Delivering high quality, safe nursing care for children and young people and their families

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Introduction:

The risk assessment topic that has been chosen for this report is “Medication error”

This report will contain the brief background of what medication error is. Further, this report will contain the appraisal of research-based evidence in relation to “medication error”. A critical analysis of complexities of care delivery in case of medication error and how it affects the child and family will also be added in this report. At the end, my role upon delivering the safe and high-quality care in relation to medication error will be evaluated. The discussion will basically be consisting of my role as a nurse in medication error, how it will affect child and the family and what should be the clinical setting for medication error.

It is possible to define a medication error as a failure in the treatment process that results in injury to the patient or has the potential to result in harm to the patient. The usage of the word "failure" indicates that the procedure did not meet some attainable norm, which is the meaning behind the word. The phrase "treatment process" can refer to the treatment of symptoms or the causes of those symptoms, the examination of disease, or the avoidance of physiological changes. Not only medicinal medications, but also the substances discussed previously, are included in this category. It also involves the process of producing or compounding, prescription, transcribing (where appropriate), dispensing, and administering a medicine, as well as monitoring the effects of the drug after it has been used. The word "harm" in the definition also suggests "lack of benefit," which is a type of unsuccessful treatment (Ferner, 2006). It is important to note that the definition does not define who is accountable for making the error – it may be a doctor, a nurse, a chemist, a caretaker, or another individual – nor does it say who is capable of preventing errors.

Medication error as a risk:

Medication errors can result in significant bodily harm and even death for patients. These errors can be caused by flaws in the system, but they can also be the consequence of simple human error. These errors, which may be avoided, may also result in significant financial, mental, and emotional strain on the healthcare professional as well as the organization. Following are the risks that medication error could cause not only for the patients but also for the medical institutions:

The implications of medication errors might range from having no noticeable symptoms to causing mortality at any time along the process. In rare instances, it might result in a new condition that can be either temporary or permanent, such as skin deformity, itching, or rashes on the skin. Even though they are rare, pharmaceutical errors can put patients at risk for serious injury or even death. The death of a loved one is always a terrible blow. Friends and family of the departed person have a more difficult time coming to grips with the loss when they are aware that their loved one's passing could have been avoided.

If a physician or nurse accidentally administers the incorrect drug to a patient, or comes dangerously close to doing so, they may experience feelings of embarrassment, guilt, and self-doubt. This is commonly referred to as the second victim (Dekker, 2013), and the consequence of this syndrome can be fatal: a senior nurse attempted suicide after she overdosed a vulnerable newborn with 10 times more calcium chloride than was recommended. The baby died as a result of the overdose.

It is also possible for patients or family members of patients to file a claim for personal injury against a healthcare provider on the grounds that the healthcare professional was negligent. This may have an impact on the healthcare professional's capacity to grow in their career as well as the likelihood that their license may be revoked. The mental and emotional toll that litigation can place on medical personnel is in addition to the strain that comes from the stress caused by pharmaceutical errors.

Patients or members of patients' families could pursue a claim for personal injury not just against the health professional, but also against the hospital setting where the health professional is employed. In the event of a legal challenge, hospitals risk incurring enormous legal counsel and probable settlement costs. Additionally, it is possible that hospitals will be required to compensate for the lost productivity of the staff members who were involved in the error, in addition to the higher costs associated with the unanticipated prolonged hospitalization and care of the patients.

Impact of medication error on patient:

Medication errors can result in undesirable consequences such as an increased risk of death, an extended length of hospitalization, and greater costs associated with medical care. Errors in medication are a problem for children of all ages in all care settings, including the home, outpatient and inpatient hospitals, and emergency rooms. Children may be at a greater risk than adults because of their smaller size and more variable physiology, their limited capacity for communication, and their care by non-pediatric health care practitioners. Patients who suffer from chronic illnesses and use a significant number of drugs may have an increased likelihood of suffering negative effects from their prescription.

Some errors in medication can modify the outcome for a patient, although in most cases, the change does not cause any harm. Other medication errors have the possibility of causing harm, but they do not actually result in any harm being suffered by the patient (Morimoto, 2004). Serious medication errors, on the other hand, that go unnoticed and uncorrected can really do the patient harm. According to the findings of one study, thirty percent of patients who had injuries caused by drugs either passed away or were incapacitated for more than half a year. ADEs are just as likely to happen at any stage of the pharmaceutical process as medication errors are.

