



Division of Developmental Disabilities
Bureau of Clinical Services

Section 5

RN Delegation of Medication Administration Tasks

RN PRESENTER'S GUIDE
for
Training Program
for
Authorized Non-licensed Direct Care Staff

Contents at a Glance

<u>Content</u>	<u>Page #</u>
Overview Profile	4
Audience	4
Prerequisites	4
Time Needed	4
Purpose	4
Audience Size	4
Equipment	4
Materials	5
Trainer(s)	5
Content	5
Skill Standard A: Medication Concepts	6
Informational Competencies	6
Interventional Competencies	7
Skill Standard B: Drug Classifications and Body Systems	8
Informational Competencies	8
Interventional Competencies	8
Skill Standard C: Administration Techniques	9
Informational Competencies	9
Interventional Competencies	9
Skill Standard D: Medication Errors	10
Informational Competencies	10
Interventional Competencies	10
Before you Start	11
Your Role as a Presenter	11
Implementation Strategies	11
Notes	12
Introduction	13
Housekeeping	13
Setting the Stage	13
Key Definitions	14
Skill Standard A Instructions – Concepts of Medication Administration	14
Routes and Forms of Medication Administration	15
Drug Actions	18
Side and Adverse Effects	19
Drug Interactions	20
Medication Categories	20
Medication Names	22

Medication Dosage	23
Weights & measures	23
Metric System	24
Household Measures	25
Care of Medications	26
Medical Abbreviations	27
Physician's Orders	28
Medication Administration Record	28
Individual Program Plan and Self-Administration of Medication	30
Assisting Administration of Medications	31
Self-Administration	32
7 rights of Medication Administration	32
Skill Standard B Instruction – Body Systems and Medication	34
Body Systems	34
Classifications	35
Medications	35
Pathology and Medications	35
Adverse and Side Effects	35
Nervous System – Antipsychotic Medications	36
Anti-anxiety Medications, Sedatives and Hypnotics	37
Antidepressants	38
Anti-mania Medications	38
Skill Standard C Instruction – Medication Administration	39
Person-Centered Approach	39
“Vehicle” Considerations	39
Communication	40
Oral and Motor Difficulties	40
Medication Administration Techniques	42
Medication Documentation and Legal/Ethical Issues	44
Medication Administration Record (MAR)	46
Charting	47
Charting Rules Summary	49
Standard of Care and Negligence	50
Skill Standard D Instruction – Medication Errors and Incidents	51

Appendices – Teaching Materials

Skill Standard A: Medication Concepts	Appendix A
Medical Abbreviations	A 1
Agency Specific Abbreviations and Policies and Procedure (Provider supplied)	A 2
Metric and Household Measurement Systems and Equivalentents	A 3
Game Instructions and Games	A 4

Instructions to Instructor (Medication Administration Practice/Understanding)	A 11
Medication Worksheet (Master)	A 12
Medication disposal, etc (Provider supplied policy and procedure)	A 13
Skill Standard B: Body Systems	Appendix B
Body Systems, Organs and Functions Table	B 1
Body Systems Figures	B 2 - 14
Skill Standard C: Administration Techniques Practice Check Sheets	Appendix C
Considerations in selection of a vehicle for medication administration	C 1
Administrations of Oral Medications Practice Sheet.....	C 2
Administrations of Topical Medications Practice Sheet.....	C 4
Administrations of Ear Medications Practice Sheet.....	C 7
Administrations of Eye Medications Practice Sheet.....	C 10
Administrations of Nasal Medications Practice Sheet.....	C 14
Administrations of Inhalant Medications Practice Sheet.....	C 18
Skill Standard D: Medication Errors	No Assistive Materials/No Appendix D
Overheads	
Prerequisites for Authorization	Overhead 1 - 3
Concepts of Medication Administration	Overhead - 4
Delegation	Overhead - 5
Task (definition)	Overhead - 6
Task Delegation	Overhead - 7
Supervision (definition)	Overhead - 8
Supervision – Direct and Indirect	Overhead - 9
Skill Standards A – D	Overhead - 10-13
Administer/Administration (of medications, definition)	Overhead - 14
Authorized Direct Care Staff (definition)	Overhead - 15
Seven “rights” of Medication Administration	Overhead - 16
Testing Materials	Appendix E
Initial Authorization Medication Test	E 1 through E 8
Test Question Bank	E 9 - 34
Competency Based Training Assessment (CBTA) for Medication Administration ...	no page #
<u>Suggested Documentation</u>	Appendix F
Attendance Roster for Initial Medication Administration Class	F - 1
Evaluation for Authorized Direct Care Staff	F - 2
Documentation Check List for Nurse-Trainers and Authorized Staff	F – 3 - 5

Training Program

Overview Profile

Audience: Direct Support Persons (DSP) are non-licensed direct care staff persons who are responsible for supporting and caring for individuals with developmental disabilities in community residential settings. (CILA's ≤ 8 persons; ICF/DD ≤ 16 beds)

Prerequisites: DSP's enrolled in this course must have completed at least the classroom Components of the Basic Health & Safety Module. The Basic Health & Safety "On The Job" (OJT) activities may be concurrent. However, the following Basic Health & Safety OJT/CBTA numbered activities 2, 9, 15, 16 through 22, 24, 30, 49, 50, 53, 55, 56, 57 and 61 must be successfully completed before DSP's can be authorized to administer medications.

Time Needed: Classroom content presented by the RN Nurse-Trainer to all DSPs is a minimum of 8 hours. OJT activities are a recommended 1 hour/individual with a developmental disability the DSP is to whom is to be authorized to administer medications.

Purpose: To prepare non-licensed direct care staff to be authorized to administer Medications as a delegated task to them by the Department of Human Services (DHS) approved RN Nurse-Trainers.

This course prepares authorized DSP's to a) be knowledgeable of health and safety factors impacting the administration of specific medications to specific individuals, b) use correct, safe procedures for medication administration to minimize health and safety risks and errors, and c) recognize and report medical and medication related observations as well as medication errors, to the RN Nurse-Trainer who is legally and professionally responsible for the delegated task of medication administration carried out by the authorized DSP.

Audience Size: At the discretion of the RN Nurse-Trainer

Equipment: Flip chart or caulk board (optional)
Overhead projector (optional but recommended)

Materials: Provided with this Handout:

- Presenter's Guide
- Overhead masters for duplication as transparencies
- Participant Handouts (May be augmented by Nurse-Trainer or Provider)

Provided by Nurse-Trainer, Provider or Student

- Attendance Roster/Sheet
- Relevant agency operational guidelines (policies and procedures)

Training Program

- Medication Administration supplies and items for demonstrations and return demonstrations
- Anything that may assist you in your teaching including authoring and making your own overheads/presentation materials.

Trainer(s): The present/trainer must be a Department of Human Services approved RN Nurse-Trainer

Content: This course addresses the four informational and interventional competencies identified as skill standards. These standards deal with concepts that support safe medication administration, body systems and the interaction of medication with them, safe administration techniques, and identification and reporting of medication errors. All standards must be addressed by the end of the eight hour course and safe medication administration competencies must be demonstrated before non-licensed staff can be authorized to administer medications.

Skill Standard A Authorized direct care staff recognizes concepts supporting, safe medication administration, and demonstrates task performance consistent with these conceptual principles.

Informational Competencies

Authorized direct care staff must know:

- routes of medication administration.
- medication forms.
- basic medication actions.
- basic medication side and adverse effects
- basic medication interactions (desired and harmful).
- basic medication categories.
- methods and concepts of medication counts.
- basic medication dosage concepts.
- principles of weights and measures.
- basic medication care.
- medication destruction methods.
- basics of physician orders.
- medical abbreviations related to physician orders.
- basics of medication administration records (MAR) and its relationship with documentation
- basic medication administration methods.
- self-administration medications levels.
- the seven rights of medication administration.

Interventional Competencies

Authorized direct care staff must be able to:

- name medication routes.
- identify and recognize medication forms.
- recognize, describe and report basic side and adverse effects of medications (harmful and non-harmful).
- recognize the difference between prescription and non-prescription drugs.
- know what medications are “controlled” drugs.
- name medication generic and trade names.
- identify safe and appropriate methods of caring for and storing medications.
- identify agency procedure for destruction of medications.
- identify agency procedure for counting medications.
- identify agency guidelines for physician’s orders.
- recognize and know the meaning of medical abbreviations.
- list the seven rights of medication administration.
- use household equivalents to metric weights and measures.
- read and match pharmacy labels with physician’s orders.
- accurately chart on the Medication Administration Record (MAR).
- identify levels of self-administration of medications.
- demonstrate how individuals with a developmental disability can be assisted with their self-administration of medication program.
- appropriately use agency policies concerned with medication administration.

Skill Standard B Authorized direct care staff recognizes the composition of body systems and know what medications and medication classes have effects on those systems. They must be able to distinguish, document and report those effects to the RN Nurse-Trainer for follow-up and direction.

Informational Competencies

Authorized direct care staff must know:

- muscular and skeletal system and related medication classifications.
- nervous system and related medication classifications.
- circulatory system and related medication classifications.
- respiratory system and related medication classifications.
- reproductive system and related medication classifications.
- urinary system and related medication classifications.
- gastrointestinal system and related medication classifications.
- endocrine system and related medication classifications.
- integumentary system and related medication classifications.
- sensory (special senses) system and related medication classifications.

Interventional Competencies

Authorized direct care staff must be able to:

- name the reasons for the use of each medication given to each individual in terms of body system affected.
- identify observations that should be reported to the RN Nurse-Trainer for each medication and by medication class.
- state special considerations and warnings for each medication and by medication class
- describe basic health problems/conditions of each individual in terms of body systems.
- relate medications to the body system they are prescribed to treat.
- list an individual's care needs resulting from their prescribed medications.
- list an individual's care needs related to their basic health problems.

Skill Standard C Authorized direct care staff documents and safely administers medications to identified individuals, using appropriate administration techniques.

Informational Competencies

Authorized direct care staff must know:

- oral medication procedures.
- topical medication procedures.
- eye medication procedures.
- ear medication procedures.
- nasal medication procedures.
- inhaled medication procedures.

