

## Patient Safety Quality Measures for the Surgical Care Improvement Project

### Measure

### Rationale

### Strategy

	Measure	Rationale	Strategy
<b>SCIP-Inf-1</b>	Prophylactic antibiotics are administered one hour prior to incision.	Studies find that the lowest incidence of post-operative infection is associated with antibiotic administration during the one hour prior to surgery. The risk of infection increases progressively with greater time intervals between administration of the antibiotic and the skin incision.	<ul style="list-style-type: none"> <li>• Include administration and documentation of the antibiotic in the surgical time out.</li> <li>• For one-hour antibiotics, the antibiotic is hung in pre-op, a surgical team member administers and documents the antibiotic infusion.</li> </ul>
<b>SCIP-Inf-2</b>	Prophylactic antibiotics are consistent with current guidelines (specific to each type of surgical procedure).	Use an agent that is safe, cost-effective, and has a spectrum of action that covers most of the probable intraoperative contaminants for the operation. First- or second-generation cephalosporins satisfy these criteria for most operations, although anaerobic coverage is needed for colon surgery.	<ul style="list-style-type: none"> <li>• The use of pre-printed orders that include the recommended antibiotic will assist surgeons with choosing appropriate antibiotics.</li> <li>• Vancomycin is appropriate if there is a risk of MRSA.</li> </ul>
<b>SCIP-Inf-3</b>	Prophylactic antibiotics are to be discontinued within 24 hours after anesthesia end time. The discontinuation time extends to 48 hours for cardiac surgery patients.	Administration of antibiotics for more than a few hours after the incision is closed offers no additional benefit to the surgical patient. Prolonged administration increases the risk of <i>Clostridium difficile</i> infection and the development of antimicrobial resistant pathogens.	<ul style="list-style-type: none"> <li>• Begin antibiotics in the PACU.</li> <li>• Administer cephalosporins every 6 hours rather than every 8 hours.</li> <li>• Antibiotics are not provided for more than 24 hours after surgery without appropriate documentation.</li> </ul>
<b>SCIP-Inf-4</b>	Cardiac surgery patients with controlled 6 a.m. blood glucose ( $\leq 200$ mg/dL) for the first two postoperative days.	Hyperglycemia in the immediate postoperative phase increases the risk of infection in both diabetic and non-diabetic patients; the higher the level of hyperglycemia, the higher the potential for infection in both patient populations.	<ul style="list-style-type: none"> <li>• Blood glucose levels are monitored from pre-op through 48 hours post operative.</li> <li>• The use of an insulin protocol for treating hyperglycemia with an insulin drip is strongly recommended.</li> </ul>
<b>SCIP-Inf-9</b>	Surgical patients with urinary catheter removed on Postoperative Day 1 or Postoperative Day 2 with day of surgery being day zero. (This measure does not apply to certain urological, gynecological or perineal procedures.)	It is well-established that the risk of catheter-associated urinary tract infection (UTI) increases with increasing duration of indwelling urinary catheterization.	<ul style="list-style-type: none"> <li>• Create a system of alerts or reminders to identify all patients with urinary catheters and assess the need for continued catheterization.</li> <li>• Develop guidelines and protocols for nurse-directed removal of unnecessary urinary catheters and management of postoperative urinary retention.</li> <li>• Consider the use of external catheters for cooperative males</li> </ul>
<b>SCIP-Inf-10</b>	Surgical patients should be actively warmed during surgery or have at least one recorded body temperature equal to or greater than 96.8° F within 30 minutes prior to the end of anesthesia to 15 minutes after anesthesia end time. (Patients with intentional hypothermia are excluded from this measure.)	Research has correlated impaired wound healing, adverse cardiac events, altered drug metabolism, and coagulopathies with unplanned perioperative hypothermia. A study by Kurtz, et al. (1996), found that incidence of culture-positive surgical site infections among those with mild perioperative hypothermia was three times higher than the normothermic perioperative patients.	<ul style="list-style-type: none"> <li>• Use aggressive warming measures during surgery.</li> <li>• Ensure accurate documentation of post-operative temperature.</li> </ul>

**Measure**

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<p><b>SCIP-CARD-2</b></p>	<p>Surgery patients on beta-blockers prior to admission should continue beta-blocker therapy during the perioperative period.</p>	<p>The American College of Cardiology and the American Heart Association recommend continuation of beta-blocker therapy in the perioperative period as a class I indication, and accumulating evidence suggests that titration to maintain tight heart rate control should be the goal.</p>	<ul style="list-style-type: none"> <li>• Instruct patients to take their beta blockers the day of surgery.</li> <li>• Educate in-house clinicians about the importance of patients receiving their beta blockers the day of surgery, even while the patients are otherwise NPO.</li> <li>• Meet with physician office staff to ensure consistent instructions to the patients.</li> </ul>
<p><b>SCIP-VTE-1</b></p>	<p>Surgery patients with recommended venous thromboembolism (VTE) prophylaxis ordered anytime from hospital arrival to 24 hours after <i>Anesthesia End Time</i>.</p>	<p>Despite the evidence that VTE is one of the most common postoperative complications and prophylaxis is the most effective strategy to reduce morbidity and mortality, it is often underused. The frequency of venous thromboembolism (VTE), which includes deep vein thrombosis and pulmonary embolism, is related to the type and duration of surgery, patient risk factors, duration and extent of postoperative immobilization, and use or nonuse of prophylaxis.</p>	<ul style="list-style-type: none"> <li>• Use pre-printed orders that include nationally recommended guidelines for VTE prophylaxis.</li> <li>• A “hard stop” would be not to allow patients to leave the recovery area until VTE orders are completed by the surgeon.</li> <li>• Ensure that surgeon “preference” cards mirror national guidelines.</li> <li>• Pharmacists should assist surgeons with understanding the risk of bleeding with pharmacological interventions.</li> </ul>
<p><b>SCIP-VTE-2</b></p>	<p>Surgery patients who received appropriate venous thromboembolism (VTE) prophylaxis within 24 hours prior to <i>Anesthesia Start Time</i> to 24 hours after <i>Anesthesia End Time</i>.</p>	<p>Timing of prophylaxis is based on the type of procedure, prophylaxis selection, and clinical judgment regarding the impact of patient risk factors. The optimal start of pharmacologic prophylaxis in surgical patients varies and must be balanced with the efficacy-versus-bleeding potential. Due to the inherent variability related to the initiation of prophylaxis for surgical procedures, 24 hours prior to surgery to 24 hours post surgery was recommended by consensus of the SCIP Technical Expert Panel in order to establish a timeframe that would encompass most procedures.</p>	<ul style="list-style-type: none"> <li>• (Please note that rates for SCIP-VTE- 2 may be lower than those for SCIP-VTE-1 as a result of more stringent criteria. SCIP-VTE-2 requires documentation that prophylaxis was ordered and actually started, whereas SCIP-VTE-1 requires only documentation of an order. )</li> <li>• Organizations with decreased VTE 2 rates should assess their processes to determine why physician orders are not being implemented.</li> </ul>

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