chapter 4

The Nursing Process

Key Terms

assessment
evaluation
expected outcomes
implementation
independent nursing actions
initial assessment
nursing diagnosis
nursing process
objective data
ongoing assessment
planning
subjective data

Chapter Objectives

On completion of this chapter, the student will:

- List the five phases of the nursing process.
- Discuss assessment, nursing diagnosis, planning, implementation, and evaluation as they apply to the administration of drugs.
- Differentiate between objective and subjective data.
- Discuss how the nursing process may be used in daily life, as well as when administering drugs.
- Identify common nursing diagnoses used in the administration of drugs and nursing interventions related to each diagnosis.

The **nursing process** is a framework for nursing action consisting of problem-solving steps that help members of the health care team provide effective patient care. It is both a specific and orderly plan used to identify patient problems, develop and implement a plan of action, and then evaluate the results of nursing activities, including the administration of drugs.

The five phases of the process are used not only in nursing, but also in daily life. For example, when buying a computer one may first think about whether it is really needed, shop in several different stores to find out more about computers, and then determine what each store has to offer (**assessment**). At this point, one decides exactly what computer to buy and how to pay for the computer (**planning**); then the computer is purchased (**implementation**). After purchase and use, the computer is evaluated (**evaluation**).

Using the nursing process requires practice, experience, and a constant updating of knowledge. The nursing process is used in this text only as it applies to drug administration. It is not within the scope of this textbook to list all of the assessments, plans, implementations, and evaluations for the medical diagnosis that requires the administration of a specific drug.

THE FIVE PHASES OF THE NURSING PROCESS

Although the nursing process can be described in various ways, it generally consists of five phases: assessment, nursing diagnosis, planning, implementation, and evaluation. Each part is applicable, with modification, to the administration of medications. Figure 4-1 relates the nursing process to administration of medications.

Assessment

Assessment involves collecting objective and subjective data. **Objective data** are facts obtained by means of a physical assessment or physical examination. **Subjective data** are facts supplied by the patient or the patient's family.

Assessments are both initial and ongoing. An **initial assessment** is made based on objective and subjective data collected when the patient is first seen in a hospital, outpatient clinic, health care provider's office, or other type of health care facility. The initial assessment usually is more thorough and provides a database (sometimes called baseline) from which later data can be compared and decisions made. The initial assessment provides information that is analyzed to identify

