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Mission Statement

The Department of Children of Families' mission is to protect children, improve child and family well-being and preserve families. The DCF Medication Administration Training curriculum is designed to prepare employees in DCF licensed child-caring facilities and extended day facilities to safely administer medications and support the safety and well being of the children in care. The DCF Medication Administration Program is committed to providing a high quality training that meets Connecticut state statues and DCF regulations for medically unlicensed person to administer medications.

The DCF Medication Administration Training Program was established in accordance with State of Connecticut General Statutes 370, Section 20-14h – j, and DCF regulation 12a-6(g)-12–16 to provide training for medically unlicensed persons to safely administer medications to children in DCF operated and licensed child care facilities and extended day treatment programs.

The DCF Basic Certification course is fast paced with many new terms and skills to learn. Students have many opportunities to practice new skills and knowledge through non-graded quizzes, class exercises and hands on practice.
INTRODUCTION

COURSE REQUIREMENTS


**Introduction**
Welcome to the DCF Medication Administration Certification training. The goal of the training is safe medication administration to children who live in DCF licensed child caring facilities, e.g. group homes, safe homes, shelters, and residential centers. Throughout the course the term *child* will be used to refer to a client of any age who lives in a DCF licensed or operated child caring facility.

The Basic certification training consists of the following all of which must be successfully completed for certification:

<table>
<thead>
<tr>
<th>Basic Certification class</th>
<th>Description</th>
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| Basic Certification class | Class and practice of the information and skills needed for safe medication administration. No more than 4 hours of class may be missed to be eligible for the written exam.  
[A] Students will be required to demonstrate specific skill competency in safe medication administration. |

| Basic Certification Exam | A written exam with multiple choice, true/false, matching and fill in the blank questions. **An 85% or better must be achieved to pass.*** |

| Internship | Upon passing the written exam, certification candidates complete a comprehensive internship at their employing facilities. The internship consists of orientation, shadowing experienced medication certified staff, a skill check by the program nurse and supervised medication administration. Details about the internship are available at the DCF Medication Administration Website or the current DCF Medication Administration Handbook. The internship must be completed within 90 days of the exam. |

| Certification | Upon DCF’s receipt of internship verification, a certificate card is issued. Certification is valid for 2 years after date of issue. |

*Anyone who fails a basic certification exam may retest one time. If the second exam is failed, the person must complete the entire basic course again before testing for a third and final time.*
UNIT ONE
Basics for Safe Medication Administration
Learner Objectives for Unit 1

After completing Unit 1, the student will be able to:

1. List the Five Rights of medication administration

2. Identify the three documents necessary for safe medication administration.

3. Identify the Five Rights on a licensed practitioner’s order, a pharmacy label and on a Medication Administration Record (MAR).

4. Describe and demonstrate competency performing the Rule of Three.

5. Explain the roles of the medication certified staff, licensed practitioner, pharmacist and nurse in safe medication administration.

6. List the responsibilities of DCF Medication Certified staff.

7. Identify when to contact your chain of command.

Terms to Define:

- Dispense
- Licensed medical practitioner
- Licensed practitioner
- Licensed practitioner's order
- Pharmacy label
- Prescription
- Route
- Rule of Three
- Administer
- Pharmacist
- Medication Administration Record
- Chain of Command
- Doctor's order
- Dose
Unit 1

Learner Objective 1

The Five Rights of Medication Administration

Safe administration of medication requires that the right CHILD receives the right MEDICATION, in the right DOSE (amount), by the right ROUTE (how it is to be given) and at the right TIME. These are called the FIVE RIGHTS of medication administration.
Learner Objective 2

The Three Documents Necessary for Safe Medication Administration

Before any medication may be administered, a medication certified staff person must have the following:

1. Licensed practitioner’s order
2. Pharmacy label on properly dispensed medication
3. Completed medication administration record (MAR)

The order, the label and the MAR must have the Five Rights on them. Before administering any medication, the certified staff person must perform the Rule of Three.

Definition:

Rule of Three: compare the Five Rights on the each of the documents three times to be sure they all match before administering the medication to the child.

FYI: The term licensed practitioner will be used throughout the course to refer to any licensed medical practitioner who prescribes medications.
**Document 1: Licensed Practitioner’s Order**

The licensed practitioner’s order is written by a medical professional who is licensed to medically assess a child, make a diagnosis and then prescribe medication and treatment. A licensed practitioner’s order may also be called a *prescription* or *doctor’s order*.

Licensed Practitioners:

<table>
<thead>
<tr>
<th>Licensed Practitioner</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>MD Medical Doctor</td>
<td>Psychiatrists and pediatricians are medical doctors</td>
</tr>
<tr>
<td>PA Physician’s Assistant</td>
<td></td>
</tr>
<tr>
<td>APRN Nurse Midwife</td>
<td>Advanced Practice Registered Nurse</td>
</tr>
<tr>
<td></td>
<td>Also called Nurse Practitioners</td>
</tr>
<tr>
<td>DMD or DDS Dentists</td>
<td></td>
</tr>
<tr>
<td>D.O. Doctor of Osteopathy</td>
<td>Function much the same as an MD</td>
</tr>
</tbody>
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*A licensed practitioner’s order must include the Five Rights, be signed and dated within the last 90 days and it may include special directions to the patient.*
ELECTRONIC LICENSED PRACTITIONER'S ORDERS

Electronic licensed practitioner's orders (E-prescribing) are beginning to replace the traditional handwritten order. Handwritten licensed practitioner's orders can be hard to read leading to serious medication errors. E-prescribing is becoming the standard: they are clear and easy to read and offer many built-in safety checks. They are frequently used in hospitals and emergency departments.

Electronic or computer generated orders come in a variety of formats. Electronic prescriptions must include the 5 Rights and be dated within the last 90 days. Be aware that sometimes the signature of the licensed practitioner is simply a number and not a written signature. During your internship you will be learn how to read and use any electronic documents your facility uses.

If you do not understand or are not familiar with a document, contact your chain of command for clarification and directions.
Document 2: Pharmacy Label on the properly dispensed medication

All medications that are administered must be dispensed by a pharmacist and be labeled with the Five Rights and any special directions.

Definition

**Dispense**: to place a medication into a container and label that container for someone else to administer.

The pharmacy label will also tell you the strength of the medication.

Document 3: Medication Administration Record (MAR)

The MAR is the form on which you will document that you have administered a medication. The MAR may also be called a Kardex. The MAR must include the Five Rights and a place for you to write your name or initial every time you administer a medication.
Learner Objective 3

Identify the Five Rights on a licensed practitioner’s order, pharmacy label and on an MAR.

Starting on page 2 in the workbook you will find licensed practitioner's order, pharmacy labels and MARs for two children, Carson Brown and Linus Van.

On each of the documents, underline each of the Five Rights.

On the licensed practitioner's orders, find the date that the orders were written.

On the pharmacy labels find the strength - also called the concentration - of the medications.
Review of the FIVE RIGHTS and the THREE NECESSARY DOCUMENTS:

The Right Child: The child whose name is on the licensed practitioner’s order, pharmacy label and MAR has been correctly identified through photograph or some other accurate way. You must follow your facility policy for identifying the right child.

The Right Medication: The medication on the licensed practitioner’s order matches the pharmacy label on the medication itself and on the medication administration record (MAR).

Example: The licensed practitioner’s order, the pharmacy label and the MAR say Prozac.

The Right Dose: The right amount of medication is administered according to the licensed practitioner’s order, the pharmacy label and the MAR.

Example: The licensed practitioner’s order and MAR say to give 20mg of Prozac. The pharmacy label says that each capsule is 20mg of Prozac. One capsule should be administered.

The Right Route: The medication is given to the child in correct way. Route is the way the medication enters or is applied to the body.

Example: The licensed practitioner’s order, the pharmacy label and the MAR state that medication capsule is to be administered by mouth.

The Right Time: The medication has been administered at the time ordered by the licensed practitioner.

Example: The licensed practitioner’s order, the pharmacy label and the MAR state that the medication is to be given at 8am.

The Three Necessary Documents for Safe Medication Administration:

1. Licensed practitioner’s Order with the 5 Rights
2. Pharmacy Label on the properly dispensed medication and with the 5 Rights
3. Medication Administration Record properly filled out with the 5 Rights.
Learner Objective 4 - Describe and demonstrate the Rule of Three

The Rule of Three is a step in the DCF Medication Administration Procedure. Before administering any medication to any child, you must compare the Five Rights on the licensed practitioner's order, the pharmacy label and the MAR. The Five Rights must match on all three documents before you may administer a medication. If the Five Rights do not match, you will stop and call your chain of command for direction.

Below are the steps to follow to correctly perform the Rule of Three. On the following page is an illustration of the steps.

1. Read the Five Rights on the licensed practitioner's order and compare them to the Five Rights on the pharmacy label. The child's name, the drug name, dose, route and time of administration must match.

2. Read the Five Rights on the pharmacy label and compare them to the Five Rights on the MAR. The child's name, the drug name, dose, route and time of administration must match.

3. Read the Five Rights on the MAR and compare them to the Five Rights on the licensed practitioner's order. The child's name, the drug name, dose, route and time of administration must match.

4. If the Five Rights match on all three documents, you may go on to administer the medication.

5. If the Five Rights do not match, STOP and contact your chain of command.
Skill Check - The Rule of Three

Turn to the workbook for the licensed practitioner's orders, pharmacy labels and MARs for Carson Brown and Linus Van.

Your instructor will demonstrate to you how to correctly perform the Rule of Three using the three documents.

You will then have the opportunity to practice this skill.

When you are ready, your instructor will observe you perform the Rule of Three using the documents in the workbook.

When you have successfully demonstrated this skill, you and your instructor will sign off on this skill on the Verification of Training Skills check list in the workbook.

Workbook pages 2 and 3.
Learner Objective 5

Explain the roles of the medication certified staff, licensed practitioner, pharmacist and nurse in safe medication administration.

ROLES

The following are brief descriptions of the roles and responsibilities of those involved in safe medication administration.

Medication Certified Staff

With DCF medication administration certification, you may administer medications according to a licensed practitioner's order to children who live in any DCF licensed or operated child-caring facility or extended day program. You may only administer medications after performing the “Rule of Three” by checking three times that the Five Rights match on the Licensed Practitioner’s Order, the Pharmacy Label and the MAR. You also have the responsibility to properly document that medications have been administered and observe for and report the medication’s effect and any concerns. You must also safeguard the medications and carry the medication key whenever you have the responsibility to administer medications.

Licensed Practitioner

A licensed practitioner makes a diagnosis and prescribes treatment including medication. A licensed practitioner may also dispense medication.

FYI: You may work with other licensed professionals such as an LCSW (licensed clinical social worker) or LMFT (licensed marriage and family therapist). These professionals are not licensed medical practitioners. They may not diagnose medical problems or prescribe medications.
Pharmacist

Pharmacists dispense medication according to a licensed practitioner’s order. Pharmacists are also excellent resources for information about medications.

Nurse

The nurse, a registered nurse (RN) or a licensed practical nurse (LPN) working with an RN, provides ongoing supervision of medication administration staff including internships and annual on-site observations. Your program nurse will also offer continuing education to you and your colleagues about medications, medication administration and children’s medical concerns. The program nurse often has the responsibility of overseeing all aspects of the children’s’ health and medical needs. He or she is an excellent resource for information and may be included in your facility’s chain of command.
Learner Objective 6

List responsibilities of the DCF Medication Certified Staff

To ensure safe medication administration, certified staff must:

- Always follow the DCF Medication Administration Procedure.
- Always use the Rule of Three to check the Five Rights before administering any medication.
- Know the desired effect of a medication and observe and report any side effects.
- Adhere to any precautions.
- Follow any specific instructions from the licensed practitioner.
- Contact the chain of command whenever you have a question or concern.
Learner Objective 7  Identify when to contact your chain of command

The Chain of Command

As a DCF Medication Certified staff, you must know who your Chain of Command is and how to access it. The Chain of Command are the program personnel who have the authority and responsibility to direct staff and report to higher authorities program activities and events which affect the well-being of the children in care.

The Chain of Command must be contacted whenever:

1. You have a question about a licensed practitioner’s order, a pharmacy label or MAR.
2. There is a change in the condition of a child.
3. Any incident where a child does not receive his medication as ordered.
4. Any incident where medication is not properly safeguarded.
5. Any time you have a question or concern.

The Chain of Command may include your supervisor, the program nurse, the program director, and/or the licensed practitioner. During your internship you will learn how to access the Chain of Command for your program.

Activity:
During your next shift find out the following:

1. What is your program’s Chain of Command?
2. Where are emergency telephone numbers posted?
3. Where are emergency medications - Epipens® and rescue asthma inhalers stored?
Learner Objective Review for Unit 1

1. The Five Rights of Medication Administration are the right:
   1. CHILD   2. MEDICATION   3. DOSE
   4. ROUTE   5. TIME

2. The three documents necessary for safe medication administration:
   1. Licensed Practitioner’s Order
   2. Pharmacy Label
   3. MAR

*The Five Rights must match on all three documents

4. The Rule of Three: Before administering any medication to any child, you must compare Five Rights on the licensed practitioner’s order, the pharmacy label and the MAR. The Five Rights must match on all three documents before you may administer a medication.

5. Roles:
   - Licensed Practitioners may diagnose and may prescribe treatment including medications.
   - Pharmacists may dispense medication according to a licensed practitioner’s order.
   - Medication certified staff may administer medications according to a licensed practitioner’s order to children who live in any DCF licensed or operated child-caring facility or extended day program
   - The program nurse (RN or LPN) provides ongoing supervision of medication administration staff including internships and annual on-site observations
6. **Responsibilities of the DCF Medication Certified Staff**

To ensure safe medication administration, certified staff must:

- Always follow the DCF Medication Administration Procedure.
- Always use the Rule of Three to check the Five Rights before administering any medication.
- Know the desired effect of a medication and observe and report any side effects.
- Adhere to any precautions.
- Follow any specific instructions from the licensed practitioner.
- Contact the Chain of Command whenever you have a question or concern.

7. **When must you contact the Chain of Command?**

The Chain of Command must be contacted whenever:

- You have a question about a licensed practitioner's order, a pharmacy label or MAR.
- There is a change in the condition of a child.
- Any incident where a child does not receive his medication as ordered.
- Any incident where medication is not properly safeguarded.
- Any time you have a question or concern.
UNIT TWO

Medication Terminology
Learner Objectives for Unit 2

After completing Unit 2 the learner will be able to:

1. Define the terms trade name and generic name for medications.
2. Define active ingredients and inactive ingredients.
3. Define controlled medication and non-controlled medication.
4. Define labeled and unlabeled (off-labeled) use of a medication.
5. Describe the different routes of administration.
6. List the steps of the DCF Medication Administration Procedure.
7. Demonstrate the correct method for administering oral medications following the DCF Medication Administration Procedure. (SKILL CHECK)

Terms to Define:

- Trade Name
- Generic Name
- Labeled Use
- Unlabeled Use
- Controlled medication
- Route
- Usual Dose
- Medication's Action
- Side Effects
- Active Ingredient
- Inactive Ingredient
In this unit you will learn about some the terms used to describe the names of medications, how they work and how they are being used. You will also learn how to safely administer an oral medication according to the DCF medication administration procedure and demonstrate this skill to your instructor.

**Learner Objective 1 Define the terms trade name and generic name**

**The Medication’s Name**

The name of medication is one of the five rights that you must know before administering a medication. A medication will have a *trade name* and a *generic name*.

*Definition: The trade name is the marketing name chosen by the drug company that makes the medication.* The trade name may also describe something about the action of the drug. Trade Names usually begin with a capital letter and may be followed by a Trademark®. A drug may have more than one trade name. Motrin ® and Advil ® are the trade names from different drug companies for the same medication (ibuprofen).

*Definition: The generic name is the chemical name.* Generic names are usually written beginning with a lower case (small) letter.

Examples of trade and generic names

<table>
<thead>
<tr>
<th>Trade</th>
<th>generic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tylenol</td>
<td>acetaminophen</td>
</tr>
<tr>
<td>Prozac</td>
<td>fluoxetine</td>
</tr>
<tr>
<td>Ritalin</td>
<td>methylphenidate</td>
</tr>
</tbody>
</table>
Why is this important?

Licensed practitioner’s often order medications by their trade names, but the pharmacy may fill the prescription with the generic version. As medication certified staff you must be aware of this possibility. If a drug name on the order and pharmacy label does not match, hold the medication and contact your chain of command for direction.

In the DCF medication certification training materials, the Trade name will be capitalized and the generic name will be written in parentheses: Motrin (ibuprofen). You are not responsible to know specific trade or generic drug names for the certification written exam. When you administer medications you must know the names of the medications you give.
Learner Objective 2- Define Active ingredients and Inactive ingredients:

Active and Inactive Ingredients in Medications
Medications are made up of various ingredients. In a tablet of Tylenol for example, acetaminophen is the actual chemical that will relieve pain or reduce a fever. Other ingredients are mixed in to form the tablet and to make it easy to swallow.

Definition:

- **Active ingredient** is the actual medication that produces the desired effect or benefit medication is prescribed for.

- **Inactive ingredients** are added to the active ingredient to improve the drug’s appearance, make the drug easy to swallow, or improve the taste. Inactive ingredients may be flavors, dyes, water.
Learner Objective 3 - Define controlled and non-controlled medications

A medication may also be described as controlled or non-controlled depending on how likely it is that the medication could be abused or addictive.

**Controlled Medication:**

*Definition:* Controlled medication is medication that the Drug Enforcement Agency considers to have a potential for abuse or addiction.

All controlled medications must be stored in a double-lock storage system that is accessible only to DCF medication certified staff and licensed medical staff. Controlled medication must be counted at every change of shift and when the responsibility for the medication changes.

Many of the medications that treat Attention Deficit and Hyperactivity Disorder (ADHD) are controlled medications. Narcotic pain relievers are also controlled medications.
Non-Controlled Medication:

Definition: Non-controlled medication is medication that is not considered to be addictive or have a potential for abuse. Most of the medications you will administer including many medications that treat psychiatric disorders are non-controlled. Also, over the counter (OTC) medications are non-controlled.

Non controlled medication must be kept locked and be accessible only to DCF medication certified staff or licensed medical staff.

More information about proper storage and safeguarding of medication is discussed in Unit 10: Storage and Control.
Learner Objective 4  Define labeled and unlabeled (off-labeled) use

Labeled use or Unlabeled use?

When a drug company develops a new medication, it is tested to be sure that it is safe and effective in treating the illness or disorder it was designed to treat. The new medication is then approved by the Food and Drug Administration (FDA) for a certain use.

Labeled Use:

*Definition: Labeled Use of medication is using a medication for a purpose that has been approved of by the FDA.* Drug reference book will tell you the approved or labeled use for a medication.
Sometimes a child may be prescribed a medication for a purpose other than the purpose approved by the FDA. This is an unlabeled or off-labeled use.

**Unlabeled Use:**

*Definition: Unlabeled /Off-labeled use of a medication is the use a medication for a purpose that has not been approved of by the FDA.*

Medications used to treat psychiatric or behavioral health issues are often prescribed for an unlabeled use. You must know why a child is being prescribed a certain medication.

**Example:**

*Cardiovascular medications may be used to treat psychiatric conditions. These medications are approved by the FDA to treat blood pressure or heart problems, but are also used to treat anxiety.*
Learner Objective 5   Describe the different routes of administration

Medications may be administered in many different ways. Most of the time you will administer medications by mouth - pills and liquid medications. Routes of medication administration include:

- **Oral** - by mouth; the most common route used.
- **Eye drops and eye ointment** - medication is placed in the eye or on the lower eye lid.
- **Ear drops** - medication is dropped into the ear canal.
- **Inhaled medications** - medication is breathed in to treat breathing problems such as asthma.
- **Nasal spray** - medication is sprayed into the nose.
- **Topical** - medication is applied to the skin. Topical medications are often used to treat skin problems. Medication on a patch is absorbed through the skin into the blood stream.

The Route of administration will affect how quickly a medication is absorbed and distributed. Inhaled medications are absorbed within seconds into the blood vessels in the lungs. Oral medication generally takes about 30-60 minutes to be absorbed from the stomach or intestine into the blood stream. Topical medication may take hours to be absorbed through the skin.

**REMEMBER!**

DCF Medication Certified staff do not administer rectal or vaginal suppositories.

DCF Medication Certified staff do not administer injectable medication (shots or needles) except for the Epi-pen® auto-injector.
Learner Objective 6: List the steps of the Medication Administration Procedure

The DCF Medication Administration Procedure is a step by step process that must be followed every time you administer medications to a child.

The DCF Medication Administration Procedure

- Approach the task in a calm manner allowing no distractions
- Wash hands before and after medication administration
- Assemble appropriate equipment
- Perform the Rule of Three:
  - First Check: Compare the Licensed practitioner's order with the pharmacy label to see that the 5 Practitioner Rights match
  - Second Check: Compare the pharmacy label with the pharmacy label to the MAR to see that the 5 Rights match
  - Third Check: Compare the MAR with the licensed practitioner's order to see that the 5 Rights match
- Pour the correct dose of medication
- Identify the correct child
- Administer the medication properly utilizing the proper techniques.
- For oral medication: perform a mouth check to ensure that the medication has been swallowed
- Document appropriately on the medication administration record
- Return the medication to the locked area and clean up
Learner Objective 7 - Demonstrate correct method for administering oral medications following the DCF Medication Administration Procedure.

SKILL: How to administer an oral medication

- Approach the task in a calm manner allowing no distractions
- Wash hands before and after medication administration
- Assemble appropriate equipment
- Perform the Rule of Three
  - **First Check:** Compare the Licensed Practitioner's order with the pharmacy label to see that the 5 Rights match
  - **Second Check:** Compare the pharmacy label with the MAR to see that the 5 Rights match
  - **Third Check:** Compare the MAR with the Licensed Practitioner's order to see that the 5 Rights match
- Pour the correct dose of medication
- Identify the correct person

Technique for Administering Oral Medication:

1. Ask the child to remove any food, gum from his mouth
2. Pour the accurate dose
   - a. Place the correct number of pills
   - b. Pour the correct amount of liquid into a medication cup
   - c. Pour liquid medication into the medication cup that is placed on a flat surface and at eye level
3. Administer the medication to the client with juice or water
4. Perform a mouth check to ensure that the medication has been swallowed

- Document appropriately on the medication administration record
- Return the medication to the locked area and clean up
Your instructor will demonstrate how to administer an oral medication and how to correctly pour a liquid medication.

