

SURGICAL INFECTION PREVENTION NATIONAL QUALITY MEASURES

Set Measure ID #	Measure Short Name
SIP-1a	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Overall Rate
SIP-1b	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - CABG
SIP-1c	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Cardiac Surgery
SIP-1d	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Hip Arthroplasty
SIP-1e	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Knee Arthroplasty
SIP-1f	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Colon Surgery
SIP-1g	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Hysterectomy
SIP-1h	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Vascular Surgery
SIP-2a	Prophylactic Antibiotic Selection for Surgical Patients - Overall Rate
SIP-2b	Prophylactic Antibiotic Selection for Surgical Patients - CABG
SIP-2c	Prophylactic Antibiotic Selection for Surgical Patients - Cardiac Surgery
SIP-2d	Prophylactic Antibiotic Selection for Surgical Patients - Hip Arthroplasty
SIP-2e	Prophylactic Antibiotic Selection for Surgical Patients - Knee Arthroplasty
SIP-2f	Prophylactic Antibiotic Selection for Surgical Patients - Colon Surgery
SIP-2g	Prophylactic Antibiotic Selection for Surgical Patients - Hysterectomy
SIP-2h	Prophylactic Antibiotic Selection for Surgical Patients - Vascular Surgery

SIP-3a	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time - Overall Rate
SIP-3b	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time - CABG
SIP-3c	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time - Cardiac Surgery
SIP-3d	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time - Hip Arthroplasty
SIP-3e	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time - Knee Arthroplasty
SIP-3f	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time - Colon Surgery
SIP-3g	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time - Hysterectomy
SIP-3h	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time - Vascular Surgery

SIP DATA ELEMENT LIST

General Data Element Name	Collected for:
<i>Admission Date</i>	All Records
<i>Admission Source</i>	All Records
<i>Admission Type</i>	All Records
<i>Birthdate</i>	All Records
<i>Case Identifier</i> ¹ **	All Records**
<i>Discharge Date</i>	All Records
<i>Discharge Status</i>	All Records
<i>First Name</i> *	All Records*
<i>Health Care Organization Identifier</i> **	Used in Data Transmission**
<i>Hispanic Ethnicity</i>	All Records
<i>ICD-9-CM Other Diagnosis Codes</i>	All Records
<i>ICD-9-CM Other Procedure Codes</i>	All Records
<i>ICD-9-CM Other Procedure Dates</i>	All Records
<i>ICD-9-CM Principal Diagnosis Code</i>	All Records
<i>ICD-9-CM Principal Procedure Code</i>	All Records
<i>ICD-9-CM Principal Procedure Date</i>	All Records
<i>Last Name</i> *	Optional for All Records*
<i>Other Patient Case Identifier</i> ²	All Records
<i>Patient HIC #</i> ²	All Records
<i>Patient Social Security Number</i> ²	All Records
<i>Payment Source</i>	All Records
<i>Performance Measure Identifier</i> **	Used in Data Transmission**
<i>Physician 1</i> *	Optional for All Records*
<i>Physician 2</i> *	Optional for All Records*
<i>Postal Code</i>	All Records
<i>Provider ID</i>	All Records
<i>Race</i>	All Records
<i>Sex</i>	All Records

Algorithm Output Data Element Name	Collected for:
<i>Measure Category Assignment</i> **	Used in Verification**

SIP Data Element Name	Collected for:
<i>Admission Diagnosis of Infection</i>	All SIP Measures
<i>Antibiotic Administration Date</i>	All SIP Measures
<i>Antibiotic Administration Route</i>	SIP-1, SIP-2
<i>Antibiotic Administration Time</i>	All SIP Measures
<i>Antibiotic Allergy</i>	SIP-2
<i>Antibiotic Name</i>	All SIP Measures
<i>Antibiotics During Stay</i>	All SIP Measures
<i>Antibiotics Prior to Arrival</i>	All SIP Measures
<i>ASA Score</i> *	SIP Optional Data Element*
<i>Beta Blockers</i> *	SIP Optional Data Element*
<i>Blood Sugar</i> *	SIP Optional Data Element*
<i>Bowel Prep</i> *	SIP Optional Data Element*
<i>DVT Interventions</i> *	SIP Optional Data Element*

¹ Case Identifier is required for all episodes of care collected for the Joint Commission

² These patient identifiers are required to uniquely identify an episode of care for the National Voluntary Hospital Reporting Initiative.