Interventional Competencies

Authorized direct care staff must be able to:

- identify aspects of developmental disabilities that determine approaches to medication administration for individuals with developmental disabilities.
- demonstrate oral medication administration.
- demonstrate topical skin medication administration.
- demonstrate instillation of eye medication.
- demonstrate instillation of ear medication.
- demonstrate nasal medication administration.
- demonstrate inhaled medication administration.
- demonstrate accurate documentation of administration on an MAR (Medication Administration Record).
- correctly document medication given.

Skill Standard D Authorized direct care staff recognized medication errors and/or incidents and follow agency specific policies and procedures to insure the individual's health and safety.

Informational Competencies

Authorized direct care staff must:

- know the definition of medication error.
- know any violation of the seven "rights" (person, time, medication, dose, route, texture/consistency, record).
- identify a medication omission error.
- know how to contact the RN Nurse-Trainer.
- know agency specific policies and procedures for medication errors.

Interventional Competencies

Authorized direct care staff must be able to:

- identify how medication errors can occur.
- identify how medication errors can be prevented.
- identify accurate documentation of errors.
- identify error reporting procedures.
- identify potential observations to be made and reported to the RN Nurse-Trainer due to a medication error.
- state responsibilities to the individual when an error occurs.
- describe the reporting method to the RN Nurse-Trainer.
- identify agency error policies and procedures.
- demonstrate accurate documentation of errors.
- state the reason for behaviors that prevent medication errors during medication administration.
- demonstrate behaviors that prevent medication errors during medication administration.

Before you Start

Your Role as a Presenter

Before the scheduled class starting time, set up all devices necessary for the training or check to see that the classroom is ready. Support staff, if assisting, must understand the limitation of their role.

Direct care staff must show an understanding of and/or demonstrate the psychomotor capability to complete tasks related to all listed informational and interventional competencies to successfully finish the didactic portion of the Medication Administration course. The following guide provides tips on dealing with housekeeping issues, setting the stage for the OJT activities, use of overheads or other visual aids to supplement lecture material, use of participant handouts to reinforce content and individualize learning, processing the accompanying activities, as well as anticipating and handling the unexpected.

Implementation Strategies

This course is not designed for self-instruction. It contains information to be presented by an approved DHS Nurse-Trainer implementing adult learning principles in a classroom setting. Experiential learning through structured and supervised OJT activities supplement the trainer's formal classroom presentation.

NOTES

Notes to Presenters

It is desirable to greet each person at the door. At that time have each person sign-in to the class and distribute copies of their learning materials. Have them sign-out at the end of the class. This is important documentation that needs to be kept on file. See the suggested documentation in Appendix F of your Nurse-Trainer information for a suggested class roster form.

- Tell them the location of bathrooms.
- Verify that all persons have the necessary pre-requisites to become authorized.
- Explain class timing, (length, lunch, breaks)

Overhead: Prerequisites for Authorization to Administer Medications for Direct Care Staff

Overhead: Concepts of Medication Administration

Use the information presented to you during your Nurse-Trainer class to the depth you feel is necessary to show the reasons and importance of the training you are doing.

Script**Introduction****Housekeeping**

Before we begin our class, let's make sure everyone is in the right place. (Suggest use Overhead showing the "Prerequisites for Authorization to Administer Medications for Direct Care Staff" Overhead.

Setting the Stage

During this class we will discuss the concepts of 1) safe medication administration; 2) body systems, their anatomical function and how medications affect them; 3) safe medication administration techniques; 4) medication errors, their prevention and documentation. (The need to present these concepts is based on laws and standards that include Administrative Rules 115 (The "CILA" Rule) and 116, and the Nurse Practice Act.

Let's look at "how did we get here?" Let's discuss why non-licensed staff, like you, are now administering medications.

You may want to review, for yourself, the Nurse Practice Act Section 50-75 regarding Nursing delegation and the definitions of "Nursing Activity" and "task".

Overhead: Delegation

Overhead: Task

Overhead: Task Delegation

Overhead: Supervision

Overhead: Supervision - Direct & Indirect

Overhead: Skill Standard A

Suggestion: Whenever possible, use a visual aid (chalk board, overhead, handout, example such as labeled medication container) as well as lecture/discussion to explain. Learners tend to retain information better with visual aids.

As a Nurse-Trainer, I delegate the **tasks** of medication administration to you with specific conditions. As the RN Nurse-Trainer, I train, supervise, delegate, and monitor these medication administration tasks. I am to use my professional judgment and retain the responsibility for the delegated medication administration tasks. However, you are responsible for your actions. You must attend, learn and follow the standards and medication methods present in this class and in any additional training about medication administration you receive.

To clarify this, let's review the definition of some key terms:

Delegation is the transfer ... (present from overhead).

A **Task** is (present from overhead).

Task Delegation is (present from overhead).

Supervision is (present from overhead).

Supervision – Direct & Indirect is (present from overhead).

CONCEPTS FOR MEDICATION ADMINISTRATION

SKILL STANDARD A

MEDICATIONS (DRUGS)

Properly used, medications are a great blessing to mankind; indiscriminately or improperly used, they can lead to anything from minor irritating problems to death. Medications are chemical compounds that modify human body processes. They may alter chemical reactions, fight, cure, or prevent disease, relieve disease symptoms, maintain health, aid in diagnosis, or alter a normal process. For example, psychotropic medications change behavior through altering, blocking, destroying, or augmenting brain chemicals or birth control pills that alter the normal menstrual cycle.

Suggestion: Involve the class by asking a student what medication she or he has taken lately or regularly and what effect the student thinks that medication has and whether it is a local or systemic effect.

Suggestion: Before you define each of the route types, name a route and have the students give you an example of that route type.

Suggestion: Develop a summary table (presented by overhead or poster) as you speak to each drug form. The column titles would be: Types (oral, rectal, etc.), forms (tablets, creams, sprays, etc.), where introduced (mouth, skin, under the tongue, etc.) and special considerations.

Suggestion: Some drug companies invent new names for tablets such as "caplets". If possible, have labeled examples on cards or in clear containers to show visually the different forms. Have a number of examples so you can pass them around.

Suggestion: When showing the different forms, briefly describe how the different forms of medications are absorbed. Include such details as treason for enteric coating.

ROUTES AND FORMS OF MEDICATION ADMINISTRATION

The most appropriate route of medication administration is determined by a physician with the knowledge of the desired response rate, body system being treated, available medication forms and the physical and chemical properties of the medication. Medications produce either a local or systemic (whole body) effect. An example of a local effect is the application of an antibiotic ointment on a cut. A systemic effect would be consumption of an aspirin or Tylenol.

ROUTES

Local effect drugs are designed to treat a specific site.

- Topical medications are for external use. They may be tinctures, lotions, ointments, liniments, and sprays or aerosols.
- Vaginal medications are inserted into the vagina and usually are suppositories, creams, liquids or foam. (These cannot be administered by authorized staff.)

Systemic effects occur after a drug is absorbed into the bloodstream and distributed throughout body tissues.

- Oral medications are taken by mouth. They are the safest, most economical and convenient method of administering medications. They take the form of tablets, capsules, liquids, or troches.
- Rectal medications are inserted into the rectum through the anus and used when digestive enzymes alter the medication and/or when a person is unable to take a medication by mouth. Rectal medications include suppositories and Diastat rectal gel. These may be local or systemic in effect.
- Sublingual medications are tablets or sprays that go under the tongue and remain there to be absorbed through the mucous membranes.
- Inhaled medications are given by the person breathing the powder or spray into the lungs. They are then absorbed by the respiratory tract mucous membranes.

Suggestion: Talk about and show the students a simple aspirin and contrast it with an enteric coated aspirin.

Suggestion: Before talking about the reason for enteric coating on tablets, see if the students can reason it out.

Suggestion: Talk about and show the students a capsule (Extra Strength Tylenol)

Suggestion: Ex: medicated cough drops.

Suggestion: Ex: Dilantin suspension

Suggestion: Ex: Robitussin-AC

- Parenteral medications are injected with a needle and syringe. Drugs given intravenously cause the most rapid body response. This route is used when speed of action is needed and when digestive chemicals alter or destroy the medication.

FORMS

- **TABLETS** are a preparation of powdered drugs that are compressed or molded into shape.
 - **SCORED** have indented lines that divide them into halves or quarters. This allows the tablet to be broken or cut easily for administering a divided, more accurate dosage.
 - **ENTERIC COATED** – A thick coating completely encases the tablet (much like the candy coating of an M & M covers the chocolate). This coating prevents the aspirin from dissolving in the stomach, thus preventing the acidic character of aspirin from irritating the stomach wall or decreasing/destroying the medication's effectiveness. It will dissolve in the small intestine. These tablets must be swallowed whole. If chewed or crushed, the medication is released in the stomach.
- **CAPSULES** are medication enclosed in a gelatinous container. Some can be pulled apart, and the contents given with food or liquid. If done, care must be taken to assure the capsule has been completely emptied to assure correct dosage. Capsules should not be crushed or chewed.
- **LOZENGES** are held in the mouth until dissolved and come in a variety of shapes and sizes.
- **SUSPENSIONS** occur when undissolved medications are mixed with a liquid. These drugs are fine particles suspended in the liquid. They must be shaken or stirred before administration.
- **SYRUPS** are liquid preparations of medications contained in a sweetened, aqueous base.

Suggestion: Ex: Cod Liver oil emulsion

Suggestion: Ex: Saline

Suggestion: Ex: Laxative cascara

Suggestion: Ex: Merthiolate

Suggestion: Ex: Calamine lotion

Suggestion: Ex: Neosporin

Suggestion: Ex: Spray Solarcaine

Suggestion: Ex: Vancenase

Suggestion: Ex: Tylenol suppositories

- **EMULSIONS** are mixtures of oil and water that have a milky appearance and tend to separate into layers after standing for long periods (like some salad dressings). Emulsions must always be thoroughly shaken before administration.
- **SOLUTIONS** are one or more drugs dissolved in a solvent. When the solvent is water, the solution is an “aqueous” solution.
- **FLUID EXTRACTS** are concentrated fluid preparations made by dissolving a crude plant drug in a solvent. They are always 100% in strength.
- **TINCTURES** are diluted alcoholic extracts and vary in strength from 10% to 80%.
- **LOTIONS** are aqueous preparations of suspended ingredients used externally to treat skin conditions such as dryness.
- **OINTMENTS** are mixtures of drugs with a fatty base for external application.
- **LINIMENTS** are aqueous preparations applied topically, generally with a massage. Often liniments are not recommended for older persons due to fragile skin. In that case, a liniment may produce burns if given with massage.
- **AEROSOLS** are solid or liquid particles suspended in a gas. Wet or surface aerosols are sprayed on the skin without touching the skin. Foam aerosols must be shaken prior to administration so the substances are emulsified.
- **SPRAYS** are prepared so they can be administered by atomizers and are primarily used to treat throat and nose conditions.
- **SUPPOSITORIES** are mixtures in a base that melts at body temperature. This base may be soap, glycerine, or cocoa butter. They are molded for suitable for insertion into the rectum or vagina.

