A Deeper Look Into Medication Errors

Kaylah Dixon, Ny'Quasha Marshall, and Logan Sanford

Lakeview College of Nursing

Identification of Problem

After evaluation of the clinical setting, the students determined that the rate at which medication errors occur is of great concern. In fact, according to the article entitled "Factors Affecting Medication Errors among Staff Nurses: Basis in the Formulation of Medication Information Guide," medication error rates can be as high as 1.9% per patient per day (Dumo, 2012). The statistic is very concerning and warrants further investigation of the contributing factors. The students selected this topic to discover the most common causes of medication errors and interventions that can reduce the rate at which these errors occur.

Literature Review

After doing research, the students found that a significant cause of errors in medication administration begins with the lack of knowledge nurses have about medications. The students chose to focus on the primary concern, the five rights of medication administration. The five rights of medication administration include the right patient, right drug, right dose, right route, and the right time (ATI Nursing, 2016, p.13). The students found there is much more to the five rights than merely the right patient, drug, dose, route, and time.

The students found that the five rights are a broad way to ensure medication safety. When addressing the right patient, the nurse must also ensure that a thorough background of the patient is collected. The nurse should discuss any other medications the patient may be taking, including over the counter medications if the drug and dosage make sense for the patient, the patient's pregnancy status, and any allergies the patient may have to medications when discussing the "right patient." It is crucial for the nurse to not just stop at the name and birth date of the patient. Also, the article discussed the misconception of the "right drug." Nurses often believe that this step in the five rights stops at what the provider prescribes when, in fact, it goes much further. This step in the administration process involves determining if the drug is appropriate for the

patient and possible drug-drug interactions. The nurse should also assess if the medicine requires dietary restrictions or if it is a high-risk drug that requires extra monitoring. Lastly, the nurse must ensure the generic and brand names match those on the prescription. When addressing the dose of the medication, the nurse must also assess if the patient may have a condition requiring modification of the dosage, if the ordered dose makes sense for the patient, and if there is a decimal point that changes the meaning of the medication dosage. When assessing the route, the nurse must determine if the drug can be cut or crushed for an oral dose, if the patient knows how to properly inhale medication if prescribed an inhaler drug and if the patient can prepare and administer an injectable medication if prescribed in that route. The most tedious and overlooked right is the right time. Nurses involved in the study claimed that out of the five rights, the right time was the least concerning right of the five. Many factors can happen that keep the nurse from being able to administer the medication at the right time. In certain instances, the timing of medication administration is crucial in the patient's care. When assessing the right timing of the medication, the nurse must have a sound knowledge of the medication he or she is administering. When evaluating the five rights, the nurse must address all aspects of the five rights. The students found that most nurses do not assess the different aspects of the five steps, which was leading to the majority of medication errors.

Besides the five rights, human error plays a significant role in medication errors. Unfortunately, when nurses are busy, rushed, or under stress, mistakes may be inevitable. Moreover, short staffing in nursing or pharmacy can also influence the occurrence of errors in medication administration. Inattentional blindness causes many human errors regarding medication administration. It is defined as "the failure to see something that is not expected" (Karch, 2015, p. 3). As nurses, one may see what they expect or accustomed to seeing. When

pulling medications, nurses become acclimated to a standard label. Capacity, conspicuity, expectation, and mental workload are factors that all contribute to inattentional blindness, and individuals must be conscious of these factors to decrease human errors. Capacity refers to the ability to pay attention, which can be altered by stress or fatigue. A nurse can feel overwhelmed when his or her focus is elsewhere, making the nurse more vulnerable to inattentional blindness. Conspicuity refers to how likely a person is to notice something or how one pays attention to something relevant to them. Conspicuity can influence expectations, which causes changes in a patient's medication regimen, which can cause the nurse to overlook the change due to poor discernment (Karch, 2015). Inattentional blindness is a major concern, and healthcare teams should work to reduce the effects of the errors which will foster patient safety.

Change Theory

The students chose Lewin's Change Theory, which includes three steps; unfreezing, moving, and freezing. According to the article entitled "Selecting The Best Theory to Implement Planned Change," unfreezing is when change is needed, moving is when the change is initiated, and refreezing is when equilibrium is established (Mitchell, 2013). The students identified that unfreezing was necessary when multiple medication errors were observed, resulting in potential harm to patients. The student's enforced change by implementing a program to which each nurse must actively go through the five rights of medication administration before administering each medication. The program also focused on reducing distractors and secluding the pyxis to a quiet and private area. The students then went on to assess the changes applied by following up annually.

The students chose this change theory because of the simplicity of the concepts within the theory. The students used each step in the change theory to ensure the proper implementation of

change. This theory is what worked best for the students, and it was the most successful in implementing change within nursing practice.

