

Medication Training

March 2016



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Unit I: GENERAL INFORMATION

Objectives:

After completing this lesson, staff will be able to:

- describe the role that a physician, a consultant pharmacist, and a licensed nurse each plays in a medication treatment program
- describe the responsibilities and legal parameters of the Medication Assistant I in administration of medications

Assisting with medication administration is a serious responsibility. A person administering medication must know the nature of each medication they give. The dictionary defines the term “medication” as a substance or mixture (other than food) that is used to do one or more of the following:

1. Prevent disease (vaccine such as tetanus immunization);
2. Aid in diagnosis of disease (barium chloride for x-ray);
3. Treat a disease or reduce symptoms (antibiotic for infection, psychotropic for mental illness);
4. Restore normal function (insulin to replace the hormone not produced by individuals who have diabetes); and
5. Maintain normal function (a heart medication to regulate a heartbeat).

It is important to understand the meaning of some terms that will be used in this module. The term “staff” will refer to someone who teaches individuals who have developmental disabilities. The term “nurse” will be used to designate the staff person in your agency who has the professional training, licensure, and primary responsibility for identifying the health needs of the individuals receiving services.

Why Have a Medication Module?

Although most adults are familiar with physicians and pharmacists, and have used a variety of medications, there are some important reasons for this module:

1. Medications can be dangerous;
2. Many medications taken by individuals in your agency may be unfamiliar to you; and
3. Although most people do not follow formal rules and procedures when giving and taking medication in their own home, such rules and procedures are required by law and policy in your agency to protect:



- a) individuals taking medications;
- b) staff carrying out medication procedures; and
- c) the agency providing services to individuals.

A medication treatment program needs many people to make it work.

1. The physician who prescribes a medication (See glossary for definition of “physician”);
2. The provider or vendor pharmacist who fills the prescription; and
3. The consultant pharmacist who helps monitor the beneficial effect of the medication versus any side effects;
4. The licensed nurse who monitors the physical/emotional wellbeing of the individual and reports changes to the physician; and
5. The staff member who observes for changes in the individual and reports to the agency nurse.

Everyone involved in a medication treatment program must do their part consistently and carefully. Any questions on a medication treatment program must be forwarded to the appropriate health professional (nurse, pharmacist).

Note: As a direct service staff member you are NOT to make judgments about medications; only to observe and report.

EXAMPLE: David lives in a group home. He has seizures three to four times a month. He currently takes Dilantin. A staff member of the group home noticed David was unsteady when he came out for breakfast this morning. The staff reported it to the nurse. The nurse recognized the unsteadiness as a possible side effect of Dilantin. Although David was not due to see the physician for another month, the nurse called to inform the physician of the observation. The physician requested a laboratory test to see if David’s blood level of Dilantin was too high. The test revealed that it was high so the physician prescribed a lower dose of Dilantin. The pharmacist sent out the new prescription and David’s unsteadiness decreased and gradually disappeared.

Remember

1) A **pharmacist** is the only person qualified to dispense drugs to an individual or facility. He/she is also the only one who may label medications. 2) A **physician, dentist, or those advanced practiced professionals** with prescriptive privileges are the only people qualified to prescribe medication. 3) The **nurse** cannot administer medications to individuals without a **physician’s** order. However, the **nurse** must know enough about how medication works to understand what the **physician** is trying to accomplish with the medication. Nursing observations, when accurately reported, are invaluable to the physician in the treatment of an individual. 4) **Direct support professionals and medication assistants** assist the **nurse** and must be knowledgeable, and dependable to make accurate observations.

Medication Administration by a Medication Assistant I

Medication administration is the responsibility of licensed nurses and requires the knowledge, skills, and abilities of the licensed nurse to ensure public safety and accountability. ND Century Code allows the licensed nurse to delegate and supervise nursing interventions, including medication administration, to individuals authorized by the ND Board of Nursing to perform those functions. The nurse may delegate the responsibility to give or apply routine regularly scheduled medications to staff who complete approved Medication Assistant I training programs including the written exam, and the clinical skills assessment. The nurse may also delegate the delivery of a specific medication for a specific client. In either of these cases, the Medication Assistant I must only give or apply medications for the routes of administration for which they have been trained and the nurse has delegated this responsibility.

The Medication Process as a Teaching Tool

The medication process provides many opportunities for teaching and learning. Although individuals will vary in their ability to participate, they should be involved to the best of their ability. When people assume responsibility for their own medication, it increases their sense of independence and self-worth. Whenever you create opportunities for individuals to be responsible for their own daily needs, you support their sense of having some control over their environment. They become an active rather than a passive participant.

EXAMPLE: Mary, an adult who has mild intellectual disability, lives in a transitional group home. During the past month, staff have reminded her only once to take her prescription medication. She selects the correct container from her tray in the locked medication cabinet, states the name and purpose of the medication, and takes the correct dose without assistance while staff observe. Staff assist her to order a refill over the telephone when she is down to a three or four day supply. Mary compares the name, dose and color to what she has been taking when the refill is delivered.

EXAMPLE: Michelle, an adult who is blind and has moderate intellectual disability. Staff have marked the containers with raised symbols to help her select her right container for the right time. Although Michelle can only say a few phrases, staff say the name and purpose of her medication and encourage her to repeat it. Michelle opens the container and takes the correct dose while staff observe.

EXAMPLE: Michael, an adult who has severe intellectual disability, cannot hear or speak. Staff have drawn a colored shape of his medication by a picture of a sun for morning, and a bed for bedtime. When Michael selects a medication container, staff assist him to match the color and shape of the medication to the colored shape for that time of day. By nodding their head and making the sign for yes, staff indicate when he has matched correctly.

In addition to teaching individuals to take their own medication(s), other learning

experiences linked to medications should be provided. The team will help determine how each person should be involved in activities such as calling for appointments, arranging for transportation, visiting with health professionals, getting the prescription filled, and monitoring for medication effects. Encourage the individual to take an active role in all stages in the medication process.

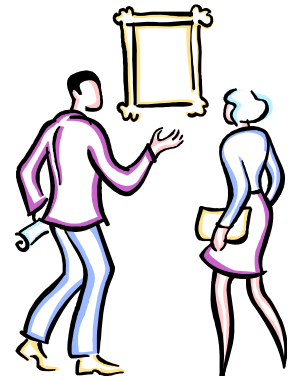
Medications and Personal Outcomes

The Council on Quality and Leadership in Supports for People with Disabilities (The Council) uses Personal Outcome Measures to accredit agencies that provide services to people with developmental disabilities in many states, including North Dakota. The Council defines quality services by the organization's responsiveness to people receiving support and their attainment of "Personal Outcomes."

Personal Outcomes (http://www.thecouncil.org/Personal_Outcome_Measures.aspx retrieved 4/12/11) are what people expect from the services and supports they receive. Personal Outcomes encompass major expectations that all people have in their lives, yet are individualized to focus on the issues that matter most to each person. There is no standard definition of any outcome that applies to all members of a group of people. In fact, it is unlikely that any two people will define personal outcomes in exactly the same manner. Personal outcomes are discovered by talking to the person, observing them in their day-to-day interactions and paying attention to cues that tell what is important to the individual and why.

The Council (1997) uses the following example to describe how medication impacts one individual's personal outcomes:

With medication, Bill's symptoms of depression are greatly reduced. He decides to join a group for greater social interactions. However, he is not satisfied to stop there. He wants to find a job and work. He wants to use his skills for greater self-esteem, financial reward, and social involvement.



This module focuses on understanding medications, body systems, and proper procedures for administering medication. However, don't forget why this training is important. Assisting individuals with medication is one of the supports that will make it possible for them to achieve their personal outcomes.

People Have the Best Possible Health

The definition of "best possible health" varies from one individual to another depending on the unique characteristics of the person. The person's health status; the presence of serious medical conditions; their age, lifestyle, and experiences; all shape the person's expectations for health. Health care interventions, including medication administration, must be personalized and effective to ensure the best possible health given the individual's current health status. To determine whether or not this outcome is present,

The Council suggests using these questions (among others) in conversations with **the person**:

- Do you feel healthy? If not, what bothers you?
- What do you do to stay healthy?
- What health concerns (physical and mental) do you have?
- Do you discuss your health concerns with anyone? How are your questions and concerns addressed?
- Are you seeing a doctor, dentist, or other health care professional?
- Do you take any medication? If so, what is it and how does it help?
- What advice has your health care professional given you? Are you following it? If yes, is it working? If no, what do you think the problem is?
- If you think the medications, treatment, or interventions are not working, what is being done?

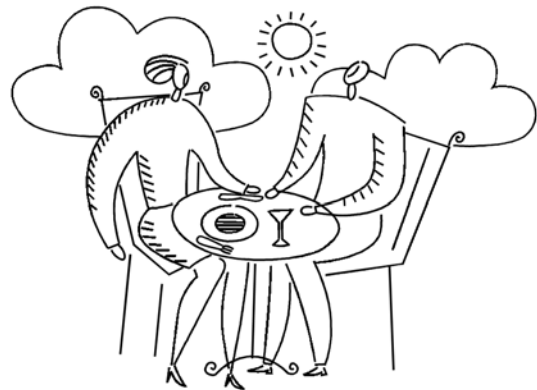
Staff members who provide support to the person are responsible to know:

- How has the person defined “best possible health?”
- How is the person involved in his or her own health care?
- Is the person following the health care professional’s recommendations? If no, why do you think that is?
- Do you think the person feels health interventions are working?
- If not, what is being done about it?
- How do you assist the person to overcome barriers to this outcome?

Medications and Other Personal Outcome Measures

While the link between medication and the “best possible health” personal outcome is quite obvious, medications used and practices for assisting with medication administration also are embedded in several other Personal Outcome Measures. The example described previously illustrated how medication for depression helped Bill achieve several Personal Outcome Measures including:

- People perform different social roles
- People have friends.
- People choose where they work.
- People are connected to natural support networks.
- People realize personal goals.



The guidelines you will learn in this module related to administration and storage of medication are recommended with the following Personal Outcome Measures in mind:

- People decide when to share personal information.
- People are respected.
- People are safe.
- People exercise rights.
- People are treated fairly.

- People are free from abuse and neglect.
- People choose services (i.e., health care providers).

Think about the people you assist with medication. How do the medications they take and the supports that you and others provide related to medication administration, storage, and monitoring for effects of medication help individuals attain their Personal Outcomes?

Summary

Many people will assume that the individual with disabilities is totally dependent and has little to offer in the medication process. You can counteract this attitude by working with the team to teach the individual to become as independent as possible and by providing an appropriate model for health care professionals.

Feedback Exercise I

1. What are some important reasons for the training offered by this module?
 - a.
 - b.
 - c.
2. Describe the role that a physician, a consultant pharmacist, and the licensed nurse each plays in a medication treatment program:
 - a.
 - b.
 - c.
3. Who is the only person qualified to dispense drugs to an individual or to a facility?
4. Who is qualified to prescribe medication?
5. What are some learning experiences that could be linked to medication and medical issues? List at least 3 learning experiences:
 - a.
 - b.
 - c.

Fill in the blank:

6. As a staff member you are not to make _____ about medication. You are to _____ and _____.

Unit II: Staff Responsibility

Objectives:

After completing this lesson, staff will be able to:

- describe the medication administration cycle
- distinguish between prescription and nonprescription or over-the-counter medications
- distinguish between controlled and non-controlled prescription medications
- apply normalization and least restrictive alternative principles during medication administration
- observe and report abnormal symptoms of medications

Medication Cycle

Medication administration is more than simply handing out medication. It is a cycle that includes four areas:

Observation – Throughout the medication cycle: the person’s behavior, appearance, and symptoms before medication is prescribed and after medication is administered.

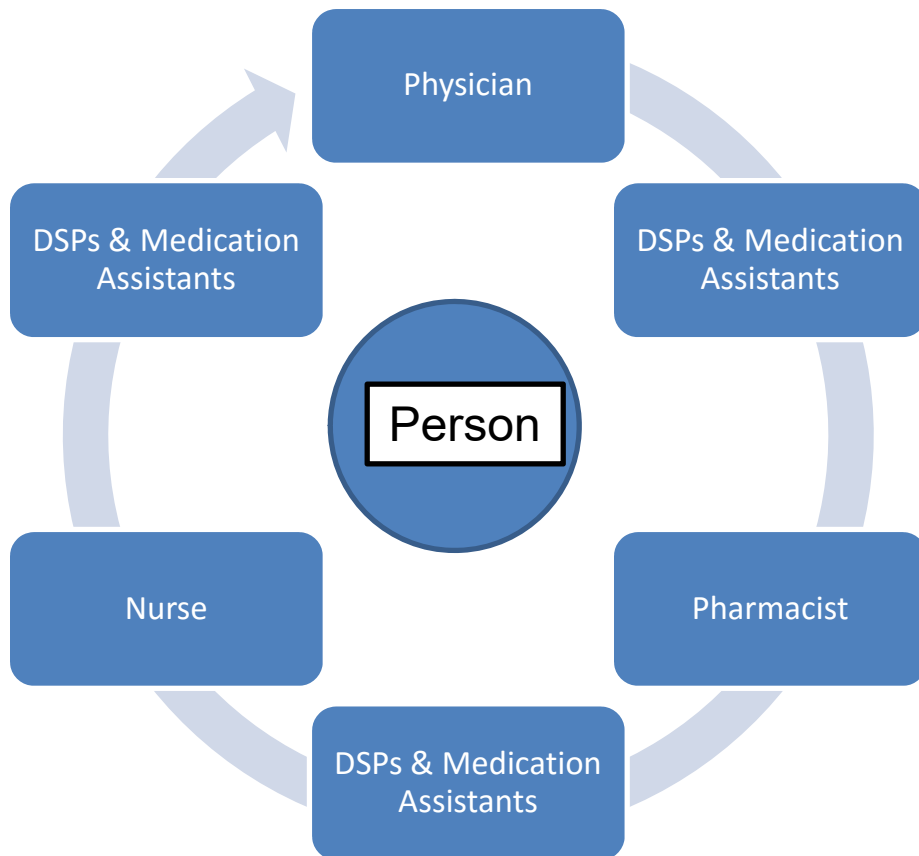
Prescription – Medication is prescribed by the physician and filled by the pharmacist

Administration – Medication is administered by direct support professionals (DSPs) and medication assistants who have been trained and certified by the nurse

4) Documentation – Documentation occurs throughout the medication cycle as well (e.g., observations of the person’s appearance, symptoms and behavior; medical referral, reports, and recommendations; prescriptions made and filled; medication administration)



Each area is important and each leads into another area. Observing a change in an individual leads to documentation. Documentation influences the physician’s prescription. The prescription determines administration. Administration requires documentation and subsequent observation of the changes that should occur in the individual. Each area has a cause and effect relationship with the others.



As a staff member you are responsible for portions of the medication administration cycle. It is important to understand that safe medication administration involves all of these job functions, and that it is much more than simply handing out medication.

An individual may not receive needed medical attention unless you conscientiously observe him/her and report changes.

Medication may be prescribed that an individual is allergic to unless you communicate important information to the nurse.

An individual may receive the wrong amount of a medication unless you monitor administration of medication correctly.

An individual may not receive a prescribed medication unless you check medication administration records (MAR) carefully and consistently.

An individual may suffer an undesirable or even fatal medication effect unless you OBSERVE and REPORT significant physical or behavioral changes to the right person at the right time by the right means.

It is important to know where your responsibility ends and that of a nurse begins.

Staff have 4 broad responsibilities regarding the medication process:

1. Knowing and adhering to laws and agency policies;
2. Applying normalization principles and teaching independence;
3. Knowing and observing the effects of each medication on the individual; and
4. Ensuring that safety and sanitation procedures are followed.

Each of the four broad responsibilities includes numerous duties. Although your agency will provide specific policies and procedures for you to follow, this module will provide information on the responsibilities that apply to staff in all agencies.

Knowing and Adhering to Laws and Agency Policies

Every staff member must learn the boundaries of authority and responsibility for their position. When entering a new job or a familiar position with a new employer, staff may feel insecure and tentative. As time passes and confidence grows, staff may be tempted to assume responsibilities outside the scope of their position and training. In the area of medication administration, this can have dangerous consequences for both staff and the individual.

Staff are trained to work in some areas independently, and in other areas, under the guidance of a nurse or other medical professional. In the area of medication administration, the nurse or the physician must provide guidance and supervision. While the training of staff should be of sufficient depth for the procedures that they perform routinely, they must never attempt to perform tasks for which they are not trained. Completion of this medication module is only part of your training. The other part of your training will be a practicum in the actual work setting supervised by the nurse. The nurse will delegate medication administration based on your demonstrated knowledge and capabilities.

Prescription/Non-prescription Medication

Medication can be prescription or non-prescription. **Prescription** medications are those medications which must be ordered by a physician and dispensed (obtained from) by a pharmacist.