DRUG ACTIONS

When a medication is prescribed, there is no absolute assurance that the interaction among the drug, individual and disease will be as intended. There is always an element of uncertainty.

- Drug - **ALL** drugs have multiple actions.

- Individual – **ALL** individuals' reactions to drug will vary due to age, physical size, health, metabolism and other numerous factors.

- Disease – Similar diseases, those that are caused by similar etiologies, may be resistant to a typical treatment plan.

Suggestion: Using aspirin as an example, talk about the different dosages appropriate for headaches/fever and anti-coagulant. Or Benadryl to cause drowsiness for insomnia, as an antihistamine for allergies (allergic reaction) or as a decongestant for a runny nose.

Suggestion: Have class members given examples of how age, physical size, etc affect what and how much medication is given. Ex: (1) Infants take a lower dose than adults (the dose of drugs in infants is typically calculated by weight). (2) A health adult takes a different dose of drug that is metabolized in the liver than an adult with chronic liver disease. (The liver "detoxifies", i.e. changes the drug so it can be flushed out by the kidney or be released in bile to be released in the stool. Without this detoxification, the active drug and its metabolites stay in the body longer.)

Suggestion: Have class members give examples they have experienced with this situation. Ex: Common strep throat normally responds to Pen VK but some strep infections have developed a resistance to Pen VK and require another

Suggestion: Have the students use the medication resource used by your agency to look up medications they are taking and discuss the side effects in class. You can use a copy of the Medication Worksheet found in Appendix A. Make sure that the staff is aware that side effects are a potential problem, not they will always occur.

When appropriate, use basic terms rather than medical terms. However, make sure that the students understand the specificity inherent in medical terms and the possible misconceptions from common terms. Ex: use of aspirin as a "blood thinner" leads a person to believe that the blood is diluted rather than anticoagulant that is specific to what the aspirin is actually doing.

SIDE AND ADVERSE EFFECTS

The goal of drug treatment of drug treatment is the greatest possible problem relief or resolution with the least number and seriousness of side or adverse effects. **All** medications produce side effects. We will arbitrarily divide these into uncomfortable and harmful side effects. (Other medication resources will categorize side effects in other ways.)

Examples:

Birth Control Medications – Side/Adverse Effects

- **Uncomfortable:** weight gain, bloating, breast tenderness/fullness, diarrhea, constipation, headache, nausea.
- **Harmful:** phlebitis (inflammation of blood vessels leading to blood clots), malignant hypertension (arterial blood pressure so high it can lead to stroke &/or internal bleeding), and gallstones.

Aspirin - Side/Adverse Effects

- **Uncomfortable:** nausea, vomiting, bruising, ringing in the ears (Tinnitus), decreased hearing, decreased appetite.
- **Harmful:** gastric ulcers, pulmonary edema, brochospasm, convulsions, coma, respiratory failure.

A side effect that MAY occur with ANY medication and should always be considered harmful is an allergic reaction. Any drug has the potential to cause an allergic reaction if it is given to a susceptible individual. It is difficult to predict if a person will be allergic to a drug. A person allergic to one drug may also be allergic to any drug with a similar make-up. Allergic reactions may involve many different symptoms that may appear immediately or in several days or weeks.

Skin disturbances are the most common allergic reaction. It may just be a mild redness, itching, and a wide variety of rashes and/or swelling. Other less common allergic reactions are fever, jaundice & blood reactions, often unique to an individual.

You may wish to briefly discuss/ explain your agency's policy and procedure for medical emergencies at this point.

Using the medication information resource book for your agency, have the students look up a medication and read the interactions where present.

Using the medication information resource book for your agency, have the students look up a medication and read the interactions possible with OTC drugs.

Anaphylaxis is the most dangerous type of an allergic reaction. It is life-threatening and involves a decreased blood pressure and breathing passage spasm. It occurs immediately after the drug administration and is most common when the medication is given by injection.

In an **anaphylactic** reaction, call **9-1-1** or your local emergency medical service system **immediately** and then transport the individual to the nearest medical facility.

The **M**edication **A**dministration **R**ecord (MAR) and/or medical chart must be noted for medication allergies prior to giving new medications.

DRUG INTERACTIONS

- Drug Interactions may result when two or more drugs used concurrently affect each other's action. The effectiveness of one or both drugs change, or undesirable actions may occur. Drug interactions are not necessarily bad. Some are intentionally done to increase a therapeutic effect without increasing dosage. Examples.
 - Undesirable – Nardil (MAO inhibitor) administered with any Albuterol preparation (ex. Proventil) may cause a hypertensive crisis; i.e., marked increase in blood pressure that could lead to stroke and/or death if not treated immediately.
 - Desirable – Demerol (Narcotic Analgesic) combined with Vistaril (Antiemetic/Antihistamine) significantly increases the effects of central nervous system depressants.

CATEGORIES

Medication can be divided into a number of different groups depending on the purpose of the grouping. One way is to divide drugs into prescription drugs and non-prescription drugs (also known as over-the-counter [OTC] drugs). **For individuals you are caring for, ALL drugs, including OTC drugs must have a physician's order.**

<p>Administrative Rule 116.70 a)</p>	<ul style="list-style-type: none"> • <u>Prescription Drugs</u> are all medications that must be physician prescribed and pharmacist dispensed. These medications are further divided into controlled and non-controlled drugs. Examples of prescribed drugs are antibiotics (Keflex [cephalexin], Amoxil [Amoxicillin]), psychotropics (Abilify [aripiprazole], Clozaril [clozapine], Eskalith [lithium carbonate]), anti-convulsants (Depakote [divalproex sodium], Tegretol [carbamazepine], Dilantin [phenytoin or diphenylhydantoin]). <ul style="list-style-type: none"> ○ <u>Non-controlled drugs</u> are any drug that must be prescribed but is not a controlled drug. ○ <u>Controlled drugs</u> are prescription medications legally designated as “controlled substances”. These drugs have a high potential for abuse. Therefore, each dose must be accounted for on a medication count sheet as well as the MAR. Examples: Valium [diazepam], Ativan [lorazepam], Tylenol #3 with Codeine [acetaminophen with codeine phosphate], Somnote [Chloral Hydrate], Hydrocodone. Always ask you RN Nurse-Trainer or pharmacist if a medication is controlled or not.
<p>Administrative Rule 116.70 e)</p>	<ul style="list-style-type: none"> • Non-Prescription (OTC) Medications OTC medication include those that can be purchased without prescription. Examples: Tylenol [acetaminophen], Aspirin [acetylsalicylic acid, ASA], Advil [Ibuprofen], and medicated shampoo.
<p>Administrative Rule 116.10 “Medication” & 116.50 e)</p>	<ul style="list-style-type: none"> • For providers covered by Administrative rule 116, non-prescriptions (OTC) drugs and vitamins may be purchased and taken with the following conditions: <ul style="list-style-type: none"> ○ it is prescribed by the physician. ○ the medication is maintained in its original container. ○ if it does not come from a “stock” supply, the individual’s name is permanently attached to the container in such a manner as to not obscure the original label.

Suggestion: Use the drug text resource you have available to demonstrate medication names.

Suggestion: Have the students bring in some medications containers from home or supply them with an old OTC container with the label still attached and use the drug text resource you have available to demonstrate medication names.

NAMES

A drug/medication may be known by its chemical name, generic name, or trade (often called brand) name.

- Chemical name: A drug's chemical name can be quite long and confusing and is rarely used except by the chemists and other scientists developing the medication.
- Generic Name: The drug name assigned by the laboratory/company that first developed the drug. This is the only consistent medication name and should, at least initially, be used when talking and/or charting about the medication.
- Trade/Brand Name: This is the name given the drug by the manufacturer that is typically the name advertised to the public. The manufacturer can be the exclusive drug supplier (and user of the Trade/Brand name) for anywhere from 7 to 15 years.
- Examples of Generic and Trade/Brand Names for the same drug:
 - Generic Name: Aspirin (acetylsalicylic acid); Trade/Brand Name(s): ASA, Aspergum, ecotrin, empirin.
 - Generic Name: Divalproex sodium; Trade/Brand Name(s): Depakote, Depakote ER, Depakote Sprinkle
 - Generic Name: Gabapentin; Trade/Brand Name(s): Neurontin, Gabarone.
 - Generic Name: Omeprazole; Trade/Brand Name(s): Prilosec

It is important to note that a physician may order a drug by its trade name and pharmacist may fill the prescription with the generic drug and label it with its generic name with the physician's permission.

Suggestion: BEFORE starting this section, have the class take a look at the label of the medication container they brought from home or you supplied to see if they can find the dosage.

Suggestion: Show the students the dosage difference between regular and "extra strength Tylenol.

DOSAGE

Dosage is the drug amount prescribed for administration. Medications dosages are determined by the physician.

Dosage is based on the:

- individual's weight, gender and age
- disease being treated.
- route of administration.
- individual's drug tolerance.

Dose frequency is determined by the:

- time it takes to get the medication to the treatment site. (time of absorption)
- how long the drug effect lasts in the body (duration of action)
- how fast it leaves the body (rate of elimination)

Some drugs tend to act more quickly than others. Some are eliminated quickly and others have a tendency to accumulate. (Ex. pain relievers [analgesics] act and are eliminated quickly while sedatives have a tendency to accumulate.)

