of the procedures in the General Surgery, Orthopedic or Vascular DRGs (see appendix A <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> )	All surgical discharges age 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium) defined by specific DRGs or MS-DRGs and an ICD-9-CM code for an operating room procedure, principal procedure within 2 days of admission OR admission type of elective (ATYPE=3) with potential complications of care listed in Death among Surgical definition (e.g., pneumonia, DVT/PE, sepsis, shock/cardiac arrest, or GI hemorrhage/acute ulcer).	General Surgery, Orthopedic and Vascular patients in specific DRGs with complications plus patients who died in the hospital without complications. Inclusions: adult patients admitted for one of the procedures in the General Surgery, Orthopedic or Vascular DRGs (see appendix A <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> ) Inclusions: adult patients admitted for one of the procedures in the General Surgery, Orthopedic or Vascular DRGs (see appendix A)
<b>Denominator Categories</b>	Female, Male; 18-90	Female; 18 and older	Female, Male; 18-90
<b>Denominator Details</b>	Adult patients admitted for one of the procedures in the General Surgery, Orthopedic or Vascular DRGs (see Appendix A <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> )	All surgical discharges age 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium) defined by specific DRGs or MS-DRGs and an ICD-9-CM code for an operating room procedure, principal procedure	Adult patients admitted for one of the procedures in the General Surgery, Orthopedic or Vascular DRGs (see Appendix A <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> ) who developed an in hospital

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	<b>Maintenance Measure 0352:</b> Failure to rescue in-hospital mortality (risk adjusted)	<b>Maintenance Measure #0351:</b> Death among surgical inpatients with serious, treatable complications (PSI 4)	<b>Maintenance Measure 0353:</b> Failure to rescue 30-day mortality (risk adjusted)
	p)who developed an in hospital complication and those who died without a complication.	<p>within 2 days of admission OR admission type of elective (ATYPE=3) with potential complications of care listed in Death among Surgical definition (pneumonia, DVT/PE, sepsis, shock/cardiac arrest, or GI hemorrhage/acute ulcer).</p> <p>See Patient Safety Indicators Appendices:</p> <ul style="list-style-type: none"> <li>• Appendix A - Operating Room Procedure Codes</li> <li>• Appendix D - Surgical Discharge DRGs</li> <li>• Appendix E - Surgical Discharge MS-DRGs</li> </ul> <p>PSI appendices at:  <a href="http://www.qualityindicators.ahrq.gov/downloads/psi/TechSpecs42/PSI%20Appendices.pdf">http://www.qualityindicators.ahrq.gov/downloads/psi/TechSpecs42/PSI%20Appendices.pdf</a></p>	complication and those who died without a complication.
<b>Exclusions</b>	Patients over age 90, under age 18.	<p>Exclude cases:</p> <ul style="list-style-type: none"> <li>• age 90 years and older</li> <li>• transferred to an acute care facility (DISP = 2)</li> <li>• missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1 =missing)</li> </ul> <p>NOTE: Additional exclusion criteria is specific to each diagnosis (pneumonia, DVT/PE, sepsis, shock/cardiac arrest, or GI hemorrhage/acute ulcer).</p>	Patients over age 90, under age 18.
<b>Exclusion Details</b>		<p>Exclude cases:</p> <ul style="list-style-type: none"> <li>• age 90 years and older</li> <li>• transferred to an acute care facility (DISP = 2)</li> <li>• missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1 =missing)</li> </ul>	

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	<b>Maintenance Measure 0352:</b> Failure to rescue in-hospital mortality (risk adjusted)	<b>Maintenance Measure #0351:</b> Death among surgical inpatients with serious, treatable complications (PSI 4)	<b>Maintenance Measure 0353:</b> Failure to rescue 30-day mortality (risk adjusted)
		NOTE: Additional exclusion criteria is specific to each diagnosis (pneumonia, DVT/PE, sepsis, shock/cardiac arrest, or GI hemorrhage/acute ulcer).	
<b>Risk Adjustment</b>	Risk Adjustment: Model was developed using logistic regression analysis. Associated data elements: age in years, sex, race, comorbidities, DRGs (combined with and without complications) and procedure codes within DRGs, transfer status. Failure to rescue is adjusted using a logistic regression model where y is a failure and the total N is composed of patients who develop a complication and patients who died without a complication. According to developer: The model adjustment variables can vary. We have found that FTR results are fairly stable, even with little adjustment, since all patients in an FTR analysis have developed a complication (by definition), they are a more homogeneous group of patients than the entire population. Hence severity adjustment plays somewhat less of a role than in other outcome measures.	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), modified CMS DRG and AHRQ Comorbidities. 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: Model was developed using logistic regression analysis. Associated data elements: age in years, sex, race, comorbidities, DRGs (combined with and without complications) and procedure codes within DRGs, transfer status. Failure to rescue is adjusted using a logistic regression model where y is a failure and the total N is composed of patients who develop a complication and patients who died without a complication. According to developer: The model adjustment variables can vary. We have found that FTR results are fairly stable, even with little adjustment, since all patients in an FTR analysis have developed a complication (by definition), they are a more homogeneous group of patients than the entire population. Hence severity adjustment plays somewhat less of a role than in other outcome measures.
<b>Stratification</b>	Complicated patient has at least one of the complications defined in Appendix B ( <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> ) Complications are defined using the secondary ICD9 diagnosis and procedure codes and the DRG code of the current admission. When Physician Part B file is available, the definition of complications and comorbidities are augmented to include CPT codes.	User has an option to stratify by Gender, age (5-year age groups), race / ethnicity, primary payer, and custom stratifiers.	Complicated patient has at least one of the complications defined in Appendix B ( <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> ) Complications are defined using the secondary ICD9 diagnosis and procedure codes and the DRG code of the current admission. When Physician Part B file is available, the definition of complications and comorbidities are augmented to include CPT codes.

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	<b>Maintenance Measure 0352:</b> Failure to rescue in-hospital mortality (risk adjusted)	<b>Maintenance Measure #0351:</b> Death among surgical inpatients with serious, treatable complications (PSI 4)	<b>Maintenance Measure 0353:</b> Failure to rescue 30-day mortality (risk adjusted)
<b>Type Score</b>	Rate/proportion	Rate/proportion	Rate/proportion
<b>Algorithm</b>	Refer to website ( <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> )	Each indicator is expressed as a rate, is defined as outcome of interest / population at risk or numerator / denominator. The AHRQ Quality Indicators (AHRQ QI) software performs five steps to produce the rates. 1) Discharge-level data is used to mark inpatient records containing the outcome of interest and 2) the population at risk. For provider indicators, the population at risk is also derived from hospital discharge records; for area indicators, the population at risk is derived from U.S. Census data. 3) Calculate observed rates. Using output from steps 1 and 2, rates are calculated for user-specified combinations of stratifiers. 4) Calculate expected rates. Regression coefficients from a reference population database are applied to the discharge records and aggregated to the provider or area level. 5) Calculate risk-adjusted rate. Use the indirect standardization to account for case-mix. 6) Calculate smoothed rate. A Univariate shrinkage factor is applied to the risk-adjusted rates. The shrinkage estimate reflects a reliability adjustment unique to each indicator. Full information on calculation algorithms and specifications can be found at <a href="http://qualityindicators.ahrq.gov/PSI_download.htm">http://qualityindicators.ahrq.gov/PSI_download.htm</a>	Refer to website ( <a href="http://www.research.chop.edu/programs/cor/outcomes.php">http://www.research.chop.edu/programs/cor/outcomes.php</a> )
<b>Data Source</b>	Electronic administrative data/claims	Electronic administrative data/claims	Electronic administrative data/claims
<b>Level of Measurement /Analysis</b>	Facility/agency; Health plan; Integrate delivery system; Population: National, regional/network, states, counties or cities	Facility/agency	Facility/agency; Health plan; Integrate delivery system; Population: National, regional/network, states, counties or cities
<b>Care Settings</b>	Hospital	Hospital	Hospital

# NATIONAL QUALITY FORUM

## Hair Removal

	<b>Maintenance Measure #0301:</b> Surgery patients with appropriate hair removal	<b>Maintenance Measure #0515:</b> Ambulatory surgery patients with appropriate method of hair removal
<b>Status</b>	Currently undergoing maintenance review	Currently undergoing maintenance review
<b>Steward</b>	Centers for Medicare & Medicaid Services	ASC Quality Collaboration
<b>Description</b>	Percentage of surgery patients with surgical hair site removal with clippers or depilatory or no surgical site hair removal.	Percentage of ASC admissions with appropriate surgical site hair removal.
<b>Type of Measure</b>	Process	Process
<b>Numerator</b>	Surgery patients with surgical hair site removal with clippers or depilatory or no surgical site hair removal.  Time window: Admission to discharge	ASC admissions with surgical site hair removal with a razor or clippers from the scrotal area, or with clippers or depilatory cream from all other surgical sites.  Time window: In-facility, prior to discharge
<b>Numerator Details</b>	Data Elements: Preoperative Hair Removal 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).	DEFINITIONS:  Admission: completion of registration upon entry into the facility
<b>Denominator</b>	All selected surgery patients  Include patients with an ICD-9-CM Principal Procedure Codes of selected surgeries.  Time window: Admission to discharge	All ASC admissions with surgical site hair removal.  Time window: In-facility, prior to discharge
<b>Denominator Categories</b>	Female, Male; 18 years of age and older	Female, Male; All ages
<b>Denominator Details</b>	Data Elements: Admission Date Anesthesia Start Date Birthdate Clinical Trial Discharge Date ICD-9-CM Principal Procedure Code Laparoscope Include patients with an ICD-9-CM Principal Procedure code or ICD-9-CM Other Procedure Codes of selected surgeries.	DEFINITIONS:  Admission: completion of registration upon entry into the facility
<b>Exclusions</b>	Excluded Populations: Patients less than 18 years of age Patients who have a length of Stay greater than 120 days Patients whose ICD-9-CM principal procedure was performed entirely by laparoscope. Patients enrolled in clinical trials Patients whose ICD-9-CM principal procedure	ASC admissions who perform their own hair removal.

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0301:</b> Surgery patients with appropriate hair removal	<b>Maintenance Measure #0515:</b> Ambulatory surgery patients with appropriate method of hair removal
	occurred prior to the date of admission Patients who performed their own hair removal	
<b>Exclusion Details</b>	The data elements include: Clinical Trial and Laparoscope. Affirmative answers to these data elements excludes the patient from the measure.	To collect data for the denominator exclusion, centers must track patients who perform their own hair removal.
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>	N/A	N/A
<b>Type Score</b>	Rate/proportion	Rate/proportion
<b>Algorithm</b>	<p>SCIP-Infection (Inf)-6: Surgery Patients with Appropriate Hair Removal Variable Key: Patient Age, Surgery Days</p> <ol style="list-style-type: none"> <li>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.</li> <li>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 admission date and birthdate to yield the most accurate age.</li> <li>3.Check Patient Age               <ol style="list-style-type: none"> <li>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.</li> <li>b.If Patient Age is greater than or equal to 18 years, continue processing and proceed to Laparoscope.</li> </ol> </li> <li>4.Check Laparoscope               <ol style="list-style-type: none"> <li>a.If Laparoscope is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</li> <li>b.If Laparoscope equals 1 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.</li> <li>c.If Laparoscope equals 2, continue processing and proceed to Clinical Trial.</li> </ol> </li> <li>5.Check Clinical Trial               <ol style="list-style-type: none"> <li>a.If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</li> <li>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.</li> <li>c.If Clinical Trial equals No, continue processing and proceed to Anesthesia Start Date.</li> </ol> </li> <li>6.Check Anesthesia Start Date</li> </ol>	<ol style="list-style-type: none"> <li>1a. The number of admissions with surgical site hair removal is determined.</li> <li>1b. The number of admissions who performed their own surgical site hair removal is determined.</li> <li>1c. The value determined in step 1b is subtracted from the value determined in step 1a to yield the measure denominator.</li> <li>2. The number of admissions with appropriate surgical site hair removal (hair removal with razor or clippers from the scrotal area, or hair removal with clippers or depilatory cream from all other surgical sites) is determined. This value is the measure numerator.</li> <li>3. The number of ASC admissions with appropriate surgical site hair removal (step 2) is divided by the number of ASC admissions with surgical site hair removal (steps 1a through 1c) during the reporting period, yielding the rate of appropriate surgical site hair removal for the reporting period.</li> </ol>

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0301:</b> Surgery patients with appropriate hair removal	<b>Maintenance Measure #0515:</b> Ambulatory surgery patients with appropriate method of hair removal
	<p>a.If the Anesthesia Start Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b.If the 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.</p> <p>c.If Anesthesia Start Date equals a Non Unable To Determine Value, continue processing and proceed to the Surgery Days calculation.</p> <p>7.Calculate Surgery Days. Surgery Days, in days, is equal to the Anesthesia Start Date minus the Admission Date.</p> <p>8.Check Surgery Days</p> <p>a.If the 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.</p> <p>b.If the Surgery Days is greater than or equal to zero, continue processing and proceed to Preoperative Hair Removal.</p> <p>9.Check Preoperative Hair Removal – Note: No allowable value can occur more than once. Allowable values of ‘1’ or ‘7’ cannot be combined with each other or with any of the other allowable values.</p> <p>a.If Preoperative Hair Removal is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.</p> <p>b.If Any Preoperative Hair Removal equals 6, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.</p> <p>c.If Any Preoperative Hair Removal equals 1, 2, 3, 4, 5, 7, or 8 and None equals 6, continue processing and recheck Preoperative Hair Removal.</p> <p>10.Recheck Preoperative Hair Removal</p> <p>a.If Any Preoperative Hair Removal equals 2, 5, or 7, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.</p> <p>b.If Any Preoperative Hair Removal equals 1, 3, 4, or 8 and None equals 2, 5, or 7, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population.</p>	
<b>Data Source</b>	Survey: Patient	Electronic administrative data/claims, electronic health/medical record, paper medical record/flow-sheet
<b>Level of Measurement</b>	Clinicians: Individual	Clinicians: Individual, group



# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0301:</b> Surgery patients with appropriate hair removal	<b>Maintenance Measure #0515:</b> Ambulatory surgery patients with appropriate method of hair removal
<b>/Analysis</b>		
<b>Care Settings</b>	Ambulatory care: Ambulatory surgery center, clinic, hospital outpatient	Ambulatory care: Clinic, office

## Pancreatic Resection

	<b>Maintenance Measure 0365:</b> Pancreatic resection mortality rate (IQI 9)	<b>Maintenance Measure #0366:</b> Pancreatic resection volume (IQI 2)	<b>Endorsed Measure HOE-024-08:</b> Survival predictor for pancreatic resection surgery
<b>Status</b>	Currently undergoing maintenance review	Currently undergoing maintenance review	Endorsed 9/2010
<b>Steward</b>	Agency for Healthcare Research and Quality	Agency for Healthcare Research and Quality	Leapfrog Group
<b>Description</b>	Percentage of discharges with procedure code of pancreatic resection with an in-hospital death.	Number of discharges with procedure for pancreatic resection.	A reliability adjusted measure of pancreatic resection surgical performance that optimally combines two important domains: Pancreatic resection hospital volume and pancreatic operative mortality, to provide predictions on pancreatic survival rates for hospitals.
<b>Type of Measure</b>	Outcome	Structure/management	Outcome
<b>Numerator</b>	Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.  Time window: Time window can be determined by user, but is generally a calendar year.	Discharges, age 18 years and older, with ICD-9-CM codes for pancreatic resection procedure.  Time window: Time window can be determined by user, but is generally a calendar year.	Survival of pancreatic cancer patients who undergo a pancreatic resection.  Time window: During the hospital admission

## NATIONAL QUALITY FORUM

	<b>Maintenance Measure 0365:</b> Pancreatic resection mortality rate (IQI 9)	<b>Maintenance Measure #0366:</b> Pancreatic resection volume (IQI 2)	<b>Endorsed Measure HOE-024-08:</b> Survival predictor for pancreatic resection surgery
<b>Numerator Details</b>	Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.	Discharges, age 18 years and older, with ICD-9-CM codes for pancreatic resection procedure.  ICD-9-CM pancreatic resection procedure codes: 526 TOTAL PANCREATECTOMY 527 RAD PANCREATICODUODENECT  Exclude cases: • MDC 14 (pregnancy, childbirth, and puerperium)	
<b>Denominator</b>	Discharges, age 18 years and older, with ICD-9-CM pancreatic resection code procedure and a diagnosis code of pancreatic cancer in any field.  Time window: Time window can be determined by user, but is generally a calendar year.	N/A	All hospital patients with pancreatic cancer who had a pancreatic resection.  Time Window : 12 months
<b>Denominator Categories</b>	Female, Male; 18 and older	Female, Male; 18 and older	
<b>Denominator Details</b>	Discharges, age 18 years and older, with ICD-9-CM pancreatic resection code procedure and a diagnosis code of pancreatic cancer in any field.  ICD-9-CM pancreatic resection procedure codes: 526 TOTAL PANCREATECTOMY 527 RAD PANCREATICODUODENECT T  ICD-9-CM pancreatic cancer diagnosis codes:	N/A	

