National surgical QI project rolls out

Ten organizations joined in August to roll out a national effort to battle surgical complications. The goal of the Surgical Care Improvement Project—SCIP—or “skip”—is to drive down complications by 25% over the next 5 years by reducing 4 types of complications:

- Surgical site infections
- Perioperative heart attack
- Deep vein thrombosis and pulmonary embolism
- Ventilator-associated pneumonia.

SCIP leaders say 13,000 deaths and 270,000 surgical complications could be prevented each year in Medicare patients alone if the SCIP measures were widely applied.

OR Manager interviewed 3 SCIP leaders: David Hunt, MD, FACS, medical officer for the Centers for Medicare and Medicaid Services (CMS) Quality Improvement Program; Linda Groah, RN, MSN, CNOR, CNAA, FAAN, of the Association of periOperative Registered Nurses (AORN); and Karina Carr, RN, CPHQ, project manager for SCIP at the Quality Improvement Organization Support Center in Oklahoma City.

Here are some questions and answers about the program.

**Who’s leading SCIP?**

A. Spearheading SCIP are the Agency for Healthcare Research and Quality, American College of Surgeons (ACS), American Hospital Association, American Society of Anesthesiologists, AORN, Centers for Disease Control and Prevention (CDC), CMS, Institute for Healthcare Improvement (IHI), Joint Commission on Accreditation of Health-care Organizations, and Veterans Health Administration.

**We’re already participating in other QI projects. Why should we join SCIP?**

A. “That’s a question we honestly had to look at,” says Dr. Hunt. “We think we have to be able to gather all of the relevant QI activities for surgery under one SCIP umbrella. We’ve been able to bring in the major stakeholders from all of the groups that are doing big national campaigns on surgical QI.”

Says Groah, “This is the first time in my career that I’ve seen 10 key organizations that are the drivers of quality patient care for surgery come together.

“I would stress that this is a partnership among nursing, surgery, and anesthesia that began with the time-out protocol,” for surgical site verification, issued in 2003.

Groah thinks the unified effort could give traction to issues perioperative nurses have tried to address for years, such as eliminating the preoperative shave, which has been proven to increase surgical infection rates.

“Now we will have the support of a national initiative,” she says.

Carr adds that SCIP is working to align its measures with those of its partners, including IHI—which has signed up 2,500 hospitals for its 100,000 Lives Campaign—as well as JCAHO, the ACS National Surgical Quality Improvement Project (NSQIP), and the CDC’s new National Healthcare Safety Network (NHSN), an expansion of the National Nosocomial Infections Surveillance (NNIS) system.

“The United States has a wonderful health care system,” says Carr, “but we still have preventable complications in surgery. There are strategies we can take to decrease the possibility of these complications. We need to make sure every patient gets the appropriate care every time.”
How will hospitals benefit from participating?

A. “Everyone wants to improve care, but there are fiscal realities to all of this. We are trying to make a strong business case for SCIP,” Dr Hunt says. “We are saying, ‘If you do this, you will be stronger financially as an institution.’ I think that is going to make a difference today when margins are so tight.”

The cost of treating complications can run into the tens of thousands of dollars. A postoperative respiratory complication can run to $52,000, for example (sidebar). With Medicare patients, the hospital eats most of that extra cost.

How can OR managers and directors be involved in SCIP?

A. “More and more, nurses are adopting evidence-based practice,” which is what the SCIP measures are based on, Groah notes. Managers can help not only by serving on QI task forces but by educating their staffs about SCIP. They can help the staff understand SCIP core measures and how they align with other QI efforts.

“These aren’t silos—they really are integrated,” Groah says.

What is SCIP going to measure?

A. For the 4 complications, SCIP will use about 20 measures. Examples are in the sidebar. The measures are expected to be final in September. The complications were identified by the SCIP steering committee based on the literature and NSQIP, which the VA has used for 12 years to compare outcomes and improve quality. In the past few years, ACS has expanded NSQIP into private hospitals.

To develop the specific measures, the SCIF committee looked for processes that had evidence to show they could prevent the complications. The feasibility of measurement was tested in a 3-state pilot in Ohio, Kentucky, and Oklahoma.

What resources will SCIP provide?

A. A change package is expected to be available on the SCIP web site (www.medqic.org/scip) in September. A nationwide conference call is planned, probably in October.

Hospitals can also look to SCIP partners for support as well as to their Medicare Quality Improvement Organizations (QIOs), which will form participant groups, says Carr. QIOs may choose to do a collaborative, one-on-one consultation, phone calls, or site visits.

How will data be submitted? How will progress be measured?

A. SCIP is working to align its data submission tool with those of its partners who also collect data, Carr says. Plans are for SCIP to have a common data dictionary, data collection strategy, and data analysis algorithms with others such as ACS NSQIP, IHI, the CDC, and JCAHO.

