**Surgical Complications Core Processes (SCIP)**

Establish reliable assessment and treatment to reduce surgical complications with the core processes established by the Surgical Care Improvement Project (SCIP).

### Domain

**Patient Care Processes:**
Clinical processes that ensure delivery of high-quality care to individual patients

### Aims

- **Effective:**
  An evidence-based practice that produces better outcomes than its alternative

- **Timely:**
  Care delivery that is prompt and provided without delay to mitigate any harm to a patient

- **Safe:**
  Delivery of care in a manner that minimizes any risk of harm to a patient

### Process Attributes

<table>
<thead>
<tr>
<th>Icon</th>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
</table>
| $    | Cost to Implement | The monetary resources required to implement this process  
Minimal: Just the cost of the improvement effort itself |
|      | Time to Implement | The amount of time, from months to years, it will take on average to establish this process  
Fewer than 12 months |
|      | Difficulty to Implement | The challenges of implementing this process  
Moderately Challenging: Either involves multiple units or disciplines OR requires a substantial shift in culture and/or operations, but not both of these |
|      | Level of Evidence | The degree to which the actions in this process are supported by research and experience; based on the Cochrane scale  
Strong Evidence: Level I or Level II — Studies published using randomized trials |

---

http://app.ihi.org/imap/tool/#process=9102c77f-e32e-4677-be9f-a5db8329040

Copyright © 2009 Institute for Healthcare Improvement All rights reserved. Individuals may photocopy these materials for educational, not-for-profit uses, provided that the contents are not altered in any way and that proper attribution is given to IHI as the source of the content. These materials may not be reproduced for commercial, for-profit use in any form or by any means, or republished under any circumstances, without the written permission of the Institute for Healthcare Improvement.
**Details**

**Elements**

- **Surgical Site Infection Prevention**
  - Appropriate use of prophylactic antibiotics:
    - Prophylactic antibiotic received within 1 hour prior to surgical incision
    - Prophylactic antibiotic selection for surgical patients consistent with national guidelines (as defined in JCAHO/CMS Specification Manual and SCIP for Measure SCIP-Inf-2)
    - Prophylactic antibiotics discontinued within 24 hours after surgery end time (48 hours for cardiac patients).
  - Appropriate hair removal
    - Controlled 6:00 AM postoperative serum glucose in cardiac surgery patients
    - Urinary catheter removed on postoperative day 1 (POD 1) or postoperative day 2 (POD 2) with day of surgery being day zero
    - Surgery patients with perioperative temperature management

- **Beta Blockers Continuation**
  - Beta blockers for patients on beta blockers prior to admission

- **Venous Thromboembolism (VTE) Prophylaxis**
  - Venous thromboembolism prophylaxis ordered
  - Appropriate VTE prophylaxis given between 24 hours prior and 24 hours after surgery

**Outcomes**

- **Mortality (HSMR):** Decreased mortality (hospital standardized mortality ratio, or HSMR)
- **Harm:** Decreased harm to patient (e.g., Harms per 100 patient days, as measured by the IHI Global Trigger Tool)
- **Cost of Care:** Decreased cost per inpatient case
- **Readmissions within 30 Days:** Decreased readmissions within 30 days
- **Reliability:** Increased delivery of evidence-based care 100% of the time

**Service Lines and Critical Functions**

- Cardiac
- Surgical

**Key Measures**

- **Perioperative Adverse Events**
  - Numerator: Perioperative adverse events
  - Denominator: 1000 patient days using IHI Trigger Tool for Measuring ADEs

- **Rate of Surgical Site Infection**
  - Rate of surgical site infection for Class 1 and 2 wounds within 30 days of surgery

- **SCIP Measures**
  - SCIP-Inf-2: Prophylactic antibiotic selection for surgical patients
  - SCIP-Inf-3: Prophylactic antibiotics discontinued within 24 hours after surgery end time (48 hours for cardiac patients)
  - SCIP-Inf-4: Cardiac surgery patients with controlled 6 a.m. postoperative serum glucose
  - SCIP-Inf-6: Surgery patients with appropriate hair removal
  - SCIP-Inf-9: Urinary catheter removed on postoperative day 1 (POD 1) or postoperative day 2 (POD 2) with day of surgery being day zero
  - SCIP-Inf-10: Surgery patients with perioperative temperature management
  - SCIP-Card-2: Surgery patients on a beta-blocker prior to arrival who received a beta-blocker during the perioperative period
  - SCIP-VTE-1: Surgery patients with recommended venous thromboembolism prophylaxis ordered
  - SCIP-VTE-2: Surgery patients who received appropriate venous thromboembolism prophylaxis within 24 hours prior to surgery to 24 hours after surgery

**Reasons and Implications**

**Importance for Patients and Families**

Providing specific treatments to surgical patients at the right time speeds healing and prevents them from having several serious complications.
Requirement, Standards, Policies, and Guidelines

- Centers for Medicare & Medicaid Services (CMS)
- National Priorities Partnership (NPP)
  Safety
- National Quality Forum (NQF)
  Safe Practice for Better Healthcare—2009 Update
  Safe Practice 22: Surgical-Site Infection Prevention
- Premier
  A supporting partnership organization of the Surgical Care Improvement Project (SCIP)
- The Joint Commission (TJC)

Financial Implications

- Expense reduction can occur due to reduced cost of treating complications (e.g., supplies, medications, possible hospital days).

Prerequisites

None for this process

Resources

Additional Resources

- The Journal of the American Medical Association (JAMA)
  Adherence to Surgical Care Improvement Project Measures and the Association With Postoperative Infections
- The Joint Commission (TJC)
  Surgical Care Improvement Project (SCIP) Improvement Project
- US Department of Health and Human Services
  Partnership for Patients
- Surgical Care Improvement Project (SCIP)

Information Compiled By

IHI