The Impact of Working Events on Patients

Patient identification errors and ineffective procedure validation in the radiology department can lead to serious treatment delays or life-threatening harm. Imagine for a moment how missing a critical step could lead to a scenario like this:

Transport personnel relied solely on the room number when taking a patient to radiology for a CT scan. Because the patient had been transferred earlier that day, the new room occupant, a non-communicative patient, was mistakenly transported. The technologist was behind schedule and hurriedly performed the examination on the wrong patient. The negative test results were placed in the record of the patient intended to receive the examination, preventing the accurate diagnosis of a life-threatening pulmonary embolism.

Radiology is Particularly Pront to Wrong Events

Researchers believe wrong events are significantly underreported, but even if they are underestimated the statistics about radiology are worrisome. The Pennsylvania Patient Safety Authority received 652 reports of radiology wrong events in just one year (2009); for perspective, TJC’s sentinel event statistics database only captured 455 wrong-side surgery events over a ten-year period (1995-2005).

A Veterans Health Administration study evaluated 212 adverse wrong events between 2001 and 2006. They found about half (104) of the events occurred outside of the operating room, and interventional radiology (IR) was the most common source. Other studies report similar findings and the evidence is clear: specific training is needed to prevent “wrong events” in radiology.

Accurate Patient Identification: An Imperative for Safe Healthcare

The Joint Commission (TJC) has long identified accurate patient identification as critical to patient safety, establishing it as its first National Patient Safety Goal in 2003 and requiring implementation of the Universal Protocol for Preventing Wrong Site, Wrong Procedure, and Wrong Person Surgery™ in 2004. While Universal Protocol was originally developed to prevent errors in surgery, it is also highly useful in radiology.

Why Wrong Events Happen

Problems that uniquely contribute to the high rate of radiology department errors include inaccurate order entry by administrative personnel and improper scheduling. Communication problems such as limited patient comprehension (language proficiency or cognitive impairment) or illegible handwriting further increase the risk of error.
To manage risks, every team member must be empowered to speak up to prevent mistakes. Dr. Robb Hoehlein, interventional radiologist and Medical Director of Radiology at East Cooper Regional Medical Center in South Carolina, agrees. “Meticulous attention to patient identifiers and confirmation of the appropriateness and accuracy of the ordered exam are critical to patient safety, minimizing adverse events, and reducing liability. It requires a team effort where no one is afraid to raise a flag, and everyone understands the importance of the issue as well as their individual responsibility to contribute.”

What You Can Do

Radiology administrators should apply the same principles developed to prevent wrong events in surgery, such as ensuring the correct patient is selected, the correct examination is performed, and the correct body part is imaged. Recommendations for radiology technologists include:

- **Use two separate data points to identify patients such as name and date of birth** – do not use unreliable location identifiers such as room numbers

- **Involve the patient in the pre-procedure verification process** – take a good patient history and look for irregularities between the actual order and the intended order; if the story doesn’t add up, stop and seek clarification from the referring physician

- **Use a checklist to conduct a final time-out before the examination starts** – once the patient is on the table, but before the imaging examination commences, re-confirm with the patient their name, DOB, type of examination and if appropriate, side to be imaged and ensure patient demographic information, patient orientation and laterality (if applicable) are entered correctly into the imaging equipment

For IR procedures, which rely on imaging guidance, the pre-procedure verification process must still be performed. Recommendations for interventional radiologists include:

- **Use a checklist to verify the availability of items before the procedure** – ensure pertinent records such as the history and physical, lab results and prior images are assembled and confirm blood products, implants and devices are in the procedure area and match the patient

- **Perform a time-out and do not start the procedure until all questions or concerns are resolved** – ensure all team members (radiologists, technologists and nurses) are present, involved, and agree that the correct patient, procedure and site have been selected, and that the patient demographic information, patient orientation and laterality (if applicable) displayed by the imaging modality are correct

How Radisphere Can Help

Radisphere’s Quality Management department offers support to its clients on important drivers of patient safety and performance improvement. This team works in partnership with hospital safety leaders to identify and mitigate the unique risks associated with wrong events in radiology.

Resources and Links

- [www.jointcommission.org](http://www.jointcommission.org)
- [www.sirweb.org](http://www.sirweb.org)

Works Cited


ABOUT RADIOLOGY QUALITY INSTITUTE (RQI):

Founded by Radisphere, RQI is a collaborative research organization dedicated to the identification and promotion of radiology quality standards and process improvements. With access to Radisphere’s extensive quality data, analytics, and outcomes, the Institute is focused on developing performance benchmarks and sharing relevant information to deliver measurable improvements in radiology quality for unparalleled levels of patient care. As the leading provider of standards-based radiology delivery solutions for more than 100 clients in 28 states, Radisphere is transforming the practice of radiology at health systems by establishing measurable performance standards and accountability for diagnostic accuracy, appropriate utilization, service level excellence and patient care.