Use the licensed practitioner's orders, pharmacy labels and MARs on pages 2 and 3 in your workbook for this skill practice and check.

You will have the opportunity to practice this skill and then demonstrate it back to your instructor.

When you have successfully demonstrated the correct technique for administering an oral medication following the DCF Medication Administration Procedure, you and your instructor will check of this skill on the check sheet in the workbook.
Learner Objective Review for Unit 2

1. Define the terms trade name and generic name for medications

Trade name: marketing name - Tylenol®
Generic name: chemical name - acetaminophen

2. Define active ingredients and inactive ingredients.

Active ingredient: chemical that actually causes the effect
Inactive ingredients: dyes, water, added to form a tablet, add flavor or color

3. Define controlled medication and non-controlled medication.

Controlled medications: have the potential to be abused or addictive

4. Define labeled and unlabeled (off-labeled) use of a medication.

Labeled Use of medication is using a medication for a purpose that has been approved of by the FDA.
Unlabeled /Off-labeled use of a medication is the use a medication for a purpose that has not been approved of by the FDA.

5. Describe the different routes of administration.

Oral medications, eye drops and ointments, ear drops, nasal sprays, inhaled medications, topical medications.

6. List the steps of the DCF Medication Administration Procedure.

See page 34
UNIT THREE

Know the Medications
Learner Objectives for Unit 3

After completing this unit the learner will be able to:

1. Identify what you must know about a medication before you administer it.
2. Describe the process that must occur in the body for a medication to have an effect.
3. List and describe the effects a child may have to a medication.
4. Define the term *side effect* and give examples.
5. Identify the correct steps to take if a child experiences a side effect.
6. Describe anaphylaxis and the appropriate steps to follow.
7. List factors that affect a child’s response to medication.
8. Define drug to drug interaction.
9. Describe drug to food interaction.
10. List the factors that affect a child's compliance with taking medication.
11. Define commonly used medical abbreviations.

Terms to Define:

- Absorption
- Distribute
- Metabolism
- Individual Effect
- Desired Effect
- Side Effect
- No Effect
- Adverse Reactions
- Allergic Reaction
- Anaphylaxis
- No Effect
- Drug to Drug Interaction
- Drug to Food interaction
- Compliance
- Holding a medication
Learner Objective 1

Identify what you must know about a medication before you administer it.

To safely administer medications, you must know the following information about the medications you will administer:

- Medication’s name
- Medication’s use
- Medication’s action
- Controlled or non-controlled
- Usual dose
- Side effects
- Precautions & considerations

**Medication's Name** - As presented in Unit 2, a medication will have a trade name and a generic name. The medication name is one of the Five Rights.

**Medication’s Use and Action**

The use and action tell you what conditions or illnesses the medication treats and how that medication is expected to help the child.

*Example: The use for an antibiotic is to treat infections caused by bacteria. The action of the antibiotic is to destroy the bacteria that is causing the illness.*
Controlled or non-controlled - Remember that a controlled medication is a medication that may be possibly abused or addictive.

Usual Dose

Definition: The usual dose is how much medication is considered to be safe and effective to treat a particular condition or illness. You can find this information in a current drug reference book. These references may include dose information only for adults, not children. The licensed practitioner will use the child's age, size and weight to help decide what dose to prescribe. Most medications have a range of doses that are considered to be safe. Doses are usually measured in milligrams (mg).

Contact the chain of command if you are unsure or have a question about a dose of medication.

The Medication’s Side Effects

All medication has the potential to cause side effects. You must know what side effects to be watching for. You must immediately report to your chain of command any unusual complaints from the child or if you notice anything unusual about the child. The more quickly a side effect is reported the more quickly the child can be evaluated. Long-term problems may then be prevented.
Medication’s Precautions and Special Considerations

Precautions and special considerations are steps that you should take to protect the child's safety and help the child get the most benefit from the medication. You can help prevent side effects by following the medication's precautions and special considerations.

Pharmacists place stickers on medication containers with information about precautions or special considerations that should be followed to ensure safe medication administration. Medication reference books are also a source for information about precautions and special considerations.

Review: What must you know about a medication before you administer it?

- Medication’s name
- Medication’s use
- Medication’s action
- Controlled or non-controlled
- Usual dose
- Side effects
- Precautions & considerations
- Store in refrigerator
- Avoid prolonged sun exposure
- Take on an empty stomach
- May cause drowsiness
Learner Objective 2

Describe the process that must occur in the body for a medication to have an effect

For any medication to have an effect, it must **enter** the body and be **absorbed**, **distributed**, **metabolized**, and then **eliminated** from the body.

1. **Medications must first enter the body.**
   - An oral medication, tablet or liquid must be swallowed.
   - A topical medication such a medication patch enters the body through the skin.

2. **Medications then are absorbed into the bloodstream.**
   - Oral medications are absorbed into the bloodstream from the mouth, stomach and/or intestine.
   - Topical medications are absorbed through the skin into the capillaries (tiny blood vessels) near the skin surface.

3. **Distribution** of the medication occurs once it enters the bloodstream and is transported throughout the body.

4. **Metabolism** is the way the body breaks down and changes the medication so it can more easily eliminated. **Metabolism** of medication usually occurs in the liver.

5. The metabolized medication is **eliminated** from the body usually through the kidneys and into the urine.
A problem in any of these steps may affect how well the medication works and if the child can safely take the medication.

- If the child has a digestive disorder, his body may not be able to absorb the medication properly and the medication may not have its best effect.

- If a child has a liver disease such as hepatitis her body may not be able to metabolize the medication well.

- Kidney disease can affect how well the body eliminates the medication.
How Medication Works In the Body

1. Enter

2. Absorbed

3. Distributed

4. Metabolized

5. Eliminated
Learner Objective 3
List and describe the effects medication may have on a child.

Learner Objective 4
Define the term *side effects* and give examples.

Effects of Medications on Children
Once a medication enters the child’s body and is absorbed, the child will have some kind of response to the medication. It is important to remember that every child will have his own unique response to medication. This is called an *individual effect*.

**Individual Effect:** Every person responds to medication in his own unique way.

The three types of effects that a medication may have on a child are:

- Desired (Therapeutic) or Intended Effect
- No Effect
- Side Effects

1. **Desired (Therapeutic) or Intended Effect**
Definition: The medication worked the way it was intended. The child felt better and was helped by the medication.

   *Example:* Penicillin cures Strep Throat by destroying the bacteria that causes the illness. The child’s sore throat is relieved and his temperature returns to normal.

2. **No Effect**
Definition: The medication did not work as it was supposed to and the child was not helped by the medication.

   *Example:* Ritalin did not decrease hyperactivity and increase attention span. The child continues to be unable to keep focused at school and struggles to complete a task.
3. Side Effects

*Definition*: side effects are any response to medication that is not the desired effect. They may range from mild to severe. Side effects may also be called unintended effects and adverse reactions.

All medication has the power to cause harm. Medication certified staff are expected to be aware of the possible side effects medications may cause. Medication information resources must be available to medication certified staff.

Mild side effects may be expected especially when a child is starting on a new medication. While they may be unpleasant, these effects often will go away after a period of time as the child's body adjusts to the medication.

Examples of common, mild side effects:
- nausea
- headache
- difficulty sleeping
- drowsiness.

More serious side effects, sometimes called *adverse reactions*, are *unexpected* and may be life-threatening.

Examples of serious side or adverse reactions:
- allergic reactions (discussed further in the next section)
- twitches or tics, changes in gait, or difficulty swallowing. These are adverse reactions sometimes seen in children prescribed certain medications that treat psychiatric illnesses.
- severe drowsiness or decreased alertness
- high fever
Allergic reactions

Allergic reactions are serious side effects. Signs of an allergic reaction include:

- Rashes or hives on the skin
- Watery eyes, runny nose
- Wheezing and coughing
- Difficulty swallowing
- Difficulty breathing

An allergic reaction is a serious side effect. Contact your Chain of Command immediately if a child has any signs of an allergic reaction.
Learner Objective 5

Identify the correct steps to take if a child experiences a side effect.

If a child experiences a side effect, hold the medication and contact your chain of command. You must also document the signs of the side effect, any complaints the child made and all directions you were given about taking care of the child.

To hold a medication means that you wait to give a medication until all questions and concerns about the medication or the child’s condition are answered by an appropriate member of the Chain of Command.
Learner Objective 6

Describe anaphylaxis and the appropriate steps to follow.

**Anaphylaxis:** a severe, potentially fatal allergic reaction

**Medical Emergency!**

- Anaphylaxis affects the entire body. It can start within seconds of exposure to a medication, food, insect bite or other allergen.
- Symptoms may *quickly* progress. The child may first feel anxious and itchy. A rash and swelling on the face and body sets in. Finally, constriction of the airway and swelling of the throat, difficulty breathing develops. Respiratory failure (inability to breathe) may soon follow.
- This is an **emergency situation**. Call 911 and follow the emergency policy and procedure at your facility.
- An epinephrine auto-injector (Epi-pen) may be ordered and should be administered as soon as symptoms appear or you suspect anaphylaxis. The Epi-pen contains medication that can temporarily stop the reaction.
- If a child in your facility has an Epi-pen ordered, the child and staff must be trained in the use of the Epi-pen.
- Refer to your facility's emergency medical policy and procedures.
Learner Objective 7

List factors that affect a child’s response to medication.

As discussed earlier in this unit, a child will have an individual response to medication. This is because each child is a unique person. Some of the factors that will affect how a child will respond to a medication are:

1. **Age, Size and Weight** of the child

   As children grow and develop their responses to medications will change, too. The licensed practitioner will consider the child's age, size and weight before deciding on the medication and the dose to prescribe.

2. **Gender**

   Male and female hormones affect how medications will be absorbed, distributed, metabolized and distributed.

3. **Route of administration**

   The route will affect how quickly a medication is absorbed and distributed and how quickly the child will respond to the medication's effects.

4. **Genetics**

   Genetics may influence the way medication is absorbed, distributed, metabolized or eliminated from the body. For example, members of a certain family may all lack the digestive enzymes that affect the absorption and metabolism of some medications.
5. **Chronic Illness and General Health and Nutritional Status** -

Chronic Illness may affect the absorption, distribution, metabolism, and elimination of medication. A good diet can help medications be more effective.

6. **Drug to Drug Interactions** -

Each medication a child takes can affect how the child responds to any other medication. More about drug interactions is on page 53.

7. **Drug to Food Interactions** -

When and what a child eats may change how well a medication is absorbed and how it will affect the child. More information is on page 54.
Learner Objective 8 Define drug to drug interactions

**Definition:** Drug to drug interaction - the effects of one medication are changed by the presence of another medication in the body.

Drug to drug interactions may occur when *more than one medication* is taken by a client. Many children are prescribed several medications that could possibly interact with each other. The licensed practitioner must know what other medications a child is prescribed including any herbal or alternative medicine preparations. Some drug to drug interactions can be life-threatening.

*Examples:*
*Antibiotics given with birth control pills reduce the desired effect of the birth control pill.*

*Serious interactions can occur when the herb St. John's Wort is taken with other medications including commonly prescribed medications that treat depression.*
Learner Objective 9 Define drug to food interactions

Definition: Drug to food interactions - Food may affect the way a medication is absorbed. Food can also change the effect of the medication.

Food changes the acidity (pH) of the stomach. The pH of the stomach affects the absorption of medications. Some medications need a certain pH level to be absorbed well. Some medications may also interact negatively with certain foods.

Examples:

_Tetracycline, an antibiotic, must be taken on an empty stomach with a glass of water. This medication must not be administered with dairy products because they will prevent the absorption of the tetracycline._

_Grapefruit juice can interact with many medications and should not be administered with medication._

When a medication must be administered on an “empty stomach,” the medication should be given one hour before a meal or two hours after a meal.
Learner Objective 10

List factors that affect children’s compliance with taking medications.

Compliance in medication administration is a child’s willingness to take his medications as prescribed.

Administering medication to children can be challenging especially if a child does not want to take his medication. Factors that can affect compliance include:

1. **Taste of the medication**
   
   It is understandable that a child will not want to take a medication that does not taste good. Your pharmacist or nurse may have suggestions in how to improve the taste of a medication. Administering the medication with plenty of water can be helpful.

2. **Smell of the medication**
   
   The sense of smell is closely linked to taste. A medication that smells bad is likely to taste bad, too.
3. **Color of the medication** –

Children may have negative associations with a certain color or a certain color medication. The pharmacist or nurse may be able to help with ways to disguise the color or offer a preparation in a different color.

4. **Consistency of the medication** –

A heavy or chalky medicine such as an antacid or milk of magnesia is unpleasant. Ask the pharmacist or nurse if this medication can be mixed with something else to make it easier for the child to take.

5. **Parental approval**

Parents may also be concerned about possible side effects and long term effects of their child being on a medication. Also, psychiatric medications may have a negative stigma to them. The child’s family may not believe in using medication to treat mental health conditions.

**Remember:** Children have the right to refuse medication. If a child does not want to take his prescribed medication it is important to find out why. Maybe he is experiencing a side effect or does not understand why he needs to take it. Report any refusals to your chain of command, document and follow-up as directed.
Exercise: Referencing Medication

Several types of reference books are available that you can use to look up information about medications. During this exercise you will learn how to use a medication reference book and find the information you need to know. You may use the worksheet in the workbook to write down the information about the medication your instructor will ask you look up.

Workbook pages 4 and 5.
Learner Objective 11  Define commonly used medication abbreviations

COMMON MEDICAL ABBREVIATIONS

Medical abbreviations can be easily misunderstood or have more than one meaning. Because of this potential danger, the use of abbreviations is discouraged, but licensed practitioners will often use abbreviations when they write orders. Medication certified staff must know these abbreviations so that they can understand and follow the licensed practitioner's orders.

If you do not understand an abbreviation on a licensed practitioner's order, you should hold the medication and contact the chain of command for directions and/or clarification.

On the following page are commonly used abbreviations that medication certified staff must know.

The workbook has exercises to help you learn the abbreviations.

Workbook page 6.
Abbreviations that describe the time or how often a medication is to be administered:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q Day</td>
<td>Every Day</td>
</tr>
<tr>
<td>BID</td>
<td>Twice a day</td>
</tr>
<tr>
<td>TID</td>
<td>Three times a day</td>
</tr>
<tr>
<td>HS</td>
<td>At bedtime (Hour of Sleep)</td>
</tr>
<tr>
<td>Q # H</td>
<td>Every # hours</td>
</tr>
<tr>
<td></td>
<td>Example: Q 4 H = every four hours</td>
</tr>
<tr>
<td>PRN</td>
<td>As Needed</td>
</tr>
<tr>
<td>AC</td>
<td>Before meals</td>
</tr>
<tr>
<td>PC</td>
<td>After meals</td>
</tr>
</tbody>
</table>

Abbreviations that describe the dose or the form of the medication:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mg</td>
<td>milligrams</td>
</tr>
<tr>
<td></td>
<td>Example: 325 mg of Tylenol</td>
</tr>
<tr>
<td>ml</td>
<td>milliliter - for liquid medications only</td>
</tr>
<tr>
<td>cc</td>
<td>cubic centimeter – for liquid medications only</td>
</tr>
<tr>
<td>Tab</td>
<td>Tablet</td>
</tr>
<tr>
<td>Cap</td>
<td>Capsule</td>
</tr>
<tr>
<td>tsp</td>
<td>teaspoon – for liquid medications only</td>
</tr>
<tr>
<td>Tbsp</td>
<td>Tablespoon – for liquid medications only</td>
</tr>
<tr>
<td>NTE</td>
<td>Not To Exceed – the maximum number of doses to be administered in a certain time period; often seen with PRN medication</td>
</tr>
<tr>
<td></td>
<td>Example: Tylenol 650mg p.o. Q4H NTE four doses in twenty four hours.</td>
</tr>
</tbody>
</table>
**Abbreviations related to the route of administration:**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.O. (p.o.)</td>
<td>By mouth</td>
</tr>
<tr>
<td>O.U.</td>
<td>Both eyes</td>
</tr>
</tbody>
</table>

**Abbreviations that describe the child's history of allergies:**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NKA</td>
<td>No Known Allergies (the child is not allergic to anything as far as is known)</td>
</tr>
<tr>
<td>NKDA</td>
<td>No Known Drug Allergies (the child has no allergies to any medication but may be allergic to other things such as a food or pollen.)</td>
</tr>
</tbody>
</table>

**Abbreviations that describe special qualities about the medication:**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
</table>
| SR – sustained release | All these abbreviations mean that the medication takes an extended period of time to be absorbed and distributed.  
These types of medications may not need to be administered as many times a day. 
They should not be crushed or cut in half without permission from a pharmacist. |
| CR – controlled release |                                                                                                                                             |
| DR - delayed release |                                                                                                                                             |
| XL – extra long release |                                                                                                                                             |
| MDI              | Metered Dose Inhaler 
Asthma “pumps” that administer a specific amount of medication with each spray.                                                                 |

**Abbreviations that give special instructions:**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPO</td>
<td>Nothing by mouth (may be ordered before a child has surgery or blood work)</td>
</tr>
<tr>
<td>c</td>
<td>with (Give c water: give with water)</td>
</tr>
<tr>
<td>s</td>
<td>without (Give s food: give without food)</td>
</tr>
</tbody>
</table>

**Equivalencies:**

<table>
<thead>
<tr>
<th>Units</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>One tsp</td>
<td>= 5 ml or 5 cc</td>
</tr>
</tbody>
</table>
Learner Objective Review for Unit 3

1. Identify what you must know about a medication before you administer it.
   - Medication’s name
   - Medication’s use
   - Medication’s action
   - Controlled or non-controlled
   - Usual dose
   - Side effects
   - Precautions & considerations

2. Describe the process that must occur in the body for a medication to have an effect

   ENTER   ABSORB   DISTRIBUTE   METABOLIZE    ELIMINATE

3. List and describe the effects a child may have to a medication.
   - Individual Effect
   - Desired/Therapeutic Effect
   - No Effect
   - Side Effect
   - Allergic Effect

4. Define the term "side effects" and give examples
   Any response to a medication that is not the desired effect; may be mild to severe.
   Includes: nausea, headache, difficulty sleeping, high fever, muscle twitching and tics

5. Identify the correct steps to take if a child experiences a side effect.
   HOLD - CONTACT CHAIN OF COMMAND - DOCUMENT

6. Describe anaphylaxis and the appropriate steps to follow.
   Severe, potentially fatal allergic reaction - CALL 911
7. List factors that affect a child’s response to medication.

   Age, size, weight, gender, route of administration, genetics, general health status, drug and food interactions.

8. Define drug to drug interaction

   The effects of one medication are changed by the presence of another medication. May occur whenever there is more than one medication in the child's system.

9. Describe drug to food interaction.

   The presence of food in the stomach affects how a medication is absorbed.

10. List the factors that affect a child's compliance with taking medication.

    Taste, Smell, Color, and Consistency of the medication Parental Approval

11. Define commonly used medical abbreviations.
Unit 4 Documentation

The Documentation Unit is divided into three sections: I - the Licensed Practitioner’s Order. II - the MAR and III - Practice in the Workbook

Documentation I:
The Licensed Practitioner’s Order

This unit will show you how medications may be ordered by the licensed practitioner.

Learner Objectives for Unit 4, Section 1:

At the completion of this unit the learner will be able to:

1. Identify the components of a licensed practitioner’s order (review from Unit 1)
2. Explain how often orders must be renewed according to DCF regulation.
3. Identify the documentation necessary for OTC medication
4. Describe standing orders.
Learner Objective 1

Identify the components of a licensed practitioner’s order (Review from Unit 1)

The licensed practitioner’s order is written by a medical professional who is licensed to assess a child, make a diagnosis and then prescribe medication and treatment. A licensed practitioner’s order may also be called a prescription or doctor’s order.

A licensed practitioner’s order must include the Five Rights, be signed and dated within the last 90 days. It may include special directions about how to best administer the medication.

<table>
<thead>
<tr>
<th>NAME of CHILD</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME of MEDICATION  DOSE ROUTE TIME</td>
</tr>
<tr>
<td>Any special directions</td>
</tr>
<tr>
<td>Signature of Licensed Practitioner</td>
</tr>
<tr>
<td>Dated within last 90 days.</td>
</tr>
</tbody>
</table>

Licensed practitioner's orders may be in many different formats. Some are handwritten but electronic or computer-generated orders are becoming more common. During your internship you will see what the orders in your facility look like. If an order does not look familiar to you, hold the medication and call your chain of command.
Learner Objective 2

Explain how often licensed practitioner's orders must be renewed according to DCF regulation

As children grow and develop, their needs change. To be sure that a child is being prescribed the correct medication for his current condition and stage of development, a licensed practitioner must review children's orders every 90 days.

DCF regulation requires that all medication orders for medication be reviewed every 90 days by a licensed practitioner who knows the child and has assessed his current needs.

- More frequent review is sometimes necessary as a child is adjusting to a new medication or is slowly being taken off a medication.

- Laws require that a new written order for controlled medication be sent to the pharmacy every time a refill is needed, usually every 30 days for a medication that is administered every day.
Learner Objective 3  Identify the documentation necessary for OTC medication.

According the State of Connecticut statutes and regulations, you must have a licensed practitioner’s order to administer any medication including over the counter (OTC) medications to a child. Orders for OTC medication must include the Five Rights, be written in the last 90 days and be signed by a licensed practitioner. Many OTC medications are ordered to be used as needed (PRN) to treat common childhood illness or symptoms such as a cold or fever.

Example: Linus Van

Liquid Motrin
Give 100mg p.o. every 6 hours, PRN for fever over 101°F
NTE 4 doses is 24 hours Charles Smith, MD 4/1/2008
Contact MD if fever does not go down or continues for more than 24 hours.

Note how specific this order is about when and for what reason you would administer the medication and when you should call the doctor.
Learner Objective 4  Describe standing orders

Standing Orders may be used to prescribe Over the Counter (OTC), as needed medications.

Standing orders are licensed practitioner’s orders for a specific child. They must include the Five Rights, have a current date and be signed by the licensed practitioner. Specific instructions must include the indication (why you would give it) and when the licensed practitioner should be contacted. Standing orders must be based on the specific child’s age, size and weight, health and medical condition and any other medications the child may be prescribed.

