

Surgical Care, Pneumonia, Immunizations and Emergency Department Core Measures

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Resources for better healthcare

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Learning Objectives



- Outline the CMS core measures for surgical care and pneumonia
- Describe the global immunization and emergency department measures for admitted patients



Surgical Care Improvement Project (SCIP)

SCIP



- 30 million operations each year in the U.S.
- 22 percent of preventable deaths attributed to post-operative complications
- Approximately 500,000 Surgical Site Infections (SSIs) occur annually in the U.S.
- Patients that develop SSI have twice the mortality and are:
 - ▣ 60 percent more likely to spend time in the ICU
 - ▣ 5 times more likely to be readmitted

SCIP Measures



- Infection Prevention:
 - ▣ Antibiotic given within one hour prior to surgery start
 - ▣ Recommended antibiotic given
 - ▣ Antibiotic dc'd within 24 hours after surgery end
 - ▣ Cardiac surgery patients with controlled 6 AM post-op blood glucose
 - ▣ Appropriate hair removal
 - ▣ Perioperative temperature management
 - ▣ Urinary catheter removal on POD1 or POD2

SCIP Measures *(continued)*



- Venous Thromboembolism (VTE) Prophylaxis
 - ▣ Recommended VTE Prophylaxis ordered
 - ▣ Appropriate prophylaxis administered within 24 hours prior to surgery to 24 hours after surgery

- Cardiovascular
 - ▣ Beta-blocker therapy during perioperative period for patients on beta-blocker prior to arrival



Evidence Supporting the Measures

Evidence:

Appropriate Hair Removal



- Shaving with a razor creates small nicks at the surgical site that can become infected
- Hair removal with a clipper or depilatories results in significantly lower infection rates

Evidence: Normothermia



- Hypothermia causes vasoconstriction, reducing delivery of IV medications
- Hypothermia suppresses the immune system
- In one study, colorectal surgery patients that maintained normothermia had an infection rate two-thirds lower than control patients

Evidence: Urinary Catheter Removal by POD-2



- Surgical patients who have urinary catheters greater than two days post-operatively are 21 percent more likely to develop UTI, significantly less likely to be discharged to home and have a significant increase in mortality at 30 days
- Risk of catheter-associated UTI increases with increasing duration of indwelling catheter

Evidence: VTE Prophylaxis



- Surgical patients are 20 times more likely to develop VTE (deep vein thrombosis or pulmonary embolism)
- Pulmonary Embolism causes 300,000 deaths per year and is the third leading cause of hospital death
- Use of anticoagulants and intermittent compression devices provides effective prophylaxis

Evidence: Prophylactic Antibiotics



- Antibiotics are most effective when given within one hour prior to surgery
- Short-duration antibiotics are as effective in preventing infection as long-duration antibiotics
- Long-duration antibiotics are more likely to cause development of drug-resistant bacteria

Evidence: Blood Glucose Control



- CABG patients with uncontrolled blood glucose have significantly higher infection rates
- Deep wound infections in diabetic cardiac surgery patients were reduced by controlling mean blood glucose levels below 200mg/dL

Evidence: Beta Blocker



- Beta blockers cause vasodilation and reduce peripheral vascular resistance
- Discontinuing beta blockers for patients already on them prior to arrival, significantly increases mortality

SCIP Tid-Bits



- SCIP Population has eight strata
 - ▣ CABG stratum
 - ▣ Other cardiac surgery stratum
 - ▣ Hip arthroplasty stratum
 - ▣ Knee arthroplasty stratum
 - ▣ Colon Surgery stratum
 - ▣ Hysterectomy stratum
 - ▣ Vascular surgery stratum
 - ▣ Other major surgery stratum

SCIP Tid-Bits *(continued)*



- Use the recommended VTE Prophylaxis options (see handout)
- Use the recommended Prophylactic antibiotic options (see handout)

Measures Likely to be Retired



- SCIP Inf 6: Appropriate Hair Removal
 - ▣ “Topped out” nationally
- SCIP VTE 1: Recommended Prophylaxis Ordered
 - ▣ Good measure, but VTE 1 and VTE 2 have parallel performance rates
 - ▣ Update with a combined single measure