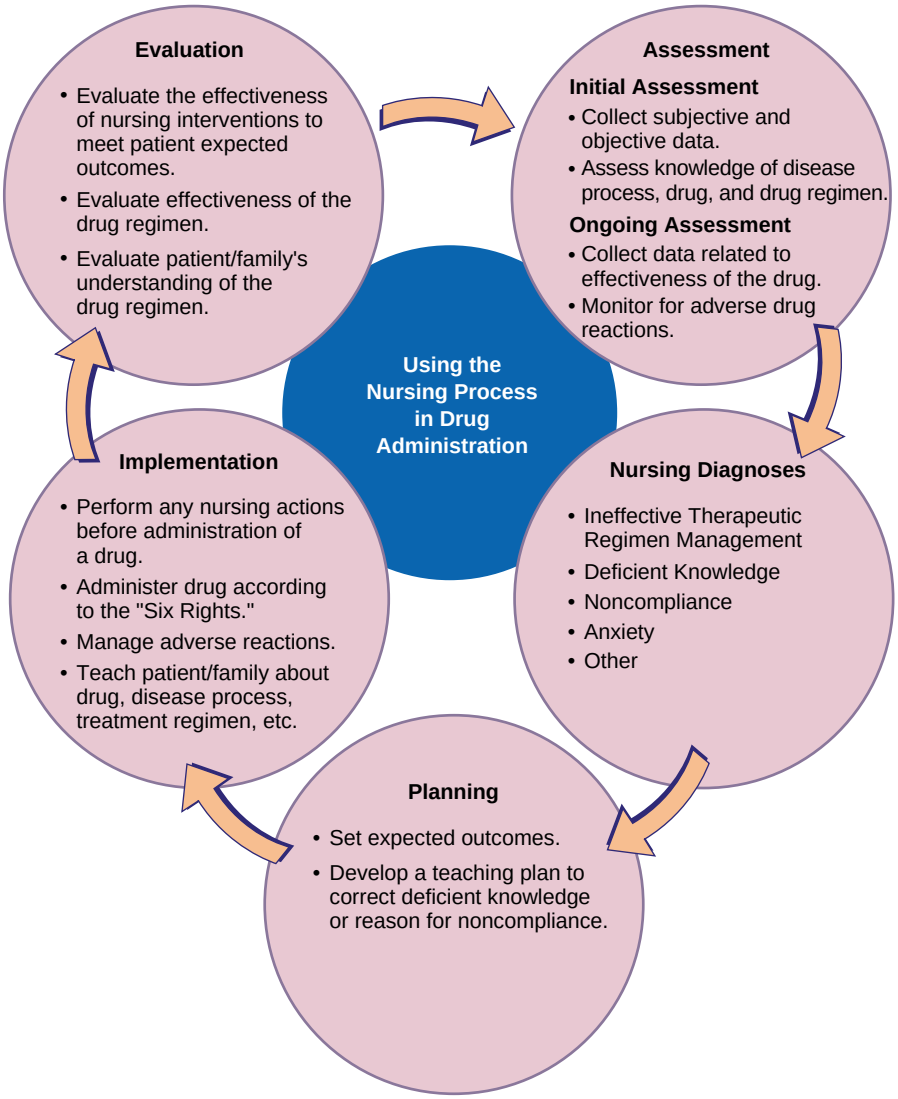

FIGURE 4-1. The nursing process as it relates to administration of medication.

problems that can be resolved or alleviated by nursing actions.

Objective data are obtained during an initial assessment through activities, such as examining the skin, obtaining vital signs, palpating a lesion, and auscultating the lungs. A review of the results of any recent laboratory tests and diagnostic studies also is part of the initial physical assessment. Subjective data are acquired during an initial assessment by obtaining information from the patient, such as a family history of disease, allergy history, occupational history, a description (in the patient's own words) of the current illness or chief complaint, a medical history, and a drug history. In addition to the prescription drugs that the patient may be taking, it is important to know any over-the-counter drugs, vitamins, or herbal therapies. For women of childbearing age the nurse needs to ask about the woman's pregnancy status and whether or not she is breastfeeding.

An **ongoing assessment** is one that is made at the time of each patient contact and may include the collection of objective data, subjective data, or both. The scope of an ongoing assessment depends on many factors, such as the patient's diagnosis, the severity of illness, the response to treatment, and the prescribed medical or surgical treatment.

The assessment phase (including the initial and ongoing assessment) of the nursing process can be applied to the administration of drugs, with objective and subjective data collected before and after to obtain a thorough baseline or initial assessment. This allows subsequent assessments to be compared with the baseline information. This comparison helps to evaluate the effectiveness of the drug and the presence of any adverse reactions. Ongoing assessments of objective and subjective data are equally important when administering drugs. Important objective data include blood pressure, pulse, respiratory rate,

temperature, weight, examination of the skin, examination of an intravenous infusion site, and auscultation of the lungs. Important subjective data include any statements made by the patient about relief or nonrelief of pain or other symptoms after administration of a drug.

The extent of the assessment and collection of objective and subjective data before and after a drug is administered will depend on the type of drug and the reason for its use.

Nursing Diagnosis

After the data collected during assessment are analyzed, the nurse identifies the patient's needs (problems) and formulates one or more nursing diagnoses. A **nursing diagnosis** is not a medical diagnosis; rather, it is a description of the patient's problems and their probable or actual related causes based on the subjective and objective data in the database. A nursing diagnosis identifies problems that can be solved or prevented by **independent nursing actions**—actions that do not require a physician's order and may be legally performed by a nurse. Nursing diagnoses provide the framework for selections of nursing interventions to achieve expected outcomes.

The North American Nursing Diagnosis Association (NANDA) was formed to standardize the terminology used for nursing diagnosis. NANDA continues to define, explain, classify, and research summary health statements about health problems related to nursing. NANDA has approved a list of diagnostic categories to be used in formulating a nursing diagnosis. This list of diagnostic categories is periodically revised and updated. In some instances, nursing diagnoses may apply to a specific group or type of drug or a particular patient. One example is Deficient Fluid Volume related to active fluid volume loss (diuresis) secondary to administration of a diuretic. Specific drug-related nursing diagnoses are highlighted in each chapter. However, it is beyond the scope of this book to discuss all possible nursing diagnoses related to a drug or a drug class.

Some of the nursing diagnoses developed by NANDA may be used to identify patient problems associated with drug therapy and are more commonly used when administering drugs. The most frequently used nursing diagnoses related to the administration of drugs include:

- Effective Therapeutic Regimen Management
- Ineffective Therapeutic Regimen Management
- Deficient Knowledge
- Noncompliance
- Anxiety

Because the above nursing diagnoses are commonly used for the administration of all types of drugs, they will not be repeated for each chapter. The nurse should keep these nursing diagnoses in mind when administering any drug.