Definition:  Standing orders are licensed practitioner’s orders that include PRN OTC medications used to help treat or manage routine, minor childhood illnesses or symptoms.

<table>
<thead>
<tr>
<th>Standing Orders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Carson Brown</td>
</tr>
<tr>
<td>Allergies: peanuts</td>
</tr>
<tr>
<td>Other medications: Prozac 20mg QD</td>
</tr>
</tbody>
</table>

1. Tylenol 325 mg tabs. Give 2 tabs (650mg) p.o. every 4 hours PRN for headache, general discomfort or fever over 101°F. Do not exceed 4 doses in 24 hours. Do not give within 6 hours of giving ibuprofen. Call physician if fever or pain does not resolve after 2 doses.

2. Tums – Give one tablet p.o. every four hours as needed for stomach upset or complaint of heartburn. Do not exceed more than 4 doses in 24 hours. Call physician if stomach upset or heartburn occurs more than 3 times a week.

3. Ibuprofen 200mg tabs. Give 2 tabs (400 mg) p.o. every 6 hours PRN for muscle pain. Do not exceed 4 doses in 24 hours. Do not give within 4 hours of giving Tylenol. Call physician if pain persists after 24 hours.

Licensed Practitioner: Charles Smith, MD  Date: 5/1/2008
This unit presents information about safe documentation practices for medication administration.

**Learner Objectives for Unit 4, Section 2:**

At the completion of this unit, learners will be able to:

1. List the general rules of correct documentation.
2. Describe what must be included in the documentation of non-controlled medication.
3. Describe what must be included in the documentation of controlled medication.
4. Describe what must be included in the documentation of PRN medication.
Documenting correctly is one of the most important parts of safe medication administration. A single error in documentation can put the health and safety of children at risk and lead to repeated errors in medication administration.

To review from Unit 1, three documents that you must have in order to give medications are:

- The licensed practitioner’s order
- The pharmacy dispensed and labeled medication
- The completed medication administration record (MAR)

You will use the Rule of 3 and compare the Five Rights on these documents to be sure that they match before administering any medication.

You will use the MAR to document when you administer medication. In part three of this unit you will complete an MAR for a non-controlled medication, a controlled medication and a PRN medication.
Learner Objective 1  List the general rules of documentation

The general rules of documentation apply to medication administration and any documentation you complete as part of your work caring for children.

1. Use permanent ink pens. Do not document in pencil or erasable pens. Your facility may have a policy about which color ink must be used.

2. Write legibly. Other staff will have to be able to read and understand what you have written in order to safely administer medications or to follow-up.

3. Use only approved abbreviations. Everything you document must be clear to everyone else.

4. Do not attempt to obliterate a documentation mistake. Do not use white-out. If you make a mistake in documentation, draw a single line through the mistake, write your initials and date above it.

    4/1/08 MM
    Example: Child threw the chair.
5. Use full, proper names and titles when documenting about contacts.

Example:

April 1, 2008.11pm At 9:30 pm this writer called the program nurse, Clara Barton, RN, to report that Linus Van had a fever of 101.4°F at 9:15 pm and that I administered 650 mg Tylenol according to his standing orders. Mikey Moose, CCW

6. Do not use one child’s full name in another child’s record.

Example:

Client Record for Lucy Belt

April 1, 2008, 4pm. At 3pm today, Lucy tried to hit another client (C.B.) during outside play time. She stated she was angry because C.B. would not play football with her. C.B. was not actually hit and was not injured. Lucy was counseled on how to express anger appropriately. Mikey Moose, CCW

7. The time and date should be noted in all documents.

See the examples for numbers 5 and 6.
Documenting Medication Administration - Using the MAR

The medication administration record (MAR) is filled in with the Five Rights and has places for you to document each dose of medication you administer. There are differences in how you document non-controlled medication versus controlled. PRN medication documentation has additional requirements so you can record when and why you administered a medication and whether it was helpful to the child.

Learner Objective 2 Documenting Non-controlled medications

Most of the medications that you will administer will be non-controlled medications. Using the current, licensed practitioner’s order and the pharmacy label you can complete the MAR with all the necessary information including the Five Rights.

Documentation of Non-Controlled Medication

- Every child who is prescribed medication must have his own MAR(s).
- Every medication for each child must be documented on a MAR.
- The MAR must include the following:
  - Month and year that it will be used.
  - The 5 Rights: child’s name, medication, dose, route, and time
  - The medication’s start date, stop date and/or review date.
  - A list of the child’s allergies
  - A place to document the time and date of each dose administered.

- There are different types of MARs. You will learn how to use your facility’s documentation during your internship.
<table>
<thead>
<tr>
<th>ORIGIN DATE</th>
<th>RENEWAL DATE</th>
<th>DRUG</th>
<th>DOSE</th>
<th>ROUTE</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/08</td>
<td>4/1/08</td>
<td>Tegretol</td>
<td>100mg</td>
<td>p.o.</td>
<td>8A M</td>
</tr>
</tbody>
</table>

You will write your initials in the box that corresponds with the time and date that you administered the medication.

Mikey Moose’s initials are in the 7am/1st day of the month box because that is when he administered this medication.
Learner Objective 3  Documenting Controlled Medications

Because controlled medications have the potential for addiction and abuse, extra documentation is required by law to ensure that all the controlled medication the facility is always accounted for. Regulations require that when you administer a controlled medication you document how much of that medication is remains.

The medication administration record for controlled medications must include:

1. Month and year that it will be used.
2. The 5 Rights, name, medication, dose, route, and time
3. The start date, stop date and/or review date.
4. A list of the child’s allergies
5. The amount of medication received from the pharmacy, the time and date of each dose administered, and the amount remaining after each dose administered.
6. The prescription (Rx) number that is found on the pharmacy label.
7. The signatures of the individuals completing the controlled drug count at the beginning and end of each shift.
Regulations also require that all controlled medications in the facility be counted at the beginning of each shift or whenever responsibility for the controlled medication is transferred from one staff member to another.

The Controlled Medication Count:

1. A medically licensed or DCF medication certified person must have the responsibility for the controlled medication by carrying the keys required to access the facility medication. A separate key must also be carried for the controlled medication storage.

2. Prior to assuming this responsibility, the “oncoming” medication certified person must count all of the controlled medication in the facility with the “outgoing” medication certified person.

3. If actual amount of medication matches the documented amount - there is no discrepancy - both staff must sign the count sheet.

4. When counting the medication check the prescription number on the pharmacy label and on the medication administration record to be sure that they match.

5. During your internship you will learn how to do the control drug count according to your facility’s policy and procedure.
<table>
<thead>
<tr>
<th>MEDICATION RECORD</th>
<th>CLIENT NAME</th>
<th>ALLERGIC TO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONTH</td>
<td>Violet Ray</td>
<td>NKA</td>
</tr>
<tr>
<td>YEAR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IDENTIFICATION OF STAFF</th>
<th>MM</th>
<th>Mikey Moose, CCW</th>
</tr>
</thead>
<tbody>
<tr>
<td>(INITIALS AND SIGNATURES)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ORIG. DATE</th>
<th>RENEWAL DATE</th>
<th>EXP. DATE</th>
<th>DRUG °</th>
<th>DOSE °</th>
<th>ROUTE °</th>
<th>TIME °</th>
<th>H</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/08</td>
<td>2/1/08</td>
<td></td>
<td>Ritalin Give 10 mg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>7</td>
<td>a</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>M</td>
</tr>
</tbody>
</table>

JUNE 2008
At 7am on 1/1, Don Duke was the medication certified staff leaving and Mikey Moose was coming on duty. Together they counted Violet Ray's controlled medication, Ritalin. The documentation matched the actual number of Ritalin in the medication cabinet, so both Don and Mikey signed that the count was correct.

Mikey administered Ritalin to Violet twice this shift, at 7am and at 12 Noon. Each time he subtracted the number of tablets he administered and documented how many were left.

At 3pm, Mikey counted with Tina Tim, the medication certified staff coming on duty. Again, the count was correct and both signed the count sheet. When Tina accepted the keys from Mikey she knew exactly how many Ritalin there were in the medication cabinet.
Learner Objective 4  Documenting PRN Medications

Documentation of PRN Medications:

1. PRN medications are administered only when the child needs or asks for the medication. The licensed practitioner's order must include how often and for what reason the medication may be given.

2. Each child must have individual PRN medication orders. PRN medication orders must be reviewed quarterly.

3. Each child must have her own PRN medication sheets.

4. Before you administer a PRN medication check on the MAR for the last time this medication was administered. Check the licensed practitioner's order to learn how often you may administer this PRN medication.

5. When you administer a PRN medication, you must document the dose and time and why you gave the medication.

6. Always document the outcome for PRNs - did the medication help? Document in an objective or descriptive manner. (i.e., client states that headache was relieved by Tylenol).
At 8:30 pm on April 2, Violet Ray told Mikey Moose that she had a headache and would like to have some Tylenol. She said that she gets headaches once in a while and that Tylenol has helped. Mikey first checked to see if Violet had a current licensed practitioner's order for Tylenol. Violet's doctor had ordered Tylenol, 650 mg p.o. every 4 hours PRN for headache or a fever over 101°F. Mikey asked Violet if she had any other complaints or concerns; she said, "no, just a headache". Mikey checked the MAR to find out the last time Violet had been given Tylenol. She had not received any so far this month. Mikey followed the DCF medication Administration procedure and administered a dose of Tylenol to Violet. He initialed the appropriate box for April 2, 2008. He also documented on the PRN record - see the next page.
### MEDICATION RECORD

**CLIENT NAME**
Violet Ray

**ALLERGIC TO:**
NKA

---

<table>
<thead>
<tr>
<th>PRNS, REFUSALS OR HOLDS OF SCHEDULED MEDS</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME (AM or PM)</th>
<th>MEDICATION</th>
<th>REASON</th>
<th>Outcome</th>
<th>STAFF INITIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/2/08</td>
<td>8:30 PM</td>
<td>Acetaminophen 650 mg</td>
<td>Complaining of a headache</td>
<td>10pm – stated that headache was gone</td>
<td>MM</td>
</tr>
</tbody>
</table>

Mikey administered Tylenol 650mg to Violet at 8:30pm on 4/2/2008. He documented the date and time, the name and dose of medication and why he gave it. At 10pm, he asked Violet if the Tylenol helped and she stated that the headache was gone. Mikey noted this outcome.
Starting on page 7 in the Workbook you will find licensed practitioner's orders, pharmacy labels and blank MARs. Information about a child and a situation are also included. Using this information you will complete an MAR for a non-controlled medication, a controlled medication and for a PRN medication.

Your instructor will give you direction in how to correctly transcribe the orders to the MARs.

Workbook pages 7 - 15.
Unit 5

MATH FOR MEDICATION ADMINISTRATION
Learner Objectives for Unit 5

This unit will prepare the learner to make simple math calculations to verify that the dose of medication ordered by the licensed practitioner matches the dose on the pharmacy label and MAR. Metric and household measurement equivalencies must be learned, and an ability to work with decimals must be demonstrated.

At the end of this unit the learner will be able to:

1. Compare household measurements used to measure medication with their metric equivalencies.
2. Identify the how weight is measured for medication administration.
3. Describe the units for measuring liquid medication.
4. Define “concentration” and Identify where the information about concentration may be found.
5. Demonstrate proper technique to measure and pour liquid medications.
6. Demonstrate basic math skills including using decimals.
7. Calculate accurately how to verify that the dose ordered matches the dose on the pharmacy label and/or MAR.

Terms to Define:

- Concentration
- Verify
Learner Objective 1
Compare household measurements used to measure medication with their metric equivalencies.

DOSE is one of the Five Rights of safe medication administration. Measuring the dose of medication precisely and accurately begins with the licensed practitioner’s order and ends with you administering the correct dose to the child.

Medications are usually measured using the following terms. You are responsible for knowing these terms and the equivalencies.

<table>
<thead>
<tr>
<th>Metric Term</th>
<th>Abbreviation</th>
<th>Used to Measure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milligram</td>
<td>mg</td>
<td>Weight</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doses are usually expressed in mg</td>
</tr>
<tr>
<td>Milliliter</td>
<td>ml</td>
<td>Liquid (volume)</td>
</tr>
<tr>
<td>Cubic Centimeters</td>
<td>cc</td>
<td>Liquid (volume)</td>
</tr>
<tr>
<td>Teaspoon</td>
<td>Tsp.</td>
<td>Liquid (volume)</td>
</tr>
<tr>
<td>Tablespoon</td>
<td>Tbsp.</td>
<td>Liquid (volume)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metric Term</th>
<th>Household Equivalency</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 ml</td>
<td>1 tsp.</td>
</tr>
<tr>
<td>5 cc</td>
<td>1 tsp.</td>
</tr>
<tr>
<td>15 ml</td>
<td>1 Tbsp.</td>
</tr>
<tr>
<td>15 cc</td>
<td>1 Tbsp.</td>
</tr>
</tbody>
</table>

Note that 1 ml = 1 cc. The terms "ml" and "cc" are used interchangeably.
Learner Objective 2

Identify how weight is measured for medication administration.

Usually the licensed practitioner writes the dose of the medication in milligrams (mg). Milligrams indicate the weight of the medication in a pill, capsule or tablet or in certain amount of liquid.

On the following orders identify milligram (mg) strength of each dose of medication.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Medication</th>
<th>Dose</th>
<th>Frequency</th>
<th>Provider</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARSON BROWN</td>
<td>Prozac</td>
<td>20 mg</td>
<td>p.o. every day at 8 am.</td>
<td>Charles Smith, MD</td>
<td>4/1/2008</td>
</tr>
<tr>
<td>Lucy Belt</td>
<td>Klonopin</td>
<td>0.5 mg</td>
<td>p.o. BID</td>
<td>Charles Smith, MD</td>
<td>4/1/2008</td>
</tr>
<tr>
<td>Linus Van</td>
<td>liquid ibuprofen</td>
<td>100 mg</td>
<td>p.o. every 6 hours PRN for fever over 101°F</td>
<td>Charles Smith, MD</td>
<td>4/1/2008</td>
</tr>
</tbody>
</table>
Learner Objective 3

Describe the units for measuring liquid medication.

Liquid medications must be carefully measured using only standardized or calibrated measuring tools. Usually calibrated medication measuring cups are used.

Liquid medications are measured metric or in household units.

**Metric:** Milliliters (ml) Cubic Centimeters (cc)

**Household:** Teaspoons (tsp) Tablespoons (Tbsp)

**Metric and household equivalencies:**

\[
5 \text{ ml} = 5 \text{ cc} = 1 \text{ teaspoon (tsp)}
\]

\[
15 \text{ ml} = 15 \text{ cc} = 1 \text{ Tablespoon (Tbsp)}
\]
Several different tools are used to measure liquid medications.

**Calibrated Medication Measuring Cup**  These are small plastic cups that may be used to measure 5cc/5ml or 1 teaspoon up to 30 cc/30 ml or 2 Tablespoons. When pouring medication, place the cup on a flat surface at eye level.

If a medication cup is not available, you may need to use measuring spoons. Use measuring spoons that are used to accurately measure for cooking. Never use an ordinary soup or cereal spoon to measure medications.

**Other Liquid Medication Measuring Tools:**

**Oral Syringe** - This is a specially designed syringe used only for oral medications. They are calibrated for very small doses. If you must administer less than 5 cc/5ml or one teaspoon, you must use an oral syringe (or calibrated medication spoon - see below) to accurately measure these tiny amounts. Place the tip of the syringe into the liquid and draw up into the barrel of the syringe.

**Calibrated Medicine Spoon**

A medicine spoon is shaped like a spoon with a hollow handle. The handle may be calibrated in cc's or ml's or quarter teaspoons. These spoons will usually hold up to 1 teaspoon. To measure medication, hold the spoon upright. Pour the correct amount of liquid into the spoon.

**Oral Dropper**

Some liquid medications will be packaged with their own dropper that is part of the bottle lid. These droppers are made to be used only with the medication it came with. Do not use with any other medication.
Learner Objective 4
Define “concentration” and identify where information about a medication’s concentration may be found.

**Definition:** Concentration - the strength per unit of medication

Medications are made in different strengths or *concentrations*. The pharmacist dispenses medication and will put on the label the strength of the medication and how much to give to equal the dose the licensed practitioner ordered. The *concentration or strength per unit of medication* will be noted on the pharmacy label.

Note the concentration on each of the following pharmacy labels:

<table>
<thead>
<tr>
<th>SUNSHINE PHARMACY</th>
<th>SUNSHINE PHARMACY</th>
<th>SUNSHINE PHARMACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carson Brown</td>
<td>Lucy Belt</td>
<td>Linus Van</td>
</tr>
<tr>
<td>Prozac (fluoxetine)</td>
<td>Klonopin (clonazapam)</td>
<td>Liquid ibuprofen</td>
</tr>
<tr>
<td>20 mg</td>
<td>0.5 mg</td>
<td>100mg/5ml</td>
</tr>
<tr>
<td>Give two capsules by mouth every day at 8am.</td>
<td>Give ½ tablet by mouth twice a day.</td>
<td>Give 5 ml or one teaspoon by mouth every 6 hours PRN for fever over 101° F.</td>
</tr>
<tr>
<td><strong>Concentration</strong></td>
<td><strong>Concentration</strong></td>
<td><strong>Concentration</strong></td>
</tr>
<tr>
<td>10 mg per capsule</td>
<td>1 mg per tablet</td>
<td>100 mg per 5 ml</td>
</tr>
</tbody>
</table>
Measuring liquid medications

You will be given a calibrated medication measuring cup, an oral syringe and a calibrated medicine spoon. Your instructor will demonstrate how to use each of these tools to accurately measure liquid medications.

You will also be given several bottles of liquid "medication". Read the pharmacy label and pour out the correct amount of medication using the various tools.
Learner Objective 5

Demonstrate basic math skills using decimals.

Some medications are ordered in doses that use decimals to measure weight. You must be very careful when working with doses with decimals. A few rules to keep in mind:

1. Write a “0” in front of the decimal point for doses that are less than one:  
   Correct: 0.25 mg  0.5 mg  
   Incorrect: .25mg  .5 mg

2. Do not write a zero after the last number:  
   Correct: 0.25 mg  1mg  
   Incorrect: 0.250mg  1.0 mg

3. Write the decimal point clearly so that it is obvious.

Decimal to fraction equivalencies:

0.05 = 5/100 = 1/20 
0.1 = 10/100 = 1/10 
0.25 = 25/100 = 1/4 
0.5 = 50/100 = 1/2 
0.75 = 75/100 = 3/4

Learning Exercise in Workbook, page 17.
Learner Objective 6

Calculate accurately how to verify that the dose on the licensed practitioner’s order matches the dose on the pharmacy label and the MAR.

To safely administer medications, you must be able to verify that you will be giving the correct dose. You will check the licensed practitioner’s order, the pharmacy label and the MAR. Sometimes you will need to make math calculations to verify that everything matches.

In order to verify that the doses all match you will need to have available the licensed practitioner’s order, the pharmacy label that includes the concentration information and the MAR. You will need to ask:

1. What **dose** is prescribed on the licensed practitioner's order—how many milligrams (mg) am I supposed to administer at this time?

2. What is **the concentration**—the number of milligrams per unit of medication that is on the pharmacy label?

3. What **dose does the MAR or pharmacy label** say to give?

4. Is this a liquid medication? Do I need to convert metric measurements into household measurement (milliliters to teaspoons)?
Looking at these documents for Carson, answer the questions below.

<table>
<thead>
<tr>
<th>Licensed practitioner’s order</th>
<th>Pharmacy Label</th>
<th>MAR Reads:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carson Brown</td>
<td>Prozac Capsules (fluoxetine)</td>
<td>Carson Brown Prozac Capsules Give Prozac 20mg (2 capsules) p.o. every day at 8am</td>
</tr>
<tr>
<td>Prozac Capsules</td>
<td>Give Prozac 20 mg p.o. every day at 8am</td>
<td>Concentration: 10mg per capsule</td>
</tr>
<tr>
<td>Charles Smith, MD</td>
<td></td>
<td>Give Prozac 20mg p.o. every day at 8am.</td>
</tr>
</tbody>
</table>

How many capsules should you administer?

Answer these questions:

1. How many milligrams (the dose) did the practitioner order?

2. What is the concentration of this medication on the pharmacy label?

3. What does the MAR or pharmacy label say we should give?
How do you calculate that the dose is the same on each document?
What you need to find out:

<table>
<thead>
<tr>
<th>Dose Ordered (mg on practitioner's order)</th>
<th>Concentration (on pharmacy label)</th>
<th>Liquid medication? Convert ml or cc to tsp or Tbsp? (check MAR)</th>
<th>What does the MAR or pharmacy label say to give? (tablets, pills, capsules? ml or cc? tsp or Tbsp?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 mg</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step 1: How many mg did the practitioner order? Place that number in the first column. Create a fraction by writing it over 1, as shown.
Step 2: Write the concentration as noted on the pharmacy label in the second column. Create a fraction by writing

\[ \frac{\text{unit on top (numerator)}}{\text{number of mg on the bottom (denominator)}} \]

<table>
<thead>
<tr>
<th>Dose Ordered (mg on practitioner’s order)</th>
<th>Concentration (on pharmacy label)</th>
<th>Liquid medication? Convert ml or cc to tsp or Tbsp? (check MAR)</th>
<th>What does the MAR or pharmacy label say to give? (tablets, pills, capsules? Ml or cc? Tsp or Tbsp?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 mg 10 mg</td>
<td>1 capsule 10 mg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step 3: Check MAR – what does the MAR say to give? Tablets, pills, capsules, ml, cc, tsp or Tbsp? The MAR says capsules.

<table>
<thead>
<tr>
<th>Dose Ordered (mg on practitioner’s order)</th>
<th>Concentration (on pharmacy label)</th>
<th>Liquid medication? Convert ml or cc to tsp or Tbsp? (check MAR)</th>
<th>What does the MAR or pharmacy label say to give? (tablets, pills, capsules? Ml or cc? Tsp or Tbsp?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 mg 10 mg</td>
<td>1 capsule 10 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>____ capsule</td>
</tr>
</tbody>
</table>
Step 4: Compare the pharmacy label and MAR. Is this a liquid medication?

