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The Impact of Quality and Safety Initiatives

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Abstract

Healthcare is consistently changing with evidence-based practice and up-to-date methods. These changes are instituted often by the Institute of Medicine and other sources who promote quality and safety initiatives. One initiative promoted by the Institute of Medicine is the prevention of medication errors (Institute of Medicine, 2006). Medication errors were statistically researched and noted to be addressed for concern. The prevention of medication errors highlighting the quality and safety initiative took place and recommendations were made to change the current healthcare environment. The healthcare environment changes will directly impact how nursing education is taught. Nursing education, with the quality and safety initiative, must change how education is being taught to help prevent the risk for medication errors. Incorporation of this initiative into education is provided to help the need for design, assessing the knowledge of the students, and addressing the evaluation of the student can be learning through a specific example method. Utilizing lab simulation as a key education tool is discussed fully to help decrease medication errors starting at the student level.

The Impact of Quality and Safety Initiatives

 The use of medication whether it is over the counter, supplements, or prescription medications is consumed on a daily basis in the United States. Four out of five Americans will are reported to use medications on a weekly basis (Institute of Medicine, 2006). Taking a medication comes with side effects, or adverse effects. On occasion these effects can be created by the prescriber, the doctor or the nurse administering the medication. In these instances the error could be giving the wrong medication, the wrong dosage, with the wrong route, or the lack of educating the patient on specific instructions per the medication. This background was introduced to the Institute of Medicine (IOM) to study the prevalence of medication errors, and to create quality and safety initiatives in essence of the study. The purpose of this paper is to review the IOM quality and safety initiatives created from the study, how the initiatives impact nursing education, and how nurse educators can incorporate these initiatives into a teaching design for students.

**Quality and Safety Initiative**

 In 1996, the Centers for Medicare and Medicaid Services prompted the Institute of Medicine in the high rate of medication error (Institute of Medicine, 2006). It was suggested to IOM to research the background of medication errors and provide a review of the findings. In the research, hospitals were found to have the greatest errors in medication administration. An adverse drug event or known as an ADE can be preventable. The ADE can be from the doctor prescribing, obtaining the medication, distributing from the pharmacy, the nurse administering or the education and monitoring post administration. The research showed between 380,000 to 450,000 preventable medication errors each year (Institute of Medicine, 2006). These numbers are also considered underestimated as some errors may not have been reported.

Along with the medication error directly effecting the patient physically, the error can also have a financial implication. These costs hinder the patient, insurance companies, the facility where the patient is at, the physician, and any other individuals surrounded in the care of the patient who received the ADE. It is reported, when an ADE occurs the patient will incur an additional $8,750 to this patients hospital stay. Already, with the given research statistics of the mean 400,000 ADE per year this can accumulate to $3.5 billion dollars every year (Institute of Medicine, 2006).

The IOM has reviewed the research and statistics of ADE, and created the quality and safety initiative “Preventing Medication Errors” (Linda Kohn, 2000). The quality and safety initiative has specific standards and recommendations listed to improve and prevent ADE. For the purpose of this paper, only one specific recommendation will be focused on in relation to nurse educators. This recommendation by IOM states:

Health care organizations and the professionals affiliated with them should make continually improved patient safety a declared and serious aim by establishing patient safety programs with a defined executive responsibility. Patient safety programs should: (1) provide strong, clear, and visible attention to safety: implement non-punitive systems for reporting and analyzing errors within their organizations: (2) incorporate well-understood safety principles, such as, standardizing and simplifying equipment, supplies and processes: and (3) establish interdisciplinary team training programs, such as simulation, that incorporate proven methods of team management. (Linda Kohn, 2000, p. 156)

**Changing the Healthcare Environment**

 In preventing ADE, changes in the healthcare environment have taken place. These changes are required for all healthcare providers alike to perform. One of the highest change is the communication between the provider and the patient (Philip Aspden, 2007). Direct communication will promote safety when medication administration is being performed. This allows the patient to have rights when communication is accurate and appropriate. The patient is the source of control, they can refuse medication, and be an active participant in the management of the medication.

 In furthering medication safety, changes have been made to obtain an up-to-date medication log on every patient including over the counter medication, supplements, and or prescription medications. Another key up-to-date log is to ask the patients allergy status. The medication log and allergy status should be updated on each visit. This action is not only at a state level but also a federal level meaning every healthcare provider must address a patient’s medication list and allergy status upon admission (Philip Aspden, 2007).

 Technology is at the forefront and medication safety can be better utilized with technology. It is further addressed for prescription medication to be electronically filed to a pharmacy of the patient’s choice. Maintaining the same pharmacy also decreases risks for medication safety, having a preferred pharmacy on file is also suggested. Other technology safe practices is allowing tablets to be equipped with PDAs, personal digital assistants. This allows providers to have the most up-to-date information on a medication instantly (Philip Aspden, 2007).

