

Hospital Quality and Patient Safety



Notable News from The North Carolina Center for
Hospital Quality and Patient Safety

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for
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The North Carolina Surgical Care Improvement Project

Substantial variations in the rates of surgery and outcomes of surgical care are well demonstrated.¹ Failure to apply standards of care known to prevent adverse events results in harm to the patient. Research shows that a significant percentage of the 30 million operations performed in the United States each year result in preventable, often life-threatening, complications.

The 1999 Institute of Medicine of the National Academies report *To Err is Human* highlighted a study from a large medical center which found that 5.4% of 44 000 patients who underwent surgery suffered complications; nearly one-half of those complications were attributed to error.² Therefore, with 30 million surgical procedures performed each year in the United States, an estimated 1.6 million patients suffer complications as a result of surgical care. In North Carolina alone, 221 326 nonobstretical operations at nonfederal acute care hospitals were performed in fiscal year 2005³ and if the proportions from the national study hold, approximately 12 000 patients may have suffered surgical complications.

Surgical site infections and cardiovascular, respiratory, and thrombotic complications represent some of the most common postoperative problems. Despite an abundance of scientific knowledge in the medical literature providing evidence-based guidance for prevention of many of these complications, there is substantial evidence that these standards aren't applied reliably in health care today.⁴

As stated in the 2001 Institute of Medicine Report *Crossing the Quality Chasm*, "Between the healthcare we have and the care we could have lies not just a gap, but a chasm."⁵ For example, evidence that properly timed antimicrobial prophylaxis is effective has existed for more than 30 years. However, only 56% of Medicare patients received prophylaxis within the appropriate time frame.⁶

Patients who experience postoperative complications have increased lengths of hospital stay, increased readmission rates, and increased mortality.^{7,8,9} Recently a number of successful projects have shown that implementation of evidence-based practices can have a significant impact on surgical complications.¹⁰ As a result, over 30 national organizations, including the Centers for Medicare and Medicaid, Centers for Disease Control and Prevention, Department of Veterans Affairs, American College of Surgeons, American Hospital Association, Institute for Healthcare Improvement, and the Joint Commission have aligned efforts aimed at reducing surgical complications and mortality. This collaboration is called the Surgical Care Improvement Project (SCIP).¹¹

The Surgical Care Improvement Project is a national quality partnership committed to improving the safety of surgical care through the reduction of postoperative complications. Launched in 2005, the goal of SCIP is to reduce the incidence of surgical complications 25% by the year 2010. The Surgical Care Improvement Project identifies evidence-based processes of care related to prevention of cardiovascular events, surgical site infections, postoperative pneumonia, and venous thromboembolism.¹² (See Table 1.)

In North Carolina, 48 hospitals are working together to improve surgical care processes by participating in the NC SCIP collaborative. These hospitals are committed to reducing complications associated with surgical care; through collaborative participation, they will design systems to reliably implement the care processes of SCIP. In August the 160 hospital representatives came together in Chapel Hill to learn about the SCIP network, share best practices, and begin the work of designing reliable processes of care related to SCIP.

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Table 1.
NC SCIP Process of Care Measures

Prevention of infection	Prophylactic antimicrobial initiated 1 hour before surgical incision (2 hours for vancomycin or fluoroquinolone)
	Prophylactic antimicrobial consistent with published guidelines
	Prophylactic antimicrobial discontinued within 24 hours of surgery end time (48 hours for cardiac patients)
	Blood glucose control in patients undergoing cardiac surgery
	Proper hair removal
	Maintenance of normothermia in colorectal surgery patients
Prevention of venous thromboembolism (VTE)	VTE prophylaxis ordered consistent with current guidelines
	Appropriate VTE prophylaxis administered within 24 hours before and after
Prevention of cardiac events	Administration of peri-operative β -blockers to patients on β -blockers prior to admission

The North Carolina Surgical Care Improvement Project collaborative is led in partnership by the North Carolina Center for Hospital Quality and Patient Safety, the Carolinas Center for Medical Excellence, and the North Carolina Chapter of the American College of Surgeons. Participating hospitals receive consultative support and secure online data collection tools and reports from the partners in addition to networking meetings, teleconferences, and other resources. The North Carolina Area Health Education Centers Program and the Southern Atlantic Healthcare Alliance provide additional support by coaching collaborative hospitals.

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