## Prophylactic Antibiotic Regimen Selection for Surgery

<table>
<thead>
<tr>
<th>Surgical Procedure</th>
<th>Approved Antibiotics</th>
</tr>
</thead>
<tbody>
<tr>
<td>CABG, Other Cardiac or Vascular</td>
<td>Cefazolin, Cefuroxime, Vancomycin** Table 3.8 or Clindamycin* Table 3.9</td>
</tr>
<tr>
<td></td>
<td>If β-lactam allergy: Vancomycin* Table 3.8 or Clindamycin* Table 3.9</td>
</tr>
<tr>
<td>Hip/Knee Arthroplasty</td>
<td>Cefazolin or Cefuroxime Table 3.2 or Vancomycin** Table 3.8</td>
</tr>
<tr>
<td></td>
<td>If β-lactam allergy: Vancomycin* Table 3.8 or Clindamycin* Table 3.9</td>
</tr>
<tr>
<td>Colon</td>
<td>Cefotetan, Cefoxitin, Ampicillin/Sulbactam Table 3.5, or Ertapenem† Table 3.6b</td>
</tr>
<tr>
<td></td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td>Cefazolin or Cefuroxime Table 3.2 + Metronidazole Table 3.6a</td>
</tr>
<tr>
<td></td>
<td>If β-lactam allergy: Clindamycin Table 3.9 + Aminoglycoside Table 2.11, or Clindamycin Table 3.9 + Quinolone Table 3.12, or Clindamycin Table 3.9 + Aztreonam Table 2.7</td>
</tr>
<tr>
<td></td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td>Metronidazole Table 3.6a with Aminoglycoside Table 2.11, or Metronidazole Table 3.6a + Quinolone Table 3.12</td>
</tr>
<tr>
<td>Hysterectomy</td>
<td>Cefotetan, Cefazolin, Cefoxitin, Cefuroxime, or Ampicillin/Sulbactam Table 3.7</td>
</tr>
<tr>
<td></td>
<td>If β-lactam allergy: Clindamycin Table 3.9 OR Metronidazole Table 3.6a</td>
</tr>
<tr>
<td>Special Considerations</td>
<td>*For cardiac, orthopedic, and vascular surgery, if the patient is allergic to β-lactam antibiotics, Vancomycin or Clindamycin are acceptable substitutes. **Vancomycin is acceptable with a physician/APN/PA documented justification for its use (see data element Vancomycin) † A single dose of ertapenem is recommended for colon procedures.</td>
</tr>
</tbody>
</table>
SCIP-INF-2: Prophylactic Antibiotic Selection for Surgical Patients

**Numerator:** Number of surgical patients who received prophylactic antibiotics recommended for their specific surgical procedure.

**Denominator:** All selected surgical patients with no evidence of prior infection.

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**Variable Key:**
- Antibiotic Days I
- Antibiotic Timing I
- Antibiotic Days II
- Antibiotic Timing II
- Surgery Days
- Abxday Flag

---

**Impact:**
- Each case will be stratified according to the principal procedure code after the Category Assignments are completed and the overall rate is calculated.

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**Stratification Table:**

<table>
<thead>
<tr>
<th>SCIP-INF-2a</th>
<th>Overall Rate</th>
<th><strong>(Allowable Value)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>SCIP-INF-2b</td>
<td>CABG</td>
<td>Table 5.01</td>
</tr>
<tr>
<td>SCIP-INF-2c</td>
<td>Other Cardiac Surgery</td>
<td>Table 5.02</td>
</tr>
<tr>
<td>SCIP-INF-2d</td>
<td>Hip Arthroplasty</td>
<td>Table 5.04</td>
</tr>
<tr>
<td>SCIP-INF-2e</td>
<td>Knee Arthroplasty</td>
<td>Table 5.05</td>
</tr>
<tr>
<td>SCIP-INF-2f</td>
<td>Colon Surgery</td>
<td>Table 5.03</td>
</tr>
<tr>
<td>SCIP-INF-2g</td>
<td>Hysterectomy</td>
<td>Table 5.06 Or 5.07</td>
</tr>
</tbody>
</table>

**INF-2** Vascular Surgery | Table 5.08

*This refers to the data element "ICD-9-CM Principal Procedure Code". Each case will be stratified according to the principal procedure code, after the Category Assignments are completed and the overall rate is calculated.

No allowable value exists for the overall rate. It includes all procedures on Tables 5.01 to 5.08.
Specifications Manual for National Hospital Inpatient Quality Measures

Discharges 10-01-08 (4Q08) through 03-31-09 (1Q09)
Antibiotic Days I = \text{Surgery Start Date} - \text{Antibiotic Administration Date} \text{ (in days)}

- If Antibiotic Days I > 1 for at least one antibiotic dose, do not proceed.
- If Antibiotic Days I = 1 \text{ for ANY antibiotic dose}, proceed with antibiotic doses that have an associated non-UTD date.

