**SCIP-INF-3: Prophylactic antibiotics discontinued within 24 hours after surgery end time**

**NQF# 0529**

**Developer:** Centers for Medicare & Medicaid Services/The Joint Commission

**Data Source:** CMS Hospital Compare

**Description:** This measure is used to assess the percent of surgical patients whose prophylactic antibiotics were discontinued within 24 hours after anesthesia end time (within 28 hours for CABG or other cardiac surgery).

**Rationale:** A goal of prophylaxis with antibiotics is to provide benefit to the patient with as little risk as possible. It is important to maintain therapeutic serum and tissue levels throughout the operation. Intraoperative re-dosing may be needed for long operations. However, administration of antibiotics for more than a few hours after the incision is closed offers no additional benefit to the surgical patient. Prolonged administration does increase the risk of Clostridium difficile infection and the development of antimicrobial resistant pathogens.

**Evidence for Rationale:**

**Numerator:** Number of surgical patients whose prophylactic antibiotics were discontinued within 24 hours after anesthesia end time (48 hours for CABG or other cardiac surgery).

**Denominator:** All selected surgical patients with no evidence of prior infection (see Appendix A, Table 5.10 and Tables 5.01-5.08 of the Specifications Manual for the list of selected surgeries).

**Impact:**
- Affects large numbers, frequently performed procedure
- Surgical site infection (SSIs) are the second most common cause of healthcare associated infections. SSIs account for 14-16% of all hospital-acquired infections and are among the most common complications of care, occurring in 2 to 5% of patients after clean extra-abdominal operations and up to 20% of intra-abdominal procedures. Among surgical patients, SSIs account for 40% of all such hospital-acquired infections. By reducing SSIs, hospitals on average could recognize a savings of $3,152 and a reduction in extended length of stay by seven days on each patient developing an infection.

**Evidence of High Impact:**

**Opportunity:**
- Opportunity for improvement exists, as demonstrated by the coefficient of variation for the measure.

**Evidence:**
- This measure is supported by evidence. A formal assessment of the evidence rated the evidence from 1A to 2C.
- The majority of published evidence shows that prophylaxis after wound closure is unnecessary. Prolonged use can promote resistance.

**Citations for Evidence:**
- Scher KS. Studies on the duration of antibiotic administration for surgical prophylaxis.

**References:**
http://qualitymeasures.ahrq.gov/content.aspx?id=27413&search=antibiotic+discontinued