The electronic medical record (EMR) allows facilities to have the same information on a patient. Nurses are now being asked to reconcile medications with the patient to ensure an accurate list is being provided during handoff from one unit to the next or on direct admission (Philip Aspden, 2007). This is then cross-matched with pharmacy and the physician. Nurses who administer medications now have to scan a patient’s wrist band, and the medication itself. This practice allows the nurse to see the last dose which was scanned, and allergies which may alert the nurse if the medication was an override from pharmacy. Some EMRs also have the capability to look up the medication on up-to-date while the nurse is giving the medication to the patient.

**The Impact on Nursing Education**

 The recommendation set forth by the IOM which was listed in the previous section has a direct impact on nursing education. Taking the recommendations and the changes in the healthcare environment impacts how nurse educators are now teaching new students, new employees and even experienced employees. Nurse educators now have to design education through promoting job safety, avoiding reliance on memory, educating on constraints and forcing functions, avoid reliance on vigilance, simplify key processes, and standardize work processes. Other areas for education is to train for the unexpected and what to do in these circumstances, how to work in teams for those who work in teams daily (Linda Kohn, 2000).

 Nurse educators themselves must remain up-to-date on medication and technology, and how it relates to quality and safety purposes for the patient. Staying up-to-date can include the education of new equipment such as intravenous monitors or patient controlled analgesic pumps, and new computer systems. Other educational needs can include the knowledge of policies and standards of the accreditation in which the facility is licensed (Linda Kohn, 2000). This is a basic compilation to the needs an educator is impacted with in reference to the quality and safety initiative, preventing medication errors. All these entities must be known to the nurse educator prior to educating others in the healthcare setting.

**Instructional Design, Assessment and Evaluation**

In designing an instructional method for nursing students on the quality and safety initiative, preventing medication errors, an educational method is on the administration of medication. Nursing students at the point in their educational background may have little experience with medication highlighting the need for education. The nurse educator will need to provide a close real life scenario for appropriate learning. In college institutes, lab simulations can provide this scenario. The nurse educator can provide case scenarios utilizing the lab simulation (Gaberson, Oermann, & Shellenbarger, 2015).

 In this lab simulation, there will be a medication administration box or sometimes called a Pyxis. A real life bar code scanning device which is then linked to the medication needing to be administered. The lab simulation room will also be provided with a mannequin. This mannequin is capable of receiving subcutaneous injections, intramuscular injections, and intravenous injections. In the instance of oral medication, the student can role play and state the medication was given. The mannequin is equipped with an identification band, and allergy band. In most cases, the mannequin is capable of breathing, having a pulse, blood pressure, and pulse oximetry allowing the student to obtain vital signs. The mannequin can also provide small conversations, turn colors, blink, and produce common noises like moaning, vomiting, and other sounds. All of which are produced by an educator using the technology the mannequin is hooked up to.

The case scenario will allow the student to review the order whether it is on paper or an electronic medication administration record. The student will then retrieve the medication out of the Pyxis, noting the right patient, right medication, right route, right time, and right dosage. Once the student retrieves the medication the student will be able to scan the wrist band and the medication to provide a second verification of the five rights. The educator will be able to note any errors and note if the student recognized any allergies or if the student requested the patient to state their name and date of birth. Once the student has verified the medication, the student will be asked about the medication for knowledge base. The next part of the scenario is accurate administration of the medication related to the order. The last piece of the scenario is discarding of the medication appropriately. The use of lab simulation can appropriately identify the needs of the student through assessment of each skill and will have an understanding of the students’ knowledge. Evaluation strategies can be given through the passing with zero errors after a specific amount of attempts noted in the policy of the institution.

**Conclusion**

Healthcare is forever changing to promote quality and safety for the patient. The Institute of Medicine set forth initiatives to promote quality and safety through preventing medication errors. To instill the quality and safety initiative, healthcare must change the current practice and provide new practice into the healthcare setting. The new practice impacts not only the patient and healthcare provider but also those who educate the new practice. Staying up-to-date on the most recent evidence-based practice and adjusting educational methods will promote the quality and safety initiative. Incorporating new design methods in education will provide new and old nurses to follow the same evidence-based practice and decrease the chance of medication error. Decreasing medication errors will promote the quality and safety initiative to prevent medication errors to the patient.

Reference

Gaberson, K., Oermann, M., & Shellenbarger, T. (2015). *Clinical teaching strategies in nursing.* New York: Springer.

Institute of Medicine. (2006). *Preventing medication errors.* Retrieved from Institute of Medicine:http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2006/Preventing-Medication-Errors-Quality-Chasm-Series/medicationerrorsnew.ashx

Linda Kohn, J. C. (2000). *To Err is Human: Building a Safer Health System.* Wahington D.C.: National Academy Press.

Philip Aspden, J. W. (2007). *Preventing Medication Errors: Quality Chasm Series.* doi:10.17226/11623.