Planning

After the nursing diagnoses are formulated, the nurse develops expected outcomes, which are patient oriented. An expected outcome is a direct statement of nurse–patient goals to be achieved. The **expected outcome** describes the maximum level of wellness that is reasonably attainable for the patient. For example, common expected patient outcomes related to drug administration, in general, include:

- The patient will effectively manage the therapeutic regimen.
- The patient will understand the drug regimen.
- The patient will comply with the drug regimen.

The expected outcomes define the expected behavior of the patient or family that indicates the problem is being resolved or that progress toward resolution is occurring.

The nurse selects the appropriate interventions on the basis of expected outcomes to develop a plan of action or patient care plan. Planning for nursing actions specific for the drug to be administered can result in greater accuracy in drug administration, patient understanding of the drug regimen, and improved patient compliance with the prescribed drug therapy after discharge from the hospital. For example, during the initial assessment interview, the patient may report an allergy to penicillin. This information is important, and the nurse must now plan the best methods of informing all members of the health care team of the patient's allergy to penicillin.

The **planning** phase plans the steps for carrying out nursing activities or interventions that are specific and that will meet the expected outcomes. Planning anticipates the implementation phase or the carrying out of nursing actions that are specific for the drug being administered. If, for example, the patient is to receive a drug by the intravenous route, the nurse must plan the materials needed and the patient instruction for administration of the drug by this route. In this instance, the planning phase occurs immediately before the implementation phase and is necessary to carry out the technique of intravenous administration correctly. Failing to plan effectively may result in forgetting to obtain all of the materials necessary for drug administration.

Expected outcomes define the expected behavior of the patient or family that indicates that the problem is being resolved or that progress toward resolution is occurring. Expected outcomes serve as a basis for evaluating the effectiveness of nursing interventions. For example, if the nursing intervention is to "monitor the blood pressure every hour," the expected outcome is that "the patient experiences no further elevation in blood pressure."

Implementation

Implementation is the carrying out of a plan of action and is a natural outgrowth of the assessment and planning phases of the nursing process. When related to the administration of drugs, implementation refers to the preparation and administration of one or more drugs to a specific patient. Before administering a drug, the nurse reviews the subjective and objective data obtained on assessment and considers any additional data, such as blood pressure, pulse, or statements made by the patient. The decision of whether to administer the drug is based on an analysis of all information. For example, a patient is hypertensive and is supposed to receive a drug to lower the blood pressure. Objective data obtained at the time of admission included a blood pressure of 188/110. Additional objective data obtained immediately before the administration of the drug included a blood pressure of 182/110. A decision was made by the nurse to administer the drug because the change in the patient's blood pressure was only minimal. However, if the patient's blood pressure was 132/84, and this was only the second dose of the drug, the nurse could decide to withhold the drug and contact the primary health care provider. Giving or withholding a drug or contacting the patient's health care provider are nursing activities related to the implementation phase of the nursing process.

The more common nursing diagnoses used when administering drugs are Effective Therapeutic Regimen Management, Ineffective Therapeutic Regimen Management, Deficient Knowledge, and Noncompliance. Nursing interventions applicable to each of these nursing diagnoses are discussed in the following sections. However, each patient is an individual, and nursing care must be planned on an individual basis after a careful collection and analysis of the data. In addition, each drug is different and may have various effects within the body. (For drugs discussed in subsequent chapters, some possible nursing diagnoses related to that specific drug are discussed.)

Effective Therapeutic Regimen Management

This nursing diagnosis takes into consideration that the patient is willing to regulate and integrate into daily living the treatment regimen such as the self-administration of medications. For this nursing diagnosis to be used the patient verbalizes the desire to manage the medication regimen. When the patient is willing and able to manage the treatment regimen, he or she may simply need information concerning the drug, method of administration, what type of reactions to expect, and what to report to the primary health care provider. A patient willing to take responsibility may need the nurse to develop a teaching plan that gives the patient the information needed to properly manage the therapeutic regimen (see Chap. 5 for more information on educating patients).

Ineffective Therapeutic Regimen Management

NANDA defines "ineffective therapeutic regimen management" as "a pattern of regulating and integrating into daily living a program for treatment of illness and the sequelae of illness that is unsatisfactory for meeting specific health goals." In the case of medication administration, the patient may not be taking the medication correctly or following the medication regimen prescribed by the health care provider.