In this example, we are working with capsules not a liquid medication. We do not need to convert anything.

Step 5: Perform the math calculation

To verify the number of capsules you should give so that you will administer the dose the licensed practitioner ordered, you will:

<table>
<thead>
<tr>
<th>Dose Ordered (mg on practitioner’s order)</th>
<th>Concentration (on pharmacy label)</th>
<th>If a liquid medication do you need to convert ml or cc to tsp or Tbsp? (check MAR)</th>
<th>What does the MAR or pharmacy label say to give? (tablets, pills, capsules? ml or cc? tsp or Tbsp?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 mg</td>
<td>1 capsule 10 mg</td>
<td>No conversion needed</td>
<td>____ capsule</td>
</tr>
</tbody>
</table>

\[
\frac{20 \text{ mg}}{1} \times \frac{1 \text{ capsule}}{10 \text{ mg}}
\]

1. multiply the numerators (the numbers above the line)

\[
\frac{20 \times 1}{1 \times 10} = \frac{20}{10} = \frac{20}{10} = 2
\]

2. multiply the denominators (the numbers below the line)

\[
\frac{20 \times 1}{1 \times 10} = \frac{20}{10}
\]

3. Divide the bottom number into the top:

\[
20 \div 10 = 2
\]

4. Your answer is to give **2 capsules**.
Another way to do the math:

\[
\begin{align*}
&\frac{2}{20 \text{ mg}} \times \frac{1\text{ capsule}}{10 \text{ mg}} \\
&\quad \frac{1}{1}
\end{align*}
\]

Because 10mg can evenly divide into 20mg, you can cancel out the 10mg and change the 20mg to 2.

Multiply the 2 x 1 = 2 capsules.

Learning and Practice Exercises in the Workbook pages 18 - 26.
Review of Learner Objectives: Math for Medication

1. Compare household measurements used to measure medication with their metric equivalencies:
   \[ 5 \text{cc} = 5 \text{ml} = 1 \text{tsp} \quad 15 \text{cc} = 15 \text{ml} = 1 \text{Tbsp} \]

2. Identify the how weight is measured for medication administration:
   **Milligrams (mg) indicate the weight of medication in a pill, capsule, tablet or in a certain volume of liquid medication.**

3. Describe the units for measuring liquid medication:  
   **see Objective 1.**

4. Define concentration and Identify where the information about concentration may be found:  
   **Concentration is the strength per unit of medication (e.g. number of mg per tablet).** The concentration will be found on the pharmacy label.

5. Demonstrate proper technique to measure and pour liquid medications.  
   **Only use calibrated measuring tools. Place medication cup on flat surface, at eye level.** Check the concentration on the pharmacy label so you will know how many cc/ml/tsp/Tbsp you should pour.  
   **Hold the bottle with the label up so that the liquid will not drip over the label.** Use an oral syringe or calibrated medicine spoon to measure less than 5cc/5ml.

6. Demonstrate basic math skills including using decimals.  
   **Refer to exercises.**

7. Calculate accurately how to verify that the dose ordered matches the dose on the pharmacy label and/or MAR.  
   **Refer to exercises.**
Unit 6

ASTHMA
Learner Objectives for Unit 6 - Asthma

After completing this unit, the learner will be able to:

1. Describe the three physical changes in the lungs of people with asthma
2. List the common triggers or causes for an asthma attack
3. Identify the common signs and symptoms of an asthma attack
4. List the components of an “asthma management plan”
5. Identify the two general types of asthma medication
6. Identify the asthma rescue medication and how it helps to relieve an asthma attack.
7. Describe the types of asthma prevention or management medication and how they help a child manage asthma.
8. Demonstrate the correct way to administer an MDI (inhaler)

☆ (SKILL CHECK)

Terms to Define:

- Airway
- Bronchial Constriction
- Trigger
- Bronchodilator - albuterol
- Diskus
- Oral Steroids
- Peak Flow Meter
- Nebulizer
- Asthma Management Plans
- Asthma Rescue medications
- Inhaled Steroids
- Intal (cromolyn sodium)
- Metered Dose Inhaler (MDI)
- Oral Steroids
- Peak Flow Meter
- Turbuhaler
- Asthma Maintenance medications
- Leukotriene Antagonists
- Chest and Neck Retractions
Asthma

Asthma is a common illness that causes breathing problems for many children. As caregivers, you must have a basic understanding of the physical components of asthma, how to help prevent asthma attacks and what to do if a child has an asthma attack.

For most children asthma can be kept under control with medication and by avoiding what triggers their asthma. Children will have fewer asthma attacks when their asthma is well controlled. The following information will describe what asthma is and how it affects the body and a child's ability to breathe. You will also learn about the different types of medications used to control asthma and the medications that treat asthma attacks.
Learner Objective 1

Describe the three physical changes in the lungs of people with asthma.

**Physical Changes of Asthma**

Children with asthma experience physical changes in their lungs, or airways, that can make breathing difficult. These physical changes are:

1. **Bronchial Constriction** – the airway “tubes” tighten, making the airway smaller so that less air can move in and out.

2. **Inflammation** – the lining of the airway becomes inflamed and swells. This swelling further blocks the already tightened airway making breathing even more difficult.

3. **Increased mucous** – with the inflammation the airway fills with more mucous than usual which “clogs” the airways even further.
Why asthma makes it hard to breathe

Air enters the respiratory system through the nose and mouth and travels through large air tubes called bronchial tubes.

In a person who doesn't have asthma, the muscles around the bronchial tubes are relaxed and the tissue is thick, allowing air to flow through easily.

In a person who has asthma, the muscles of the bronchial tubes get tight and thick. The air passages become irritated and inflamed and fill with mucus. This makes it difficult for air to move through the tubes, making it hard to breathe.

Inflamed bronchial tube of an asthmatic

Normal bronchial tube

Source: American Academy of Allergy, Asthma and Immunology

This information was reviewed by the AAAAI Public Education Committee. Articles appeared in the March 2002 USA Today Advertising Supplement.
Learner Objective 2

List common triggers or causes for an asthma attack

What triggers or causes an asthma attack?
Children with asthma may be very sensitive to triggers in the environment that make their airways begin to constrict, become inflamed and increase the mucous in their lungs. Common triggers include:

- Smoke
- Dust and pollen
- Animal fur and dander
- Dust mites and cockroaches
- Cold air
- Exercise
- Strong emotions
- Fumes and strong odors

When you are caring for a child with asthma you should know what triggers an asthma attack for that child and help the child avoid those triggers.
Learner Objective 3

List the common signs and symptoms of an asthma attack

**Signs and Symptoms of an Asthma Attack**

A child who is having an asthma attack may have one or more of the following signs or symptoms:

- Shortness of breath
- Difficulty breathing
- Chest tightness
- Cough
- Wheezing
- Chest & neck retractions

*An asthma attack can be potentially life threatening.*
Learner Objective 4 List the components of an Asthma Management Plan

Asthma Management Plan: Caring for a Child with Asthma

There is no cure for asthma, but there are many things that can be done to manage it. The child’s licensed practitioner can develop an asthma management plan to help keep the symptoms under control and perhaps prevent asthma attacks. The plan will include:

- the specific triggers for that child and how to avoid them.
- monitoring the child's breathing capability with a peak flow meter.
- prevention or management medications to keep the asthma under control.
- rescue medication to treat asthma attacks if they occur.
Learner Objective 5  Identify the two general types of asthma medication

**Asthma Medications**

There are two general types of asthma medications:

**Rescue medications** – used to treat an asthma attack when the child’s airway is being constricted and breathing becomes more difficult.

**Prevention or maintenance medications** - used every day to help keep the inflammation and mucous under control so that the child can breathe easily. Some prevention or maintenance medications are a combination of two different medications for better effect.
Learner Objective 6

Identify the asthma rescue medication and how it helps to relieve an asthma attack.

ASTHMA RESCUE MEDICATION-INHALED BRONCHODILATORS

Inhaled Bronchodilators

Use: Relax the muscles that line the airways. These are quick acting rescue medications that are used during an asthma attack to stop the attack.

Examples of Inhaled Bronchodilators:

- Ventolin, Proventil (albuterol)

Possible Side Effects:

- Restlessness
- Fast heart beat
- Anxiety
- The child may complain of feeling “jumpy” and their hands may shake.

Special considerations when administering Inhaled Bronchodilators:

- Bronchodilators are usually administered by a “metered-dose inhaler” (MDI) and provide rapid relief.
- If symptoms of the asthma attack do not quickly improve within a few minutes, follow your facility's medical emergency procedures.
Learner Objective 7

Describe the types of asthma prevention or management medication and how they help a child manage asthma.

ASTHMA PREVENTION OR MANAGEMENT MEDICATION

Asthma prevention or management medications are used on a daily basis even when the child is feeling well to keep asthma symptoms under control and may help prevent asthma attacks from happening.

- Inhaled Steroids
- Intal (cromolyn sodium)
- Leukotriene antagonists
- Oral steroids
- Other asthma medications

These medications work to reduce inflammation and swelling in the airway. They should not be stopped without a licensed practitioner’s order.

ASTHMA MANAGEMENT MEDICATIONS

DO NOT STOP
AN ASTHMA ATTACK
Asthma Prevention - Management Medications

Inhaled Steroids

Use: Reduce and prevent airway swelling, inflammation and mucous to reduce the chance of an asthma attack.

Examples of Inhaled Steroids:

- Vanceril, Beclovent (beclomethasone)
- Flovent (fluticasone propionate)
- Azmacort (triamcinolone)
- Pulmicort Turbuhaler, Rhinocort (budesonide)

Possible Side Effects:

- Mouth and throat irritation and infections

Special Considerations when administering Inhaled Steroids:

- If the child receives an inhaled bronchodilator and an inhaled steroid medication at the same time, administer the bronchodilator first.

- The child should rinse his/her mouth with water after administering inhaled steroids to prevent mouth/throat irritation or infection.
Asthma prevention - management medications, continued...

Intal (cromolyn sodium)

Use: An inhaled medication that reduces inflammation in the airways.

- Intal (cromolyn sodium)

Possible Side Effects:

- Headache
- Dizziness
- Bad taste in mouth

Special Considerations:

- Nasalcrom (cromolyn sodium) is a nasal spray used to treat allergies. Be sure to administer the correct medication by the correct route.

- Cromolyn sodium may be administered by MDI or through a nebulizer.
Asthma prevention - management medications, continued…

**Leukotriene Antagonists**

**Use:** Leukotriene antagonists prevent airway constriction and inflammation.

They are oral *tablets* that are taken every day.

**Examples of Leukotriene antagonists:**

- Accolate (zafirlukast)
- Singulair (montelukast)

**Possible Side Effects**

- Fatigue
- Headache
- Nausea
- Diarrhea

**Special considerations:**

- To be effective Leukotriene antagonists must be administered every day.
Asthma prevention -management medications, continued…

**Oral Steroids**

Use: Oral steroids are powerful medications to reduce inflammation when asthma symptoms are especially severe.

**Examples of Oral Steroids used for Asthma treatment:**

- Deltasone (prednisone)
- Prelone (prednisolone)

**Possible Side Effects:**

<table>
<thead>
<tr>
<th>• Nausea and vomiting</th>
<th>• Headache</th>
<th>• Fluid retention and weight gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Nervousness</td>
<td>• Mood and personality changes such as euphoria and depression</td>
<td></td>
</tr>
</tbody>
</table>

**Special Considerations:**

- Medication certified staff should review any information that the pharmacy includes with the steroid medication.
- Oral steroids are often prescribed for a short period of time.
- Follow the licensed practitioner’s order for “tapering” or gradually reducing the dose. Oral steroids should not be suddenly stopped without tapering.
- Contact your chain of command if you have any question about correctly administering the oral steroid medication.
**Other Asthma Management Medications**

Other asthma management medications combine two medications in one inhaler or have medications that help keep airways open to help keep the asthma under control. These medications ARE NOT RESCUE medications. They are administered daily through diskus or aerolizer inhalers. You must know how to properly use the inhaler before administering the medication to the child. Some of the other asthma medications currently prescribed are listed below.

- **Advair (fluticasone propionate and salmeterol xinafoate)**
  
  **Use:** A combination medication that controls inflammation and helps keep the airways open. This medication is administered through a diskus inhaler.

- **Serevent (salmeterol)**
  
  **Use:** A prevention medication that helps keep the airways open. It is administered with a discus inhaler.

- **Foradil (formoterol fumarate)**
  
  **Use:** A prevention medication that helps to keep the airways open. It is administered through an aerolizer inhaler.

Learning Exercise in Workbook page 27
Review of Asthma

Physical Changes in the Lungs in People with Asthma:

1. Bronchial Constriction
2. Inflammation in the airway
3. Increased mucous in the airway

Common asthma triggers:

Smoke, dust, pollen, fumes, strong odors, strong emotions, exercise, cold air.

Symptoms of an asthma attack:

Shortness of breath  Coughing  Chest tightness  
Wheezing  Difficulty Breathing  Chest and neck retractions

Asthma medications

**Rescue** – Inhaled bronchodilator (albuterol)

Will quickly open constricted airways during an asthma attack.

**Maintenance or Prevention** – Inhaled steroids, cromolyn sodium, Leukotriene antagonists, oral steroids

Taken daily to keep asthma under control and prevent attacks.
Learner Objective 8: SKILL - How to administer an MDI

Your instructor will demonstrate to you how to correctly administer a metered dose inhaler (MDI).

You will then have the opportunity to practice this skill.

When you are ready, your instructor will observe you "administer" an MDI.

When you have successfully demonstrated the skill, you and your instructor will sign off on this skill on the check list in the workbook.

How to Administer an MDI:

1. Instruct the child to hold the inhaler upright and shake it.

2. The child should administer the inhaler according to the technique taught by their physician. Either of the techniques listed below is acceptable:
   a. The child holds the inhaler one to two inches from his mouth.
   b. The child places the mouth piece of the inhaler in his mouth forming a tight seal.

3. Instruct the child to exhale completely.

4. Depress the canister once while inhaling for two to five seconds.

5. Child should hold his breath for up to ten seconds or as long as possible.

Wait one minute and repeat the entire process if a second puff is ordered.

Always follow the DCF Medication Administration Procedure.
Special information for administering an inhaler:

- Before you administer an inhaler, remove the cap.

- Check that the canister and mouth piece are clean and not damaged. The mouth piece can be cleaned by removing the canister and running the mouth piece under warm water. Do not use an inhaler that is damaged.

- The child should rinse her mouth with water after administration of an inhaled steroid medication.

- Document on the medication administration record. If a rescue inhaled bronchodilator was administered to treat an asthma attack, be sure to document the outcome of the medication – did the medication help relieve the asthma attack or did you need to take emergency medical action because the medication did not help?

Exhale   Inhale & depress the canister   breathe in 2-5 seconds… Hold
breath for up to 10 seconds.........exhale.

Wait one minute before administering a second puff
Unit 7

MEDICATIONS FOR TREATING MEDICAL CONDITIONS
Unit 5 MEDICATIONS USED TO TREAT MEDICAL CONDITIONS

At the conclusion of this unit the student will be able to:

1. Identify the use and special considerations for antibiotics
2. Identify the use and special considerations for antiviral medications
3. Identify the use for scabicide and pediculocide medications
4. Identify the special consideration for scabicides and pediculocides
5. Identify the use and special considerations for antifungal medications
6. Identify the use and special considerations for the following medications:
   a. analgesics
   b. antipyretics
   c. expectorants
   d. antitussives
   e. decongestants
   f. antihistamines
7. Identify the use and special considerations for cardiovascular medication
8. Identify the use and special considerations for anticonvulsant medication
9. Identify the use and special considerations for medications that treat digestive disorders:
   a. laxatives
   b. antacids
10. Identify the different types of hormone and/or birth control medication
Medications used to treat medical conditions

Even typically healthy children will get sick from time to time. This unit gives a brief description of some common childhood illnesses and reviews some of the medications that may be prescribed to treat an infection and the symptoms of illness and injury. While many of these medications are available over the counter, you must have a licensed practitioner’s order to administer any medication. You must be aware of possible side effects and follow the special considerations. Watch for any changes in a child's behavior, activity, ability to participate and in their overall well-being.

Promptly report any change to your chain of command.

Each classification in this unit will include the following information:

- **Use**
- **Examples of the medication**
- **Possible side effects**
- **Special considerations**

The learner objectives identify exactly what information you must understand about each type of medication. You are not expected to know specific drug names for the written certification exam.
MEDICATIONS THAT TREAT COMMON INFECTIONS

LEARNER OBJECTIVE 1 - IDENTIFY the use and special considerations for antibiotics

ANTIBIOTICS

Use: Medications that are used to treat infections and illness caused by bacteria

Examples of common bacterial illnesses:
- Strep throat
- Ear Infections (otitis media)
- Lyme disease
- Sinus infections
- Pneumonia
- Bronchitis
- Gonorrhea

Examples of antibiotics
- PenV.K., Amoxicillin/Augmentin (penicillins)
- Doxycycline, Achromycin (tetracyclines)
- Emycin, Erythrocin (erythromycins)
- Zithromax, Z-Pac
- Keflex, Ceftin, Suprax (cephalosporins)
- Cipro (fluoroquinolone)

Possible Side Effects
- nausea
- vomiting
- diarrhea
- rash
- headache
- yeast infection
- dizziness
- restlessness

You must know the specific side effects of any antibiotic you administer.
JUNE 2008

Special Considerations:

- An antibiotic is designed to destroy specific bacteria. The licensed practitioner will prescribe the most effective antibiotic.

- Allergies to antibiotics are common. Watch for signs of allergic reaction when administering antibiotics.

- The entire prescription must be finished as ordered even if symptoms go away.

- Some antibiotics must be stored in the refrigerator. Follow the pharmacy instructions about storing the antibiotic.

- If a dose is missed, do not give a double dose. Contact the chain of command for instructions.

- Follow any specific instructions about administration with food.

- Antibiotics may reduce the effectiveness of birth control medication.
Learner Objective 2  Identify the use and special considerations for antiviral medications

ANTIVIRAL MEDICATIONS

USE: Medications used to reduce the symptoms of viral illnesses

General Information about Viral Illness:

- The body “fights-off” most viral infections i.e., colds, flu, chicken pox.
- Vaccines may prevent many viral infections (flu, hepatitis B, and mumps).

Examples of common viral illnesses

Common cold  Influenza (the flu)
Sore throats (pharyngitis)  Mono (mononucleosis)
Herpes  HIV/AIDS  Hepatitis

Examples of Antiviral medications:

- Tamiflu (oseltamivir)
- Zovirax (acyclovir)
- AZT, Retrovir (zidovudine)
- Valtrex (valacyclovir)
- Symmetrel (amantadine)

Possible Side Effects:

- Dizziness
- Nausea
- Vomiting
- Diarrhea
Special Considerations for Antiviral medications:

- There are no medications that will cure a viral infection. Antiviral medications may help reduce the symptoms or how long a viral illness lasts.

- Starting antiviral medication at the earliest sign of a viral infection provides the greatest benefit.

- **Antiviral medications prevent the virus from multiplying so that the viral illness is less severe or shorter.**

Antiviral medications treat the symptoms of a viral infection. They do not cure a viral infection.
Learner Objective 3  Identify the use for scabicides and pediculocides

Scabies and Lice

Scabies and lice infestation in children are common, and are not an indication of a child’s cleanliness or overall health. Scabies and lice can be passed from person to person fairly easily which makes it important to promptly and correctly treat any infestation. The scabies medications are applied to the skin and lice medications are applied to the hair. They must be used carefully according to a licensed practitioner’s order. For complete lice treatment combing out the lice eggs, or nits, is necessary to help prevent a re-infestation.

Scabies is a mite somewhat like ticks or spiders. Scabies is transmitted by close contact with an infected person or animal. The mites burrow into the outer layers of the skin. Symptoms include intense itching.

Lice are parasites that generally infest the scalp and attach their eggs to hair. Lice are spread by direct contact especially in crowded conditions or by sharing clothing or other personal articles like combs and brushes. Itching may be severe.

Scabies and lice do not typically transmit diseases, but skin infections can occur where the skin has been scratched open because of the intense itching.
Scabicides

Use: Medications used to treat scabies infestations:

Examples

- Nix cream (permethrin)
- Eurax (crotamiton)
- Kwell (lindane)

*Kwell is highly toxic and is prescribed only if other treatments have failed.*

Possible Side Effects

- Skin irritation, rash
- Toxic to the nervous system if used incorrectly or if overused.

Pediculocides

Use: Medications that treat lice infestations

Examples

- Nix cream (permethrin)
- Rid (pyrethrins)
- Kwell (lindane)

*Kwell is highly toxic and is prescribed only if other treatments have failed.*

Possible Side Effects

- Skin irritation, rash
- Eye irritation if it gets into eyes
- Toxic to the central nervous system if used incorrectly or overused
Learner Objective 4 Identify the special considerations for scabicides and pediculocides

Special Considerations for scabicides and pediculocides

- Scabicides and pediculocides can potentially cause serious adverse effects especially if overused.

- Follow all directions exactly.

- These medications may be toxic to the central nervous system (brain and spinal cord) if overused or if used incorrectly.

- An individual licensed practitioner’s order is required to administer a scabicide or a pediculocide.

- Do not apply to face, eyes, mouth.

- If after treatment you suspect that the child still has or has been reinfected with scabies or lice, contact the chain of command for direction. DO NOT REPEAT TREATMENT without a specific licensed practitioner’s order to do so.
Learner Objective 5  Identify the use and special considerations for antifungal medications.

Antifungal Medications

Use: Treatment of fungal infections

Fungal infections are caused by a fungus and may be superficial (on the skin) or systemic (in the body). Most infections are superficial and mild but may be difficult to treat. Fungal infections tend to develop in dark moist areas.