Non-prescription medications can be obtained by the general public through simple purchase in a store. Non-prescription medications are frequently called “over-the-counter” medications because any one can obtain them without a prescription. These medications have been proven safe for most people if taken according to package instructions. Examples of over-the-counter medications are aspirin, stomach antacids such as Maalox, and many cold medications.



Any medication carries with it some degree of danger; no medication is harmless.

Whenever anyone other than the individual himself is involved in the administration of a medication the responsibility must be delegated by a licensed medical professional according to federal, state and agency regulations.

EXAMPLE: You as an individual can take aspirin in your home without checking with your physician or keeping a written record of when you took it. If you were in the hospital, you would not receive aspirin even if you request it unless your physician wrote an order. When it was given to you, the nurse would be required to record that it was taken. An individual living in his/her own home does not need a physician's order to take over-the-counter medication; but in the same way, a physician's order is required if that same individual lives in a group home because other persons are involved in the medication administration. Your agency will have policies regarding standing orders, i.e., common over-the-counter medications which each individual physician had indicated are permissible to take according to package instructions. Follow your agency's policies on orders for ANY non-prescription medication.

Federal and State Law

Laws, regulations, statutes, ordinances, agency policies and procedures . . . What purpose do they serve? Laws, agency policies, and procedures seek to protect each of us in our dealings with others. Medication legislation is designed to protect the public from fraud, false advertising and untested medications and to regulate the manufacturing and dispensing of medications.

Food and Drug Act

The Food and Drug Administration (FDA) requires medication manufacturers to prove the value and safety of new medications before they are released for sale. This act determines:

1. Which medications may be sold with or without a prescription;
2. Prescription medication labeling: a clear description of contents, directions for use, the quantity of medication dispensed, and the date of expiration;
3. Non-prescription medication labeling: the name of the medication, the strength, quantity and average directions for use; and
4. Warning statements on certain medication labels.

How does this act affect you in your work?

- Every medication must have a label.
- Look for additional colored labels that indicate a warning statement. (Example: "This medication may cause drowsiness").

- If an individual takes the same medication at more than one location, both containers must have a label containing the description of contents, directions for use, quantity and expiration date. (If you do not understand a label as written, contact your agency nurse.)

Controlled Substance Act of 1970

This Controlled Substance Act (CSA) was enacted to regulate the manufacture, importation, possession, use and distribution of certain substances. Since its enactment in 1970, the Act has been amended several times (1978, 1984, 1988, and 1993).

Prescription medications can be controlled or non-controlled. “Non-controlled” medications are those which are considered safe for most people and therefore require a physician’s order but are not likely to be addictive (taken for the wrong reasons and sold illegally). “Controlled” medications are those which are likely to be addictive. The CSA regulates who can prescribe and who can dispense controlled medications. Controlled medications are categorized into five schedules based on their potential for addiction. (Schedule I being highest and schedule V the lowest).

Table I

Major Features of the Federal Comprehensive Drug Abuse Prevention and Control Act of 1970

SCHEDULE	CONTROLLED DRUGS
Schedule I, drugs with high abuse potential and no accepted medical use. Illegal drugs.	Heroin, hallucinogens.
Schedule II, drugs with high abuse potential and accepted medical use. Double locked!	Narcotics (morphine and pure codeine) Oxycodone, Demerol, Amphetamines
Schedule III*, drugs with moderate abuse potential and accepted medical use. No double lock required by Federal Law.	Tylenol with codeine, Anabolic steroids
Schedule IV*, drugs with low abuse potential and accepted medical use. No double lock required by Federal Law.	Xanax, Librium, Klonopin, Valium, Ambien,
Schedule V*, Drugs with low abuse potential and accepted medical use. No double lock required by Federal Law.	Narcotic drugs used in limited quantities for coughing and anti-diarrheal purposes. Robitussin AC.

*** Agency policy or state regulations (i.e., Title XIX) may place additional requirements for storage of Schedule III, IV, and V Medications. Learn your agency policy.**

How does this Act affect you in your work?

- Controlled medication will have a warning statement on the label: “Caution: Federal Law prohibits the transfer of this drug to any person other than the patient for whom it was prescribed.”
- Controlled medications have limited refills.
- Schedule II controlled medications require separate double lock storage and separate medication administration records.

Each state has regulations which further define by whom and how medications are dispensed, prescribed and administered. In North Dakota only licensed physicians, dentists, or those advanced practiced professionals with prescriptive privileges may **prescribe** medications. In North Dakota, only licensed pharmacists may **dispense** prescription medication. In North Dakota only licensed medical personnel (e.g., nurses, physicians) may **administer** medication. You as a staff member may be asked to administer medications but **ONLY AFTER BEING TRAINED BY THE LICENSED NURSE AT YOUR AGENCY.**

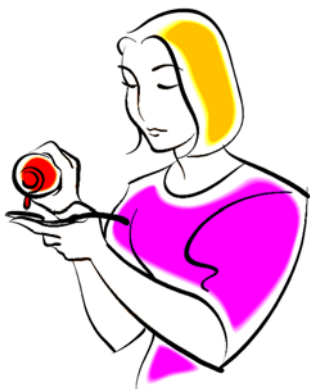
Applying Normalization Principles and Teaching Independence

State laws and agency policies do not allow agencies to follow medication practices used in a typical home. Medications in settings served by your agency must be kept in a locked cabinet; forms must be filled out; administration procedures must be documented, etc.

However, every effort should be made to use procedures that are as normal as possible within the rules and regulations. **AVOID** practices such as:

- Having people line up to receive medication
- Shouting out the names of individuals to come for medication
- Identification tags or bracelets

Such practices draw unnecessary attention to the fact that individuals are on medication and decreases “normalization”.



Another factor to consider when applying the principle of “normalization” is the age of the individual. If he/she is an adult, you can apply the principle of normalization by considering what is typical for someone of that same age in the community. For example, do most 35 year old men have someone else open the container for them or do they do it themselves? Do most 35 year old men take the medication without comment or does someone say “Here comes the airplane, open your mouth wide and I’ll pop it in!!”? Obviously, you would not do this! The principle of normalization requires not only that the individual do as much as possible independently but that you assist in an age appropriate manner, if assistance is necessary.

The principle of “least restrictive alternative” stresses an individual’s independence. Even if an individual cannot do what is typical of others, the individual has the right to do as much as possible for him/herself while staff assist and teach him/her to do the remainder. Staff should not do things for individuals just because it is easier or faster (i.e., you would not take a medication out of a cabinet or container for an individual who could reach it alone.) Using an adaptive device such as a cookie sheet on the counter is an example of a simple accommodation for an individual who has difficulty opening containers and removing the correct amount without spilling. However, we cannot let the individual attempt tasks that might cause severe harm if done incorrectly (i.e., you would not have an individual with visual impairment pour a liquid medication without adaptive equipment). Sometimes there is a fine line between risk-taking and negligence.

As a staff member you must remember that decisions regarding an individual’s program plan are made by a team. The interdisciplinary team is made up of the individual, direct service staff, physician/nurse/ specialists. You do not make the decision regarding which individuals can keep and take medication independently. If you have questions regarding medication administration for a specific individual, contact your agency nurse or supervisor.

Know and Observe Effects of Medication Administration

You must know each medication, it’s expected effects for the individual and what to do if the expected does not occur or the unexpected does. **REPORT** to the nurse/supervisor any changes in the individual but leave the diagnosis to the medical professional. Remember it is your responsibility to observe and report change, not diagnose.

A change can be objective or subjective. A change which can be clearly seen (e.g., cough, loss of weight, vomiting, rash) is called an objective symptom. A change which is only perceptible to the individual (e.g., pain, nausea, dizziness) is called a subjective symptom. Although objective symptoms are easily observed, you may need to ask the individual specific questions and observe his/her behavior to detect subjective symptoms. In addition, “body language” such as facial expressions and body positions may give clues to subjective symptoms.



In order to observe effectively for abnormal symptoms and behavior you need to know:

1. How does the individual look and act most of the time?
2. What medication is being taken and what is the desired effect?
3. What potential side effects occur with this medication?
4. What can you do to increase the effectiveness of the medication, and decrease side effects?

In your capacity of working with individuals with disabilities you will come to know them very well. In some cases, you will know more about them than anyone else. Your observation on a day to day basis will be important in determining if something is physically wrong. Developing a keen observational sense will be a very important aspect of recognizing when something goes wrong. The first thing you will need to know is what the person is generally like. For instance, what do they look like, how do they smell, sound, feel, and react in a normal or healthy state?

Your ability to observe clearly and pass on information in an objective and detailed manner is your best tool when assessing for signs and symptoms of an illness or injury. You'll use all your senses to describe what is occurring.

Visual: You will be using the eyes to visually observe or inspect the individual or the affected part of their body. Observation of the person for any behavior that may indicate pain will also be important.

Auditory: You will be using hearing to identify changes in sounds in an individual (i.e., changes in breathing patterns, bowel sounds) as well as listening to what they are telling you with their words.

Smell: The sense of smell will be used to identify unusual smells, or odors.

Touch: The sense of touch will help confirm what your eyes, ears, or nose detect.

Observation of the following sixteen characteristics will help you establish a basic description of how the individual "normally" appears.

1. GENERAL APPEARANCE: How is he/she dressed? Well-groomed? Body odor?
2. BODY POSTURE: Is usual posture "good" or "slumped"?
3. GENERAL STATE OF HEALTH: Strong or frail? Symptoms of illness?
4. PHYSICAL ACTIVITY LEVEL: What is the usual pace, fast or slow? Need assistance? Tremors or paralysis?
5. PHYSICAL CONDITION OF SKIN: Note color and texture. Rashes? Bruises?
6. PHYSICAL CONDITION OF HAIR AND SCALP: Note texture and quantity.
7. PHYSICAL CONDITION OF SENSES: Glasses? Hearing Aids? Numbness?
8. SPEECH: Verbal or nonverbal? Slow, fast? Slurred?
9. MOUTH, GUMS AND TEETH: Color of gums? Teeth or dentures? Breath Odor?

10. FACIAL EXPRESSIONS: Happy, sad, flat, anxious, strained?
11. VITAL SIGNS: Usual temperature, blood pressure, pulse, respirations?
12. WEIGHT: Usual weight? Normal weight for height and body build?
13. BOWEL AND BLADDER: Regular bowel habits? Appearance of urine/stool?
14. APPETITE AND EATING HABITS: Fussy eater? Hearty eater? All meals?
15. GENERAL EMOTIONAL STATE: Happy, passive, uncooperative, depressed?
16. STATE OF AWARENESS: Alert, inattentive, drowsy?

The staff member may become, in a sense, the eyes, ears, and nose for the supervisor, nurse, and physician. Through the staff member, health concerns regarding the person may first be recognized. Later, observations and documentation will assist the nurse and physician in gathering significant information to make an accurate diagnosis and develop an appropriate plan of care.

Staff members, for the most part, will be working with individuals who are healthy. However, some signals may alert staff members that there is something abnormal about how the person looks or acts. These changes may occur suddenly, or over the course of time. It is part of the staff member's role to monitor individuals and inform the nurse in the event you identify any health concerns. These observations will assist the person's health care professionals in their assessment of the person's condition. If staff members have an idea of what to look for when someone shows signs of a change in his or her health pattern, they will be further ahead in planning for recovery.

In this agency, report any observations to:



Summary

Bearing in mind the necessity of assisting individuals who have intellectual disabilities to develop their abilities and to promote their integration in normal life, the following concepts are to be applied:

1. An individual is to be taught to self-administer medication, based on team consensus.
2. Staff involved in medication administration must observe for physical and/or behavioral changes. Such changes should be reported to the agency nurse or supervisor.
3. Only medications which a physician has prescribed or approved for the individual can be given.

Feedback Exercise II

1. Medication administration is more than simply handing out drugs. It should be looked at as a cycle that includes which four areas:
 - a)
 - b)
 - c)
 - d)
2. What are four broad responsibilities that a staff member in a facility has in medication administration?
 - a)
 - b)
 - c)
 - d)
3. Why do we have laws and regulations regarding medication administration?
4. According to the module, what is one of the most important lessons for every staff member to learn regarding medication?
5. Can an individual in a group home be given over the counter medication without a physician's order? Why? Why not?
6. How does the Food and Drug Act affect you at work?
 - a)
 - b)
 - c)

7. What are two categories of prescription drugs?
 - a)
 - b)
8. How does the Controlled Substance Act of 1970 affect you in your work?
9. What are some practices to avoid when giving medications?
 - a)
 - b)
 - c)
10. How does the principle of normalization apply to medication administration?
11. How does the principle of least restrictive alternative apply to medication administration?
12. What do you need to know in order to observe effectively for abnormal symptoms and behavior?
 - a)
 - b)
 - c)
 - d)
13. List 8 of the 16 characteristics listed in your module that will help you establish a basic description of how the individual “normally” appears:
 - a)
 - b)
 - c)
 - d)
 - e)

f)

g)

h)

14. Prescription medications are those medications which must be ordered by a _____ and dispensed by a _____.

Non-prescription medications can be obtained by the _____ and are frequently called _____ medications.

Some examples of non-prescription medications are _____, _____, _____.

15. You as a staff member may be asked to administer medications but only upon delegation by _____.

Unit III: Medication Knowledge

Objectives:

After completing this lesson, staff will be able to:

- list and explain the six R's of medication administration
- define therapeutic range
- correctly interpret abbreviations commonly used in administration of medications

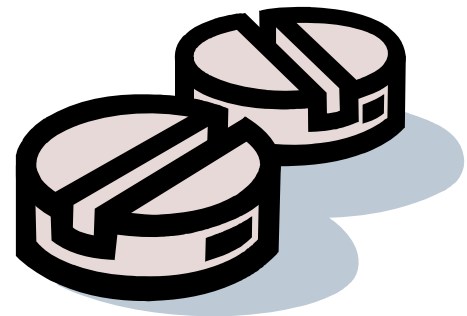
In order to give medications correctly, staff need to observe the **six rights (6 Rs) of medication administration**: RIGHT INDIVIDUAL, RIGHT DOSE, RIGHT TIME, RIGHT ROUTE, RIGHT MEDICATION, RIGHT DOCUMENTATION. Most medication errors are made because one of the 6 rights were not observed. In this section the 6 rights will be discussed. All are of equal importance. Carelessness in any one could result in serious error.

Right Individual

It is essential to confirm the identity of the individual prior to assisting with medication administration. Never give medications to someone unfamiliar to you. Staff should also avoid giving medications to more than one person at a time. Giving the medication to the wrong individual involves danger for two people. The individual not receiving the medication is deprived of the desired effect and the individual receiving the medication may experience serious negative consequences.

Right Dose

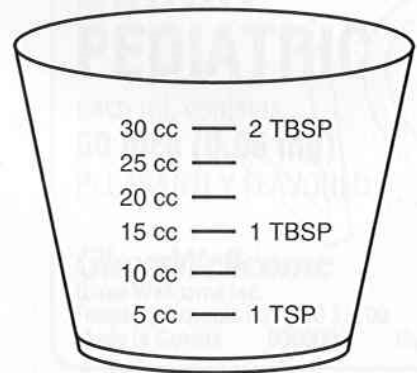
The correct dosage of medication must be given if the desired effects are to be obtained. Because different amounts of medication present different effects, you must know the correct amount to administer. Some medications are deadly poisons, but when given in tiny amounts can help relieve disorders. Other medications are useless for therapy unless given in large amounts. Most medications have a **therapeutic range**, that is, a range of doses that can produce desired effects with minimal side effects. Physicians prescribe an amount within the dosage range depending on how strong an effect is needed and on the age, size, and physical condition of the individual. Doses less than the therapeutic range may not produce any effect. Doses more than the therapeutic range may produce side effects and be potentially fatal. For this reason most medications come in different strengths. For example: Tylenol tablets come in strengths of 325 mg and 500 mg. When giving medication you need to record the strength (dosage) given. ALWAYS check to see that you are giving the strength that the physician has ordered. If you gave a 500 mg tablet instead of a 325 mg tablet, you would be giving almost twice the dosage prescribed.



The pharmacy supplies drugs in one of two forms: single-dose packages or multiple-dose packages. In single-dose or unit-dose packaging, each dose of medication is individually wrapped or bottled. Each single-dose package contains the proper dose for one administration. It is labeled with the drug name, strength, expiration date, and sometimes the individual's name.

Many drugs are dispensed from the pharmacy in multiple-dose bottles, vials, or packages. The person who is to administer the medication must measure and pour out single dose of liquid medications or count out tablets or capsules.

The most frequently used system for measuring medication is metric. Most liquid medications are administered in milliliters and most solid forms of medication are measured in milligrams, gram, and kilograms. (1000 mg = 1gm, 1000 gm = 1 kg) the picture of a medication cup gives you an idea of how metric compares to household measurements: (1 teaspoon = 5 cc).



Many measuring cups for medications will have both systems listed for convenience.

