Pharmacology and the prevention of medication errors

INTRODUCTION

For many patients, the disturbing part of being in the hospital has to do with relying on other people for your care and what treatment you are given. The medications that are given are a significant part of this fear. I can only envision what it must be like for patients to have an unfamiliar person come in and start managing the drugs that are given. What would be particularly frightening could be the adverse reactions triggered by taking them.

It is very realistic that a patient might have a fear of experiencing adverse side effects from a medication. A large number of Americans die needlessly each year due to medication errors. This should drive the desire of every healthcare professional to prevent medication errors from happening. Let us examine some of the problems and trends that exist in medication errors and how to help eliminate them.

THE IMPORTANCE OF PREVENTING MEDICATION ERRORS IN HEALTHCARE

Medication errors occur when the healthcare professional, patient, or the consumer makes a mistake. “ Adverse drug events (ADEs) account for more than 3. 5 million physician office visits and 1 million emergency department visits each year” (Silva & Krishnamurthy, 2016). The reporting of medication errors is vastly understated.

Healthcare professionals have a professional and legal responsibility to make sure that the patient is receiving the right medication and dose every time that a medication is given. Nurses, in particular, are required to assess a

patient’s necessity for a drug, evaluate the response to it and then manage it safely and correctly.

SAFETY AND QUALITY ISSUES INVOLVED IN MEDICATION ADMINISTRATION

A nurse has spent many years in training, learning and understanding the role of medication to help and assist a patient in a safe environment. The patient has faith and trust that the medication that they will be taking is going to do them well and not harm.

Some of the most common errors occur because prescriptions are not legible, drug names get confused, there are drug interactions, and when there is poorly written documentation. When a nurse receives, a poorly written prescription it can cause serious injury because the wrong drug amount or name of the drug is given.

Another big problem that occurs in the nursing field today is that most nurses have poor concentrations due to their workload. If time allows they can call back the doctor to clarify an illegible order, versus arriving at their own assumptions. In addition, during the rush of the day healthcare professionals can make medication errors by misplacing decimal points and misreading zeros.

Effective communication can affect the patient’s safety, for example, poorly communicated side effects for a certain medication can cause patient harm. Good effective communication can help prevent injuries, medication errors, delays in treatment, perinatal deaths, wrong site surgery, and patient falls (Nursing that works newsletter, 2007).

The pharmacy is another place where medication errors occur. These errors mainly are a result of overstressed and overworked pharmacists. The number of medications that Americans are taking has increased drastically and our pharmacies are not able to keep up with the demand. The problem of pharmacy errors is only going to continue to get worse and worse as the number of prescriptions that are being written increases and pharmacists are asked to continue to work longer hours and at a faster pace. Pharmacists are making errors in filling the prescriptions due to exhaustion like many in the healthcare profession.

CONTINUOUS QUALITY IMPROVEMENT IN MEDICATION SAFETY

It is important that healthcare professionals and healthcare organizations continue to improve medication safety through continuous quality improvement program and initiatives. Quality improvement programs that concentrate on medication safety management and recognizing medication safety dangers and prevention of medication miscalculations. Healthcare organizations need to continue to have medication error reporting systems and the presence of safety protocols for specific medications. Programs that are successful in reducing the number of medication errors need to publish the results so that the healthcare community can use those programs and strategies in their organization. It would make sense that a centralized organization be established that could be tasked with creating and overseeing safety programs to help reduce medication-related errors.

At a minimum, the following components of continuous quality improvement programs need to be in place at all healthcare organizations. They should be

required to maintain adequate health professionals on staff including pharmacists and nurses. They need to improve workflow and work patterns, adopt medication reconciliation strategies that are effective, use proper and effective technology systems, and cultivate a culture of accountability that would also value quality improvement.

TOOLS IN TECHNOLOGY TO PREVENT MEDICATION ERRORS

A number of new and emerging technologies are in use today that can help to prevent medication errors. I have noticed that there are still some doctor orders that are handwritten. Consequently, these handwritten prescriptions can be very hard to read, much less correctly deciphered into suitable medication doses. Electronically transmitting every medication prescriptions to the pharmacy would greatly reduce a large part of the problems associated with poorly written prescriptions.

