



PROFESSION

Simple steps prevent surgical site infections

Infections after colorectal surgeries are common and potentially deadly, but interventions such as changing into clean gloves and gowns can prove effective.

By **KEVIN B. O'REILLY**, *amednews staff*. *Posted Dec. 12, 2012.*

A quality improvement project involving seven prominent hospitals around the country cut the rate of colorectal surgical site infections by 32%, the hospitals said in November. One in seven patients who undergoes a colorectal procedure experiences a surgical site infection. These infections extend patients' hospital stays and sometimes contribute to their deaths.

Hospitals such as Cedars-Sinai Medical Center in Los Angeles, Mayo Clinic in Rochester, Minn., and North Shore-Long Island Jewish Health System in Great Neck, N.Y., took part in the project, launched in August 2010 by the American College of Surgeons and the Joint Commission's Center for Transforming Health Care.

The proportion of colorectal procedures in which patients developed surgical infections fell from 15.8% to 10.7% at the seven participating hospitals, while the average length of stay for infected patients declined from 15 days to 13. Nearly 8,000 colorectal surgeries are performed annually at the hospitals. Patients who avoided infection stayed in the hospital an average of eight days to recover from their colorectal surgeries.

Compared with data collected at baseline, the project helped hospitals avoid 135 surgical site infections and save \$3.7 million in medical costs. More information about the colorectal surgical site infection project, including a complete list of the interventions hospitals implemented, is available at the commission's website (centerfortransforminghealthcare.org/assets/4/6/SSI_storyboard.pdf).

Careful analysis of outcomes data from the college's National Surgical Quality Improvement Program helped the hospitals identify areas for improvement, said Mark R. Chassin, MD, MPH, president of the Joint Commission. Using quality-control and improvement techniques borrowed from other industries such as manufacturing helped the participating hospitals prevent infections, he said.

"They measured the magnitude of the problem carefully, pinpointed contributing factors and developed specific solutions targeted to each cause of the failure, and then tested them in real-life practice," Dr. Chassin said.

Infection control steps

Different factors contributed to problems at each hospital, Dr. Chassin and other physicians involved in the project emphasized. However, some interventions did emerge as widely effective at the seven hospitals. One was for everyone in the operating room to change into clean gloves, gowns and other coverings before suturing the patient, to avoid contaminating the surgical site with dirty material from the procedure.

At Cedars-Sinai, a one-page pamphlet was used to inform surgeons, nurses, patients and families about infection-prevention measures. These included giving the patient antibacterial soap to bathe with the night before surgery, standardizing antibiotic doses before surgery and ensuring that appropriate antibiotics were given in procedures exceeding four hours, and developing a protocol for health professionals to monitor dirty or contaminated wounds after surgery. Cedars-Sinai reduced its colorectal surgical site infection rate from 15.5% to 5.5% and has maintained the rate below 5% since July, said Shirin Towfigh, MD, an attending surgeon there.

The interventions are ones that community and rural hospitals should be able to adopt, she said.

"We tried to make it as easy and cheap and as reproducible as possible at smaller hospitals that may not have the facilities to have a quality improvement team to brainstorm their own conclusions for their hospital," Dr. Towfigh said.

A ready-to-implement tool kit called a "targeted solutions tool" will be made available at no added cost to commission-accredited hospitals before July 2013, Dr. Chassin said.

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