

Surgical errors remain a challenge in and out of the operating room

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Despite a national focus on reducing surgical errors, surgery-related adverse events continue to occur both inside and outside the operating room, according to an analysis of events at Veterans Health Administration Medical Centers published in the November issue of *Archives of Surgery*.

An estimated five to 10 incorrect surgical procedures occur daily in the United States, some with devastating effects, according to background information in the article. Surgery can be performed on the wrong site, wrong side of the body, using an incorrect procedure or on the wrong patient. "The Veterans Health Administration developed and implemented a pilot program to reduce the risk of incorrect surgical events in April 2002, which resulted in the dissemination of a national directive in January 2003," the authors write. The rule was further updated in 2004.

Julia Neily, R.N., M.S., M.P.H., of Veterans Health Administration (VHA), White River Junction, Vt., and colleagues reviewed reported surgical adverse events occurring at 130 VHA facilities between January 2001 and June 2006. Events were categorized by location (inside the [operating room](#) vs. outside, at a location such as a procedure room at a clinic or at the patient's bedside), specialty departments, body segments, severity and several other characteristics.

Overall, the researchers reviewed 342 reported events, including 212 adverse events (any [surgical procedure](#) performed unnecessarily, such as

a procedure performed on the wrong patient or wrong site) and 130 close calls (in which a recognizable step toward an adverse event occurred but the patient was not subjected to the unnecessary procedure). Of the adverse events, 108 (50.9 percent) occurred in an operating room and 104 (49.1 percent) occurred elsewhere.

"When examining adverse events only, ophthalmology and invasive radiology were the specialties associated with the most reports (45 [21.2 percent] each), whereas orthopedics was second to ophthalmology for the number of reported adverse events occurring in the operating room," the authors write. "Pulmonary medicine cases (such as wrong-side thoracentesis [removing fluid from chest]) and wrong-site cases (such as wrong spinal level) were associated with the most harm. The most common root cause of events was communication (21.0 percent)."

The results indicate that communication problems often occur early in surgical procedures, and interventions such as a final "time-out" moments before incision may occur too late to correct them. "Incorrect surgical procedures are not only an operating room challenge but also a challenge for events occurring outside of the operating room," the authors conclude. "We support earlier communication based on crew resource management to prevent surgical adverse events."

More information: Arch Surg. 2009;144[11]:1028-1034.

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