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure 0365:</b> Pancreatic resection mortality rate (IQI 9)	<b>Maintenance Measure #0366:</b> Pancreatic resection volume (IQI 2)	<b>Endorsed Measure HOE-024-08:</b> Survival predictor for pancreatic resection surgery
	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		
<b>Exclusions</b>	Exclude cases: <ul style="list-style-type: none"> <li>• missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1 =missing)</li> <li>• transferring to another short-term hospital (DISP=2)</li> <li>• MDC 14 (pregnancy, childbirth, and puerperium)</li> </ul>	N/A	Patients who do not have a diagnosis of pancreatic cancer; patients < 18 years of age.
<b>Exclusion Details</b>	Exclude cases: <ul style="list-style-type: none"> <li>• missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1 =missing)</li> <li>• transferring to another short-term hospital (DISP=2)</li> </ul>	N/A	

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure 0365:</b> Pancreatic resection mortality rate (IQI 9)	<b>Maintenance Measure #0366:</b> Pancreatic resection volume (IQI 2)	<b>Endorsed Measure HOE-024-08:</b> Survival predictor for pancreatic resection surgery
	<ul style="list-style-type: none"> <li>• MDC 14 (pregnancy, childbirth, and puerperium)</li> </ul>		
<b>Risk Adjustment</b>	<p>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.</p>	No risk adjustment necessary.	<p>Method: We used an empirical Bayes approach to combine mortality rates with information on hospital volume at each hospital. In traditional empirical Bayes methods, a point estimate (e.g., mortality rate observed at a hospital) is adjusted for reliability by shrinking it towards the overall mean (e.g., overall mortality rate in the population). We modified this traditional approach by shrinking the observed mortality rate back toward the mortality rate expected given the volume at that hospital – we refer to this as the “volume-predicted mortality”. With this approach, the observed mortality rate is weighted according to how reliably it is estimated, with the remaining weight placed on the information regarding hospital volume [volume-predicted mortality].</p> <p>Risk adjustment for patient characteristics is not used in the measure because in sensitivity analysis, composite measures based on an unadjusted mortality input and a risk-adjusted mortality input had a correlation of (.95) and thus were equally good at predicting future performance. See the Figure in the Calibration section below.</p> <p>The formula for calculating the survival predictor has two components, one is a volume predicted mortality rate, and the second is an observed mortality rate.</p> <p>The volume predicted mortality</p>

# NATIONAL QUALITY FORUM

	Maintenance Measure 0365: Pancreatic resection mortality rate (IQI 9)	Maintenance Measure #0366: Pancreatic resection volume (IQI 2)	Endorsed Measure HOE-024-08: Survival predictor for pancreatic resection surgery
			<p>rate reflects the hospitals experience performing pancreatic resection surgeries (thus, it includes all pancreatic resection surgeries) and uses mortality for all hospitals at that specific volume to create the volume predicted mortality. The input data from the hospitals for this domain is a volume count of all pancreatic resections performed in the hospital.</p> <p>The second domain is the observed mortality, for this domain the population is narrowed to a homogenous group of pancreatic resections with a diagnosis of cancer, the data needed for this domain is the number of observed deaths occurring for pancreatic resection cases with cancer, within the inpatient setting.</p> <p>The general composite measure calculation is as follows:            Predicted Survival = 1-Predicted Mortality</p> <p>Predicted Mortality = (weight)*(mortality) + (1-weight)*(volume predicted mortality)</p> <p>Volume predicted mortality* = intercept - coefficient*ln(caseload), where the intercepts and coefficients are derived from regression using the NIS data and the caseload comes from the Leapfrog Hospital Survey (answer to question #1 for this high-risk procedure; or can be derived from claims data).            *Any negative values are reset to "0"</p> <p>Weight = mortality</p>

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure 0365:</b> Pancreatic resection mortality rate (IQI 9)	<b>Maintenance Measure #0366:</b> Pancreatic resection volume (IQI 2)	<b>Endorsed Measure HOE-024-08:</b> Survival predictor for pancreatic resection surgery
			signal/(mortality signal + [mortality sigma/caseload]), where mortality signal and sigma are derived from the NIS data and the caseload comes from the Leapfrog Hospital Survey (answer to question #2 for this high-risk procedure; or can be derived from claims data).
<b>Stratification</b>	User has the option to stratify by gender, age (5-year age groups), race / ethnicity, primary payer, and custom stratifiers.	N/A	
<b>Type Score</b>	Rate/proportion	Count	
<b>Algorithm</b>	Each indicator is expressed as a rate, is defined as outcome of interest / population at risk or numerator / denominator. The AHRQ Quality Indicators (AHRQ QI) software performs five steps to produce the rates. 1) Discharge-level data is used to mark inpatient records containing the outcome of interest and 2) the population at risk. For provider indicators, the population at risk is also derived from hospital discharge records; for area indicators, the population at risk is derived from U.S. Census data. 3) Calculate observed rates. Using output from steps 1 and 2, rates are calculated for user-specified combinations of stratifiers. 4) Calculate expected rates. Regression coefficients from a reference population database are applied to the discharge records and aggregated to the provider or area level. 5) Calculate risk-adjusted rate. Use the indirect standardization to account for case-mix. 6) Calculate smoothed rate. A Univariate	The volume is the number of discharges with a procedure for pancreatic resection.	

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure 0365:</b> Pancreatic resection mortality rate (IQI 9)	<b>Maintenance Measure #0366:</b> Pancreatic resection volume (IQI 2)	<b>Endorsed Measure HOE-024-08:</b> Survival predictor for pancreatic resection surgery
	shrinkage factor is applied to the risk-adjusted rates. The shrinkage estimate reflects a reliability adjustment unique to each indicator. Full information on calculation algorithms and specifications can be found at <a href="http://qualityindicators.ahrq.gov/IQI_download.htm">http://qualityindicators.ahrq.gov/IQI_download.htm</a>		
<b>Data Source</b>	Electronic administrative data/claims	Electronic administrative data/claims	Electronic administrative data/claims
<b>Level of Measurement /Analysis</b>	Facility/agency	Facility/agency	Facility/agency; Health plan; Integrate delivery system; Population: National, regional/network, states, counties or cities
<b>Care Settings</b>	Hospital	Hospital	Hospital

## Prophylactic Antibiotics: Discontinued

	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
<b>Status</b>	Currently undergoing maintenance review	Endorsed 7/2008
<b>Steward</b>	Centers for Medicare & Medicaid Services	American Medical Association - Physician Consortium for Performance Improvement
<b>Description</b>	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.	Percentage of cardiac surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic antibiotics AND who received a prophylactic antibiotic, who have an order for discontinuation of prophylactic antibiotics within 48 hours of surgical end time.
<b>Type of Measure</b>	Process	Process
<b>Numerator</b>	Surgical patients whose prophylactic antibiotics were discontinued within 24 hours after surgery end time.	Cardiac surgical patients who have an order for discontinuation of prophylactic antibiotics within 48 hours of surgical end time.
<b>Numerator Details</b>	Data Elements: Anesthesia End Date Anesthesia End Time Antibiotic Administration Date Antibiotic Administration Time	CPT II 4043F: Documentation that an order was given to discontinue prophylactic antibiotics within 48 hours of surgical end time, cardiac procedure.  *Note: CPT Category II Code 4043F may be provided

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
		for documentation that antibiotic discontinuation was ordered OR that antibiotic discontinuation was accomplished. Report CPT Category II Code 4043F if antibiotics were discontinued within 48 hours.
<b>Denominator</b>	Number of surgical patients with: CABG (ICD-9-CM procedure codes 36.10-36.14, 36.19, 36.15-36.17, 36.2), other cardiac surgery (35.0-35.95, 35.98, 35.99), colon surgery (45.00, 45.03, 45.41, 45.49, 45.50, 45.7-45.90, 45.92-45.95, 46.03, 46.04, 46.1-46.14, 46.52, 46.75, 45.76, 46.91, 46.92, 46.94, 48.5, 48.6-48.69), hip arthroplasty (81.51, 81.52), knee arthroplasty (81.54), abdominal hysterectomy (68.3, 68.4, 68.6), vaginal hysterectomy (68.5-68.59, 68.7), or vascular surgery (38.34, 38.36, 38.37, 38.44, 38.48, 38.49, 38.51, 38.52, 38.64, 38.14, 38.16, 38.18, 39.25, 39.26, 39.29).	All cardiac surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic antibiotics AND who received a prophylactic antibiotic.
<b>Denominator Categories</b>	Female, Male; Patients aged 18 and older	
<b>Denominator Details</b>	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 Laparoscope Oral Antibiotics Other Surgeries Perioperative Death Reasons to Extend Antibiotics Surgical Incision Date Surgical Incision Time	CPT II 4046F: Documentation that prophylactic antibiotics were given within 4 hours prior to surgical incision or given intraoperatively; CPT II 4042F: Documentation that prophylactic antibiotics were neither given within 4 hours prior to surgical incision nor given intraoperatively  AND  CPT Procedure Codes: Cardiothoracic Surgery: 33120, 33130, 33140, 33141, 33202, 33250, 33251, 33256, 33261, 33305, 33315, 33321, 33322, 33332, 33335, 33400, 33401, 33403-33406, 33410, 33411, 33413, 33416, 33422, 33425-33427, 33430, 33460, 33463-33465, 33475, 33496, 33510-33519, 33521-33523, 33530, 33533-33536, 33542, 33545, 33548, 33572, 35021, 35211, 35216, 35241, 35246, 35271, 35276, 35311.
<b>Exclusions</b>	<ul style="list-style-type: none"> <li>• Principal or admission diagnosis suggestive of pre-operative infectious disease</li> <li>• Infectious diseases (001.0-139.8)</li> <li>• Meningitis (320.0-326)</li> <li>• Ear infection (380.0-380.23; 382.0-382.20)</li> <li>• Endocarditis (421.0-422.99)</li> <li>• Respiratory (460-466.19; 472-476.1; 480-487.1; 490-491.9; 510-511.9; 513-513.1)</li> <li>• Digestive (540-542; 575.0)</li> <li>• Renal (590-590.9; 595.0)</li> <li>• Prostate (601.0-601.9)</li> </ul>	Exclude patients for whom prophylactic antibiotics was not ordered by reason of appropriate denominator exclusion. If using electronic data, exclude patients using the following code: If using the medical record or hybrid methodologies, exclude patients who have documentation in the medical record of: medical reason(s) for not discontinuing prophylactic antibiotics within 48 hours of surgical end time, cardiac procedure. If using the EHR methodology, exclude patients using the codes listed in the electronic data collection



# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<ul style="list-style-type: none"> <li>•Gynecologic (614-614.9; 616-616.4)</li> <li>•Skin (680-686.9)</li> <li>•Musculo-skeletal (711.9; 711.99; 730.0-730.99)</li> <li>•Fever of unknown origin (780.6)</li> <li>•Septic shock (785.59)</li> <li>•Bacteremia (790.7)</li> <li>•Viremia (790.8)</li> <li>•Receiving antibiotics at the time of admission (except colon surgery patients taking oral prophylactic antibiotics);</li> <li>•Medical records do not include antibiotic start date/time, incision date/time, antibiotic end date/time, surgery end date/time;</li> <li>•Receiving antibiotics &gt; 24 hours prior to surgery (except colon surgery patients taking oral prophylactic antibiotics);</li> <li>•No antibiotics received before or during surgery, or within 24 hours after surgery end time (i.e., patient did not receive any prophylactic antibiotics);</li> <li>•Diagnosed with and treated for infections within two days after surgery date</li> <li>•No antibiotics received during hospitalization</li> </ul>	<p>methodology or who have documentation in the medical record of the appropriate denominator exclusion.</p>
<b>Exclusion Details</b>	<p>Clinical Trial Infection Prior to Anesthesia Laparoscope Other Surgeries Perioperative Death Reasons to Extend Antibiotics</p>	<p>Append a modifier (1P) to the CPT Category II Code to report patients with documented circumstances that meet the denominator exclusion criteria</p> <p>1P:Documentation of medical reason(s) for not discontinuing prophylactic antibiotics within 48 hours of surgical end time, cardiac procedure.</p>
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>	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.	
<b>Type Score</b>	Rate/proportion	
<b>Algorithm</b>	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.	

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>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 admission date and birthdate to yield the most accurate age.</p> <p>3. Check Patient Age</p> <p>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 for Centers for Medicare and Medicaid Services (CMS). Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b. If Patient Age is greater than or equal to 18 years, continue processing and proceed to ICD-9-CM Principal Procedure Code.</p> <p>4. Check ICD-9-CM Principal Procedure Code</p> <p>a. If the ICD-9-CM Principal Procedure Code is not on Table 5.01 or 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b. If the ICD-9-CM Principal Procedure Code is on Table 5.01 or 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and proceed to recheck ICD-9-CM Principal Diagnosis Code.</p> <p>5. Check ICD-9-CM Principal Diagnosis Code</p> <p>a. If the ICD-9-CM Principal Diagnosis Code is on Table 5.09, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b. If the ICD-9-CM Principal Diagnosis Code is not on Table 5.09, continue processing and proceed to Laparoscope.</p> <p>6. Check Laparoscope</p> <p>a. If Laparoscope is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b. If Laparoscope equals 1 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-</p>	

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	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>3a) for The Joint Commission.</p> <p>c.If Laparoscope equals 2, continue processing and proceed to Clinical Trial.</p> <p>7.Check Clinical Trial</p> <p>a.If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>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 for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If Clinical Trial equals No, continue processing and proceed to Anesthesia Start Date.</p> <p>8.Check Anesthesia Start Date</p> <p>a.If the Anesthesia Start Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the 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 for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If Anesthesia Start Date equals a Non Unable To Determine Value, continue processing and proceed to the Surgery Days calculation.</p> <p>9.Calculate Surgery Days. Surgery Days, in days, is equal to the Anesthesia Start Date minus the Admission Date.</p> <p>10.Check Surgery Days</p> <p>a.If the 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 for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the Surgery Days is greater than or equal to zero, continue processing and proceed to Infection Prior to Anesthesia.</p> <p>11.Check Infection Prior to Anesthesia</p> <p>a.If Infection Prior to Anesthesia is missing, the case will proceed to a Measure Category</p>	

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	<p>Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>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 for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If Infection Prior to Anesthesia equals No, continue processing and proceed to Perioperative Death.</p> <p>12.Check Perioperative Death</p> <p>a.If Perioperative Death is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If Perioperative Death equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If Perioperative Death equals No, continue processing and proceed to Surgical Incision Date.</p> <p>13.Check Surgical Incision Date</p> <p>a.If the Surgical Incision Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP- Inf-3a) for The Joint Commission.</p> <p>b.If the Surgical Incision 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 for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If Surgical Incision Date equals a Non Unable To Determine Value, continue processing and proceed to Other Surgeries.</p> <p>14.Check Other Surgeries</p> <p>a.If Other Surgeries is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The</p>	

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	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>Joint Commission.</p> <p>b.If Other Surgeries equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If Other Surgeries equals No, continue processing and proceed to Antibiotic Received.</p> <p>15.Check Antibiotic Received</p> <p>a.If Antibiotic Received equals 1 or 2, continue processing and proceed to recheck ICD-9-CM Principal Procedure Code</p> <p>b.If Antibiotic Received equals 4, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If Antibiotic Received equals 3, continue processing and proceed to step 19 and check Antibiotic Name. Do not check step 16 ICD-9-CM Principal Procedure Code, step 17 Oral Antibiotics or step 18 Antibiotic Received.</p> <p>16.Recheck ICD-9-CM Principal Procedure Code only if Antibiotic Received equals 1 or 2</p> <p>a.If the ICD-9-CM Principal Procedure Code is not on Table 5.03, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.03, continue processing and proceed to check Oral Antibiotics.</p> <p>17.Check Oral Antibiotics</p> <p>a.If Oral Antibiotics is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If Oral Antibiotics equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If Oral Antibiotics equals Yes, continue processing and proceed to recheck Antibiotic</p>	

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	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>Received.</p> <p>18.Recheck Antibiotic Received</p> <p>a.If Antibiotic Received equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If Antibiotic Received equals 2, continue processing and proceed to Antibiotic Name.</p> <p>19.Check Antibiotic Name</p> <p>a.If the Antibiotic Grid is not populated, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission. Note: The front-end edits reject cases containing invalid data and/or an incomplete Antibiotic Grid. A complete Antibiotic Grid requires all data elements in the row to contain either a valid value and/or Unable to Determine.</p> <p>b.If the Antibiotic Name is on Table 2.1, continue processing and recheck Antibiotic Name.</p> <p>20.Recheck Antibiotic Name</p> <p>a.If all of the Antibiotic Names are on Table 3.11, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If at least one of the Antibiotic Names is NOT on Table 3.11, continue processing and proceed to Antibiotic Administration Route. Exclude antibiotic doses on Table 3.11 from further processing.</p> <p>21.Check Antibiotic Administration Route</p> <p>a.If the Antibiotic Administration Route is equal to 3 or 10 for all antibiotic doses, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the Antibiotic Administration Route is equal to 1 or 2 for any antibiotic dose, continue processing and proceed to Antibiotic Administration Date. Proceed only with antibiotic doses on Table 2.1 that are administered via routes 1 or 2.</p> <p>22.Check Antibiotic Administration Date</p>	

