



Pennsylvania Patient Safety Reporting System  
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# PATIENT SAFETY WEEK ADVISORY

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## **PATIENT SAFETY AWARENESS WEEK**

The Patient Safety Authority and the PA-PSRS program staff are pleased to join with the National Patient Safety Foundation in marking Patient Safety Awareness Week during March 7-13, 2004 as a national education and awareness-building campaign for improving patient safety at the local level. We are issuing this first advisory as part of our efforts to reduce medical errors and promote patient safety in Pennsylvania’s healthcare facilities. For more information about the National Patient Safety Foundation, see their website at [www.npsf.org](http://www.npsf.org).

## **PATIENT SAFETY AUTHORITY**

The Patient Safety Authority is an independent state agency created by Act 13 of 2002 to help reduce and eliminate medical errors by identifying problems and recommending solutions that promote patient safety. The Authority has contracted with ECRI, a Pennsylvania-based non-profit health services research agency, to develop and implement the Pennsylvania Patient Safety Reporting System (PA-PSRS, pronounced PAY-sirs), a confidential, web-based system designed to receive reports of serious events and incidents from Pennsylvania’s hospitals, birthing centers and ambulatory surgical centers.

Starting in mid-November 2003, 22 healthcare facilities, representing a cross-section of Pennsylvania’s healthcare institutions, have been voluntarily participating in a test phase of the PA-PSRS system prior to a statewide rollout. During Phase 1, they have submitted more than 2,500 reports reflecting a variety of events that resulted in actual or potential harm to patients. Events submitted during the test phase can be broken down into the following broad categories:

*“Starting in mid-November 2003, 22 health care facilities...have been voluntarily participating in a test phase of the PA-PSRS system prior to a statewide rollout.”*

Patient Falls	Medication Errors	Errors Related to Procedures	Complications Related to Procedures	Other	TOTAL
21%	26%	23%	11%	19%	100%

*The above statistics were submitted as part of a test phase of the PA-PSRS system. While they are representative of the types of events submitted by healthcare facilities in Pennsylvania, as test data their statistical validity cannot be confirmed.*



An Independent Agency of the Commonwealth of Pennsylvania

## POTENTIALLY DANGEROUS ABBREVIATION IN SURGERY

A participating healthcare facility reported a potentially dangerous abbreviation that may cause confusion in the operating suite. A patient was scheduled for a left total hip replacement, which was abbreviated LTHR. However, the consent form presented to the patient was incorrectly written for a left total *knee* replacement (LTKR)—an error both the surgeon and patient detected. The visual similarity between the abbreviations LTHR and LTKR is likely the source of this problem.

Among JCAHO's 2004 Patient Safety Goals is the improvement of communication among caregivers, which establishes a requirement that healthcare organizations "standardize the abbreviations, acronyms and symbols used throughout the organization, including a list of abbreviations, acronyms and symbols not to use."<sup>1</sup> While the patient safety community typically discusses dangerous abbreviations in the context of medication errors, this case highlights the fact that abbreviations of treatments and procedures may also pose hazards to patients.

This case illustrates the importance of reporting "near misses", or incidents as defined in Act 13. Though this report only concerned an inaccurate consent form, and the mistake was corrected by both the surgeon and the patient, this transcription error could have occurred on the physician's order or the OR schedule and could have resulted in a serious event.

## THE STORY BEHIND FALLS

Who, what, when, where, how, and why are the important elements of any story and are the essential components of any narrative being reported to improve patient safety.

Consider the following two examples of reports of patient falls:

Narrative 1: "Patient found on floor."

Narrative 2: "Patient pushing off seat of folding chair in PT trying to get up, unassisted without supervision. Left hand slipped; lost balance; slid onto floor. Attendant otherwise occupied with finding information about patient's room for transfer after session."

*"Who, what, when, where, how, and why are the important elements of any story and are the essential components of any narrative being reported to improve patient safety."*

Which narrative conveys more useful information? Falls are among the most common problems reported by Pennsylvania acute health care facilities, and their causes are varied. Patients' mental and physical status, protective devices, supervision, medications, and elimination needs are all potential contributors. The solutions are also varied, and one's ability to help prevent falls depends on understanding the causes. It is also useful to know the consequences of falling for patients with different risk factors.

It is even more important to know the characteristics of the high-risk patient, the relationship between potential causes and the tendency to fall, and the effective recovery actions of caregivers that minimize patient harm. Reporting falls—particularly, reporting incidents that did not cause harm—can help identify these relationships, but only if the narratives contain relevant information. Many facilities already have fall assessment and reduction programs.

