

Lessons Learned: Electronic Medication Reconciliation Challenges of Early Adoption

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Introduction

Lifespan has grown into a regional healthcare network providing patient services across Rhode Island. Its mission is to improve the health status of the people whom they serve through the provision of customer friendly, geographically accessible and high value services. Its Information Service department supports this mission by providing comprehensive integrated information network to clinicians, staff, administration, and executives. Lifespan has been recognized nationally for its innovation and achievements in electronic medical record (EMR) system's adoption. Lifespan's EMR platform is an older legacy electronic medical record system, Siemens Invision. With the organization's innovative nature and focused vision, Lifespan has achieved Stage 6 of the HIMSS Analytics EMR Adoption Model. Additionally, Lifespan was one of first twenty hospitals in the country to achieve Meaningful Use Stage 1.

Method

In October 2011 it was discovered that Lifespan's Siemens Invision Clinicals v27.0, Medication Reconciliation Discharge Reconciliation modules were not operating properly. A Registered Nurse noted a discrepancy between what the Physician Assistant entered into the EMR and what printed on the discharge paperwork and system generated discharge prescription. The clinician contacted the helpdesk to report the issue immediately and the efforts began to investigate the problem.

Siemens described the issue in a Safety Advisory Notification (November 2, 2011) as the following:

“This issue occurs when set up of the dose form values is not synchronized between First Data Bank (FDB) data, the Common Vocabulary Engine (CVE), the Invision Service Master and the relevant Invision profiles. When dosage forms are missing or mapped incorrectly, two scenarios may occur which could result in the discharge medication list and prescription not being what the discharging clinician intended.”

Results

Lifespan partnered with multiple outside groups and agencies to communicate to the public about the event. Lifespan institutions were audited by the Board of Pharmacy, RI Department of Health, and submitted a response statement to The Joint Commission.

Discussion

As information technology advances and becomes ubiquitous in healthcare, all clinicians and nurses have a responsibility to appreciate risks inherent in the use of technology. Lifespan considers themselves early adopters of technology in healthcare and acknowledge the risks associated with pioneering our rapidly advancing technologies. This experience brings to light the risks associated with being early adopters of technology, when national standards are not determined.

The lessons learned from Nursing Informatics Perspective:

- Improved collaboration of all stakeholders through project lifecycle
- Improved education to end users, emphasizing end user responsibility in identifying errors and escalating concerns
- Improved testing to include multilevel testing in various stages of development
- Involve more disciplines and end users throughout the testing phases
- Heightened awareness of conflicting national standards

The organization has taken the approach of being transparent in sharing the experience with others nationally. It is imperative to share this experience and lessons learned to aid other institutions who may be in the initial stages of EMR adoption.