

Medication Administration Errors

Literature Review

Taylor Hamilton

Lakeview College of Nursing

## **Medication Administration Errors**

The Five Rights to Medication Administration – right patient, right drug, right dose, right route, and the right time. The rights of medication are one of the first things that nurses learn in nursing school. However, there are still medication administration errors that occur. Due to things like overwhelmed and understaffed nursing, lack of concentration, and human error. According to the American Patient Rights Association, one in five medication doses is administered incorrectly in an inpatient setting (ARPA, 2019). Medication dose errors can lead to Adverse Drug Events, which are injuries that occur due to medication errors, which puts the patient's safety at risk. In this literature review, several qualitative articles will be of evaluation to determine ways nurses can do their part to reduce the number of medication administration errors.

### **Qualitative Exploration of Practices to Prevent Medication Errors in Neonatal Intensive Care Units: A Focus Group Study**

The NICU is a high-risk setting where medication errors could be very harmful to the patients. A medication error in a neonate can be especially at risk to adverse drug events following a medication error "due to their small size, immature organ system, and disease severity involving invasive procedures for diagnosis, complex treatment, and multiple medications" (Rishoej et al., 2018). With many things to do in a shift, nurses often find ways to make things go quicker or easier to do. One of the physicians included in the study stated that he questioned what measures should happen when trying to do something quickly during practice. This doctor wondered how far things should go to cut the time down on things to ensure safe care is being provided (Rishoej et al., 2018). The key question these authors address is finding implementations that can make work more efficient and safer for the patient, which is vital to the

patient's safety and lessens the chances of medication errors. The main purpose of this article is to find things that can be implemented into the NICUs practice and protocol to ensure patient safety and reduce the risk of medication administration errors for the neonates.

### **Key Points**

In this article, key points stressed the importance of extra steps to lessen the chances of medication errors. According to the European Standards of Care for Newborn Health, some implementations to reduce medication errors are electronic systems, satellite pharmacies individualizing doses for infants, implementation of smart infusion pumps, and implementing bar code assisted medication administration (Van der Sijs H, Helder O, et al., 2018). Technology is another tool that could be very effective when lessening the chances of medication errors. This study discusses the use of automated dosage according to weight and alerts that could make physicians aware of any potential problems, requiring a reassessment of the prescribed medication. Another critical point was the nursing experience, education, and training. By requiring education and training along with years of experience, especially on calculating medication dosage, could all help reduce the number of medication errors. If nurses take this line of reasoning seriously, there could be a reduced number of medication errors in the NICU, which would help the neonates' safety and health. If nurses fail to take this reasoning seriously, it could continue to potentially put the neonate's lives at risk and cause further health issues for the neonates.

### **Assumptions**

Parents of the infants in the NICU are under a great deal of stress along with their child needed the care; there is even more immense stress when their baby needs multiple medications. Parents are often aware of their child's medication regimen, what it consists of, and when to

receive medications. An assumption is that some parents may even blame themselves for a medication error, wishing they had been paying more attention or watching the staff more closely. Rishoej et al. (2018) expressed that parents were never at fault or responsible for avoiding medication errors (Rishoej et al., 2018).

### **Deficit/Conclusion**

In conclusion, medication errors in the NICU are a challenge that will continuously need to be monitored and educated. Medication errors are also a matter that will always have room for improvement. With the assistance of implementing techniques, further education and training, slowing down to concentrate on calculating the correct dosage for the NICU patients and their safety.

### **Causes of Medication Errors in Intensive Care Units from the Perspective of Healthcare**

#### **Professionals**

In the ICU, their patients receive more medications than patients on other units to their conditions being so much more severe in most cases. In these units, nurses must ensure they are providing extra attention to these patients to be aware of any drug side effects. In most cases, the patients in the ICU are often drowsy or unconscious, so it can be harder to monitor for signs of drug reactions, and reactions from a medication error. The researcher's main purpose of this research was to figure out and describe why medication errors continue to be a problem in the ICU from the perspective of healthcare workers in the ICU (Irajpour et al., 2017). This article's most important information was the research it found by asking three questions: "Has medication error ever occurred in your ward? Why does medication errors occur? Please give your experience of medication errors" (Irajpour et al., 2017). Most research studies only focus on

medication errors done by nurses. Still, this article looked at the viewpoints of a wide variety of healthcare professions like physicians, nurses, and clinical pharmacists.

### **Key Points**

In interviews conducted to complete this research, four main points found to be an issue in the ICU that contribute to medication errors. These four main points were the low attention of healthcare professionals to medication safety, lack of professional communication and collaboration, environmental determinants, and management determinants (Irajpour et al., 2017). These lack of communication and professional skills and knowledge were key concepts that have been causing medication errors. Lack of knowledge and incorrect prescribing were other key concepts contributing factors to medication errors that had occurred in this and other hospitals around the world's ICU (Irajpour et al., 2017). Nurses and other healthcare members who lack knowledge can, without knowing, put their patient's life at risk by not being educated or knowing about the drugs they are administering or how they can react to the patient or with other medications they take. The key question in this research that the author addresses is the causes behind medication errors and what can change to minimize those medication errors.