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	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>a.If the Antibiotic Administration Date is equal to Unable to Determine for all antibiotic doses, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the Antibiotic Administration Date is equal to a Non Unable to Determine date for at least one antibiotic dose, continue processing and proceed to the Antibiotic Days I calculation. Note: Proceed only with antibiotic doses that have an associated Non Unable to Determine date.</p> <p>23.Calculate Antibiotic Days I. Antibiotic Days I, in days, is equal to the Surgical Incision Date minus the Antibiotic Administration Date.</p> <p>24.Check Antibiotic Days I</p> <p>a.If the Antibiotic Days I is greater than 1 for at least one antibiotic dose, continue processing and recheck the ICD-9-CM Principal Procedure Code. Do not recheck step 27 Antibiotic Days I, step 28 Surgical Incision Time, steps 29 and 30 Antibiotic Administration Time, or step 31 Antibiotic Timing I.</p> <p>b.If the Antibiotic Days I is less than or equal to 1 for all antibiotic doses, continue processing. Proceed to step 27 and recheck Antibiotics Days I. Do not recheck ICD-9-CM Principal Procedure Code or Oral Antibiotics.</p> <p>25.Recheck ICD-9-CM Principal Procedure Code only if Antibiotic Days I is greater than 1 for at least one antibiotic dose</p> <p>a.If the ICD-9-CM Principal Procedure Code is not on Table 5.03, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.03, continue processing and check Oral Antibiotics.</p> <p>26.Check Oral Antibiotics</p> <p>a.If Oral Antibiotics is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If Oral Antibiotics equals No, the case will proceed to a Measure Category Assignment of B</p>	

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	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If Oral Antibiotics equals Yes, continue processing and proceed to step 35 and check Anesthesia End Date. Do not recheck step 27 Antibiotic Days I, step 28 Surgical Incision Time, steps 29 and 30 Antibiotic Administration Time, or 31 Antibiotic Timing I.</p> <p>27.Recheck Antibiotic Days I only if Antibiotic Days I was less than or equal to 1 for all antibiotic doses</p> <p>a.If the Antibiotic Days I is less than or equal to zero for ALL antibiotic doses, continue processing. Proceed to step 35 and check Anesthesia End Date. Do not check step 28 Surgical Incision Time, step 29 and 30 Antibiotic Administration Time, or step 31 Antibiotic Timing I.</p> <p>b.If the Antibiotic Days I is equal to 1 for ANY antibiotic dose, continue processing and proceed to Surgical Incision Time.</p> <p>28.Check Surgical Incision Time</p> <p>a.If the Surgical Incision Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the Surgical Incision Time is equal to Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If the Surgical Incision Time is equal to a Non Unable to Determine Value, continue processing and check Antibiotic Administration Time.</p> <p>29.Check Antibiotic Administration Time</p> <p>a.If the Antibiotic Administration Time equals Unable to Determine for all antibiotic doses, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the Antibiotic Administration Time equals a Non Unable to Determine time for at least one antibiotic dose, continue processing and recheck</p>	



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	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>Antibiotic Administration Time.</p> <p>30.Recheck Antibiotic Administration Time</p> <p>a.If the Antibiotic Administration Time equals Unable to Determine for ANY antibiotic dose with Antibiotic Days I equal to 1, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the Antibiotic Administration Time equals a Non Unable to Determine time for ALL antibiotic doses with Antibiotic Days I equal to 1, continue processing and proceed to the Antibiotic Timing I calculation.</p> <p>31.Calculate Antibiotic Timing I. Antibiotic Timing I, in minutes, is equal to the Surgical Incision Date and Surgical Incision Time minus the Antibiotic Administration Date and Antibiotic Administration Time. Calculate Antibiotic Timing I for all antibiotic doses with non Unable to Determine date and time. Proceed with antibiotic doses that have Antibiotic Timing I calculated, or Antibiotic Days I less than or equal to zero.</p> <p>32.Check Antibiotic Timing I</p> <p>a.If the Antibiotic Timing I is greater than 1440 minutes for any antibiotic dose, continue processing and recheck the ICD-9-CM Principal Procedure Code. Proceed with antibiotic does that have Antibiotic Timing I calculated, or Antibiotic Days I less than or equal to zero.</p> <p>b.If the Antibiotic Timing I is less than or equal to 1440 minutes for all antibiotic doses with non Unable to Determine date and time, continue processing. Proceed to step 35 and check Anesthesia End Date. Do not recheck ICD-9-CM Principal Procedure Code or Oral Antibiotics.</p> <p>33.Recheck ICD-9-CM Principal Procedure Code only if the Antibiotic Timing I is greater than 1440 minutes for any antibiotic dose</p> <p>a.If the ICD-9-CM Principal Procedure Code is not on Table 5.03, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.03, continue processing and check Oral Antibiotics.</p> <p>34.Check Oral Antibiotics</p> <p>a.If Oral Antibiotics is missing, the case will</p>	

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	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If Oral Antibiotics equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If Oral Antibiotics equals Yes, continue processing and proceed to Anesthesia End Date.</p> <p>35.Check Anesthesia End Date</p> <p>a.If the Anesthesia End Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the Anesthesia End Date is equal to Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If the Anesthesia End Date is equal to a Non Unable to Determine value, continue processing and proceed to the Antibiotic Days II calculation.</p> <p>36.Calculate Antibiotic Days II. Antibiotic Days II, in days, is equal to the Antibiotic Administration Date minus the Anesthesia End Date.</p> <p>37.Set Exclusion Flag, for all cases, to equal No. If all of the antibiotic doses of a case satisfy one of the two following conditions, set Exclusion Flag (for this case) to equal 'Yes'. These conditions are:</p> <p>a.Antibiotic Days II is greater than 3 days regardless of table on which procedure code is on; OR</p> <p>b.Antibiotic Days II is greater than 2 days AND ICD-9-CM Principal Procedure Code is on Table 5.03, 5.04, 5.05, 5.06, 5.07, or 5.08.</p> <p>38.Check Exclusion Flag</p> <p>a.If the Exclusion Flag is equal to Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the Exclusion Flag is equal to No, continue processing and proceed to check Antibiotic Days</p>	

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	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>II. Remove any dose that satisfies one of the two following conditions. These conditions are:</p> <p>1. Antibiotic Days II is greater than 3 days regardless of procedure on which procedure code is on; OR</p> <p>2. Antibiotic Days II is greater than 2 days AND ICD-9-CM Principal Procedure Code is on Table 5.03, 5.04, 5.05, 5.06, 5.07 or 5.08.</p> <p>39. Check Antibiotic Days II</p> <p>a. If the Antibiotic Days II is less than or equal to zero for all antibiotic doses, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b. If the Antibiotic Days II is greater than zero for at least one antibiotic dose, continue processing and recheck ICD-9-CM Principal Procedure Code.</p> <p>40. Recheck ICD-9-CM Principal Procedure Code</p> <p>a. If the ICD-9-CM Principal Procedure Code is on Table 5.01 or 5.02, continue processing and recheck Antibiotic Days II.</p> <p>1. If the Antibiotic Days II is less than 2 days for antibiotic doses, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>2. If the Antibiotic Days II is greater than or equal to 2 days for at least one antibiotic dose, continue processing and proceed to Anesthesia End Time.</p> <p>b. If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and proceed to Anesthesia End Time.</p> <p>41. Check Anesthesia End Time</p> <p>a. If the Anesthesia End Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS.</p> <p>Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b. If the Anesthesia End Time is equal to Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p>	

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	<p>c.If the Anesthesia End Time is equal to a Non Unable to Determine Value, continue processing and recheck Antibiotic Administration Time.</p> <p>42.Recheck Antibiotic Administration Time</p> <p>a.If the Antibiotic Administration Time equals Unable to Determine for all antibiotic doses, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the Antibiotic Administration Time equals a Non Unable to Determine time for at least one antibiotic dose, continue processing and proceed to the Antibiotic Timing II calculation. Remove from consideration any antibiotic doses for which Antibiotic Administration Time equals Unable to Determine.</p> <p>43.Calculate Antibiotic Timing II. Antibiotic Timing II, in minutes, is equal to the Antibiotic Administration Date and Antibiotic Administration Time minus Anesthesia End Date and Anesthesia End Time.</p> <p>44.Set Exclusion Flag. Set Exclusion Flag, for all cases, to equal 'No'. If all of the antibiotic doses of a case satisfy one of the two following conditions, set Exclusion Flag (for this case) to equal 'Yes'. These conditions are:</p> <p>a.Antibiotic Timing is greater than 4320 minutes; OR</p> <p>b.Antibiotic Timing II is greater than 2880 minutes AND ICD-9-CM Principal Procedure Code is on Table 5.03, 5.04, 5.05, 5.06, 5.07, or 5.08.</p> <p>45.Check Exclusion Flag</p> <p>a.If the Exclusion Flag equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 47 and check the Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the Exclusion Flag equals No, continue processing and recheck ICD-9-CM Principal Procedure Code and Antibiotic Timing II. Remove any dose that satisfies one of the two following conditions. These conditions are:</p> <p>1.Antibiotic Timing II is greater than 4320 minutes; OR Principal Procedure Code is on Table 5.03, 5.04, 5.05, 5.06, 5.07, or 5.08.</p> <p>46.Recheck ICD-9-CM Principal Procedure Code and Antibiotic Timing II</p>	

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	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.01 or 5.02 and Antibiotic Timing II is less than or equal to 2880 minutes for all antibiotic doses, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.01 or 5.02 and Antibiotic Timing II is greater than 2880 minutes for at least one antibiotic dose, continue processing and proceed to check Reasons To Extend Antibiotics.</p> <p>1.If Reasons To Extend Antibiotics is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>2.If Reasons To Extend Antibiotics equals 7, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>3.If Any Reasons To Extend Antibiotics equals 1, 2, 3, 4, 5, 6 and None equals 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>c.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08 and Antibiotic Timing II is less than or equal to 1440 minutes for all antibiotic doses, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>d.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08 and Antibiotic Timing II is greater than 1440 minutes for at least one antibiotic dose, continue processing and proceed to check Reasons To Extend Antibiotics.</p> <p>1.If Reasons To Extend Antibiotics is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-3a) for The</p>	

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	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>Joint Commission.</p> <p>2.If Reasons To Extend Antibiotics equals 7, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>3.If Any Reasons To Extend Antibiotics equals 1, 2, 3, 4, 5, 6 and None equals 7, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-3a) for The Joint Commission.</p> <p>47.For The Joint Commission Only, continue processing for the Stratified Measures. Note: Initialize the Measure Category Assignment for each strata measure (b-g) to equal B, not in the Measure Population. Do not change the Measure Category Assignment that was already calculated for the overall rate (SCIP-Inf-3a). The rest of the algorithm will reset the appropriate Measure Category Assignment to be equal to the overall rate's (SCIP-Inf-3a) Measure Category Assignment.</p> <p>48.Check Overall Rate Category Assignment</p> <p>a.If the Overall Rate Category Assignment is equal to B or X, set the Measure Category Assignment for the strata measures (SCIP-Inf-3b through SCIP-Inf-3h) to equal B, not in the Measure Population. Stop processing.</p> <p>b.If the Overall Rate Category Assignment is equal to D or E, continue processing and check the ICD-9-CM Principal Procedure Code.</p> <p>49.Check ICD-9-CM Principal Procedure Code</p> <p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.01, for Stratified Measure SCIP-Inf-3b, set the Measure Category Assignment for measure SCIP-Inf-3b to equal the Measure Category Assignment for measure SCIP-Inf-3a. Stop processing.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and recheck the ICD-9-CM Principal Procedure Code.</p> <p>50.Recheck ICD-9-CM Principal Procedure Code</p> <p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.02, for Stratified Measure SCIP-Inf-3c, set the Measure Category Assignment for measure SCIP-Inf-3c to equal the Measure Category Assignment for measure SCIP-Inf-3a. Stop processing.</p>	

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
	<p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and recheck the ICD-9-CM Principal Procedure Code.</p> <p>51.Recheck ICD-9-CM Principal Procedure Code</p> <p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.04, for Stratified Measure SCIP-Inf-3d, set the Measure Category Assignment for measure SCIP-Inf-3d to equal the Measure Category Assignment for measure SCIP-Inf-3a. Stop processing.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and recheck the ICD-9-CM Principal Procedure Code.</p> <p>52.Recheck ICD-9-CM Principal Procedure Code</p> <p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.05, for Stratified Measure SCIP-Inf-3e, set the Measure Category Assignment for measure SCIP-Inf-3e to equal the Measure Category Assignment for measure SCIP-Inf-3a. Stop processing.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.06 or 5.07 or 5.08, continue processing and recheck the ICD-9-CM Principal Procedure Code.</p> <p>53.Recheck ICD-9-CM Principal Procedure Code</p> <p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.03, for Stratified Measure SCIP-Inf-3f, set the Measure Category Assignment for measure SCIP-Inf-3f to equal the Measure Category Assignment for measure SCIP-Inf-3a. Stop processing.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.06 or 5.07 or 5.08, continue processing and recheck the ICD-9-CM Principal Procedure Code.</p> <p>54.Recheck ICD-9-CM Principal Procedure Code</p> <p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.06 or 5.07, for Stratified Measure SCIP-Inf-3g, set the Measure Category Assignment for measure SCIP-Inf-3g to equal the Measure Category Assignment for measure SCIP-Inf-3a. Stop processing.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.08, for Stratified Measure SCIP-Inf-3h, set the Measure Category Assignment for measure SCIP-Inf-3h to equal the Measure Category Assignment for measure SCIP-Inf-3a. Stop processing.</p>	
<b>Data Source</b>	Electronic administrative data/claims, paper medical record/flow-sheet	Electronic administrative data/claims, electronic health/medical record, paper medical record/flow-sheet

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0529:</b> Prophylactic antibiotics discontinued within 24 hours after surgery end time	<b>Endorsed Measure #0637:</b> Discontinuation of prophylactic antibiotics (cardiac procedures)
<b>Level of Measurement /Analysis</b>	Facility/agency	Clinicians: Individual, group
<b>Care Settings</b>	Hospital	Hospital, Ambulatory care: Ambulatory surgery center

## Prophylactic Antibiotics: Duration

	<b>Maintenance Measure #0128:</b> Duration of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0271:</b> Discontinuation of prophylactic antibiotics (non-cardiac procedures)
<b>Status</b>	Currently undergoing maintenance review	Endorsed 7/2008
<b>Steward</b>	Society of Thoracic Surgeons	American Medical Association-Physician Consortium for Performance Improvement
<b>Description</b>	Percent of patients aged 18 years and older undergoing cardiac surgery whose prophylactic antibiotics were discontinued within 48 hours after surgery end time.	Percentage of non-cardiac surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic antibiotics AND who received a prophylactic antibiotic, who have an order for discontinuation of prophylactic antibiotics within 24 hours of surgical end time.
<b>Type of Measure</b>	Process	Process
<b>Numerator</b>	Number of cardiac surgery patients whose prophylactic antibiotics were discontinued within 48 hours after surgery end time.  Time window: Within 48 hours after surgery end time.	Non-cardiac surgical patients who have an order for discontinuation of prophylactic antibiotics within 24 hours of surgical end time. Numerator Instructions: There must be documentation of order (written order, verbal order, or standing order/protocol) specifying that prophylactic antibiotic is to be discontinued within 24 hours of surgical end time OR specifying a course of antibiotic administration limited to that 24-hour period (e.g., "to be given every 8 hours for three doses") OR documentation that prophylactic antibiotic was discontinued within 24 hours of surgical end time.  Time window: Within 24 hours of surgical end time.
<b>Numerator Details</b>	Number of cardiac surgery procedures in which appropriate antibiotic discontinuation [AbxDisc (STS Adult Cardiac Surgery Database Version 2.73)] is marked "yes"	CPT II 4049F: Documentation that order was given to discontinue prophylactic antibiotics within 24 hours of surgical end time, non-cardiac procedure.  Note: CPT Category II Code 4049F is provided for documentation that antibiotic discontinuation was ordered OR that antibiotic discontinuation was accomplished. Report CPT Category II Code



# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0128:</b> Duration of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0271:</b> Discontinuation of prophylactic antibiotics (non-cardiac procedures)
		4049F if antibiotics were discontinued within 24 hours
<b>Denominator</b>	Number of patients undergoing cardiac surgery.	All non-cardiac surgical patients undergoing procedures with the indications for prophylactic antibiotics and who received a prophylactic antibiotic.
<b>Denominator Categories</b>	Female, Male; 18 yrs and older	
<b>Denominator Details</b>	<p>Number of cardiac surgery procedures;</p> <p>A cardiac procedure is determined as a procedure for which at least one of the following is not marked “no” or “missing” (note: full terms for STS field names are provided in brackets []): OpCAB[Coronary Artery Bypass], OpValve[Valve Surgery], VADProc [VAD Implanted or Removed], VSAV [Aortic Valve Procedure], VSMV [Mitral Valve Procedure], OpTricus [Tricuspid Valve Procedure Performed], OpPulm[Pulmonic Valve Procedure Performed], OpOCard [Other Cardiac Procedure other than CABG or Valve], OCarLVA [Left Ventricular Aneurysm Repair], OCarVSD [Ventricular Septal Defect Repair], OCarSVR [Surgical Ventricular Restoration], OCarCong [Congenital Defect Repair], OCarTrma [surgical procedure for an injury due to Cardiac Trauma], OCarCrTx [Cardiac Transplant], OCarACD [Arrhythmia Correction Surgery], OCAoProcType[Aortic Procedure Type], EndoProc [Endovascular Procedure (TEVAR)], OCTumor [resection of an intracardiac tumor], OCPulThromDis [Pulmonary Thromboembolism], OCarOthr [Other Cardiac Procedure other than those listed previously], ECMO [Extracorporeal Membrane Oxygenation], OCarLasr [-Transmyocardial Laser Revascularization], OCarASD [Atrial Septal Defect Repair], OCarAFibSur [Atrial Fibrillation Surgical Procedure]</p>	<p>CPT II 4046F: Documentation that prophylactic antibiotics were given within 4 hours prior to surgical incision or given intraoperatively; CPT II 4042F: Documentation that prophylactic antibiotics were neither given within 4 hours prior to surgical incision nor given intraoperatively</p> <p>AND</p> <ul style="list-style-type: none"> <li>• CPT Procedure Codes:</li> </ul> <p>Integumentary: 15734, 15738, 19260, 19271, 19272, 19301-19307, 19361, 19364, 19366-19369          Spine: 22325, 22612, 22630, 22800, 22802, 22804, 63030, 63042          Hip Reconstruction: 27125, 27130, 27132, 27134, 27137, 27138          Trauma (Fractures): 27235, 27236, 27244, 27245, 27758, 27759, 27766, 27792, 27814          Knee Reconstruction: 27440-27443, 27445-27447          Vascular: 33877, 33880, 33881, 33883, 33886, 33891, 34800, 34802-34805, 34825, 34830-34832, 34900, 35081, 35091, 35102, 35131, 35141, 35151, 35601, 35606, 35612, 35616, 35621, 35623, 35626, 35631, 35636-35638, 35642, 35645-35647, 35650, 35651, 35654, 35656, 35661, 35663, 35665, 35666, 35671, 36830          Spleen and Lymph Nodes: 38115          Esophagus: 43045, 43100, 43101, 43107, 43108, 43112, 43113, 43116-43118, 43121-43124, 43130, 43135, 43300, 43305, 43310, 43312, 43313, 43320, 43324-43326, 43330, 43331, 43340, 43341, 43350, 43351, 43352, 43360, 43361, 43400, 43401, 43405, 43410, 43415, 43420, 43425, 43496          Stomach: 43500-43502, 43510, 43520, 43600, 43605, 43610, 43611, 43620-43622, 43631-43634, 43640, 43641, 43653, 43800, 43810, 43820, 43825, 43830-43832, 43840, 43842, 43843, 43845-43848, 43850, 43855, 43860, 43865, 43870          Small Intestine: 44005, 44010, 44020, 44021, 44050, 44055, 44100, 44120, 44125-44127, 44130, 44132, 44133, 44135, 44136          Biliary Surgery: 47420, 47425, 47460, 47480, 47560, 47561, 47570, 47600, 47605, 47610, 47612, 47620, 47700, 47701, 47711, 47712, 47715, 47719-47721, 47740, 47741, 47760, 47765, 47780, 47785, 47800,</p>

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0128:</b> Duration of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0271:</b> Discontinuation of prophylactic antibiotics (non-cardiac procedures)
		<p>47802, 47900</p> <p>Pancreas: 48020, 48100, 48120, 48140, 48145, 48146, 48148, 48150, 48152-48155, 48160, 48500, 48510, 48511, 48520, 48540, 48545, 48547, 48548, 48550, 48554, 48556</p> <p>Abdomen, Peritoneum, and Omentum: 49215, 49568</p> <p>Renal Transplant: 50300, 50320, 50340, 50360, 50365, 50370, 50380</p> <p>Neurological Surgery: 22524, 22554, 22558, 22600, 22612, 22630, 35301, 61154, 61312, 61313, 61315, 61510, 61512, 61518, 61548, 61697, 61700, 61750, 61751, 61867, 62223, 62230, 63015, 63020, 63030, 63042, 63045, 63047, 63056, 63075, 63081, 63267, 63276</p> <p>Cardiothoracic Surgery: 33120, 33130, 33140, 33141, 33202, 33250, 33251, 33256, 33261, 33305, 33315, 33321, 33322, 33332, 33335, 33400, 33401, 33403-33406, 33410, 33411, 33413, 33416, 33422, 33425-33427, 33430, 33460, 33463-33465, 33475, 33496, 33510-33519, 33521-33523, 33530, 33533-33536, 33542, 33545, 33548, 33572, 35211, 35241, 35271</p> <p>General Thoracic Surgery: 19272, 21627, 21632, 21740, 21750, 21805, 21825, 31760, 31766, 31770, 31775, 31786, 31805, 32095, 32100, 32110, 32120, 32124, 32140, 32141, 32150, 32215, 32220, 32225, 32310, 32320, 32402, 32440, 32442, 32445, 32480, 32482, 32484, 32486, 32488, 32491, 32500, 32501, 32800, 32810, 32815, 32900, 32905, 32906, 32940, 33020, 33025, 33030, 33031, 33050, 33300, 33310, 33320, 34051, 35021, 35216, 35246, 35276, 35311, 35481, 35526, 37616, 38381, 38746, 38747, 39000, 39010, 39200, 39220, 39545, 39561, 60521, 60522, 64746</p> <p>Foot &amp; Ankle: 27702, 27703, 27704, 27870, 28192, 28193, 28293, 28296, 28299, 28300, 28306, 28307, 28308, 28309, 28310, 28320, 28322, 28415, 28420, 28445, 28465, 28485, 28505, 28525, 28531, 28555, 28585, 28615, 28645, 28675, 28705, 28715, 28725, 28730, 28735, 28737, 28740, 28750, 28755, 28760</p>
<b>Exclusions</b>	<p>Exclusions:</p> <ul style="list-style-type: none"> <li>- Patients who had a principal diagnosis suggestive of preoperative infectious diseases</li> <li>- Patients whose ICD-9-CM principal procedure was performed entirely by Laparoscope</li> <li>- Patients enrolled in clinical trials</li> <li>- Patients with documented infection prior to surgical procedure of interest</li> <li>- Patients who expired perioperatively</li> <li>- Patients who were receiving antibiotics more than 24 hours prior to surgery</li> </ul>	<p>Documentation of medical reason(s) for not discontinuing prophylactic antibiotics within 24 hours of surgical end time.</p>

## NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0128:</b> Duration of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0271:</b> Discontinuation of prophylactic antibiotics (non-cardiac procedures)
	<ul style="list-style-type: none"> <li>- Patients who were receiving antibiotics within 24 hours prior to arrival</li> <li>- Patients who did not receive any antibiotics during this hospitalization</li> <li>- Patients with reasons to extend antibiotics</li> </ul> This list will be provided in the STS Adult Cardiac Surgery Database Data Manager's Training Manual as acceptable exclusions.	
<b>Exclusion Details</b>	AbxDisc is marked "Exclusion"	Append modifier to CPT Category II code: 4046F-1P
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>		
<b>Type Score</b>	Rate/proportion	
<b>Algorithm</b>		
<b>Data Source</b>	Registry data	Electronic administrative data/claims, lab data, paper medical record/flow-sheet
<b>Level of Measurement /Analysis</b>	Clinicians: Group; Facility/agency; Population: National, regional/network, states, counties or cities	Clinicians: Individual, group
<b>Care Settings</b>	Hospital	Hospital, Ambulatory care: Ambulatory surgery center

# NATIONAL QUALITY FORUM

## Prophylactic Antibiotics: Selection

	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
<b>Status</b>	Currently undergoing maintenance review	Endorsed 7/2008	Currently undergoing maintenance review	Endorsed 10/2008
<b>Steward</b>	Society of Thoracic Surgeons	American Medical Association-Physician Consortium for Performance Improvement	Centers for Medicare & Medicaid Services	Hospital Corporation of America
<b>Description</b>	Percent of patients aged 18 years and older undergoing cardiac surgery who received preoperative prophylactic antibiotics recommended for the operation.	Percentage of surgical patients aged 18 years and older undergoing procedures with the indications for a first OR second generation cephalosporin prophylactic antibiotic, who had an order for cefazolin OR cefuroxime for antimicrobial prophylaxis.	Surgical patients who received prophylactic antibiotics consistent with current guidelines (specific to each type of surgical procedure).	Measure adherence to current ACOG, ACCP recommendations for use of DVT prophylaxis in women undergoing cesarean delivery.
<b>Type of Measure</b>	Process	Process	Process	Process
<b>Numerator</b>	Cardiac surgery patients who received a first generation or second generation cephalosporin prophylactic antibiotic (e.g., cefazolin, cefuroxime, cefamandole) preoperatively or in the event of a documented allergy, an alternate antibiotic choice (e.g., vancomycin, clindamycin) was ordered and administered preoperatively.	Surgical patients who had an order for cefazolin OR cefuroxime for antimicrobial prophylaxis. Numerator Instructions: There must be documentation of order (written order, verbal order, or standing order/protocol) for cefazolin or cefuroxime for antimicrobial prophylaxis OR documentation that cefazolin or cefuroxime was given. Report one of the following CPT Category II codes: • CPT II 4041F: Documentation of order for	Surgical patients who received recommended prophylactic antibiotics for specific surgical procedures.	Number of women undergoing cesarean delivery who receive either fractionated or unfractionated heparin or pneumatic compression devices prior to surgery.

## NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
		cefazolin OR cefuroxime for antimicrobial prophylaxis. Note: CPT Category II Code 4041F is provided for antibiotic ordered or antibiotic given. Report CPT Category II Code 4041F if cefazolin OR cefuroxime was given for antimicrobial prophylaxis.		
<b>Numerator Details</b>	Number of cardiac surgery procedures in which appropriate antibiotic selection [AbxSelect (STS Adult Cardiac Surgery Database Version 2.73)] is marked “yes”		Data Elements: Antibiotic Administration Route Antibiotic Allergy Antibiotic Name Oral Antibiotics Vancomycin	
<b>Denominator</b>	Number of patients undergoing cardiac surgery.  Time window: 12 months	All surgical patients aged 18 years and older undergoing procedures with the indications for a first or second generation cephalosporin prophylactic antibiotic.	Number of surgical patients with: CABG (ICD-9-CM procedure codes 36.10-36.14, 36.19, 36.15-36.17, 36.2), other cardiac surgery (35.0-35.95, 35.98, 35.99), colon surgery (45.00, 45.03, 45.41, 45.49, 45.50, 45.7-45.90, 45.92-45.95, 46.03, 46.04, 46.1-46.14, 46.52, 46.75, 45.76, 46.91, 46.92, 46.94, 48.5, 48.6-48.69), hip arthroplasty (81.51, 81.52), knee arthroplasty (81.54), abdominal hysterectomy (68.3, 68.4, 68.6), vaginal hysterectomy (68.5-68.59, 68.7), or vascular surgery (38.34 38.36, 38.37, 38.44, 38.48, 38.49, 38.51, 38.52. 38.64, 38.14, 38.16, 38.18, 39.25, 39.26, 39.29).	All women undergoing cesarean delivery.
<b>Denominator Categories</b>	Female, Male; 18 and older		Female, Male; Patients aged 18 or older	
<b>Denominator Details</b>	Number of cardiac surgery procedures;  A cardiac procedure is determined as a procedure for	Report one of the following CPT Category II codes: • CPT II 4041F: Documentation of order for cefazolin OR cefuroxime for	Data Elements: Anesthesia End Date Anesthesia End Time Anesthesia Start Date Admission Date	

## NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
	<p>which at least one of the following is not marked “no” or “missing” (note: full terms for STS field names are provided in brackets []): OpCAB[Coronary Artery Bypass], OpValve[Valve Surgery], VADProc [VAD Implanted or Removed], VSAV [Aortic Valve Procedure], VSMV [Mitral Valve Procedure], OpTricus [Tricuspid Valve Procedure Performed], OpPulm[Pulmonic Valve Procedure Performed], OpOCard [Other Cardiac Procedure other than CABG or Valve], OCarLVA [Left Ventricular Aneurysm Repair], OCarVSD [Ventricular Septal Defect Repair], OCarSVR [Surgical Ventricular Restoration], OCarCong [Congenital Defect Repair], OCarTrma [surgical procedure for an injury due to Cardiac Trauma], OCarCrTx [Cardiac Transplant], OCarACD [Arrhythmia Correction Surgery], OCAoProcType[Aortic Procedure Type], EndoProc [Endovascular Procedure (TEVAR)], OCTumor [resection of an intracardiac tumor], OCPulThromDis [Pulmonary</p>	<p>antimicrobial prophylaxis.</p> <p>Note: CPT Category II Code 4041F is provided for antibiotic ordered or antibiotic given. Report CPT Category II Code 4041F if cefazolin OR cefuroxime was given for antimicrobial prophylaxis.</p> <p>Denominator (Eligible Population): All surgical patients aged 18 years and older undergoing procedures with the indications for a first or second generation cephalosporin prophylactic antibiotic</p> <p>• CPT Procedure Codes: Integumentary: 15734, 15738, 19260, 19271, 19272, 19301-19307, 19361, 19364, 19366-19369 Spine: 22325, 22612, 22630, 22800, 22802, 22804, 63030, 63042 Hip Reconstruction: 27125, 27130, 27132, 27134, 27137, 27138 Trauma (Fractures): 27235, 27236, 27244, 27245, 27758, 27759, 27766, 27792, 27814 Knee Reconstruction: 27440-27443, 27445-27447</p>	<p>Antibiotic Administration Date Antibiotic Administration Time Antibiotic Received Birthdate Clinical Trial Discharge Date ICD-9-CM Principal Diagnosis Code ICD-9-CM Principal Procedure Code Infection Prior to Anesthesia Laparoscope Perioperative Death Surgical Incision Date Surgical Incision Time</p>	

## NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
	Thromboembolectomy,, OCarOthr [Other Cardiac Procedure other than those listed previously], ECMO [Extracorporeal Membrane Oxygenation], OCarLasr [-Transmyocardial Laser Revascularization], OCarASD [Atrial Septal Defect Repair], OCarAFibSur [Atrial Fibrillation Surgical Procedure]	Vascular: 33877, 33880, 33881, 33883, 33886, 33891, 34800, 34802-34805, 34825, 34830-34832, 34900, 35081, 35091, 35102, 35131, 35141, 35151, 35601, 35606, 35612, 35616, 35621, 35623, 35626, 35631, 35636-35638, 35642, 35645-35647, 35650, 35651, 35654, 35656, 35661, 35663, 35665, 35666, 35671, 36830 Spleen and Lymph Nodes: 38115 Esophagus: 43045, 43100, 43101, 43107, 43108, 43112, 43113, 43116-43118, 43121-43124, 43130, 43135, 43300, 43305, 43310, 43312, 43313, 43320, 43324-43326, 43330, 43331, 43340, 43341, 43350, 43351, 43352, 43360, 43361, 43400, 43401, 43405, 43410, 43415, 43420, 43425, 43496 Stomach: 43500-43502, 43510, 43520, 43600, 43605, 43610, 43611, 43620-43622, 43631-43634, 43640, 43641, 43653, 43800, 43810, 43820, 43825, 43830-43832, 43840, 43842, 43843, 43845-43848, 43850, 43855, 43860, 43865, 43870 Small Intestine: 44005, 44010, 44020, 44021, 44050, 44055, 44100, 44120, 44125-44127, 44130, 44132, 44133, 44135, 44136		

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
		Biliary Surgery: 47420, 47425, 47460, 47480, 47560, 47561, 47570, 47600, 47605, 47610, 47612, 47620, 47700, 47701, 47711, 47712, 47715, 47719-47721, 47740, 47741, 47760, 47765, 47780, 47785, 47800, 47802, 47900 Pancreas: 48020, 48100, 48120, 48140, 48145, 48146, 48148, 48150, 48152-48155, 48160, 48500, 48510, 48511, 48520, 48540, 48545, 48547, 48548, 48550, 48554, 48556 Abdomen, Peritoneum, and Omentum: 49215, 49568 Renal Transplant: 50300, 50320, 50340, 50360, 50365, 50370, 50380 Neurological Surgery: 22524, 22554, 22558, 22600, 22612, 22630, 35301, 61154, 61312, 61313, 61315, 61510, 61512, 61518, 61548, 61697, 61700, 61750, 61751, 61867, 62223, 62230, 63015, 63020, 63030, 63042, 63045, 63047, 63056, 63075, 63081, 63267, 63276 Cardiothoracic Surgery: 33120, 33130, 33140, 33141, 33202, 33250, 33251, 33256, 33261, 33305, 33315, 33321, 33322, 33332, 33335, 33400, 33401, 33403-33406, 33410, 33411, 33413, 33416, 33422, 33425-33427, 33430, 33460,		