NEVER CHANGE A MEDICATION DOSAGE WITHOUT THE GUIDANCE AND WRITTEN DOCUMENTATION OF A PHYSICIAN OR NURSE. WHEN IN DOUBT, WITHHOLD ADMINISTRATION AND IMMEDIATELY CHECK WITH THE NURSE OR PHYSICIAN BEFORE ADMINISTRATION.

WEIGHTS AND MEASURES

Dosage is the amount of medication administered. For instance, a standard aspirin tablet weights 325 milligrams (mg). The directions on the aspirin bottle typically state to take two of these tablets for a headache. However, a "low dose" or children's aspirin tablet is only 81 mg. For the child, because of their weight and fragility and immaturity of their body systems, one 81 mg tablet will treat the problem where two adult tablets or 650 mg is more than eight times the proper dose. But there is "low dose" aspirin that is also 81 mg and taken by adults as an

Suggestion: Talk about the terms “blood thinner” and “anti-coagulant and how the simpler term can be misleading.

Suggestion: Talk about the intent prescribing a medication and how a side-effect can be the intended effect depending on dosage and the diagnosis.

Suggestion: Have the class look at food packaging to see how English measuring system and Metric system measures are both listed.

Suggestion: Have some fluid containers (graduated measuring cups too) that are labeled with English and Metric volume measures to help students see the relative volume measures.

Suggestion: Put together a poster with all the metric, English and Household measures. Also, have some very small items the students can handle with their weights labeled.

anticoagulant to lower the occurrence of coronary artery and carotid artery atherosclerosis and thus the incidence of heart attacks and stroke. The effect sought is not the analgesic/pain relief effect but rather the anticoagulant (commonly called a blood-thinner which is not what it does) effect. This is related to dosage and the characteristic of all drugs with multiple actions.

METRIC SYSTEM

Volume Measures

The Metric System is used by most of the world and is slowly gaining ground in the United States. The basic measure of fluid/volume is the liter. This is about a quart. In the “English” measuring system, there is no basic volume measure. It could be the ounce which leads to confusion since the word “ounce” is also the label used for a weight measure in the “English” measuring system. To measure more volume, the pint (16 ounces), quart (2 pints), and gallon (4 quarts) are used. Obviously, there is no consistency among the different volume measures.

In the metric system, to measure less volume, Latin prefixes are attached to the word “liter”.

Deciliter = $1/10^{\text{th}}$ of a liter or 10 Deciliters/liter

Centiliter = $1/100^{\text{th}}$ of a liter or 100 Centiliters/liter

Milliliter = $1/1000^{\text{th}}$ of a liter or 1000 Milliliters/liter

The abbreviation for milliliter is the most common measure for medications and the abbreviation is “mℓ”. To measure larger volumes Greek prefixes are used but this part of the Metric System is rarely used for medications. (Example: Kiloliter)

The milliliter is much volume. 1 mℓ is only 0.0338 fluid ounces or there are 29.57 mℓ/fluid ounce.

Weight Measures

Like the liter, the gram, abbreviation “gm”, “GM”, or “G”, is the metric measure for weight (mass). The naming logic of the less weight measures is done the same as for volume measures (Decagram, Centigram, and Milligram). The milligram (mg) is most frequently used to measure medications by weight. The milligram is 1/1000th of a gram or 1000 milligrams/gram. A gram isn't much weight. There are 28.35 gm/ounce or 1 gm = 0.0353 ounces (about the weight of a fruit fly).

The English system is, again, illogical, as there is the ounce, pound (16 ounces/pound) and Ton (2000 pounds/ton depending on what “kind” of “ton” it is).

Household Measures

Kitchen measures are readily available to everyone and often used to measure liquid medication. So, tablespoons (tbsp) may be used to administer medications. Often, some sort of medicine cup/measure is available in a drug store for the OTC medications. You will notice that it is marked in metric and household measures. An example of this is the teaspoon (abbreviation tsp) is equal to 5 ml of liquid. Using a regular teaspoon, because flatware manufactures are not restricted to a particular volume for their spoons, is much less accurate.

Other Measures

A measure that is not a metric measure but has come into use is the microgram. This is one millionth of a gram.

The milliequivalent may be used. It is a relatively complex measure of chemical activity and is not necessary for the staff to know specifically but to recognize that there is such a measure.

The Unit is a measure used for some medications but is most often seen in insulins. It is a measure of drug potency.

CARE OF MEDICATIONS

There are state and federal regulations to insure that medications are cared for and taken in a manner that will provide the ultimate safety and protection from harm. For this reasons the following guidelines are to be followed:

Care and Storage of Medications

Medications must be safely locked in a storage container, i.e. lock-box or medication cabinet, at all times except when the individual(s) is/are taking the medications.

Drug supplies for each individual must be stored under the proper conditions of sanitation, temperature, light, refrigeration, and moisture.

- 1) Exposure to excessive heat over a period of time causes some drugs to deteriorate.
- 2) Refrigeration is required for some drugs because they deteriorate if kept at room temperature or higher. These drugs must also be locked.
- 3) Exposure to light causes deterioration of some drugs. These must be kept in dark bottles and are typically dispensed in a colored container.
- 4) Bottles/containers must always be capped when not in use to prevent deterioration. Many drugs undergo chemical changes when exposed to air for a length of time.

Prescription drugs are purchased from a licensed pharmacy and are to be labeled with name, address, and the pharmacy's telephone number, individual's name, drug's name and strength, directions for use, date filled, prescription number, prescribing physician's or dentist's name, and the expiration date.

Non-prescription (OTC) drugs and vitamins may be purchased and taken providing there is proper labeling and storage.

- 1) The physician must prescribe the medication.

Administrative Rule 116.80 a)

Administrative Rule 116.80 e)

Insert & Discuss your Agency's specific policies and procedures.

Insert & Discuss your Agency's specific policies and procedures.

Administrative Rule 116.80 f)

Insert & Discuss your Agency's specific policies and procedures related to acceptable abbreviations. It is recommended that there be an official Agency abbreviation list and only those abbreviations may be used.

Suggestion: Use games supplied in Appendix A to teach abbreviations.

Abbreviations are a source of medication errors. A provider-accepted medical abbreviation list based on national standards posted at all medication administration sites is best.

- 2) The medication is maintained in its original container.
- 3) The individual's name is permanently attached to the container in such a manner as to not obscure the original label.

Any drug container having detached, excessively soiled, or damaged labels must be returned to the pharmacy for re-labeling.

The contents of any drug container without a label or with an unreadable label must not be used. Follow your agency's procedure for disposing of medications.

Medication having an expiration date must not be used after the date of expiration.

Medications for external use must be kept in a separate area from those medications that are taken internally. These areas must be marked, i.e. "External Medications".

Destruction of Medications:

Medication must be disposed of according to your agency's procedures. They cannot be flushed down a toilet as this contaminates the water supply and may very well be against local ordinances.

MEDICAL ABBREVIATIONS

- Medical abbreviations are "shorthand" used to indicate routes, times, amounts, symptoms and other information about drugs and/or medical diagnoses.
- Abbreviations are used when prescriptions are written, diagnoses, made, and charting done. It is best when the abbreviations are universal (recognized standards) rather than unique to the organization.

Insert & Discuss your Agency's specific policies and procedures related to Physician's Orders.

Administrative Rule 116.70 a)

Administrative Rule 116.70

Insert & Discuss your Agency's specific policies and procedures related to the Medication Administration Record.

Suggestion: use a copy of your Agency's MAR. Put a mock name (like John Doe) with all the required medications and required information. Hand these out before explaining the MAR as a visual aid. An Overhead of the MAR would be very useful. Include a PRN section to be used as a visual aid for explanation of how PRNs are to be listed.

Administrative Rule 116.70 b) 1)

PHYSICIAN'S ORDERS

- When an individual goes to a physician, an agency specific consultation form must be sent so the physician can write orders.
- **These orders must be signed by the physician/ advanced practice nurse/physician assistant**, who may write a prescription that staff may take to the pharmacy for filling or the physician may phone the pharmacy with the drug order.
- All physician visits by an individual should have written documentation from the physician. **All medications must have a written order from the physician/advanced practice nurse/physician assistant**,
- Staff may **NOT** take a prescription order from the physician over the phone.
Staff may:
 - take a physician order form to the physician's office and ask him to write and sign the order, or;
 - **call the nurse consultant** who will phone the physician for the telephone medication order and notify the staff or other provider of this order.

MEDICATION ADMINISTRATION RECORD

The Medication Administration Record (MAR) is part of the individual's permanent record. The MAR describes the individual's medications, as well as their doses, routes, times taken, allergies and special considerations and thus is very important.

ALL MEDICAL FORMS ARE LEGAL DOCUMENTS. Neither "White-Out" nor erasures can be used. Only ink (preferably black) can be used to write on medical forms.

Each agency will have a medication record that meets its specific needs. A medication record must have the following information:

- individual's name
- drug name and dosage form

Administrative Rule 116.70 b) 3)

Suggestion: After explaining the scheduled medication documentation, hand out another mock MAR with errors in documentation to each student and have them find the errors. Make sure to use your Agency's MAR. Discuss it after giving them a few minutes to find the errors. You can have them work in pairs.

Insert & Discuss your Agency's specific policies and procedures related to the PRN section of the MAR.

Administrative Rule 116.50 d)

- name of prescribing physician, physician assistant, dentist, podiatrist, or certified optometrist
 - dose
 - administration frequency or times
 - administration route
 - date and time given
 - most recent date of the order
 - medication allergies. If the individual has no known allergies, then “none” should be listed.
 - special considerations.
 - staff or other provider signatures corresponding to initials used by the authorized staff who administer the medications to the individual.
- In addition, to properly identify the MAR it should have the:
- agency name or identification code. It may also have the agency address.
 - MAR month and year.
 - primary physician's name.
 - nurse's signature who reviewed the MAR.
- PRN SECTION OF THE MEDICATION ADMINISTRATION RECORD**
- This section of the MAR describes procedures to be used in filling out the MAR for PRN or “as needed” medication. “As needed medications are those prescribed that are not taken on a set/specific schedule, but are to be taken for a specific condition.
- Each time a PRN medication is taken, the name of the medication, dose, date and time taken and the staff initials or signature or other provider is to be recorded on the PRN section of the MAR.