\text{Antibiotic Administration Date} \text{ = UTD for all antibiotic doses}

- If Antibiotic Days I \leq 0 \text{ for ALL antibiotic doses}, do not proceed.

\text{Non-UTD Value}

\text{Antibiotic Administration Time} \text{ = UTD for any antibiotic dose with 'Antibiotic Days I = 1'}

- If Antibiotic Days I > 1 for any antibiotic dose, proceed with antibiotic doses that have Antibiotic Timing I calculated, or Antibiotic Days I \leq 0.

\text{Antibiotic Timing I} = \text{Surgery Start Date and Surgical Incision Time} - \text{Antibiotic Administration Date and Antibiotic Administration Time} \text{ (in minutes)}.

Calculate Antibiotic Timing I for all antibiotic doses with non-UTD date and time. Proceed with antibiotic doses that have Antibiotic Timing I calculated, or Antibiotic Days I \leq 0.

\text{Not on Table 5.03}

\text{On Table 5.03}

- If Antibiotic Timing I \geq 1440 minutes for any antibiotic dose, proceed with antibiotic doses that have Antibiotic Timing I calculated, or Antibiotic Days I \leq 0.

\text{≤ 1440 minutes for all antibiotic doses with non-UTD date and time. Proceed with antibiotic doses that have Antibiotic Timing I calculated, or Antibiotic Days I \leq 0.}

\text{Note:} \text{ Proceed only with antibiotic doses on Table 2.1 in Appendix C.}

\text{Note:} \text{ Proceed only with antibiotic doses that have an associated non-UTD date.}

\text{Note:} \text{ 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 'UTD'.}
Antibiotic Days II = Antibiotic Administration Date - Surgery End Date (in days)

Antibiotic Days II ≤ 0 for all doses of all Antibiotics

Antibiotic Days II > 0 for at least one dose of any antibiotic

Initialize Abxday flag = ‘No’ for each antibiotic dose.
Set Abxday flag = ‘Yes’ for each antibiotic dose where Antibiotic Days II ≤ 0.

For each case, proceed ONLY with those antibiotic doses that satisfy at least one of the following conditions:
- Antibiotic Timing II <= 1440.
- Abxday flag = Y

Antibiotic Timing II = Antibiotic Administration Date - Antibiotic Administration Time - Surgery End Date and Surgery End Time (in minutes).

Calculate Antibiotic Timing II for all antibiotic doses with non-UTD date and time.
Proceed with antibiotic doses that have Antibiotic Timing II calculated, or Abxday flag = Yes.
STOP here for CMS. CONTINUE to “N” for The Joint Commission.
Not in Measure Population

Overall Rate Category Assignment

- B or X

- D or E

ICD-9-CM Principal Procedure Code

On Table 5.01

On Table 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08

ICD-9-CM Principal Procedure Code

On Table 5.02

On Table 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08

ICD-9-CM Principal Procedure Code

On Table 5.04

On Table 5.03 or 5.05 or 5.06 or 5.07 or 5.08

INF-2 N

Note: Initialize the Measure Category Assignment for each strata measure (b-h) = 'B'.

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 the appropriate Measure Category Assignment to be equal to the overall rate's (SCIP-INF-2a) Measure Category Assignment.

INF-2 Z

Set the Measure Category Assignment for measure SCIP-INF-2b = the Measure Category Assignment for measure SCIP-INF-2a

INF-2 Z

Set the Measure Category Assignment for measure SCIP-INF-2c = the Measure Category Assignment for measure SCIP-INF-2a

INF-2 Z

Set the Measure Category Assignment for measure SCIP-INF-2d = the Measure Category Assignment for measure SCIP-INF-2a

INF-2 O

For all Stratified Measures (b-h)

Overall Rate Category Assignment

- B or X

- D or E

ICD-9-CM Principal Procedure Code

On Table 5.01

On Table 5.02 or 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08

ICD-9-CM Principal Procedure Code

On Table 5.02

On Table 5.03 or 5.04 or 5.05 or 5.06 or 5.07 or 5.08

ICD-9-CM Principal Procedure Code

On Table 5.04

On Table 5.03 or 5.05 or 5.06 or 5.07 or 5.08

INF-2 N
For Stratified Measure SCP-INF-2e
Set the Measure Category Assignment for measure SCP-INF-2e = the Measure Category Assignment for measure SCP-INF-2a

On Table 5.05

For Stratified Measure SCP-INF-2f
Set the Measure Category Assignment for measure SCP-INF-2f = the Measure Category Assignment for measure SCP-INF-2a

On Table 5.03 or 5.06 or 5.07 or 5.08

For Stratified Measure SCP-INF-2g
Set the Measure Category Assignment for measure SCP-INF-2g = the Measure Category Assignment for measure SCP-INF-2a

On Table 5.06 or 5.07 or 5.08

For Stratified Measure SCP-INF-2h
Set the Measure Category Assignment for measure SCP-INF-2h = the Measure Category Assignment for measure SCP-INF-2a

On Table 5.08

Stop