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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
		33463-33465, 33475, 33496, 33510-33519, 33521-33523, 33530, 33533-33536, 33542, 33545, 33548, 33572, 35211, 35241, 35271 General Thoracic Surgery: 19272, 21627, 21632, 21740, 21750, 21805, 21825, 31760, 31766, 31770, 31775, 31786, 31805, 32095, 32100, 32110, 32120, 32124, 32140, 32141, 32150, 32215, 32220, 32225, 32310, 32320, 32402, 32440, 32442, 32445, 32480, 32482, 32484, 32486, 32488, 32491, 32500, 32501, 32800, 32810, 32815, 32900, 32905, 32906, 32940, 33020, 33025, 33030, 33031, 33050, 33300, 33310, 33320, 34051, 35021, 35216, 35246, 35276, 35311, 35481, 35526, 37616, 38381, 38746, 38747, 39000, 39010, 39200, 39220, 39545, 39561, 60521, 60522, 64746 Foot & Ankle: 27702, 27703, 27704, 27870, 28192, 28193, 28293, 28296, 28299, 28300, 28306, 28307, 28308, 28309, 28310, 28320, 28322, 28415, 28420, 28445, 28465, 28485, 28505, 28525, 28531, 28555, 28585, 28615, 28645, 28675, 28705, 28715, 28725, 28730, 28735, 28737, 28740, 28750, 28755, 28760		

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
<b>Exclusions</b>	<p>Exclusions include:</p> <ul style="list-style-type: none"> <li>- Patients who had a principal diagnosis suggestive of preoperative infectious diseases</li> <li>- Patients whose ICD-9-CM principal procedure was performed entirely by Laparoscope</li> <li>- Patients enrolled in clinical trials</li> <li>- Patients with documented infection prior to surgical procedure of interest</li> <li>- Patients who expired perioperatively</li> <li>- Patients who were receiving antibiotics more than 24 hours prior to surgery</li> <li>- Patients who were receiving antibiotics within 24 hours prior to arrival</li> <li>- Patients who did not receive any antibiotics before or during surgery, or within 24 hours after anesthesia end time (i.e., patient did not receive prophylactic antibiotics)</li> <li>- Patients who did not receive any antibiotics during this hospitalization</li> </ul> <p>This list will be provided in the STS Adult Cardiac Surgery Database Data Manager's Training Manual as acceptable exclusions.</p>	<p>Documentation of medical reason(s) for not ordering cefazolin OR cefuroxime for antimicrobial prophylaxis.</p>	<ul style="list-style-type: none"> <li>• pre-operative infectious disease</li> <li>• Infectious diseases (001.0-139.8)</li> <li>• Meningitis (320.0-326)</li> <li>• Ear infection (380.0-380.23; 382.0-382.20)</li> <li>• Endocarditis (421.0-422.99)</li> <li>• Respiratory (460-466.19; 472-476.1; 480-487.1; 490-491.9; 510-511.9; 513-413.1)</li> <li>• Digestive (540-542; 575.0)</li> <li>• Renal (590-590.9; 595.0)</li> <li>• Prostate (601.0-601.9)</li> <li>• Gynecologic (614-614.9; 616-616.4)</li> <li>• Skin (680-686.9)</li> <li>• Musculo-skeletal (711.9-711.99, 730.0-730.99)</li> <li>• Fever of unknown origin (780.6)</li> <li>• Septic shock (785.59)</li> <li>• Bacteremia (790.7)</li> <li>• Viremia (790.8)</li> <li>• Receiving antibiotics at the time of admission (except colon surgery patients taking oral prophylactic antibiotics)</li> <li>• Medical records do not include antibiotic start date/time or incision date/time, or surgery end date/time</li> <li>• Receiving antibiotics &gt; 24 hours prior to surgery (except colon surgery patients taking oral prophylactic antibiotics)</li> <li>• No antibiotics received before or during surgery, or within 24 hours after surgery end time (i.e., patient did not receive any prophylactic antibiotics)</li> </ul>	<p>N/A</p>

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
	AbxSelect is marked "Exclusion"			
<b>Exclusion Details</b>		Append modifier to CPT Category II code: 4041F-1P	Data Elements: Birthdate Clinical Trial ICD-9-CM Principal Diagnosis Code Infection Prior to Anesthesia Laparoscope Perioperative Death	
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>	N/A		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-2 are 5.01 to 5.08.	
<b>Type Score</b>	Rate/proportion		Rate/proportion	
<b>Algorithm</b>	N/A		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 admission date and birthdate to yield the most accurate age. 3.Check Patient Age a.If Patient Age is less than 18 years, the case	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			<p>will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for Centers for Medicare and Medicaid Services (CMS). Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.</p> <p>b.If Patient Age is greater than or equal to 18 years, continue processing and proceed to ICD-9-CM Principal Procedure Code.</p> <p>4.Check ICD-9-CM Principal Procedure Code</p> <p>a.If the ICD-9-CM Principal Procedure Code is not on Table 5.01 or 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Table 5.01 or 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and proceed to recheck ICD-9-CM Principal Diagnosis Code.</p> <p>5.Check ICD-9-CM Principal Diagnosis Code</p> <p>a.If the ICD-9-CM Principal Diagnosis Code is on Table 5.09, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.</p> <p>b.If the ICD-9-CM Principal Diagnosis Code is not on Table 5.09, continue processing and proceed to Laparoscope.</p>	

## NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			6. Check Laparoscope a. If Laparoscope is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b. If Laparoscope equals 1 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c. If Laparoscope equals 2, continue processing and proceed to Clinical Trial. 7. 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 for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. 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 for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c. If Clinical Trial equals No, continue processing and proceed to Anesthesia Start Date. 8. Check Anesthesia Start Date a. If the Anesthesia Start Date is missing, the case will proceed to a Measure Category	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the 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 for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c.If Anesthesia Start Date equals a Non Unable To Determine Value, continue processing and proceed to the Surgery Days calculation. 9.Calculate Surgery Days. Surgery Days, in days, is equal to the Anesthesia Start Date minus the Admission Date. 10.Check Surgery Days a.If the 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 for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the Surgery Days is greater than or equal to zero, continue processing and proceed to Infection Prior to Anesthesia. 11.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 for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.	

## NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			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 for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c.If Infection Prior to Anesthesia equals No, continue processing and proceed to Perioperative Death. 12.Check Perioperative Death a.If Perioperative Death is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If Perioperative Death equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c.If Perioperative Death equals No, continue processing and proceed to Surgical Incision Date. 13.Check Surgical Incision Date a.If the Surgical Incision Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP- Inf-2a) for The Joint Commission. b.If the Surgical Incision Date equals Unable	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			<p>To Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.</p> <p>c.If Surgical Incision Date equals a Non Unable To Determine Value, continue processing and proceed to Antibiotic Received.</p> <p>14.Check Antibiotic Received</p> <p>a.If Antibiotic Received equals 1 or 2, continue processing and proceed to recheck ICD-9-CM Principal Procedure Code</p> <p>b.If Antibiotic Received equals 4, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.</p> <p>c.If Antibiotic Received equals 3, continue processing and proceed to step 18 and check Antibiotic Name. Do not check ICD-9-CM Principal Procedure Code, Oral Antibiotics or Antibiotic Received.</p> <p>15.Recheck ICD-9-CM Principal Procedure Code only if Antibiotic Received equals 1 or 2</p> <p>a.If the ICD-9-CM Principal Procedure Code is not on Table 5.03, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.</p>	



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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			b.If the ICD-9-CM Principal Procedure Code is on Table 5.03, continue processing and proceed to check Oral Antibiotics. 16.Check Oral Antibiotics a.If Oral Antibiotics is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If Oral Antibiotics equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c.If Oral Antibiotics equals Yes, continue processing and proceed to recheck Antibiotic Received. 17.Recheck Antibiotic Received a.If Antibiotic Received equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If Antibiotic Received equals 2, continue processing and proceed to Antibiotic Name. 18.Check Antibiotic Name a.If the Antibiotic Grid is not populated, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Rate (SCIP-Inf-2a) for The Joint Commission. Note: The front-end edits reject cases containing invalid data and/or an incomplete Antibiotic Grid. A complete Antibiotic Grid requires all data elements in the row to contain either a valid value and/or Unable to Determine. b.If the Antibiotic Name is on Table 2.1, continue processing and proceed to Antibiotic Administration Route. 19.Check Antibiotic Administration Route a.If the Antibiotic Administration Route is equal to 3 or 10 for all antibiotic doses, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the Antibiotic Administration Route is equal to 1 or 2 for any antibiotic dose, continue processing and proceed to Antibiotic Administration Date. Proceed only with antibiotic doses on Table 2.1 that are administered via routes 1 or 2. 20.Check Antibiotic Administration Date a.If the Antibiotic Administration Date is equal to Unable to Determine for all antibiotic doses, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the Antibiotic Administration Date is equal to a Non Unable to Determine date for	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			<p>at least one antibiotic dose, continue processing and proceed to the Antibiotic Days I calculation. Note: Proceed only with antibiotic doses that have an associated Non Unable to Determine date.</p> <p>21. Calculate Antibiotic Days I. Antibiotic Days I, in days, is equal to the Surgical Incision Date minus the Antibiotic Administration Date.</p> <p>22. Check Antibiotic Days I</p> <p>a. If the Antibiotic Days I is greater than 1 for at least one antibiotic dose, continue processing and recheck the ICD-9-CM Principal Procedure Code. Do not recheck step 25 Antibiotic Days I, step 26 Surgical Incision Time, step 27 Antibiotic Administration Time, or step 29 Antibiotic Timing I.</p> <p>b. If the Antibiotic Days I is less than or equal to 1 for all antibiotic doses, continue processing. Proceed to step 25 and recheck Antibiotics Days I. Do not recheck ICD-9-CM Principal Procedure Code or Oral Antibiotics.</p> <p>23. Recheck ICD-9-CM Principal Procedure Code only if the Antibiotics Days was greater than 1 for at least one antibiotic dose</p> <p>a. If the ICD-9-CM Principal Procedure Code is not on Table 5.03, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.</p> <p>b. If the ICD-9-CM Principal Procedure Code is on Table 5.03, continue processing and check Oral Antibiotics.</p>	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			24. Check Oral Antibiotics a. If Oral Antibiotics is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b. If Oral Antibiotics equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c. If Oral Antibiotics equals Yes, continue processing. Proceed to step 33 and check Anesthesia End Date. Do not recheck step 25 Antibiotic Days I, step 26 Surgical Incision Time, step 27 Antibiotic Administration Time, or step 29 Antibiotic Timing I. 25. Recheck Antibiotic Days I only if Antibiotic Days I is less than or equal to 1 for all antibiotic doses a. If the Antibiotic Days I is less than or equal to zero for all antibiotic doses, continue processing. Proceed to step 33 and check Anesthesia End Date. Do not check step 26 Surgical Incision Time, step 27 Antibiotic Administration Time, or step 29 Antibiotic Timing I. b. If the Antibiotic Days I is equal to 1 for ANY antibiotic dose, continue processing and proceed to Surgical Incision Time. 26. Check Surgical Incision Time a. If the Surgical Incision Time is missing, the case will proceed to a Measure Category	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the Surgical Incision Time is equal to Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c.If the Surgical Incision Time is equal to a Non Unable to Determine Value, continue processing and check Antibiotic Administration Time. 27.Check Antibiotic Administration Time a.If the Antibiotic Administration Time equals Unable to Determine for all antibiotic doses, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the Antibiotic Administration Time equals a Non Unable to Determine time for at least one antibiotic dose, continue processing and recheck Antibiotic Administration Time. 28.Recheck Antibiotic Administration Time a.If the Antibiotic Administration Time equals Unable to Determine for ANY antibiotic dose with Antibiotic Days equal to 1, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the Antibiotic Administration Time equals a Non Unable to Determine time for All antibiotic doses with Antibiotic Days equal to 1, continue processing and proceed to the Antibiotic Timing I calculation. 29.Calculate Antibiotic Timing I. Antibiotic Timing I, in minutes, is equal to the Surgical Incision Date and Surgical Incision Time minus the Antibiotic Administration Date and Antibiotic Administration Time. Calculate Antibiotic Timing I for all antibiotic doses with Non Unable to Determine date and time. Proceed with antibiotic doses that have Antibiotic Timing I calculated, or Antibiotic Days I less than or equal to zero. 30.Check Antibiotic Timing I a.If the Antibiotic Timing I is greater than 1440 minutes for any antibiotic dose, continue processing and recheck the ICD-9-CM Principal Procedure Code. Proceed with antibiotic doses that have Antibiotic Timing I calculated, or Antibiotic Days I less than or equal to zero. b.If the Antibiotic Timing I is less than or equal to 1440 minutes for all antibiotic doses with non Unable to Determine date and time, continue processing and proceed to step 33 and check Anesthesia End Date. Proceed with antibiotic doses that have Antibiotic Timing I calculated, or Antibiotic Days I less than or equal to zero. Do not recheck ICD-9-CM Principal Procedure Code or Oral Antibiotics. 31.Recheck ICD-9-CM Principal Procedure	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Code only if Antibiotic Timing I is greater than 1440 for any antibiotic dose a.If the ICD-9-CM Principal Procedure Code is not on Table 5.03, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the ICD-9-CM Principal Procedure Code is on Table 5.03, continue processing and check Oral Antibiotics. 32.Check Oral Antibiotics a.If Oral Antibiotics is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If Oral Antibiotics equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c.If Oral Antibiotics equals Yes, continue processing and proceed to Anesthesia End Date. 33.Check Anesthesia End Date a.If the Anesthesia End Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			<p>b.If the Anesthesia End 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 for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.</p> <p>c.If the Anesthesia End Date equals a Non Unable to Determine Value, continue processing and proceed to the Antibiotic Days II calculation.</p> <p>34.Calculate Antibiotic Days II. Antibiotic Days II, in days, is equal to the Antibiotic Administration Date minus the Anesthesia End Date.</p> <p>35.Check Antibiotic Days II</p> <p>a.If the Antibiotic Days II is less than or equal to zero for all doses of all antibiotics, continue processing. Proceed to step 41 and recheck Antibiotic Administration Route. Do not check step 37 Anesthesia End Time, step 38 Antibiotic Administration Time, or step 39 Antibiotic Timing II.</p> <p>b.If the Antibiotic Days II is greater than zero for at least one dose of any antibiotic, continue processing and proceed to Initialize the Abxday flag.</p> <p>36.Initialize Abxday flag. Initialize Abxday flag to equal 'No' for each antibiotic dose. Set Abxday flag to equal 'Yes' for each antibiotic dose where Antibiotic Days II is less than or equal to zero.</p> <p>37.Check Anesthesia End Time</p> <p>a.If the Anesthesia End Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop</p>	



