

## CHAPTER 8

### MEDICATION ADMINISTRATION AND MEDICATION ERRORS

#### I. INTRODUCTION

The Institute of Medicine's (IOM) report titled To Err is Human: Building a Safer Health System (IOM, Dec. 1999) states the deaths from medication errors that take place both in and out of hospitals, more than 7,000 annually, exceed those from workplace injuries. In a separate report, investigation by the Chicago-Tribune states that since 1995, at least 1,720 hospital patients have died and 9,548 others have been injured because of mistakes made by RN's across the country (Associated Press, Sept. 10, 2000).

#### II. COMMON MEDICATION ERRORS

The most common errors which are made by health care providers are medication errors. Because nurses are usually the front-line health care providers who are required to administer medications prescribed by physicians (and often the most potent medications to critically ill patients), they must be especially careful in their procedures and practices to avoid one of the many types of medication errors which are common. The most common types of medication errors include:

1. similar sounding medication name;
2. administration without a prescription;
3. the wrong medication;
4. the wrong dosage;
5. negligent injection;
6. failure to note an order change;
7. failure to administer medication;
8. failure to discontinue medication;
9. use of an unsterile needle;
10. the wrong patient;
11. allergic reactions; and
12. failure to assure patient taking medications.

Nurses are required to handle and administer a vast variety of drugs that are prescribed by physicians and dispensed by an organization's pharmacy. Medications may range from aspirin to esoteric drugs that are administered through intravenous solutions. These medications must be administered in the prescribed manner and dose to prevent serious harm to patients.

There are a variety of ways to ensure that, as a nurse, you are helping to prevent medication errors within your facility. Appendix 8-1 of this chapter contains a checklist that you can use to measure the procedures designed to prevent medication errors at your facility. The checklist helps you insure that the procedures setup by your facility are satisfactory and being complied with. After completing the checklist in Appendix 8-1, you will know where your facilities strengths and weaknesses lie in preventing medication errors.

The practice of pharmacy essentially includes preparing, compounding, dispensing, and retailing medications. These activities may be carried out only by a pharmacist with a state license or by a person exempted from the provisions of a state's pharmacy statutes.

Nurses are exempted from the various pharmacy statutes when administering a medication on the oral or written order of a physician. However, the improper administration of medications can lead to malpractice suits.

### **A. ADMINISTRATION OF CONTROLLED MEDICATIONS WITHOUT A PRESCRIPTION**

A nurse should never administer prescription medications without a valid prescription or order from a physician. In effect, doing that constitutes practicing medicine without a medical license and is beyond the scope of a nurse's license. Administering medications without approval may give rise to legal liability and disciplinary action against the nurse.

### **B. ADMINISTERING THE WRONG MEDICATION**

The injection of the wrong medication into a patient can lead to civil liability or to a charge of substandard nursing care made to the Department of Health. A nurse who prepares medication for a physician is liable for the preparation of that medication. A physician can blame a nurse who fails to prepare the medication properly in order to escape liability.

In the case of Ambercrombie v. Roof, a solution was prepared by a nurse employee and injected into the patient by a physician, 28 N.E. 2d 772 (Ohio 1940). The physician made no examination of the fluid, and the patient suffered permanent injuries as a result of the infection. An action was brought against the physician for malpractice. The patient claimed that the fluid injected into her was alcohol and that the physician should have recognized its distinctive odor. The court, in finding for the physician, stated that the physician was not responsible for the misuse of drugs prepared by the hospital, unless the ordinarily prudent use of his faculties would have prevented injury to the patient.

### **C. GIVING THE WRONG DOSAGE**

A nurse is responsible for making an inquiry if there is uncertainty about the accuracy of a physician's medication order in a patient's record. A nurse who is in doubt about a physician's orders should contact that physician and seek clarification of their order.

In the Louisiana case of Norton v. Argonaut Insurance Co., 144 So. 2d 249 (La.Ct.App. 1962), a nurse believed that she was left an incorrect order because of the dosage. The nurse asked two physicians present whether the medication should be given as ordered. The two physicians did not interpret the order as the nurse did and advised the nurse that the attending physician's instructions did not appear out of line. The nurse administered the misinterpreted dosage of medication without contacting the attending physician. As a result of administering the medication the patient died of a fatal overdose.

The court found that the nurse had been negligent in failing to get in contact with the attending physician before administering the medication. The nurse was held liable, as was the physician who wrote the ambiguous order that led to the fatal dose.

In discussing the standard of care expected of a nurse who encounters an apparently erroneous order, the court stated that not only was the nurse unfamiliar with the medication in question, she also violated the general rule which requires that the prescribing physician be called when there is doubt about an order for medication. This clarification was not sought from the physician who wrote the order, and that departure from the standard of competent nursing practice provided the basis for holding the nurse liable for negligence.

