ECRI Institute PSO

Share Learn Protect™

PSO Monthly Brief

July 2012

At the Crossroads: Medical and Information Technology

As the lines connecting health information technology (HIT) and medical technology strengthen and multiply, healthcare practitioners must ensure that they are using the benefits of such communication to the advantage of their patients.

After all, the goals of any electronic health record (EHR) or other HIT implementation include streamlined workflow, better information transfer and communication, and an overall improvement in patient care and safety. However, a poorly planned or rushed HIT implementation can in fact have the opposite effect—staff may be frustrated, information can be lost, and patients may be at risk of misdiagnosis and mistreatment.

This convergence of technologies should be carefully shepherded from planning through implementation, as well as regular review and upkeep. To ensure that any HIT system is implemented successfully, organization leadership must take an active role in championing it. Clear goals and patient safety-centered implementation plans must be set and publicized. Necessary capital and staffing to maintain the technology should also be ensured. Once the HIT is implemented, leadership should motivate staff to report unsafe conditions, near misses, and adverse events, so potential hazards can be identified and eliminated.

Once the HIT system is up and running, both leadership and staff need to be aware of the following:

- Change management. Any changes made within or to the HIT system or network must be made in a controlled manner and not without awareness, authorization, or approval of the change to be made. Because repercussions from unauthorized, unverified, or incorrect changes can impact patient safety significantly, ECRI Institute included change management in its complimentary list of 2012 Top 10 Technology Hazards (registration required).
- Interfacing and interoperability. Linked systems must be able to transfer, read, and store information without losing, corrupting, or overwriting it. This capability should be tested extensively as early in the planning phase as possible to ensure that the system being considered will interface smoothly with the organization's existing systems. ECRI Institute PSO has received multiple reports of events related to interoperability and is currently conducting an HIT "Deep Dive," analyzing events collected using the Agency for Healthcare Research and Quality (AHRQ) common formats. Stay tuned for these findings later this year.
- Software upgrades. Staff members who are responsible for the maintenance and upkeep of the HIT system should ensure that the software is well maintained, working with the vendor as necessary. Updates should be installed promptly, yet it should be verified that they do not overwrite or alter any data previously entered into the system (i.e., the upgrade should be tested before installation). If an upgrade would negatively impact the system's interoperability with another technology, this should be documented along with the decision not to implement the upgrade. Significant upgrades that change the functionality of the device or system may necessitate user training.

The linking of medical technology and HIT can certainly create a more efficient healthcare system; however, any new technology carries with it risk. Therefore, healthcare practitioners should be proactive in learning the new systems and in ensuring that the systems interface smoothly, supporting patient safety. ECRI Institute can help organizations to perform such proactive assessments; for more information, e-mail insight@ecri.org.

How Can We Help You?

Whether you have questions about the final rule or want to learn more about ECRI Institute PSO and/or support for other PSOs, we would be happy to hear from you. Please contact ECRI Institute at pso@ecri.org or call (610) 825-6000, ext. 5558.