Right Time

Medications are scheduled at regular times to maintain consistent levels of effectiveness. Medications that are quickly used by the body need to be taken more often to maintain an adequate amount in the blood so that the desired effect will occur. Other medications can be given less often because the body does not use the medication as rapidly. For this reason, follow the medication routine as scheduled by the pharmacist. As a rule, medications should be given within the hour scheduled.

EXAMPLE:

In some agencies, medications ordered for 8 a.m. usually are given within the hour range of 7:30 and 8:30 a.m. (1/2 hour before to 1/2 hour after the scheduled time). In other agencies the time allowed is one hour before to one hour after the scheduled time: i.e., an 8 a.m. medication could be given any time between 7 a.m. and 9 a.m. Refer to your agency policies to determine which is allowed in your agency.

When medications cannot be given within the scheduled hour(s), contact your nurse or supervisor for instructions.

Other medications are scheduled before or after meals because:

1. Some medications are irritating to the stomach and food in the stomach reduces this irritation.
2. Some medications are taken on an empty stomach because they enter the

system quicker if there is not food in the stomach.

3. Some medications are used to coat the stomach and protect it during meals.

When a physician prescribes medication he will indicate when to give it by the abbreviations listed below:

a.c.	=	before meals	p.c.	=	after meals
q	=	every	tid	=	3 times a day
qh	=	every hour	bid	=	2 times a day
q6h	=	every 6 hours	prn	=	as needed

(Check your agency policies to learn the standard times when medications are given 2, 3, or 4 times a day, etc.).

Right Route

The route is the part of the body to which the medication is administered. Most medications are given by the oral route, i.e., they are taken by mouth and swallowed. They are called **internal** medications. Other medications are applied to the outside of the body such as skin creams, eye drops, and ear drops. They are called **external** medications.

You must ensure that individuals are taking medications by the correct route. The route or method to administer the medication is determined by:

1. The medication's chemical and physical properties (some medications are poisonous if swallowed but are not harmful if put on the skin).
2. The site of the desired action (some medication is only needed on a small portion of their body i.e., a "local" effect; whereas some medication is needed by the entire body, i.e., "systemic" effect).
3. How quickly the desired effect is needed (speed of absorption). Absorption is quickest in the following order:
 - a) intravenous (directly into the bloodstream);
 - b) intramuscular (injected into muscle);
 - c) subcutaneous (injected just under skin); and
 - d) oral (swallowed and absorbed from stomach or intestine like food).

These abbreviations pertain to routes of administration:

p.o.	=	by mouth
I.M	=	intramuscular injection
I.V.	=	intravenous injection
supp.	=	suppository

ophth	=	pertaining to the eye
otic	=	pertaining to the ear
sub-Q, SQ	=	subcutaneous injection
SL	=	sublingual
buc	=	inside the cheek

You will be learning to give medications by the several routes as part of this medication module and the practica that accompanies it. Staff may administer medications only by the routes for which they have been trained and have demonstrated competence to the agency nurse.

EXAMPLE: Drops incorrectly put into the eye when prescribed for the ear could harm the eye. Drops incorrectly put into the ear may not move down the ear canal and therefore be ineffective. External medications are usually prescribed for a local (small area) effect. If given in the wrong area, the desired effect may not occur and the area applied may be injured.



The technique of giving an injection is only one small part of administering a medication by the intramuscular or subcutaneous route. The speed with which the medication acts and the affect the medication has on the entire body, not just one small area, are important considerations. For these reasons, only professionally trained staff and unlicensed staff who have been specifically delegated in accordance with the North Dakota Nurse Practice Act may administer injected medications.

EXAMPLE: A new medication is ordered to treat an infected toenail. The individual is allergic to the medication. If the medication had been an ointment applied to the skin, the allergic reaction might cause redness and itching only of the toe. If the medication had been taken orally, the allergic reaction might show up in a few hours as a rash over the body. If the medication had been injected, the individual might have trouble breathing within minutes. The rapid onset of severe symptoms and limited time to react are the reasons why only professionally trained staff should give injections.

Right Medication

The right medication must be given to have the desired effect. Matching the label of the container with the Medication Administration Record is one way to ensure the right medication is given.

Medications are given for many purposes. The physician may prescribe a medication for one individual to control seizures, while the same medication may be prescribed for another individual to control manic depressive symptoms. It is your responsibility to know the specific purposes of each medication you administer.

To better understand why a particular medication is ordered it is helpful to understand basic physiology of the body. The following chart will list all major body systems and their functions.

Table 2: Body Systems

System	Anatomy	Function
1. Skeletal	bones, joints	body support, protect organs
2. Muscular	muscles	body movement
3. Nervous	brain, spinal cord	control body activity
4. Circulatory	heart, blood	carry oxygen to cells
5. Respiratory	nose, lungs	provide air
6. Reproductive	ovary, uterus, testes	create life
7. Urinary	kidneys, bladder	remove wastes
8. Gastrointestinal	mouth, stomach, bowel	digest food, remove waste
9. Endocrine	thyroid, pancreas	secrete hormones
10. Skin	skin	protection
11. Sensory	eye, ear	sight and hearing

Right Documentation

Each time a medication is administered, it must be documented. Documentation of medication administration must be done at the time the medication is given.

- Documentation should be done in blue or black ink.
- No pencil or white out can be used.
- Never cross out or write over documentation.
- If you make a mistake when you are documenting on the medication log, circle your mistake and write a note on the log to explain what happened.

Double check your documentation as soon as you have finished giving medications and again at the end of the day.

Summary

Your careful observation of the 6 Medication Rights (6 Rs) is extremely important to the safety of individuals. Only if you are sure you have the 6 Rs can you administer the medication!

- right individual
- right medication
- right dose
- right time
- right route
- right documentation

Feedback Exercise III

1. List and explain the 6 Rights (6 Rs) of medication administration.

- a)
- b)
- c)
- d)
- e)
- f)

2. What is therapeutic range?

Absorption is a process whereby the drug enters the blood stream. Listed below are four medication administration procedures. Put them in a sequential order according to the speed of absorption starting with the fastest one first.

- | | |
|----------|----------------------------|
| 1. _____ | A. intramuscular injection |
| 2. _____ | B. oral administration |
| 3. _____ | C. intravenous injection |
| 4. _____ | D. subcutaneous injection |

Listed below are 11 major body systems, their anatomical parts and their functions. Name the correct anatomical part and the right function for each body system.

<u>System</u>	<u>Anatomy</u>	<u>Function</u>
1. skeletal	_____	_____
2. muscular	_____	_____
3. nervous	_____	_____
4. circulatory	_____	_____
5. respiratory	_____	_____
6. reproductive	_____	_____
7. urinary	_____	_____
8. gastrointestinal	_____	_____
9. endocrine	_____	_____
10. skin	_____	_____
11. sensory	_____	_____

Unit IV: Effects of Medication

Objectives:

After completing this lesson, staff will be able to:

- list and describe seven factors which influence medication response
- list and describe the three broad effects of medication
- describe medication interactions and their effects

The pathway medication takes from the time it enters the body until it produces its effect is complex.

Oral medication is taken into the body and travels the same route as food. It starts in the mouth and travels to the stomach by way of the esophagus. Although some medications begin absorption into the blood stream while they are still in the stomach, most medications are absorbed from the upper part of the small intestine. (Some medications are covered with special enteric coatings to prevent their digestion in the stomach and keep them from causing irritation.) After oral medications are absorbed through the stomach lining or intestinal walls it enters the blood stream.

Sublingual administration (placing the drug under the tongue) is quickly absorbed into the blood stream through the mucous membrane that makes up the lining of the mouth. This route has the advantage of rapid absorption and higher concentration in the blood because it doesn't have to pass through the digestive system first.

Buccal administration is similar to sublingual except that the medication is placed in the mouth next to the cheek and is absorbed through the mucous membrane that lines the inside of the cheek.

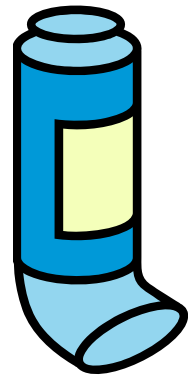
Topical administration refers to applying a drug directly to the skin or mucous membrane usually for a local effect (i.e., creams, ointments). Absorption through the skin is slow, while absorption through the mucous membranes is rapid.

Absorption of **rectal medications** (i.e, suppositories and enemas) is generally slow and irregular. However it may be the best route when the person is not able to take medication orally).

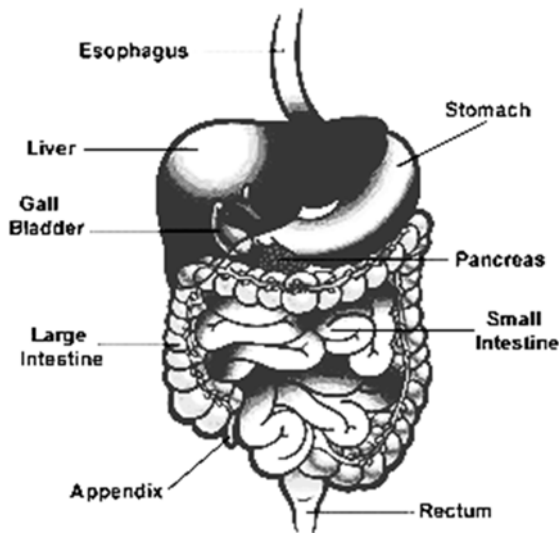
Vaginal medications are usually given for their local effects.

In **inhalation administration**, the medication is absorbed through the mucus membranes in the nose and through the tiny air sacs that fill the lungs.

Parenteral administration (intradermal, subcutaneous, intra muscular, and intravenous) involves injecting a drug into the body with a needle and syringe. This

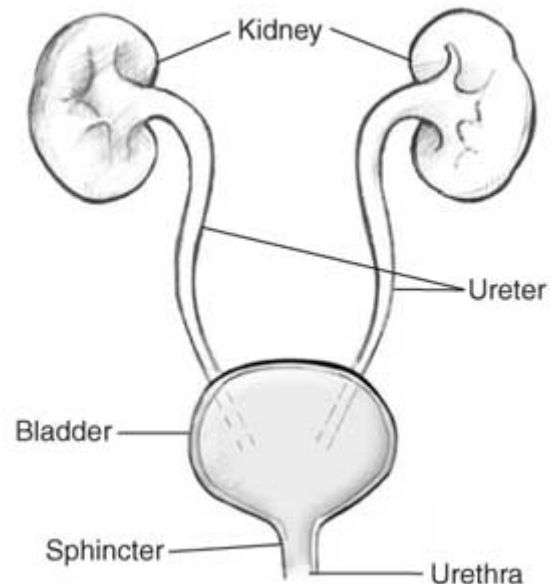


method gives much more rapid absorption and distribution than oral administration.



The blood stream is the transporting system for the whole body. (For this reason, physicians will often order blood tests to find out how well organs are functioning and the effect the medication is having). However, the presence of medication in the bloodstream does not necessarily mean that it produces immediate effects. Once the medication has been absorbed into the bloodstream, it must still make its way into the fluids that bathe the tissues. The medication must reach a certain concentration before it can exert its effects on the cells.

Eventually the medication is transported to the liver which is the single most important site of medication detoxification (converts medication to a harmless substance). Although medications can be excreted (eliminated) by many routes including kidneys, lungs, sweat glands, saliva and mammary glands, the kidneys are the most important organs for removal of medication from the body. The kidneys filter the medication and in time, all the medication is eliminated from the body in the urine.



As you can see, the pathway for medication is complex. Any breakdown can significantly alter medication response. For instance, if the kidneys were damaged and could not excrete this medication, there would be a buildup of the medication and possibly a toxic effect. This is one reason to observe the individual for any changes while taking any medication.

Factors Which Influence Medication Response

Medications, even when properly prescribed and administered, can have several possible outcomes. Individuals react differently to medication. In some individuals, the medication effect may be unexpectedly potent (strong) while others will show little, if any response to the same dose. In fact, the same individual may react in quite different ways when she/he receives the identical dose at different times.

1. **Body Weight:** Generally speaking, the more an individual weighs the more diluted the medication becomes in the body and the smaller the amount of medication that accumulates in the targeted tissues. The less an individual weighs the greater the amount of medication that concentrates in the tissues and the more powerful is the

effect of the medication. The dosage is often calculated and administered on the basis of the ratio of milligrams (mg) of the medication to the kilograms (kg) of the individual's body weight.

2. **Age:** The age of an individual will affect his/her response to medication. Different age groups vary in their ability to eliminate medication. Very young infants may not have the liver enzyme system for breaking down certain medications. Because the elderly individual usually experiences a decrease in the function of some organs, smaller doses of medications may be required. It is not uncommon to see bizarre, unpredictable reactions to medications given to the elderly (especially with sedatives).



3. **Sex:** The sex of an individual sometimes affects the response to medication. This is due to two factors: the difference in the distribution of fat and water and the difference in size. Women usually have more fatty pads than men, and men have more body fluid than women. Some medications may be more soluble in fat and others are more soluble in water.
4. **Pregnancy and lactation** (breast feeding): The most important consideration when medications are ordered for women of childbearing age is that she may be pregnant and the medication may affect the fetus. Medication taken by the mother may enter the milk and be swallowed by the breastfeeding baby.
5. **Genetic factors:** Individuals may react differently as a result of inherited factors. For example, an individual may be abnormally sensitive to a medication or have a different medication metabolism. This is why it is important to obtain family histories of medication sensitivities and/or allergies.
6. **Psychological factors:** The way an individual feels about a medication and what one believes it can do are major factors in the effect of a medication. If an individual has no confidence in the medication, chances are the medication will not work as well.
7. **Illness/disease:** Illness and disease can affect the action of medications upon an individual. For example, an individual who has severe pain may require more pain medication than someone who has less pain. A person with kidney disease may not excrete medications like a healthy person and the medication may build up in the body causing an overdose.

Three Broad Effects of Medication

The three primary outcomes of any medication on the body are: desired effects, side effects, and no apparent effects. Whenever a physician prescribes a medication, he or she must weigh the potential benefits of the desired effect and the potential dangers of the side effects.

1. **Desired Effects**

When the prescribed medication is working correctly the medication is producing the “desired effect”. The desired effect is what we want the medication to accomplish. Reducing seizure activity with Dilantin, eliminating a headache with aspirin and preventing polio with oral vaccine are all examples of desired effects.

2. **Side Effects**

Whether or not the desired effect occurs, there is always the possibility that side effects will also occur. “Side effects” are effects produced by the medication other than the one for which it was prescribed. Side effects may be expected and predictable (such as drowsiness when taking seizure medication) or completely unexpected and unpredictable. Side effects can be relatively harmless (such as urine discoloration from Dilantin) or potentially fatal (such as severe allergic reaction to penicillin). Side effects may show up as physical or behavioral changes. These changes may be readily observable, such as a rash, diarrhea, vomiting or fainting, or harder to discern, such as lightheadedness, blurred vision, dryness of the mouth. As a staff member involved in medication administration, it is your responsibility to observe and report all effects to the nurse/supervisor.

When an individual is first exposed to a foreign substance, the body may develop a reaction called an “allergic reaction”. Allergic reactions can also occur after later

exposure to the medication even if it is several months to years after the first prescription. For example, an individual takes penicillin for an infection and no reaction occurs. Several years later penicillin is again prescribed and the individual develops a rash. This is also an allergic reaction.



Allergic reactions can be mild or severe. A mild reaction might show up as a skin rash, diarrhea, itching, watery discharge from nose, tearing, or nausea. Reactions can occur

anytime from a few hours to 2 weeks after the administration of a medication.

A severe allergic reaction known as “anaphylactic shock” usually occurs immediately after the administration of the medication. For this reason, an individual should be observed by someone who knows them well after the first dose of a new medication is administered. Anaphylactic shock can be fatal if symptoms are not reported immediately and assistance obtained. The symptoms include airway restriction, irritability, extreme weakness, nausea, and vomiting, which are followed quickly by acute shortness of breath, low blood pressure and death. Anaphylactic shock is a medical emergency. Follow your agency’s procedures for such symptoms.

3. No Apparent Desired Effects

Different medications require various amounts of time before their full benefit is expected. However, sometimes there is no apparent effect from taking the medication. The term “no effect” is self-descriptive. After allowing the typical amount of time for a medication to begin showing an effect, the individual still shows no effect from taking the medication. For example, Tylenol may be prescribed every four hours for a fever. After 24 hours, the fever remains unchanged. It is important for the physician to know if there is no effect. The physician may then prescribe an alternate medication with the same desired effect, change the dosage of the present medication, etc.

Medication Interactions

Whenever an individual is taking more than one medication, interactions may occur. “Medication interactions” are effects resulting from the combination of two or more substances (i.e., medications, alcohol, food, etc.) which produce changes different from the effect of each substance alone. The resulting interaction may be:

1. Potentiation - an increase in the effect of one or more of the medications.

EXAMPLE: Bill did some heavy lifting at work yesterday and strained his back. His physician prescribed a muscle relaxant to relieve the muscle strain. While he was still on the medication, Bill had a beer with some friends after work. As he drove home he suddenly felt tired and drove off the road.