Computers, Wi-Fi, the internet have continued to develop and all prescription orders need to take advantage of this medium. With the growth of wireless networks and mobile platforms, such as the IPAD, healthcare professional could order all prescriptions readily and efficiently. Prescriptions electronically transmitted reduce errors and give the healthcare professional one more stratagem to reduce medication errors. The proper and effective use of electronic devices can greatly reduce the number of errors made.

In addition to these efforts, there are new and emerging technologies that are being developed and worked on to help reduce the number of medication errors. There are automated dispensing machines that automatically dispense the correct drug and dose. In addition, barcoding is

being introduced that can also help to eliminate handwritten issues and translation prescription-related errors. Computerized medication administration records can synchronize data throughout an organization and help properly record and then to track any missed prescriptions. If an organization interfaces the pharmacy, the computerized prescriber order entry system, and the admission system then all of the information is accessible by all personnel.

HEALTHCARE TEAM COLLABORATION AND COMMUNICATION

It takes a lot of collaboration and interaction between healthcare professionals to care for a patient. When healthcare professionals are not communicating properly, patient safety is at stake. Some of the problems that arise are missing information, misinterpretation of information, or overlooking a change in the patient status. The lack of communication can cause server harm and injury to a patient.

Effective teams and teamwork is a result of collaboration, trust, and respect. There must be proper communication between all members of the team in order for medication errors to be minimized and eliminated. An effective approach to a patient’s care involves each member of the team working together to achieve an overall care plan for the patient.

Good communication will always encourage teamwork and help to prevent medication errors. Proper communication along with technological improvements can lay the groundwork for there to be a more effective clinical practice. Hospitals and healthcare organizations need to provide training programs that will help to encourage and teach healthcare

professionals how to have effective communication and collaboration. By addressing this issue, healthcare organizations have a chance to improve team collaboration and communication and improve patient safety and care.

WHAT DOES NURSING LITERATURE SAY ABOUT THE MEDICATION ERRORS

Research has indicated that interruptions to the administration of medications are the number one cause of medication errors (Pelegrin, 2018). A nurse can be interrupted a number of times during their routines of medication administration. It is important that a nurse learn how to handle distractions in a way that the quality of care for the patient is not undermined. A better understanding of how disruptions in a nurse's daily work schedule can affect their medical decision-making. Technology can play an important role in helping to reduce the number of interruptions that a nurse experience, by enhancing communication, tools, and workload. Also understanding why disturbances happen will also lead to creating effective strategies to help the healthcare professional manage disruptions and then reduce the number of medication errors.

IMPORTANCE OF MEDICATION ERRORS TO NURSING PROFESSION

Nurses spend a large part of their time distributing medications. Precise and safe medication administration rest on a nurses' understanding of each drug, making appropriate judgments when required, and critical thinking skills. Nurses have a critical role in distributing medicines to patients by following the six rights of drug administration. These six rights are Right medication, Right route, Right time, Right patient, Right dosage, and Right documentation. Following these six rights can help to eliminate medication

error. Nurses are the last line of defense in the healthcare field that can help avoid medication errors so they need to be able to perform this task without any interruptions. It is important to take the time required to guarantee patient safety and to diminish interruptions throughout the process.

CONCLUSION

One of the primary goals of the healthcare industry should be to reduce the number of medication errors and improve patient safety. In the fast-paced healthcare setting, distributing medications is a high-risk task. Medication errors can occur during any phase of the medication distribution process. Technology is one of the main tools that can be used today to improve overall patient care, safety, and patient outcomes. It is important that health care organizations continue to have a quality improvement in the overall administration of medications. Communication and team collaboration are important factors in the reduction of medication errors. More research is required concerning the role of technology in the administration of medication and the role that disruptions can have with the distribution of medications.

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