### **D. WRONG ROUTE**

The nurse in Fleming v Baptist General Convention, 742 P.2d 1087 (Okla. 1987), negligently injected the patient with a solution of Talwin and Atarax subcutaneously, rather than intramuscularly. The patient suffered tissue necrosis as a result of the improper injection. The suit against the hospital was successful. On appeal, the court held that the jury's verdict for the plaintiff found adequate support in the testimony of the plaintiff's expert witness on the issues of nursing negligence and causation.

### **E. NEGLIGENT INJECTION**

The plaintiff in Pellerin v. Humedcenters, Inc., 696 So. 2d 590, 96-1996 (La.Ct.App. 1997), had gone to the emergency room at Lakeland Medical Center complaining of chest pain on February 22, 1988. An emergency room physician, Dr. Gruner, examined her and ordered a nurse to give her an injection consisting of 50 mg. of Demerol and 25 mg. of Vistaril.

Although the nurse testified she did not recall giving the injection, she did not deny giving it, and her initials are present in the emergency room record. The nurse admitted she failed to record the site and mode of injection in the emergency room patient's medical records.

The plaintiff testified that she felt pain and a burning sensation in her hip during the injection.

According to testimony by Dr. Gruner, a burning sensation upon injection of Vistaril is common. However, the burning persisted afterward and progressively worsened over the next several weeks. The pain spread to an area approximately 10 inches in diameter around the injection site. The patient could not sleep, work, perform household chores, or participate in sports without experiencing pain. There was also a lump around the injection site and her skin was numb in that area.

The jury awarded the plaintiff monetary damages as a result of the nurse's negligence. The verdict of the jury was amply supported by the record. The nurse admitted she failed to record the site and mode of injection in the emergency records. According to the testimony of two experts in nursing practice, failing to record this information is below the standard of care for nursing. While these omissions could not have affected the administration of the injection, they tend to indicate that in this instance the nurse did not follow accepted procedure while performing her job.

#### **F. FAILURE TO NOTE AN ORDER CHANGE**

A nurse's failure to review a patient's record before administering a medication, to ascertain whether an order has been modified, may render a nurse liable for negligence. In the case of Larrimore v. Homeopathic Hospital Association, 181 A.2d 573 (Del. 1962), a female patient had been receiving a drug by injection. The physician wrote an instruction on the patient's orders changing the method of administration from injection to oral medication. When a nurse on the patient's unit was preparing to medicate the patient by injection, the patient objected and advised the nurse of the physician's new order. The nurse told the patient she was mistaken and gave the medication by injection.

The nurse did not review the order sheet after being told by the patient that the medication was to be given orally. The nurse was found to be negligent because of her failure to review the patient's chart and note that the physician had ordered a change in the patient's medication.

#### **G. FAILURE TO ADMINISTER MEDICATION**

In Kallenberg v. Beth Israel Hospital, 357 N.Y. S.2d 508 (N.Y. App. Div. 1974), a patient died after her third cerebral hemorrhage because of the failure of the physicians and staff to administer necessary medications. When the patient was admitted to the hospital, her physician determined that she should be given a ceratin drug to reduce her blood pressure and make her condition operable. For some unexplained reason, the drug was not administered. The patient's blood pressure rose, and after a hemorrhage, she died. The jury found the hospital and physicians negligent in failing to administer the drug and ruled that the negligence had caused the patient's death. The appellate court found that the jury had sufficient evidence to decide that the negligent treatment had been the cause of the patient's death.

#### **H. FAILURE TO DISCONTINUE A MEDICATION**

A health care organization will be held liable if a nurse continues to inject a solution into a patient after noticing its ill effects. In the Florida case of Parrish v. Clark, 145 So. 2d 848 (Fla. 1933), the court held that a nurse's continued injection of saline solution into an unconscious patient's breast after the nurse

noticed ill effects constituted negligence. Thus, once something was observed to be wrong with the administration of the solution, the nurse had a duty to discontinue its use.

**I. NONSTERILE NEEDLE**

The blood donor in Brown v. Shannon West Texas Memorial Hospital, 222 S.W. 2d 248 (Tex. 1949), sought to recover from a serious injury allegedly caused by the use of a nonsterile needle. The court held that the burden of proof was on the plaintiff to show, by competent evidence, that the needle was contaminated when used and that it was the proximate cause of the alleged injury. The mere proof, said the court, that infection followed the use of the needle or that the infection possible could be attributed to the use of an unsterile needle was insufficient. If the plaintiff had been able to prove the needle was not sterile, then the plaintiff would have recovered damages.

**J. WRONG PATIENT**

It is of utmost importance to check each patient's name bracelet before administering any medication. To ensure that the patient's identity corresponds to the name on the patient's bracelet, the nurse should address the patient by name when approaching the patient's bedside to administer any medication. Especially in nursing homes and hospitals where there may be more than one patient in a room, this is exceptionally important. Should the nurse unwittingly administer one patient's medication to a different patient, the attending physician should be notified and appropriate documentation placed on the patient's chart.