Reasonable adjustments to support complex care delivery in case of medication error:

The hazards that are posed by medication errors and the subsequent bad pharmacological effects that can be avoided as a result have been the subject of a significant amount of research that has been published in scholarly journals from around the world. It is estimated that prescription errors cause injury to at least 1.5 million people each year in the United States, with around 400,000 adverse events that could have been avoided (Aspden, 2006). In hospitals in Australia, around one percent of all patients experience a negative outcome as a direct result of a pharmaceutical error (Runciman, 2003). In the United Kingdom, out of a total of one thousand consecutive claims that were reported to the Medical Protection Society beginning on July 1, 1996, 193 were connected to prescribing and medicine. Medication errors are not only frustrating for patients, but also expensive for healthcare systems, patients' families, and physicians themselves (Vincent, 2001).

As a result, minimizing the occurrence of medication errors has emerged as a top concern across the globe. There is an increasing body of evidence suggesting that information technology (IT)-based systems, which include computerized physician order entry, bedside bar-coded medication administration, automated dispensing cabinets, and electronic medication reconciliation, are essential components of strategies to reduce the occurrence of medication errors (Mongan, 2008). It has been estimated that the increased use of information technology systems in the United Kingdom might result in cost reductions of up to $88 billion over a period of ten years (Amarasingham, 2009). There are fewer problems, lower death rates, and reduced expenditures at hospitals that use electronic medical records and notes, as well as computerized order entry and clinical decision assistance (Jha, 2008).

Clinical decision - making process is a complicated process that is dependent on humans having the ability to give undivided attention, as well as to retain, recall, and synthesize enormous volumes of data – all of which are vulnerable areas. Information technology systems have the ability to increase access to various bits of data, organize those data, and establish linkages between those data. Clinicians frequently "know" the information (including a patient's allergens, a drug recall alert, or a drug-drug interaction), but they forget to take it into consideration when they are writing prescriptions for their patients (Pfeffer, 2000). IT solutions are successful at bridging the 'knowing–doing' gap because they present the physician with the appropriate information at the moment that the doctor is making a decision.

Implications for clinical settings in case of medication error

Errors in medication are a common problem in the healthcare industry. These errors cost billions of dollars throughout the country and are responsible for a large amount of morbidity and mortality. Despite the fact that errors in drug delivery have received a lot of attention on a national level, the problem is still very common. Creating a comprehensive plan for education and prevention is the best way to improve the safety of patients, and it should be your first priority (Leape, 1998). It is important for medical professionals to collaborate and communicate with one another, and they should also encourage patients to become more knowledgeable about the treatments they are receiving. Errors in the dispensing of medication can be decreased with a culture that prioritizes safety.

Following are the implications for the clinical settings in case of medication error:

- Always keep in mind that the use of any drug comes with the risk of experiencing unwanted side effects.
- Always ensure that, in addition to signing the prescription, your name is circled on the printed up prescription pad.
- When making orders, nurse should not utilize any abbreviations for drugs.
- Always fill out a separate prescription for every drug.
- If you are unsure about the dose or the frequency, you should not be afraid to double check them.
- Always be sure to state the length of the treatment.
- Include a description of the patient's condition in the prescription you write.
- Always be mindful of drugs that carry a high risk.

Nurses' role in ensuring high quality and safe care in medication error

Following should be the nurses' role for ensuring high quality and safe care in case of medication error:

Safe pharmaceutical administration necessitates proficiency in drug calculations. Medication errors can be greatly reduced with the use of competent drug calculations and solid fundamental mathematics abilities. Educators in the nursing profession play a crucial role by developing and implementing strategies to keep nurses proficient in drug calculations. Nurses can gain valuable experience in the safe administration of medications through simulated practice.

It is imperative that nurses increase their pharmacologic knowledge and remain current on any new medications. It is imperative that ongoing medication expertise be maintained. The purpose of pharmacologic continuing education is to keep nurses up to date on the safe use of newly developed medications (Cheragi, 2013). This includes appropriate indications and dosages, correct administration, drug behavior, potential side effects to use, drug - related problems, prospective adverse reactions, patient monitoring, patient teaching, as well as documentation.

Patient safety can be improved through interventions that reduce distractions. To reduce the likelihood of medication mistakes, some hospitals have adopted the "sterile cockpit rule," which

requires that all potential sources of distraction be removed from the medicine preparation area. In the 1980s, the airline industry came up with this method to ensure pilots' safety by limiting their ability to engage in non-essential activities like idle chatter or reading during the flight's most crucial minutes. Fore et al. found that after the rule was put into effect, the percentage of drug mistakes dropped by 42.78 percent (2013) A nurse's constant engagement with patients as well as other members of the care team could make it challenging for them to strictly adhere to the sterile cockpit guideline. There should be as few interruptions as possible in the drug preparation area, thus a "do not disturb" or "silent zone" sign might be helpful.

