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Wrong-Site Blocks Vex OR Safety Efforts

by Ted Agres

More than 40 times each week in the United States, a surgeon cuts into a patient or an anesthesiologist places a nerve block, only to realize that the scalpel or needle belonged somewhere else.

The true incidence of wrong-site surgery may be substantially higher because these errors are generally self-reported and are not always anonymous, which may discourage reporting (*Arch Surg* 2010;145:984). And the problem persists despite widespread adoption of the Joint Commission's Universal Protocol starting in July 2004 and other patient safety measures (see *Anesthesiology News*, April 2009, page 1).

Anesthesiologists are responsible for a growing share of these "sentinel events," especially involving wrong-site local and regional anesthesia blocks. In Pennsylvania, for instance, the share of errors attributed to wrong-site blocks jumped from 20% of the total in 2004 to 44% in 2009, said John R. Clarke, MD, clinical director of the state's Patient Safety Authority, which collects and analyzes the data (Figure). "This is because surgeons have made improvements, but anesthesiologists have not," Dr. Clarke said.

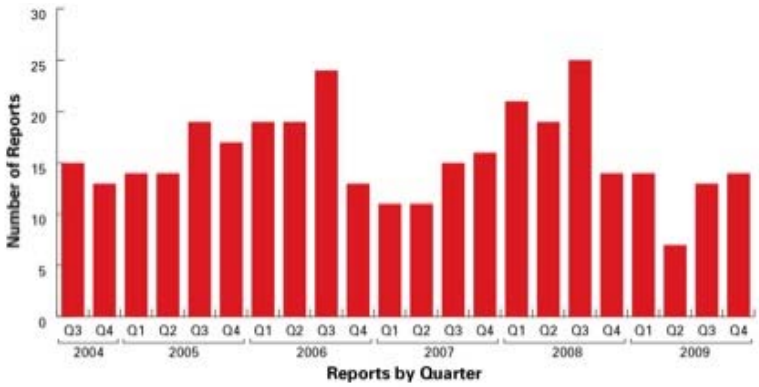

Figure. Pennsylvania Patient Safety Authority wrong-site surgery reports by quarter.

"Surgeons have been applying the Universal Protocol the way it was intended, including verification, marking the site and performing the time-out," Dr. Clarke told *Anesthesiology News*. "But anesthesiologists, if anything, did verifications but hardly ever did markings. And

they were generally not doing the time-out with an independent party. And often, they only did a rudimentary form of verification," he said. "It's disappointing that anesthesiologists are not keeping up with improvements relative to surgeons."

From Scheduling to Completion

The Joint Commission will soon release results of a two-year pilot project aimed at reducing wrong-site surgical procedures with the hope that hospitals and other facilities will adopt best practices to prevent them. The pilot study covered the full range of surgical procedures, from scheduling to confirmation that the operation had been performed.

In July 2009, two Rhode Island hospitals affiliated with the Lifespan health care system asked the Joint Commission to undertake the study. Eight other institutions were subsequently added, including Mount Sinai Medical Center in New York City and Thomas Jefferson University Hospital in Philadelphia.

The study was conducted by the Joint Commission's Center for Transforming Healthcare, a separate nonprofit that collaborates with hospitals and other health care organizations to help them improve processes and outcomes by using methods from Lean Six Sigma and other change-management approaches. The center's work is independent of the commission's accreditation and certification activities. "There is a firewall between the work that is done in the center and the accreditation side of the house," said project manager Melody Dickerson, RN.

Tools and solutions emerging from the pilot study will be "beta-tested" at still other hospitals and ambulatory centers in late March and early April and made available to all accredited organizations afterward, Ms. Dickerson said. She declined to identify the approaches being studied, but noted that solutions can be tailored to the needs of particular institutions.

At Mount Sinai, the orthopedic surgical team participating in the pilot uncovered weaknesses in how they applied Universal Protocol safety checks, said David Reich, MD, professor and chair of anesthesiology at the institution. "We analyzed our results and created a new process that we refer to as the 'active time-out,'" Dr. Reich said. Instead of a nurse simply reciting a script prior to surgery, each member of the operating room team plays a unique role: The surgeon, anesthesiologist and the scrub person each has a series of questions or statements he or she makes in response to the circulating nurse, who serves as coordinator.

"We also made and enforced certain rules, which may seem obvious but were not always implemented previously, such as turning off music in the OR and insisting that everyone stop what they are doing during the active time-out process," Dr. Reich said.

Blaming the Blocks

Anesthesiologists placing regional blocks in the holding area perform their own "block time-out," involving an additional person who confirms the patient, procedure and laterality, Dr. Reich said. This second person could be the surgeon, a circulating nurse from the OR or the holding area, or an anesthesia resident, as long he or she is not under the anesthesiologist's supervision. "We felt there was too much influence, potentially, with an attending anesthesiologist supervising his or her resident in the block time-out," Dr. Reich said.

Performing a time-out prior to starting a block has been recommended practice for some time. “As anesthesiologists, we do a time-out before we do any procedure on the patient, whether it’s placing a central line or putting in an acute regional pain care block,” said Sonya Pease, MD, president of the Florida Society of Anesthesiologists. “A lot of times, we do these procedures before the surgeon shows up. That creates two time-outs,” she told *Anesthesiology News*.


Sonya Pease, MD

The increase in anesthesia-related wrong-site problems is tied to the increased use of nerve blocks, said Joseph F. Talarico, DO, president of the Pennsylvania Society of Anesthesiologists. “In the past, it wasn’t much of a problem because we were not blocking as much as we were administering general anesthesia,” he said. These mistakes should decrease as anesthesiologists take appropriate precautions. “For instance, we are now marking the site along with the surgeons, and unless the site is marked, we won’t bring the patient into the OR,” Dr. Talarico said.

Although wrong-site nerve blocks are nowhere near as serious as are wrong-site operations, anesthesiologists “should take the same sense of responsibility as they do with anoxic encephalopathy,” Dr. Clarke said. “It’s not as big a problem by any stretch, but it’s an area for potential quality control for people who are known for quality but who don’t seem to have applied the same level of enthusiasm for preventing wrong-site procedures as they have for other things.”

The effort at Mount Sinai has been constructive, said Erin DuPree, MD, deputy chief medical officer and vice president for patient safety at the institution. “It’s been a positive experience for us to focus on surgical safety and decrease risk for patients,” she said. “Partnering with a national organization and sharing data to help other organizations decrease their risk is fantastic.”