Nursing Informatics/Healthcare System Assessment

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Introduction to the “Power Notes System”

For the purposes of this paper, I will use an alias for the healthcare informatics system that I evaluated: the Power Notes System (PNS). I interviewed the Director of Nursing Administration of the hospital, who has been instrumental over the past decade in implementing this system.

PNS integrates all departments of the hospital into one electronic medical record (EMR), which the nurse can access all parts of. It is divided into sections for all systems to be assessed, vital signs, medication administration records, physician orders, social work, physical therapy, and the list goes on. When each nurse signs on to the system, his or her patient caseload shows up on the screen. When he or she clicks on a patient, all of the information on that patient is available to them by clicking on each category on the left-hand side of the screen. Certain assessment criteria are required for the nurse to fill out before other parts of the chart may be accessed. Additionally, if a nurse needs to fill out a form, such as tracking medication administration on the electronic medical record (eMAR), certain icons appear at the top of the patient screen. PNS conforms to all JCAHO standards for patient confidentiality and security.

System History and Timeline

PNS began ten years ago as only a nursing tool. All other departments continued to use paper until 2011, when medicine finally was trained to use it. The first nursing units to use PNS in 2004 were one medical/surgical unit, and the critical care unit. By 2008, all nursing departments were online. Surgery followed, then social work, pharmacy, and finally medicine. The hospital recognized that the future of nursing and of healthcare was to integrate electronic systems into their patient care. The main goals of this were improving both patient safety and efficiency of nurses. At present, Medicare and Medicaid are going to begin to reduce reimbursement to hospitals that do not comply with implementation of an EMR. This directly impacts the success of the hospital, which is an excellent reason for implementation.

Costs of Implementation

According to the Director of Nursing Administration who I spoke with, the director of the information technology department does not give out budgetary information related to the systems in place. This information is confidential. I was told that updates are made four to six times per year, so the costs must be considerable.

System Design

The person who originally implemented the system was the senior vice president of nursing at the time. It was marketed to them as a clinical information system for nurses to document patient care. The office that designed the system for the hospital is located in the Midwest. They own the copyrights to the software. The information technology steering committee and directors of nursing originally designed the system specifications for this particular hospital. There is an on-site PNS person to handle all problems and updates. Two nurses, one vice president of nursing and one associate director of nursing, handle the clinical adaptations of PNS.

Evaluation of the System

PNS has exceeded its uses. There are so many implications of implementing this system. Information is now at fingertips of every provider, which provides transparency, continuity of care, accessibility, and greater quality of documentation. Intra- and interdepartmental communication is now easily available, as almost all departments are online.

The benefits of this system are plentiful. Nurses can access every part of the chart, which helps in their role of coordination of care. It eliminates the waste of a paper system, in following with the “green” policies of many hospitals and offices, and also saves the physical space that it used to take to store all of those paper charts. The medical staff has Ipads with PNS applications on them, so they can go room-to-room with the patient’s chart. Even the outpatient clinics affiliated with the system have access to PNS, and it is lined to the main plant.

System Adjustments

The hospital is always looking at ways to tweak, upgrade, streamline, and simplify PNS and their processes in general. The main goals are to remove duplication of entry as much as possible. All changes that are made must be specific to documentation and regulatory requirements. Recent changes have been made by digitizing the last of the paper forms, thus making them available to all end users. These include the peripherally inserted central catheter documentation sheet that was rolled out in November 2012, and the rapid response team nurse/respiratory technician flow sheet and plan of care that are going live on December 18, 2012.

There are several planned system fixes for the near future. One is to bring the computers into rooms, and have them flip down from the walls to protect personal health information. Each hospital room must be specially wired for this, so it may be a while. A new version of the system is about to be rolled out, with access for Maternal/Child Health, who was previously not online. Psychiatry is still a hybrid system, and efforts will be made to bring them completely on in the near future.

Changes are made incrementally, and many times per year. Specific changes are brought to the nurse managers and streamlined before they are presented to the end-users. The nurses are already familiar with using the system, so any changes that are implemented are tailored to the working knowledge of the users. In-services are done for one to two weeks before changes go live to ensure that the staff is comfortable with the changes. When the changes go live, there are two to three hours of system downtime during which the computers are totally unavailable. This usually happens on the night shift. Paper charting is used during this period, and the night shift nurses are very adherent to the protocols.

Return on Investment

It is very difficult to ascribe a dollar amount to the improvements that PNS has made to the hospital’s success. A more streamlined system, minimization of errors, access for all nurses to every part of the chart, patient safety, and improved workflow are all returns on investment from implementation. The fact that the nursing staff now has more time to care for their patients, and less time is spent documenting is a great benefit. More staff is being hired now that are accustomed to using entirely electronic systems, which the administration believes is a benefit to the nursing community.

Assessing the return on investment is done by the hospital reaching the goals that they have set. When the Joint Commission came to evaluate the hospital, they were extremely impressed at the level of documentation that PNS afforded the nurses. They were additionally impressed with the nurses’ ease of use and fluency.

Recommendations

Mobile healthcare (mHealth) is becoming increasingly important as we move from a wired to a wireless world. The implications of this in healthcare for standardizing and increasing efficiency include the use of tablets, barcode scanners, digitized pens, and cameras for documenting patient care. A company called Motion has come out with a new tablet that, according to Jody Torres, RN, of East Jefferson General Hospital is, “portable and has the integrated features, such as cameras and barcode scanners, that [are] needed while still being rugged and easily disinfected” (Health Management Technology, 2012, p. 12). Many EMR systems have applications that are available on mobile platforms. The hospital that I visited would benefit from using mHealth in their patient care.

A cost-effective way of implementing such a system could be Bring Your Own Device (BYOD), which is “a business policy allowing and encouraging employees to bring their own mobile devices, such as laptops and smartphones, into their place of work and use them to access company resources including email, intranet and company applications” (Bodani, 2012, p. 84). According to Aasha Bodhani (2012), “BYOD is gaining approval in the health industry” (p. 84). The devices can be easily carried by practitioners with the use of lab coats that have tablet-sized pockets. This ensures that the technology stays mobile while leaving the doctor’s hands free for patient care (PRWEB, 2011).

References

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Interview conducted on December 12, 2012 at 11:00am