

Lesson 3.16

Introduction to Medication Administration

Terminal Objective:

3.16 List concepts and principles of medication administration.

Enabling Objectives:

3.16.01 Define medical abbreviations/symbols commonly used in medication administration.

3.16.02 Define terms related to medication administration.

3.16.03 State characteristics of routes for medication administration.

3.16.04 State factors that affect route selection.

3.16.05 State the five drug rights.

3.16.06 State guidelines for safe medication administration.

3.16.07 State the procedure for reporting medication errors.

3.16.08 State safety precautions for administering medications to children, the elderly, the confused, disoriented, or the combative patient.

MEDICAL ABBREVIATIONS/SYMBOLS

Many abbreviations are used in medication administration. Each hospital, clinic, or other facility should have a list of authorized abbreviations available. Medical abbreviations can be written in all capital letter or small letters. Authorized abbreviations and symbols pertaining to medication administration include:

1. **A.C** -- Before meals.
2. **Amp** -- Ampule.

3. **B.I.D.** -- Two times a day.
4. **c** -- With.
5. **Cap** -- Capsule.
6. **DC** -- Discontinued.
7. **I.D.** -- Intradermal.
8. **I.M.** -- Intramuscular.
9. **I.V.** -- Intravenous.
10. **S.C.** -- Subcutaneous.

11. **H.S.** -- Hour of sleep.
12. **NS** -- Normal saline.
13. **NSS** -- Normal saline solution.
14. **p** -- after.
15. **P.C.** -- After meals.
16. **P.O.** -- By mouth.
17. **P.R.N.** -- When necessary, or as needed.
18. **Q** -- Every.
19. **Q.D.** -- Every day.
20. **Q.H.** -- Every hour.
21. **Q3H** -- Every 3 hours.
22. **Q4H** -- Every 4 hours.
23. **Q.I.D.** -- Four times a day.
24. **Q.O.D.** -- Every other day.
25. **Q.S.** -- Sufficient quantity.
26. **s** -- without.
27. **ss** -- One half.
28. **Stat.** -- Immediately.
29. **Tab** -- Tablet.
30. **T.I.D.** -- Three times a day.
31. **TR. or Tinc.** -- Tincture.
32. **Sol.** -- Solution.
33. **X6** -- For six doses only.
34. **X6D** -- For six days only.
35. **M** -- Minimum.
36. **GTT** -- Drop.
37. **DR** -- Dram.
38. **OZ** -- Ounce.
39. **CC** -- Cubic centimeter.
40. **GTT** -- Drop.
41. **ML** -- Milliliter.
42. **L** -- Liter.
43. **GR** -- Grain.
44. **GM** -- Gram.
45. **MG or MGM** -- Milligram.
46. **PT.** -- Pint.
47. **QT.** -- Quart.
48. **TBSP or T** -- Tablespoon.
49. **tsp or t** -- Teaspoon.
50. **U** -- Unit.
51. **O.S.** -- Left eye.
52. **O.D.** -- Right eye.
53. **O.U.** -- Both eyes.
54. **Otic** -- Pertaining to the ears.
55. **Ophthalmic** -- Pertaining to the eyes.
56. **Topical** -- Pertaining to the skin.
57. **A.D.** -- Right ear.
58. **A.S.** -- Left ear.
59. **A.U.** -- Both ears.
60. **ETH** -- Elixir or Terpin Hydrate.
61. **K** -- Potassium.

- 62. **I** -- Iodine.
- 63. **FE** -- Iron.
- 64. **C** -- Chloride.
- 65. **PR** -- Per Rectum.
- 64. **Susp** -- Suspension.
- 66. **AA or aa** -- Of each.

TERMINOLOGY

The following terms are used when ordering medication.

Ampule -- Contains sterile solution of medication sealed in a glass or plastic container.

Dilute -- To diminish the strength of a mixture by adding another substance.

Diluent -- Substance capable of dissolving a drug substance and holding it in a solution.

Elixir -- A drug dissolved in flavored or sweetened water and/or alcohol.

Expectorant -- A drug that increases bronchial secretions and the ability to remove or cough up the secretions.

Floor Stock Supply -- A drug storage system in which bulk doses of medication are prepared for patients by ward personnel.

Reconstitution -- Restoring a dehydrated substance to its previous liquid form by adding water.

Solute -- A drug substance which can be dissolved in liquid

Suppository -- A cone shaped or cylindrical medication made from insertion into a body cavity, (rectum or vagina), where the suppository is dissolved and its components absorbed. Suppositories are made of cocoa butter or glycerin, and usually a medication.