Common fungal infections:
Athlete’s foot  Ringworm  Yeast infections
Diaper rash  Fingernail and toenail infections

Examples of Topical Antifungal Medication:

- Lotrimin (clotrimazole)
- Tinactin (tolnaftate)
- Monistat (miconazole)
- Mycostatin (nystatin)
- Desenex Max (terbinafine)

Examples of Oral Antifungal Medication:

- Nizoral (ketoconazole)
- Diflucan (fluconazole)
- Lamisil (terbinafine)
- Grifulvin V (griseofulvin)
- Sporanox (itraconazole)
Possible Side Effects:

- **oral medications**: nausea/vomiting, abdominal pain, itching, fever, headache, diarrhea, dry mouth, blurred vision
- **topical medications**: irritation and burning at application site, rash, itching

Special Considerations:

- Treatment of a fungal infection may take a long time. It is important to administer antifungal medication consistently and for the full course of treatment.
- Topical antifungal medication must be applied liberally to the affected area after the area has been cleaned and dried.
- Good hygiene will help prevent the spread of the infection.
- Report any side effects to the chain of command.
MEDICATIONS USED TO TREAT PAIN, INJURIES AND SYMPTOMS OF 
INFECTIONS or ALLERGIES

Learner Objective 6

Identify the use and special considerations for medications used to treat the 
symptoms of illness and injuries: analgesics, antipyretics, expectorants, 
antitussives, decongestants, antihistamines.

Medication certified staff may need to administer medications to help reduce pain 
or fever or relieve other symptoms of an illness or injury. A child specific licensed 
practitioner’s order is required before any medication is administered including 
medications that are sold over the counter (OTC) that you may purchase without a 
prescription.

The American Academy of Pediatrics strongly discourages the use of over-the- 
counter cough and cold medications for children under the age of 2. The Academy 
also reports that studies indicate that OTC cough and cold medications may not be 
effective in relieving the symptoms of colds. Follow your facility’s policy and 
procedure in managing children with coughs and colds. Consult with your chain of 
command if you have any questions.

www.aap.org/advocacy/releases/jan08coughandcold.htm
Analgesics

Use: Pain relief

The most common analgesics for children are over-the-counter, non-narcotic pain relievers.

Examples of Non-narcotic analgesics:
- Tylenol (acetaminophen)
- Motrin, Advil (ibuprofen)
- Aleve (naproxen sodium)

Aspirin is a non-narcotic analgesic that is not administered to children because of the risk of Reye’s syndrome. Reye’s Syndrome is a rare but potentially fatal reaction linked to aspirin.

A child who has had a more serious injury, surgery or tooth extraction may be prescribed a narcotic analgesic for a short time. Narcotic analgesics are controlled medications and must be used with caution.

Examples of Narcotic analgesics:
- Vicodin
- Tylenol with codeine
Possible Side Effects:

Non-narcotic analgesics:

- Stomach upset
- Rash, bruising
- Dizziness

Narcotic analgesics:

- Sedation
- Slow and shallow breathing
- Nausea, vomiting, constipation
- Dizziness

Special Considerations:

- Any frequent complaint of pain or any pain that the child describes as severe or that interferes with the child’s ability to participate in usual activities should be evaluated by a licensed practitioner. Notify your chain of command and/or follow your facility’s emergency medical policy and procedure.

Non-Narcotic Analgesics:

- Ibuprofen is usually used to treat menstrual cramps and muscle/skeletal injuries.
• Ibuprofen should not be administered to children who are also taking Lithium.

• Acetaminophen is generally safe if given as ordered by the licensed practitioner.

• Acetaminophen overdose/poisoning can cause severe, permanent and life threatening liver damage. Overdosing can occur by giving too much acetaminophen at one time or by frequently giving acetaminophen over a period of time. If an overdose is suspected, immediate medical attention is required to prevent liver damage. Follow your facility medical emergency policy and procedure.

• Many over the counter (OTC) medications contain acetaminophen. Read all OTC labels carefully and read all active ingredients.

• Tylenol (acetaminophen) is available in many different strengths. Read, follow and understand licensed practitioner's orders for Tylenol (acetaminophen).

Narcotic Analgesics:

• Narcotic analgesics are controlled medications with a potential for abuse.

• Licensed practitioner’s orders for narcotic analgesics should be very specific about when and for how long the medication may be administered. Orders are usually written for a limited number of doses to be given for a few days after an injury or surgery.
Antipyretics

Use: Reduce a fever.

Examples:
- Tylenol (acetaminophen)
- Motrin, Advil (ibuprofen)

Possible Side Effects:
- stomach upset
- rash, bruising
- dizziness
- drowsiness

Special Considerations:
- Fever is a sign of illness or a serious side effect to some medications. Report any fever to your chain of command.
- Before an antipyretic is administered the child’s temperature must be checked and recorded. The child's temperature should be checked again an hour or so after you administer the antipyretic to see if the fever has gone down.
- Follow facility policy and procedure about when to call the nurse or licensed practitioner for direction about caring for a child with a fever.
Expectorants

Use: Loosen secretions in the lungs and promote coughing to clear the secretions.

Examples:

- Robitussin, Mucinex (guaifenesin)

Possible Side Effects:

- Nausea
- Vomiting

Special considerations:

- Expectorants are the preferred choice of cough medication as they promote coughing out of excess secretions in the lungs.
- If a child has a persistent cough he/she should be evaluated by a physician.
- Increasing fluid intake will help to loosen secretions and make the expectorant more effective.
**Antitussives**

**Use:** Suppress the cough reflex.

**Examples:**

<table>
<thead>
<tr>
<th>Over-the-Counter</th>
<th>Prescription (Narcotic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vick’s Formula 44</td>
<td>Codeine (Usually combined with another cough medication)</td>
</tr>
<tr>
<td>Robitussin DM</td>
<td>Hycodan</td>
</tr>
</tbody>
</table>

**Possible Side Effects:**

<table>
<thead>
<tr>
<th>Over-the-Counter</th>
<th>Prescription (narcotic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dizziness</td>
<td>Dizziness</td>
</tr>
<tr>
<td>Nausea</td>
<td>Drowsiness or Sedation</td>
</tr>
<tr>
<td></td>
<td>Nausea</td>
</tr>
<tr>
<td></td>
<td>Constipation</td>
</tr>
</tbody>
</table>

**Special Considerations:**

- Antitussives should not be used on a routine basis to stop a cough as this could mask complications such as pneumonia or bronchitis.
- Antitussives may be ordered to use at night to quiet a cough that interrupts sleep.
- Narcotic antitussives should be used cautiously with clients with a history of drug or alcohol abuse.
- Antitussives that contain Dextromethorphan (DM) should not be administered with some types of medications due to the possibility of a serious drug interaction. Immediately report to your chain of command if the child develops a fever, agitation, restlessness, stiff muscles, seizures and/or seems confused or very sleepy.
Decongestants

Use: Reduce congestion in the sinuses and nasal passages.

Examples

- Sudafed (pseudoephedrine)
- Sinex (phenylephrine HCl)

Possible Side Effects

- Excitability
- anxiety

- tremors
- nausea/vomiting
- insomnia

Special Considerations

- Decongestants can cause excitability and insomnia. Consider this before administering a decongestant at the bedtime.
Antihistamines

Use: Reduce symptoms of allergies and colds such as runny nose, watery eyes and hives.

Examples of Antihistamines:

- Claritin, Alavert (loratadine)
- Allegra (fexofenadine HCl)
- Benadryl (diphenhydramine)
- Zyrtec (cetirizine)
- Claritin (loratadine)
- Alavert (loratadine)
- Zyrtec (cetirizine)
- Benadryl (diphenhydramine)

Possible Side Effects:

- Drowsiness
- Sedation
- Headache
- Dry mouth

Special Considerations:

- Many antihistamines cause drowsiness and should be used cautiously.
- Many antihistamines cause a decreased ability to urinate. Report any child's complaint of having difficulty urinating.
MEDICATIONS USED TO TREAT CARDIAC (HEART) DISEASE
and CIRCULATORY SYSTEM DISORDERS

While it is unusual for a typical child to have a heart or blood circulatory system problem that requires medication, you should have an understanding of these medications. Cardiovascular medications tend to be used in children for the medication's unlabeled use, however, side effects and special considerations are the same as if they were being used to treat a heart condition or blood pressure problem.
Learner Objective 7

Identify the use and special considerations for cardiovascular medications.

CARDIOVASCULAR MEDICATIONS

Use - Heart (cardiac) conditions or blood pressure disorders.

Examples

Labeled Use: Heart conditions and blood pressure problems:

- Lopressor, Toprol (metoprolol)
- Lanonxin (digoxin)

Unlabeled Use: For children, cardiovascular medications are frequently prescribed to treat anxiety, agitation, post traumatic stress disorder PTSD or attention deficient hyperactivity disorder (ADHD).

- Catapres (clonidine)
- Tenex (guanfacine)

Possible Side Effects:

For all cardiovascular medications whether labeled or unlabeled use.

- Low blood pressure
- Slowed heart rate
- Dizziness
- Nausea
Special considerations:

- Blood pressure and pulse must be monitored periodically even if the medication is for an unlabeled use.

- Doses should not be missed. Missed doses may result in dangerous changes in blood pressure. Report any missed dose to the chain of command.
MEDICATIONS USED TO CONTROL SEIZURE DISORDERS

Children may be prescribed seizure control medications - anticonvulsant medications - to help control a seizure disorder. Anticonvulsants are also used to control moods or manage aggressive behavior. This would be an unlabeled use for an anticonvulsant.

Learner Objective 8

Identify the use and unlabeled use for anticonvulsant medications and the special considerations for anticonvulsant medications.

ANTICONVULSANTS

Use: Reduce, control and/or prevent seizures.

Examples:

Labeled Use: Control seizures:

- Dilantin (phenytoin)
- Luminal (phenobarbital)

Unlabeled use: Mood stabilization (may also used to control seizures)

- Tegretol (carbamazepine)
- Depakote (divalproex)
- Depakene (valproic acid)
- Lamictal (lamotrigine)
- Neurontin (gabapentin)
Possible Side Effects:

- drowsiness
- diarrhea
- headache
- rash
- nausea
- vomiting

Special Considerations

- Anticonvulsant medications, especially when used to treat seizure disorders, must be given consistently at the prescribed time of day to maintain a therapeutic level of medication in the bloodstream.

- These medications may build up to toxic levels in the body. Licensed practitioners will order periodic blood work to check the medication level and may adjust dosages accordingly.
Medications that Treat Digestion Problems

Learner Objective 9

Identify the uses for medications used to treat digestive problems: laxatives and antacids.

LAXATIVES

Use: Promote bowel movements or treat or prevent constipation.

Constipation is a significant side effect for many medications. Children may need a laxative to help regulate their bowel movements.

Examples:

- Colace (docusate sodium) *stool softener*
- Metamucil (psyllium) *fiber laxative*
- MiraLax (polyethylene glycol)
- Milk of Magnesia
- Dulcolax (bisacodyl)

Possible Side Effects:

- Nausea
- abdominal cramps
- diarrhea

Special considerations:

- Exercise, fiber (fresh fruit and vegetables, whole grains) and fluids can prevent or relieve constipation without medication.
- Stool softeners such as Colace may be safely ordered to be given daily.
- Fiber type laxatives such as Metamucil do not damage the bowel. It is important to administer fiber type laxatives immediately upon mixing it with water or juice and to follow up with glass of water.
- Chemical laxatives should not be used frequently as they can damage bowel function.
- Report any child's complaint about a change in bowel habits.
ANTACIDS

Use: Reduce the acidity of the stomach; treat "heartburn".

Examples:

- Mylanta
- Nexium (esomeprazole)
- Maalox
- Tums
- Zantac (ranitidine)

Possible Side Effects:

- constipation
- diarrhea

Special considerations:

- Check with the pharmacist or physician initially if giving antacids with other medication. Antacids can affect the absorption of other medications.

- A child who frequently complains of heartburn or stomach upset should be evaluated by a physician.

- Nexium and Zantac may be prescribed to be given every day to children who are being treated for acid reflux or stomach ulcers.
Learner Objective 10

Identify the different types of hormone and/or birth control medications prescribed to adolescent girls.

**BIRTH CONTROL/HORMONE MEDICATIONS (Contraceptives)**

**Use:** Hormones administered to prevent pregnancy.

**Examples:**

- **Oral**
  - Norinyl, -Triphasil, -Ovral, -Loestrin, -Ortho Novum

- **Patch**
  - Ortho Evra
  (transdermal)

- **Injectable***
  - Depo-Provera

*Administered only by a licensed medical professional. Medication certified staff may not administer medications given by a "shot".

**Possible Side Effects:**

- nausea
- weight gain
- irregular menstrual cycles

**Special Considerations:**

- Potential side effects should be clearly explained to the girl. These may include: changes in menstrual flow, bloating, headache, mental depression, blood clots, and stroke.

- These medications do not protect against HIV or other sexually transmitted diseases (STD).
• Oral contraceptives must be taken every day to be effective. It is best that they be taken at the same time every day.

• The transdermal patch should be changed the same day each week.

• Follow the licensed practitioner’s instructions regarding missed doses.

• Birth control/hormonal medications may be prescribed to help regulate menstrual cycles.

• Depo-Provera is an injectable medication. To remain effective, this medication must be injected by a licensed medical professional every 3 months.
## Review - Highlight of Learner Objectives

<table>
<thead>
<tr>
<th>Classification</th>
<th>Use</th>
<th>Special Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibiotics</td>
<td>Treat bacterial infections</td>
<td>Watch for allergies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Finish entire prescription</td>
</tr>
<tr>
<td>Anti-viral medications</td>
<td>Treat viral infections</td>
<td>Reduce symptoms – do not cure</td>
</tr>
<tr>
<td>Scabicides</td>
<td>Treat scabies infestation of the skin</td>
<td>Follow orders and directions exactly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potentially toxic to CNS</td>
</tr>
<tr>
<td>Pediculocides</td>
<td>Treat lice infestation in hair</td>
<td>Follow orders and directions exactly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potentially toxic to CNS</td>
</tr>
<tr>
<td>Antifungal medications</td>
<td>Treat fungal infections</td>
<td>Treatment may take a long time.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Keep infected area clean and dry.</td>
</tr>
<tr>
<td>Analgesics</td>
<td>Relieve pain</td>
<td>Frequent, unusual or pain that interferes with a child's usual activity must be reported to the chain of command.</td>
</tr>
<tr>
<td>Antipyretics</td>
<td>Reduce fever</td>
<td>Monitor child’s temperature</td>
</tr>
<tr>
<td>Expectorants</td>
<td>Promote coughing up mucous</td>
<td>Report any persistent cough</td>
</tr>
<tr>
<td>Antitussives</td>
<td>Suppress coughing</td>
<td>May mask signs of respiratory infection such a pneumonia or bronchitis</td>
</tr>
<tr>
<td>Decongestants</td>
<td>Reduce congestion in the sinuses and nasal passages</td>
<td>Avoid administering at bedtime</td>
</tr>
<tr>
<td>Classification</td>
<td>Use</td>
<td>Special Considerations</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Antihistamines</td>
<td>Reduce symptoms of allergic reactions</td>
<td>Many cause drowsiness - use with caution.</td>
</tr>
<tr>
<td>Cardiovascular medications</td>
<td>Affect the heart and blood circulatory system</td>
<td>BP and pulse must be checked routinely.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do not stop abruptly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doses should not be missed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Often used for unlabeled purposes such as anxiety and ADHD.</td>
</tr>
<tr>
<td>Anticonvulsants</td>
<td>Reduce or prevent seizures</td>
<td>Give consistently on time.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>May require periodic blood work.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Often used for unlabeled purposes such as treating mood disorders</td>
</tr>
<tr>
<td>Laxatives</td>
<td>Promote bowel movements; treat constipation</td>
<td>Increased fluids, fiber and activity may reduce the need for laxative medication.</td>
</tr>
<tr>
<td>Antacids</td>
<td>Control or reduce acid in stomach</td>
<td>Check with pharmacist or practitioner before administering at the same time as another medication.</td>
</tr>
<tr>
<td>Birth Control/Hormone medications</td>
<td>Prevent pregnancy</td>
<td>Do not protect against STDs or AIDS.</td>
</tr>
<tr>
<td>(Contraceptives)</td>
<td>Also prescribed for other medical reasons</td>
<td>Must be administered as ordered for maximum effectiveness</td>
</tr>
</tbody>
</table>
Unit 8

MEDICATIONS TO TREAT PSYCHIATRIC (BEHAVIORAL HEALTH) CONDITIONS
Learner Objectives for Unit 8: Medications That Treat Psychiatric Conditions

At the conclusion of this unit, the learner will be able to:

1. Identify the use for antipsychotic medications.
2. Describe the special considerations for antipsychotic medications.
3. Identify the use for anticholinergic medications.
4. Identify the use for antidepressant medications.
5. Describe the special considerations for antidepressant medications.
6. Identify the use for mood stabilizer medications.
7. Describe the special considerations for Lithium.
8. Identify the use of antianxiety medications.
9. Describe the special considerations for antianxiety medications.
10. Identify the use for Stimulant and Non-Stimulant ADHD Medications.
11. Describe the special considerations for ADHD medications.
12. Identify the use of hypnotic medications.
13. Describe the special considerations for hypnotic medications.
14. Identify the serious side effects (adverse reactions) that must be reported immediately to the chain of command.
15. List other side effects that must be reported, describe the special considerations and what you might be able to do prevent or relieve side effects.
MEDICATIONS USED TO TREAT PSYCHIATRIC CONDITIONS

Introduction

Many children you work with will be prescribed psychotropic medications – medications used to treat a variety of psychiatric conditions. Another term used in discussions about psychiatric conditions is behavioral health. Psychotropic medications affect the central nervous system (the brain and spinal cord), influence how the brain thinks and affect emotions and behavior. You must know why a particular child is prescribed a specific psychotropic medication. Licensed practitioners will often need to make dose adjustments or change medications as they work with the child and determine what the best medication plan will be.

You are not expected to remember specific drug names. The learner objectives identify the information you are responsible to know including the use for the various drug classifications and special considerations for the specific drug classification.

As you know, all medications can possibly cause harm to a child. You must pay attention for any changes in a child’s behavior, activity, ability to participate, and in their overall well-being.

You must promptly report any change to your chain of command.
Learner Objective 1 – Identify the use for Antipsychotic Medications

**ANTIPSYCHOTICS (Neuroleptics)**

**Use:** Treat psychotic symptoms.

Antipsychotics help to reduce psychotic symptoms in children who have schizophrenia or disorders such as PTSD (post traumatic stress disorder) and borderline personality disorder. They may also be used for children with autism, mental retardation and Tourette’s syndrome to help control psychotic symptoms, and verbal and movement tics. Antipsychotics may also be called *neuroleptics*.

**Examples of Antipsychotic medication:**

First Line Medications: Usually tried first:
- Risperdal (risperidone)
- Geodon (ziprasidone)
- Zyprexa (olanzapine)
- Seroquel (quetiapine)
- Abilify (aripiprazole)

Second Line Medications: Prescribed if the first line medications are not effective.
- Thorazine (chlorpromazine)
- Clozaril (clozapine)
- Haldol (haloperidol)
- Trilafon (perphenazine)
Learner Objective 2 – Identify the Special Considerations for Antipsychotic Medications

The following are special considerations for antipsychotic medications that you will be responsible to know:

- If any side effect is suspected, hold the medication, contact the chain of command, and document what was observed and actions taken.

- Call the emergency medical system (911) as directed by the chain of command or your facility’s emergency medical procedure.

- Difficulty swallowing, drooling, facial tics and twitches, changes in how the child walks or moves may be the first signs of a serious side effect. You must immediately report any such signs to your chain of command.

- A fever is also a sign of a possible serious side effect. Report any fever to your chain of command.

- *Certified staff must consult directly with a licensed practitioner before administering any psychotropic medication as a PRN.*
Learner Objective 3 – Identify the use for Anticholinergic Medications

ANTICHOLINERGIC MEDICATIONS

Use: Treat abnormal muscle movements that may be associated with antipsychotic medications.

Examples of Anticholinergic Medication:
- Cogentin (benztropine)
- Artane (trihexyphenidyl)
- Benadryl (diphenhydramine)

Special Considerations:
- Be sure children drink plenty of water especially in hot weather.
- If symptoms get worse or do not improve, contact your chain of command.
Learner Objective 4 - Identify the use for Antidepressant Medication

ANTIDEPRESSANTS

Use: Treat depression

Examples of Antidepressant Medication:

- Prozac (fluoxetine)
- Luvox (fluvoxamine)
- Celexa (citalopram)
- Anafranil (clomipramine)
- Remeron (mirtazapine)
- Pamelor (nortriptyline)
- Tofranil (imipramine)
- Zoloft (sertraline)
- Lexapro (escitalopram)
- Desyrel (trazodone)
- Norpramin (desipramine)
- Elavil (amitriptyline)
- Wellbutrin (bupropion)
- Sinequan (doxepin)
Learner Objective 5 - Describe the special considerations for antidepressant medications.

Special Considerations for Antidepressant Medication:

- Antidepressants are psychotropic medications that elevate the mood, increase physical activity and mental alertness. Suicidal thoughts and behavior may increase in children taking antidepressants because they now have the energy to carry out a suicide plan. Carefully watch for and immediately report any child who has made suicidal statements or actions.

- Report any complaint or observation of stiffness, restlessness or fever.

- Be aware of drug to drug interactions.
Learner Objective 6 – Identify the use for mood stabilizer medications

**Mood Stabilizers**

*Use -* Treat mood disorders such as bipolar disorder. They are also used to help improve impulse control and control aggression.

**Examples of Mood Stabilizers**

Many medications are used as mood stabilizers including several that are prescribed as an "unlabeled use".

**Labeled use as mood stabilizer:**

Lithobid, Eskalith (lithium)

**Unlabeled use as mood stabilizer:**

Anticonvulsant medication:

- Depakene (valproic acid)
- Topomax (topiramate)
- Tegretol (carbamazepine)

- Depakote (divalproex)
- Klonopin (clonazepam)
Learner Objective 7 - Identify the Special Considerations for Lithium and the Special Considerations for Anticonvulsants used to Stabilize Mood

**Lithium**
- Be sure that the child drinks plenty of fluids to prevent a build up of lithium in the blood.
- Routine blood tests to check the level of medication will be ordered.
- **Ibuprofen should not be administered to children taking lithium.**

**Anticonvulsant**
- Medication must be administered on time as ordered.
- Take as prescribed & follow directions about administration with or without food.
- Blood tests will be ordered frequently to check the level of medication.
Learner Objective 8 – Identify the use for Antianxiety medications

ANTIANXIETY MEDICATIONS

Use: Treat anxiety, tension, and nervousness.

Examples of Antianxiety Medication:
- Ativan (lorazepam)
- Valium (diazepam)
- Xanax (alprazolam)
- Serax (oxazepam)
- Buspar (buspirone)

Learner Objective 9

Describe the special considerations for antianxiety medications.