Potentiation: Some medications cause drowsiness and when taken with alcohol this effect will be increased. Mixing alcohol with many medications is like taking an overdose of pills.

EXAMPLE: Sue has been on Coumadin to prevent blood clots. Today she had a headache and took two aspirin. Two hours later she still had a headache, so she took two more aspirin. That evening as she is brushing her teeth, she notices that her gums are bleeding and it took a longer time for the bleeding to stop than when this happened in the past.

Potentiation: When a person is on any anticoagulant such as Coumadin, caution is needed when giving any dose of aspirin, since it will cause the person to bleed more easily and be harder to stop the bleeding. Aspirin is not recommended for persons on anticoagulants.



2. **Antagonism-** a decrease in the effects of one or more of the medications.



EXAMPLE: David recently saw the doctor for a sinus infection. He has been taking the Tetracycline that was prescribed for a week; but his infection doesn't seem to go away. When asked about what he takes the medication with, he replied, "A big glass of milk."

Antagonism: When taking Tetracycline and milk together, the milk will bind with the Tetracycline and result in the medication not being absorbed.

3. **Unique Effect** - Some combinations of medications produce new and unique effects. Sometimes the effect will be a different action than what either of the medications usually has. Think about what happens when you mix blue and yellow food coloring in water. You get green water. In the same way, two or more different medications given together may have an effect different than either one of them alone.

There are two important points to remember concerning medication interactions:

1. the greater the number of medications taken at one time, the greater the possibility that a medication interaction will occur
2. by being notified of what medication an individual is now taking, the physician can prescribe a new medication that has the best chance of being compatible with the current medication.

While the examples emphasize unwanted medication interactions, staff should be aware that medication may be prescribed together in order to produce a desired interaction. An example of this is the medication Diamox. It is usually given for glaucoma, but when given with certain seizure medications it will potentiate (increase) the effect of the anticonvulsant so that a much smaller dose can be given

The important thing to remember is that ANY CHANGE (physical or behavioral) especially during the first few days of a new medication, may have been caused by that medication. As a direct service staff member, you are the person best able to observe for any behavioral or physical changes. In fact, it is up to you to observe and report any and all suspected effects of medication.

Medication Names

One medication can have many different names. The chemical name is the one by which a chemist can precisely identify the components of the medication. Because one medication may be sold by several companies, it can have several trade or brand names. The generic name is the common name given before trade names are adopted. The family or category describes the general purpose of the medication.



Example:

Trade or brand name	Tylenol, Tempra
Generic name (classification)	Acetaminophen
Chemical name	N-(4-hydroxyphenyl) acetamide
Family or category	analgesic (Pain relief)

Example:

Trade or brand name	Keflex
Generic name	Cephalexin
Chemical name	5-thia-1-azabicyclo [4.2.0]-oct-2-ene-2 carboxylic acid, 7-[(aminophenylacetyl)amino]-3-methyl-8-oxo-, monohydrate
Family or category	antibiotic (fight infection)

Medications sold under the generic name are usually less expensive than those sold under a trade name. The medication is chemically the same and most of the time the effect is the same. Pharmacists are required to dispense the generic medication to individuals who receive Title XIX funds from the Social Security Act, unless the prescribing physician indicates otherwise. Many commercial insurances require generic medication be used as well.

Summary

Medications can affect every organ of the body. Prescribing medications is a very complex task and can only be done by a physician, dentist, or those advanced practiced professionals with prescriptive privileges. Even then, the effect of the medication may be different for each person depending on their age, sex, weight, health, heredity, and feelings. As a staff member you are responsible for:

1. applying the 6 Rights (individual, dose, time, route, medication, documentation);
2. observing which effect occurs (desired, side, no apparent effect);
3. reporting the information to the nurse/supervisor.

Feedback Exercise IV

1. What 7 factors influence medication response? Describe each.
 - a)
 - b)
 - c)
 - d)
 - e)
 - f)
 - g)
2. What are the three broad effects of medication? Describe each.
 - a)
 - b)
 - c)
3. What is an allergic reaction and what are some of its symptoms?
4. What is potentiation?
5. Define antagonism:
6. Describe what is meant by “unique effect” of medication.
7. List and describe three names a medication might have.

Unit V: Standard Precautions for Infection Control

Objectives:

After completing this lesson, staff will be able to:

- Wash hands correctly and frequently
- Follow standard precautions during medication administration

Hand Washing

Of all the infection control practices, the most important technique is thorough and frequent washing of the hands. For hand washing to be effective it must be done correctly and frequently.

The critical steps of hand washing include:

- _ Adjusting the water (the temperature of the water used for hand washing isn't as important as the friction used);
- _ Wetting the hands and applying the soap;
- _ Rubbing the hands together to form a lather for at least 10-15 seconds, being sure to apply friction to all the surfaces of the hands;
- _ Rinsing the hands with fresh water;
- _ Drying the hands with a single-use paper towel or air dryer. Turn off the water faucets with a clean paper towel to avoid recontaminating hands.) To prevent the spread of illness it is important that both staff members and individuals receiving services wash their hands.



When to Implement Hand Washing

- _ After using the toilet, after assisting with toileting or after assisting with incontinence protection (briefs or pad).
- _ Before and after preparing or eating a meal or snack.
- _ Before and after medication administration.
- _ Immediately after contact with blood, body visibly contaminated with blood, vaginal secretions, semen, urine, feces (stool/bowel movements), vomit, or discharge from the eyes, nose, or ears. Remember, even if you are wearing gloves you must wash your hands. Washing hands and wearing gloves are not substitutes for each other; they are meant to complement each other.

Standard Precautions

Standard Precautions combine the major features of Universal (Blood and Body Fluid) Precautions (designed to reduce the risk of transmission of blood-borne pathogens from moist body substances) and applies them to all people regardless of their diagnosis or presumed infection status. Standard Precautions apply to (1) blood, (2) all body fluids,

secretions, and excretions except sweat, regardless of whether they contain visible blood, (3) nonintact skin, and (4) mucous membranes. Standard Precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection.

The two main blood-borne illnesses that people are most concerned with today are the HIV (Human Immunodeficiency virus - which is the virus responsible for AIDS) and HBV (Hepatitis B Virus). However, it is very important that staff implement standard precautions with everyone, regardless of what is known about their health status.

1) Protective Barriers

It is essential to wear protective barriers when it is likely that you will come in direct contact with blood or body fluids. Protective barriers include:

- a. Gloves must be worn whenever you anticipate having contact with blood or body fluids. The type of gloves can either be vinyl or latex, when providing direct care, or general purpose utility gloves for housekeeping tasks. It should be common knowledge among staff where the gloves are located.
 - Vinyl or latex gloves must be changed between person-to-person contacts.
 - Latex and vinyl gloves should never be washed; they are intended as single-use gloves.
 - General purpose utility gloves (rubber gloves) may be reused after they have been washed and disinfected. They should be checked to make sure that they are not cracked, peeling, or discolored and that they do not have holes or tears in them. Discard gloves if any of these occur
 - Remember that hand washing should occur every time you remove gloves, regardless of whether you've handled blood or body fluids.
- b. Protective face or eye wear. (These can include goggles, glasses, and/or disposable face masks.) The eyes and mucous membranes should be protected from splashes or sprays of blood or body fluids because of the risk of infection caused by possible exposure. Eye wear is to be worn whenever splashes of blood or body fluids in the eyes are likely. Masks should be worn if it is likely that splashes of blood or body fluids in the mouth might occur.
- c. Gowns, aprons, or other protective clothing. The type of outer protective clothing that would need to be worn would depend on the procedure that was being performed and the degree of exposure that is anticipated. They should be worn if soiling of the skin or clothing is likely. In most programs it is unlikely that gowns or aprons or other protective clothing would be necessary.



2) Hand Washing

Remember that washing your hands is the most important procedure that can be done to prevent the spread of illness or disease.

3) Avoiding Accidental Cuts

Prevent injury from accidental needle sticks or cuts by utilizing the following safety measures:

- _ Never recap a needle.
- _ Discard the needle or sharp medical object immediately in an appropriate puncture resistant container after its use. There are specific staterules that may also apply if a program is a generator of infectious waste. Check with your individual program coordinator/director as to specifics.

4) Cleaning and Disinfecting

Clean and disinfect surfaces contaminated with blood or any body fluids. In the event you are cleaning a contaminated surface, you will want to ensure that the following procedures are followed:

- _ Be sure to wear household gloves.
- _ Place disposable paper towels over the spill and then wipe it up. Place the used paper toweling in a securely closed, leak proof bag labeled with the type of contaminate.
- _ Using a freshly prepared bleach solution(1/4 cup bleach to 1 gallon of water) or a hospital-grade disinfectant (tuberculocidal), vigorously clean, then rinse the contaminated area. (Friction from scrubbing the area helps remove the micro-organism). Manufactures' instructions for use of such products should be followed.
- _ Be sure to wash your hands thoroughly afterwards.

Standard precautions include:

- _ Use of protective barriers
- _ Hand washing
- _ Avoiding accidental needle sticks
- _ Cleaning and disinfecting contaminated surfaces

Feedback Exercises V

1. What is the primary goal of infection control practices?

2. The most important technique for infection control is thorough and frequent _____.

3. Hand washing should occur for at least (How long?) _____, being sure to apply friction to all surfaces of the hands.

4. Standard precautions apply to.
 - a)
 - b)
 - c)
 - d)

5. List four general standard precautions.
 - a)
 - b)
 - c)
 - d)

6. List the three main forms of protective barriers to utilize when you anticipate contact with blood or body fluids.
 - a)
 - b)
 - c)

7. List the four step procedure to be used when disinfecting and cleaning a contaminated surface.
 - a)
 - b)
 - c)
 - d)

True or False

8. T F If you wear gloves, hand washing is not necessary.
9. T F Standard precautions are used to decrease the possibility of exposure to blood-borne pathogens.
10. T F The two main blood-borne pathogens are hemophilia and sickle cell anemia.
11. T F Standard precautions apply only to body fluids that are blood or blood stained.
12. T F Standard precautions are intended to supplement, not replace, routine infection control practices.
13. T F Vinyl, latex gloves must be changed between person to contact, and should never be washed for reuse

Unit VI: Oral, Sublingual, and Buccal Medication Administration

Objectives:

After completing this lesson, staff will be able to:

- utilize the principles of safety in the administration of medication
- define terms related to the administration of medications
- keep accurate records of medication administration
- define negligence in medication procedures;



When staff administer oral (tablet or liquid) medication, they need to follow established procedures in their agency. The following pages list common steps and rationale frequently used in community-based programs.

Steps of Oral Medication Procedure

Steps	Rationale
<p>1. Time Schedule - Organize a schedule of things to accomplish at the beginning of your shift. Check each individual's MAR (Medication Administration Record) to determine times for medication.</p>	<p>1. Right time - Medication is given at the right time. Medication must be taken 1/2 hour before or after the designated time. (In some agencies it may be 1 hour before or after designated time.) Example: Medication ordered for 7:00 a.m. may be taken between 6:30 a.m. and 7:30 a.m. (or 6:00 a.m. and 8:00 a.m.) Normalization - When teaching the individual to self-medicate remember to allow time for him/her to come independently for medication before prompting.</p>
<p>2. Hand washing. Both staff and the individual should wash their hands.</p>	<p>2. Prevents spread of infection to the individual and yourself.</p>
<p>3. Unlock medication storage area. Key must be stored according to agency policy. (In many situations this means staff must carry it during the entire work time.)</p>	<p>3. Protects others from improper use of medications. (Double locking is required for some controlled substances - the pharmacist will indicate if the medication is controlled and requires a double lock.)</p>

<p>4. Check the label - Check the information on the MAR with the label on the medication container or card (and with the physician's order in some agencies). When checking they must agree on the six rights: right medication, right name, right dose, right time, right route.</p> <p>Read the medicine label three times before giving the medication; 1) when taken from the storage area (whether by the individual or staff), 2) when removed from the container or punch card, 3) when returned to the storage area.</p>	<p>4. Prevents medication errors. Give medication only upon written orders from the physician, or when directed by the agency nurse who has received a verbal or telephone order from the physician. Checking the label three times ensures accuracy. Never give a medication unless the label is on and clearly readable. Always check to make sure that the correct medications are in the cup before giving it to the person.</p> <p>Normalization: The individual should be given the time to select the right container or punch card independently.</p>
<p>5. Teaching based on the person's plan. Question the individual or describe the name and purpose of the medication.</p>	<p>5. The individual has a right to know what medication he/she is taking and why.</p>
<p>6. Remove the right dose from the container or punch card.</p>	<p>6. When using solid forms of medication (tablet, capsule), place the correct number of tablets in the lid or cap of the bottle, medication cup, or the person's hand. Handle in such a way that the fingers do not come in contact with the medication to prevent contamination. Because not all medications will come in the exact dose prescribed, two or more tablets may need to be taken to make the correct dose. Always check to make sure that the correct number of pills is in the cup before giving it to the person.</p> <p>Example: Depakote comes in 250 and 500 mg strength. To take a prescribed dose of 750 mg the individual would need to remove two different tablets.</p> <p>Example: If 1 mg is ordered and the medication only comes in 2 mg tablets then 1/2 tablet is the correct dose. Request that your pharmacist break them. Never attempt to break an unscored tablet.</p> <p>Normalization: The individual should remove the tablets. If the person has difficulty with safety caps, regular caps should be requested.</p>

<p>7. Teaching based on the individual's IPP- Ask the individual "How much are you supposed to take?" or explain how many he/she should take.</p>	<p>7. The individual has a right to know how much medication he/she should take.</p>
<p>8. Report changes in appearance of the medication to the nurse, supervisor, or pharmacist.</p>	<p>8. Ensure the right dose and medication is being taken. The pharmacist will determine if it is a generic substitute, change in brand of the medication or the wrong medication. Example: Damage due to sunlight, moisture, breaking, may change the odor or appearance of the medication and perhaps make it inactive (ineffective) or poisonous. The wrong medication or dose may have been placed in the container. Normalization: Ask the person, "Is this the right medication, (color, shape, size)?"</p>
<p>9. Observe the swallowing of the medication.</p>	<p>9. Observe one individual at a time so your attention can be directed to the actual swallowing. The individual may keep pills in the cheek, choke, hide the medication, etc. Do not leave medication in the room or send with the individual to carry to a water fountain, etc. Some may store the medication in a suicide attempt, may take at a wrong time, drop the medication or give to another person. Avoid distractions. Do not talk with others while working with medication. If a medication is dropped, do not have the individual take it. Store it and/or dispose of it according to your agency's policies. In some agencies staff are asked to place the dropped medication in an envelope labeled with the prescription number, individual's name, medication name, quantity and strength and store in a locked storage area until it can be disposed. Normalization: The individual should take the medication correctly and independently.</p>

<p>10. Replace medication in locked storage area.</p>	<p>10. Internal (oral) medications must be stored separately from external (skin, ear, eye) medications. Keep them on separate shelves/cabinets. Each individual must have a separate cubicle (tray, etc.) for personal prescription medications. Stock medications (aspirin, Tylenol, etc.) must be stored separately from prescription medications. Therefore the medication area will have these four storage areas:</p> <ul style="list-style-type: none"> a) oral prescriptions b) external prescriptions c) oral stock medications d) external stock medications <p>Example: Mary has an external medication (Lotrimin skin cream) kept in a cubicle on the shelf and a cubicle on another shelf for her oral medications.</p>
<p>11. Chart the medication</p>	<p>11. Your signature (initials) verifies that you witnessed the medication being swallowed by the individual.</p>
<p>12. Observe for desired and side effects of the medication.</p>	<p>12. The staff assisting the individual with medications has the responsibility to know the purpose for which it is being given, any side effects, warnings or special directions and the usual dose. Staff must also be familiar with the condition of the individual, i.e., allergies. Information on each medication is written on medication information sheets, nursing care plans, and medical referral forms. If you have a question about a medication, contact the following resources in the suggested order in which they are listed: (refer to agency policy)</p> <ul style="list-style-type: none"> 1) agency nurse/supervisor 2) consultant pharmacist 3) prescribing physician 4) hospital pharmacy

Sublingual Medication Administration

Sublingual medications are in the form of tablets. Follow the basic procedures for administering oral medications. However, instead of swallowing the tablets, the medication is placed under the tongue where it is quickly absorbed through the mucus membrane. The individual should not drink or eat until all of the medication is dissolved.

Buccal Medication Administration

Buccal administration is similar to sublingual administration except that the tablet is placed in the mouth next to the cheek. The medication should not be swallowed, and the individual should have no food or drink until the medication is dissolved.