Data Collection and Analysis

The article entitled "Factors Affecting Medication Errors among Staff Nurses: Basis in the Formulation of Medication Information Guide" discussed the serious and complex problem in the clinical setting and evaluated the nurses' knowledge regarding the use and administration of medications. The nurses that are the most vulnerable for medication errors and their consequences are intensive care unit nurses. According to the article, an average of 1.7 medical errors accumulate every day on intensive care patients. Supporting evidence suggests that seventy-eight percent of all errors in the intensive care setting are medication errors (Dumo, 2012). These errors are potentially life-threatening due to the critical nature of the patient. The study found that factors contributing to medication errors are as follows; errors in dose calculation, absence of double-checking, low adherence to protocols, and insufficient drug knowledge among professionals. Most medication errors occur through transcription, such as the lack of a written order and abbreviations. After further investigating the rate at which medication errors occur, the study found that the use of multiple drugs and prolonged stays are factors that contribute to a patient being affected by these errors. The study stated, "medication errors were found to occur as a result of a lack of communication, poor relationships with the work environment, excessive pressure at work, and interruptions in work" (Dumo, 2012).

Medication errors are a significant portion of preventable deaths within hospital settings. The article titled "Managing Medication Errors- A Qualitative Study" explores nurses' opinions on what a medication error entails. The research study consists of asking nurses to identify scenarios of medication errors and if the medication error is reportable. The nurses identified the

factors that contribute to medication errors include "failure to compare the patient identification band with the medication administration record, nurse fatigue, and illegible handwriting by the prescriber" (Stetina, Groves, & Pafford, 2005). In the study, they discovered that nurses can recite the five rights of medication administration but do not always implement the five rights when administering medications. The study identified that nurses believe the right time is not as crucial as the other four rights of medication administration. As the study continued, it was discovered "nurses showed an increased reliance upon computerized and systematic checks to put into place in health care systems" (Stetina, Groves, & Pafford, 2005). Nurses believe the systematic checks will always find discrepancies within the administration process. Nurses believe their self-checks are not necessary because computerized programs typically reveal potential problems or harm to the patient.

Planning the Change Strategy/Implementation

The students will educate the nurses about the five rights of medication administration in its entirety and stress the importance of these five rights and the potential consequences of not following them. The students will implement continued education for all nurses throughout their employment within the facility. The students will provide knowledge and later evaluate the nurse's competency and compliance with the five rights.

The nurses will be required to attend one interactive scenario every three months throughout their employment. These interactive scenarios will include educational handouts on all aspects of the five rights of medication administration. The students will offer simulation-like opportunities to all nurses by providing patient scenarios that require nurses to walk through the process actively. The students will give constructive feedback to all nurses regarding their performance within the interactive scenario.

The students will follow up with the participating nurses at least a year to ensure compliance with the education provided. The students will analyze the effectiveness of the program by assessing the number of medication errors occurring in each unit annually. The students will also distribute anonymous surveys to the nurses on the unit, questioning how many medication errors they witnessed without being reported. The students will then dispute how many medication errors the nurses performed personally and did not report. The students will ask the nurses to elaborate on how the medication error affects the patient as well as what could have been done differently to prevent the medication error.

Stabilizing the Change

As stated above, the students will provide the nurses with this educational program every three months and will assess their compliance annually. The students will determine the effectiveness of the program by comparing the number of medication errors before and after implementation. The students will continue to examine the statistics of the medication errors annually to ensure progression. After assessing the statistics, the students will request feedback from the nurses to make the necessary changes moving forward. The students will report their findings to risk management and propose that they adopt this program into their policies and procedures.

Evaluation of the Change Experience

The students will evaluate the change experience by analyzing the data of the program. As stated above, the students asked the nurses to provide feedback on the program for improvements moving forward. After reviewing the feedback given, the students adjusted the program based on the input from the nurses. After making the necessary changes, the students noticed a significant decrease in the number of medication errors. The students observed an

increased enthusiasm from the nurses regarding the program.

The students plan to make the additional necessary changes moving forward in regards to the feedback from the nurses. The goal of the students is to continue to see a decrease in the number of medication errors. The students observed great success in this program due to the hands-on experience this program provided.

References

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Appendices

- October 16th, 2019
    - The students met with the instructor regarding the expectations of the assignment.
- October 17th, 2019
    - The students met outside of class to work on the change paper for approximately three hours.
- October 21st, 2019
    - The students met outside of class to work on the change paper for approximately five hours.
- October 23rd, 2019
    - The students met with the instructor regarding the expectations of the assignment.

- October 29th, 2019
    - The students met outside of class to work on the change paper for approximately one hour.
- October 30th, 2019
    - The students met before class to work on the change paper for approximately thirty minutes.