Suggestion: After explaining the RN medication documentation, hand out another mock MAR with errors in PRN documentation to each student and have them find the errors. Discuss it after giving them a few minutes to find the errors. You can have them work in pairs.

Insert & Discuss your Agency's specific policies and procedures related to Self-Administration of Medication.

Administrative Rule 116.60

If the term "Habilitation Plan" is not the one used at your Agency, use the appropriate term.

Administrative Rule 116.60

Suggestion: Hand out a mock Individual Program Plan, as a visual aid, that shows a program for helping an individual become independent in self-administration of medication. Use it as a point of

In addition to the required information for regularly scheduled medications, the PRN section of the MAR should have:

- conditions for which the medication may be given. These need to be specific, i.e. "2 325 mg aspirin tablets given for complaints of headache. (In this case, if this is the only condition stated, the staff cannot administer the aspirin for elevated and temperature. This would have to be added to the conditions for which the medication may be given.)
- contraindications for the medications
- maximum or stop dosage
- any special directions and precautions for the medication's preparation and administration
- common severe side or adverse effects or interactions and the action required if they occur (this should include immediate notification of the Nurse-Trainer)
- proper storage.

INDIVIDUAL PROGRAM PLAN and Self-Administration of Medication

There is an annual (and as needed) meeting by a "treatment team" for each individual served by your Agency who develops/evaluates/updates the individual's "Habilitation Plan". This "Habilitation Plan" can also be called an Individual Program (IP) or Individual Service Plan (ISP) or simply a "Hab" Plan.

This annual or as needed meeting includes, as appropriate, the individual, the Interdisciplinary Team (IDT) or Community Support Team (CST) and the individual's family and/or designee as appropriate. The individual's need(s) are identified, put in priority order and a plan (IP/ISP/Hab) is developed, and implemented. This includes a plan to help an individual to independently administer their medications. **Providers are required to have "Self-Administration of Medication Program" in place for every individual served.** Some individuals

discussion as to what is necessary, who is to complete the program and how to document.

Administrative Rule 116.60 d)

Stress that Medication Administration of **any** kind is supervised by the RN Nurse-Trainer and done by **authorized** direct care staff **only**.

Administrative Rule 116.20
"Administer/Administration"

Overhead: "Administer or Administration"

Direct support staff who **have not** successfully completed this class and other requirements for direct support staff **cannot** engage in medication administration activities of any kind.

Administrative Rule 116.60 b) 1 & 2)

Administrative Rule 116.60 c)

may already be independent. A plan is regularly reviewed and the individual's capability to independently self-medicate evaluated even when the person is already considered independent. The individual will always be working, with the help of the staff, toward their highest level of independence in administering their medications.

Because of the individual's developmental disability, staff assistance is likely to be required. The type of assistance needed can be either or both of two categories: (1) RN delegation and task supervision of an individual's medication administration by authorized direct-care staff; and/or (2) authorized direct-care staff providing self-administration of medication training to individuals under the supervision and monitoring of the Nurse-Trainer.

ASSISTING ADMINISTRATION OF MEDICATIONS

Illinois law defines administration as "an act whereby a single dose of medication is instilled into the body of, applied to the body of, or otherwise given to a person for immediate (emphasis author's) consumption or use, exclusive of injection or other similar methods of transmission"

If a person needs assistance in administering medications, the following must be in place:

- an assessment by the Nurse-Trainer of the individual's physical and mental status and medical history.
- an evaluation of the medication order(s) and medications prescribed.
- an assessment of the individual's capability to self-administer their medications.
- The ID team has recommended that the individual be assisted with taking their medications.
- There is a written training program, an ISP in place to teach the individual some aspect of self-administration of his/her medication.

Administrative Rule 116.20
"Supervision"

Overhead: "Supervision"

Administrative Rule 116.20 "Self-administration"

Suggestion: Hand out a "Self-Administration of Medication Assessment (SAMA) form to show what is evaluated to determine self-medication ability.

Note: Unlicensed staff **cannot** train individuals in "self-administration of medication" without being an authorized direct care staff person.

Insert & Discuss your Agency's specific policies and procedures related to Medication Administration. If you haven't already given the students a sample MR, this would be a good time to use it as a visual aid for each of the "Rights of Medication Administration".

- The authorized direct-care staff completes the medication administration tasks delegated by the Nurse-Trainer and essential to supporting the individual's highest level of functioning.
- The Nurse-Trainer monitors, directs, guides and is accountable for the outcomes of the medication administration task.
- A MAR must be kept to document that the individual has taken the medication.

SELF-ADMINISTRATION OF MEDICATIONS

"Self-Administration" means an act whereby an individual administers his/her own medications. To be considered "capable of self-administering their medication" individual residents must, at a minimum, be able to identify their medication by size, shape, or color and know when they should take it, and the amount to be taken each time.

In order to train an individual to self-administer medications, you must know each step in the medication administration process. Therefore, before a non-licensed staff member can train an individual to self-administer medications, s/he must have successfully complete this medication course, met all criteria to be an authorized direct care staff, and provide training to individuals under the supervision and monitoring of the Nurse-Trainer.

7 RIGHTS OF MEDICATION ADMINISTRATION

Each time you assist with a medication, you need to review the "7 rights" of medication administration. These "7 rights" provide a systematic, conscious method to complete before administering medications. By using them, every time you administer medication, you will increase the safety of administering medications and thus protect the individual for whom you are caring. The "7 rights" of medication are:

Suggestion: Use a magnified overhead picture of the MAR so it is readable and/or Overhead: "7 Rights of Medication Administration"

A quick verbal or written quiz (open notes/book at least initially) after introducing the 7 rights may help in "cementing" the information for the staff.

Use the mock MARs you passed out to show the different ways "dose" is expressed.

Like you pointed this out on the mock MAR for "dose" do the same with "time". Explain/Refer to your Agency's specific policies and procedures related to Medication Administration.

Like you pointed this out on the mock MAR for "dose" do the same with "route".

Talk about the importance of "Right texture/consistency" and that it is typically on the label of the medication and/or in the MAR instructions. (See Appendix C, page 1.)

Show on the mock MAR what proper documentation consists of.

1. Right Person: Make sure you can accurately identify those to whom you are administering medications. If you have any questions, don't administer the medication until you check with a staff person who knows the individuals to make sure. A picture with the person's name may be available with the MAR.
2. Right Drug: to assure administration of the correct: compare the physician's written order and/or the MAR with the pharmacy label. Double check them and make sure they agree.
3. Right Dose: The MAR will have the amount of medication to be given in the same area as the drug name. It can be stated in a number of different ways. By number of tablets, milligrams, ounces, teaspoons, etc. Make sure you understand exactly how much to give.
4. Right Time: Both the label on the medication container/ card and the MAR should show the time the medication is to be given. If the label gives no precise time but states daily or "qd" or some other time method, check the MAR for the schedule or Agency policy/procedure for the definition of, for example "daily".
5. Right Route: This is how the medication is consumed, applied, or received (e.g., orally or topically) is described as the route. Once again, check the prescription label and/or the MAR.
6. Right Texture/Consistency: Particularly, for individuals with swallowing difficulties, consistency of an oral medication is important to prevent aspiration. For others, it eases consumption. The oral medication may be a liquid, a tablet that is crushed or a capsule emptied into a food substance such as applesauce or ice cream.
7. Right Record: Be sure you are reading the correct person's record. This is a reinforcement of the "Right Person".

Your careful and consistent use of the seven medication rights is extremely important to an individual's safety by accurate medication administration.

Overhead: Skill Standard B

Use body system diagrams (Suggestion: make Overheads of them and copies of the system diagrams for the students) for your presentation of anatomy. To increase the students' understanding of how particular medications affect different body system, you can discuss some of the medications you have already discussed and point out the body system affected while pointing out the parts of the body system and how the medication effects it.

Suggestion: After giving examples of the functions, divide the staff/students into groups and assign each group a body system. Have each group put together a list the functions of their system and at least two medications (taken from your agency's medication information source) that affect that system. Have them use the provided anatomy handouts and use Overheads to point out the system.

BODY SYSTEMS & MEDICATION CLASSIFICATIONS
SKILL STANDARD B

BODY SYSTEMS

We will discuss major body systems parts and their function. The body **SYSTEMS** are:

- Skeletal
- Muscular
- Nervous
- Respiratory
- Cardiovascular
- Reproductive
- Urinary
- Gastrointestinal
- Integumentary (skin)
- Endocrine

(Note, the "Special Senses" [sight, hearing, taste, smell, touch] are all part of the Nervous system.)

Except for the Integumentary System, body systems are divided into organs. The Skeletal system is all the bones of the body that function as support, muscle attachment that enables a person to move, and protection (brain within the skull, lungs inside the rib cage). The Nervous System is anatomically divided into the Central Nervous system (CNS) consisting of the brain and spinal cord and the Peripheral Nervous System (PNS) which is all the nerves that exit or enter the CNS.

While body systems are only divided for convenience of study. They interact in a very complex way to maintain life. For example, the Cardiovascular System consists of the heart, blood vessels (arteries, veins, and capillaries), and the blood. But it is the marrow of the long bones (femur, tibia, humerus and sternum) that produces blood. The kidney (part of the Urinary System) produces a chemical (angiotensin) that is released in the blood, travels to the lungs and stimulates the lungs to produce another chemical that acts directly on the artery muscular wall to constrict the arteries and raise the blood pressure. The combination of the bones and muscles (sometimes call the musculoskeletal system) permit a person to move but the brain has to send a nerve impulse through the spinal cord and out the PNS to make your leg muscles contract and thus enable you to walk.

MEDICATIONS

Classifications

There are all kinds of Medication Classifications. In some cases, a medication can belong to more than one class depending on effect desired. (Ex. Aspirin as a analgesic or anticoagulant) For instance, they can be divided by what they do or treat: antiviral, antipsychotics, anticonvulsants, diuretics, and cardiotonics. Another division is chemical: barbiturate, aminoglycoside, tetracycline, phenothiazine, cardiac glycoside.

Pathology/Pathophysiology and Medications

When a disease/problem is discovered by a physician, s/he diagnoses it and names it such as "Arteriosclerosis" or "Gastric Ulcer". Whenever possible, the physician attempts to discover the disease cause because that determines the treatment. That is the importance of proper diagnosis and naming.

