Safety Action Bundle: Surgical Site Infections (SSI)

**Background**
- Surgical site infections (SSI) are the third most frequently reported health care-associated infection (HAI).
- SSIs are associated with significant patient morbidity and mortality. It is estimated that between 750,000 and 1 million SSIs occur in the United States each year, extending hospital stays by 3.7 million extra days and generating more than $1.6 billion in excess hospital charges each year.
- Hyperglycemia in surgical patients, with and without diabetes, is associated with poorer clinical outcomes and HAI.

**Aim**
To reduce the incidence of Surgical Site Infections by 40% by December 31, 2013.

*Hospitals in top quartile (zero) should focus on maintenance and hardwiring.*

**Measures**

| Outcome: | Surgical Site Infections Rate per Centers for Medicare and Medicaid (CMS) and State Law | D |
| Process: | SSI Perfect Care Bundle Qualis Health | D |
| Submit: | National Healthcare Safety Network (NHSN) | D |

**Core Strategies**

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<td>Set aims, goals and timelines for practice changes.</td>
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<td>Identify administrative and clinical leaders to champion initiative.</td>
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<td>Educate care providers including information about surgical infections and how to prevent including the bundle. Ensure that new staff are educated as they begin caring for patients.</td>
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<td>Educate clinicians about identification of high risk patients and additional steps that can be taken to help keep these patients safe.</td>
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| Pre-Operative Period | Antimicrobial prophylaxis administered within one hour prior to incision (two hours for Vancomycin and Fluoroquinolones). | | |
| | Select appropriate antimicrobial agents for surgery type, that is consistent with published guidelines. | | |
| | Evaluate if hair removal is needed. If so, use clippers and not razors. | | |

| Intra-Operative Period | Pause and have surgeon review surgical checklist. Establish teamwork including ability to speak up. | | |

October 2012
## Surgical Site Infection (SSI)

### Verbal pause at the three critical points involving all surgery team members: prior to anesthesia, prior to incision and prior to patient leaving the operating room.

### Skin Prep: Wash and clean skin around incision site using a 2 percent chlorhexidine gluconate product.

### Standardize procedures for active warming in the operating room (Maintain body temp $\geq 96.8^\circ F/36.0^\circ C$).

*For example, warming blankets under patients on the operating table.*

### Discontinue antibiotics within 24 hours after surgery end time (48hrs for cardiac).

### Cardiac Patients: Blood glucose level at 6AM on day one following surgery and day two following surgery should be $<200$mg/dL.

### Surgical wound dressing: Protect primary closure incisions with sterile dressing for 24-48 hours post-op.

### VTE Prophylaxis: Surgery patients will be given appropriate venous thromboembolism prophylaxis within 24 hours prior to surgery to 24 hours after surgery end time.

### Present your performance compared to others, to the board and other key stakeholder groups.

### Intervene with insulin bolus or continuous infusion if blood glucose is 180 mg/dL or higher both before surgery and for at least 48 hours after surgery.

### Have blood glucose in control prior to patient arriving for surgery.

### If continuing to have surgical infections, segment population and implement the following:

- Change pre-surgical bowel preparation procedure.
- Create process for obese patients such as removing suture or staples later, consider using oxygen to help heal, types of dressing, and if closure needs to be different.
- Chlorhexidine baths in adult patients with history of recurrent colonizations, infections, or at high risk of sequelae.

### Encourage and support patient and family participation in care planning and decision making using materials like the FAQ available through the CDC.

### Educate patient and family on bundle and how they can help remind staff.

### When an infection occurs, interview all staff, patient, and family for ways in which this might have occurred.
Hardwiring

| Culture | ☐ Promote a blame-free environment where individuals are able to report errors or near misses without fear of reprimand or punishment.  
☐ Encourage collaboration across ranks and disciplines to seek solutions for patient safety problems.  
☐ Promote transparency of results from display on units to the board and public. |

Key Resources

   http://www.publichealthreports.org/issueopen.cfm?articleID=1813.