**K. ALLERGIC REACTIONS**

Any adverse reactions to a medication should be charted on the patient's medical record. The attending physician and the facility's pharmacy should be advised as to the patient's allergic reaction.

**L. FAILURE TO MONITOR AND ENSURE PATIENT TAKING MEDICATIONS**

A nurse normally has a duty to monitor and ensure that a patient is taking their medications. A failure to perform this act can lead to nursing negligence on the part of the nurse.

The nurse in Hitch v. Ohio Department of Mental Health did not breach her duty to her patient when she failed to check to see whether the patient was taking his medication. The deceased suffered from a seizure disorder, an organic personality disorder and borderline intellectual functioning. He had a history of not complying with his medication regimen, particularly when he was in a nonstructured setting or when his regimen was undergoing some sort of change. The nurse devoted a significant part of each of her visits with the deceased, counseling him about his medication regimen; however, the patient ceased taking all medication and eventually died.

At the trial the nurse testified that her patient trusted her, had come to understand that he needed to take his medication and had been 100 percent compliant in taking his medication. This evidence was able to persuade the jury to find that the nurse had not known that the patient had stopped taking his medications. If the jury were to find that the nurse had known that her patient had stopped taking his medications she would have been liable of nursing negligence.

### **III. THE "SEVEN RIGHTS" OF PATIENT MEDICATION**

There is a checklist every nurse should learn called the "Seven Rights of Medication." If this checklist is memorized and followed in every case, medication errors would be significantly reduced or eliminated altogether. Every nurse and nursing student should memorize this list and go through it in her mind every time a patient is administered a medication by the nurse.

This is the checklist known as "The Seven Rights of Patient Medication":

ALWAYS CHECK FOR AND CONFIRM:

1. The right medication;
2. The right patient;
3. The right dose;
4. The right time;
5. The right route;
6. The right reason; and
7. The right documentation;

### **IV. SIMILAR MEDICATION NAMES**

Perhaps the most common medication errors arises because there are many medications which have names sounding very similar to others or which look alike when written out. This problem is compounded by the prevalence of telephone orders to nurses and hospital staff, the practice of telephone prescriptions, and illegible handwriting. A list of medications which are often confused is attached as Appendix 8-2 to this chapter and can be used as a reference to help avoid medication errors.

According to the National Coordinating Council for Medication Error Reporting and Prevention, medication errors include everything from situations that can potentially cause an error to events that can potentially cause a patient's death.

As a licensed nurse, you're expected to know about any medication you administer: its indications

and contraindications, safe dosages, and potential adverse responses. But knowing about drugs isn't enough to prevent errors. Here's a summary of actions you can take and issues you should be aware of so that you can help eliminate medication errors.

1. Unclear orders. If you don't understand a medication order, don't administer the drug or you could be held liable for any problem that occurs. Verbal orders are especially risky for drugs with sound alike names (Did he say Celebrex or Cerebyx?) or if you have trouble understanding the prescriber. Written orders are safer but not foolproof. Illegible handwriting, unfamiliar abbreviations, misplaced zeros or decimal points, and incomplete orders, all are problems you can face. Faxed orders may pick up marks that you could mistake for part of the prescription. By law, you're expected to refuse an unclear drug order and to ask the prescriber to clarify it. Don't try to decipher it yourself or ask a colleague's interpretation. Question any order for a drug that isn't typically prescribed for your patient's condition or if the dose is outside the normal range.
2. Patient mixups. Like drug names, patient names can be a source of error. Always check your patient's ID before administering any drug, and if he's alert, ask him to state his full name.
3. Medication mixups. Avoid rushing when you read medication labels, which could trick your eye into "seeing" what your mind expects. Look carefully at the drug name and concentration. Do it twice if you're not familiar with the drug.
4. Miscalculated dosages. Converting milligrams to micrograms or determining the correct pediatric dose from an adult dose is tricky. Whenever you calculate a dose, ask another nurse to check your math.
5. Patient errors. A patient taking medication at home can make serious mistakes if he doesn't understand his drug regimen. So before your patient goes home, carefully explain how to take his medication and ask him to repeat what you've told him. Give him written instructions as reinforcement. Encourage your patient to ask questions about his medications, such as why he's receiving them, how to take them properly, what adverse responses he could develop, and what steps to take if the medications aren't effective.

When a medication error occurs, thoroughly document the error and complete an incident report according to your facility's policy. Reporting what you know about the incident sheds light on flaws in the medication delivery system so the facility administrators can correct them.

## V. CONCLUSION

The nurse may be the last wall of defense to protect a patient from a medication error. The nurse should be diligent and attentive and should help prevent such errors. The nurse should avoid at all costs, being rushed, tired, inattentive, sloppy, or lazy. The nurse should memorize the rules contained in this chapter and should guard at every turn against medication errors. The nurse must be part of the solution and never part of the problem.

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