Function is what a structure is supposed to do. For instance, the stomach lining is to produce and release chemicals to digest food entering the stomach. Some chemicals protect the stomach wall from the very chemicals released (secretion) so the stomach doesn't digest itself. Those are both stomach "wall" functions. When the protective function no longer works, that is a "dysfunction". Part of the stomach "wall lining" is digested producing what is called a gastric ulcer. A medication can be prescribed that can coat the stomach wall and decrease wall digestion or another medication can be given that decreases the amount of acid secreted. The resistance to digestion that is already present in the stomach can then be sufficient to protect the wall.

Pathology/Pathophysiology is the process of what is going wrong. Medications, then may treat the pathology directly or attempt to or actually cure it or treat the symptoms (decrease the undesirable effects).

Adverse/Side Effects

Take a look at the medication resource information and find the section that talk about Adverse/Side effects. In some sources you may have a listing of medication group

Suggestion: Have the students look at what your agency uses as a medication information resource. Name a medication and have they look up that medication and talk about the classification. Once again you can use a copy of the Medication Worksheet found in Appendix A with emphasis on classifications.

Suggestion: Using the medication information resource and the Appendix A worksheet. Give the students a list of medications that cover several different categories to demonstrate to the students those categories. Discuss what the medications do and show how the category name applies. Continue using this source and information to explain the different categories of medications, their desired effects, adverse effects and other salient information.

Make sure to define in the simplest words as possible the terms used to describe/name the adverse/side effects.

Suggestion: The objective of this lecture/discussion is to continue to help the students learn how to find drug information from the information source(s) you use as well as understand what that information means. Develop a list of drugs to look up with the adverse/side effects list to the right as well as adverse/side effect of medications you see frequently given to individuals at your agency. When discussing the results of the exercise, help them find the information on the first few drugs and then have them work alone or in pairs to do a few more. Approach each by first using the generic name of the drug, then the classification, trade name(s), indications, side effects and special considerations.

Adverse/Side effects but not all drugs in a particular group necessarily display all the group's possible Adverse/Side effects.

Nervous System – Antipsychotic Drugs

Major Tranquilizers (also called antipsychotic or neuroleptic) [NOTE: as stated above, not all antipsychotic drugs display all these adverse/side effects and the degree of adverse/side effect varies from drug to drug and may vary from person to person.

- Sedation - medication prescribed to reduce anxiety can be given in higher doses to promote sleep.
- Anticholinergic Effects – the term “anticholinergic” describes a group of effects that include blurred vision, urinary retention, dry mouth, constipation, tachycardia (rapid heart rate), drug-induced delirium (confusion, cognitive impairment [“can't think straight”]).
- Orthostatic Hypotension – a form of low arterial blood pressure producing light-headedness occurring upon standing up or changing position.
- Extrapyramidal Side Effects (EPS).
 - *Akathisia* – subjective feeling of uneasiness and restlessness, often manifested as the inability to sit still.
 - *Acute Dystonia* – abnormal Muscle tone: usually a combination of flaccid and very tense muscles (uncommon in the elderly).
 - *Torticollis* – neck muscle spasms drawing the head to one side.
 - *Swollen tongue and thrusting tongue movements*.
 - *Trismus* – spasm of the jaw muscles.
 - *Oculogyric crisis* – muscle spasms controlling eye movements.
 - *Dystonic hip/spine movements* – seen in younger people.

- *Parkinson's Syndrome* (common in the elderly) – tremor, drooling, mask-like faces, rigidity.
- *Akinesia* – impaired gait and coordination, loss of voice volume, difficulty swallowing, impaired handwriting.
- *Tardive Dyskinesia* – abnormal movements of the facial muscles, tongue, jaw, and extremities that does not lessen upon drug discontinuation.
- *Neuroleptic Malignant Syndrome* – high fever fluctuating with delirium, muscle rigidity, autonomic dysfunction in the form of tachycardia, labile arterial B/P, sweating, incontinence.
- *Bradkinesia* – slowness in initiation and sustaining of movement; depressed appearance, blink rate, ventilation, swallowing capability, gait disturbance, shuffling steps, loss of arm swing, stooped posture, difficulty maintaining balance.

Antianxiety Drugs, Sedatives/Hypnotics

- Minor Tranquilizers
 - *Lethargy* – abnormal drowsiness or stupor, a condition of indifference.
 - *Cognitive Impairment* – disorientation, memory inability/loss, inability to concentrate or maintain attention, difficulty in calculations; decreased judgment, language, and general knowledge.
 - *Ataxia* – Motor incoordination (clumsy)
 - *Antegrade Amnesia* – inability to remember information or events for a period of hours after taking the drug.
 - *Rebound Insomnia* – Anxiety upon abrupt drug withdrawal.
 - *Reversible Dementia* – after prolonged drug use.
 - *Depression* – lowered or decreased functional

activity characterized by altered mood.

- *Withdrawal Syndrome* – hallucinations, panic, confusion, seizures, nausea, tremor, anxiety, tachycardia, mydriasis (pupil dilation), paresthesias (abnormal sensations), muscle spasms.

Antidepressants

- *Sedation* – drugs prescribed for anxiety can be given in higher doses to promote sleep.
- *Anticholinergic Effects* - – the term “anticholinergic” describes a group of effects that include blurred vision, urinary retention, dry mouth, constipation, tachycardia (rapid heart rate), drug-induced delirium (confusion, cognitive impairment [“can’t think straight”]).
- *Orthostatic Hypotension* – a form of low arterial blood pressure producing light-headedness occurring upon standing up or changing position.
- *Fine Resting Tremor* – tremors of rapid vibrations that occur when the limb is at rest.
- *Cardiac Arrhythmias* – Variations from the normal heart rhythm.

NOTE: MAO (Monoamine oxidase) Inhibitors interact with many foods such as wine and cheese, to cause severe side effects.

Antimania Drugs (Also used for bipolar depression)

- *Tremor* – fine in character that occurs with movement. EPS rarely occurs.
- *Lethargy* – abnormal drowsiness or stupor, a condition of indifference.
- *Nausea/Vomiting*
- Anticholinergic effects DO NOT occur.

Overhead: Skill Standard C

“Approaches to Medicine Administration for People with Developmental Disabilities” is the source of what is stated in the content column.

Suggestion: This is a good discussion point. Talk with the class about what needs to be considered when administering medications to those with a developmental disability and how to give that person as much control (normalization) as appropriately possible. Topics could include: appropriate choices, drug “vehicles” communication, and oral/motor difficulties

See Appendix C for “Vehicle options/suggestions.

MEDICATION ADMINISTRATION TECHNIQUES

SKILL STANDARD C

Person –Centered Approach

A hallmark of a person-centered approach to medication administration is to focus on the person’s needs. This approach considers characteristics of the person’s functional movement, ability to swallow, and the texture easiest for the person to manage. Another factor is the person’s ability to reliably identify him- or her-self verbally. If not, a recent photo attached to the MAR is necessary for correct identification.

The person-centered approach shifts procedure control to the person as much as possible. Medication still be necessary but the person with intact oral motor function can exert some control by choosing whether the medication is whole or crushed, or choosing the vehicle (e.g. applesauce or other food) as long as there is no food-drug interaction.

The person’s developmental level is relevant to the control type s/he is capable to exercising. For example, if the person functions adaptively at a pre-school level, s/he may refuse necessary medications. Rather than allow the person to “choose” whether to take the medication, shift control by offering a choice within the drug regimen (e.g. consistency vehicle).

In cases of medication refusal, assess the person’s refusal to determine if the decision is based on the medication: Does it taste bad? Does it produce unpleasant side effect(s)?

“Vehicle” Considerations

Avoid using the person’s food at mealtime as a vehicle for medication administration, unless the person requests the option. (NOTE ALL ALLERGIES AND FOOD-DRUG INTERACTIONS.)

Medication “vehicles” must be appropriate to the person’s eating skills. They should be indicated on the person’s mealtime instructions. To the extent possible, each

Suggestion: Ask if anyone in the class is an Oral Motor Specialist.

person should be encouraged to choose a preferred “vehicle” for medication administration. for example: applesauce, yogurt, pureed fruit, peanut butter & jelly, and cream cheese.

Communication

In evaluating the effects of medication or person’s physical status, the caregiver must take into account the cognitive and communication difficulties frequently seen in persons with developmental disabilities.

If the person is verbal and able to communicate, there are fewer problems. If the person is nonverbal and/or has a very low level of cognitive development, s/he often cannot clearly express what s/he is feeling.

This problem can be approached by monitoring physical signs of distress, flushed skin and rapid respiration, to determine pain or distress. Documentation to show trends and patterns is very important. In addition, the caregiver can convey this information to the treatment team. Items to be included are: description of body parts and sensation, such as “head” and “hurt” to enable the person to communicate his/her feeling as independently as possible.

Oral and Motor Difficulties

Oral and motor difficulties are significant in medication administration. If the person served has immature or abnormal oral patterns, UNLICENSED PERSONNEL ADMINISTERING MEDICATION should request the support team to refer the person to an oral motor specialist. Staff should be trained by the oral motor specialist to best meet the needs of the person.

Signs Indicating the need for Oral Motor Specialist

The person may show any or all of the following:

- tonic bite – clamping down on utensils, or biting down when mouth should be open.
- Tongue thrust – thrusting tongue forward when food introduced into the mouth.

- Lip purse-stringing – pulling the lips together as though a purse string is being pulled.
- Lip retraction – pulling back of lips as though smiling, usually in response to oral stimulation.
- Jaw retraction
- Coughing, gagging, or any difficulty associated with swallowing.
- Use of neck extension to hold food, fluid, or medications in the mouth for swallowing in the absence of sufficient oral control. (In this situation, either the person or staff moves the head back into neck extension to prevent food, fluid, or medication from rolling out of the mouth as there is insufficient oral control. This is dangerous as it opens the airway.

Other Oral and Motor Considerations (Beckman and Roberts, 1992)

Bolus Size – A person may not be able to swallow a large bolus but have no difficulty with a small one. The exact placement within the mouth can be crucial. Optimum placement can be determined during assessment by an oral motor specialist.

