No single step prevents wrong surgery

No single step, whether the time out before the incision or surgical site marking, is adequate to prevent wrong surgery. Rather, site verification needs to be a package of activities that involves the team—the nurse, patient, surgeon, and anesthesia provider—as well as an accurate OR schedule and consent and a review of all the patient information.

That’s what the Pennsylvania Patient Safety Authority concluded after analyzing 427 events reported to the state over 2\( \frac{1}{2} \) years, a rate of about 1 every 2 days. Of these, 41% reached a patient, and 59% were near misses; 18 facilities had more than 1 wrong incision in 12 months.

The surgeon’s involvement is particularly important. Having the surgeon involved preoperatively was a net benefit in preventing events. But having the surgeon involved in site verification only in the OR was a net detriment—that is, it was implicated in more events than it prevented.

“We had several events in which the time-out was completed, yet the wrong site was operated on,” says Janet Johnston, RN, MSN, JD, of the authority’s reporting system, which collected and analyzed the data.

“Utilizing one part of the verification process does not seem to be associated with fixing the problem. The whole site verification process is complex, and our data seems to indicate that doing one small part of that process is not really adequate.”

Hospitals and surgery centers in Pennsylvania are required to report wrong-surgery events as well as near misses. Pennsylvania is the only state that mandates reporting of near misses.

From the data, the agency identified factors that contributed to wrong-site events that reached a patient as well as factors that resulted in a “save.”

Factors implicated in patient contact
Activities of surgeon in OR: 53%
Failure of time-out: 34%
Failure of anesthesia provider in OR (eg, blocking wrong site before time-out): 17%
Failure to verify with consent: 13%
Failure to verify with patient information: 13%
Failure to verify position/prep: 11%

Factors in a “save”
Patient/family: 23%
Surgeon involved preop: 19%
Consent: 17%
Patient information: 16%
Office records: 13%
Preop nurse: 12%

“The surgeon’s involvement preoperatively seemed to have a strong association with actually promoting recovery from a wrong-surgery event,” Johnston told OR Manager.

“Another interesting thing had to do with the physician’s office records.” Having
the patient’s office records available in the surgery setting seemed to aid prevention. But not having records available was one factor associated with wrong-surgery events that reached the patient.

A strong contributing factor in wrong surgery was the scheduling of the case by the physician’s office, Johnston noted. Sometimes the incorrect procedure was scheduled, the wrong site was identified, or the surgical site was ambiguous.

**Two case examples**

Two cases illustrate the surgeon’s role in ensuring correct surgery. In the first example, the surgeon participated in site verification only in the OR. In the second, the surgeon was involved preoperatively.

**Surgeon involved only in OR**

A patient was admitted for left knee surgery. The patient was properly identified, and the site was properly marked. After the patient was brought to the OR, the physician elevated the patient’s right leg for the procedure. The nurse prepped and draped the patient. During the time out, no one recognized the wrong leg had been prepared. The procedure was performed on the incorrect leg.

“Because the surgeon inadvertently lifted the wrong leg for the prep, the surgical team assumed it was the correct leg,” Johnston notes.

**Surgeon involved preoperatively**

The patient was in the holding area. The permit and scheduled procedure indicated the left side was to be operated on. The patient, however, stated the right side was to be done. The surgeon reviewed all of the paperwork, the physician’s notes, and the current x-ray, spoke to the patient, and confirmed the right side was the correct side. The surgery proceeded.

A report on the analysis appears in the June 2007 issue of the Patient Safety Advisory published by the Pennsylvania Patient Safety Authority. An article on the project has been accepted for publication in the Annals of Surgery.

Download the Advisory at www.psa.state.pa.us/psa. Look under Advisories and Related Resources. View a video about the findings by clicking on Resources Associated with Patient Safety Advisory Articles. Scroll down to Other Resources.