

# Medication Study Guide

For  
Unlicensed Personnel  
In  
Adult Care Homes



North Carolina Department of Health and Human Services  
Division of Health Service Regulation  
Adult Care Licensure Section  
2708 Mail Service Center  
Raleigh, NC 27699-2708

Medication Testing Unit  
Phone: (919) 855-3793  
Fax: (919) 733-9379

Website Edition

**THE NORTH CAROLINA DEPARTMENT OF HEALTH AND  
HUMAN SERVICES DOES NOT DISCRIMINATE ON THE  
BASIS OF RACE, COLOR, NATIONAL ORIGIN, SEX,  
RELIGION, AGE OR DISABILITY IN EMPLOYMENT OR THE  
PROVISIONS OF SERVICES.**

# TABLE OF CONTENTS

|   | <b>Page</b> |
|---|-------------|
| <b>Introduction .....</b>                                 | <b>i</b>    |
| <b>Definitions .....</b>                                  | <b>iii</b>  |
| <b>Section 1 – Study Questions</b>                        |             |
| <b>Abbreviations/Medical Terminology .....</b>            | <b>1</b>    |
| <b>Regulations .....</b>                                  | <b>3</b>    |
| <b>Medication Administration .....</b>                    | <b>8</b>    |
| <b>Measuring Devices .....</b>                            | <b>17</b>   |
| <b>Metric System .....</b>                                | <b>19</b>   |
| <b>Labels .....</b>                                       | <b>20</b>   |
| <b>Medication Administration Records .....</b>            | <b>22</b>   |
| <b>Attachment A – MAR .....</b>                           | <b>24</b>   |
| <b>Infection Control .....</b>                            | <b>25</b>   |
| <br>  |             |
| <b>Section 2 – Answers to Study Guide Questions .....</b> | <b>27</b>   |
| <br>  |             |
| <b>Section 3 – Attachments</b>                            |             |
| <b>Attachment B .....</b>                                 | <b>48</b>   |
| <b>Attachment C .....</b>                                 | <b>49</b>   |
| <b>Attachment D .....</b>                                 | <b>50</b>   |
| <b>Attachment E .....</b>                                 | <b>51</b>   |

## **Introduction to the Medication Study Guide**

Administering medications is a very important task. Current regulations and requirements for medication administration in adult care homes in North Carolina became effective January 1, 2000. One of the requirements is that any unlicensed person administering medications or supervising the administration of medications must pass a test given by the state of North Carolina. Information such as schedules and changes regarding medication testing may be found on our website at <http://www.ncdhhs.gov/dhsr/acls/>.

The purpose of the Medication Study Guide is to help you become more knowledgeable with administering medications and better prepared for the test. There are three sections to the Medication Study Guide.

In Section 1, there are 118 questions divided into the following areas:

1. Abbreviations/Medical Terminology
2. Regulations
3. Medication Administration
4. Measuring Devices
5. Metric System
6. Labels
7. Medication Administration Records
8. Infection Control

You need to read each question thoroughly and choose the best answer.

In Section 2, you will find the answers to each of the questions in Section 1. Except for questions 1 through 20, there is an explanation of why the answer is correct. The explanation should help you learn more about your important role with administering medications and better prepare you for the test. It is very important that you understand why the answer is correct. If you need additional help with questions, you should ask a pharmacist or nurse for assistance.

Section 3 has additional attachments for you to use as resources. You should try to answer the questions without using the attachments.

This study guide was also developed as a training tool in addition to workshops or training programs on medication administration. It is not a substitute for attending workshops or training programs on medication administration. With the study guide, you can go at your own pace and review any area of the questions as many

times as you wish. It can help you see if you need further training in one of the areas.

There is an answer sheet in the study guide for you to use as you answer each question. An answer sheet similar to the one in the study guide will be used for the medication test. You should choose the letter that corresponds to the best answer and fill in the circle under the letter that corresponds with the best answer. Disregard the “T” and “F” in the circles on the answer sheet. If you need help with using the answer sheet, ask your supervisor, nurse or pharmacist for assistance.

Remember, this study booklet is only a guide! The questions on the test will be similar to the questions in this study guide. There will be questions on the test pertaining to each of the areas in the study guide. The medication test given by the state will have approximately 60 questions.