Medication Administration Speed – A person with oral motor difficulties should not be rushed through taking his/her medication(s). Offering water/fluid immediately after medication administration, whatever their form, increases the risk of aspiration. Give water/fluid slowly and in small amounts. Offering a small sip of water/fluid after each medication (or food for that matter) can help the person completely consume the medication/food. Check the mouth frequently to make sure the medication/food has been swallowed so the person does not aspirate (take the medication/food into the lungs or tubes leading to the lungs). This slow, careful procedure can be a good oral motor leaning experience for the person.

Suggestion: ONLY USE THE FOLLOWING IF THERE ARE NO CONTRA-INDICATIONS FOR USE AND THE STUDENTS AGREE. Use the Administration of Medication Check Lists provided in Appendix C and your Agency's MAR. Pair the students up with one acting as the individual receiving the medication and the other administering the medication. The individual receiving the medication will read each step to the person administering the drug for guidance and keep track of the steps completed. For PO drugs, some pharmacies can provide M & M/candy in medication cards for practice. Use this if available with proper medication labels. Sterile saline can be used to simulate eye drops and ear drops (warm drops for the ear drop simulation to prevent dizziness). Hand Lotions can be used to simulate topical medications. This may also be a good opportunity to introduce the CBTA sheet they must use to complete the course.

Sufficient Intake - Persons with developmental disabilities often have special needs such as the inability to take in a sufficient amount of food and/or water. When medications must be crushed or powdered or are liquids and are incorporated in food, make sure all the dose is included.

Body Alignment – Maintaining good body alignment, in both the sitting and lying positions, of the head and trunk is very important in assisting oral control for swallowing. Many people with physical disabilities have difficulty with esophageal reflux and erosion. Enteric-coated tablets help prevent an irritating medication from damaging the GI tract lining (Enteric-coated tablets should never be crushed.)

Medication Administration Techniques

There are nine medication administration procedures/routes we will practice. They are:

- Oral
- Eye drops
- Eye ointment
- Ear drops
- Nasal by pressurized canister
- Topical
- Nasal by dropper
- Nasal by spray
- Inhalant

You will be paired with another staff/student to practice each of the route using a procedure check list and an MAR. One student will be the person receiving the medication and the other will be the administrator of the medication. Then roles will be reversed. The person receiving the medication will read each step of the procedure before it is performed, it will be performed and then the next step will be read until the procedure is completed.

Suggestion: Before talking about the inhaler, find out if anyone in the class uses one and have them explain how they have been directed to do so and how it feels.

Explain the terms used when talking about the Inhaler.

Medication Administration by Inhalation

- Inhalation – the act of drawing breath, vapor, or gas into the lungs.
- Purpose of drug by inhalation - Provides medication in an aerosol form that treats lung disease or is absorbed through the lung tissue to treat disease. Diseases treated include:
 - respiratory infections (i.e. warm steam)
 - serious respiratory disease (i.e. asthma, emphysema)
 - heart disease.
- Inhaler – A small handheld device, usually an aerosol unit, used to deliver medications directly to the lungs and bronchi. Categories of drugs given by inhalers include bronchodilators (i.e. provental), mycolytic agents (i.e. bronkosal), and steroids (vanceril). The drugs are administered as a mist or spray.
- Process – The process for administering these medications is usually on the container and should be followed carefully. Most administrations require cooperation and assistance from the individual. S/he is usually required to expel all the air from her/his lungs, seal the inhaler with his/her lips around the opening and depress the inhaler to release the medication while taking a deep breath and holding it for as long as possible. This is usually done twice, with a five to ten minute wait between administrations.
- Precautions – Inhalation medications are often ordered PRN by a physician with a recommended time interval between doses and a maximum administration limit. The directions should be followed carefully because bronchospasms and cardiac effects may occur with overuse. As with every medication, individuals should be observed carefully to note the therapeutic effects.

Admin. Rule 116.70 b) 3 & b) 5)

Many people new to documentation are fearful and hesitant. This may lead to errors. Assure them that their care is appropriate AND that if they carefully follow charting principles competently, their chances of legal problems are much lessened.

Topical Medication Administration

Direct application to the skin or mucous membrane is used for antiseptics, antibiotic ointments and soothing drugs. Although you need to wear protective/latex gloves (unless you have a latex allergy for which you should use hypoallergenic gloves) when applying topical medications, always wash your hands before and after applying the topical medication to protect the individual and yourself. Topical medications come in:

Ointments are applied to the skin by direct application or applied to a dressing that is then placed on the affected skin area. Use a tongue blade just removed from its paper wrapping (NEVER your fingers as this will contaminate the ointment) to remove ointments from their containers.

Lotions are applied to the skin for their antiseptic and/or astringent effects.

Liniments are rubbed on the skin to relieve muscle and/or joint soreness.

Aerosols are sprayed on the skin without touching. This is advantageous when skin is irritated or burned. (Avoid the face, especially eyes, nose, and mouth.)

Gargles are solution that are bubbled in the throat by keeping the solution in the upper throat, tilting the head back and exhaling air to create bubbling. They are NOT swallowed but are spit out.

Sprays are used principally to treat nose and throat conditions.

MEDICATION DOCUMENTATION AND LEGAL ISSUES

Chart and MAR Documentation are **CONFIDENTIAL**

Records and Documentation

Whenever medications are administered, the person administering the medications must accurately document or chart that they were given. The Medication Administration Record (MAR) and progress notes are the forms most frequently used for documentation by the

Suggestion: This is an excellent opportunity for a scenario. Create mock situations involving medication administration, adverse effects, incidents, etc and have the students chart them. Have the paired students criticize one another and then discuss the situation in class. DO NOT necessarily include criticisms specific for any class member.

Suggestion: Have a collection of your agency's health-related forms pertinent to the staff being trained and introduce them as the proper use of these forms. If this has already been done in some other part of their training, reinforce that training.

Suggestion: Create mock charting with your agency's forms (more than one incident) that involves medication administration, adverse effects, incidents, etc. and have the students criticize them in a class discussion. This would include not only what is wrong but how to correct it.

unlicensed personnel. Materials and entries made in this chart should be accurate, factual and done with sincerity, thought and safety. This is a big responsibility. You need to know and practice charting.

The ABC's of charting include:

A: Accuracy

B: Brief (Succinct is a better word, but it doesn't start with "B". What it means is there are few words but the situation/observation is completely and accurately described.

C: completely objective. That is, inappropriate conclusions are not made.

All you have learned and will learn in this course is expressed in the person's record. This is a legal document of occurrences and situations pertaining to a person's care.

Each agency has records/forms that meet its needs. You are responsible for using the appropriate records/forms authored by your agency. The collection of these records/forms is known as the person's "Record". It can be under one "cover" or found in several places. Like materials such as those related to health care, legal issues, financial issues may be separated from one another to guard confidentiality and/or to meet the agency's needs.

Care must be taken to ensure the record's accuracy, as it may become evidence in court. This accuracy includes legibility. The record must be preserved for years.

Record legality demonstrates the reason for standard medical abbreviations and symbols. In a record reviewed years later, the information must be clear, precise, and not easily misinterpreted. It is important to record observed facts, not inferences or judgments.

Suggestion: Reintroduce the MAR and discuss it in depth from the point of the purpose and how it fulfills that purpose.

Purpose of the Medical/Health Record

A medical/health record is a collection of all pertinent facts of the person's life history, his or her illnesses, and treatment. Medical records are important in the practice of medicine, nursing, and care. They:

- serve as a basis for care planning.
- provide a means of communication among all concerned people (physician, nurse, staff, administrators, etc.).
- document the course of illness(es), its/their treatment and the results of that treatment.
- serve as a basis for review, study and evaluation of the care rendered. (This is often called "Quality Assurance".)

Medication Administration Record (MAR)

Let us look at the agency's MAR. We have talked how the "Seven Rights" are used with the MAR. There are other parts to the MAR and methods of completing it. It is the initial record of medication administration and, therefore, of major importance to safe administration.

Who puts the MAR together? Most often a pharmacy is contracted by a provider to furnish medications. As part of that responsibility the pharmacy will print the MAR for the agency. There are other methods to author the MAR, but they are relatively unusual and not specifically important.

Whenever a physician, dentist, physician's assistant, advanced practice professional nurse, etc writes a prescription for a medication or treatment or verbally instructs a nurse to write it, it must be written on the MAR or for a treatment, on a Treatment Administration Record or TAR. This is called "transcribing". Only a nurse can transcribe orders. It cannot be delegated to unlicensed persons.

Suggestion: Using an overhead of your agency's MAR or TAR, point out and/or demonstrate each point.

Insert & Discuss your Agency's specific policies and procedures related to Medication Administration charting.

Administrative Rule 116.70 b) 3

The timing of medication administration is very important. For instance, a medication, such as insulin, must be given before breakfast so it has a chance to work on the food consumed at breakfast so it has a chance to work on the food consumed at breakfast and during the day. Antibiotics must be concentrated in the blood above a certain level to be effective. Too low a blood level concentration may even help the disease resist the antibiotic. Therefore, antibiotics are given at regular intervals such as 6:00 am, noon, 6:00 pm and midnight. Unless times are specified on the physician's orders, the agency can develop its own medication schedules within limits of medication pharmacology. It is the professional nurse's responsibility to properly set these times.

Charting

The term "charting" has been used a number of times in our discussion. It describes the writing of information in the individual's personal record. This can be in progress notes, MARs, TARs, or any other Health/Nursing/Medical document. It is called "charting" because the Medical Record is often called the "Chart". The following are rules for charting on the MAR/TAR:

- The medication column should be completed by an RN or LPN if not already done by the pharmacy. (Make sure you are familiar with the medications listed, doses ordered, and abbreviations used.)
- For each medication you administer, your initials must appear in the small box in the column indicating the date you administered the medication and in the row that indicates the medication given at the scheduled time.
- Your initials followed by your full signature must be on each MAR sheet. This is typically at the bottom of the MAR where medications are listed or on the back of the sheet. Your title must be written or abbreviated and follow your signature. Make your signature legible!
- Ditto marks cannot be used.

Insert & Discuss your Agency's specific policies and procedures related to Medication Administration charting.