Steps of Liquid Medication Procedure

Steps	Rationale
1. Time Schedule (refer to oral procedure).	1. Right time.
2. Hand washing	2. Prevent spread of infection
3. Unlock storage area.	3. Safe storage of medicine.
4. Check label: --as bottle is taken from shelf --before pouring --as bottle is replace to shelf	4. Never give liquid unless label is present and clearly readable to insure that the right medication is being taken.
5. Shake before pouring- (shaking is not required for liquid medication which does not separate.)	5. Medication settles to bottom in a suspension; should be evenly distributed to ensure correct dose.
6. Pour away from label side.	6. Prevent messy, unreadable label.
7. Pour at eye level while the cup is sitting on a hard surface.	7. Looking down gives wrong reading.
8. Pour just before giving.	8. Liquid may deteriorate, or evaporate while standing.
9. Do not mix liquid medications.	9. One may interact with the other causing precipitation (medication falls to bottom) or give an unpleasant look, or unpredictable reaction.
10. Individual teaching.	10. Assist individual to shake, and pour liquids correctly.
11. Report change in appearance of medication to nurse/pharmacist/ supervisor.	11. Medication may change color or clarity as it becomes aged or contaminated
12. Observe swallowing of liquid.	12. Right time, right route.

13. Replace in locked storage area.	13. Safety. Note that some liquid medications require refrigeration so you need a locked box for the refrigerator.
14. Chart medication taken.	14. Legal record.
15. Observe for action and side effects.	15. Report desired and side effects to nurse/supervisor.

Legal Issues

One function of the law is to protect those who are dependent on others from unfair, unscrupulous or inadequate treatment. When an individual places himself in the hands of a staff member, he should be able to reasonably expect that his life and other human rights will be protected from inadequate care.

Today, many judges are being confronted with the complex problem of deciding whether an individual received adequate care from competent staff. Under law, the individual expects and is entitled to quality care. The law supports these expectations and makes the staff responsible for a “duty of care”, which becomes a legal duty. If staff do not meet this legal duty of “reasonable care” and if consequently some harm does come to the individual, the staff may be held liable and negligent. Negligence is not only failure to give any care (omission), but also the giving of poor care (commission). Violating any of the five R’s can be considered negligence.



EXAMPLE: John takes medication for seizure control. In the rush of getting everyone on the van for work, his morning medication was taken by Jesse. Jesse became very drowsy late that morning. He fell and broke his wrist. If the court proved the fall and resulting fracture were a result of taking the wrong medication, the staff working with John and Jesse that morning could be liable for negligence (i.e. sued in court).

EXAMPLE: Dave and Bob are both on antibiotics for respiratory infections. Dave is allergic to penicillin so he takes a different medication than Bob. The phone rang while both were taking the bed-time dose, so the staff member did not notice that Dave accidentally took Bob’s medication. Soon after, Bob began scratching his arms. Staff noticed a rash and notified the nurse. Dave’s reaction was a result of inattention of staff. The staff could be liable for negligence.

Traditionally, courts hold the person with the most training and education (licensed nurse in the area of medication training) to be responsible or liable for the outcome of all actions performed by those responsible to him/her. This does not mean that anyone else involved

in the medication process would be held to be blameless. It simply means that persons with the most education and training would be held accountable for the actions of those being supervised.

Remember, you are still responsible for anything you do or do not do. However, following policies and procedures increases your protection. Medication policies and procedures are established to protect the individual, staff, and agency.

Medication Administration Record



The following is an example of a medication administration record. Although this MAR may be different from the form used in your agency, it contains much of the same information. The hour column of the MAR simply tells at what times the medications are to be taken. Unless such times are specified by the physician, each facility sets up its own schedule of times. The numbers across the top indicate the days of the month and initials indicate who observed the administration. All initials on the MAR must be identified by signature.

In some cases, other information may appear below the initials.

EXAMPLE: Some heart medication may not be given if the pulse falls below 60. Staff would always take the pulse prior to administering the medication and the rate would be recorded below their initials.

Because the records can be admitted into a court of law as evidence, great care must be taken to ensure the accuracy of the records. Some suggestions are as follows:

1. Before administering medication, check that the current month is entered on the MAR. At the same time, check to see if there is more than one MAR for this individual.
2. Use ink.
3. If an error in charting occurs, draw one line through, date and initial. Never use “white out”, pencil or scribbling. “White out” gives the appearance of a cover-up. Pencil can be erased and changed therefore is not admissible as a legal record. Scribbling is open to misinterpretation. If someone else needs to read your scribbling, it may be misunderstood. Do not use felt tip pens since it “runs” if wet.

Feedback Exercise VI

1. Listed below are the 12 basic steps to oral medication administration. Give at least one reason for each of the steps.

- a) Time Schedule
Reason:
- b) Hand washing
Reason:
- c) Unlock Medication Storage Area
Reason:
- d) Check Label
Reason:
- e) Individual Teaching
Reason:
- f) Remove the Right Dose From the Container
Reason:
- g) Ask the Individual
Reason:
- h) Report Change in Appearance
Reason:
- i) Observe the Swallowing of the Medication
Reason:
- j) Replace Medication in Locked Storage Area
Reason:
- k) Chart the Medication Taken
Reason:
- l) Observe for Desired and Side Effects
Reason:

2. List at least two basic steps and rationale of liquid medication administration which are different from the oral medication administration.

a)

b)

3. What is negligence according to the module?

4. Medication policies and procedures are established to protect the _____, _____, and _____.

5. Why must great care be taken to ensure the accuracy of the medication administration record?

the blood in order for the desired effect to occur).

3. What are the side effects?
4. Are there any possible interactions of this medication with other medications?
5. Are there special storage or administration procedures?
For example, does it need to be refrigerated?
6. Is it a controlled substance? (Special storage and recording procedures may be required for controlled substances.)

When a new medication is ordered or there is a change in a medication order, staff should follow agency policies for obtaining this information.

In addition, whenever a new medication or a change in dosage is ordered by the physician, verify that the medication label and physician's order are the same. Do this by:

1. Comparing the label directly to the physician's order.
2. Calling the agency nurse to verify the order if it does not accompany the medication.

The information from the pharmacy label -- medication name, dose (this includes two things, the amount of drug in each tablet or strength of the medication and the number of tablets to be taken), when and how the medication is to be taken - - all must be transcribed (put on the MAR).

EXAMPLE: Tegretol 200 mg. Take 2 tablets (400 mg) four times daily.

If you are asked to transcribe new orders or a change in order, be sure it is compared to the physician's order by two staff members to verify the accuracy. Anything not transcribed correctly could have serious consequences. Any time you have a question about the way a label was transcribed into the MAR from the physician's order **CALL THE AGENCY NURSE OR YOUR SUPERVISOR FOR CLARIFICATION.**

If an error is made in transcribing - discontinue that section of the MAR and rewrite it into a new section. If a medication dose is changed during the month - mark the section as "discontinued" and rewrite the change in a new section **(See example MAR on page 47).**

Because the individual may take medications at two sites, your agency will have a procedure for receiving medications in 2 locations. The containers are still to be labeled with the individual's name, name of medication, dose and directions for use.

Procedures for When the Individual is Away from Agency

To avoid missing a scheduled dose of medication when an individual will be away from the agency, follow your agency policy regarding:

- Sending an individual dose with them if gone during one scheduled medication time.

- Sending the appropriate number of doses if the individual will be gone for more than one medication time.

Instruct family/friends when the medication is to be taken; be sure they have labeled containers with clear instructions and explain why the individual needs the medication. Always document the amount of medication sent home and the amount returned.

Procedures for Verbal Orders

Orders may be given verbally, usually over the phone. In North Dakota, ONLY a licensed medical person (nurse in the agency) is able to take a verbal order from the physician. If a physician calls with an order while you are working, refer him/her to the agency nurse or consultant pharmacist. The verbal order is written down by the nurse and signed by the physician as quickly as possible.



Procedures for PRN Medication

PRN means “only as needed”. It is a term applied to prescription or over-the-counter medications that are taken only if the individual has a symptom which can be relieved by the medication.

EXAMPLE: Tylenol for headaches is not taken every day but rather only as needed for a headache.

OTC is an abbreviation for “over-the-counter” medication. These are medications which are considered safe for most people if taken according to the package instructions. Although most PRN medications do not need a prescription for purchase, some PRN’s are stronger and require a physician’s prescription.

EXAMPLE: Tylenol with codeine may be prescribed after dental work.

In order for an individual to use PRN’s (either prescription or OTC) while in your agency, a physician’s order is necessary. Most individuals have a “standing order” form prescribed by their physician for the use of common OTCs. The OTCs indicated on the standing order are the only ones that can be used. The procedure for giving an over-the-counter medication is as follows:

1. Check the standing order from the physician to see if the individual can take a medication for the symptom mentioned.
2. Follow the outlined steps for oral/external medication
3. Chart the following information on the MAR (Medication Administration Record) or designated record (per agency policy):

- a. medication
- b. dose (how much in each tablet as well as total tablets taken)
- c. time taken
- d. route (oral or external)
- e. reason it was requested
- f. effect the medication had

EXAMPLE: 3:25 pm Tylenol 325 mg; (2) tablets (650 mg) orally for headache.
(4:15 pm no further complaints about headache).

Visit the individual within 1/2 hour (or appropriate length of time) if the medication is being given for a specific purpose to see if the desired effect has been achieved.

EXAMPLE: The effects of most medication can be noted within an hour. However, medications such as those given for constipation may not show effect until the next day.

Procedures for Medication Administration

The Appendix includes instructions for administration of medication by the following routes:

- eye medications
- ear medications
- rectal medications and enemas
- vaginal medications
- topical medications
- metered hand held inhalants
- metered-dose nasal pump
- nasal spray
- transdermal patches

Note: Staff must **NEVER** administer medications by a route for which they have not been trained.

Feedback Exercise VII

1. What should you do if a physician calls you at your facility to give a verbal order?
2. What do staff need to know about medications they are administering?
 - a)
 - b)
 - c)
 - d)
 - e)
 - f)
3. How do you verify that the medication label and the physician's order are the same?
4. What information from the pharmacy label or the physician's order is transcribed onto the Medication Administration Record?
5. What does PRN mean?
6. Describe procedures for giving "over-the-counter" medication.

Unit VIII: Special Issues in Medication Administration

Objectives:

After completing this lesson, staff will be able to:

- list at least three techniques which can be used to achieve successful swallowing of medications
- describe the agency policies and procedures to be followed when a medication error occurs

Assisting the Individual Who Has Difficulty Swallowing

Many individuals have difficulty swallowing medications, especially tablets and capsules of large size. The following techniques may be helpful in gaining cooperation as well as enabling successful administration:

1. Have the individual in a sitting position (elevate the head if the individual is in bed).
2. Have the individual take a small sip of water before medication to moisten throat passage.
3. If several tablets must be taken, have the individual take them one at a time.
4. Have the individual take sips of water after each tablet.
5. Have the individual rest a minute or two after each tablet. This quiets the cough reflex and enables them to take all the medication.
6. A tablet may be swallowed fairly easily if given in a teaspoon of foods such as pudding, jelly, or applesauce if these foods are permitted.
7. If continued difficulty, consult agency nurse/pharmacist as some medicines come in liquid as well as solid (tablet) form.
8. Have the individual take liquid medication slowly - follow with sips of water unless cough syrup (cough syrups often act by coating the throat lining - taking sips of water would wash away this effect).



Assisting Individuals Who Refuse Medication

If a prescription medication has been ordered, it is important that the medication be given within the time span designated by agency policy. As mentioned previously, this is 1/2 hour before the time through 1/2 hour after (or one hour before to one hour after designated time).

You may work with an individual who refuses to take the medication. While the individual does have the right to refuse medication, if staff use the following approaches, many times the individual will agree to take the medication.

1. Accept the refusal initially and wait approximately 10 minutes to see if the individual will independently decide to come for the medication.
2. Offer choices.
EXAMPLE: Joe, do you plan to take your medication before you eat supper or after? (if not specified by order).
3. According to individual tolerance, repeat the offer of choices within the one hour time span allotted for that medication.
4. Use the “sandwich technique” to suggest medication compliance. The sandwich technique is giving a compliment, followed by an action needing to be done, followed by a beneficial effect if the action is completed.
EXAMPLE: “Joe, it is good that you took your medication yesterday. If you continue to take your medication regularly you may have fewer seizures!”
5. Use the “Premack Principle” by stating what “liked” activity will follow after medication are taken. The Premack Principle consists of offering an individual the choice of participating in a highly preferred activity after the completion of a less preferred activity.
EXAMPLE: “As soon as you take your medication, we’ll have coffee.”

Individuals Who Continue to Refuse

1. Once refusals continue past the time limit, notify the nurse/supervisor/ pharmacist per agency policy.
2. Chart that the medication was refused. In most agencies this will be noted on the MAR and/or by a medication error report.
3. Options to consider:
 - a. Why is the individual refusing? For control? As a means to assert independence? Don’t let medications become a power struggle between you and the individual -- offer a choice.
 - b. Explain the importance of this medication for the individual and the purpose for which it was prescribed.
 - c. Allow the individual time to think about taking the medication between repeated approaches with a choice.
4. Repeated refusals are a reason to call a team meeting to address the refusals within the program plan.



Errors in Medication Administration

A medication error may be any violation of the five rights (right individual, right time, right medication, right dose, right route) or incorrect medication procedure. An error must be reported immediately to the agency nurse/supervisor per agency policy.

A medication error has occurred if:

The **wrong individual** was given a medication.

Consequence: Potentially dangerous effect, perhaps involving two people.

EXAMPLE: In the rush to get everyone in the van in the morning. John's medication was taken by Jesse.

The **wrong medication** was given to an individual.

Consequence: A potentially dangerous effect for at least one individual.

EXAMPLE: Since Jesse took John's medication and was drowsy all morning in the workshop, he cut his hand on the handsaw.

The **wrong dose** was given to an individual.

Consequence: a potentially dangerous effect for the individual.

EXAMPLE: Staff gave Joe two tablets for high blood pressure instead of one. Joe felt faint all morning and passed out getting up from his chair.

The medication was administered at the **wrong time**.

Consequence: A potentially dangerous effect for the individual.

EXAMPLE: Margaret did not take her morning medication until noon. Her blood sugar at midmorning was 285 (normal 70-130).

The medication was administered by the **wrong route**.

Consequence: A potentially dangerous effect.

EXAMPLE: Karen's ear drops were administered into her right eye. By mid-morning her eye was red, burning and swollen shut.

Staff administered the medication by using the **wrong procedure**.

Consequence: Potentially dangerous effects which may not immediately be seen.

EXAMPLE: A staff member failed to wash his hands prior to administering eye drops to Karen. The next morning Karen's eye was watery and itchy.

What to Do If Any of the Above Occur: Notify the agency nurse/supervisor/ pharmacist/ physician according to agency policy. Fill out a medication error report. Legally, you are in a better position if you can show that you promptly recognized the error and that you took action to remedy it. This is not a punishment.

Be humble. Remember, everyone makes mistakes: people who are wise learn from them. Admit any errors made; document, but do not dwell on past mistakes. Relax. Tension and anxiety cause mistakes.

Feedback Exercise VIII

1. List at least four techniques you may use to achieve successful swallowing of medication.
 - a)
 - b)
 - c)
 - d)
2. List at least three techniques you could use to assist an individual who refuses to take medication.
 - a)
 - b)
 - c)
3. If the approaches or techniques you have used failed to convince the individual to take medication, what additional step will you take? List at least two.
 - a)
 - b)
4. What steps will you take as a staff member if you realize that you have committed a medication error?

5. When does a medication error occur? Match the following examples with the categories listed to the right.

- | | | |
|-----------|---|----------------------|
| _____ 1. | Matthew took John's vitamin (same brand). | a. wrong medication |
| _____ 2. | Bill didn't wash his hands before applying Lotrimin to his feet. | b. wrong individual |
| _____ 3. | Joe took his Dyazide instead of his Depakot at bedtime. | c. wrong dose |
| _____ 4. | Mary went out for supper and didn't get her 5:00 pm Penicillin until 7:00 pm | d. wrong time |
| _____ 5. | It came out so fast, Mary got two drops instead of one in her eye. | e. wrong route |
| _____ 6. | Carol's heart medication is sublingual (under the tongue). She just swallowed it with her other medication. | f. wrong procedure |
| _____ 7. | Tom dropped his tablet on the floor but swallowed it after he found it. | g. no error occurred |
| _____ 8. | Ben put his ophth drops in his ear. | |
| _____ 9. | Jane took 2 capsules of 150 mg Dilantin. The label read: Take 300 mg. | |
| _____ 10. | Kate's label reads: Take Amoxicillin 250 mg qid ac. She took it right after meals and at bedtime. | |

Unit IX: Medication and Positive Behavior Supports

Objectives:

After completing this lesson, staff will be able to:

- explain why medication shouldn't be the first choice solution to challenging behavior

Undeniably, medication can be used appropriately and effectively as a part of a comprehensive behavior support plan. However, most of the time medication does not serve as a long-term, complete solution to challenging behavior. Look at the following:

EXAMPLE: Betty has just started work at a factory. The machine she operates was adapted to fit both Betty and her wheelchair, and for the first couple of weeks she had a good work record. Recently, she has seemed to become much more irritable. She gets upset if she is criticized in any way, and if she makes a mistake, she yells and throws things. The staff have no idea why she has shown such a dramatic change in behavior. They've decided to meet and discuss what to do.