We all know that taking tests can be stressful. The medication administration test being given by the state will be on the basics of medication administration. Using this study guide in addition to attending workshops and programs on medication administration should help you not only be better prepared for the test but also become more knowledgeable and skilled with administering medications. Becoming more competent in administering medications will help residents in adult care homes avoid serious medication-related problems.

## Definitions

**Knowing the following terms will help you with the study guide.**

**Administer:** to give out, insert or apply medication to a person.

**Controlled Substance:** Medications that have the potential to be addictive and used in a way other than the medication was prescribed; a system must be in place to account for receipt, administration and disposition of each medication.

**Dispense:** Preparing and packaging a prescription medication in a container with information required by state and federal law; anytime more than one dose of medication from a supply is placed in another container and labeled, it is considered dispensing.

**Dispensing Practitioner:** A licensed health professional who has the authority to dispense medications; a pharmacist is the dispensing practitioner you may be the most familiar with.

**Document:** To record or write; Documentation of the administration of medications is required on the medication administration record (MAR).

**Label:** Information on the medication package; referred to also as medication label or prescription label.

**Medication Administration Record (MAR):** A record that lists all of the medications ordered for the resident, including routine or regularly scheduled medications and PRN medications; It is used to document or record the administration of medications.

**Medication / Drug:** Another word used for drug; a substance or mixture of substances used in the diagnosis, cure treatment or prevention of disease.

**Medication Pass:** Scheduled time of the day when medications are administered to residents.

**Non-controlled Medications:** All other prescription medications that are not listed as controlled substances.

**OTC Medications:** Over-the-counter or non-prescription medications; medications which can be purchased or obtained without a prescription; however, you need a physician's order to administer them.

**Prescription Medications:** Medications that can only be obtained or purchased through an order or prescription written by a physician or prescribing practitioner.

**PRN** – as needed or if necessary; PRN medications are not scheduled to be administered at specific times.

**Prescribing Practitioner** – Refers to a licensed health care professional who is authorized to prescribe or order a medication; the prescribing practitioner people are the most familiar with is a physician or doctor. Other prescribing practitioners include physician assistants, family nurse practitioners and dentists.

**Report:** To make known, to give information about something.

**Side effects:** Any effect other than the desired effect; unwanted effects or adverse reactions from a medication.

**Transcribe:** To transfer written information from one place to another; information on the physician's order must be transcribed to the medication administration record (MAR).

**Vital Signs:** Measurement of a person's heartbeat, blood pressure, breathing and temperature.

# **SECTION 1**

## **STUDY GUIDE QUESTIONS**

## Abbreviations/Medical Terminology

Match each term in Column 1 to its abbreviation in Column 2 by choosing the letter of the abbreviation for each term.

| <u>Column 1: Term</u>       | <u>Column 2: Abbreviation</u> |
|-----------------------------|-------------------------------|
| 1. Hour of sleep or bedtime | A. qod or QOD                 |
| 2. Twice a day              | B. qd or QD                   |
| 3. Subcutaneous             | C. bid or BID                 |
| 4. Every other day          | D. sq. or SQ                  |
| 5. Once a day               | E. HS or qhs                  |

| <u>Column 1: Term</u> | <u>Column 2: Abbreviation</u> |
|-----------------------|-------------------------------|
| 6. gram               | A. pc                         |
| 7. milligram          | B. mg                         |
| 8. after meals        | C. Over-the-Counter           |
| 9. OTC                | D. gm                         |
| 10. by mouth          | E. po                         |

Match each abbreviation in Column 1 to its term in Column 2 by choosing the letter of the term for each abbreviation.

| <u>Column 1: Abbreviation</u> | <u>Column 2: Term</u> |
|-------------------------------|-----------------------|
| 11. q                         | A. Teaspoonful        |
| 12. ac                        | B. Before meals       |
| 13. qid or QID                | C. As needed          |
| 14. tsp                       | D. Every              |
| 15. prn or PRN                | E. Four times a day   |

| <u>Column 1: Abbreviation</u> | <u>Column 2: Term</u>               |
|-------------------------------|-------------------------------------|
| 16. Tbsp                      | A. Three times daily                |
| 17. tid or TID                | B. Milliliter                       |
| 18. ml                        | C. Ounce                            |
| 19. oz                        | D. Tablespoonful                    |
| 20. MAR                       | E. Medication administration record |