The reasons for not following the drug regimen vary. For example, some people do not fill their prescriptions. Other patients skip doses, take the drug at the wrong times, or take an incorrect dose. Some may simply forget to take the drug; others take a drug for a few days, see no therapeutic effect, and quit. Some find the adverse effects so bothersome that they discontinue taking the drug without notifying the health care provider. Display 4-1 identifies some reasons for this ineffective therapeutic regimen management.

When working with a patient who is not managing the drug regimen correctly, the nurse must ensure that the patient understands the drug regimen. It is essential to provide written instructions. If possible, the nurse should allow the patient to administer the drug before he or she is dismissed from the health care facility. The nurse should determine if adequate funds are available to obtain the drug and any necessary supplies. For example, when a bronchodilator is administered by inhalation, a spacer or extender may be required for proper administration. This device is an additional expense. A referral to the social services department of the institution may help when finances are a problem.

For those who forget to take the drug, the nurse should suggest the use of small compartmentalized boxes marked with the day of the week or time the drug

DISPLAY 4-1 ● Possible Causes of Ineffective Management of Health Care Regimen

Extended therapy for chronic illness causes patient to become discouraged
Troublesome adverse reactions
Lack of understanding of the purpose for the drug
Forgetfulness
Misunderstanding of oral or written instructions on how to take the drug
Weak nurse–patient relationships
Lack of funds to obtain drug
Mobility problems
Lack of family support
Cognitive deficits
Visual or hearing defects
Lack of motivation

From: Carpenito, L. J. (1995). *Nursing diagnosis: Application to clinical practice* (6th ed., pp. 601–602). Philadelphia: Lippincott-Raven; Hussar, D. A. (1995, October). *Nursing95*, pp. 62–64.

FIGURE 4-2. Various types of drug containers may be used to help individuals remember to take their medication at the correct time.

is to be taken (see Fig. 4-2). These containers can be obtained from the local pharmacy.

It is important to discuss the drug regimen with the patient, including the reason the drug is to be taken, the times, the amount, adverse reactions to expect, and reactions that should be reported. The patient needs a thorough understanding of the desired or expected therapeutic effect and the approximate time expected to attain that effect. For example, a patient may become discouraged after taking an antidepressant for 5 to 7 days and seeing no response. An explanation that 2 to 3 weeks is required before the depression begins to lift will, in many cases, promote compliance.

It is important to provide ways to minimize adverse reactions if possible. For example, many anticholinergic drugs cause dry mouth. The nurse instructs the patient to take frequent sips of water or suck on hard candy to help minimize the discomfort of a dry mouth.

Frequent follow-up sessions are needed to determine compliance with the drug regimen. If a follow-up visit is not feasible, the nurse considers a telephone call or home visit. It is vital that the nurse strive to develop a caring and nurturing relationship with the patient. Compliance is enhanced when a patient trusts the nurse and feels comfortable confiding any problem encountered during drug therapy.

Deficient Knowledge

Deficient knowledge is the absence or deficiency of cognitive information to a specific subject. In the case of self-administration of drugs the patient lacks sufficient knowledge to administer the drug regimen correctly. It may also relate to a lack of interest in learning, cognitive limitation, or the inability to remember.

Most patients, at least in the initial treatment stages, have a lack of knowledge about the drug, its possible adverse reactions, and the times and method of administration. At times, the patient may have a lack of knowledge about the disease condition. In these situations, the nurse addresses the specific deficient knowledge (ie, adverse reactions, disease process, method of administration, and so on) in words that the patient can understand. It is important for the nurse to first determine what information the patient is lacking and then plan a teaching session that directly pertains to the specific area of need. (See Chap. 5 for more information on patient education.) If the patient lacks the cognitive ability to learn the information concerning self-administration of drugs, then one or more of the caregivers should be taught to administer the proper treatment regimen.

Noncompliance

Noncompliance is defined as behavior of the patient or caregiver that fails to coincide with the therapeutic plan agreed on by the patient and the health care provider. Patients are noncompliant for various reasons, such as a lack of information about the drug, the reason the drug is prescribed, or the expected or therapeutic results. Noncompliance also can be the result of anxiety or bothersome side effects. The nurse can relieve anxiety by allowing the patient to express feelings or concerns, by actively listening as the patient verbalizes feelings, and by providing information so that the patient can be fully informed about the drug. Many patients have a tendency to discontinue use of the drug once the symptoms have been relieved. It is important to emphasize the importance of completing the prescribed course of therapy. For example, failure to complete a course of antibiotic therapy may result in recurrence of the infection. To combat noncompliance the nurse finds out the exact reason for the noncompliance, if possible. Factors related to noncompliance are similar to those listed in Display 4-1.

