

## Making Surgery Safer

### *QIO Support for the Surgical Care Improvement Project*

The national network of Quality Improvement Organizations (QIOs) is providing technical assistance to hospitals taking part in the Surgical Care Improvement Project (SCIP). Launched in 2005 by a broad partnership of organizations, SCIP seeks to reduce often preventable complications that endanger surgical patients. Specifically, the SCIP partnership is addressing surgical site infections, perioperative cardiac events, blood clots, and ventilator-associated pneumonia that can result from surgical procedures.

#### **The SCIP Agenda**

The primary goal of the SCIP partnership is to reduce nationally the incidence of surgical complications by 25 percent by the year 2010. SCIP partners are committed to promoting care processes known to reduce surgical complications. The QIO network is the primary education and training channel for the effort.

#### **The SCIP Partnership**

SCIP partners believe that a meaningful reduction in complications requires that surgeons, anesthesiologists, perioperative nurses, pharmacists, infection control professionals and hospital executives work together to make surgical care improvement a priority. The national partnership includes the Centers for Medicare and Medicaid Services (CMS), the Agency for Healthcare Research and Quality, the Centers for Disease Control (CDC), the American Hospital Association, the American College of Surgeons, the Veterans Health Administration, the Institute for Healthcare Improvement, the American Society of Anesthesiologists, the Association of periOperative Registered Nurses, and the Joint Commission on Healthcare Organization Accreditation.

#### **The QIO Role in SCIP**

Under contract to CMS, QIOs will provide educational support and information on preventing surgical complications to all hospitals that participate in the SCIP project. QIOs will offer all hospitals assistance on collecting and publicly reporting data on SCIP performance measures.

QIOs will provide intensive training to up to 20 percent of hospitals in each state. To increase the pace of adopting practices proven to make surgery safer, QIOs will bring hospital teams together for collaborative learning sessions; conduct onsite consultation for implementing more effective clinical processes, and provide hands-on assistance to overcoming barriers to change.

#### **Public Health: What's At Stake**

A significant percentage of the more than 30 million surgeries performed in the United States each year result in preventable, often life-threatening complications. For example, a 2003 JAMA study found that postoperative complications account for up to 22% of preventable deaths among patients. The SCIP project targets areas where the incidence and cost of complications is high:

- **Surgical Site Infections** account for 14% to 16% of all hospital-acquired infections. SSIs can be prevented through appropriate selection of antibiotics, proper timing of antibiotic administration, control of blood sugar and body temperature during surgery and other clinical processes.
- **Adverse cardiac events** are common complications of surgery, occurring in 2-5% of patients undergoing non-cardiac surgery and as many as 34% of patients undergoing vascular surgery. Certain perioperative cardiac events, such as myocardial infarction, are associated with a mortality rate of 40-70% percent and prolonged hospitalization. Studies have shown that nearly half of fatal perioperative cardiac events could be prevented with appropriate beta-blocker therapy.
- **Deep vein thrombosis (DVT)** occurs after approximately 25% of all major surgical procedures performed without prophylaxis, and **pulmonary embolism (PE)** in 7% of surgeries conducted without prophylaxis. Over 50% of major orthopedic procedures are complicated by DVT, and up to 30% by PE, if prophylactic treatment is not instituted. Studies show that prophylaxis is often underused or used inappropriately.
- **Postoperative pneumonia** occurs in 9 to 40 percent of patients and has an associated mortality rate of 30 to 46 percent. Many of the risk factors for postoperative pneumonia respond to medical intervention and are preventable. A conservative estimate of the potential savings of the reduced hospitalization due to postoperative pneumonia is \$22,000 to \$28,000 per patient per admission.

## **Preparing for SCIP: QIOs Led National Effort to Reduce Surgical Infections**

In 2002, QIOs brought together more than 50 hospitals from around the country for pilot training on reducing surgical infections that resulted in an overall 27% improvement. Subsequently, QIOs in more than 30 states brought teams of hospitals together for intensive collaborative learning sessions that significantly lowered infection rates for many participating institutions. Since the 1990's, QIOs have also worked collaboratively with hospitals to improve care for AMI, heart failure and pneumonia. Many of the clinical interventions associated with these efforts apply to the SCIP initiative

QIOs have also worked closely with thousands of hospitals to facilitate reporting on quality of care performance measures. QIOs and many state hospital associations are currently working together to lead patient safety initiatives or serve as support centers for the Institute for Healthcare Improvement's 100,000 Lives Campaign. SCIP performance measures have been aligned to with those in the IHI campaign.

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