Special Considerations for Antianxiety Medications:
- Some are controlled medications.
- If an antianxiety medication is prescribed for PRN (as needed) use, medication certified staff must directly consult the licensed practitioner before administering a PRN antianxiety medication.
- An overdose of an antianxiety medication can be fatal. Be especially careful to do a mouth check after administering these medications to ensure that the child is not cheating the medication and perhaps storing up a supply for an overdose.
Learner Objective 10 – Identify the use for Stimulants and non-stimulant medications used to treat ADHD

STIMULANTS AND NON-STIMULANT ADHD Medications

Use: Increase attention span and decrease hyperactivity. (Reduce the symptoms of attention deficit hyperactivity disorder)

ADHD is a common diagnosis in children. Medications are prescribed as part of an overall treatment plan.

Examples of stimulants used to treat ADHD

- Ritalin, Metadate, Methylin (methylphenidate)
- Concerta (methylphenidate)
- Dexedrine (dextroamphetamine)
- Focalin (dexamethylphenidate)
- Adderall (dextroamphetamine & amphetamine)
- Daytrana (methylphenidate patch)

Examples of non-stimulant medication used to treat ADHD

- Straterra (atomoxetine)
- Some antidepressants such as Wellbutrin (bupropion)
Learner Objective 11 - Describe the special considerations for ADHD medications.

Special Considerations for stimulant medications:

- Stimulant medications are controlled medications and require double locked storage and a routine count of the medication.

- Stimulants are usually not administered late in the day. Understand and follow the licensed practitioner’s schedule for times of administration.

- Stimulants may delay growth.

- Stimulants may suppress the appetite so weight and food intake should be monitored.

- Daytrana is a transdermal patch applied to the skin. It is a controlled medication and requires all the security measures for controlled medication. Follow proper administration techniques and dispose of used patches according to facility policy.
Learner Objective 12 - Identify the use for hypnotic medication

Learner Objective 13 - Identify the special considerations for hypnotic medication

**HYPNOTICS**

*Use: Promote sleep*

**Examples of Hypnotics:**

- Ambien (zolpidem)
- Desyrel (trazodone)
- Remeron (mirtazapine)
- Sonata (zaleplon)
- Benadryl (diphenhydramine)

**Special Considerations:**

- Consider using non-medication interventions first to help with sleep.
- Report insomnia or poor sleeping to the child’s licensed practitioner.
- Children can become tolerant to and/or dependent on these medications.
- Dangerous interactions may occur if administered to a child who is also taking an antihistamine or an antianxiety medication.
Learner Objective 14 - Identify the serious side effects (adverse reactions) that must be reported immediately to the chain of command.

Possible Psychotropic Medication Serious Side Effects (adverse reactions)

Immediately contact the chain of command if you notice any of the following:

- Fever or complaint of sore throat
- Drooling or difficulty swallowing
- Changes in how the child walks or moves
- Confusion or increased sedation
- Muscle stiffness especially in the neck or mouth area
- Eyes rolling back involuntarily
- Complaint of stomach pain

These serious side effects are potentially life-threatening or may become permanent. If you notice or the child complains of any of these side effects, hold the medication, contact your chain of command and document.
Learner Objective 15 - Identify other possible side effects that must be reported, and identify the special considerations and steps you can take to help prevent or relieve these side effects.

Other Psychotropic Medication Side Effects and Special Considerations

Below is a list of general side effects that may be seen with many of the psychotropic medications that you will administer. The special considerations and what you can do describe steps that you can take to help prevent or reduce side effects.

<table>
<thead>
<tr>
<th>Side effect</th>
<th>Special considerations: what you can do</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity to the sun</td>
<td>Be sure children apply sunscreen before going outdoors.</td>
</tr>
<tr>
<td>(increased chance of sunburn)</td>
<td></td>
</tr>
<tr>
<td>Sensitivity to heat</td>
<td>Encourage children to drink plenty of water especially during hot weather</td>
</tr>
<tr>
<td>Constipation</td>
<td>Encourage fluids and physical activity</td>
</tr>
<tr>
<td>Appetite changes</td>
<td>Monitor food intake and encourage healthy food choices. Follow nutritional recommendations.</td>
</tr>
<tr>
<td>Weight Gain</td>
<td></td>
</tr>
<tr>
<td>Sleep disturbances</td>
<td>Allow for relaxing bedtime routines.</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>Encourage fluids to relieve dry mouth.</td>
</tr>
</tbody>
</table>

- The learner objectives for each particular type of psychotropic medication identify any specific special considerations for that medication that you will be responsible to know.
**Review of Psychotropic Medications**

Children may be prescribed a variety of medications to treat psychiatric conditions. Many times medications will be prescribed for their unlabeled use. Medication certified staff must know why a child is prescribed a medication, what the benefit and the potential side effects and adverse reactions might be. The chain of command must be notified immediately if any side effects or adverse reactions are seen.

<table>
<thead>
<tr>
<th>Medication</th>
<th>Use</th>
<th>Special Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antipsychotic</td>
<td>Psychotic conditions/symptoms</td>
<td>Watch for abnormal muscle movements and fever.</td>
</tr>
<tr>
<td>Anticholinergic</td>
<td>Treat muscle movement disorders seen with antipsychotic meds</td>
<td>Be sure children drink plenty of fluids, especially in hot weather</td>
</tr>
<tr>
<td>Antidepressant</td>
<td>Treat depression</td>
<td>Watch for signs of worsening depression or thoughts of suicide</td>
</tr>
<tr>
<td>Mood Stabilizer</td>
<td>Treat mood disorders</td>
<td>Unlabeled use meds: Anticonvulsant</td>
</tr>
<tr>
<td>Antianxiety</td>
<td>Treat anxiety, tension, nervousness</td>
<td>May be controlled medications</td>
</tr>
<tr>
<td>Stimulants (ADHD meds)</td>
<td>Treat attention deficit and hyperactivity disorder</td>
<td>Usually not administered late in the day</td>
</tr>
<tr>
<td>Hypnotic (sleep medication)</td>
<td>Promote sleep</td>
<td>Offer non-medication interventions first</td>
</tr>
</tbody>
</table>

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Unit 9
MEDICATION ADMINISTRATION TECHNIQUES
Learner Objectives for Unit 9: Administration Techniques

In this unit you will learn how to properly administer various types of medications. The objectives list the information you will be responsible to know for the written exam. The starred objectives indicate skills that you must practice during class time.

After completing this unit, participants will be able to:

1. Define standard precautions
2. List the different forms of oral medication
3. Identify which forms of oral medications should not be crushed
4. Define "scored" tablet and what this means
5. State how to measure doses of liquid medication less than 5 ml's.
6. Explain how to clean an infected eye prior to administering eye medication
7. Know and practice the technique for administering eye ointment and eye drops
8. Know and practice the technique for administering ear medication to children.
9. Explain the difference in technique for administering ear drops to a child 3 years old or younger or that for a child over 3 years old.
10. Know and practice the technique for administering nasal sprays
11. Verbalize the different types of delivery systems for inhaled medication
12. Know and practice the technique for administering topical medication
13. Verbalize the correct method for applying and removing transdermal medication patches.
14. Describe the role of the DCF medication certified staff for administering rectal or vaginal medication.
JUNE 2008

Terms to Define:

- Standard
- Enteric coated
- Scored

Precautions

- Sustained release
- Calibrated
- Oral syringe measuring cup

- Rapid release (quick dissolve) tablets
- Tablets
- Capsules

- Gel caps
- Chewable tablet
- Eye ointment

- Eye drops
- Ear lobe
- Nasal spray or pump

- Metered dose inhaler
- Nebulizer
- Transdermal medication

- Technique
- Self administration
- patch
General Information about Techniques of Administration

You will learn the specific techniques to administer different types of medications but there are steps that you must follow for every medication you administer.

1. Follow the steps of the Medication Administration Procedure every time you administer any medication to any child. You must perform the Rule of Three - carefully compare the Five Rights three times on the licensed practitioner’s order, the pharmacy label and the MAR/Kardex making sure that the five rights match on all three documents.

2. Thoroughly wash your hands before and after you administer medication.


Definition - Standard Precautions - a set of practices that prevent the spread of infection including the use of personal protective equipment such as gloves, gowns, masks and goggles.

Page 174 has further information about Standard Precautions
The DCF Medication Administration Procedure

- Approach the task in a calm manner allowing no distractions
- Wash hands before and after medication administration
- Assemble appropriate equipment
- Perform the Rule of Three:
  - First Check: Compare the Licensed practitioner's order with the pharmacy label to see that the 5 Practitioner Rights match
  - Second Check: Compare the pharmacy label with the pharmacy label to the MAR to see that the 5 Rights match
  - Third Check: Compare the MAR with the licensed practitioner's order to see that the 5 Rights match
- Pour the correct dose of medication
- Identify the correct child
- Administer the medication properly utilizing the proper techniques.
- For oral medication: perform a mouth check to ensure that the medication has been swallowed
- Document appropriately on the medication administration record
- Return the medication to the locked area and clean up
Learner Objective 1 – Define Standard Precautions

Definition - Standard Precautions - a set of practices that prevent the spread of infection including the use of personal protective equipment such as gloves, gowns, masks and goggles.

STANDARD PRECAUTIONS in Medication Administration

Standard Precautions (also known as Universal Precautions) are the steps you take to protect yourself and those you are caring for from exposure to possible infection. Standard Precautions for medication administration include thoroughly washing your hands before and after each medication administered and/or between each child you administer to. You should also wear gloves when you are administering:

<table>
<thead>
<tr>
<th>• Eye medications</th>
<th>• Ear medications</th>
<th>• Nasal medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Topical medications</td>
<td>• If you must touch a tablet in order to crush or split it before administering.</td>
<td></td>
</tr>
</tbody>
</table>

Washing your hands is the best way to prevent the spread of infection.
Learner Objective 2  List the forms of oral medications

ADMINISTERING ORAL MEDICATIONS

Most of the medications you will administer will be given orally (p.o.). Some forms of oral medications include:

Liquid medications
- Tablets
- Capsules
- Gel Caps
- Chewable tablets

Quick dissolving tablets
- Dissolve rapidly on the tongue

Enteric coated tablets
- Have a special coating so that the tablet will not be absorbed until it is in the small intestine.

Sustained Release tablets
- Designed to be absorbed over a long period of time so that the child may not need to take the medication several times a day.
- XR, XL, CR, or SR after the medication name indicate a sustained release medication.

Scored tablets
- A groove across the center of the tablet indicates that the tablet may be cut perfectly in half.
Some general guidelines to follow when administering oral medications.

1. Ask the child to remove gum, candy or food from his mouth before you administer medication to him.

2. Always give oral medications with fluids; water is usually the best choice. Drinking water will help the child swallow the medication.

3. A mouth check should be done to make sure that the child swallowed the medications. *Cheeking* medications means the child does not swallow the medication but instead hides the medication in his mouth. He may then retrieve it to save up medications for an overdose or to give them to a peer. Also, when the child cheeks his meds he isn’t getting his medications as ordered. You must look inside the child's mouth and under the tongue to ensure that the child swallowed the medication. Administering medication with a generous drink of water can also reduce the chance the child will cheek his medication.

4. If you must directly touch a tablet, wear gloves.
Special techniques for Oral Medications

Learner Objective 3

Identify forms of oral medications that should not be crushed.

Sometimes you will need to crush a medication because the child has difficulty swallowing tablets and no liquid form of the medication is available. The licensed practitioner should be informed if a child has difficulty swallowing tablets so that other options may be considered.

You should get approval from a pharmacist or licensed practitioner before crushing any medication. Medications that should not be crushed are:

<table>
<thead>
<tr>
<th>Enteric Coated tablets</th>
<th>Sustained release tablets (SR, XL, XR, CR usually follow the name of the medication)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gel Caps</td>
<td>Other liquid filled capsules</td>
</tr>
</tbody>
</table>
How to Crush a Tablet:

- Use a clean, dry mortar and pestle, a pill crusher or place the tablet between the bowls of two spoons.

- Wrap the tablet in waxed paper or in a paper med cup to prevent the crushed medication from spilling.

- Mix the crushed medication with a small amount of applesauce or pudding. Use no more than a tablespoon or two to mix with the medication. Remember the child will have to eat all of the food/medication mixture to receive the full dose of medication.

- Offer a glass of water after administering the medication.
Learner Objective 4  Define Scored Tablets

**Definition:** A scored tablet has a line or groove dividing the pill in half. Scored tablets contain half of the dose on each side of the dividing line.

- Only scored medication may be cut in half.
- Contact your chain of command if you must cut a tablet in half to obtain the correct dose of medication.
- Document any direction you receive from the licensed practitioner, a pharmacist or the program nurse before you split a tablet.

**How to split a scored tablet**

- Wear gloves when handling the tablet.
- **Using a pill-splitter:**
  - Line up the scored groove on the tablet with the razor blade in the splitter.
  - Close the splitter to cut the tablet in half.
- **Using a sharp knife** (if you don't have a pill-splitter)
  - Place the knife in the scored groove.
  - Tap the knife blade sharply with a spoon or other unbreakable object.
  - Be careful not to scatter the tablet halves.
**Liquids**

Liquid medications are often prescribed for young children or for children who cannot swallow pills.

**Technique for Pouring Liquid Medications - Review from Math Unit**

**Measuring Liquid Medications:**

1. Liquid medications must be carefully measured so that you will be administering the correct dose. There are a variety of devices that you may use to accurately measure liquid medications. *Please see the math unit for descriptions.*

2. **Check the concentration of the medication on the pharmacy label before pouring a dose so that you will be able to verify how much medication to pour.**

3. The medication cup must be placed on a flat surface at eye level.

4. While pouring medication from the bottle hold the label facing upward to avoid spilling the medication onto the label.
Learner Objective 5 - Identify how to measure less than 5cc's of medication

Any dose of medication that is less than 5CC must be measured in an oral syringe or calibrated dropper. Medications that are prescribed in such small doses may be very concentrated. Be extra careful to accurately measure such small doses.

 Technique for Administering Oral Medication - Review from Unit 2

1. Follow the DCF Medication Procedure.

2. Pour the accurate dose: place the prescribed number of pills or pour correct amount of liquid into a medication cup.

3. Administer the medication to the client with juice or water.

4. After administering the medication, perform a mouth check to ensure that the child swallowed the medication.
ADMINISTERING EYE MEDICATIONS (Ointments and Drops)

General Information for Administering Eye Medication

1. Wash hands and wear gloves when administering eye medications.

2. Prior to administering eye medication, ask the child the following questions:
   a) does the eye feel or look worse?
   b) is the eye swollen, red, crusted, or oozing?
   c) does the eye hurt? Describe the pain.

   If the child answers yes to any of these questions: hold the medication, contact chain of command, document, and follow instructions.

3. After administering an eye medication, have the child remain in a safe environment until the medication is completely absorbed and the client’s vision is cleared.

4. Never bandage an eye unless there is a specific order to do so.
Learner Objective 6 - Explain how to clean an infected eye.

When a child has an eye infection such as pink eye, there may be a great deal of drainage around the eye. This must be washed off before administering eye medication. The child may be taught to do this herself.

1) Wash your hands and wear gloves or instruct the child to wash her hands.

2) Moisten a disposable washcloth, gauze, or cotton ball with warm water.

3) Wipe the infected eye gently from the inner to outer corner.

4) To prevent spreading the infection, never use the same area of the washcloth for more than one wipe AND use a separate washcloth for each eye.

5) Remove your gloves and wash your hands (or instruct child to wash her hands) when the eye is clean.

6) Put on clean gloves before handling the medication.
General Information about Eye Ointments

1. Eye ointments usually are dispensed in small tubes with pointed tips that allow a *thin ribbon* of medication to be placed inside the *lower eyelid*.

2. Eye ointments tend to blur the vision. If a child needs medication in both eyes, be sure the child's vision has cleared before administering medication to the other eye.

4. Eye ointments tend to melt and run once they are applied. Have clean tissues handy. If the child has an eye infection he should not wipe both eyes with the same tissue. Wear gloves while administering the ointment and wash your hands after administration. Discourage children from sharing washcloths, towels and eye make-up, etc.

*Wear gloves. Starting at the inner corner of the eye, apply a thin ribbon of ointment to the lower lid.*
Technique for administering Eye Ointment:

1. Follow the DCF Medication Administration Procedure.
2. Prepare the medication correctly: Place the cover of the medication on its side to avoid contamination. Warm the medication to room temperature.
3. Clean the child’s eye if necessary. (See page 183.)
4. Wear gloves. Squeeze a small amount of medication out of the tube onto a tissue before administering.
5. Have the child tilt his head slightly backward, resting it against a hard surface if possible. Ask the child to look up and away.
6. Do not touch the eye with the medication container.
7. *Gently pull down the lower eyelid using the side of a finger.* Beginning at the *inner corner of the eye, place a thin ribbon of medication into the lower lid.*
8. Rotate the tube after administering the ointment; this will detach the ointment from the container.
9. Instruct the child to close his eyes for 1-2 minutes so the medication may be absorbed.
10. Gently wipe away any excess medication that may have dripped out of the eye.
11. Before replacing the cap onto the tube, squeeze a small amount of ointment from the tube and discard it. This will prevent contamination of the medication.
General Information about Eye Drops

1. Eye drops may burn and cause irritation.

2. Provide a tissue to blot excess medication and tears. If an infection is present provide a separate tissue for each eye.

Eye Drops

Wear gloves. Gently pull down the lower eyelid using the side of your finger.

Form a small pocket and place the prescribed number of drops into pocket.
Learner Objective 7 - Know & practice the technique for administering eye drops

Technique for administering Eye Drops

1. Follow the DCF Medication Administration Procedure.

2. Have tissues available; place the cover of the medication on its side to avoid contamination. Warm the medication to room temperature.

3. Clean the child's eye if necessary. See page 183.

4. Wear gloves. Have the child tilt her head slightly backward, resting against a hard surface if possible. Ask the child to look up and away.

5. Do not touch the medication dropper to the eye or eyelashes.

6. Gently pull down the lower eyelid using the side of your finger. Form a small pocket and place the prescribed number of drops into pocket.

7. Have the child close her eyes and turn her head slightly toward the affected side. If other eye drops are ordered, wait 5 minutes before giving the second medication.
General Information about administering ear medications.

1. Be sure that the ear canal is clean and dry. Document and notify the chain of command if you notice any drainage or if the child has any complaints.

2. You may need to clean the ear first.
   a. Ears may be cleaned with a disposable washcloth by wiping gently in a downward motion.
   b. NEVER insert cotton swabs into the ear canal. You can damage the ear canal or eardrum.

3. After you administer an ear medication the child should remain with the affected ear up for 3-5 minutes. If you need to administer drops to both ears wait at least 5 minutes before administering medication into the second ear.
   - Never place a cotton ball, tissue or gauze in the ear after administering ear medication unless prescribed by the physician.
   - A child may feel dizzy, nauseated or have ear pain after ear drops are administered. Warming ear drops to room temperature before you administer them may help the child feel more comfortable.
   - Ear medication droppers should be placed against the sides of the ear near the ear canal opening to allow the medication to gently roll into the ear.
   - If the child feels dizzy following the administration of ear medication, provide a safe environment, notify the chain of command, and document.
Learner Objective 8 - Know & practice the technique for administering ear drops

Learner Objective 9 - Identify the differences in technique depending on the age of the child.

Technique for Administering Ear Drops

1. Follow the DCF Medication Administration Procedure.

2. Wash your hands and wear gloves for this procedure.

3. Remove the cover and place it on its side to avoid contamination; warm the medication to room temperature.

4. Position the child with the ear to be treated upward.

5. Straighten the ear canal by the following methods:

   a. 3 years old and younger: gently pull ear LOBE down and back.

   b. Over 3 years old: gently pull UPPER part of the ear up and back.

      See illustration on next page.

6. Place the prescribed number of drops against the sides of the ear near the ear canal opening to allow the medication to roll in.

7. Have the child remain with affected ear upward for 3-5 minutes
Learner Objective 9 Explain the difference in administering an ear drop to a child over 3 years old or to a child 3 years old or younger.

**CHILD OVER THE AGE OF 3**

Gently pull the upper part of the ear UP and BACK

---

**Child 3 years old and younger**

Gently pull the ear lobe DOWN and BACK
NASAL SPRAYS

General Information about administering nasal sprays.

1. Some nasal preparations can cause nasal irritation and ulceration. If a child is experiencing pain or abnormal nasal drainage hold the medication, contact the chain of command, and document.

2. The child should blow her nose prior to administration and wait 5 minutes after administration before blowing her nose again.

3. A nasal spray tip should never be placed deeper than 1 cm. (3/8 in.) into the nose.

4. Tolerance may develop to some nasal preparations and overuse of some preparations may cause rebound congestion.

Place tip of spray 1 cm or 3/8 inch into nostril...
Learner Objective 10  Know and practice the technique for administering nasal sprays.

**Technique for administering nasal sprays.**

1. Follow the DCF Medication Administration Procedure.

2. Have the child gently blow his nose. Have tissues available.

3. Wear gloves. While plugging one nostril, place the tip of the sprayer (1 cm or 3/8 inch) into the other nostril.

4. Ask the client to breathe in through his nose as the spray is administered.

5. Have the child exhale through his mouth after the spray is administered, repeat the procedure if prescribed.

6. Discourage him from blowing his nose for 5 minutes.
ADMINISTERING INHALED PULMONARY MEDICATIONS

Learner Objective 11  Verbalize the different types of delivery systems for inhaled medications.

Types of Inhaler Devices - Inhaled medication delivery systems*

There are several types of inhaler devices that may be used for the treatment of asthma or other lung (pulmonary) conditions. The type of inhaler device prescribed depends on the child and her symptoms. The most common devices are:

- **Metered Dose Inhalers (MDI)**
  
  Use chemical propellants to push out the medication from the inhaler. A spacer or aero chamber may be prescribed to use with the MDI to make proper use easier and the medication more effective.

- **Dry Powder or Rotary Inhalers (Turbuhaler, Diskus)**
  
  Dry powder inhalers are activated through breathing. They release the medication through rapid inhalation instead of using propellants.