21. The following are abbreviations for drug routes, **EXCEPT**:

- A. PO
- B. IM
- C. PD
- D. SL

22. You receive an order for Nitroglycerin to be given **sublingually**. It would be given:

- A. Under the tongue
- B. By mouth
- C. Instilled in the ear
- D. Applied to the skin

23. The following are abbreviations for dosages or strengths of medications **EXCEPT**:

- A. mg
- B. ml
- C. gm
- D. PD

24. If you are not sure of an abbreviation, it is O.K. to guess

- A. True
- B. False

25. It is important to know the policy on approved abbreviations for your facility.

- A. True
- B. False

26. A milliliter is the same as a milligram.

- A. True
- B. False

## Regulations

**27.** Over-the-counter drugs may be kept as floor stock or house stock in an adult care home.

- A. True                      B. False

**28.** When administering medications, it is O.K. to leave a resident's medication at the bedside if the resident is present.

- A. True                      B. False

**29.** You are legally responsible for any medication or treatment you administer.

- A. True                      B. False

**30.** Medications should be given within one hour before or one hour after the prescribed or scheduled time of administration.

- A. True                      B. False

**31.** Residents have a right to refuse medications.

- A. True                      B. False

**32.** Oral medications must be stored separately from topical or external medications.

- A. True                      B. False

**33.** Staff giving medications in adult care homes have to demonstrate certain skills with administering medications and be checked off or validated by a registered nurse or registered pharmacist.

- A. True                      B. False

- 34.** Regulations for the accountability or recordkeeping of controlled substances differ from the regulations for non-controlled medications.
- A. True                      B. False
- 35.** Unlicensed staff in adult care homes may administer intramuscular (IM) injections and subcutaneous (SQ) injections.
- A. True                      B. False
- 36.** A telephone or verbal order for medications and treatments must be signed by the person who prescribed the medications within:
- A. 15 days from the date the order is given.  
B. 30 days from the date the order is given.  
C. 20 days from the date the order is given.  
D. None of the above
- 37.** Information or documentation on the MAR for PRN (as needed) medications that are administered includes:
- A. the amount or quantity of medication administered.  
B. the specific time of administration.  
C. the initials of the person administering the medication.  
D. the effectiveness of the medication.  
E. all of the above.
- 38.** Mr. Jones, a resident of an adult care home, is going to visit his family for the week. The proper way to prepare Mr. Jones' prescription medications to take with him would be to:
- A. Remove the amount of medications needed for the week from the resident's supply of medication, place the medications in labeled containers and document the medications sent on the appropriate facility form.  
B. Send the medications in containers that have been filled and labeled by a pharmacist and document the medications sent on the appropriate facility form.

39. The resident's physician or prescribing practitioner is to be contacted about the resident's medication orders:
- A. if the FL-2 is not dated and signed within 24 hours of admission to the facility.
  - B. when the medication orders on a FL-2 and discharge summary do not match.
  - C. if a medication order is incomplete or unclear.
  - D. all of the above.
40. The facility is required to maintain or keep all medication orders for a resident:
- A. in the resident's record in the facility.
  - B. at the pharmacy.
  - C. in any type of notebook or record, as long as the order is in the facility.
  - D. in the resident's room.
41. The following statement about non-prescription (OTC) medications is **FALSE**:
- A. They may be kept in the original container with the manufacturer's label and expiration date.
  - B. They may be packaged and labeled by a pharmacist.
  - C. They may be administered to a resident without a physician's order.
  - D. They can produce unwanted effects.
42. Which of the following is **TRUE** when prepouring or preparing medications in advance:
- A. Oral solid medications (tablets and capsules) for routine administration may be prepared within 24 hours of the prescribed time for administration.
  - B. PRN medications may be prepared in advance.
  - C. Medications may be crushed at the time the medications are prepoured or prepared in advance.
  - D. A, B, and C are true.
43. You have to document on MAR when a medication is:
- A. Administered
  - B. Refused
  - C. Omitted
  - D. All of the above.

