

PROFESSION

Surgical errors: In ORs, "never events" occur 80 times a week

The mistakes add up to \$1.3 billion in medical liability payouts over 20 years and involve surgeons of all ages.

By **KEVIN B. O'REILLY**, amednews staff. **Posted Jan. 21, 2013.**

About 80 times each week, U.S. patients undergoing surgery experience mistakes that safety advocates say never should happen.

The types of errors being made: Surgical instruments such as sponges are unintentionally left behind in the patient; a wrong procedure is performed; a wrong surgical site is operated upon; and surgery is done on the wrong patient altogether.

The weekly error estimate comes from a review of medical liability settlements and judgments from 1990 to 2010 that are collected in the National Practitioner Data Bank, the federal repository of medical liability claims. The findings were published in the December 2012 issue of *Surgery*.

Researchers found nearly 10,000 cases of these so-called never events totaling \$1.3 billion in settlements. Based on previous studies finding that about 90% of injured patients do not receive indemnity payments and so would not be included in the data bank, the researchers calculated an annual rate of 4,082 surgical never events, or 78.5 each week.

Given the common estimate that 50 million operations are done each year in the U.S., the calculation would translate to one surgical never event in every 12,248 procedures. Although surgical never events are extremely rare, that does not lessen the gravity of these mistakes, said T. Forcht Dagi, MD, MPH, chair of the American College of Surgeons' Committee on Perioperative Care. Checklists and protocols designed to prevent these errors must be followed, he said.

"It's unacceptable," said Dr. Dagi, a neurosurgeon. "It's got to be done right everywhere. Patients have a right to it, and it's our responsibility to see that that right is protected."

Age and experience are no protection

The average payout for a surgical never event is \$133,055, according to the *Surgery* study. In most cases, there was only temporary harm to the patient, but a third of the time there was a permanent injury, the study said.

The mistakes were distributed across the physician age spectrum, with 36% of them happening among surgeons ages 40 to 49. Nearly 30% occurred with surgeons between 50 and 59, while less than a quarter happened among surgeons 39 and younger. Less than 15% were by surgeons 60 or older.

"The take-home message from what we learned in the study was that it's not the new doctors fresh out of training, and it's not the doctors who are very old where these events tend to happen the most," said Martin A. Makary, MD, MPH, the study's lead author and an associate professor of surgery at Johns Hopkins University School of Medicine in Baltimore. "It happens to everybody."

To prevent wrong-site and wrong-patient procedures, the Joint Commission in 2004 mandated a three-step process known as the universal protocol. Yet that alone has not solved the problem.

Although the *Surgery* article does not break out surgical never events by year, a study in the October 2010 *Archives of Surgery*, now *JAMA Surgery*, found that cases of wrong surgeries reported to a Colorado medical liability insurer rose between 2002 and 2008.

In Minnesota, meanwhile, 18 wrong surgeries were reported in 2004 under the state's mandatory never-events public reporting law. Since then, the number has risen every year, reaching 50 in 2011. For retained surgical instruments, 270 cases were reported in Minnesota between 2004 and 2011. For the last year reported, 2011, there was an 8% rise in retained object events.

Focus on communication lapses

Leaders at the Joint Commission, which accredits more than 19,000 hospitals, ambulatory surgery facilities and other health care organizations, acknowledge that its universal protocol is not sufficient to stop surgical never events. The commission's quality-improvement arm, the Center for Transforming Healthcare, in August 2010 launched a project to reduce wrong-site surgery risk at eight health care organizations and to provide tools to help others prevent the mistakes.

Seemingly simple steps such as presurgical time-out briefings, marking the surgical site and confirming the patient's identity can fall prey to communication lapses. All along the path — from scheduling the procedure to incision — there are chances for things to go wrong, said Mark R. Chassin, MD, MPH, president of the Joint Commission. For example, sometimes the surgical site is marked too far away from the incision spot to be clearly seen or the ink used to mark the spot fades when the skin is cleaned and prepped for surgery.

"There are about 300 ways that timeouts can fail, from not having everyone stop what they're doing and paying attention ... to

having a bad safety culture where somebody knows something's wrong but is too scared to speak up," Dr. Chassin said.

Participating organizations reduced from 52% to 19% the proportion of cases in which there was a process-related problem that could have resulted in a wrong-site surgery, the commission says. The results were announced in June 2011, and a wrong-site surgery prevention toolkit is available to commission-accredited hospitals at no cost.

New methods to track surgical sponges

Although wrong surgeries happen about 40 times each week, the other 40 surgical never events involve sponges, needles and other items used in surgery that get left behind in patients. Surgical sponges are the hardest to track and the most often left behind.

The process traditionally used to track them, counting them in and then counting them out, fails too often, experts said. An August 2008 *Annals of Surgery* study found that there are count discrepancies 13% of the time, sending nurses and others on a search for surgical instruments inside the patient, on tables, in buckets and on the OR floor.

Instead of merely counting sponges, nurses should track them by placing each one in a dedicated holder at the end of the case, said Verna C. Gibbs, MD, director of NoThing Left Behind, a national surgical safety project. New technologies that use bar-coding or radio frequency identification chips are making it easier to track the sponges and find them if they get misplaced. At least a quarter of perioperative nurses work at organizations using such technology, Dr. Gibbs estimated.

The time for discussion about the frequency of surgical never events has passed, Dr. Gibbs said. It is time for effective action to prevent them, she added.

"Everyone wants to know how often this happens, but the number doesn't really matter, so long as we know the number is greater than zero," she said. "Let's use all this creative mental energy to fill the gaps in hospitals' knowledge base so they can help their surgeons and nurses and radiologists and anesthesiologists to stop these never events from occurring."

ADDITIONAL INFORMATION:

The cost of surgical mistakes

A review of medical liability settlements and judgments in the National Practitioner Data Bank between 1990 and 2010 sheds light on the financial consequences of surgical "never events." Payouts ranged up to \$7.1 million.

Type of "never event"	Cases	Average payout
Wrong procedure	2,447	\$232,035
Wrong site	2,413	\$127,159
Wrong patient	27	\$109,648
Retained foreign body	4,857	\$86,247

Source: "Surgical never events in the United States," *Surgery*, Dec. 17, 2012 ([ncbi.nlm.nih.gov/pubmed/23257079/](http://www.ncbi.nlm.nih.gov/pubmed/23257079/))

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"Wrong-Site and Wrong-Patient Procedures in the Universal Protocol Era: Analysis of a Prospective Database of Physician Self-reported Occurrences," *Jama Surgery*, formerly *Archives of Surgery*, Oct. 18, 2010 (archsurg.jamanetwork.com/article.aspx?doi=10.1001/archsurg.2010.185)

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"Surgical never events in the United States," *Surgery*, Dec. 17, 2012 (www.ncbi.nlm.nih.gov/pubmed/23257079/)

"Adverse Health Events in Minnesota," Minnesota Dept. of Public Health, January 2012 (www.health.state.mn.us/patientsafety/ae/2012ahereport.pdf)

"Prevention of Retained Surgical Items Multistakeholder Policy," NoThing Left Behind, Feb. 1, 2011 (nothingleftbehind.org/uploads/NoThing_Left_Behind_Policy.pdf)

"The frequency and significance of discrepancies in the surgical count," *Annals of Surgery*, August 2008 (www.ncbi.nlm.nih.gov/pubmed/18650646/)

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