Would some type of medication be appropriate in this situation? Based on our limited information, we obviously can't decide, but there are a few considerations we can address.

Consideration #1

Is medication a first choice? Almost never. It would be much more appropriate for staff to look at Betty's work environment for possible cause(s) for the challenging behavior. Have they given her work assignments that she cannot complete and which frustrate her? Have they inadvertently paid too much attention to her (reinforced her) when she becomes agitated? An environmental change which can be designed to change a specific behavior would almost always be preferable to the use of a medication.

Medications:

- may also affect behaviors other than the one intended.
- require complicated procedures involving physicians, nurses, etc.
- have the potential of reinforcing an image of the individual as sick or diseased.

Conclusion: Medication intervention is not usually a "first choice" solution.

Consideration #2

Is medication a permanent solution? Not usually. Medication is effective in controlling or influencing a challenging behavior only as long as it is taken. Unlike medications such as antibiotics, which may actually eliminate the cause of the condition (kill the germs or eliminate the infection), medication to modify behavior only temporarily controls behavior. Even if a tranquilizer might decrease Betty's aggressive behavior, we should NOT be surprised to see the aggressive behavior increase after the medication is removed. Conclusion: Medication intervention is not a "permanent" solution

Consideration #3

Is medication a "complete solution" for most challenging behavior? Again, not usually. A medication might be prescribed in an attempt to decrease Betty's irritability and aggressive behavior. Even if the medication were effective, it would not serve as a complete solution to the challenging behavior. We need to support Betty in learning socially appropriate and effective ways of dealing with criticism and failure. The most we can expect of the medication is that it might decrease the challenging behavior; however, we cannot expect appropriate, adaptive behaviors to "automatically" appear.

Conclusion: A "complete" solution to most challenging behaviors involves the learning of new, more adaptive patterns of behavior. This is best accomplished by a systematic teaching.



Suppose that instead of giving Betty the medication, the staff developed a comprehensive behavior support plan to help Betty express her frustration more appropriately. If her self-control, communication, and socialization skills increased, and her relationships with the staff and others improved, then both Betty's and the staff concerns could be resolved.

Always ask the question: "Why are we recommending the prescription of a medication?" Is it for staff benefit, or the individual's? What are the alternatives?

As you consider the examples in this chapter, remember that not all medications used to modify behavior are psychotropic medications. The key to determining if medication is a behavior modifying medication is the intended or desired effect of the medication. These three considerations apply to any medication prescribed with the intent to change behavior.

Feedback Exercise IX

1. What are some considerations we may consider before behavior controlling medications are used?
 - a)
 - b)
 - c)
2. What is a “complete” solution to most challenging behaviors?

Unit X: Medication Observation

Objectives:

After completing this lesson, staff will be able to:

- Know and observe the effects of medication on the individual

The previous units emphasized the four broad responsibilities you have as a staff member monitoring medications. These were:

1. Knowing and adhering to laws and agency policies about medication administration.
2. Applying normalization principles and teaching independence when working with the medication process.
3. Knowing and observing the effects of each medication on the individual.
4. Ensuring that safety and sanitation procedures are followed throughout the medication administration.

Laws, principles and procedures are similar for all individuals (1, 2, 4, above). Once you learn the general responsibility, you can apply it to all work situations. The third responsibility (knowing and observing medication effects) is very specific; consequently more difficult to apply.

EXAMPLE: Knowing that the elderly may require smaller doses of medication and that the overweight individual needs larger doses, doesn't tell you what to watch for when a 68 year old, 192 pound individual is taking Navane 15 mg daily.

It would be impossible to provide, within this module, all the information necessary to observe the effects of each individual medication. Physicians, pharmacists, and nurses continually study and update medication knowledge. Staff must also assume the responsibility of studying about each medication which you monitor. Information to do this will be provided by your agency consultant pharmacist and nurse.

The following table lists categories of medication commonly taken by individuals, the usual purpose, and the most common or most serious side effects. This is only a very broad listing - - -
REMEMBER YOU MUST REPORT ANY CHANGE OBSERVED IN THE INDIVIDUAL!!!



Category	Purpose	Side Effects
Anticonvulsant	Control Seizures	Anticonvulsants work by blocking the nerve impulses that cause convulsions. They often cause drowsiness, fatigue, dizziness, nervousness, clumsiness. Specific medications may have additional side effects such as blurred vision, headaches, or blood disorders. It is best to study the specific side effects for the anti-seizure medications for the people you support. These medications may be toxic to the liver. Because there is a very small difference between enough drug to be effective and too much drug (causing serious side effects), anticonvulsant doses must be finely adjusted.
Antibiotics	Treat infections	Prescribed for 4-10 days. Very important to take all of the medication. Antibiotics can cause nausea and diarrhea and can make the person more sensitive to sunlight. Most of these common side effects are mild. But some side effects, such as allergic reactions, can be severe. They can cause shortness of breath or even death.
Analgesics	Relieve pain	Side effects and cautions vary with the type of analgesic. Aspirin may cause gastrointestinal upset and bleeding. Allergic reactions may include: shortness of breath, rash, swelling, hives, asthma, or shock. Acetaminophen taken in higher doses than recommended can lead to liver damage and death. Risk for liver damage may be increased in people who drink 3 or more alcoholic beverages while using this medication. Ibuprofen – should not be taken by people who have allergies to aspirin. It can cause kidney damage especially in people who are over 60, taking diuretics, have high blood pressure, heart disease, or pre-existing kidney disease. Opioids (Codeine) can cause drowsiness.
Antipsychotics	Reduce symptoms of psychotic disorders	Most side effects of antipsychotic drugs are mild and many go away after the first few weeks of treatment. Side effects may include drowsiness, rapid heartbeat, dizziness when changing positions, decrease in sexual interest or ability, problems with menstrual periods, skin rashes of skin sensitivity to the sun, weight gain, muscle spasms, restlessness and pacing, slowing down of movement and speech, and shuffling walk.

Antidepressants	Relieve depression symptoms by regulating chemical imbalances in the brain.	Side effects may vary depending on the medicine you take, but common ones include: Nausea; dry mouth; loss of appetite; diarrhea or constipation; sexual problems (loss of desire, erection problems); headaches; trouble falling asleep, or waking a lot during the night; feeling nervous or on edge; feeling drowsy in the daytime. Most side effects are temporary and will go away after a few weeks. But some (such as dry mouth, constipation, and sexual problems) may continue.
Hormones a. Thyroid replacement	Stimulate metabolism	Side effects are rare, while taking these drugs; usually, adjusting the levels of medication will alleviate any unpleasant effects. People with too much of these medications in their system may experience chest pain, sleeplessness, weight loss, sweating. Those with not enough might experience dry, puffy skin, weight gain, coldness, sleepiness.
b. Birth control	Prevent pregnancy	<p>There are side effects of birth control pills, although most are not serious. They include: nausea, weight gain, sore or swollen breasts, small amount of blood, or spotting, between periods, lighter periods, mood changes.</p> <p>The following side effects, easily remembered by the word "ACHES," are less common but more serious. These symptoms may indicate a serious disorder, such as liver disease, gallbladder disease, stroke, blood clots, high blood pressure, or heart disease. They include:</p> <ul style="list-style-type: none"> *A - abdominal pain C - chest pain H - headache E - eye problems S - severe leg pain
c. Insulin/oral	Treat diabetes and enable body to use nutrients	<p>Too little insulin in the bloodstream is serious and can be fatal if the situation is not caught early and corrected. The first signs are vomiting, excessive thirst, diarrhea. Later the person becomes dazed (stuporous), respirations are deep, and the face is dry and flushed. There is a fruity smell to the breath. If these symptoms continue, the person may become unconscious (diabetic coma).</p> <p>Symptoms of too much insulin (Hypoglycemia or insulin shock) are extreme hunger, nervousness, sweating, heart palpitations, and disturbed vision. This may occur from 5 minutes to several hours after a dose of insulin.</p>

d. Steroids	Reduce Inflammation	Nausea, vomiting, loss of appetite, heartburn, trouble sleeping, increased sweating, or acne may occur. More serious side effects include: muscle pain/cramps, irregular heartbeat, weakness, swelling hands/ankles/feet, unusual weight gain, signs of infection (such as fever, persistent sore throat), vision problems (such as blurred vision), vomit that looks like coffee grounds, black/bloody stools, severe stomach/abdominal pain, mental/mood changes, slow wound healing, thinning skin, bone pain, menstrual period changes, puffy face, seizures, easy bruising/bleeding. This medication may infrequently increase blood sugar level, which can cause or worsen diabetes.
e. Hormone Replacement Therapy	Reduce symptoms of menopause	Women are now generally discouraged from using long-term hormone replacement therapy because of health risks. Low dose vaginal estrogen is prescribed to treat some symptoms of menopause. Since effects may include abnormal vaginal bleeding, breast pain, and nausea.
Antacids	Relieve upset stomach	Serious side effects can occur with an overdose or overuse of antacids. Side effects include constipation, diarrhea, changes in the color of bowel movements, and stomach cramps.
Laxative	Relieve constipation	Stimulant laxatives should not be used daily or regularly. This type of laxative may weaken the body's natural ability to defecate and cause laxative dependency. Stimulant laxatives may cause cramping and diarrhea.
Anti-hypertensive	Lower high blood pressure	Each type of high blood pressure drug has possible side effects. Some side effects may be temporary; some may be more lasting. Some side effects are bothersome; some may be potentially dangerous. Common side effects of high antihypertensive medications include lack of appetite, dizzy, dry mouth, and fatigue. A more serious side effect is weakness.
Cardiovascular	Slow and strengthen heartbeat (pulse)	Potential side effects of beta-blockers include: Dizziness or lightheadedness; problems with sexual performance and ability; sleeping problems and drowsiness; fatigue; cold hands and feet; slow heartbeat; edema (swelling in ankles, feet, or legs); trouble breathing, especially asthma symptoms; depression

Anti-inflammatory	Relief of pain, inflammation in the treatment of musculoskeletal disorders	Anti-inflammatory medications are safest when low doses are taken for brief periods. Side effects most commonly occur if large doses are taken over a prolonged time (months or years). Some side effects are mild and go away on their own or after reducing the dose. Others may be more serious and need medical attention. Common side effects of NSAIDs include: stomach pain and heartburn; Stomach ulcers; general bleeding tendency increases while taking some anti-inflammatory medications, especially aspirin; headaches and dizziness; ringing in the ears. Severe allergic reactions such as rashes, wheezing, and throat swelling and liver or kidney problems; high blood pressure; leg swelling.
Proton Pump Inhibitors	Decrease the amount of acid in the stomach to help ulcers heal and reflux, or heartburn symptoms to subside	Side effects include headache, diarrhea, abdominal pain, bloating, constipation, nausea, and gas.

Feedback Exercise X

1. Antibiotics are usually prescribed from 4-10 days to treat infections. Ben received a prescription for an antibiotic for 10 days to treat a sore throat. While at his parent's home for the weekend, he did not take any. When he returned to the group home you would:

a)

b)

2. You are Joe's crew supervisor. Today you notice several bruises on his arm. You asked Joe what happened but he doesn't know. This could be a possible side effect of which medication categories:

a)

b)

3. When observing for effects of cardiovascular medication, you would

4. Match the category to the major medication purpose:

- | | | |
|-------------------|-------|---|
| a) Antacid | _____ | 1) Prevent pregnancy |
| b) Laxative | _____ | 2) Treat diabetes |
| c) Steroids | _____ | 3) Relieve constipation |
| d) Anticonvulsant | _____ | 4) Treat infection |
| e) Antibiotic | _____ | 5) Control seizures |
| f) Insulin | _____ | 6) Reduce symptoms of psychotic disorders |
| g) Antipsychotic | _____ | 7) Relieve upset stomach |
| h) Birth control | _____ | 8) Reduce inflammation |
| i) Analgesic | _____ | 9) Stimulate metabolism |
| | | 10) Relieve pain |

Appendix I

Medication Administration Procedures

How to Properly Use Eye Drops



1. Wash hands thoroughly with soap and water. Put on gloves.
2. If a dropper is supplied, make sure there are no chips or cracks at the end of the dropper.
3. If a dropper is supplied, hold the dropper tip down all the time. This prevents the drops from flowing back into the bulb where they may become contaminated.
4. The eye drops must be kept clean. Avoid touching the dropper against the eye or anything else.
5. If the eye drops are a cloudy suspension, shake them for ten seconds.
6. Position the person lying down or tilt his/her head back while sitting or standing.
7. With your index finger, pull the lower lid of the eye down to form a pocket (see drawing A).
8. Hold the dispenser with the opposite hand and place as close to the eye as possible, without touching it.
9. Brace your remaining fingers of this hand against the nose or cheek.
10. Drop the prescribed amount into the pocket made by the lower lid. Placing drops on the surface of the eyeball (cornea) may cause stinging.
11. Replace the cap or dropper right away. Do not wipe or rinse it off.
12. Close eye gently and wipe off any excess liquid with a tissue.
13. If multiple eye drops and or ointments are used, wait 5 minutes in between each.
14. Remove gloves. Wash hands.
15. Tighten cap on bottle and return to storage area.

REMEMBER

- Follow Instructions Carefully
- Do Not Miss Doses
- Use the Exact Number of Drops Prescribed

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How to Properly Use Eye Ointment



1. Wash hands thoroughly with soap and water. Put on gloves.
2. This ointment must be kept clean. Avoid touching the tip of the tube against the eye or anything else.
3. Hold the tube between the thumb and forefinger of the opposite hand, and place the tube as near to the eyelid as possible, without touching it.
4. Brace the remaining fingers of this hand against the cheek or nose.
5. Tilt the head back and up while seated, standing or lying.
6. With your index finger, pull the lower lid of the eye down to form a pocket.
7. Gently squeeze a small thin ribbon along the inside of the lower lid.
8. Have the person blink his/her eye gently.
9. With a tissue, wipe off any excess ointment from the eyelids and lashes.
10. Replace and tighten cap right away.
11. Remove gloves and wash hands.

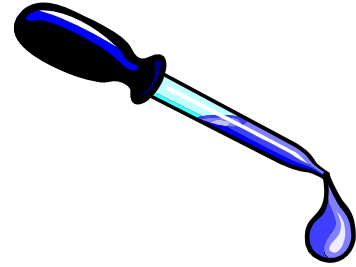
REMEMBER:

- Follow Instructions
- Do Not Miss Doses
- The Person's Eyesight May Be Cloudy After Using the Ointment

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How to Properly Use Ear Drops



1. Wash hands thoroughly with soap and water.
2. Check the dropper to make sure it is not chipped or cracked.
3. The eardrops must be kept clean. Avoid touching the dropper against the ear or anything else.
4. Warm the drops to near body temperature by holding in your hand for a few minutes.
5. If the drops are a cloudy suspension, shake well for ten seconds.
6. Draw the medicine into the dropper.
7. Tilt the affected ear up or have the person lie on his/her side.
8. To allow the drops to run in:
 - Adult: - Hold the earlobe up and back.
 - Children: - Hold the earlobe down and back.
9. Place the prescribed amount of the dropper into the ear.
10. To avoid injury, do not insert the dropper into the ear.
11. Keep the ear tilted up for a few minutes, or insert a soft cotton plug, whichever has been recommended.
12. Wash hands to remove any medicine.

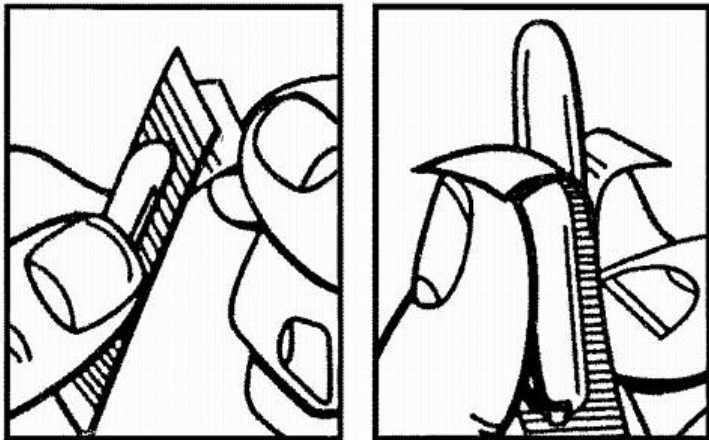
REMEMBER:

- Follow Instructions Carefully
- Do Not Miss Doses

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How to Properly Use Rectal Suppositories



1. Store suppositories in a cool place to avoid melting. Refrigerate them if so labeled.
2. If necessary, suppositories may be held under cool water to harden them prior to insertion.
3. Wash hands thoroughly with soap and water.
4. Put on disposable gloves.
5. Remove suppository wrapper if present.
6. Lubricate tip of suppository with a water soluble lubricant such as K-Y Jelly, not Petroleum Jelly (Vaseline). If not available, moisten the rectal area with tap water.
7. Have the person lie on his/her side with lower leg straightened out and upper leg bent forward toward the stomach.
8. Lift upper buttocks to expose rectal area.
9. Insert suppository with finger until it passes the muscular sphincter of the rectum, about 1/2-1 inch in infants and 1 inch in adults. If not inserted past this sphincter the suppository may pop back out.
10. Hold buttocks together for a few seconds.
11. Have the person remain lying down for about 15 minutes to avoid having the suppository come back out.
12. Discard used materials, remove gloves, and wash hands thoroughly.
13. Document results.