- 44.** In order for a medication to be administered you must have:
- A. permission from the family
  - B. a drug handout of information from the pharmacist
  - C. a physician's order
- 45.** "As needed" (PRN) medications must be administered according to:
- A. The facility's administration time schedule for medications.
  - B. The resident's choice of time and frequency.
  - C. The reason and frequency of administration specified in the physician's order.
  - D. The family's request on how often the medication can be given and for what reasons.
- 46.** When should medications be signed off on the MAR?
- A. After a resident has been observed to actually take the medication
  - B. After all the residents have been administered their medications and observed to actually take the medications
  - C. After the medication label is checked with the MAR
  - D. Before the county or state visits the home.
- 47.** You remove a resident's medications from the packages or containers and the resident refuses to take his 12PM medications, you should:
- A. Put each medication back into the appropriate container or package that the medication came from.
  - B. Leave the medications with the resident in case the resident decides to take the medications later.
  - C. Dispose of the medications in accordance with the facility's policy and procedures.
  - D. Both A and C are correct.
- 48.** When medications are stored in a refrigerator that is accessible to residents, the medications are to be:
- A. Stored in a separate container in the refrigerator.
  - B. Stored in a separate locked container in the refrigerator.

49. Three of the four statements below are requirements when residents administer their own medications. Which one is **not** a requirement for self-administration?

- A. A physician's order is necessary for the resident to self-administer.
- B. The physician is contacted if there is a change in the resident's physical or mental abilities.
- C. The medications are to be stored in a safe and secure manner.
- D. The resident has to be observed to take each dose of medication.

## Medication Administration

50. One of the best ways of identifying the correct resident is to:
- A. Ask another staff member.
  - B. Ask another resident.
  - C. Ask residents to spell their names.
  - D. Use photographs of the residents.
51. Checking the medication label against the MAR three times should **always**:
- A. Be done with each medication administered to each resident.
  - B. Be done by the new staff members.
  - C. Be done if you do not know the resident.
  - D. Be done if it is a new medication order.
52. All of the following are examples of medication errors **EXCEPT** one. Which one of the following is **NOT** a medication error?
- A. the omission of a prescribed medication.
  - B. the refusal of a medication by a resident.
  - C. failing to perform any of the six rights of medication administration.
  - D. administering medications that have not been prescribed including OTCs or non-prescription medications.
53. If you are unable to read the physician's handwriting on a prescription or health services record or the directions for a medication are incomplete, you should:
- A. Leave the orders for the staff on the next shift.
  - B. Contact your supervisor, the pharmacist or the physician.
  - C. Ask the resident or a family member.
  - D. Use your best "guess."
54. When a resident has difficulty swallowing, the resident is at risk for:
- A. Asthma
  - B. Aspiration
  - C. Arrhythmia
  - D. Arthritis

55. When applying a topical medication, you should wear:
- A. A waterproof gown.
  - B. A mask.
  - C. Gloves.
  - D. A mask and gloves.
56. An inhaler must be shaken:
- A. Before each and every time you use it.
  - B. After each and every time you use it.
  - C. If the physician orders more than one puff to be administered to the resident.
  - D. Only if it becomes clogged.
57. After the resident has received nose drops, the resident should:
- A. Remain with his head tilted slightly back for about 60 minutes.
  - B. Blow his nose.
  - C. Remain with his head tilted slightly forward for a few minutes.
  - D. Lie down with head lower than shoulders for a few minutes.
58. If a resident is using the bathroom at the time you are to administer the resident's medications, it is **acceptable** to:
- A. Flag the MAR to remind you to return to that resident later in the medication pass to administer the medications.
  - B. Omit the medications and record the medications were not administered on the MAR.
  - C. Administer the medications while the resident is using the bathroom.
  - D. A and C.
59. Which of the following statement is **NOT** true about allergies and medications?
- A. An allergy is a reaction that occurs as the result of an unusual sensitivity to a medication or other substance.
  - B. Allergic reactions can include rashes, swelling, itching but are never life threatening.
  - C. Document all allergies in the resident's record, or document "No Known Allergies", if the resident does not have any allergies.
  - D. All allergic reactions or suspected reactions should be reported promptly to the supervisor, nurse, physician or pharmacist according to facility policy.