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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the Anesthesia End Time is equal to Unable to Determine, continue processing and proceed to check the Abxday flag. 1.If the Abxday flag equals No for All doses, the case will proceed to a Measure Category Assignment of D of will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. 2.f the Abxday flag equals Yes for ANY dose, continue processing and proceed to step 41. Proceed only with doses where the Abxflag is equal to Yes. c.If the Anesthesia End Time is equal to a Non Unable to Determine Value, continue processing and recheck Antibiotic Administration Time. 38.Recheck Antibiotic Administration Time a.If the Antibiotic Administration Time equals Unable to Determine for all antibiotic doses, continue processing and proceed to check the Abxday flag. 1.If the Abxday flag equals No for All doses, the case will proceed to a Measure Category Assignment of D of will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and recheck the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. 2.If the Abxday flag equals Yes for ANY dose, continue processing and proceed to step 41 and recheck the Antibiotic	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Administration Route. Proceed only with doses where the Abxflag is equal to Yes. Do not check Antibiotic Timing II. b.If the Antibiotic Administration Time equals a Non Unable to Determine time for at least one antibiotic dose, continue processing and proceed to the Antibiotic Timing II calculation. Proceed with both UTD and Non-UTD time. 39.Calculate Antibiotic Timing II. Antibiotic Timing II, in minutes, is equal to the Antibiotic Administration Date and Antibiotic Administration Time minus Anesthesia End Date and Anesthesia End Time. Calculate Antibiotic Timing II for all antibiotic doses with Non Unable to Determine date and time. Proceed with antibiotic doses that have Antibiotic Timing II calculated, or Abxday flag equal to Yes. 40.Check Antibiotic Timing II a.If the Antibiotic Timing II is greater than 1440 minutes for all doses of all Antibiotics with a Non Unable to Determine date and time, continue processing and proceed to check the Abxday Flag. Proceed with antibiotic doses that have Antibiotic Timing II calculated, or Abxday flag equal to Yes. 1.If the Abxday flag equals No for All doses, the case will proceed to a Measure Category Assignment of B of will not be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. 2.If the Abxday flag equals Yes for ANY dose, continue processing and recheck the	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			<p>Antibiotic Administration Route. Proceed only with doses where the Abxflag is equal to Yes.</p> <p>b.If the Antibiotic Timing II is less than or equal to 1440 minutes for at least one dose of ANY antibiotic, continue processing and proceed to Antibiotic Administration Route. Proceed with antibiotic doses that have Antibiotic Timing II calculated, or Abxday flag equal to Yes.</p> <p>41.Recheck Antibiotic Administration Route. For each case, proceed ONLY with those antibiotic doses that satisfy at least one of the following conditions: Antibiotic Timing II is less than or equal to 1440 or Abxday flag is equal to Yes.</p> <p>a.If the Antibiotic Administration Route equals 1 for all doses of all Antibiotics, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.</p> <p>b.If the Antibiotic Administration Route equals 2 for any dose of any antibiotic, continue processing and proceed to recheck the ICD-9-CM Principal Procedure Code. Note: For each case include only those antibiotics with route IV for further processing.</p> <p>42.Recheck ICD-9-CM Principal Procedure Code</p> <p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.03, continue processing and proceed to step 46 and recheck Antibiotic</p>	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			<p>Name. Do not recheck to determine if ICD-9-CM Principal Procedure Code is on Tables 5.01, 5.02, 5.04, 5.05, 5.06, 5.07, or 5.08 or if Antibiotic Name is on Table 3.2.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Tables 5.01, 5.02, 5.04, 5.05, 5.06, 5.07, or 5.08, continue processing and proceed to recheck ICD-9-CM Principal Procedure Code.</p> <p>43.Recheck ICD-9-CM Principal Procedure Code</p> <p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.06 or 5.07, continue processing and proceed to recheck Antibiotic Name.</p> <p>1.If the Antibiotic Name is on Table 3.7, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.</p> <p>2.If the Antibiotic Name is not on Table 3.7, continue processing and proceed to step 46 and recheck Antibiotic Name. Do not recheck to determine if ICD-9-CM Principal Procedure Code is on Tables 5.01, 5.02, 5.04, 5.05, or 5.08 or if Antibiotic Name is on Table 3.2.</p> <p>b.If the ICD-9-CM Principal Procedure Code is on Tables 5.01, 5.02, 5.04, 5.05, or 5.08, continue processing and proceed to recheck ICD-9-CM Principal Procedure Code.</p> <p>44.Recheck ICD-9-CM Principal Procedure Code</p> <p>a.If the ICD-9-CM Principal Procedure Code is on Table 5.01, 5.02, or 5.08, continue processing and proceed to recheck Antibiotic</p>	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Name. 1.If the Antibiotic Name is on Table 3.1, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. 2.If the Antibiotic Name is not on Table 3.1, continue processing and proceed to step 46 and recheck Antibiotic Name. Do not recheck to determine if ICD-9-CM Principal Procedure Code is on Tables 5.04 or 5.05 or if Antibiotic Name is on Table 3.2. b.If the ICD-9-CM Principal Procedure Code is on Tables 5.04 or 5.05, continue processing and proceed to recheck Antibiotic Name. 45.Recheck Antibiotic Name a.If the Antibiotic Name is on Table 3.2, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the Antibiotic Name is not on Table 3.2, continue processing and proceed to recheck Antibiotic Name. 46.Recheck Antibiotic Name a.If the Antibiotic Name is on Table 3.6b, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission.	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			b.If the Antibiotic Name is not on Table 3.6b, continue processing and proceed to recheck Antibiotic Name. 47.Recheck Antibiotic Name a.If the Antibiotic Name is on Table 3.5, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If the Antibiotic Name is not on Table 3.5, continue processing and proceed to recheck Antibiotic Name. 48.Recheck Antibiotic Name a.If the Antibiotic Name is on Table 3.2, continue processing and recheck Antibiotic Name. 1.If the Antibiotic Name is on Table 3.6a, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. 2.If the Antibiotic name is not on Table 3.6a, continue processing and proceed to recheck ICD-9-CM Principal Procedure Code. b.If the Antibiotic Name is not on Table 3.2, continue processing and proceed to recheck ICD-9-CM Principal Procedure Code. 49.Recheck ICD-9-CM Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.01, 5.02, 5.04, 5.05, or 5.08, continue processing and proceed to recheck	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Antibiotic Name. b.If the ICD-9-CM Principal Procedure Code is on Tables 5.03, 5.06 or 5.07, continue processing and proceed to step 54 and check Antibiotic Allergy, Do not check step 50 and 52 to see if Antibiotic Name is on Tables 3.8 or 3.9, step 51 Antibiotic Allergy or step 53 Vancomycin. 50.Recheck Antibiotic Name only if the ICD-9-CM Principal Procedure Code is on Table 5.01, 5.02, 5.04, 5.05, or 5.08 a.If none of the Antibiotic Names are on Table 3.8 and 3.9, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If at least one of the Antibiotic Names are on Table 3.8 or 3.9, continue processing and proceed to Antibiotic Allergy. 51.Check Antibiotic Allergy only if at least one of the Antibiotic Names are on Table 3.8 or 3.9 a.If Antibiotic Allergy is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If Antibiotic Allergy equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Inf-2a) for The Joint Commission. c.If Antibiotic Allergy equals No, continue processing and proceed to recheck Antibiotic Name. 52.Recheck Antibiotic Name a.If none of the Antibiotic Names are on Table 3.8, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If at least one of the Antibiotic Names are on Table 3.8, continue processing and proceed to check Vancomycin. 53.Check Vancomycin a.If Vancomycin is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If any Vancomycin value equals 9 and none of the values equal 1, 2, 3, 4, 5, 6, 7, 8, 10, or 11, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c.If any Vancomycin value equals 1, 2, 3, 4, 5, 6, 7, 8, 10, or 11 and none of the values equals 9, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 57 and check the	



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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. 54. Check Antibiotic Allergy only if the ICD-9-CM Principal Procedure Code is on Table 5.03, 5.06, or 5.07 a. If Antibiotic Allergy is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b. If Antibiotic Allergy equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. c. If Antibiotic Allergy equals Yes, continue processing and proceed to recheck Antibiotic Name. 55. Recheck Antibiotic Name a. If at least one of the Antibiotic Names is on Table 3.9, continue processing and recheck Antibiotic Name. 1. If at least one of the Antibiotic Names is on Tables 2.11 or 3.12 or 2.7, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 57 and check the Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. 2. If none of the Antibiotic Names are on Tables 2.11 or 3.12 or 2.7, continue processing and recheck Antibiotic Name.	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			b.If none of the Antibiotic Names are on Table 3.9, continue processing and recheck Antibiotic Name. 56.Recheck Antibiotic Name a.If at least one of the Antibiotic Names is on Table 3.6a, continue processing and recheck Antibiotic Name. 1.If at least one of the Antibiotic Names is on Tables 2.11 or 3.12, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. 2.If none of the Antibiotic Names are on Tables 2.11 or 3.12, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. b.If none of the Antibiotic Names are on Table 3.6a, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-2a) for The Joint Commission. 57.For The Joint Commission Only, continue processing for the Stratified Measures. Note: Initialize the Measure Category Assignment for each strata measure (b-g) to equal B, not in the Measure Population. Do not change the Measure Category Assignment that was already calculated for the overall rate (SCIP-Inf-2a). The rest of the algorithm will reset	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			the appropriate Measure Category Assignment to be equal to the overall rate's (SCIP-Inf-2a) Measure Category Assignment. 58. Check Overall Rate Category Assignment a. If the Overall Rate Category Assignment is equal to B or X, set the Measure Category Assignment for the strata measures (SCIP-Inf-2b through SCIP-Inf-2h) to equal B, not in the Measure Population. Stop processing. b. If the Overall Rate Category Assignment is equal to D or E, continue processing and check the ICD-9-CM Principal Procedure Code. Specifications Manual for National Hospital Inpatient Quality Measures Discharges 10-01-10 (4Q10) through 03-31-11 (1Q11) SCIP-Inf-2-30 59. Check ICD-9-CM Principal Procedure Code a. If the ICD-9-CM Principal Procedure Code is on Table 5.01, for Stratified Measure SCIP-Inf-2b, set the Measure Category Assignment for measure SCIP-Inf-2b to equal the Measure Category Assignment for measure SCIP-Inf-2a. Stop processing. b. If the ICD-9-CM Principal Procedure Code is on Table 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and recheck the If the ICD-9-CM Principal Procedure Code. 60. Recheck ICD-9-CM Principal Procedure Code a. If the ICD-9-CM Principal Procedure Code is on Table 5.02, for Stratified Measure SCIP-Inf-2c, set the Measure Category Assignment for measure SCIP-Inf-2c to equal the Measure	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Category Assignment for measure SCIP-Inf-2a. Stop processing. b.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and recheck the If the ICD-9-CM Principal Procedure Code. 61.Recheck ICD-9-CM Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.04, for Stratified Measure SCIP-Inf-2d, set the Measure Category Assignment for measure SCIP-Inf-2d to equal the Measure Category Assignment for measure SCIP-Inf-2a. Stop processing. b.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and recheck the If the ICD-9-CM Principal Procedure Code. 62.Recheck ICD-9-CM Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.05, for Stratified Measure SCIP-Inf-2e, set the Measure Category Assignment for measure SCIP-Inf-2e to equal the Measure Category Assignment for measure SCIP-Inf-2a. Stop processing. b.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.06 or 5.07 or 5.08, continue processing and recheck the If the ICD-9-CM Principal Procedure Code. 63.Recheck ICD-9-CM Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.03, for Stratified Measure SCIP-Inf-2f, set the Measure Category Assignment for measure SCIP-Inf-2f to equal the Measure	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			Category Assignment for measure SCIP-Inf-2a. Stop processing. b.If the ICD-9-CM Principal Procedure Code is on Table 5.06 or 5.07 or 5.08, continue processing and recheck the If the ICD-9-CM Principal Procedure Code. 64.Recheck ICD-9-CM Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.06 or 5.07, for Stratified Measure SCIP-Inf-2g, set the Measure Category Assignment for measure SCIP-Inf-2g to equal the Measure Category Assignment for measure SCIP-Inf-2a. Stop processing. b.If the ICD-9-CM Principal Procedure Code is on Table 5.08, for Stratified Measure SCIP-Inf-2h, set the Measure Category Assignment for measure SCIP-Inf-2h to equal the Measure Category Assignment for measure SCIP-Inf-2a. Stop processing. <b>2a.22. Describe the method for discriminating performance (E.g., significance testing)</b> Benchmarks are established using the ABC methodology, based on the actual performance of the top facilities. ABC benchmarks identify superior performance and encourage poorer performers to improve. It is data-driven, peer-group performance feedback. Achievable Benchmarks of Care TM: developed at the University of Alabama at Birmingham for AHRQ. This methodology identifies benchmark care levels already achieved by “best-in-class” care givers. Development of benchmarks that are realistic	

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	<b>Maintenance Measure #0126:</b> Selection of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0268:</b> Selection of prophylactic antibiotic: First or second generation cephalosporin	<b>Maintenance Measure #0528:</b> Prophylactic antibiotic selection for surgical patients	<b>Endorsed Measure #0473:</b> Appropriate DVT prophylaxis in women undergoing cesarean delivery
			and achievable may help to motivate providers that are having difficulty improving care. The benchmarks represent a measureable level of excellence that always exceeds average performance. It ensures that all superior providers contribute to the benchmark but also ensures that providers with high performance but very low numbers of cases do not unduly influence benchmark levels. Additional information can be found at <a href="http://main.uab.edu/show.asp?durki=14527">http://main.uab.edu/show.asp?durki=14527</a>	
<b>Data Source</b>	Registry data	Electronic administrative data/claims, lab data, paper medical record/flow-sheet	Electronic administrative data/claims, paper medical record/flow-sheet	Paper medical record/flow-sheet
<b>Level of Measurement /Analysis</b>	Clinicians: Group; Facility/agency; Population: National, regional/network, states, counties or cities	Clinicians: Individual	Facility/agency	Facility/agency
<b>Care Settings</b>	Hospital	Hospital, Ambulatory care: Ambulatory surgery center	Hospital	Hospital, Ambulatory care: Ambulatory surgery center

### Prophylactic Antibiotics: Timing/Received

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery - cesarean section.
<b>Status</b>	Endorsed 11/2007	Currently undergoing maintenance review	Endorsed 7/2008	Currently undergoing maintenance review	Endorsed 10/2008

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	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
<b>Steward</b>	National Committee for Quality Assurance, American Medical Association-Physician Consortium for Performance Improvement	Society of Thoracic Surgeons	American Medical Association-Physician Consortium for Performance Improvement	Centers for Medicare & Medicaid Services	Massachusetts General Hospital/Partners Health Care System
<b>Description</b>	Percentage of surgical patients aged > 18 years with indications for prophylactic parenteral antibiotics for whom administration of the antibiotic has been initiated within one hour (if vancomycin, two hours) prior to the surgical incision or start of procedure when no incision is required.	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).	Percentage of surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic parenteral antibiotics, who have an order for prophylactic antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours), prior to the surgical incision (or start of procedure when no incision is required)	Surgical patients with prophylactic antibiotics initiated within one hour prior to surgical incision. Patients who received vancomycin or a fluoroquinolone for prophylactic antibiotics should have the antibiotics initiated within two hours prior to surgical incision. Due to the longer infusion time required for vancomycin or a fluoroquinolone, it is acceptable to start these antibiotics within two hours prior to incision time.	Percentage of patients undergoing cesarean section who receive prophylactic antibiotics within one hour prior to surgical incision or at the time of delivery.
<b>Type of Measure</b>	Process	Process	Process	Process	Process
<b>Numerator</b>	Surgical patients for whom administration of a prophylactic antibiotic has been initiated within one hour (if vancomycin, two	Cardiac surgery patients who received prophylactic antibiotics within one hour of surgical incision or start of procedure if no	Surgical patients who have an order for prophylactic antibiotic to be given within one hour (if fluoroquinolone or	Surgical patients who received prophylactic antibiotics within 1 hour of surgical incision (2 hours if receiving	Number of patients who received prophylactic antibiotics within one hour prior to surgical incision or at the time of

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	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
	<p>hours) prior to the surgical incision (or start of procedure when no incision is required). The antimicrobial drugs listed below are considered prophylactic antibiotics for the purposes of this measure:</p> <ul style="list-style-type: none"> <li>• Ampicillin/sulbactam</li> <li>• Aztreonam</li> <li>• Cefazolin</li> <li>• Cefmetazole</li> <li>• Cefotetan</li> <li>• Cefoxitin</li> <li>• Cefuroxime</li> <li>• Ciprofloxacin</li> <li>• Clindamycin</li> <li>• Erythromycin base</li> <li>• Gatifloxacin</li> <li>• Gentamicin</li> <li>• Levofloxacin</li> <li>• Metronidazole</li> <li>• Moxifloxacin</li> <li>• Neomycin</li> <li>• Vancomycin</li> </ul>	<p>incision was required (two hours if vancomycin or fluoroquinolone).</p> <p>Time window: Within one hour of surgical incision or start of procedure if no incision was required (two hours if vancomycin or fluoroquinolone).</p>	<p>vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).</p> <p>Numerator Instructions: There must be documentation of order (written order, verbal order, or standing order/protocol) specifying that antibiotic is to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required) OR documentation that antibiotic has been given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).</p>	<p>vancomycin).</p>	<p>delivery. Because delivery and administration of antibiotics are unlikely to be exactly simultaneous and watches imperfectly synchronized, in operational use there must be an allowance for a discrete period of time in the application of “at the time of delivery.” We propose that administration should be considered acceptable if given within 10 minutes of delivery/cord clamping for those in whom prophylactic antibiotics are not given preoperatively.</p>
<b>Numerator Details</b>	Electronic Collection: G-codes or CPT Category II are used to report the numerator of the measure: 1. If reporting G-codes	Number of cardiac surgery procedures in which timing of appropriate antibiotic administration	Report one of the following CPT Category II codes: Identify patients with documentation of order	Data Elements: Anesthesia Start Date Antibiotic Administration Date Antibiotic Administration	



## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
	<p>submit the appropriate G-code.</p> <p>2. If reporting CPT Category II codes submit the appropriate CPT Category II code.</p> <p>Identify surgical patients who were administered prophylactic antibiotics (See Table 2A) within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required):</p> <ul style="list-style-type: none"> <li>• ? GXXXXX: Clinician documented to have given the prophylactic antibiotic within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).</li> </ul> <p>OR</p> <p>? CPT II XXXXF: Documentation that prophylactic antibiotic was given within one hour (if vancomycin, two hours) prior to surgical incision (or start of</p>	<p>[AbxTiming (STS Adult Cardiac Surgery Database Version 2.73)] is marked “yes”</p>	<p>for prophylactic antibiotic:</p> <ul style="list-style-type: none"> <li>• CPT II 4047F: Documentation of order for prophylactic antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to surgical incision (or start of procedure when no incision is required).</li> </ul> <p>OR</p> <p>Documentation that prophylactic antibiotic has been given within one hour prior to the surgical incision (or start of procedure when no incision is required).</p> <ul style="list-style-type: none"> <li>• CPT II 4048F: Documentation that prophylactic antibiotic was given within one hour (if fluoroquinolone or vancomycin, two hours) prior to surgical incision (or start of procedure when no incision is required).</li> </ul>	<p>Time</p> <p>Surgical Incision Date</p> <p>Surgical Incision Time</p>	

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	<p>procedure when no incision is required).</p> <p>Medical Records: There must be documentation of order (written order, verbal order, or standing order/protocol) specifying that antibiotic is to be given within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). A sample should be determined using the most accurate data available in the settings in which the measure will be implemented. Sample sizes may be defined by different implementers.</p> <p>Hybrid: Users should follow the requirements of electronic data collection, select a sample of patients, and then supplement the electronic data where needed with medical record abstraction of data elements to fulfill measure</p>				

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	<p>reporting requirements.</p> <p>EHR: Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described previously. EHR users should collect data on 100% of their denominator population instead of a sample.</p> <p>EHR users may opt to use the codes listed in the electronic data collection methodology to identify patients with documentation of administration of prophylactic antibiotic.</p>				
<b>Denominator</b>	All surgical patients aged 18 years and older who have an order for a prophylactic parenteral antibiotic to be given within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).	<p>Number of patients undergoing cardiac surgery.</p> <p>Time window: 12 months</p>	All surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic parenteral antibiotics Denominator (Eligible Population): All surgical patients aged 18 years and older undergoing procedures with the indications for	Number of surgical patients with: CABG (ICD-9-CM procedure codes 36.10-36.14, 36.19, 36.15-36.17, 36.2), other cardiac surgery (35.0-35.95, 35.98, 35.99), colon surgery (45.00, 45.03, 45.41, 45.49, 45.50, 45.7-45.90, 45.92-45.95, 46.03, 46.04, 46.1-46.14, 46.52, 46.75, 45.76,	All patients undergoing cesarean section without evidence of prior infection or already receiving prophylactic antibiotics for other reasons.