### **Assumptions**

Excellent communication is key to a well-rounded workplace. Before the study, we could assume that if members of the healthcare team had excellent communication skills, it would provide better care and safety for them. Excellent communication skills can directly correlate to lower incidences of medication administration errors (Irajpour et al., 2017). Medication administration errors are not only when a patient takes the wrong medication; a medication error can happen as soon as the medicine gets the wrong label placed on it. We can now assume that if the pharmacy is not taking the time to ensure that they are putting the correct names on the

proper medication, that this will directly lead to giving the patient incorrect medication (AAO, 2015).

### **Deficit/Conclusion**

In conclusion, communication within the healthcare team is extremely vital to ensuring the health and safety of the patients that are of care. The main inference found in this research study was implementing a protocol or program within the hospital that could reduce the number of medication errors that occur and help strengthen the communication between the healthcare professions who are caring for patients. Another inference found was that the education and knowledge of healthcare team members need to be at a higher level to ensure that the patients are receiving safe, reliable care. If healthcare providers fail to use excellent communication while administering medication, which starts at the prescription and ends with the administration, medication errors could continue to occur (Irajpour et al., 2017).

### **Why do nursing students make medication errors? A qualitative study in Indonesia**

Clinical rotations in nursing school can be an exciting time for students to perform the skills they are learning on patients. Implementing these skills for the first time can be nerve-racking for the nursing students and require supervision from either a practicing nurse or their clinical instructor. However, even with guidance and extreme caution, during clinical rotations, nursing students had reached 44.8% of medication errors compared to all medical errors made (Musharyanti et al., 2019). The main points of view presented in this article were from 26 different nursing students from Indonesia, who conducted a focused discussion group interview. In this interview, the main questions were, "What do you think about nurses' role in patient and medication safety? What sort of medication errors have you seen nursing students make during clinical rotations? What are the causes of medication errors by nursing students" (Musharyanti et

al., 2019)? The main purpose of this article is to determine why and how nursing students make medication errors.

### **Key Points**

The researcher's key question in this study was why nursing students are making medication administration errors during their time on a clinical floor. What changed needs to happen to reduce the high number of mistakes that are happening. Some key concepts that researchers found as contributing to nursing student medication errors were timing errors, patient identification errors, drug preparation errors, lack of knowledge and skill, and lack of supervision and role models (Musharyanti et al., 2019). When reporting these errors that occurred, the nursing students admitted to knowing they were making errors but did things to save time and get tasks over with, which they later regretted. If nurses fail to take medication administration seriously, whether it be what time the medication got administered or not assuring medication's rights, it could result in medication errors, which can cause life-threatening adverse effects to the clients. Another key concept that caused medication errors was a lack of excellent and consistent role models from the nurses on the floor (Musharyanti et al., 2019). The nursing students expressed that there were many differences in the way that the nurses practiced compared to what they were learning in the classroom. If a nurse was not practicing the same way the students learned, they tended to follow what the nurses were doing and not follow the correct way they learned in school. If nurses start with weak patterns of practice, those patterns will stick long-term, resulting in medication errors and errors throughout their nursing practice. If nurses take this line of reasoning seriously and make changes with good role models and high levels of education, it could ensure they are doing their part in helping reduce the number of medication administration errors. A study done by the University of Jordan found that nursing students are at

high risk for committing medication administration errors and found places in the education of weakness that the students had in managing, drawing, and administering medication (Salami, 2018).

### **Assumptions**

Having a lack of knowledge or skills in medication could cause medication errors to occur. We can assume that if a nurse lacks knowledge or expertise on safety while preparing and administering medication, it could be potentially harmful and result in negative adverse effects for the patients (Musharyanti et al., 2019). If education facilities and clinical sites fail to educate nursing students on the drugs and proper way to prepare and administer medication, medication errors can occur more frequently. Additionally, if a nursing student does not have a good role model as an educator or clinical leader, it can be assumed they will not have proper practice techniques or skills due to a lack of knowledge (Musharyanti et al., 2019).

### **Deficit/Conclusion**

In conclusion, nursing students learn and take in so many things while in nursing school and on the clinical sites. This article has a lot of valuable information from ensuring students are well educated about medications and proper techniques for preparation and medication administration and providing the students with good role models at the clinical sites. One of the main inferences is that students should be well educated in all aspects of nursing to ensure they are confident in their practice and can provide excellent care to all of the patients to which they provide care.

### **Conclusion**

While the five rights of medication are among the first things taught in nursing school to help reduce the risk of medication errors, those are not the only contributing factors that

contribute to nurses and other healthcare professions avoid making a medication administration error. Nurses have many things they continuously need to be doing, and a majority of that is making sure they are giving the right medication to the right patient and the right time.

Unfortunately, medication administration errors are going to continue to occur, but starting with a strong education, using excellent communication skills with colleagues, and following protocols, there's a chance to lessen the number of medication errors. Finding the reasoning behind common medication errors is something that each facility should be investigating to determine why the same medication errors continue to happen and what steps can happen to help reduce the number of errors that occur (Musharyanti et al., 2019). Researchers found that one in five medication doses is administered incorrectly in inpatient settings. There was a 73% probability of at least one error to occur while the medication is being prepared, administered, or documented (ARPA, 2019). These numbers have the chance to be lowered if nurses slow down, concentrate, and have a strong education and knowledge, and open communication about the medication they are using.

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