Suspension -- A preparation of an undissolved substance maintained in a liquid substance.

Tincture -- A diluted alcohol solution varying in strengths from 1% to 20%.

Unit Dose Supply -- A drug storage system that employs pharmacy control in supplying individual doses of drugs for each patient.

Vial -- A rubber-capped glass bottle containing one or several doses of a particular injectable medication.

Routes

Oral (p.o.) -- Medication is ingested through the mouth and is absorbed in the gastrointestinal tract with a systemic effect (medication affects the body as a whole).

Subcutaneous (s.c.) -- Sterile medication is injected into the subcutaneous tissue with a needle inserted at a 45-degree angle. It can produce either a systemic or local effect (affecting only the area in which the medication is applied). Subcutaneous medications produce a more rapid systemic effect than oral medications.

Intramuscular (I.M.) -- Sterile medication is injected into a muscle, gluteus maximums or deltoid, with a needle inserted at a 90-degree angle. Intramuscular medications produce a more rapid systemic effect than either oral or subcutaneous medications.

Intravenous (I.V.) -- Sterile medication is injected directly into a vein; produces a very rapid systemic effect.

Intradermal (I.D.) -- Sterile medication is injected into the superficial layers of the skin with a needle at a 15-degree angle. Allergy and tuberculosis testing are administered in this fashion.

Sublingual (s.l.) -- Medication is dissolved under the tongue and absorbed through the

mucous membrane. Medication is not swallowed or chewed.

Instillation -- Administration of a liquid drop by drop into the nose, ears, or eyelids.

Inhalation -- A vapor form of steam or medication that is inhaled into the lungs. It produces a local effect on the respiratory tract with possible systemic effects. Some types of anesthetics are inhaled which cause a loss of consciousness necessary to perform surgical procedure; commonly known as general anesthesia.

Rectal (R) -- Medication that is placed in the rectum for absorption through a mucous membrane.

Topical -- Medication that is applied directly on the surface of the skin producing a local or systemic effect.

Route Selection Factors

There are several physical factors that affect route selection including age and body build (e.g., muscular, obese, emaciated). The speed of absorption varies with the route. A drug must enter the bloodstream before a systemic effect is obtained. The chemical nature of the drug is also important. The drug may not be absorbed by all tissues and/or the drug may be irritating to certain tissues. Patient comfort, convenience, and accessibility of the site are also concerns.

Certain drugs may be contraindicated for patients with a specific diagnosis or medical history. Be aware of the patient's medical and mental condition as well. Combative, disorientated, or unconscious patients may aspirate an oral drug.

The Five Drug Rights

To eliminate the potential of error in medication administration, the Hospital Corpsman must know the Five Rights of medication administration.

RIGHT MEDICATION

Compare the name of the medication on the card to the label on bottle. Labels are only to be changed by the pharmacy. If a label is soiled or unreadable, return the bottle to the pharmacy. To make a positive medication identification follow this procedure: Identify the drug with the medication card or Medication Administration Record (MAR) before removing the bottle from the medication locker or unit dose cart. Check the drug against the medication card or MAR before preparing the medication. Identify the drug with the medication card before returning the medication to the medication locker, if applicable.

RIGHT DOSE

Make sure the dosage is computed and prepared correctly.

RIGHT ROUTE

The Doctor's Order will specify the proper route. The Hospital Corpsman may not interchange routes without a Doctor's Order.

RIGHT PATIENT

When using the unit dose cart, make the following checks. Compare the patient's name on the MAR with the name on the medication drawer. Check the patient's bed tag and wristband with the MAR and ask the patient to verbalize his/her name.

When using the floor stock, compare patient's bed tag and wristband with the Medication/Treatment card. Ask the patient to verbalize his/her name.

RIGHT TIME

Medication may be given 30 minutes before or after the stated time. If administering a PRN medication, always check the MAR to note the last time the medication was given to

ensure that the minimum time ordered has elapsed.

Guidelines for Safe Medication Administration

Always ensure that there is sufficient light when administering any medication. This ensures the medication is correct and permits proper identification of the patient. Note the patient's appearance before and after medication is administered.

During medication administration avoid interruptions that might cause delays, contribute to errors when attention is diverted, or require leaving medication unattended. Only the individual who prepares the medication will administer and record the medication. You should never give a medication without a medication card or the MAR. Pour all the medications for one patient before pouring medication for the next patient.