- **Nebulizers**
  
  Nebulizers convert liquid medication into a fine mist and deliver the mist through a face mask or mouth piece that connected to the nebulizer machine with plastic tubing. Your program nurse should teach you the correct way to use a particular child’s nebulizer before you use it.

*Information from:  http://www.ymghealthinfo.org
General Considerations

1. For a metered dose inhaler (MDI) two puffs will usually be the prescribed dose. Unless otherwise instructed, the child must wait at least one minute between puffs. This allows the first puff of medication to be absorbed before the second is administered.

2. When more than one inhaler is prescribed, check with the licensed practitioner to determine which inhaler to administer first. Usually bronchodilators are given first and then inhaled steroids are given second.

3. A child who is having an asthma attack should have relief within a few minutes after using her bronchodilator inhaler. If relief is not obtained, follow facility policy for medical emergencies.

4. Unless otherwise indicated the child should rinse his mouth after the use of a steroid inhaler to decrease the possibility of side effects such as thrush, a fungal infection in the mouth.
Technique for administering an oral metered dose inhaler

1. Follow the DCF Medication Administration Procedure.

2. Remove the cap from the inhaler and check for cleanliness and damage to the canister. Clean canister holders with warm water, and do not use if there is any damage to the canister or the holder.

3. Determine how many puffs are left in the inhaler. Document all puffs used.

4. Instruct the child to hold the inhaler upright and shake it.

5. The child should administer the inhaler according to the technique taught by his physician. Either of the techniques listed below is acceptable:
   a. Have client hold the inhaler one to two inches from his mouth.
   b. Place the mouth piece of the inhaler inside his mouth and form a tight seal around the mouth piece.

6. Instruct the child to exhale completely and inhale deeply through the mouth as the canister is depressed once. The child should inhale for two to five seconds, and hold his breath for as long as possible up to ten seconds.

7. Wait one minute and repeat the entire process as prescribed.

8. The child should rinse her mouth with water after administration of an inhaled steroid medication.
9. Document appropriately on the medication administration record. If a rescue inhaled bronchodilator was administered to treat an asthma attack, be sure to document the outcome of the medication – did the child find relief from her asthma attack or did you need to take emergency medical action because the medication did not help?

<table>
<thead>
<tr>
<th>Exhale</th>
<th>Inhale &amp; depress the canister</th>
<th>Breathe .... in 2-5 seconds...</th>
<th>Hold</th>
</tr>
</thead>
<tbody>
<tr>
<td>breath for up to 10 seconds</td>
<td>..........exhale.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Wait one minute before administering a second puff if prescribed.

Skill Check for Oral MDI is also part of the Asthma Unit.
Technique for administering an inhaler with a spacer or aero-chamber

Spacers or aero-chambers capture and hold the mist from a dose of an inhaler until the client starts to breathe from the mouthpiece of the spacer or aero-chamber.

1. Read the package insert for instructions.

2. Place the inhaler into the spacer (aero-chamber) and have the client place the spacer into his mouth forming a tight seal.

3. Press the top of the inhaler releasing the medication into the spacer.

4. Tell the child to slowly breath in and out the prescribed number of times taking deep breaths and holding their breath for several seconds.

5. Wait one minute and repeat the procedure.

Technique for administering dry powder inhaler (diskus or turbuhaler, etc)

There are many different dry powder inhalers. Read the package information and/or consult with your program nurse or a pharmacist for instructions on how to properly administer these types of inhalers.
Learner Objective 12  Know and practice technique for administering topical medications.

General Considerations when administering topical medications

1. Allow for client privacy.

2. Clean the skin if necessary per licensed practitioner’s directions.

3. Wear disposable gloves.

4. The skin should be dry prior to applying topical medication.

5. Apply enough medication to cover the area to be treated, unless otherwise directed.

6. Except for powders, never apply a topical medication directly from the container onto the skin. Place a small amount of medication onto clean gauze then apply to the skin. This prevents contamination of the medication container.

7. Observe the client for any rashes that are new or that get worse.
Applying Different Types of Topical Medications

1. Powders
   a. Apply to dry skin to avoid irritation.
   b. Shake the canister distributing the powder onto the desired area. Unless otherwise instructed, gently distribute the medication to cover the entire area.

2. Lotions, ointments, creams:
   a. Shake liquid medications.
   b. Wear gloves and apply a small amount of the medication (unless otherwise directed) onto a gauze pad, and pat the medication onto the area.
   c. Bandage the area only if instructed by the licensed practitioner.
Learner Objective 13  Verbalize the correct method for applying and removing Transdermal medication patches.

Transdermal medications (patches):

- Transdermal medication is an adhesive patch designed to deliver a constant amount of medication through the skin. A variety of medications are available in patch form.
- Gloves should be worn to apply or remove transdermal patches.
- The adhesive patch should be applied to clean, intact, dry skin that is not infected, scarred, callused or tattooed.
- Wash the skin with soap and water both where the new patch will be placed and where the old patch was removed.
- Remove the old patch before applying the new one. Check the skin under the patch for redness or rash.
- Change application sites to avoid skin irritation.
- Peel backing off the patch, press onto the skin and apply pressure to assure that it sticks to the skin.
- Document in the child's record the site where you applied the patch. (for example: 6/1/2008: upper right arm)
- Read package instruction for any further information.
Learner Objective 14  Role of DCF Medication Certified Staff in administering rectal and vaginal medications.

A. General Considerations

1. Do not directly administer to any child. D.C.F. Medication Administration Certified personnel are not trained nor certified to administer any rectal or vaginal medications. The children who have these types of medication ordered must be able to self administer these medication or have a nurse available to administer the medication.

2. Providing the child with instructions for self administration
   a. Medication certified staff may provide the child with instructions on self administration. Information about administration may be found on the package information.
   b. Review of instructions may be done by a staff member of the same sex as the child and in the presence of another staff member as a witness. This review should be documented.

See the Verification of Training Skills checksheet.
Unit 10
SAFE STORAGE AND CONTROL

200
This unit provides general background on drug control laws and regulations for safe storage and control of medications.

Learner Objectives for Unit 10: Safe Storage and Control

At the completion of this unit learners will be able to:

1. summarize the regulations about safeguarding medications and the medication storage keys.

2. describe the storage requirements for non-controlled medications.

3. describe the storage requirements for controlled medications.

4. describe the procedure for the controlled medication count and when it must be performed.

5. describe what to do if the controlled medication count is incorrect.

6. describe the correct storage practices for refrigerated medications.

7. tell how external (topical) medications should be stored versus internal medications.

8. describe how emergency medications – Epi-pens and rescue asthma inhalers – should be stored.

9. describe the guidelines about destroying non-controlled medications and controlled medications.

Terms to Define:

- Controlled medication count
- Emergency Medication
- Epi-pen ®
- External (topical) medication
- Internal medication
- Discrepancy
Medication Storage

Learner Objective 1 summarize the regulations about safeguarding medications and the medication storage keys.

One of your responsibilities as a DCF medication certified staff is to ensure that the medications are safeguarded and stored correctly. The keys to the medication storage must always be carried by the medication certified staff person who is responsible for the medications that shift.
Every facility will have its own system of storage and safeguarding medications. You will learn about your facility's system during your internship. DCF and pharmacy regulations have requirements that must be met in every facility. For example, medication must be kept in the bottle, blister pack or other container that the pharmacy sent to your facility.

Different medications require different storage. As you remember from an earlier unit, medications may be classified as non-controlled medication or as controlled medication. Controlled medications will require storage with two locks and these medications are counted at every change of shift and/or whenever the responsibility for the medication changes. Internal medications (medication administered by mouth) are stored separately from external medications (topical medications like lotions and ointments). There are requirements for storing refrigerated medications. Finally, rescue asthma inhalers and Epi-pens® are stored in a special way.

The medication storage area should be in a location that you can work in without distraction. Children should have some privacy when they receive their medications. The medication area should be well lit, have a sink near by for hand washing and have a desk or counter to work on.

Regulation requirements for safe storage will be presented.
Learner Objective 2

Describe the storage requirements for non-controlled medications

The DCF requirements for the storage of non-controlled medications:

- locked and accessible only to medication certified or medically licensed staff.

- immobile (unable to be taken out of the facility).

- contain only medication & necessary medical supplies.

- be neat and clean.

- Medication keys must be carried by the medication certified staff responsible for administering the medications for that shift.
Learner Objective 3

Describe the storage requirements for controlled medications

DCF requirements for safe storage of controlled medications follow the guidelines established by the Drug Control Division of Consumer Protection:

- Controlled medications must be double locked: the medications are in an immobile locked container inside another locked, immobile container. This container must contain only controlled medications.

- The key to the controlled medications must be its own ring, separate from the non-controlled medication key. This key must always be carried by the medication certified staff person responsible for medications that shift.

Examples of commonly prescribed controlled medications:
- Ritalin, Adderall, Daytrana patch (methylphenidate)
- Concerta (dextroamphetamine/methylphenidate)
- Ativan (lorazapam), Klonopin (clonazapam)

The pharmacy will usually place a large letter “C” on the label of a controlled medication. If you are not sure if a medication is a controlled medication, contact your chain of command.
Learner Objective 4

Describe when the controlled medication count must be done.

Describe the procedure for the controlled medication count.

By definition, controlled medications have the potential to be abused or addictive. The amount of controlled medications currently in your facility must always be documented. The controlled medication count is done so that the person responsible for the medications knows exactly how much controlled medication is in the facility. If a controlled medication is lost you will know immediately. Prompt action can be taken to try to find the medication and steps taken to ensure the safety of the children.

When to count the controlled medications:

- At the change of shift: The on-coming medication certified staff person counts with the certified staff person who is leaving.

- Anytime there is a change in who is responsible for medication administration.

Example: You are the certified staff person on duty and are carrying the keys. You are taking a child to the doctor, and there is another medication certified staff person on duty. You will count the controlled medications with that person and give the keys for him to carry.

Do not accept the controlled medication key unless you have counted the controlled medications with the person who is handing the keys to you.
Procedure for the Controlled medication count

- You and the other medication certified staff count the medications together.

- One of you will look at the actual medications; the other will look at the count documentation. The actual number or amount of medication present should match the count documented.

- If the count is correct, both you and the other staff will sign the count documentation.

- The on-coming staff then may take the controlled drug keys to carry.

- You will learn how the count is specifically done in your facility during your internship.
Learner Objective 5

Describe what to do if the controlled medication count is incorrect (there is a discrepancy).

Sometime you may discover that the actual amount of controlled medication does not match the amount that the documentation says should be present. This is called a "discrepancy" in the count. What should you do?

1. Carefully count again with the other medication certified staff person.

2. Check the count sheet documentation and the MAR to be sure that every dose administered has been noted and that the math is correct. Many times the count is inaccurate due to a documentation error, not because a controlled medication is actually missing.

3. Look in the controlled medication storage container for any loose tablets.

4. If the discrepancy remains after these actions:
   - contact your chain of command to report the discrepancy and follow your facility's policy and procedure
   - write an incident report describing the discrepancy
   - forward (mail or fax) the incident report to:
     - State of Connecticut Department of Consumer Protection Drug Control Division
     - DCF Medical Director
Learner Objective 6

Describe the correct storage practices for refrigerated medications.

Some medications like liquid antibiotics must be kept in a refrigerator to stay effective. The pharmacist will apply a sticker to such a medication to remind you that it needs to be refrigerated.

DCF requires the following:

- The refrigerator must be in an area that is accessible only to medication certified staff or licensed medical staff.

OR

- The refrigerator must be locked and the key carried by only medication certified staff or licensed medical staff.

OR

- A locked, immobile box may be installed in the “food” refrigerator. Only medication certified staff or licensed medical staff may have the key to the medication box.

- **The temperature of the refrigerator must be kept between 36 and 46 degrees Fahrenheit.** When medications are in the refrigerator, the temperature must be recorded every day.

36 – 46 degrees F
Learner Objective 7

Tell how internal versus external (topical) medications should be stored.

- Internal medications that are administered by mouth (p.o.) must be stored separately from external (topical) medications.
- Keeping the internal and external medications in separate storage helps to prevent someone from accidentally administering a topical medication internally and keeps the topical medication from touching and possibly contaminating the internal medication.
- Internal and external medications can be separated in a variety of ways.
  - Place internal and external medications on separate shelves or drawers.
  - Place external medications in separate containers like plastic storage bags or boxes.
- Areas used to store external medications should be clearly labeled “External Use Only”.

INTERNAL MEDICATIONS STORAGE ONLY

EXTERNAL MEDICATIONS STORAGE ONLY
Learner Objective 8

Describe how emergency medications (Epi-pens® and rescue asthma inhalers) should be stored.

Emergency medications – Epi-pens® and rescue asthma inhalers – must be stored in a secure location that is easily accessible to staff but not to children.

If a child is having an anaphylactic reaction or an asthma attack, immediate treatment may be life saving. All trained staff must be able to quickly get the emergency medication without having to find a medication certified staff to unlock the medication storage. Staff do not have to be medication certified to be trained by a licensed medical person in the proper use of these emergency medications.

Know where your emergency medications are stored.

In class exercise
Learner Objective 9 - Describe the guidelines about destroying non-controlled medications and controlled medications

Medications may need to be destroyed if they have expired and are no longer safe to be administered, when the licensed practitioner has discontinued the order for them or when a child has been discharged from your facility and his medication supply was left behind.

Guidelines for destroying non-controlled medications are different than those for controlled medications. You must follow your facility's policy and procedure for destroying any medication. Contact your chain of command if you think a medication needs to be destroyed.

Guidelines for Destroying Non-controlled Medication:

Two DCF medication certified staff may destroy non-controlled medications.

Guidelines for Destroying Controlled Medication:

Contact the Drug Control Division of the State of Connecticut Department of Consumer Protection if controlled medication needs to be destroyed.

The current DCF Medication Administration Handbook provides further details on proper destruction practices and how to document the medication destruction.
Review of Learner Objectives

1. The medication storage keys must be carried by the medication certified staff person or licensed medical person on duty.

2. Non-controlled medications must be stored in a locked, immobile container that is accessible only to medication certified or licensed medical staff.

3. Controlled medications must be stored in locked, immobile container that is inside another locked, immobile container accessible only to medication certified staff or licensed medical staff.

4. The controlled medication count must be performed at the change of shift or whenever the responsibility for the medications changes.

5. If the controlled medication count is wrong (there is discrepancy):
   a. Contact your chain of command
   b. Complete an incident report
   c. Forward the incident report to Drug Control Division and the DCF Medical Director

6. The medication refrigerator must be kept at 36° - 46°F.

7. Internal medications and External (topical) medications must be stored separately from each other.

8. Emergency medications (Epi-pens® and rescue asthma inhalers) must be stored where all trained staff may have easy access to them. They should not be locked with the other medications.

9. Destruction of medications:
   - 2 DCF medication certified staff may destroy non-controlled medications.
   - Contact Drug Control Division of Consumer Protection if controlled medications need to be destroyed.
   - Follow your facility’s policy and procedure for destroying medications.
Unit 11
MEDICATION ERRORS
Learner Objectives for Unit 11: Medication Errors

At the completion of this unit, the learner will be able to:

1. Identify types of medication errors
2. List the steps to be taken if an error occurs
3. Describe how and when to document a medication error
4. Describe how to report a medication error that leads to the child needing medical attention
5. Identify when to contact the Dept of Consumer Protection, Drug Control Division.

Terms to Define:

- Objective description
- Incident report
- Medication Error report
- Medical attention
Medication Errors

Safety is the number one responsibility for medication certified staff. Any medication error could harm a child.

Failing to follow the DCF Medication Administration Procedure is often the reason for a medication error: giving medications to the wrong child, in the wrong dose, at the wrong time or by the wrong route. Any violation of the Five Rights is a medication error. Always follow the DCF Medication Administration Procedure and perform the Rule of Three by checking the Five Rights on the order, the label and the MAR.
Learner Objective 1 Identify causes and types of medication errors.

Medication errors can happen for many reasons. Often, distractions in busy programs contribute to mistakes being made. It would be impossible to list all medication errors, but most fall into one of the following categories. Being aware of these common reasons for medication errors will help you avoid making errors.

Errors in communication

Examples:

- No one is assigned responsibility for medication administration for a shift, so no one administers medications.
- No one was aware of a new medication order so it was not sent to the pharmacy to be filled.

Errors when ordering or in dispensing medications

Examples:

- Not sending new or renewal orders to the pharmacy on time
- Pharmacy dispensing the wrong medication

Errors in Documentation

Examples:

- Not initialing the MAR after administering a dose
- Transcribing an order incorrectly on the MAR
- Inaccurate controlled drug counts
Errors in Administration

Examples:

- Violating the Five Rights
  - Wrong child
  - Wrong medication
  - Wrong dose
  - Wrong route
  - Wrong time

- Missing a dose

Errors in Medication Storage and Control

Examples:

- Not carrying the medication keys
- Leaving the medication area unlocked or the keys unattended
- Improperly storing medications
  - Leaving medications needing refrigeration out of the refrigerator.
  - Storing controlled medications with non-controlled medications

All medication errors can potentially lead to a child being harmed.

- Forgetting to get an order filled by the pharmacy could leave a child suffering with an illness or pain.
- Not documenting that you administered a medication may lead to another medication certified staff administering a second dose.
- Not keeping the medication keys with you could allow a child to get into the medications and seriously hurt herself or another child.
Learner Objective 2 List the steps to be taken if an error occurs.

What to do if a medication error occurs:

If you find that an error has occurred, your first responsibility is to ensure the safety and well being of the child or children involved. Then, documentation of the error must be completed by the end of your shift.

1. Check the child and follow your policy and procedures for emergency medical care if appropriate.

2. Inform your supervisor and/or the chain of command and follow all direction you receive from them.

3. Before you leave your shift write an **objective description** of the incident according to your facility policy and procedure. An objective description is one that explains what you saw, heard and did. It does not include your opinion or guesses about the error.
Learner Objective 3  Describe how and when to document a medication error.

All medication errors must be documented on your facility’s approved reporting form. This form may be called an incident report or a medication error form. You will be shown the forms and how to complete them during your internship. All incident report or medication error forms must contain the following information:

1. the child’s name and the medications involved in the incident
2. the staff involved in the incident
3. the date and time of incident
4. an objective description of what happened and immediate actions taken to ensure the safety and well-being of the child, who was contacted, the status of the child.

Documentation must be written before the end of the shift by the person who made the error or discovered the error.

Follow your facility’s policy and procedure about how to document including any follow-up, corrective actions and/or re-training and the outcome for the child.

Some medication errors must be reported to DCF Risk Management. Follow your facility's policy and procedure about how to file this report.
Learner Objective 4 Describe how to report a medication error that leads to the child needing medical attention.

Medication Errors Requiring Medical Care:

If a child needs medical attention* because of a medication error, the Department of Children and Families requires that:

1. The child’s guardian, social worker or the DCF Hotline must be notified.
2. A copy of the incident report must be sent to the DCF Medical Director within one business day of the event.
3. The child’s parent should be notified if appropriate.
4. The medication certified staff person responsible for the error must have his or her certification to administer medications suspended until the investigation is completed. The DCF Medication Administration program must be notified of any certificates suspended.
5. A thorough review of the incident must be made to investigate the cause of the error.
6. A corrective action plan must be made to describe how this type of error will be prevented and include re-training plans if appropriate for the medication certified staff person involved.
7. DCF Risk Management must be informed. Follow your facility's policy and procedures for making this report.

*Medical attention may be defined as:

- the licensed practitioner requests to see the child in his or her office for evaluation.
- the child is sent to a hospital Emergency Department.
- the licensed practitioner orders special monitoring of the child.
- the licensed practitioner orders adjustments to the child's medications because of the error.
Learner Objective 5  Describe when you should contact the State of Connecticut Department of Consumer Protection (DCP), Drug Control Division

The Drug Control Division of the DCP is responsible for monitoring issues with controlled medications including the destruction of controlled medication.

1. Inform Drug Control any time the count for controlled medication is incorrect and controlled medications appear to be missing.
   - An incident report must be written describing the situation including the date and time, the name and dose of the medication as well as staff involved.
   - A written report about the incident must be promptly sent to Drug Control and to DCF. Information on how to contact Drug Control is in the DCF Medication Administration Handbook.

2. Drug Control must also be contacted whenever controlled medications need to be destroyed because they have expired, the order has been discontinued or the child has been discharged from the facility.

During your internship you will learn your facility policy and procedures for reporting missing controlled drugs or getting controlled drugs destroyed.

Learner Exercise: Case Studies in Workbook pages 30 - 32.
Review of Objectives for Medication Errors

1. Identify types of medication errors
   - Errors in communication
   - Errors in ordering or dispensing medication
   - Errors in Documentation
   - Errors in Administration
   - Errors in Storage and Control

2. List the steps to be taken if an error occurs

   | 1. Check on the child and follow your facility's policy and procedures | 2. Inform your supervisor and chain of command and follow any directions | 3. Document the error. Use objective description |

3. Describe how and when to document a medication error
   1. Note the child's name, medications, the date and time, staff involved
   2. Write an objective description of the error: what happened, the immediate actions taken, the status of the child
   3. Documentation must be completed before the end of the shift by the person who made or discovered the error.

4. Describe how to report a medication error that leads to the child needing medical attention
   1. Notify the child's guardian, social worker.
   2. Call DCF Hotline if after hours.
   3. Send copy of incident report to the DCF Medical Director within one business day.

5. Identify when to contact the Dept of Consumer Protection, Drug Control Division.
   1. When controlled medications appear to be missing
   2. If controlled medications need to be destroyed.
Unit 12
MANAGING UNUSUAL SITUATIONS IN MEDICATION ADMINISTRATION
Learner Objectives for Unit 12 - Managing unusual situations

Upon completion of this unit learners will be able to:

1. Identify when an order should be questioned and the steps to take.
2. Identify circumstances in which a medication should not be administered and the steps to take.
3. Define borrowing medications and explain why borrowing is not permitted.
4. Describe the criteria for administering medications at the right time.
5. Define dispensing and who may legally dispense medications

Terms to define:
- Unusual quantity
- Borrowing
- Time frame for administering medications "on time"
- Unusual Time
- Dispensing
Learner Objective 1 Identify when an order should be questioned and the steps to take.

One of your responsibilities in safe medication administration is to know when you should get help or clarification. Anytime you have a question about an order, a medication or about the child, contact your chain of command for direction before administering the medication.