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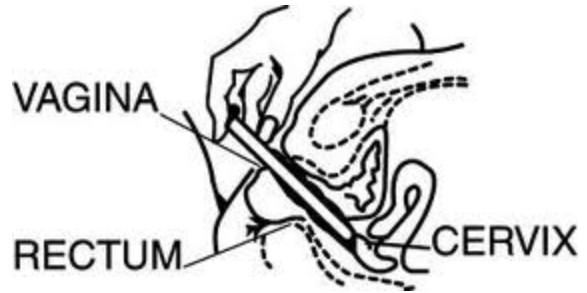
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Procedure for Inserting Fleets Enema

1. Wash hands thoroughly. Apply Gloves.
2. Make sure person is in proper position, lying on left side with knee bent.
3. Make sure enema tip is lubricated. If tip is not lubricated apply k-y jelly to tip.
4. Hold fleets bottle upright and insert with steady pressure into rectum with tip pointing to navel.
5. If person can bear down like to have a BM have them do it. (This relaxes the anal muscles so insertion is made easier.
6. Squeeze bottle until entire contents are expelled.
7. Discontinue use if resistance is felt. If not this could result in an injury.
8. Have person try to hold contents of fleets as long as possible so the person can have better results.
9. Place person on bedpan, commode, or toilet.
- 10.** Discard gloves and wash hands thoroughly.
11. Document results.

Procedure for Inserting Vaginal Medication

1. Wash hands.
2. Ask the person to void before beginning.
3. Ensure privacy for the individual.
4. Assist the person to lie on her back, with her knees bent and legs spread apart.
5. Put on gloves, unwrap the suppository or prepare the applicator.
6. Spread the labia apart and locate the vaginal opening.
7. Insert the medication



By hand: gently inserting the suppository about 2-3 inches into the vagina
OR

By applicator: Gently inserting the applicator about 2-3 inches into the vagina. Push the plunger to release the suppository and withdraw it. If ointment, cream, or jelly, slowly withdraw the applicator as you push the plunger.

8. Assist the individual to wipe the vaginal opening if necessary.
9. Clean or discard the applicator.
10. Remove and discard gloves.
11. Assist the person back into a comfortable position.
12. Provide sanitary pads to soak up the vaginal discharge.
13. Wash hands.

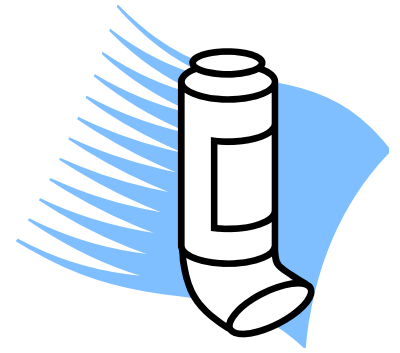
Source: Bayt. P. T. (1994) Administering Medications. New York: Glenco, McGraw-Hill.

Administration of Topical Medications

1. Position the person and the affected area comfortably.
2. Wash hands thoroughly with soap and water. Put on gloves.
3. Check label of container.
4. Prepare topical skin medication, following the directions on the label. The lid of the medication container should be placed upside down on the table to avoid contaminating the medication
5. Observe the affected area for unusual conditions, which should be reported to the licensed nurse prior to administration.
6. Cleanse the area if indicated.
7. Retrieve the amount needed with a tongue blade or clean dispensing spoon so you don't contaminate the medication.
8. Apply the medications using the correct procedure for the medication form. Use a thick or thin layer according to physician's orders.
 - Creams: rub in gently
 - Lotions: pat or dab on skin
 - Liniments: rub in vigorously
 - Ointments: apply with appropriate applicator
 - Aerosol sprays: hold the can upright and spray the area from a distance of 3-6 inches, then spray a second and third time as indicated.
 - Foam medication: hold the can inverted next to the skin and spray.
9. Remove gloves before replacing container cover.
10. Put away medications, dispose of used supplies in the appropriate area.
11. Wash hands.

Oral Inhalation of Metered-Dose Inhalers

1. Wash hands
2. Explain the procedure and assist the person into a sitting position for medication administration. (If lying in bed, the head of the bed should be elevated.)
3. Shake the inhaler
4. Hold the inhaler upright
5. Place the mouthpiece of the inhaler near the mouth (1-2 inches away) Note: For ipratropium, the lips should close around the mouthpiece. This helps to avoid blurred vision, which could result if the medication is accidentally sprayed into the eyes.
6. Tell the person to breathe out comfortable.
7. Activate (push down) the inhaler while the person takes a slow, deep breath through the mouth.
8. Tell the person to hold the breath for as long as is comfortable, then slowly breathe out. (Wait at least 1 minute if a second puff is to be inhaled.)
9. Assist the person back into a comfortable position.
10. Instruct the person to rinse the mouth and throat with a drink of water.
11. Wash hands.



Source: Bayt. P. T. (1994) Administering Medications. New York: Glenco, McGraw-Hill.

Using a Nasal Spray

1. Observe individual for any unusual conditions which should be reported to the licensed nurse prior the administration; i.e. nasal secretions.
2. Wash hands
3. Assist the person to sit up.
4. Have the person breathe through the nose with the mouth open.
5. Insert spray nozzle gently into nose, taking care not to touch the mucous membrane.
6. Ask the person to take a deep breath and spray the bottle two or three* times quickly. (*Check label for number of sprays.)
7. Wipe away excess medication with tissue.
8. Instruct individual not to blow nose for a few minutes.
9. Wipe nozzle of spray with alcohol wipe.
10. Wash hands.

Using A Metered-Dose Nasal Pump

General directions, staff should look for package inserts and ask nurse for specific instructions when new medications are prescribed.

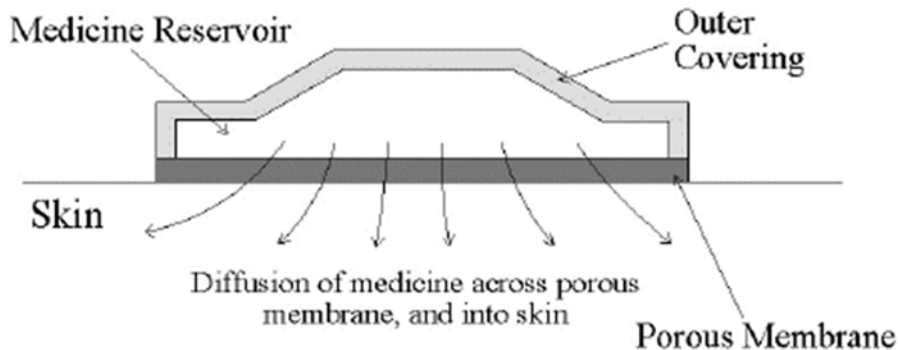
1. Remove the protective cap, and prime the pump as directed by the manufacturer. (Usually, pressing down about four times primes the pump. The pump will stay primed for about one week, if refrigerated. After that, you'll need to prime the pump again.)
2. Have the person blow his/her nose (unless contraindicated, e.g., risk of intracranial pressure or nose bleeds).
3. Assist the person to a comfortable sitting position. Have them tilt their neck backward slightly.
4. Tilt the pump bottle so that the straw-like tube inside draws medication from the deepest part of the bottle.
5. Place the pump's applicator tip about half an inch into the person's nostril. Point the tip straight up his/her nose and toward the inner corner of their eye. (Don't angle the pump, or the medication will run into their throat.)
6. Squeeze the pump once, quickly and firmly. Try to use just enough force to coat the inside of the nostril, but not so much that the medication is injected into the sinuses.
7. Spray again if the directions instruct you to, or repeat the procedure in the other nostril if directed to do so.
8. Offer facial tissue to blot runny nose but caution the person against blowing nose for several minutes.
9. Instruct the person to keep his/her head still for several minutes so the medication has time to work.
10. Store the medication as directed.

Administering Nebulizer Treatments

1. Wash hands.
2. Prepare needed supplies: nebulizer, nebulizer mask or mouthpiece, and medication.
3. Set up the nebulizer machine and nebulizer cup.
4. Have the person sit upright.
5. Check and record heart rate and respirations.
6. Check medication labels with the MAR according to procedure.
7. Place the medication into the nebulizer cup and replace the cover on the cup.
8. Attach the nebulizer cup to the nebulizer tubing and mouthpiece or mask. The cover must be screwed on correctly to ensure the person receives all of the medication.
9. Ask the person to place the mouthpiece in his/her mouth with lips closed tight around the mouthpiece.
OR
Place mask over person's face.
10. Turn on the machine. A steam-like vapor should be noted.
11. When the machine makes a different sound it is close to being done. Tap the cup a few times to tap down solution clinging to the sides of the cup. The treatment will take approximately 10 minutes to complete.
12. Check the person's heart rate and respirations and record.
13. Once the cup is empty, turn the machine off and remove the mask/mouthpiece.
14. Wash the nebulizer cup, the tube to the mouthpiece, and the mouthpiece or mask in hot soapy water. Do not wash the other tubing connecting to the machine.

Administering Transdermal Patches

Transdermal Patch



1. Wash hands and put on gloves
2. Check medication label with the MAR.
3. Each patch is sealed in its own protective pouch. Do not remove it from the pouch until you are ready to use the patch.
4. It is helpful to date and initial the patch with a pen before applying, especially if it is to be on several days before a change.
5. Patches are applied to a non-hairy dry area of the chest, back, flank, upper arm, behind the ear, lower abdomen or hip area, as directed by the physician. If the area has hair, clip (do not shave) the hair close to the skin with scissors. Patches should not be applied to skin that is excessively oily, burned, broken out, cut, irritated or damaged in any way. If you need to clean the skin where the patch will be applied, use only clear water. Do not use soaps, oils, lotions, alcohol, or other products that might irritate the skin under the patch. Make sure that the skin is completely dry.
6. When you are ready to put on the patch, tear open the pouch and remove the patch. A protective liner covers the sticky side of the patch (the side that will be put on the skin). With the liner facing you, pull the liner from the patch (try to touch the sticky side as little as possible). Throw away the liner.
7. Immediately after you have taken the patch from the pouch Press the patch firmly on the skin with the palm of your hand for about 30 seconds. Make sure it sticks well to the skin, especially around the edges of the patch.
8. Wash your hands when you have finished applying.
9. After the time indicated on the MAR and label has elapsed, remove the used patch and discard it carefully. It may still have medication in it. Then choose a different place on the skin to apply a new patch and repeat steps 4-8 in order.

Appendix II

Glossary

Advanced practice registered nurse - a person who holds a current license to practice in this state as an advanced practice registered nurse and either has a graduate degree with a nursing focus or has completed the educational requirements in effect when the person was initially licensed. This can be with or without prescriptive privileges.

Anaphylactic Shock - severe allergic reaction resulting from contact with a substance (i.e., medication, peanuts, bee sting) to which an individual has become sensitized. Death may occur if emergency treatment isn't given.

Antagonism - the joint action of two or more substances (i.e. medication(s), alcohol, food, etc.) in which the total effect of the medication(s) is less than the effect of the medication independently.

Controlled Substances - medications (drugs) considered to have a high potential for abuse. Special documentation and storage procedures may be required.

Dispense - a primary responsibility of pharmacists whereby prescription medication is issued or released to a person for which the physician ordered (prescribed).

Enteric Coating - tablets or capsules which are coated with a special substance that will not dissolve until it reaches the small intestine. May not be crushed.

External Medication - a category of medications which are not swallowed, such as eye drops, ear drops, rectal suppositories, and topical ointments.

Individual - in this module, refers to person who has a developmental disability and is receiving services.

Interaction - a response occurring whenever two or more medications are taken by an individual, which may result in an antagonism, potentiation, or unique effect.

Internal Medication - a category of medications which includes only those taken orally.

Least Restrictive Alternative - a principle applied by staff to individuals receiving services whereby an individual is provided with only as much assistance as needed to complete a task.

Medication Administration Record (MAR) - a legal document signed by staff trained in medication administration which verifies administration of a medication.

Non-Prescription Medication - medications which have been proven safe for most people if taken according to package instructions. Such forms of medication do not require a physician's prescription to be purchased. (Note: In Developmental Disability

Facilities, these medications still require a physician's order).

Normalization - a principle applied by staff to individuals receiving services whereby staff provide teaching and experiences which are as close as possible to those available to the mainstream of society.

Nurse - within a community facility, a staff member who has professional nursing training/license and whose primary responsibility is to identify the health needs of individuals being served.

Objective Symptom - a change noted in an individual (behavioral or medical) which can be clearly seen or observed by another.

Over-the-Counter (OTC) Medication - medication which can be purchased without a physician's prescription. (Also see non-prescription).

Physician - a medical doctor or dentist who has extensive, professional medication training and who is licensed to practice medicine. Physicians may legally prescribe medication.

Potentiation - the joint action of two or more substances (i.e. medication(s), alcohol, food, etc.) in which the total effect of the medication(s) is greater than the effect of each medication acting independently.

Prescription - a written direction or order from a physician for the dispensing and administering of medication.

Prescriptive privileges - assessing the need for drugs, immunizing agents, or devices and writing a prescription to be filled by a licensed pharmacist.

PRN - medication taken only as needed to relieve a particular symptom.

Side Effect - effects produced by medication other than the one for which it was prescribed. Side effects may also be referred to as unwanted or undesired effects.

Staff - in this module, refers to persons who are adequately trained and qualified to provide services that meet the needs of individuals with developmental disabilities.

Subjective Symptom - a change indicated by an individual (behavioral or medical) which cannot be clearly seen or observed by another.

Therapeutic Range - the upper and lower limits (range) in which a medication is usually effective with minimal side effects. Such ranges provide a margin of safety for a person, i.e., medication above the range may be toxic; medication levels below the range could prove ineffective.

Appendix III

Feedback Exercise Answer Keys

Unit 1 General Information

1. What are some important reasons for the training offered by this module?
 - a) Medications can be dangerous
2. Many medications taken by individuals in your agency may be unfamiliar to you
3. Although most people do not follow formal rules and procedures when giving and taking medication in their homes, such rules and procedures are required by law and policy in your agency to protect:
 - I. Individuals taking medications
 - II. Staff carrying out medications procedures, and
 - III. The agency providing services to individuals.
2. Describe the role that a physician, a consultant pharmacist, and the licensed nurse each plays in a medication treatment program:
 - a) A physician prescribes medication.
 - b) A consultant pharmacist helps monitor the beneficial effect of the medication versus any side effects.
 - c) The licensed nurse monitors the physical/emotional well-being of the individual and reports changes to the physician.
3. Who is the only person qualified to dispense drugs to an individual or to a facility?
The pharmacist.
4. Who is qualified to prescribe medication?
A physician, dentist, or those advanced practiced professionals with prescriptive privileges.
5. What are some learning experiences that could be linked to medication and medical issues? List at least three learning experiences:
 - a) Increased opportunities for social interaction
 - b) Use of the telephone
 - c) Use of public transportation
 - d) Increased independence
6. As a staff member you are not to make judgments about medication. You are to observe and report.

Unit II Staff Responsibility

1. Medication administration is more than simply handling the drugs. It should be looked at as a cycle that includes which four areas:
 - a) observation
 - b) prescription
 - c) administration
 - d) documentation

2. What are four broad responsibilities that a staff member in a facility has in medication administration?
 - a) Knowing and adhering to laws and agency policies.
 - b) Applying normalization principles and teaching independence.
 - c) Knowing and observing the effects of each medication on the individual; and
 - d) Ensuring that safety and sanitation procedures are followed.
3. Why do we have laws and regulations regarding medication administration?

Medication legislation, regulations, agency policies, and procedures are designed to protect the public at large, individuals served by the agencies, and staff members.
4. According to the module, what is one of the most important lessons for every staff member to learn regarding medication and individuals receiving services?

The boundaries of authority and responsibility for their position. Staff members must never attempt to perform tasks for which they are not trained.
5. Can an individual in a group home be given over the counter medication without a physician's order? Why? Why not?