Administer all medication with a positive attitude and a sense of assurance. Know the drug the patient is about to receive, especially the usual dose, indication, and adverse reactions.

Do NOT return unused medication to a bottle or transfer medication from one bottle to another. There is a risk of accidentally mixing or placing medications in a wrong container. This practice also creates the possibility of cross-contamination.

When administering medication from a tray or cart, never leave the medication unattended. If medication is to be taken before or after meals, take it to the patient on time. If the patient is not present, do not leave the medication at the patient's bedside. When a sleeping medication is ordered, take it to the patient at the time prescribed or requested. Remember, medications must be given within 30 minutes before or after the scheduled time. Notify the nurse if the patient is missing or a medication delay occurs for any reason.

Withhold the medication if the patient questions the dose, size, shape of pills or capsules, whether or not the medication has been canceled or changed, or why it was received. If this should happen, verify the Doctor's Orders and inform the patient of your verification. If a patient is still uncertain, notify the nurse. Never force a patient to take a medication against his/her will. Withhold the medication if the patient reports any previous reaction to the drug and report this to the nurse.

Always administer a drug in the form prescribed by the physician. If another form seems indicated, report your observations and recommendations. Do not allow a patient to take drugs that were not prescribed by the physician and prepared by the pharmacy staff. **never** allow a patient to share medication with another patient. A parent may give medication to a child with supervision. Chart a medication **only** after the patient has consumed it or it has actually been administered. Observe the patient for desired and undesired effects of the medication.

Reporting Medication Errors

After immediately notifying the nurse of a medication error, observe the patient for adverse effects of the medication. An error results from faulty technique in preparation, administration, or the recording of medication.

Place an asterisk in the proper place on the MAR and state in the Nursing Notes that a medication error was made. Include medication given, amount given, route, time given, and action taken. Complete any form or report as required by local instructions or policies, e.g., Incident report.

Precautions

You must always practice safety precautions when administering medication to children, the elderly, disoriented, or combative patients. Avoid using essential foods to dilute medications for children. Make sure the child

swallows the medication. If you are unable to convince a child through salesmanship, do not use physical force. When giving a liquid medication to an infant, use a half-filled spoon, medicine dropper, or a syringe without a needle. Place the medication under the tongue and give it slowly.

Never prepare injections or display needles in front of children. Use of physical restraint of children is justified for safety when giving injections (to be sure that the child does not move.) Obtain assistance as required. Physical restrictions should be effective but gentle, accompanied by soothing, friendly conversation. The injection would be carried out quickly. The injection site should never be slapped.

Elderly patients may have dysphagia due to a tight esophageal sphincter. To assist them with this problem have the patient elevate the head and take a sip of water to relax the

esophageal muscle. Placing tablets at the base of the tongue will stimulate the swallowing reflex. Never rush a patient and always be alert to excessive difficulty in swallowing. A patient's physical condition may require special techniques when giving injections.

Never administer tablets or capsules to a confused, disoriented, or combative patient. If there is a significant change in the patient's condition, withhold all medications and notify the nurse. Medications for psychiatric patients are usually supplied in a liquid form and administered under close supervision conditions. If an injection is ordered, ensure adequate staff assistance is available to restrain the patient so that the medication may be administered safely.

Lesson 3.16

Introduction to Medication Administration Worksheet

1. What is the abbreviation for "of each"?

2. What term pertains to the ears?

3. Define reconstitution.

4. A diluted alcohol solution varying in strengths from 10% to 20% is know as:

5. An intramuscular injection produces a very rapid systemic effect.
 - a. True
 - b. False
6. Circle medication administration routes that do NOT produce a local effect.
 - a. Subcutaneous
 - b. Topical
 - c. Intramuscular
7. Who is authorized to change the label on a medication bottle?

8. When giving medication, a Hospital Corpsman may interchange routes without Doctor's Orders if the patient requests
 - a. True
 - b. False

9. A patient reports that a medication caused a reaction. You withhold the medication and:
- a. tell the other Hospital Corpsman.
 - b. notify the Doctor.
 - c. notify the Nurse.
 - d. call the pharmacy.

10. To save time, medications are charted before administering them to the patient.
- a. True
 - b. False

11. What is the first step in reporting a medication error?

12. What information is documented in the Nursing Notes when a medication error is made?

13. What should be used to administered liquid medications to infants?

14. Elderly patients should be encouraged to take medications quickly.

- a. True
- b. False

15. An IM medication has been ordered for a psychiatric patient. What should be done to ensure this procedure is carried out safely?