Measures Likely to be Revised



- SCIP Inf 10: Normothermia
 - ▣ Nearly “topped out” nationally
 - ▣ Cases pass the measure by achieving normothermia or simply by using active warming devices
 - ▣ Working to consider revisions to focus on desired outcome (normothermia)

Measures Likely to be Revised *(continued)*

- SCIP Inf 4: Glucose Control in Cardiac Surgery
 - ▣ Focus on single time frame (18-24 hours after anesthesia end time)
 - ▣ 6 AM blood glucose arbitrary
 - ▣ Looking for glucose control of $<$ or $=$ to 180 mg/dL



Pneumonia (PN)

Pneumonia



- Pneumonia and influenza are the fifth leading causes of death in the U.S. in patients age 65 years and older
- Pneumonia accounts for nearly 600,000 Medicare patient hospitalization utilizing more than 4.5 million inpatient days each year

Pneumonia



- Pneumonia is the principal reason for more than 500,000 emergency department visits by Medicare patients each year
- The incidence of pneumonia increases with age, and more than 90 percent of deaths due to this condition are 65 and older

Pneumonia Measures



- Pneumococcal vaccination
- Blood cultures performed within 24 hours prior or 24 hours after hospital arrival for patients transferred or admitted to ICU within 24 hours of arrival
- Blood cultures performed in the ED prior to initial antibiotic received

Pneumonia Measures *(continued)*



- Adult smoking cessation advice/counseling
- Initial antibiotic received within 6 hours of arrival
- Antibiotic selection
- Influenza vaccination



Evidence Supporting Measures

Evidence: Blood Cultures



- Pneumonia patients sick enough to be admitted to the ICU should have blood cultures drawn
- Results can be used to optimize antibiotic therapy

Evidence: Timing of Initial Antibiotic



- Giving antibiotics within 6 hours of arrival reduces mortality by 15-30 percent

Evidence: Selection of Initial Antibiotic



- Patients should be assessed for severity of illness, allergies and pseudomonas risk
- Different combinations of initial antibiotics are recommendations based on patient characteristics
- Patients receiving recommended antibiotics have a lower mortality rate

Evidence: Influenza and Pneumococcal Immunizations



- Clinics and physician offices are ineffective in immunizing large numbers of eligible patients
- The most vulnerable patients are hospital inpatients
- The influenza vaccine is highly effective in preventing influenza-related pneumonia, hospitalization and death

Pneumonia Tid-bits



- Pneumonia vaccination measures will retire

- New global vaccination measures coming with January 1, 2012 discharges
 - ▣ IMM-1a: Pneumococcal Immunization – Overall Rate
 - ▣ IMM-1b: Pneumococcal Immunization – Age 65 & Older
 - ▣ IMM-1c: Pneumococcal Immunization – High Risk Population (Ages 6 through 64)
 - ▣ IMM-2: Influenza Immunization

Emergency Department Measure



- ED-1a: Median Time from ED Arrival to ED Departure for Admitted ED Patients – Overall Rate
- ED-1b: Median Time from ED Arrival to ED Departure for Admitted ED Patients – Reporting Measures
- ED-1c: Median Time from ED Arrival to ED Departure for Admitted ED Patients – Observation Patients
- ED-1d: Median Time from ED Arrival to ED Departure for Admitted ED Patients – Psychiatric/Mental Health Patients

Emergency Department Measure

(continued)

- ED-2a: Admit Decision Time to ED Departure Time for Admitted Patients – Overall Rate
- ED-2b: Admit Decision Time to ED Departure Time for Admitted Patients – Reporting Measure
- ED-2C: Admit Decision Time to ED Departure Time for Admitted Patients – Psychiatric/Mental Health Patients

Resources



- Specifications Manuals:
<http://qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1141662756099>
- Hospital Compare:
<http://www.hospitalcompare.hhs.gov/>
- National Quality Forum:
<http://qualityforum.org/Home.aspx>

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