No! A physician's order is required because other persons are involved in the medication administration.
6. How does the Food and Drug Act affect you at work?
 - a) Every medication must have a label.
 - b) Look at additional colored labels that indicate a warning statement. (Example: "This medication may cause drowsiness).
3. If an individual takes the medication at more than one location, both containers must have labels containing the description of contents, direction for use, quantity and expiration date.
7. What are two categories of prescription drugs?
 - a) "Noncontrolled" medications: They are those which are considered safe for most people and therefore require a physician's order but are not likely to be addictive.
 - b) "Controlled" medications: They are those which are likely to be addictive.
8. How does the Controlled Substance Act of 1970 affect you in your work?
 - a) Controlled medication will have a warning statement on the label: "Caution: Law prohibits the transfer of this drug to any person other than the patient for whom it was prescribed.
 - b) Controlled medications have limited refills.
 - c) Schedule II controlled medications require separate double lock storage and separate medication administration records.
9. What are three practices to avoid when giving medications?
 - a) Having people line up to receive medication.
 - b) Shouting out the names of individuals to come for medication.
 - d) Identification tags or bracelets.
10. How does the principle of normalization apply to medication administration?

Let the individual do as much as possible independently and assist the individual in an age appropriate manner whenever assistance is necessary.

11. How does the principle of least restrictive alternative apply to medication administration?
The individual has the right to do as much as possible for him/her self and the staff will assist and teach him/her to do the remainder.
12. What do you need to know in order to observe effectively for abnormal symptoms and behavior?
 - a) How does the individual look and act most of the time.
 - b) What medication is being taken and what is the desired effect?
 - c) What potential side effects occur with this medication?
 - d) What can you do to increase the effectiveness of the medication, and decrease side effects?
13. List eight of the sixteen characteristics listed in your module that will help you establish a basic description of how the individual “normally” appears: (any eight of the following 16 are correct).
 - a) General appearance
 - b) Body posture
 - c) General state of health
 - d) Physical activity level
 - e) Physical condition of skin
 - f) Physical condition of hair and scalp
 - g) Speech
 - h) Mouth, gums, and teeth
 - i) Facial expression
 - j) Vital signs
 - k) Weight
 - l) Bowel and bladder
 - m) Appetite and eating habits
 - n) General emotional state
 - o) State of awareness
14. Prescription medications are those medications which must be ordered by a physician and dispensed by a pharmacist. Non-prescription medications can be obtained by the general public and are frequently called “over-the-counter” medications. Some examples of non-prescription medications are aspirin, stomach antacid, cold medications.
15. You as a staff member may be asked to administer medications but only upon delegation by the licensed nurse at your agency.

Unit III: Medication Knowledge

1. List and explain the 6 R’s of medication administration.
 - a) **RIGHT INDIVIDUAL:** Never give medication to someone who is unfamiliar to you. Giving the medication to the wrong individual could involve danger for two people, one who didn’t receive the scheduled medication and the one for whom the medication was not prescribed.
 - b) **RIGHT DOSE:** The correct dosage of medication must be given in order to obtain the desired effects. Different amounts of medication present different effects.

- c) **RIGHT TIME:** Medications are scheduled at regular times to maintain consistent levels of effectiveness. As a rule, medication should be given within the hour scheduled.
- d) **RIGHT ROUTE:** Direct service staff must ensure individuals are taking medication by the correct route. Most medications are given by the oral route (internal). Other medications are applied to the outside of the body (external).
- e) **RIGHT MEDICATION:** Matching the label of the container with the medication administration record and prescription is one way to ensure that the right medication is taken.
- f) **RIGHT DOCUMENTATION:** each time a medication is administered, it must be documented.

2. What is a therapeutic range?

The upper and lower limits (range) in which a medication is usually effective with minimal side effects. Such ranges provide a margin of safety for a person, i.e., medication above the range may be toxic; medication levels below the range could prove ineffective.

Absorption is a process whereby the drug enters the blood stream. Listed below are four medication administration procedures. Put them in a sequential order according to the speed of absorption.

- | | |
|---------------------|----------------------------|
| 1. <u> C </u> | A. intramuscular injection |
| 2. <u> A </u> | B. oral administration |
| 3. <u> D </u> | C. intravenous injection |
| 4. <u> B </u> | D. subcutaneous injection |

Listed below are 11 major body systems, their anatomical parts and their functions. Name the correct anatomical part and the function for each body system.

<u>System</u>	<u>Anatomy</u>	<u>Function</u>
1. Skeletal	bones, joints	body support, protect organs
2. muscular	muscles	body movement
3. nervous	brain, spinal cord	control body activity
4. circulatory	heart, blood	carry oxygen to cells
5. respiratory	nose, lungs	provide air
6. reproductive	ovary, uterus, testes	create life
7. urinary	kidneys, bladder	remove wastes
8. gastrointestinal	mouth, stomach, bowel	digest food, remove waste
9. endocrine	thyroid, pancreas	secrete hormones
10. skin	skin	protection
11. sensory	eye, ear	sight and hearing

Unit IV: Effects of Medication

1. What 7 factors influence medication response? Describe each.
 - a. **BODY WEIGHT:** The amount of medication concentrated in the tissues and the effect of the medication depends on the weight of the individual. Less weight: more medication concentration and more powerful effect. More weight: less medication concentration and less powerful effect.
 - b. **AGE:** Very young infants may not have the liver enzyme system for breaking down certain medications. Elderly individuals may have a decrease in the function of some organs and therefore may require smaller doses of medication.
 - c. **SEX:** The difference in the distribution of fats and water and the difference in size sometimes affects the response to medication. Some medications may be more soluble in fat and other medication more soluble in water.
 - d. **PREGNANCY AND LACTATION (breast feeding):** Medications may affect the fetus or may enter the milk and be swallowed by the breast feeding baby.
 - e. **GENETIC FACTORS:** Individuals may react differently as a result of inherited factors. It is important to obtain family histories of medication sensitivities and/or allergies.
 - f. **PSYCHOLOGIC FACTORS:** Feelings and beliefs about a medication are major factors in the effect of a particular medication.
 - g. **ILLNESS/DISEASE:** Healthy individuals may excrete medications faster while persons with diseased organs may build up medications in the body causing overdose.
2. What are the three broad effects of medication? Describe each.
 - a. **DESIRED EFFECTS:** What we want medication to accomplish.
 - b. **SIDE EFFECTS:** Effects produced by the medication other than the one for which it was prescribed. Side effects may be expected and predictable, or completely unexpected and unpredictable, harmless, or potentially fatal.
 - c. **NO APPARENT DESIRED EFFECTS:** Some individuals show no effect of medication.
3. What is an allergic reaction and what are some of its symptoms?

When an individual is exposed to a foreign substance, the body may develop a reaction. When it occurs with a medication it is called an “allergic reaction.” Allergic reactions can be mild such as a skin rash, diarrhea, itching, tearing, nausea, etc. or severe such as “anaphylactic shock” which could be fatal if symptoms are not reported immediately and assistance is obtained.
4. What is potentiation? The joint action of two or more substances (i.e. medication(s), alcohol, food, etc.) in which the total effect of the medication(s) is greater than the effect of each medication acting independently.
5. Define antagonism: The joint action of two or more substances (i.e. medication(s), alcohol, food, etc.) in which the total effect of the medication(s) is less than the effect of the medication independently.
6. Describe what is meant by “unique effect” of medication: Two or more medications given together may have an effect different than either one of them alone.

7. List and describe three names a medication might have.
 - a. BRAND: The same medication may have several trade or brand names depending on the companies selling the medication.
 - b. CHEMICAL: The name by which a chemist can precisely identify the components of the medication.
 - c. GENERIC: The common name given to the medication before trade names are adopted. This name remains the same no matter which company sells it.

Unit V: Standard Precautions for Infection Control

1. To prevent illness or disease by preventing the infectious disease chain of events from continuing.
2. Hand washing
3. 10-15 seconds
4. (a) blood, (b) all body fluids, secretions, and excretions except sweat, regardless of whether they contain visible blood, (c) nonintact skin, and (d) mucous membranes.
5.
 - a) Protective barriers.
 - b) Hand washing.
 - c) Avoiding accidental cuts.
 - d) Cleaning and disinfecting.
 - e) Contaminated laundry procedures.
6. Gloves, protective face or eye wear, protective clothing.
7.
 - a) Wear rubber gloves.
 - b) Wipe up spill with paper towels and put towels in a labeled leak proof bag.
 - c. Using a freshly prepared bleach solution (1/4 c bleach to 1 gallon of water) or hospital-grade disinfectant (tuberculocidal), vigorously clean, then rinse the contaminated area.
 - d) Wash hands thoroughly after the procedure.
8. F
9. T
10. F
11. F
12. T
13. T

Unit VI: Oral, Sublingual, and Buccal Medication Administration

1. Listed below are the twelve basic steps to oral medication administration. Give at least one reason for each of the steps.
 - a. Time Schedule
Reason: Medication is given at the right time. Medication must be taken 1/2 hour before or after designated time.
 - b. Hand washing
Reason: Prevents infection of the individual and yourself.
 - c. Unlock Medication Storage Area

- Reason: Protect others from improper use of medications.
 - d. Check Label 3 times to ensure that the correct medication was selected.
Reason: Reduces the possibility of medication errors.
 - e. Individual Teaching
Reason: Prepares the individual for independent living.
 - f. Remove the Right Dose from the Container
Reason: Ensure that the individual takes the correct dose.
 - g. Ask the Individual
Reason: The individual has a right to know what medication they are taking and why they are taking it.
 - h. Report Change in Appearance
Reason: To ensure the right dose and medication is being taken.
 - i. Observe the Swallowing of the Medication
Reason: The individual may keep it in the cheek, choke, hide the medication, store the medication in a suicide attempt, drop it, give it to another person, etc.
 - j. Replace Medication in Locked Storage Area
Reason: Internal (oral) medication must be stored separately from external medications.
 - k. Chart the Medication Taken
Reason: Your signature verifies that you witnessed the medication being swallowed by the individual.
 - l. Observe for Desired and Side Effects.
Reason: The staff must know the intended use, the purpose, side effects, warnings, or special directions, the usual dose and be familiar with the condition of the individual.
2. List at least 2 basic steps and rationale of liquid medication administration which are different from the oral medication administration. Any two of the following:
 - a. Shake before pouring: Medication settles to bottom in a suspension.
 - b. Pour away from label side: Prevent messy, unreadable label.
 - c. Pour at eye level: Looking down gives wrong reading.
 - d. Pour just before giving: Liquid may deteriorate or evaporate while standing.
 - e. Do not mix liquid: One may interact with the other, causing precipitation.
 3. What is negligence according to the module? Negligence is the failure to give any care (omission) and/or the giving of poor care (commission).
 4. Medication policies and procedures are established to protect the individual, the staff member, and the agency.
 5. Why must great care be taken to ensure the accuracy of the medication administration record?
Because the records can be admitted into a court of law as evidence.

Unit VII: Special Medication Procedures

1. What should you do if a physician calls you at your facility to give a verbal order?
Refer him/her to the agency nurse or consultant pharmacist.
2. What do staff need to know about medications they are administering?
 - a. What is the purpose and desired effect of the medication?
 - b. What is the response time?

- c. What are the side effects to watch for?
 - d. Are there any possible interactions of this medication with other medications?
 - e. Are there special storage or administrative procedures?
 - f. Is it a controlled substance?
3. How do you verify that the medication label and the physician's order are the same?
 - a. By comparing the label directly to the physician's order.
 - b. Calling the agency nurse to verify the order if it does not accompany the medication.
 4. What information from the pharmacy label or the physician's order is transcribed onto the Medication Administration Record?
Medication name, dose, when and how the medication is to be taken.
 5. What does PRN mean? Only as needed.
 6. Describe procedures for giving "over-the-counter" medication.
 - a. Check the standing order from the physician to see if the individual can take a medication for the symptom mentioned.
 - b. Follow the outlined steps for oral/external medication.
 - c. Chart the following information on the MAR or designated record.
 - i. medication
 - ii. dose (how much in each tablet as well as total tablets taken)
 - iii. time taken
 - iv. route (oral or external)
 - v. reason it was requested
 - vi. effect the medication had

Unit VIII: Special Issues in Medication Administration

1. List at least four techniques you may use to achieve successful swallowing of medication. (Any 4 of the following techniques could be considered as correct).
 - a. Have the individual in a sitting position.
 - b. Have the individual take a small sip of water before medication to moisten throat passage.
 - c. If several tablets must be taken, have the individual take them one at a time.
 - d. Have the individual take sips of water after each tablet.
 - e. Have the individual rest a minute or two after each tablet.
 - f. Have the individual take the tablet in a teaspoon of jelly or applesauce if these foods are permitted.
 - g. If continued difficulty, consult agency nurse or pharmacist.
 - h. Have the individual take liquid medication slowly, follow with sips of water, if this is permitted.
2. List at least three techniques you could use to assist an individual who refuses to take medication? (Any three of the following techniques could be considered as correct).
 - a. Accept the refusal initially and wait approximately 10 minutes to see if the individual will independently decide to come for the medication.
 - b. Offer choices.
 - c. Repeat the offer of choices within the hour time span allotted for the medication.

- d. Use the “sandwich technique” (giving a compliment, followed by an action needed to be done, followed by a beneficial effect if the action is completed.) to suggest medication compliance.
- e. Use the “Premack Principle” (offering an individual the choice of participating in a highly preferred activity after the completion of a less preferred activity.).
- 3. If the approaches or techniques you have used failed to convince the individual to take medication, what additional steps will you take? List at least two. (Any two of the following steps of the following steps should be considered as correct).
 - a. Notify the nurse/supervisor per agency policy.
 - b. Chart that the medication was refused.
 - c. Consider:
 - i. Why the individual is refusing: For control? Independence?
 - ii. Explain the importance and purpose of medication.
 - iii. Allow the individual time to think.
 - d. Call a team meeting to address the refusals.
- 4. What steps will you take as a staff member if you realize that you have committed a medication error? Notify the nurse/supervisor/pharmacist/physician according to agency policy and fill out a medication error report.
- 5. When does a medication error occur? Match the following examples with the categories listed to the right.

- | | |
|--|------------------------|
| <u> b </u> 1. Matthew took John’s vitamin
(same brand name) | a. wrong medication |
| <u> f </u> 2. Bill didn’t wash his hands
before applying Lotrimin to his feet. | b. wrong individual |
| <u> a </u> 3. Joe took his Dyazid instead
of his Depakot at bedtime. | c. wrong dose |
| <u> d </u> 4. Mary went out for supper and
didn’t get her 5:00 pm Penicillin until 7:00 pm | d. wrong time |
| <u> c </u> 5. It came out so fast, Mary got two drops instead of one in her eye. | e. wrong route |
| <u> e </u> 6. Carol’s heart medication is sublingual (under the tongue).
She just swallowed it with her other medication. | f. wrong documentation |
| <u> f </u> 7. When Tom recorded that he had replaced the pain patch for Sarah, he
wrote his initials on the wrong date. | g. no error occurred |
| <u> e </u> 8. Ben put his ophth drops in his ear | |
| <u> g </u> 9. Jane took 2 capsules of 150 mg Dilantin. The label read: Take 300 mg. | |
| <u> d </u> 10. Kate’s label reads: Take Amoxicillin 250 mg qid ac. She took it right
after meals and at bedtime. | |

Unit IX: Medication and Behavior Change

1. What are some considerations we may consider before medications to modify behavior are used?
 - a. Is medication a first choice?
 - b. Is medication a permanent solution?
 - c. Is medication a complete solution?
2. What is a “complete” solution to most challenging behaviors?

A complete solution to most challenging behaviors is the learning of new, more adaptive patterns of behavior through a systematic teaching program.

Unit X: Medication Observation

1. Antibiotics are usually prescribed for 4-10 days to treat infections. Ben received a prescription for Amoxicillin for 10 days to treat a sore throat. While at his parent's home for the weekend, he did not take any. When he returned to the group home you would:
 - a. continue the medication until all capsules are taken.
put the capsules not taken over the weekend in a marked container to be destroyed by the pharmacist.
 - c. notify the nurse/supervisor/pharmacist according to agency policy
2. You are Joe's crew supervisor. Today you notice several bruises on his arm. You asked Joe what happened but he doesn't know. This could be a possible side effect of which medication categories:
 - a. Anticonvulsant
 - b. Steroids
3. When observing for effects of cardiovascular medication, you would. Contact your agency nurse/supervisor before giving medication if pulse is below 60.
4. Match the category to the major medication purpose:

a. Antacid	<u>7</u>	1. Prevent pregnancy
b. Laxative	<u>3</u>	2. Treat diabetes
c. Steroids	<u>8</u>	3. Relieve constipation
d. Anticonvulsant	<u>5</u>	4. Treat infection
e. Antibiotic	<u>4</u>	5. Control seizures
f. Insulin	<u>2</u>	6. Reduce symptoms of psychotic disorders
g. Antipsychotic	<u>6</u>	7. Relieve upset stomach
h. Birth control	<u>1</u>	8. Reduce inflammation
i. Analgesic	<u>10</u>	9. Stimulate metabolism
		10. Relieve pain