Questioning a prescription/order:

In order to safely administer medications, you must understand the licensed practitioner’s order. If directions, doses, technique or times of administration are unfamiliar to you or are different from your facility policy and procedure or standard reference information you must get clarification before you administer the medication. Contact your chain of command and follow their direction according to facility policy and procedure. Document all your contacts and any direction that you are given.

Call your chain of command whenever you have a question about a licensed practitioner's order, a medication or a child.
When should an order be questioned?

1. When a medication is ordered in **unusual quantities**.

**Examples**

- Three or more pills of the same medication are to be administered at one time.

- More than 10cc or 2 tsp. of one liquid medication are to be administered at one time.

- The dose prescribed is higher than what standard drug reference books describe.
2. When a medication is ordered at unusual times.

Examples:

- More than four doses in 24 hours.
- More often than every four hours.

Other circumstances that you should check with your chain of command before proceeding:

- Two or more controlled medications are ordered for the same time.
- You do not understand the abbreviations on the order.
- Two or more medications from the same drug classification are ordered.
- You cannot read the order. You will not be able to safely perform the Rule of Three and compare the Five Rights to ensure that you will be administering the right drug, right dose at the right time and by the right route to the right child.

You have the responsibility to administer medications safely. If you do not understand an order or it is unfamiliar to you in any way, hold the medication and contact your chain of command for direction.
Learner Objective 2

Identify when a medication should not be administered and the steps to take.

Consult with your chain of command before administering medication if:

1. A child has a sudden change in physical or mental condition.

Examples:

- A child has vomited during the night; check with your chain of command about whether to administer the child’s morning medications.
- You are concerned that a child is having side effects from a medication.

2. The pharmacy label is illegible.

Example

- The liquid medication has dripped unto the label covering the name of the medication and the dose.
3. The child refuses to take the medication

- Children always have the right to refuse medication. Take the time to talk with the child about why they don’t want their medication. Follow your program’s policy and procedure for medication refusals.

4. Any of the 5 Rights is violated: person, drug, dose, route, or time.

Examples

- If the 5 Rights do not match on the order, label and MAR.
- If you cannot administer the medication one hour before to one hour after the prescribed time.

5. There is no licensed practitioner’s order for the medication or you cannot perform the Rule of Three.

Example:

- A child who was admitted this afternoon has properly dispensed medications but the orders were left at the pharmacy. You may not administer those medications until you have a copy of the orders. Contact the chain of command and follow facility policy and procedure to obtain copies of the orders.

6. Storage practices are questionable.

Example:

- In the regular medication cabinet you find a bottle of liquid amoxicillin that is labeled Keep Refrigerated.
7. The medication looks unfamiliar to you or the child

Example:

- You notice that the pills in a new blister pack are green. You remember that the previous supply had been pink.

- The child tells you that she does not recognize a pill or that it looks different to her.

Contact your chain of command whenever you have a question about a licensed practitioner's order, a medication or a child.
Review:

Steps to take when questioning an order or when you are not sure you should administer the medication.

1. Hold the medication

2. Contact the chain of command and follow directions.

3. Document the names and titles of all your contacts. Also, document the directions you were given and your actions.

4. Follow up on the directions.

Any changes or corrections in an order must be in writing from the licensed practitioner. Faxes and photocopies of orders are acceptable as long as they are legible.

The child’s physician or facility nurse should be notified when a dose of medication is missed. Refer to your program’s policy and procedures about reporting missed medication doses.
Learner Objective 3  Define borrowing medication and why borrowing is not permitted.

BORROWING MEDICATION - Using one child's medication for another child.

Medication certified staff may never administer one child's medication to another child even if it is the same medication in the same dosage.

Medication certification permits you to administer medications only when the Five Rights match on the order, pharmacy label and MAR. If you are using or borrowing one child's medication for another child, the Five Rights will not match when you compare the first child's medication pharmacy label to the second child's MAR and order. Borrowing medication is not permitted.

Using Stock Medications

Many programs keep a stock supply of over-the-counter medications such as a large bottle of Tylenol or Motrin. Medication certified staff may administer medication from these bottles to any child who has a current licensed practitioner's order. Since these bottles are not labeled for a specific child, administering medication from the stock supply is not borrowing.
Learner Objective 4 Describe the criteria for administering medications at the right time.

ADMINISTERING MEDICATION AT THE RIGHT TIME

Except for PRN (as needed) medications, doses of medication are ordered by the licensed practitioner to be administered a specific number of times per day. The actual time of medication administration is determined by the child’s or the facility’s schedule. Each facility is responsible for adopting medication administration times.

Example: The licensed practitioner’s order says to give the medication BID. At your facility, twice-a-day medications are administered at 8am and 8pm. You may administer this medication in the morning any time between 7am and 9am and in the evening between 7pm and 9pm.

Medications may be administered one hour before until one hour after the scheduled time.

For some medications, the licensed practitioner will give a specific time to administer the medication.

Example: Ritalin is often ordered for twice a day, but licensed practitioners will usually specifically direct you to give the medication at certain times. For Ritalin ordered as BID, the licensed practitioner may order it to be given at 8am and 1pm. Ritalin is a stimulant medication and generally is not given later in the day.
Learner Objective 5 Define dispensing and who may legally dispense medication.

Dispensing medication is a legally defined activity. By law only pharmacists and licensed practitioners may dispense.

Definition of Dispensing: The act of processing a medication for administration, by placing medication into a container and labeling that container for administration by another person.

What is the danger in administering a medication that has not been dispensed by a pharmacist or a licensed practitioner? You do not know if the person who packed the medication has accurately performed the Rule of Three with the Five Rights. You cannot be certain that this is the correct medication for this child because you did not complete the checks. If you administer this medication, you are responsible for any thing that may go wrong with the child in response to that medication.

According to state law, only pharmacists and licensed practitioners may dispense medication.

Medication certified staff may NOT DISPENSE medications under any circumstance.

During your internship you will learn how to safely provide medications for children who are going on facility-sponsored outings or are going for overnight visits.

Review of Learner Objectives for Unit 12

A licensed practitioner’s order should be questioned when:
You do not understand the order
Unusual quantities or doses are prescribed
The medication is ordered to be given at unusual times

Medication should not be administered when:
You have a question about the order, the medication or the child
A child has a sudden change in physical or mental state.
The pharmacy label is illegible
The child refuses to take the medication
Any of the 5 rights is violated
If there is no licensed practitioner’s order or you cannot perform the Rule of Three
If storage practices are questionable
Medication looks unfamiliar to you or to the child

Steps to take when questioning an order or a medication:
Do not administer the medication (hold the medication)
Contact the chain of command and follow directions
Document contacts and directions
Follow up on directions

Borrowing medication is not permitted.

Administering medication at the right time:

Medications may be administered one hour before until one hour after the scheduled administration time unless the licensed practitioner has ordered the medication to be given at a specific time.
Dispensing: The act of placing a medication into a container, labeling the container and giving the container for someone else to administer.

Medication certified staff MAY NOT DISPENSE.

Only licensed practitioners and pharmacists may dispense.
<table>
<thead>
<tr>
<th>TERM</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorption</td>
<td>The movement of medication from the stomach or intestines into the blood stream.</td>
</tr>
<tr>
<td>Active Ingredient</td>
<td>The actual medication that brings about the desired effect or benefit the medication is prescribed for.</td>
</tr>
<tr>
<td>Administer</td>
<td>To give a properly dispensed medication to a child according to a licensed practitioner’s order.</td>
</tr>
<tr>
<td>Adverse Reaction</td>
<td>Unexpected and possibly serious or life-threatening effects of a medication.</td>
</tr>
<tr>
<td>Airway</td>
<td>The “tubes” air flows through for breathing including the trachea (windpipe) and bronchial (airways in the lungs)</td>
</tr>
<tr>
<td>Albuterol</td>
<td>Generic name of most commonly prescribed asthma rescue medication. Trade names: Proventil, Ventolin</td>
</tr>
<tr>
<td>Allergic Reaction</td>
<td>A specific adverse reaction that may cause skin rashes or hives, watery eyes or runny nose and may lead to difficulty breathing. The chain of command and emergency medical help if appropriate must be contacted immediately.</td>
</tr>
<tr>
<td>Analgesics</td>
<td>Medications that relieve pain</td>
</tr>
<tr>
<td>Anaphylaxis</td>
<td>A severe, potentially life threatening allergic reaction that requires immediate emergency medical care.</td>
</tr>
<tr>
<td>Antacids</td>
<td>Medications that reduce the acid in the stomach</td>
</tr>
<tr>
<td>Antianxiety medications</td>
<td>Treat anxiety, tension and nervousness</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>Medications used to treat infections caused by bacteria</td>
</tr>
<tr>
<td>Anticholinergic medications</td>
<td>Treat the muscle movement disorders seen with antipsychotic medication</td>
</tr>
<tr>
<td>Anticonvulsant</td>
<td>Medications that are used to control seizures</td>
</tr>
<tr>
<td>Antidepressant</td>
<td>Medication used to treat depression. See p. 132 for types</td>
</tr>
<tr>
<td>Drug Class</td>
<td>Description</td>
</tr>
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<tr>
<td>Antifungal</td>
<td>Medications used to treat fungal infections.</td>
</tr>
<tr>
<td>Antihistamines</td>
<td>Medications that reduce symptoms of allergies</td>
</tr>
<tr>
<td>Antipsychotic medication</td>
<td>Treat psychotic conditions (also known as neuroleptics)</td>
</tr>
<tr>
<td>Antipyretic</td>
<td>Medications that reduce a fever</td>
</tr>
<tr>
<td>Antitussives</td>
<td>Medications that suppress the cough reflex: stop a cough</td>
</tr>
<tr>
<td>Antiviral medications</td>
<td>Treat viral infections; do not cure illness, but control symptoms.</td>
</tr>
<tr>
<td>Asthma Management Plan</td>
<td>A child’s specific plan for treating his asthma including avoiding triggers, monitoring breathing, medications for prevent asthma attacks and medications to treat an attack if they occur.</td>
</tr>
<tr>
<td>Asthma Prevention (maintenance) medications</td>
<td>Medications prescribed to keep asthma under control and prevent attacks from happening.</td>
</tr>
<tr>
<td>Asthma Rescue medications</td>
<td>Medications used to stop an asthma attack quickly.</td>
</tr>
<tr>
<td>Borrowing</td>
<td>Using one child’s medication to give to a second child because the second child’s medication supply has run out.</td>
</tr>
<tr>
<td>Bronchial constriction</td>
<td>Tightening of the airway. One of the physical components of asthma.</td>
</tr>
<tr>
<td>Bronchodilator</td>
<td>Medication that opens constricted airways.</td>
</tr>
<tr>
<td>Calibrated measuring cup</td>
<td>A measuring cup with standard, accurate measurements for liquid medications</td>
</tr>
<tr>
<td>Cardiovascular medications</td>
<td>Treat heart (cardiac) and blood pressure problems</td>
</tr>
<tr>
<td>Chain of Command</td>
<td>The program personnel who have the authority and responsibility to direct staff.</td>
</tr>
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</tr>
<tr>
<td>Chest and neck retractions</td>
<td><strong>Visible “sinking in” of skin on the chest and neck when a child is having great difficulty taking a breath such during a severe asthma attack.</strong></td>
</tr>
<tr>
<td>Combination medications (asthma)</td>
<td>Medications that contain more than one asthma prevention medication that are taken daily to manage asthma.</td>
</tr>
<tr>
<td>Compliance</td>
<td>Following direction or a plan of care.</td>
</tr>
</tbody>
</table>
| Concentration | The number of mg per unit of medication.  
Example: 325mg per tablet Tylenol |
<p>| Controlled Medication | Medication determined by the Drug Enforcement Agency (DEA) to have a potential for abuse or addiction. |
| Controlled medication count | Required process during which the oncoming medication certified person counts all the controlled medication with the off going medication certified person to ensure that the correct amount of controlled medication that is in supply is documented. |
| Decongestants | Medication that relieve congestion the sinuses and nasal passages. |
| Desired or Therapeutic effect | The medication works as it was intended and provided a benefit. |
| Discrepancy | In the controlled drug count, the number of pills actually in supply does not match the number of pills documented to be in supply. |
| Dispense | To place a medication into a container and label that container for someone else to administer. |
| Distribution | Medication carried throughout the body in the blood stream. |</p>
<table>
<thead>
<tr>
<th><strong>Doctor’s Order</strong></th>
<th><strong>See Licensed Practitioner’s Order</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dose</strong></td>
<td>The amount of medication to be administered. Dose is usually expressed in milligrams (mg).</td>
</tr>
<tr>
<td><strong>Drug to Drug interaction</strong></td>
<td>One or more drug affects another drug in the body.</td>
</tr>
<tr>
<td><strong>Drug to food interaction</strong></td>
<td>The presence of food in the stomach affects the absorption and the effect of the medication.</td>
</tr>
<tr>
<td><strong>Emergency medication</strong></td>
<td>Asthma rescue inhalers (albuterol) and Epi-pens</td>
</tr>
<tr>
<td><strong>Enteric coated medications</strong></td>
<td>Tablets that have a special outside layer to prevent the medication from dissolving in the stomach.</td>
</tr>
<tr>
<td><strong>Expectorants</strong></td>
<td>Medications that promote coughing by loosening mucus in the lungs</td>
</tr>
<tr>
<td><strong>External(topical) medications</strong></td>
<td>Medications that are applied to the skin. (e.g. creams, lotions, powder)</td>
</tr>
<tr>
<td><strong>Generic name</strong></td>
<td>The short chemical name of a drug. Usually a lower case letter is used: acetaminophen, fluoxetine.</td>
</tr>
<tr>
<td><strong>Holding a medication</strong></td>
<td>Temporarily waiting to administer a medication until questions or concerns about the medication or child’s condition are answered by an appropriate member of the chain of command.</td>
</tr>
<tr>
<td><strong>Hormone/Birth Control medications</strong></td>
<td>Used to prevent pregnancy or regulate menstrual cycles</td>
</tr>
<tr>
<td><strong>Hypnotics</strong></td>
<td>Medications that promote sleep</td>
</tr>
<tr>
<td><strong>Inactive Ingredient</strong></td>
<td>Dyes, flavors and other binders that give a medication a desirable taste or color and that make the administration of the medication easier.</td>
</tr>
<tr>
<td><strong>Incident report</strong></td>
<td>Documentation of any unusual event</td>
</tr>
<tr>
<td><strong>Individual Effect</strong></td>
<td>Each child’s unique response to medication.</td>
</tr>
<tr>
<td><strong>Inflammation (in the airway)</strong></td>
<td>Swelling of the lining of the airway. One the physical components of asthma.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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</tr>
<tr>
<td>Inhaled steroids</td>
<td>Asthma prevention medications that reduce inflammation and mucous in the airways. Inhaled through MDI or nebulizer.</td>
</tr>
<tr>
<td>Intal (cromolyn sodium)</td>
<td>Asthma prevention medication that reduces inflammation in the airways. Inhaled through MDI or nebulizer.</td>
</tr>
<tr>
<td>Internal medications</td>
<td>Medications that are swallowed (i.e. p.o. meds)</td>
</tr>
<tr>
<td>Labeled use</td>
<td>Medication prescribed for its FDA approved use.</td>
</tr>
<tr>
<td>Laxatives</td>
<td>Medications that promote bowel movements or prevent constipation</td>
</tr>
<tr>
<td>Leukotriene antagonists</td>
<td>Asthma prevention medication tablets that reduce inflammation.</td>
</tr>
<tr>
<td>License Practitioner</td>
<td>A professional with a medical license to assess and diagnose illness and prescribe treatment include medications.</td>
</tr>
<tr>
<td>Licensed Practitioner's Order</td>
<td>A written direction for a medication. An order must include the five rights. It may be called as prescription or a doctor’s order.</td>
</tr>
<tr>
<td>Medical attention</td>
<td>Physician or other professional assessment of a child following a medication error or to evaluate an injury or illness.</td>
</tr>
<tr>
<td>Medication Administration Procedure</td>
<td>The steps taken to safely administer a medication to a child.</td>
</tr>
<tr>
<td>Medication Administration Record (MAR)</td>
<td>The form on which you will document that you have administered a medication. It must include the five rights.</td>
</tr>
<tr>
<td>Medication error report</td>
<td>Documentation of any error in medication administration</td>
</tr>
<tr>
<td>Metabolism</td>
<td>Process of breaking down medication so that it can be eliminated from the body. Metabolism often occurs in the liver.</td>
</tr>
<tr>
<td>Metered Dose Inhaler (MDI)</td>
<td>Inhaled aerosol that gives a one measured “puff” of medications at a time.</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
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</tr>
<tr>
<td>Mood stabilizers</td>
<td>Medications used to treat mood disorders such as bipolar disease.</td>
</tr>
<tr>
<td>Muscle movement disorders</td>
<td>Serious and possibly permanent adverse reaction to antipsychotic medication. See page 129 for examples.</td>
</tr>
<tr>
<td>Nebulizer</td>
<td>A machine which turns liquid medication into a fine mist that is breathed in through a mask or mouth piece.</td>
</tr>
<tr>
<td>No Effect</td>
<td>A medication does not produce any desired effect.</td>
</tr>
<tr>
<td>Objective description</td>
<td>Noting what was seen, heard, physically felt, smelled or tasted.</td>
</tr>
<tr>
<td>Oral syringe</td>
<td>Used to measure and administer very small doses of liquid medications.</td>
</tr>
<tr>
<td>Outcome</td>
<td>The observed effect of a medication.</td>
</tr>
<tr>
<td>Over the Counter Medication</td>
<td>Medications that may be purchased without a prescription.</td>
</tr>
<tr>
<td>Pediculocides</td>
<td>Medications used to treat lice.</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>Medical professionals licensed to dispense medication.</td>
</tr>
<tr>
<td>Pharmacy Label</td>
<td>The label placed on the medication when it is dispensed by the pharmacist. It will include the five rights and the concentration of the medication.</td>
</tr>
<tr>
<td>Prescription</td>
<td>See Licensed Practitioner’s Order</td>
</tr>
<tr>
<td>Prescription medication</td>
<td>Medications that require a licensed practitioner’s order to be dispensed and purchased from a pharmacy.</td>
</tr>
<tr>
<td>Psychotropic medications</td>
<td>Medications used to treat psychiatric disorders. They affect the central nervous system, how the brain thinks and affect emotions and behaviors.</td>
</tr>
<tr>
<td>Rapid release (quick dissolve) tablet</td>
<td>Tablet that melts quickly in the mouth so it does not have to be swallowed</td>
</tr>
<tr>
<td>Registered Nurse (RN)</td>
<td>Medical professional who may oversee and assess the care of children, supervise medication administration. RNs may NOT dispense medication.</td>
</tr>
<tr>
<td><strong>Route</strong></td>
<td>The way a medication enters or is applied to the body</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Rule of Three</strong></td>
<td>Comparing the licensed practitioner’s order, the MAR and the pharmacy label to ensure that the five rights match on all three documents.</td>
</tr>
<tr>
<td><strong>Scabicides</strong></td>
<td>Medications used to treat scabies.</td>
</tr>
<tr>
<td><strong>Scored</strong></td>
<td>Tablets that may be split in half to obtain exactly half a dose. The score is a groove in the center of the tablet.</td>
</tr>
<tr>
<td><strong>Self-administration</strong></td>
<td>Child administers medications to herself with little to no involvement of medication certified or licensed staff.</td>
</tr>
<tr>
<td><strong>Serotonin Syndrome</strong></td>
<td>Adverse effect that may be seen whenever two or medications are administered together. Medical emergency! See. P. 134</td>
</tr>
<tr>
<td><strong>Side Effect</strong></td>
<td>Predictable, expected unintended effects. Many are mild and will go away once the body adjusts to the medication. Side effects must be reported to the chain of command.</td>
</tr>
<tr>
<td><strong>Special Consideration/Precautions</strong></td>
<td>Steps to take that may prevent unintended effects, improve desired effect and/or make using the medication safer.</td>
</tr>
<tr>
<td><strong>Standard Precautions</strong></td>
<td>Practices that prevent contact with blood or body fluids. Also known as Universal precautions</td>
</tr>
<tr>
<td><strong>Standing Orders</strong></td>
<td>Routine set of instructions that includes OTC medications used to treat minor illnesses.</td>
</tr>
<tr>
<td><strong>Stimulants</strong></td>
<td>Increase attention span and decrease hyperactivity.</td>
</tr>
<tr>
<td><strong>Sustained release</strong></td>
<td>Allow for slow absorption of the medication over a longer period of time</td>
</tr>
<tr>
<td><strong>Time frame for medication administration</strong></td>
<td>One hour before to one hour after the identified time for medication administration.</td>
</tr>
<tr>
<td><strong>Trade name</strong></td>
<td>The marketing name the pharmaceutical company gives a drug. Usually indicated with an upper-case first letter in the name: Tylenol ® Prozac ®</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Transcribe</td>
<td>To copy a licensed practitioner’s order onto a MAR.</td>
</tr>
<tr>
<td>Transdermal (patch) medication</td>
<td>Medication in a patch that is worn on the skin. The medication is absorbed from the patch through the skin.</td>
</tr>
<tr>
<td>Triggers (in asthma)</td>
<td>Conditions and/or substances that may start an asthma attack. Common examples: dust, pollen, cold air, strong emotions.</td>
</tr>
<tr>
<td>Unintended effect</td>
<td>Any response to a medication that is not desired. See also side effect and adverse reaction.</td>
</tr>
<tr>
<td>Unlabeled use</td>
<td>Medication prescribed a use that has not been approved by the FDA.</td>
</tr>
<tr>
<td>Unusual quantity</td>
<td>Direction to administer medication in a number or dose that is greater than normal.</td>
</tr>
<tr>
<td>Unusual time</td>
<td>Administering medication more frequently or at hours that are outside the normal parameters.</td>
</tr>
<tr>
<td>Volume (measuring in medication administration)</td>
<td>Used to measure the correct dose for liquid medications. Usually milliliters (mm), cubic centimeters (cc), teaspoons (tsp).</td>
</tr>
<tr>
<td>Weight (measuring in medication administration)</td>
<td>Used to measure and express the dose for medications. Usually in milligrams (mg)</td>
</tr>
<tr>
<td>Wheezing</td>
<td>High pitched whistling sound heard during an asthma attack. A symptom of an asthma attack.</td>
</tr>
</tbody>
</table>