Anxiety

Anxiety is a vague uneasiness or apprehension that manifests itself in varying degrees from expressions of concern regarding drug regimen to total lack of compliance with the drug regimen. When anxiety is high, the ability to focus on details is reduced. If the patient or caregiver is given information concerning the medication regimen during a high anxiety state, the patient may not remember the information. This could lead to noncompliance. The anxiety experienced during drug administration depends on the severity of the illness, the occurrence of adverse reactions, and the knowledge level of the patient. Anxiety is decreased with understanding of the therapeutic regimen. To decrease anxiety before discussing the treatment regimen with the patient, the nurse takes time to talk with and actively

listen to the patient. This helps to build a caring relationship and decrease patient anxiety. It is critical for the nurse to allow time for a thorough explanation and to answer all questions and concerns in language the patient can understand.

It is important to identify and address the specific fear and, if possible, reassure the patient that the drug will alleviate the symptoms or, if possible, cure the disorder. The nurse thoroughly explains any procedure. The nurse actively listens and provides encouragement as the patient expresses fears and concerns. Reassurance and understanding on the part of the nurse are required; the amount of reassurance and understanding depends on the individual patient.

Evaluation

Evaluation is a decision-making process that involves determining the effectiveness of the nursing interventions in meeting the expected outcomes. When related to the administration of a drug, this phase of the nursing process is used to evaluate the patient's response to drug therapy. The evaluation is positive if the expected outcomes have been accomplished or if progress has occurred. If the outcomes have not been accomplished, different interventions are needed. During the administration of the drug the expected response is alleviation of specific symptoms or the presence of a therapeutic effect. Evaluation also may be used to determine if the patient or family member understands the drug regimen.

To evaluate the patient's response to therapy, and depending on the drug administered, the nurse may check the patient's blood pressure every hour, inquire whether pain has been relieved, or monitor the pulse every 15 minutes. After evaluation, certain other decisions may need to be made and plans of action implemented. For example, the nurse may need to notify the primary health care provider of a marked change in a patient's pulse and respiratory rate after a drug was administered, or the nurse may need to change the bed linen because sweating occurred after a drug used to lower the patient's elevated temperature was administered.

The nurse can evaluate the patient's or family's understanding of the drug regimen by noting if one or both appear to understand the material that has been presented. Facial expression may indicate that one or both do or do not understand what has been explained. The nurse also may ask questions about the information that has been given to further evaluate the patient's or family's understanding.

● Critical Thinking Exercises

1. *Mr. Hatfield, age 69 years, confides to you that he is not taking the drug prescribed by his primary health care provider. He states he took the drug for a while and then quit. Explain some possible reasons Mr. Hatfield could have for not taking his drug. Discuss questions you could ask to assess the reason for Mr. Hatfield's noncompliance.*
2. *Ms. Heggan is 82 years old and lives alone. She is prescribed several drugs by the primary health care provider but is worried about taking the drugs and the side effects that might occur. She comes to the outpatient clinic after 1 week, and you learn that she has not filled her prescription and is not taking the drugs. Your nursing diagnosis is Ineffective Management of the Therapeutic Regimen related to anxiety about taking the prescribed drugs. Determine what information you would seek to obtain from Ms. Heggan. Identify important nursing interventions for this diagnosis.*
3. *Ms. Taylor is receiving three drugs for the treatment of difficulty breathing and swelling of her legs. You are giving these drugs for the first time. Discuss what questions you would ask Ms. Taylor to obtain subjective data.*

● Review Questions

1. A patient states that he does not understand why he had to take a specific medication. The most accurate nursing diagnosis for this man would be _____.
   - **A.** ineffective management of therapeutic regimen
   - **B.** anxiety
   - **C.** noncompliance
   - **D.** deficient knowledge
2. When the nurse enters subjective data in the patient's record, this information is obtained from _____.
   - **A.** the primary care provider
   - **B.** other members of the health care team
   - **C.** the patient or family
   - **D.** laboratory and x-ray reports
3. During the evaluation phase of the nursing process the nurse makes _____.
   - **A.** decisions regarding the effectiveness of nursing interventions
   - **B.** sure nursing procedures have been performed
   - **C.** notations regarding the patient's response to medical treatment
   - **D.** a list of all adverse reactions the patient has experienced while taking the drug