Patient Safety Tip of the Week

February 25, 2014

Joint Commission Revised

Diagnostic Imaging Requirements

The Joint Commission has revised its standards and requirements for hospitals offering diagnostic imaging services (The Joint Commission 2013) and the focus is on patient safety. The revised requirements become effective July 1, 2014 and there will be additional changes coming for 2015.

Hospitals generally underappreciate the patient safety risks in the Radiology suite. While some of those risks are related to the radiology procedures themselves, there are a whole host of risks not directly related to the procedure. We strongly recommend you read our October 22, 2013 Patient Safety Tip of the Week "How Safe Is Your Radiology Suite?" for an exhaustive review of all those risks.

The new Joint Commission requirements focus heavily on MR, CT and nuclear medicine imaging. For MR imaging they want to be sure hospitals manage the risks associated with claustrophobia or anxiety, potential need for urgent or emergent medical care, acoustic noise, patient implants or foreign bodies, and ferromagnetic objects entering the MRI environment. They want you to ensure that access is restricted for everyone not specifically trained in MRI safety (or screened by MRI-trained staff before entering the scanner area), with appropriate signage and direct supervision and control of the area by MRI-trained staff.

Safety in the MRI unit is a whole topic unto its own. We refer you to our prior columns on patient safety issues related to MRI:

- February 19, 2008 "MRI Safety"
- March 17, 2009 "More on MRI Safety"
- October 2008 "Preventing Infection in MRI"
- March 2009 "Risk of Burns during MRI Scans from Transdermal Drug Patches"
- February 1, 2011 "MRI Safety Audit"
- October 25, 2011 "Renewed Focus on MRI Safety"
- August 2012 "Newest MRI Hazard: Ingested Magnets"

The new Joint Commission performance improvement standards also require that hospitals collect data on patient burns occurring during MRI exams, incidents where ferromagnetic items have entered the MRI scanner room, and any injuries resulting from presence of ferromagnetic items in the MRI scanner room.

A focus on radiation safety for both patients and staff is evident in the requirements for CT, nuclear medicine, and PET imaging. Staff dosimetry results need to be reviewed at least quarterly by the radiation safety officer or medical physicist to ensure that staff radiation exposure meets ALARA ("As Low As Reasonably Achievable") and regulatory limits.

For CT services the hospital needs to measure the actual radiation dose produced for at least adult brain, adult abdomen, pediatric brain, and pediatric abdomen studies and needs to record in the patient's medical record the radiation dose on every study produced during a CT examination. In addition, the interpretive report of the study needs to include information about the radiation dose.

An important addition is that the hospital considers the patient's age and recent imaging studies when deciding on the most appropriate type of imaging and has knowledge of recent imaging examinations in order to avoid unnecessary duplication of studies (see our multiple columns on radiation safety and the Imaging Gently® and Imaging Wisely® campaigns listed below). Hospitals are also expected to use external benchmarks for comparison when analyzing its patient CT radiation doses and CT imaging protocols need to be reviewed and kept current, ensuring they are in keeping with current standards of practice and have received input from interpreting radiologists, medical physicists, and the lead imaging technologist.

At the same time, however, maintenance of image quality is important and both radiation dosing issues and image quality issues need to be part of the organizations quality improvement activities.

Also, at least annually a medical physicist or MRI scientist must conduct a performance evaluation on the MR, CT, nuclear medicine or PET equipment. The Joint Commission document lists the parameters that, at a minimum, must be evaluated for each modality. Such persons must also be involved regarding safety issues related to installation of any new equipment, replacement of existing equipment, modifications to rooms where ionizing radiation will be emitted or radioactive materials stored.

The requirements also focus on qualifications of individuals involved in imaging studies, looking for appropriate certification for both radiologic technologists and the medical physicists. It also requires verification that imaging technologists who perform CT have ongoing education that includes training on dose reduction techniques and the Imaging Gently® and Imaging Wisely® campaigns.

Under medication safety standards Joint Commission requires that before administering a radioactive pharmaceutical for diagnostic purposes, staff verify that the dose to be administered is within 20% of the prescribed dose (or within a prescribed range if the dose is prescribed as a range).

Hospitals and imaging centers are expected to perform prior to initiation of a procedure verifications of the correct patient, correct imaging site, correct patient positioning, and (for CT scanning) correct imaging protocol and scanner parameters.

We continue to have a special concern about hospitals that technically do not offer MRI services but either have an arrangement for MRI services provided by third parties on their premises or for those hospitals that don't have MRI services but have their staff accompany patients to off-site MRI units. While they might be technically exempt from the Joint Commission MRI-specific Joint Commission requirements they need to be cognizant of all the patient safety (and staff safety) issues regarding MRI. We find that such arrangements often result in both parties assuming that someone else is responsible for safety and are especially risk-prone. Similarly, particularly with MRI you need to consider what outside parties (eg. firemen, police) might have to rarely venture into the MRI suite and ensure that they are aware of all the safety precautions that are necessary.

Now is a good time to review your hospital's compliance with these updated and revised Joint Commission requirements. It's also a good time to see how your hospital stacks up regarding the numerous safety hazards noted in our October 22, 2013 Patient Safety Tip of the Week "How Safe Is Your Radiology Suite?".

Some of our prior columns on patient safety issues in the radiology suite:

- October 16, 2007 "Radiology as a Site at High-Risk for Medication Errors"
- April 8, 2008 "Oxygen as a Medication"
- September 16, 2008 "More on Radiology as a High Risk Area"
- October 7, 2008 "Lessons from Falls....from Rehab Medicine"
- November 18, 2008 "Ticket to Ride: Checklist, Form, or Decision Scorecard?"
- January 2010 "Falls in the Radiology Suite"
- August 2010 "Sedation Costs for Pediatric MRI"
- January 25, 2011 "Procedural Sedation in Children"
- February 19, 2008 "MRI Safety"
- March 17, 2009 "More on MRI Safety"
- October 2008 "Preventing Infection in MRI"
- March 2009 "Risk of Burns during MRI Scans from Transdermal Drug Patches"
- February 1, 2011 "MRI Safety Audit"
- October 25, 2011 "Renewed Focus on MRI Safety"
- March 13, 2012 "Medical Emergency Team Calls to Radiology"

- August 2012 "Newest MRI Hazard: Ingested Magnets"
- October 22, 2013 "How Safe Is Your Radiology Suite?"

Some of our previous columns on the issue of radiation risk:

- February 2, 2010 "The Hazards of Radiation"
- November 23, 2010 "Focus on Cumulative Radiation Exposure"
- March 2010 "More on Radiation Safety"
- June 2011 "Progress in Reducing Radiation from CT Scans"
- April 2013 "Radiation Risk of CT Scans: Debate Continues"
- June 4, 2013 "Reducing Unnecessary CT Scans"
- July 2013 "More on the CT/Cancer Debate"

References:

The Joint Commission. Prepublication - Diagnostic Imaging Services Requirements Prepublication Standards. December 20, 2013
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www.patientsafetysolutions.com

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