<i>DVT Prophylaxis*</i>	SIP Optional Data Element*
<i>Infection Prior to Anesthesia</i>	All SIP Measures
<i>Oxygen*</i>	SIP Optional Data Element*
<i>Oral Antibiotics</i>	All SIP Measures
<i>Other Surgeries</i>	SIP-3
<i>Postoperative Infections</i>	SIP-3
<i>Prophylactic Antibiotic</i>	SIP-2, SIP-3
<i>Surgery End Date</i>	SIP-3
<i>Surgery End Time</i>	SIP-3
<i>Surgery Performed During Stay</i>	All SIP Measures
<i>Surgery Start Date</i>	All SIP Measures
<i>Surgical Incision Time</i>	All SIP Measures
<i>Temperature*</i>	SIP Optional Data Element*
<i>Temperature Obtained*</i>	SIP Optional Data Element*
<i>Type of Infection*</i>	SIP Optional Data Element*
<i>Type of Surgery</i>	All SIP Measures
<i>Wound Class*</i>	SIP Optional Data Element*

*CMS ONLY

**Joint Commission ONLY

Surgical Infection Prevention Measure Population

The Surgical Infection Prevention (SIP) measure population can be initially identified by eight data elements that are common to all of the performance measures in the set:

- *Admission Date*
- *Birthdate*
- *ICD-9-CM Principal Procedure Code*
- *ICD-9-CM Other Procedure Code*
- *ICD-9-CM Principal Diagnosis Code*
- *Admission Diagnosis of Infection*
- *Surgery Performed During Stay*
- *Infection Prior to Anesthesia*

An ICD-9-CM Principal or Other Procedure code of a Surgical Procedure of Interest is required for inclusion in the population as identified in Appendix A, Table 5.01-5.08. The patient must have either an *ICD-9-CM Principal Procedure Code* of a surgical procedure of interest, or an *ICD-9-CM Other Procedure Code* of a surgical procedure of interest.

The Surgical Procedures noted in Appendix H, Table 1.9 alone will only identify patients to be included in a broad sense. However, patients with other conditions present must then be eliminated from the measure population. This is, in part, accomplished by using the *ICD-9-CM Principal Diagnosis Code* wherein patients who have an infection prior to surgery are eliminated. Even if this infection is not a principal diagnosis, if the admission diagnosis is suggestive of an infectious process as identified in the data element *Admission Diagnosis of Infection* the case is also eliminated. Additionally, if there is documentation that the patient is being treated for an infection prior to the surgical procedure of interest whether prior to admission or in the hospital prior to anesthesia for the surgery, that patient is also removed from the measure population, as identified in *Infection Prior to Anesthesia*.

To be included in the SIP population, a patient must have a surgical procedure of interest performed during the hospital stay and must have no indication whatsoever of an infectious process prior to that procedure.

The patient must be 18 years of age or older for inclusion in the measure population.