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			prophylactic parenteral antibiotics.	46.91, 46.92, 46.94, 48.5, 48.6-48.69), hip arthroplasty (81.51, 81.52), knee arthroplasty (81.54), abdominal hysterectomy (68.3, 68.4, 68.6), vaginal hysterectomy (68.5-68.59, 68.7), or vascular surgery (38.34, 38.36, 38.37, 38.44, 38.48, 38.49, 38.51, 38.52, 38.64, 38.14, 38.16, 38.18, 39.25, 39.26, 39.29)	
<b>Denominator Categories</b>		Female, Male; 18 and older		Female, Male; Patients aged 18 and older	
<b>Denominator Details</b>	Electronic Collection: G-code, CPT-II code, and patient demographics (age, etc) are used to determine patients that are included in the measure: •? GXXXXX: Patient documented to have order for prophylactic parenteral antibiotic to be given within one hour (if vancomycin, two hours) prior to surgical incision (or start of procedure when no incision is required). OR •? CPT II XXXXF:	Number of cardiac surgery procedures;  A cardiac procedure is determined as a procedure for which at least one of the following is not marked “no” or “missing” (note: full terms for STS field names are provided in brackets []): OpCAB[Coronary Artery Bypass], OpValve[Valve Surgery], VADProc [VAD Implanted or Removed], VSAV [Aortic Valve Procedure], VSMV [Mitral Valve Procedure],	• CPT Procedure Codes Integumentary: 15734, 15738, 19260, 19271, 19272, 19301-19307, 19361, 19364, 19366-19369 Le Fort Fractures: 21422, 21423, 21346-21348, 21432, 21433, 21435, 21436 Mandibular Fracture: 21454, 21461, 21462, 21465, 21470 Spine: 22325, 22612, 22630, 22800, 22802, 22804, 63030, 63042 Hip Reconstruction: 27125, 27130, 27132, 27134, 27137, 27138 Trauma (Fractures): 27235,	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).	

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	<p>Documentation of order for prophylactic parenteral antibiotic to be given within one hour (if vancomycin, two hours) prior to surgical incision (or start of procedure when no incision is required).</p> <p>Medical Records: There must be documentation of order (written order, verbal order, or standing order/protocol) specifying that antibiotic is to be given within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). A sample should be determined using the most accurate data available in the settings in which the measure will be implemented. Sample sizes may be defined by different implementers.</p> <p>Hybrid: Users should follow the requirements of</p>	<p>OpTricus [Tricuspid Valve Procedure Performed], OpPulm[Pulmonic Valve Procedure Performed], OpOCard [Other Cardiac Procedure other than CABG or Valve], OCarLVA [Left Ventricular Aneurysm Repair], OCarVSD [Ventricular Septal Defect Repair], OCarSVR [Surgical Ventricular Restoration], OCarCong [Congenital Defect Repair], OCarTrma [surgical procedure for an injury due to Cardiac Trauma], OCarCrTx [Cardiac Transplant], OCarACD [Arrhythmia Correction Surgery], OCAoProcType[Aortic Procedure Type], EndoProc [Endovascular Procedure (TEVAR)], OCTumor [resection of an intracardiac tumor], OCPulThromDis [Pulmonary Thromboembolism], OCarOthr [Other Cardiac Procedure other than</p>	<p>27236, 27244, 27245, 27758, 27759, 27766, 27792, 27814 Knee Reconstruction: 27440-27443, 27445-27447 Laryngectomy: 31360, 31365, 31367, 31368, 31370, 31375, 31380, 31382, 31390, 31395 Vascular: 33877, 33880, 33881, 33883, 33886, 33891, 34800, 34802-34805, 34825, 34830-34832, 34900, 35081, 35091, 35102, 35131, 35141, 35151, 35601, 35606, 35612, 35616, 35621, 35623, 35626, 35631, 35636-35638, 35642, 35645-35647, 35650, 35651, 35654, 35656, 35661, 35663, 35665, 35666, 35671, 36830 Spleen and Lymph Nodes: 38115 Glossectomy: 41130, 41135, 41140, 41145, 41150, 41153, 41155 Esophagus: 43045, 43100, 43101, 43107, 43108, 43112, 43113, 43116-43118, 43121-43124, 43130, 43135, 43300, 43305, 43310, 43312, 43313, 43320, 43324-43326, 43330, 43331, 43340, 43341, 43350, 43351, 43352, 43360, 43361, 43400, 43401, 43405, 43410,</p>		

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	<p>electronic data collection, select a sample of patients, and then supplement the electronic data where needed with medical record abstraction of data elements to fulfill measure reporting requirements.</p> <p>EHR: Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described previously. EHR users should collect data on 100% of their denominator population instead of a sample.</p> <p>EHR users may opt to use the codes listed in the electronic data collection methodology to identify all patients aged 18 years and older who have an order for a parenteral antibiotic to be given within one hour (if vancomycin, two hours) prior to the surgical incision (or start of</p>	<p>those listed previously], ECMO [Extracorporeal Membrane Oxygenation], OCarLasr [- Transmyocardial Laser Revascularization], OCarASD [Atrial Septal Defect Repair], OCarAFibSur [Atrial Fibrillation Surgical Procedure]</p>	<p>43415, 43420, 43425, 43496 Stomach: 43500-43502, 43510, 43520, 43600, 43605, 43610, 43611, 43620-43622, 43631-43634, 43640, 43641, 43653, 43800, 43810, 43820, 43825, 43830-43832, 43840, 43842, 43843, 43845-43848, 43850, 43855, 43860, 43865, 43870 Small Intestine: 44005, 44010, 44020, 44021, 44050, 44055, 44100, 44120, 44125-44127, 44130, 44132, 44133, 44135, 44136 Colon and Rectum: 43880, 44025, 44110, 44111, 44140, 44141, 44143-44147, 44150, 44151, 44155-44158, 44160, 44202, 44204-44208, 44210-44212, 44300, 44310, 44312, 44314, 44316, 44320, 44322, 44340, 44345, 44346, 44602-44605, 44615, 44620, 44625, 44626, 44640, 44650, 44660, 44661, 44700, 44950, 51597 Anus and Rectum: 45108, 45110-45114, 45116, 45119-45121, 45123, 45126, 45130, 45135, 45136, 45150, 45160, 45170, 45190, 45500, 45505, 45520, 45540, 45541, 45550, 45560, 45562, 45563, 45800,</p>		

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	procedure when no incision is required).		45805, 45820, 45825 Hepatic Surgery: 47133, 47135, 47136, 47140-47142 Biliary Surgery: 47420, 47425, 47460, 47480, 47560, 47561, 47570, 47600, 47605, 47610, 47612, 47620, 47700, 47701, 47711, 47712, 47715, 47719-47721, 47740, 47741, 47760, 47765, 47780, 47785, 47800, 47802, 47900 Pancreas: 48020, 48100, 48120, 48140, 48145, 48146, 48148, 48150, 48152-48155, 48160, 48500, 48510, 48511, 48520, 48540, 48545, 48547, 48548, 48550, 48554, 48556 Abdomen, Peritoneum, and Omentum: 49215, 49568 Renal Transplant: 50300, 50320, 50340, 50360, 50365, 50370, 50380 Gynecologic Surgery: 58150, 58152, 58180, 58200, 58210, 58260, 58262, 58263, 58267, 58270, 58275, 58280, 58285, 58290-58294 Acoustic Neuroma: 61591, 61595, 61596, 61598, 61520, 61526, 61530, 61606, 61616, 61618, 61619, 69720, 69955, 69960, 69970		

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			Cochlear Implants: 69930 Neurological Surgery: 22524, 22554, 22558, 22600, 22612, 22630, 35301, 61154, 61312, 61313, 61315, 61510, 61512, 61518, 61548, 61697, 61700, 61750, 61751, 61867, 62223, 62230, 63015, 63020, 63030, 63042, 63045, 63047, 63056, 63075, 63081, 63267, 63276 Cardiothoracic Surgery: 33120, 33130, 33140, 33141, 33202, 33250, 33251, 33256, 33261, 33305, 33315, 33321, 33322, 33332, 33335, 33400, 33401, 33403-33406, 33410, 33411, 33413, 33416, 33422, 33425-33427, 33430, 33460, 33463-33465, 33475, 33496, 33510-33519, 33521-33523, 33530, 33533-33536, 33542, 33545, 33548, 33572, 35211, 35241, 35271 Cardiothoracic (Pacemaker): 33203, 33206- 33208, 33212-33218, 33220, 33222-33226, 33233-33238, 33240, 33241, 33243, 33244, 33249, 33254, 33255 Genitourinary Surgery: 51550, 51555, 51565, 51570, 51575, 51580, 51585, 51590,		



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			51595, 51596, 51920, 51925, 52450, 52601, 52612, 52614, 52620, 52630, 52647, 52648, 54401, 54405, 54406, 54408, 54410, 54415, 54416, 55801, 55810, 55812, 55815, 55821, 55831, 55840, 55842, 55845 General Thoracic Surgery: 19272, 21627, 21632, 21740, 21750, 21805, 21825, 31760, 31766, 31770, 31775, 31786, 31805, 32095, 32100, 32110, 32120, 32124, 32140, 32141, 32150, 32215, 32220, 32225, 32310, 32320, 32402, 32440, 32442, 32445, 32480, 32482, 32484, 32486, 32488, 32491, 32500, 32501, 32800, 32810, 32815, 32900, 32905, 32906, 32940, 33020, 33025, 33030, 33031, 33050, 33300, 33310, 33320, 34051, 35021, 35216, 35246, 35276, 35311, 35481, 35526, 37616, 38381, 38746, 38747, 39000, 39010, 39200, 39220, 39545, 39561, 60521, 60522, 64746. Foot & Ankle: 27702, 27703, 27704, 27870, 28192, 28193, 28293, 28296, 28299, 28300, 28306, 28307, 28308, 28309, 28310, 28320, 28322, 28415, 28420, 28445, 28465,		

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			28485, 28505, 28525, 28531, 28555, 28585, 28615, 28645, 28675, 28705, 28715, 28725, 28730, 28735, 28737, 28740, 28750, 28755, 28760		
<b>Exclusions</b>	N/A	<p>Cases are removed from the denominator if the patient had a documented contraindication or rationale for not administering antibiotic in medical record.</p> <p>Other exclusions include:</p> <ul style="list-style-type: none"> <li>- Patients who had a principal diagnosis suggestive of preoperative infectious diseases</li> <li>- Patients whose ICD-9-CM principal procedure was performed entirely by Laparoscope</li> <li>- Patients enrolled in clinical trials</li> <li>- Patients with documented infection prior to surgical procedure of interest</li> <li>- Patients who were receiving antibiotics more than 24 hours prior to surgery</li> <li>- Patients who were</li> </ul>	Documentation of medical reason(s) for not ordering antibiotics to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).	<ul style="list-style-type: none"> <li>• Principal or admission diagnosis suggestive of pre-operative infectious disease</li> <li>• Infectious diseases (001.0-139.8)</li> <li>• Meningitis (320.0-326)</li> <li>• Ear infection (380.0-380.23; 382.0-382.20)</li> <li>• Endocarditis (421.0-422.99) <ul style="list-style-type: none"> <li>oRespiratory (460-466.19; 472-476.1; 480-487.8; 490-491.9; 510-511.9; 513-513.1)</li> </ul> </li> <li>• Digestive (540-542; 575.0)</li> <li>• Renal (590-590.9; 595.0)</li> <li>• Prostate (601.0-601.9)</li> <li>• Gynecologic (614-614.9; 616-616.4)</li> <li>• Skin (680-686.9)</li> <li>• Musculo-skeletal (711.9-711.99, 730-730.99)</li> <li>• Fever of unknown origin (780.6)</li> </ul>	<ul style="list-style-type: none"> <li>• Patients who had a principal ICD-9 diagnosis code suggestive of preoperative infectious disease</li> <li>• Patients who were receiving antibiotics within 24 hours prior to surgery except that prophylaxis with penicillin or ampicillin for Group B Streptococcus (GBS) is not a reason for exclusion.</li> <li>• Patients with physician/advanced practice nurse/physician assistant/certified nurse midwife documented infection or prophylaxis for infection, except that prophylaxis for GBS is not a reason for exclusion.</li> <li>• Patients who undergo other surgeries within 3 days before or after the cesarean section.</li> </ul>

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		<p>receiving antibiotics within 24 hours prior to arrival</p> <p>This list will be provided in the STS Adult Cardiac Surgery Database Data Manager's Training Manual as acceptable exclusions.</p>		<ul style="list-style-type: none"> <li>•Septic shock (785.59)</li> <li>•Bacteremia (790.7)</li> <li>•Viremia (790.8)</li> <li>•Receiving antibiotics at the time of admission (except colon surgery patients taking oral prophylactic antibiotics)</li> <li>•Medical records do not include antibiotic start date/time or incision date/time</li> <li>•Receiving antibiotics more than 24 hours prior to surgery (except colon surgery patients taking oral prophylactic antibiotics)</li> <li>•Colon surgery patients who received oral prophylactic antibiotics only</li> </ul>	
<b>Exclusion Details</b>		Timing of appropriate antibiotic administration (AbxTiming) is marked "Exclusion"	Append modifier to CPT Category II code: 4047F-1P	Data Elements: Admission Date Antibiotic Received Birthdate Clinical Trial Discharge Date Infection Prior to	

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				Anesthesia Laparoscope Oral Antibiotics Other Surgeries	
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary	No risk adjustment necessary	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>		N/A		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-1 are 5.01 to 5.08.	
<b>Type Score</b>		Rate/proportion		Rate/proportion	
<b>Algorithm</b>		N/A		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,	

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				is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age. 3. Check Patient Age a. If the 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 for Centers for Medicare and Medicaid Services (CMS). Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b. If the 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 5.01 or 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, the case will proceed to a	

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				Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the ICD-9-CM Principal Procedure Code is on Table 5.01 or 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and proceed to recheck ICD-9-CM Principal Procedure Code. 5.Recheck ICD-9-CM Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.06 or 5.07, continue processing and check ICD-9-CM Other Procedure Code. 1.If any of the ICD-9-CM Other Procedure Codes are on Table 4.07, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop	

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				processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. 2.If all of the ICD-9-CM Other Procedure Codes are missing or none are on Table 4.07, continue processing and proceed to ICD-9-CM Principal Diagnosis Code. b.If the ICD-9-CM Principal Procedure Code is not on Table 5.06 or 5.07, continue processing and proceed to ICD-9-CM Principal Diagnosis Code. 6.Check ICD-9-CM Principal Diagnosis Code a.If the ICD-9-CM Principal Diagnosis Code is on Table 5.09, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint	

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	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				Commission. b.If the ICD-9-CM Principal Diagnosis Code is not on Table 5.09, continue processing and proceed to Laparoscope. 7.Check Laparoscope a.If Laparoscope is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If Laparoscope equals 1 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. c.If Laparoscope equals 2, continue processing and proceed to Clinical Trial.	



## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				8.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 for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. 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 for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. c.If Clinical Trial equals No, continue processing and proceed to Anesthesia Start Date. 9.Check Anesthesia Start Date a.If the Anesthesia Start Date is missing, the case will proceed to a Measure	

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	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the 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 for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission c.If Anesthesia Start Date equals a Non Unable To Determine Value, continue processing and proceed to the Surgery Days calculation. 10.Calculate Surgery Days. Surgery Days, in days, is equal to the Anesthesia Start Date minus the Admission Date. 11.Check Surgery Days	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				a.If the 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 for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the Surgery Days is greater than or equal to zero, continue processing and proceed to Infection Prior to Anesthesia. 12.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 for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If Infection Prior to Anesthesia equals Yes, the	

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	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. c.If Infection Prior to Anesthesia equals No, continue processing and proceed to Other Surgeries. 13.Check Other Surgeries a.If Other Surgeries is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If Other Surgeries equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery - cesarean section.
				Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. c.If Other Surgeries equals No, continue processing and proceed to Surgical Incision Date. 14.Check Surgical Incision Date a.If the Surgical Incision Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP- Inf-1a) for The Joint Commission. b.If the Surgical Incision 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 for CMS. Proceed to step 36 and	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. c.If Surgical Incision Date equals a Non Unable To Determine Value, continue processing and proceed to Antibiotic Received. 15.Check Antibiotic Received a.If Antibiotic Received equals 1 or 2, continue processing and proceed to recheck ICD-9-CM Principal Procedure Code b.If Antibiotic Received equals 4, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. c.If Antibiotic Received equals 3, continue processing and proceed to step 19 and check Antibiotic Name. Do not	

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	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				check ICD-9-CM Principal Procedure Code, Oral Antibiotics or Antibiotic Received. 16.Recheck ICD-9-CM Principal Procedure Code only if Antibiotic Received equals 1 or 2 a.If the ICD-9-CM Principal Procedure Code is not on Table 5.03, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the ICD-9-CM Principal Procedure Code is on Table 5.03, continue processing and proceed to check Oral Antibiotics. 17.Check Oral Antibiotics a.If Oral Antibiotics is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b. If Oral Antibiotics equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. c.If Oral Antibiotics equals Yes, continue processing and proceed to recheck Antibiotic Received. 18.Recheck Antibiotic Received a.If Antibiotic Received equals 1, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified	



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	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If Antibiotic Received equals 2, continue processing and proceed to Antibiotic Name. 19.Check Antibiotic Name a.If the Antibiotic Grid is not populated, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. Note: The front-end edits reject cases containing invalid data and/or an incomplete Antibiotic Grid. A complete Antibiotic Grid requires all data elements in the row to contain either a valid value and/or Unable to Determine. b.If the Antibiotic Name is on Table 2.1, continue processing and proceed to Antibiotic Administration	

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	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery - cesarean section.
				Route. 20.Check Antibiotic Administration Route a.If the Antibiotic Administration Route is equal to 3 or 10 for all antibiotic doses, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the Antibiotic Administration Route is equal to 1 or 2 for any antibiotic dose, continue processing and proceed to Antibiotic Administration Date. Proceed only with antibiotic doses on Table 2.1 that are administered via routes 1 or 2. 21.Check Antibiotic Administration Date a.If the Antibiotic Administration Date is equal to Unable to Determine for all	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery - cesarean section.
				antibiotic doses, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the Antibiotic Administration Date is equal to a Non Unable to Determine date for at least one antibiotic dose, continue processing and proceed to the Antibiotic Days I calculation. Note: Proceed only with antibiotic doses that have an associated non Unable to Determine date. 22.Calculate Antibiotic Days I. Antibiotic Days I, in days, is equal to the Surgical Incision Date minus the Antibiotic Administration Date. 23.Check Antibiotic Days I a.If the Antibiotic Days I is greater than 1 for at least one antibiotic dose,	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery - cesarean section.
				continue processing and recheck the ICD-9-CM Principal Procedure Code. b.If the Antibiotic Days I is less than or equal to 1 for all antibiotic doses, continue processing. Proceed to step 26 and recheck Antibiotics Days I. Do not recheck ICD-9-CM Principal Procedure Code or Oral Antibiotics. 24.Recheck ICD-9-CM Principal Procedure Code only if the Antibiotic Days I is greater than 1 for at least one antibiotic dose a.If the ICD-9-CM Principal Procedure Code is not on Table 5.03, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the ICD-9-CM Principal Procedure Code	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				is on Table 5.03, continue processing and check Oral Antibiotics. 25.Check Oral Antibiotics a.If Oral Antibiotics is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b. If Oral Antibiotics equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. c.If Oral Antibiotics equals Yes, continue processing and proceed to step 27 and check Surgical Incision Time. Do not recheck Antibiotic Days I.	

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	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				26.Recheck Antibiotic Days I a.If the Antibiotic Days I is less than zero for all antibiotic doses, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the Antibiotic Days I is greater than or equal to zero for any antibiotic dose, continue processing and proceed to Surgical Incision Time. 27.Check Surgical Incision Time a.If the Surgical Incision Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				Commission. b.If the Surgical Incision Time is equal to Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. c.If the Surgical Incision Time is equal to a Non Unable to Determine Value, continue processing and check Antibiotic Administration Time. 28.Check Antibiotic Administration Time a.If the Antibiotic Administration Time equals Unable to Determine for all antibiotic doses, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS.	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery - cesarean section.
				Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the Antibiotic Administration Time equals a Non Unable to Determine time for at least one antibiotic dose, continue processing and proceed to the Antibiotic Timing I calculation. Note: Proceed only with antibiotic doses that have an associated non Unable to Determine time. 29.Calculate Antibiotic Timing I. Antibiotic Timing I, in minutes, is equal to the Surgical Incision Date and Surgical Incision Time minus the Antibiotic Administration Date and Antibiotic Administration Time. 30.Check Antibiotic Timing I a.If the Antibiotic Timing I is greater than 1440 minutes for any antibiotic dose, continue processing and recheck the ICD-9-CM	



## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery - cesarean section.
				Principal Procedure Code. b.If the Antibiotic Timing I is less than or equal to 1440 minutes for all antibiotic doses, continue processing. Proceed to step 33 and recheck Antibiotic Timing I. Do not recheck ICD-9-CM Principal Procedure Code or Oral Antibiotics. 31.Recheck ICD-9-CM Principal Procedure Code only if the Antibiotic Timing I is greater than 1440 minutes for any antibiotic dose a.If the ICD-9-CM Principal Procedure Code is not on Table 5.03, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the ICD-9-CM Principal Procedure Code	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				is on Table 5.03, continue processing and check Oral Antibiotics. 32.Check Oral Antibiotics a.If Oral Antibiotics is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If Oral Antibiotics equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop Specifications Manual for National Hospital Inpatient Quality Measures Discharges 10-01-10 (4Q10) through 03-31-11 (1Q11) SCIP-Inf-1-18 processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				Commission. c.If Oral Antibiotics equals Yes, continue processing and proceed to recheck Antibiotic Timing I. 33.Recheck Antibiotic Timing I a.If the Antibiotic Timing I is greater than or equal to zero minutes and less than or equal to 60 minutes for at least one antibiotic dose, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the Antibiotic Timing I is less than zero minutes or greater than 60 minutes for all antibiotic doses, continue processing and recheck Antibiotic Name. 34.Recheck Antibiotic Name a.If the Antibiotic Name is on Table 3.8 or Table 3.10	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				for at least one dose, continue processing and recheck Antibiotic Timing I. b.If the Antibiotic Name is not on Table 3.8 or Table 3.10 for any dose, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Do not recheck Antibiotic Timing I. Stop processing for CMS. Proceed to step 36 and check the Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. 35.Recheck Antibiotic Timing I a.If the Antibiotic Timing I is greater than 60 minutes and less than or equal to 120 minutes for at least one antibiotic dose on Table 3.8 or Table 3.10, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing for CMS. Proceed to Stratified	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. b.If the Antibiotic Timing I is less than zero minutes or greater than 120 minutes for all antibiotic doses on Table 3.8 or Table 3.10, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing for CMS. Proceed to Stratified Measures for Overall Rate (SCIP-Inf-1a) for The Joint Commission. 36.For The Joint Commission Only, continue processing for the Stratified Measures. Note: Initialize the Measure Category Assignment for each strata measure (b-g) to equal B, not in the Measure Population. Do not change the Measure Category Assignment that was already calculated for the overall rate (SCIP-Inf-1a). The rest of the algorithm	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery - cesarean section.
				will reset the appropriate Measure Category Assignment to be equal to the overall rate's (SCIP-Inf-1a) Measure Category Assignment. 37. Check Overall Rate Category Assignment a. If the Overall Rate Category Assignment is equal to B or X, set the Measure Category Assignment for the strata measures (SCIP-Inf-1b through SCIP-Inf-1h) to equal B, not in the Measure Population. Stop processing. b. If the Overall Rate Category Assignment is equal to D or E, continue processing and check the ICD-9-CM Principal Procedure Code. 38. Check ICD-9-CM Principal Procedure Code a. If the ICD-9-CM Principal Procedure Code is on Table 5.01, for Stratified Measure SCIP-Inf-1b, set the Measure Category Assignment for measure SCIP-Inf-1b to	

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	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery - cesarean section.
				equal the Measure Category Assignment for measure SCIP-Inf-1a. Stop processing. b.If the ICD-9-CM Principal Procedure Code is on Table 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and recheck the ICD-9-CM Principal Procedure Code. 39.Recheck ICD-9-CM Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.02, for Stratified Measure SCIP-Inf-1c, set the Measure Category Assignment for measure SCIP-Inf-1c to equal the Measure Category Assignment for measure SCIP-Inf-1a. Stop processing. b.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and recheck the ICD-9-CM Principal Procedure Code. 40.Recheck ICD-9-CM	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.04, for Stratified Measure SCIP-Inf-1d, set the Measure Category Assignment for measure SCIP-Inf-1d to equal the Measure Category Assignment for measure SCIP-Inf-1a. Stop processing. b.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.05 or 5.06 or 5.07 or 5.08, continue processing and recheck the ICD-9-CM Principal Procedure Code. 41.Recheck ICD-9-CM Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.05, for Stratified Measure SCIP-Inf-1e, set the Measure Category Assignment for measure SCIP-Inf-1e to equal the Measure Category Assignment for measure SCIP-Inf-1a. Stop processing.	



## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery – cesarean section.
				b.If the ICD-9-CM Principal Procedure Code is on Table 5.03 or 5.06 or 5.07 or 5.08, continue processing and recheck the ICD-9-CM Principal Procedure Code. 42.Recheck ICD-9-CM Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.03, for Stratified Measure SCIP-Inf-1f, set the Measure Category Assignment for measure SCIP-Inf-1f to equal the Measure Category Assignment for measure SCIP-Inf-1a. Stop processing. b.If the ICD-9-CM Principal Procedure Code is on Table 5.06 or 5.07 or 5.08, continue processing and recheck the ICD-9-CM Principal Procedure Code. 43.Recheck ICD-9-CM Principal Procedure Code a.If the ICD-9-CM Principal Procedure Code is on Table 5.06 or 5.07, for Stratified Measure SCIP-Inf-1g, set the Measure	

## NATIONAL QUALITY FORUM

	<b>Endorsed Measure #0269:</b> Timing of prophylactic antibiotics - administering physician	<b>Maintenance Measure #0125:</b> Timing of antibiotic prophylaxis for cardiac surgery patients	<b>Endorsed Measure #0270:</b> Timing of antibiotic prophylaxis- ordering physician	<b>Maintenance Measure #0527:</b> Prophylactic antibiotic received within 1 hour prior to surgical incision SCIP-Inf-1	<b>Endorsed Measure #0472:</b> Prophylactic antibiotic received within one hour prior to surgical incision or at the time of delivery - cesarean section.
				Category Assignment for measure SCIP-Inf-1g to equal the Measure Category Assignment for measure SCIP-Inf-1a. Stop processing. b.If the ICD-9-CM Principal Procedure Code is on Table 5.08, for Stratified Measure SCIP-Inf-1h, set the Measure Category Assignment for measure SCIP-Inf-1h to equal the Measure Category Assignment for measure SCIP-Inf-1a. Stop processing.	
<b>Data Source</b>	Electronic administrative data/claims	Registry data	Electronic administrative data/claims, lab data, paper medical record/flow-sheet	Electronic administrative data/claims, paper medical record/flow-sheet	Lab data, paper medical record/flow-sheet, survey: patient
<b>Level of Measurement /Analysis</b>	Clinicians: individual	Clinicians: Group; Facility/agency; Population: National, regional/network, states, counties or cities	Clinicians: Individual, group	Facility/agency	Facility/agency
<b>Care Settings</b>	Hospital, Ambulatory care: Ambulatory surgery center	Hospital	Hospital, Ambulatory care: Ambulatory surgery center	Hospital	Hospital

# NATIONAL QUALITY FORUM

## Statin Medication

	<b>Maintenance Measure #0118:</b> Anti-lipid treatment discharge	<b>New Candidate Measure #1519:</b> Statin therapy at discharge after lower extremity bypass (LEB)
<b>Status</b>	Currently undergoing maintenance review	Currently undergoing review
<b>Steward</b>	Society of Thoracic Surgeons	Society of Vascular Surgery
<b>Description</b>	Percent of patients aged 18 years and older undergoing isolated CABG who were discharged on a statin or other lipid-lowering regimen.	Percentage of patients aged 18 years and older undergoing infrainguinal lower extremity bypass who are prescribed a statin medication at discharge. This measure is proposed for both hospitals and individual providers.
<b>Type of Measure</b>	Process	Process
<b>Numerator</b>	Number of patients undergoing isolated CABG who were discharged on a statin or other lipid-lowering regimen.  Time window:	Patients undergoing infrainguinal lower extremity bypass who are prescribed a statin medication at discharge.  Time window: Lifetime for provider reporting, annual for hospital reporting.
<b>Numerator Details</b>	Number of isolated CABG procedures in which discharge lipid lowering medication [DCLipid (STS Adult Cardiac Surgery Database Version 2.73)] is marked "yes"	A registry that includes anatomic details or CPT procedure codes is required to identify patients for numerator inclusion. The Society for Vascular Surgery Vascular Quality Initiative (SVS VQI) and the Vascular Study Group of New England (VSGNE) registries capture detailed anatomic information. Infrainguinal lower extremity bypass is defined as a bypass beginning at or below the external iliac artery and extending into the ipsilateral leg. It includes procedures with CPT codes 35656, 35556, 35583, 35666, 35566, 35585, 35671, 35571, 35587. The numerator is calculated as the number of patients age 18 and over undergoing such a procedure who are prescribed a statin medication at the time of discharge, which is also captured in the above registries.
<b>Denominator</b>	All patients undergoing isolated CABG.	All patients aged 18 years and older undergoing lower extremity bypass as defined above who are discharged alive, excluding those patients who are

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0118:</b> Anti-lipid treatment discharge	<b>New Candidate Measure #1519:</b> Statin therapy at discharge after lower extremity bypass (LEB)
	Time window: 12 months	intolerant to statins. Time window: Lifetime for provider reporting, annual for hospital reporting.
<b>Denominator Categories</b>	Female, Male; 18 yrs and older	Female, Male; 18 years or older
<b>Denominator Details</b>	<p>Number of isolated CABG procedures excluding cases with in-hospital mortality or cases for which discharge anti-lipid treatment use was contraindicated.</p> <p>Isolated CABG is determined as a procedure for which all of the following apply:</p> <ul style="list-style-type: none"> <li>- OpCAB is marked "Yes"</li> <li>- (VADProc is marked "No" or "Missing") or (VADProc is marked "Yes, Implanted" and UnplVAD is marked "yes")</li> <li>- OCarASDTy is marked "PFO" or "missing"</li> <li>- OCarAFibAProc is marked "primarily epicardial" or "missing" and</li> <li>- OpValve, VSAV, VSAVPr, ResectSubA, VSMV, VSMVPr, OpTricus, OpPulm, OpONCard, OCarLVA, OCarVSD, OCarSVR, OCarCong, OCarTrma, OCarCrTx, OCAoProcType, EndoProc, OCTumor, OCPulThromDis, OCarOthr are all marked "no" or "missing"</li> </ul>	<p>A registry that includes anatomic details or CPT procedure codes is required to identify patients for denominator inclusion. The Society for Vascular Surgery Vascular Quality Initiative and the Vascular Study Group of New England registries capture detailed anatomic information. Infrainguinal lower extremity bypass is defined as a bypass beginning at or below the external iliac artery and extending into the ipsilateral leg. It includes procedures with CPT codes 35656, 35556, 35583, 35666, 35566, 35585, 35671, 35571, 35587. Only patients who are discharged alive are included in the denominator, and patients who are intolerant to statins are excluded, as described below.</p>
<b>Exclusions</b>	Cases are removed from the denominator if there was an in-hospital mortality or if discharge anti-lipid treatment was contraindicated.	Chart documentation that patient was not an eligible candidate for statin therapy due to known drug intolerance, or patient died before discharge.
<b>Exclusion Details</b>	Mortality Discharge Status (MtDCStat), Mortality Date (MtDate), and Discharge Date (DischDt) indicate an in-hospital mortality; DCLipid is marked as "Contraindicated"	Chart documentation that patient was not an eligible candidate for statin therapy due to known drug intolerance, or patient died before discharge. These data are captured in the SVS VQI and VSGNE registries.
<b>Risk Adjustment</b>	No risk adjustment necessary	No risk adjustment necessary
<b>Stratification</b>		Not required
<b>Type Score</b>	Rate/proportion	Rate/proportion

# NATIONAL QUALITY FORUM

	<b>Maintenance Measure #0118:</b> Anti-lipid treatment discharge	<b>New Candidate Measure #1519:</b> Statin therapy at discharge after lower extremity bypass (LEB)
<b>Algorithm</b>		All patients age 18 and older undergoing infrainguinal LEB who were prescribed statin at discharge divided by (all patients over 18 undergoing infrainguinal LEB minus those intolerant to statins minus those who died before discharge).
<b>Data Source</b>	Registry data	Registry data
<b>Level of Measurement /Analysis</b>	Clinicians: Group; Facility/agency; Population: National, regional/network, states, counties or cities	Clinicians: Individual, group; Facility/agency; Can be measured at all levels
<b>Care Settings</b>	Hospital	Hospital