

# Making Surgery Safer

The nation's Quality Improvement Organizations (QIOs) are actively working to improve surgical care for patients by providing technical assistance to hospitals involved with the Surgical Care Improvement Project (SCIP). Launched in 2005, SCIP is a three-year national partnership of organizations committed to improving surgical care in hospitals nationwide.

As part of SCIP, surgeons, anesthesiologists, perioperative nurses, pharmacists, infection control professionals, and hospital executives work together to make improvement in surgical care a priority. The national partnership includes the Centers for Medicare and Medicaid Services, the Agency for Healthcare Research and Quality, the Centers for Disease Control, 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.

SCIP participants aim to reduce the national incidence of surgical complications by 25% by 2010 through targeting four areas: surgical site infections, adverse cardiac events, blood clots, and postoperative pneumonia.

## QIO Experience is Key

QIOs, which represent the country's single largest federal investment in improving quality, are uniquely qualified to assist hospitals in this area. Between 2002 and 2003 QIOs led a nationwide collaborative of hospitals to reduce surgical site infections by administering antibiotics within 60 minutes of surgical incision. In 30 states, QIOs brought hospitals teams together for intensive collaborative training sessions that significantly lowered infection rates. Some results:

- Participating hospitals reduced their rates of SSIs by 27%.
- In California, QIOs helped 26 hospitals increase the proportion of surgical patients who received antibiotics within one hour of surgical incision from 74% to 84%.
- QIOs helped 16 hospitals in Colorado increase the number of patients who received antibiotics within one hour of incision from 62% to 88%.
- In Maryland, QIOs helped 16 hospitals raise their rates of administering antibiotics from 72% to 92%.
- In New Mexico, 19 hospitals raised their rates of administering antibiotics from 48% to 68%.

## The Cost of Surgical Complications: Lives Lost

QIOs are building on this experience by targeting four areas as part of the SCIP project where the incidence and cost of complications are high: surgical site infections, adverse cardiac events, blood clots, and postoperative pneumonia.

- **Surgical site infections (SSIs)** complicate an estimated 780,000 operations each year, and are a major cause of preventable deaths in hospitals. SSIs can be prevented by administering prophylactic antibiotics within one hour prior to sur-

gery, timing antibiotic administration properly, and controlling blood sugar and body temperature during surgery.

- **Adverse cardiac events** are a common surgical complication which occur in up to 5% of patients who undergo non-cardiac surgery, and as many as 34% of patients who have vascular surgery. Certain surgically-related cardiac events, such as heart attacks, are associated with a mortality rate of 40-70% percent and prolonged hospitalization. Studies have shown that nearly half of such fatal cardiac events during surgery could be prevented with appropriate beta-blocker therapy.
- **Deep vein thrombosis (DVT)** occurs after approximately 25% of all major surgical procedures performed without protective treatment; pulmonary embolism (PE) occurs in 7% of surgeries conducted without such prevention. When preventive measures are not taken, DVTs complicate over 50% of major orthopedic procedures and up to 30% of PEs.
- **Postoperative pneumonia** occurs in 9-40% of patients and has an associated mortality rate of 30-46%. Yet many 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 hospital admission.

## How QIOs Help

QIOs are offering hospitals participating in SCIP various levels of support:

- QIOs assist hospitals in collecting and publicly reporting data on SCIP performance measures.
- QIOs offer educational support and information on how to prevent surgical complications.
- QIOs provide intensive training to up to 20% of hospitals in each state.
- To increase the pace of adopting practices proven to make surgery safer, QIOs bring hospital teams together for collaborative learning sessions.
- QIOs conduct onsite consultation to identify more effective clinical processes.
- QIOs help facilities identify and overcome barriers to changes in clinical practice.

Learn more about SCIP at  
[www.medqic.org/scip](http://www.medqic.org/scip)

*The American Health Quality Association represents the national network of Quality Improvement Organizations (QIOs) that work to encourage the spread of best clinical practices and improve systems of care delivery. Visit [www.abqa.org](http://www.abqa.org).*