## FALLS ASSOCIATED WITH WHEELCHAIRS

A few healthcare facilities have reported incidents to the PA-PSRS system involving patient falls from wheelchairs. While no serious injury has been identified, to date, studies have indicated that wheelchair-related deaths do occur and are more prevalent in persons over 65 years of age. Wheelchairs falling and tipping are the factors most commonly associated with such deaths.<sup>2</sup>

Another wheelchair hazard is its improper use. For example, one PA-PSRS incident indicated that a patient fell while using an empty wheelchair as a walker. The wheelchair tipped backwards while the patient was bearing her upper body weight on the wheelchair handles. Falls are also associated with mechanical problems. For example, falls are more likely to occur when footrests, wheel locks, or other parts do not function properly or are loose. Risks can be reduced by using wheel locks and anti-tipping devices.<sup>3</sup>



## MRI HIDDEN RISKS

The PA-PSRS database includes incidents in which an MRI was ordered for a patient who had a cardiac pacemaker. Fortunately, the procedures were cancelled in both cases. Patient injury might have resulted if these patients had received MRI's.

The healthcare community is most likely aware of MRI-associated patient injuries/death involving ferrous gas cylinders as projectiles.<sup>4,5</sup> Also nationwide, other ferromagnetic objects have been involved in projectile incidents when near MRI's, such as tools, scissors, IV poles, mop buckets, floor buffers, laundry carts.<sup>6</sup>

What may be less known are the risks associated with items implanted or imbedded within the patient. Studies of implants and prostheses have been conducted associated with MRI's. Some implants can be adversely affected by the MRI's electromagnetic fields: for example, cochlear implants, internal or external cardiac pacemakers, implantable infusion pumps, cerebral aneurysm clips. Devices that contain a magnet that might move or become demagnetized, such as dental implants or prostheses with magnetic components may also be adversely affected by the MRI. In addition, metal fragments or shrapnel might be twisted or dislodged during the procedure, resulting in patient injury. Persons with tattoos may experience skin irritation as a result of an MRI.<sup>7,8,9</sup>

Many resources are available that can be utilized to develop strategies to reduce the risk of injury or death related to implanted/imbedded objects and the MRI procedure. Such resources include, but are not limited, to the following.

- American College of Radiology <http://www.acr.org>
- Shellock F, Sawyer-Glover A. The magnetic resonance environment and implants, devices and materials. In: Shellock F, editor. *Magnetic resonance procedures: health effects and safety*. Boca Raton, FL: CRC Press; 2001
- ECRI. Safety concerns in the MR Environment. *Healthcare Risk Control*. Volume 4 Radiology 5; September 2002
- Institute of Magnetic Resonance Safety, Education, and Research <http://mrisafety.com>
- Gosbee J, DeRosier J. MR hazard summary: August 2001 update. In: VA National Center for Patient Safety; 2001

*“The PA-PSRS database includes incidents in which an MRI was ordered for a patient who had a cardiac pacemaker.”*

## REFERENCES

- <sup>1</sup>JCAHO Patient Safety Goals. JCAHO Web site. <http://www.icafo.org/accredited+organizations/patient+safety/index.htm>. Accessed March 2, 2004.
- <sup>2</sup>Calder CJ, Kirby RL. Fatal wheelchair-related accidents in the U.S. *Am J Phys Med Rehab* 1990; 69(4): 183-9.
- <sup>3</sup>ECRI. Falls. *Healthcare Risk Control Safety and Security* 2: 4. December 1996.
- <sup>4</sup>Archibold RC. Hospital details failures leading to MRI fatality. *The New York Times* 2001 August 22; B1
- <sup>5</sup>*Patient death illustrates the importance of adhering to safety precautions in magnetic resonance environments*. ECRI. 2001 [http://www.ecri.org/Include/Docs/hazard\\_MRI\\_Q80601.pdf](http://www.ecri.org/Include/Docs/hazard_MRI_Q80601.pdf)
- <sup>6</sup>Carr MW and Grey, ML. Magnetic resonance imaging. *American Journal of Nursing*. December 2002: 29.
- <sup>7</sup>Shellock FG, editor. *Pocket Guide to MR procedures and metallic objects: update 2001*. Philadelphia: Lippincott Williams & Wilkins; 2001.
- <sup>8</sup>Shellock FG, Editor. *Reference manual for magnetic resonance safety*. 2002 ed. Salt Lake City (UT): Amirsys; 2001.
- <sup>9</sup>Kreidstein ML, et al. Mri interaction with tattoo pigments: case report, pathophysiology, and management. *Plastic Reconstructive Surgery* 1997; 99(6): 1717-20.

Consistent with Act 13, ECRI, as contractor for the PA-PSRS program, is issuing this newsletter to advise medical facilities of immediate changes that can be instituted to reduce serious events and incidents. For more information about the PA-PSRS program or the Patient Safety Authority, see the Authority's website at [www.psa.state.pa.us](http://www.psa.state.pa.us).



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