# Rx: Health Care FYI #58

**Subject:** *Preventing Wrong-Site Surgeries*
**From:** *Rep. Tim Murphy (PA-18)*
***Date:*** *July 24, 2007*

**The problem:** Approximately 1,300 to 2,700 wrong site surgeries occur annually.[1] While hospitals have taken many steps to prevent these errors, there is no uniform protocol for avoiding wrong site surgeries. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has listed this issue as one of their patient safety improvement goals.

**What is a wrong-site surgery?**

- Wrong-site surgery is an operation or procedure preformed on the wrong part of the body.[2] These include: the incorrect side (for example, left eye rather than right) which can occur with paired structures such as kidneys, ovaries, or eyes; the correct side but incorrect location—occurs where there is more than one similar anatomical structure to choose from (for example, incorrect finger on the correct hand or incorrect eye muscle on correct eye); the correct side and correct anatomical site but the incorrect operation (for example, resection of a muscle rather than recession).[3]

**An example of wrong-site surgeries:**

- A recent report found that Pennsylvania hospitals operated on the wrong limb or body part 174 times during a recent 30-month period, and 253 "near misses" where the mistake was caught at the last minute. Sometimes the mistake was caught as the result of input from a patient or family member.[4]
- A study of 3 million operations between 1985 and 2004, found a rate of 1 in 112,994 cases of wrong-site surgery. The average large hospital may be involved in such an event every 5 to 10 years.[5]
- As there is no universal reporting requirement the actual cause and number of wrong site surgeries is most likely much higher. Of 126 cases with reported causes in 2001, 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

[1] Seiden SC. Et. al. Wrong-side/wrong-site, wrong-procedure, and wrong-patient adverse events: are they preventable? Arch Surg. 2006;141:931-939.
[2] Gibbs VC. Patient safety practices in the operating room: correct-site surgery and nothing left behind. *Surg Clin N Am* 2005;85:1307–19.
[3] Ibid.
[4] Patient Safety Authority of Pennsylvania. Actual and Near Miss Wrong-Site Surgery is Reported Every Other Day in PA Healthcare Facilities. June 26, 2007.
[5] Kwaan MR. Et. al. Incidence, patterns, and prevention of wrong-site surgery. Arch Surg. 2006;141:353-358.

involved surgery on the wrong patient; and 11 percent involved the wrong surgical procedure.[6]

**Risk Factors for Wrong-Site Surgeries include:**

- Emergency cases (19 percent)**;** unusual physical characteristics such as 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).[7]
- 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; policy issues such as marking of the surgical site was not required in hospital policy; verification in the operating room and a verification checklist were not required; a pre-operative patient assessment was incomplete. Staffing issues, distraction factors, availability of pertinent information in the operating room were also cited as contributing risk factors.[8]

**Recommendations:**

- Hospitals should adopt patient safety procedures such as the Joint Commission's 'Universal Protocol For Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery.'
- Hospital should publicly report wrong-site surgeries to the U.S. Department of Health and Human Services and the public.
- Provide pay-for-performance incentives for hospitals to implement patient safety efforts to eliminate wrong-site surgeries.
- Implement health information technology with patient information from Electronic Medical Records to ensure that surgical teams all have the information automatically they need (including x-rays, medical history, etc.) in front of them prior to surgery.
- Involve the patient in the marking process for surgeries to ensure operations occur to the right area.[9]
- Require an oral verification of the correct site in the operating room by each member of the surgical team.[10] Some providers sign their initials directly on the site to be operated on before the surgery.
- Develop a verification checklist or "time out" before a procedure that includes all documents referencing the intended operative procedure and site, including the medical record, X-rays and other imaging studies and their reports, the informed consent document, the operating room record, and the anesthesia record, and direct observation of the marked operative site on the patient.[11] Surgical teams can also give everyone involved in the operation the right to halt it if there is a concern.

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[6] Joint Commission on Accreditation of Health Care Organizations. Sentinel Event Alert. Issue 24. December 5, 2001.
[7] Joint Commission on Accreditation of Health Care Organizations. Sentinel Event Alert. Issue 24. December 5, 2001.
[8] Ibid.
[9] Joint Commission on Accreditation of Health Care Organizations. Sentinel Event Alert. Issue 24. December 5, 2001.
[10] Ibid.
[11] Ibid.