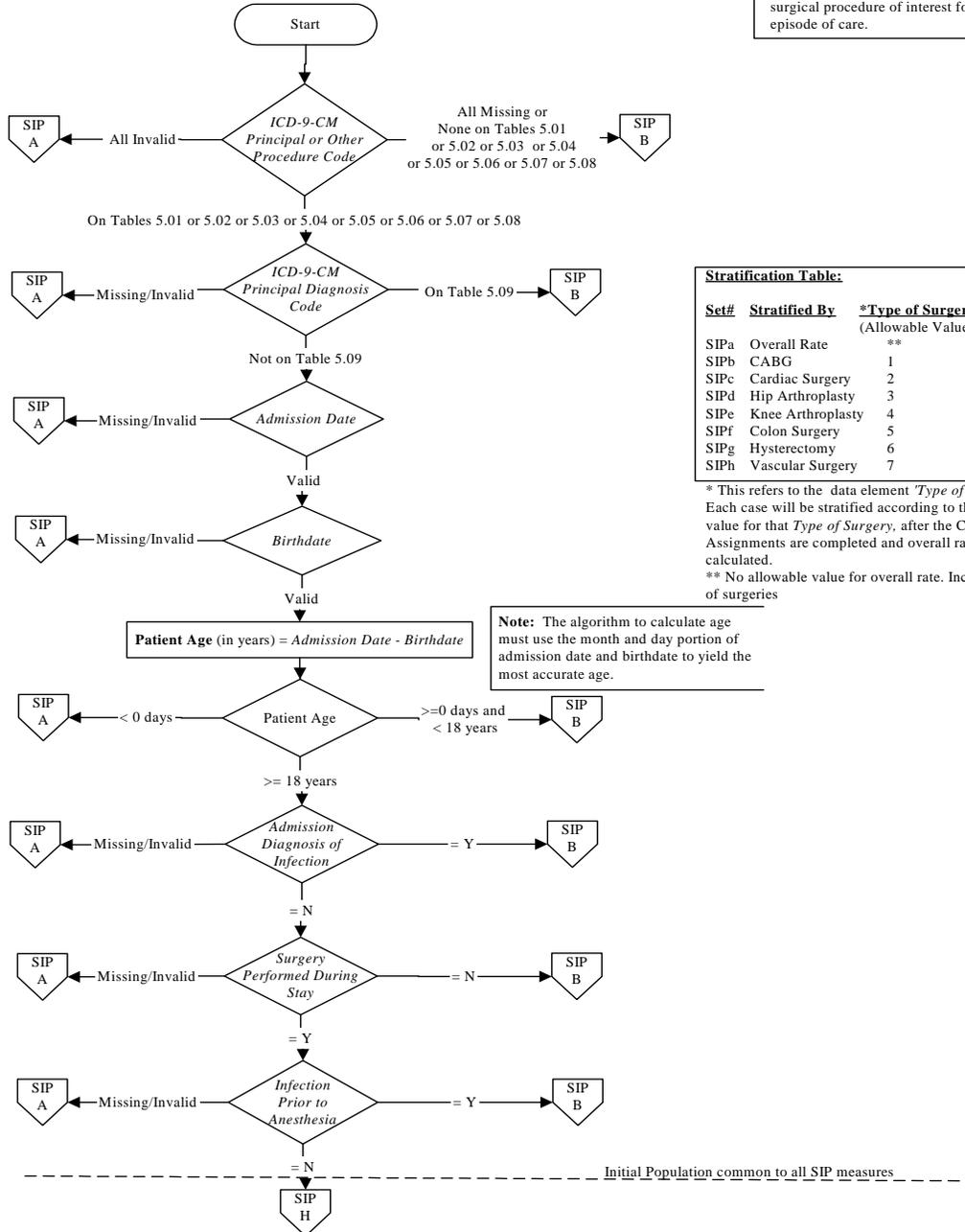
Each of the 3 SIP measures, in addition to the overall rate calculated for each measure, is stratified into 7 subcategories, based upon the *Type of Surgery* performed. The overall rate is calculated using all cases that fall into the measure population regardless of type of surgery. Each subcategory, or stratum, is calculated using only those cases that meet the discrete criteria for that stratum. For the SIP core measure set, stratification is established through the data element, *Type of Surgery*. Stratification will provide Health Care Organization's (HCO's) with "drill down" capability, in evaluating antibiotic timing and selection rates by *Type of Surgery*.

Each allowable value represents one of the seven strata: 1) CABG, 2) Cardiac, 3) Hip arthroplasty, 4) Knee arthroplasty, 5) Colon surgery, 6) Hysterectomy, 7) Vascular Surgery. Appendix A, Tables 5.01-5.08, contains the ICD-9-CM codes for the Procedures of Interest for SIP. Please refer to the “Steps To Calculate Rates And Measurements” section for additional details and examples related to stratification.

Note to Programmers: The Measure Set ID numbers for each SIP measure range from 1a-1h, 2a-2h and 3a-3h for SIP-1, 2 and 3 respectively, where “a” is the overall rate. The Type of Surgery data element allowable values (1-7) are not directly aligned with the ICD-9-CM Procedure Codes in Appendix A, Tables 5.0-5.08. The Type of Surgery data element allowable values and the ICD-9-CM code tables do not match the sequence of Measure ID strata (b-h). Programmers should be aware of this as they code for stratification.

Initial population, common to all measures in the SIP set

Note: If two procedures of interest are performed during the same operative time frame, choose the surgery listed as the principal procedure as the surgical procedure of interest for the specific episode of care.



Stratification Table:

Set#	Stratified By	*Type of Surgery (Allowable Value)
SIPa	Overall Rate	**
SIPb	CABG	1
SIPc	Cardiac Surgery	2
SIPd	Hip Arthroplasty	3
SIPe	Knee Arthroplasty	4
SIPf	Colon Surgery	5
SIPg	Hysterectomy	6
SIPh	Vascular Surgery	7

* This refers to the data element 'Type of Surgery'. Each case will be stratified according to the allowable value for that Type of Surgery, after the Category Assignments are completed and overall rate is calculated.
 ** No allowable value for overall rate. Includes all types of surgeries

Note: The algorithm to calculate age must use the month and day portion of admission date and birthdate to yield the most accurate age.

Initial Population common to all SIP measures