CMS is building a data warehouse and working out agreements to include SCIP data. “We are going to be able to maintain and compare data from multiple programs in one common repository,” Dr Hunt says.

Will SCIP data be made public? Will it be used in deciding how much hospitals get paid?

A. At its root, SCIP is a QI initiative, says Dr Hunt. “That is the heart of why we started it.”

The data will be available first to the participating hospitals so they can see how they are doing and plan QI efforts.

But public reporting and linking pay to performance have been on the table since the beginning of meetings with the steering committee, Dr Hunt says.

SCIP is working with the Hospital Quality Alliance to see which measures would be appropriate for public reporting. CMS is also on the record for the need to explore pay for performance—paying hospitals differently according to how well they perform.
“Eventually, I would not be surprised if the SCIP measures turned out to be those that are useful for public reporting and pay for performance in the surgical sphere,” he says.

**Q Do we have to submit data to participate?**
A. SCIP is asking hospitals that participate to submit data on at least 1 of the 4 complications.

“We hope they will go ahead and measure,” Carr says. But the QI strategies will be available, so if a hospital wanted to use those to improve care without measurement, that would be possible.

**Q A lot of the SCIP measures involve physicians. How does SCIP plan to get physicians on board?**
A. “We recognize that most of the major problems that affect surgical patients really are problems of the system rather than individuals,” Dr Hunt says. “We are trying to develop a cohesive program that touches all of the components in surgical services that have an impact on care of the patient.

“Surgeons have a long commitment of wanting to push the quality improvement envelope, so it really is not a hard sell for surgeons to join.”

The main thing is to demonstrate that it is not going to be a huge burden for them in paperwork and committee time, he says.

*A SCIP recruitment packet and other information are at www.medqic.org/scip.*

---

**SCIP key measures**

The Surgical Care Improvement Project is targeting these 4 areas:

**Surgical site infections**

Surgical site infections (SSIs) account for 14% to 16% of all hospital-acquired infections and are among the most common complications of care. SSIs occur in 2% to 5% of patients after clean extra-abdominal operations and in up to 20% of patients having intra-abdominal procedures. Among surgical patients, SSIs account for 50% of all hospital-acquired infections. Research shows that by reducing SSIs, for each patient who develops an infection, hospitals on average could save $3,152 and reduce the length of stay by 7 days.

*Examples of ways to prevent SSIs:*

- Administer prophylactic antibiotics within 1 hour prior to surgery.
- Control perioperative serum glucose in major cardiac surgical patients.

**Adverse cardiac events**

Adverse cardiac events occur in 2% to 5% of patients having noncardiac surgery and in as many as 34% of patients having vascular surgery. Certain perioperative cardiac events, such as myocardial infarction, are associated with a mortality rate of 50% to 70% per event as well as prolonged hospitalization and higher costs. Studies show that nearly half of the fatal cardiac events could be preventable with beta-blocker therapy.

*Examples of ways to prevent adverse cardiac events:*

- Administer beta-blockers to eligible major noncardiac surgical patients during the perioperative period.
- Administer beta-blockers to surgical patients with evidence of coronary artery disease during the perioperative period.

**Deep vein thrombosis**

Deep vein thrombosis (DVT) occurs after about 25% of all major surgical procedures performed without prophylaxis. Pulmonary embolism (PE) occurs in 7% of surgery conducted without prophylaxis. More than 50% of major orthopedic pro-
Cedures are complicated by DVT and up to 30% by PE if prophylactic treatment is not instituted. Despite well-established efficacy and safety of preventive measures, studies show that prophylaxis is often underused or used inappropriately.

Example of a way to prevent venous thromboembolism (VTE):
• Assess patient risk for VTE and administer appropriate perioperative prophylaxis.

**Perioperative ventilator-related pneumonia**

Ventilator-related pneumonia occurs in 9% to 40% of patients and has an associated mortality rate of 30% to 46%. Many of the risk factors for this event respond to medical intervention and thus are preventable. A conservative estimate of the potential savings from reduced hospitalization due to postoperative pneumonia is $22,000 to $28,000 per patient admission.

Examples of ways to prevent postoperative pneumonia:
• For major surgical patients on a ventilator who are without contraindications, postoperatively elevate the head of the bed to at least 30 degrees.

*The SCIP measures are expected to be released in September.*

---

**The business case for surgical quality**

Complications result in an increased median length of stay:
• Infectious: 2.8 days
• Cardiovascular: no days
• Respiratory: 5.5 days
• Thromboembolic: 2.8 days

And an increased cost:
• Infectious: $1,398
• Cardiovascular: $7,789
• Respiratory: $52,466
• Thromboembolic: $18,310