- Do not erase, “white out” or use liquid eraser. As the MAR or TAR is a legal document, the acceptable method of correction is to draw a single line through the error (so that what was written is still legible) and write above that line the word “error” the date and your initials. If possible, explain the reason for the error elsewhere as required by agency policy and procedures. Erasures of any sort will call the document into question in court.
- Immediately record after administering the medication on the MAR. This means a few seconds to a few minutes. This is the most effective and only acceptable means of assuring the right medication, right person, right time, and right route. Medications cannot be removed from the original pharmacy packaging into medication cups or envelopes for later administration. The chance of medication error increases if a MAR is not used. Mistakes can more easily be detected, tracked and addressed if an MAR is used. Remember that the person suffering from a medication error is the individual receiving **or** not receiving it.
- If a medication cannot be administered as ordered due to a contradiction, write your initials in the appropriate box, circle the initials, and note the reason for withholding the medication in the progress notes on the back of the MAR if that is the policy of your agency. Notify the Nurse-Trainer immediately for instruction. Notify the health care provider or designee immediately regarding your actions and reasons for withholding the medication. (If these instructions contradict those written in the agency policy, consult with the Nurse-Trainer to resolve the conflict.)
- If the individual refuses the medication, after three attempts within the designated time frame according to provider policy, write your initial in the appropriate box, circle the initials, and note the reason for this refusal in the progress notes on the back of the MAR. Notify the Nurse-Trainer immediately for instruction. Notify the health care provider or designee immediately regarding your actions. (If these instructions contradict those written in the agency policy, consult with the Nurse-Trainer to resolve the conflict.)

Suggestion: You might use an overhead in combination with a handout to review these rules and discuss implications.

- Charting is considered incomplete and incorrect unless it contains your initials, verified with full signature and title on the MAR, or full signature and title in the progress notes.

Charting Rules - Summary

- Neat, legible writing or printing is acceptable.
- Always use ball point pens, never a pencil or felt tip pen.
- Use the correct column and appropriate line as well as the correct record.
- Make sure your spelling is correct.
- Do not erase, use “white out” or liquid eraser. Use a single line through the error, write “error” and initial and date the error.
- Always chart as soon as possible.
- Always chart with the appropriate date (including year) and time the medication is given. Typically the MAR form design will make this easy. However, charting in the progress notes necessitates full date, with year and time.
- Only abbreviations accepted and posted by your facility may be used. These are best if universally accepted across providers.
- Close each progress note entry with your signature and job title.
- Never chart for another employee.
- Do not leave any blank space on the MAR or progress record. Lines should be drawn over any blank space in the progress record to prevent illegal entry.
- An individual's records are confidential.
- Do not write personal opinions in the progress notes.

Note to the students that NOT doing something that should be done under a standard of care is just as liable as doing something wrong. Poor care is considered negligence as it does not meet the expected standard. This section is a good place to emphasize that administration of medications is a very important assignment, not only for the person's health but for the legal elements involved and the responsibility given the staff.

Standard of Care and Negligence

The law protects those dependent on others from unfair, unscrupulous, or inadequate treatment. By law, a person who places her/his care in the hands of a health worker can reasonably expect that her/his life and rights will be protected, particularly from abuse or neglect. Inadequate care is neglect. These rights are protected by statutes and regulations that govern who may perform what services under what conditions and when this must or must not be done. A person can break the law not just for what has or is being done but for what should have been done but was not. This course is the result of such legislation.

Today, many judges must decide whether a person has received an appropriate standard of care from competent persons. Under common law, a person expects and is entitled to an appropriate standard of care. Common law supports this and makes the caregiver legally responsible for a "duty of care". If the standard is not met and a lack of action or action has resulted in the harm, the person responsible for that lack of action or action is negligent. Traditionally, we hold the person with the most training and education to be responsible for the outcome of all action performed by those responsible to him/her.

However, this does not mean a person supervised by the one with the most training and education is blameless. A person is always responsible for their actions. If a caregiver is granted in proper care, it is documented that s/he is trained and shown competence in that care and s/he accepts that judgment of competence, s/he are also liable. The person with the highest licensure (often RN or MD) will still be responsible for what is done or not done. This is partially demonstrated by the requirement that a person's record must be signed by the caregiver administering the care.

The Personal Record and Confidentiality

A record, health, personal or financial, is confidential in nature. Its contents should not be shown nor discussed with anyone not involved with the individual's health, personal, or financial issues. It should not be discussed in inappropriate, public locations. The individual does have the right to know his/her record, but this decision and responsibility is that of the licensed person.

Overhead: Skill Standard D

Administrative Rule 116.70 c)

Suggestion: Develop "Scenarios" that demonstrate medication errors. Show the students where and how the situation is considered an error. Discuss it and then give them new "Scenarios" to read and complete your provider's Medication Error form and discuss it both for the determination of the error and for the correct completion of the form.

MEDICATION ERRORS AND/OR INCIDENTS

SKILL STANDARD D

An error has been made in medication administration when one of the "Seven Rights" has not been observed. Always keep in mind that the person suffering most due to an error is the individual being served. This is ANY violation of these seven rights. In review, these are the RIGHT:

- person
- time (schedule)
- dose
- medicine
- route/method
- record (MAR)
- texture/consistency

An error that occurs in setting up, passing, or recording a medication must be reported immediately. An error shows a breakdown in the system and is a serious occurrence even though the result may not be serious. When an error is discovered, staff should immediately review the purpose and action of the medication so they can observe the individual for adverse effects.

When an error is discovered, staff should immediately review the purpose and action of the medication so they can observe the individual for adverse effects.

Scenario: An order for Tolinase 500 mg. B.I.D. p.o. to be administered at 8 am and 5 pm. The desired effect is to increase insulin production by the individual's pancreas (Islets of Langerhans) to help maintain normal blood sugar levels.

Consider the consequences of Tolinase administration error involving the:

- Wrong Person – this error involves both the person not receiving the Tolinase and the person who took the medication in error. The person who was prescribed the Tolinase but did not receive it, will likely have a rise in blood sugar levels outside the normal range that may cause body system damage found in untreated diabetics. The person inappropriately receiving the Tolinase could have a potentially dangerous lowering of blood sugar levels that can cause such symptoms

as headache, lightheadedness, confusion, and emotional changes. More serious symptoms include lack of coordination (danger of falling) convulsions and coma. While the more serious adverse effects are less likely, none should occur. Tolinase effects can last for 6 to 12 hours.

- Wrong Time: Tolinase is given every day. In this case, twice during the day to maintain effective amounts in the body. (This is the reason for medication schedules; to maintain a sufficient amount of drug in the body. Inappropriate alteration of a schedule produces drug levels that vary from too much drug to too little drug that produces, alternately, a low blood sugar and a high blood sugar.)
 - Given too late:
 - The amount of Tolinase in the body drops. During the time the drug has not been given the blood sugar level rises and can do damage. Once the Tolinase is given, the blood sugar level will go down but any damage has already occurred.
 - When the next Tolinase is given, if it is given on time, its effect will be reinforced by the Tolinase given late. Thus the effect of increase amount of Tolinase can lead to a low blood sugar
- Wrong Medication – See the Wrong Person situation.
- Wrong Dosage – Physicians prescribe drug doses related to the severity of the problem being treated. Too little a dose will be insufficient to have the desired effect. Too large a dose goes beyond the problem being treated and increases the possible adverse/side effects consequences.
- Wrong Route – It is difficult to give a pill or tablet by the wrong route but a pill that should be swallowed is designed to be absorbed in the stomach or intestine for its best effect. If the Tolinase were to be kept in the mouth under the tongue (“sublingual”) to dissolve, the absorption rate would be different and thus effect the drug’s effectiveness with all the accompanying

Insert & Discuss your Agency's specific policies and procedures related to Medication Errors.

Administrative Rule 116.70 c) – “In the event of a medication error, authorized direct care staff shall immediately report the error to the registered professional nurse, advanced... to receive direction on any action to be taken.

consequences. It can affect taste and may irritate the mouth.

- Wrong Record – This is essentially a “Wrong Person” error with the possibility of additional problems. To help explain the situation, let’s name the two people involved Jim and Sam. Jim’s record is being used but it is Sam who is being medicated.
 - Sam receives the wrong medication (see above) or a double dose of a medication if he is prescribed the same medication as Jim. If it is the wrong medication, Sam is getting adverse effects. If it is double dose, see wrong dosage above.

Although Jim’s record is marked that he has received the medication, he has not and thus the condition that the drug was to treat is not present. For instance, if the drug was to prevent seizures, the possibility of a seizure occurring increases.

- Wrong Texture or Consistency – If a medication is crumbling or discolored, it should not be given and it is probably contaminated in some way. For liquid medications, find out how they should appear and if they do not have the desired appearance, do not administer them. (Reference Appendix C, page 1 that speaks to Texture and Consistency.) If you cannot administer a medication because of a wrong texture or consistency, call the Nurse-Trainer immediately for direction.

What to do when an error occurs:

- By Administrative Rule 116.70 c) the RN must be notified immediately. There may be other designated staff that must also be notified but the RN must be first. Follow agency policies and procedures. If the nurse or designated staff are not on duty, they must be called at home so they can give instructions for the immediate care of the involved individual and call the physician if necessary.
- A Medication Error/Omission form is “completed within 8 hours or before the end of the shift in which the error was discovered, whichever is earlier (116.70 c)). All

questions must be answered accurately and completely. This form is signed by the person making or discovering the error and designated staff, typically the Nurse-Trainer. Whenever possible, the person making the error, as they are the most familiar with the situation, should complete the form. However, once the error is discovered, the form must be completed (116.70 c)).

- Record in the individual's record exactly when the error happened, what happened, what was done and how the individual was affected. There must be follow-up charting that reflects any long-term effects.
- If more than one person is involved, they must be included on the Medication Error/Omission Form.
- Sign and date all entries.

Unfortunately errors are made. Every error is potentially serious. Care must be taken to prevent them from happening. Once an error does occur, the situation must be analyzed to decrease or prevent future similar errors. If you make an error, report the error immediately by policy.

REMINDER – The physician orders (prescribes), the pharmacist dispenses, and the unlicensed staff administers under supervision of the Nurse-Trainer. Never give a medication unless you know its use, adverse/side effects, and dosage. Always administer according to the “seven rights”. Always administer medications in compliance with the state of Illinois regulations and in accordance with your responsibilities, job description and limitations.