In order to reduce the risk of medication errors, nursing staff must adhere to the correct protocols for the administration of medications. The correct patient, drug, dose, route, and time are essential components of any such regimen. Not only that, but after the medication has been given, the patient must submit the appropriate paperwork (Kim, 2013). It is more likely that the patient will receive an unnecessary second dose of medication if the first is not recorded. Nurses should be cautioned against reporting the dose before the drug is delivered, as there are a number of reasons why the patient may not end up getting the medication at all. Because the patient may not take their prescription at the time it was prescribed, if they take their medication at all, the time it was prescribed may be inaccurately recorded (Joseph D, 2013).

Patients have a duty to get adequate education regarding the therapeutic effects, potential side effects, and desired results of their drugs. Evaluating the efficacy of certain treatments is essential in order to determine that the patient has reacted to the medication. For instance, excessive blood glucose levels may be managed with insulin dosages that slide along a sliding scale. The levels of glucose in the patient's blood must be carefully monitored to ensure that they are within the therapeutic range that is desired. Additionally, the patient must be carefully monitored for adverse reactions and instructed on how to report them, such as the symptoms and signs of hypoglycemia.

When giving a patient analgesic, the nurse must first determine how much pain the patient is experiencing, then give the patient the analgesic drug, after which she must observe the patient for any adverse effects, evaluate the therapeutic response, and document it (Choinière, 1990). If the desired effect is not obtained, it is possible that the patient did not receive an adequate dose or that they require a different analgesic for the control of their pain.

It might be complicated to use various dosing strategies for the same medication, which can increase the likelihood of making mistakes (Chu, 2016). Dosing errors could be reduced in the intensive care unit by adopting a standardized system for administering doses of intravenous drugs including epinephrine, midazolam, and nitroglycerine infusions (Jung, 2014). It is possible for nurses to reduce the risk of making prescription mistakes by consulting a list of medications classified as high alert (Douglass, 2018).

Factors for mitigation of risks of medication error

Factor 1:

The prescribing clinician should be the first line of defense against medication errors. This professional needs to have all the data at their disposal to make the most educated prescribing judgments possible for each patient. One type of information needed is evidence-based recommendations on medications for treating a variety of illnesses and disorders, including recommended dosage, benefits, and risks (Smolen, 2014). The patient's current medications, illnesses, comorbid conditions, allergies, and adverse reactions to medications are all pieces of information that must be recorded accurately and completely. It is essential to have access to up-to-date and comprehensive information regarding the selection of appropriate medications, including newly developed drugs.

Factor 2:

The employees responsible for distributing the prescriptions, who are typically the nurse or the pharmacist, make up the second line of defense at the hospital. The examination of prescriptions and determination of whether or not they are acceptable in light of considerations such as allergies, diagnoses, symptoms, and test findings are essential roles that are played by individuals involved in the process of dispensing medication. It is the responsibility of these trained individuals to ensure that the appropriate medication is delivered at the appropriate dose, in the appropriate form, and at the appropriate frequency (Cohen, 2007). It is the responsibility of the dispenser to verify that the drug being given to the patient is the same as the one that was prescribed, unless the dispenser discovers a potential issue that calls for a modification or cancellation of the initial order. A study demonstrates the importance of this position by demonstrating that pharmacists can lower

the risk of adverse drug reactions (ADEs) in intensive care unit patients by asking clarification of prescription orders and offering feedback to prescribers.

Factor 3:

The persons responsible for actually providing the medicines to the patient, which are most commonly nurses, make up the third line of defense against medication errors. Their duties are similar to those of the persons who dispense the medications, but they are carried out at a separate point in the procedure. In some situations, the same individual (often the nurse) is responsible for both the dispensing and the administration of the medication. These physicians help assure patients' safety by double ensuring that the medication they are about to administer is the same as the one that was prescribed and dispensed (Hughes, 2005). In addition to this, they perform a final check to ensure that the patient is administered the appropriate drug, for the appropriate indication, in the appropriate dose, at the appropriate time, and via the appropriate route.

Factor 4:

The patient is the fourth line of defense because he or she has the ability to inquire as to the rationale behind a medication's administration, confirm that the correct medication, dosages, and route are being used, and notify the clinician prescribing, issuing, or administering the medication of any potential issues, such as allergies or previous drug-drug interactions. However, patients are often not actively engaged despite their ability to play a significant part in the safe administration of medications (Keers, 2013). It would be wise to make better use of a resource with untapped potential to cut down on drug mistakes.

Conclusion:

It is only recently that researchers have begun to comprehend the scope of the problem of medication errors that affect young children, adolescents, and newborns. Numerous patients in clinics, medical offices, and patients' homes are impacted as a result of these incidents. At every stage of the prescription process, including product labels, prescribing, writing, dispensing, as well as administration in inpatient and outpatient settings, there is an opportunity to prevent patient harm. This opportunity must be pursued. Because the administration of medications at home is such a significant part of paediatrics, the participation of parents and other adults responsible for

the care of children will be essential in efforts to lessen the negative effects that are caused by medication errors on children.

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