A follow-up review of wrong site surgery

In August 1998, the Joint Commission issued a Sentinel Event Alert examining the problem of wrong site surgery, including a review of 15 cases that had been reported to JCAHO. Today, the sentinel event database includes 150 reported cases of wrong site, wrong person or wrong procedure surgery, of which 126 have root cause analysis information. Of the 126 cases, 41 percent relate to orthopedic/podiatric surgery; 20 percent relate to general surgery; 14 percent to neurosurgery; 11 percent to urologic surgery; and the remaining to dental/oral maxillofacial, cardiovascular-thoracic, ear-nose-throat, and ophthalmologic surgery. Fifty-eight percent of the cases occurred in either a hospital-based ambulatory surgery unit or freestanding ambulatory setting, with 29 percent occurring in the inpatient operating room and 13 percent in other inpatient sites such as the Emergency Department or ICU. Seventy-six percent involved surgery on the wrong body part or site; 13 percent involved surgery on the wrong patient; and 11 percent involved the wrong surgical procedure.

Eighty-one percent of the cases were self-reported, with the remaining cases coming from patient complaints, media stories and other sources. However, wrong site surgery data collected by other organizations, including the New York Department of Health and the Board of Medicine in Florida, suggest a significant amount of under-reporting to JCAHO by health care organizations. Most organizations reporting wrong site surgery cases to JCAHO indicated they were aware of the previous Sentinel Event Alert recommendations.

Risk factors and root causes

JCAHO identified a number of factors contributing to the increased risk for wrong site, wrong person, or wrong procedure surgery, including: emergency cases (19 percent); unusual physical characteristics, including morbid obesity or physical deformity (16 percent); unusual time pressures to start or complete the procedure (13 percent); unusual equipment or set-up in the operating room (13 percent); multiple surgeons involved in the case (13 percent); and multiple procedures being performed during a single surgical visit (10 percent).

The root causes identified by the hospitals usually involved more than one factor; however, the majority involved a breakdown in communication between surgical team members and the patient and family. Other contributing causes included: policy issues such as marking of the surgical site was not required; verification in the operating room and a verification checklist were not required; and patient assessment was incomplete, including an incomplete pre-operative assessment. Staffing issues, distraction factors, availability of pertinent information in the operating room, and organizational cultural issues were also cited as contributing risk factors.

Carrots and sticks

While professional organizations, associations and regulatory bodies continue to address the problem of wrong site surgery, and despite
widespread media attention, wrong site surgery remains a significant concern across the nation. In February 1997, the American Academy of Orthopaedic Surgeons (AAOS) issued a revised Advisory Statement highlighting recommendations and methods for eliminating wrong site surgery, as well as the appropriate management following the discovery of wrong site surgery.¹ "Although the wrong site surgery problem has been addressed on a local level in many areas of the country, there has been no organized national effort to eliminate wrong site surgery," says S. Terry Canale, M.D., immediate past president, AAOS. "The American Academy of Orthopaedic Surgeons believes that a unified effort among surgeons, hospitals and other health care providers to initiate preoperative and other institutional regulations can effectively eliminate wrong site surgery in the United States. The AAOS urges other surgical and health care practitioner groups to join the effort in implementing effective controls to eliminate this system problem."

The American Academy of Orthopaedic Surgeons believes that a unified effort among surgeons, hospitals and other health care providers to initiate preoperative and other institutional regulations can effectively eliminate wrong site surgery in the United States. The AAOS urges other surgical and health care practitioner groups to join the effort in implementing effective controls to eliminate this system problem.

S. Terry Canale, M.D., immediate past president, American Academy of Orthopaedic Surgeons

In February 2001, the New York State Department of Health released the final report of its Preoperative Protocols Panel, outlining steps for preventing wrong site surgery, wrong procedures, and procedures on the wrong patient.² The guidelines, applicable to all settings, are considered baselines that hospitals, surgery centers and practitioners can build upon and tailor to their settings. Shared with all New York State hospitals and ambulatory care centers, the guidelines emphasize enhanced communication among surgical team members, three independent verifications including marking or identifying the correct site, and having the surgeon see and speak with the patient while in the peri-operative area.

Clearly, the public will no longer tolerate injuries involving wrong site, wrong person or wrong procedure surgery and is forcing action through state agencies and other regulatory bodies. For example, in Florida, the Board of Medicine in June 2001 instituted stiff penalties for physicians and organizations experiencing wrong site surgery. Penalties include fines up to $10,000, five hours of risk management education, 50 hours of community service, and a one hour lecture to the medical community on wrong site surgery.

The American College of Surgeons stresses the importance of teamwork in any surgical situation. "It is most important that there be cooperative openness between the surgeon and the nurses," says Tom Russell, M.D., executive director, American College of Surgeons. "The two groups must both take responsibility, and if there are questions, they should stop and clarify to be sure everyone is on the same page. No one should make assumptions."

As the first line of defense in reducing the risk of medical errors including wrong site surgery, JCAHO advises patients and family members to make sure that there is total agreement between themselves, their primary care doctor and the surgeon about exactly what will be done and where. A good resource is the Agency for Healthcare Research and Quality's Patient Fact Sheet--20 Tips to Help Prevent Medical Errors, which provides tips to patients to help prevent medical errors, including wrong site surgery.³

Recommendations
JCAHO reiterates the importance of implementing risk reduction strategies as stated in the earlier issue of Sentinel Event Alert and suggests developing processes to assure the correct surgical site, patient and procedure by: 1) marking the surgical site and involving the patient in the marking process; 2) creating and using a verification checklist including appropriate documents, for example, medical records, X-rays and/or imaging studies; 3) obtaining oral verification of the patient, surgical site, and procedure in the operating room by each member of the surgical team; and 4) monitoring compliance with these procedures. Additionally, JCAHO recommends that 5) surgical teams consider taking a
"time out" in the operating room to verify the correct patient, procedure and site, using active--not passive--communication techniques.

**Resources**

Published for Joint Commission accredited organizations and interested health care professionals, Sentinel Event Alert identifies specific sentinel events, describes their common underlying causes, and suggests steps to prevent occurrences in the future.

During the on-site survey of accredited organizations, JCAHO surveyors assess, for consultative purposes, the organization’s familiarity with and use of Sentinel Event Alert information. Accredited organizations are expected to:

- Review and consider relevant information, if appropriate to the organization’s services, from each Sentinel Event Alert.
- Consider information in an alert when designing or redesigning relevant processes.
- Evaluate systems in light of information in an alert.
- Consider standard-specific concerns.
- Implement relevant suggestions or reasonable alternatives or provide a reasonable explanation for not implementing relevant changes.

At this time, JCAHO has placed a moratorium on using the organization’s response to Sentinel Event Alert recommendations as the basis for scoring standards.

Please route this issue to appropriate staff within your organization. Sentinel Event Alert may only be reproduced in its entirety and credited to the Joint Commission on Accreditation of Healthcare Organizations. To receive by e-mail, or to view past issues, visit www.jcaho.org

**Setting the Standard for Quality in Health Care**
Joint Commission on Accreditation of Healthcare Organizations
Sentinel Event Hotline (630) 792-3700

©Copyright 2002, Joint Commission on Accreditation of Healthcare Organizations