- 60.** All of the following are considered reasons for medication errors, **EXCEPT**:
- A. Transcribing information incorrectly onto the MAR.
  - B. Administering medications by the directions on the medication label without using the MAR.
  - C. Checking the medication label with the MAR when administering medications.
  - D. Administering medications by memory.
- 61.** Medication errors may:
- A. interfere with how effective the medication will be.
  - B. produce bad reactions.
  - C. threaten the resident's life.
  - D. all of the above.
- 62.** Never administer medications that:
- A. are discolored.
  - B. are outdated or expired.
  - C. both A and B.
- 63.** If you have to calculate dosages, it is best to:
- A. ask the resident the correct dosage.
  - B. do your best calculations and administer the medication.
  - C. ask the supervisor, nurse or the pharmacist to calculate the dosage with you.
- 64.** How many minutes should a medication prescribed "before meals" be administered prior to eating?
- A. 15 minutes
  - B. 5 minutes
  - C. 30 minutes
  - D. 60 minutes

- 65.** When administering medications, the main concern with leaving medications at the bedside is that:
- A. the resident may never take the medications and someone else may.
  - B. the medications may accumulate dust.
  - C. it may increase confusion.
  - D. a staff member might report you.
- 66.** When administering medications, it is safe practice to:
- A. rely only on the color of the medication.
  - B. rely only on the shape of the medication.
  - C. rely only on the location of the container.
  - D. read the label and the MAR each time a medication is administered.
- 67.** When a medication cannot be administered on time:
- A. document the reason for the delay on the MAR.
  - B. call the resident's family.
  - C. don't worry about it and continue with your work.
  - D. tell the kitchen staff.
- 68.** If the resident expresses concern about a medication you are about to administer:
- A. give it anyway.
  - B. walk away and document "refused".
  - C. double check the medication and dosage information.
  - D. give it to his roommate.
- 69.** The medication label and the MAR are compared:
- A. When selecting or removing the medication from the supply or storage area.
  - B. Before pouring the medication.
  - C. After pouring and before returning the medication to the supply or storage area.
  - D. All of the above.

- 70.** A resident returns from a home visit and the resident's mother brings an over-the-counter medication that she purchased and asks you to administer it for cold symptoms, you should:
- A. Give the medication as requested.
  - B. Refuse and throw the medication away.
  - C. Explain to the mother that even over-the-counter medications require a physician's order.
- 71.** You are with a resident at a doctor's appointment. The physician writes an order for Amoxicillin and you know the chart is flagged "Allergic to Amoxicillin". You should:
- A. Administer the medicine as ordered, the physician knows best.
  - B. Remind the physician of the allergy warning.
  - C. Pull the allergy label off the record.
- 72.** When new orders are received, the MAR is changed to reflect the new orders.
- A. True
  - B. False
- 73.** A resident's allergies should be documented on the MAR and the resident's record.
- A. True
  - B. False
- 74.** A drug reference book is a helpful tool to identify or find information on medications and dosages and side effects.
- A. True
  - B. False
- 75.** If you question a dosage, give the medication then call the pharmacy.
- A. True
  - B. False
- 76.** A medication cannot cause a resident to be confused.
- A. True
  - B. False

**77.** A delay in administering a medication may cause a life-threatening incident.

A. True

B. False

**78.** A medication that is ordered sublingually may be chewed or swallowed.

A. True

B. False

**79.** Side effects of medications may include:

A. Change in behavior.

B. Rash.

C. Change in swallowing.

D. Change in mobility or walking.

E. All of the above.

**80.** A medication arrives from the pharmacy, and there is no order for the medication on the MAR, you should:

A. Copy the directions on the medication label onto the MAR.

B. Administer the medication according to the directions on the medication label.

C. Look in the resident's record for an order and/or notify the supervisor, nurse, or pharmacist before administering the medication.

D. Omit the medication and write a note for the next shift to check on it.

**81.** When you are administering a medication and the order on the MAR does not match the directions on the medication label, you should:

A. Administer the medication according to the MAR.

B. Notify the supervisor, nurse or pharmacist and/or look in the resident's record for the current medication order.

C. Administer the medications according to the directions on the medication label.

D. Omit the medication and leave a note for the next shift.

82. A resident has just returned to the facility from the hospital and the medication order on the FL-2 is “Continue previous medications”. You should:
- A. Ask the resident or family if there were any medication changes.
  - B. Administer the medications that the resident was receiving prior to hospitalization.
  - C. Contact the resident’s physician for medication orders.
83. “Ambien 5mg po as needed for sleep”:
- A. is a complete medication order
  - B. is an incomplete order
84. A medication order is transcribed onto the MAR:
- A. Only after the medication arrives from the pharmacy.
  - B. Only after the family brings in the medication
  - C. Only after a physician’s order for the medication is received by the facility.
  - D. All of the above.
85. When measuring liquids, which of the following statements is **FALSE**:
- A. A teaspoon or tablespoon from the kitchen may be used.
  - B. A calibrated syringe or dropper is often necessary for measuring amounts less than 5ml and unequal or odd amounts.
  - C. When using a medication cup, it should be placed on a flat surface and measured at eye level.
  - D. You never approximate or guess the amount of medication to administer.
86. When administering two or more different eye drops at the same time, which of the following apply:
- A. Wash your hands prior to and after administration of the eyedrops.
  - B. Wear gloves when there is redness, drainage or possibility of infection.
  - C. Allow a 3-minute to 5-minute period between the administration of each eye medication.
  - D. Sign/initial the medication administration record (MAR) after the administration of each type of eye drop.
  - E. All of the above.

- 87.** Before administering a “PRN” medication, you need to:
- A. Know the reason the medication is being requested and ask the resident when the medication was last administered.
  - B. Know the reason the medication is being requested and look at the MAR to see when the medication was last administered.
- 88.** Mrs. Smith has an order for Darvocet N-100 1 tablet every 4 hours as needed for pain. According to the MARs, she has been taking the Darvocet at 8AM, 12PM, 4PM and 8PM every day for the past 2 months. Which of the following statement is **correct?**
- A. Schedule the Darvocet for 8AM, 12PM, 4 PM and 8PM on the (MAR)
  - B. Just continue to administer the medication when Mrs. Smith requests the Darvocet.
  - C. Mrs. Smith’s physician should be contacted about how often Mrs. Smith is taking the Darvocet.
- 89.** You are assigned to administer 8:00AM medications today. It is 8:00AM and the residents need to be at the workshop by 8:00AM, the van is waiting. You should:
- A. Pour medications from memory.
  - B. Get the untrained staff (no medication training) to assist you.
  - C. Administer medications as you were trained, even if this means the residents will be late for the workshop.
  - D. Tell the residents you will bring their medications to the workshop and administer them later.
- 90.** Mr. Cook who is an alert and oriented resident refuses all of his morning medications. He says the medications do not help him and he doesn’t need them. Your best response is to:
- A. Encourage the resident to take the medications by explaining the importance and purposes of the medications.
  - B. Tell the resident “ Your physician said that you must take this medication.” And force him to take the medications.
  - C. Hide the medication in the resident’s food or drink.
  - D. Leave the medications with the resident, in case he decides to take them later

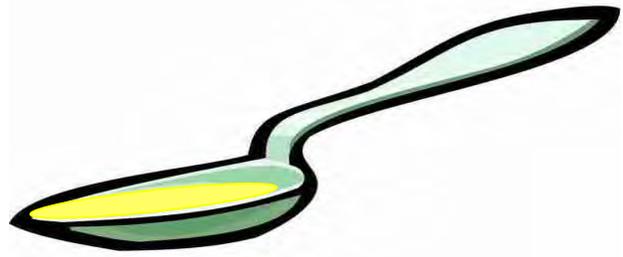
**91.** When administering medications this morning, Mrs. Walls is extremely difficult to wake up. She is having difficulty with swallowing her medications. You should:

- A. Crush her medications so she will be able to swallow the medications and then notify your supervisor, nurse or physician.
- B. Hold her medications at this time and immediately notify your supervisor, nurse or physician.

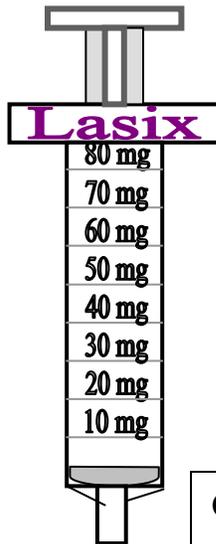
## Measuring Devices



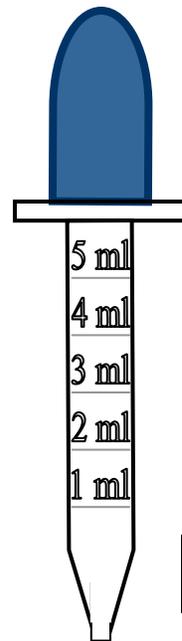
**A. Medication Cup**



**B. Tablespoon**



**C. Oral Syringe**



**D. Oral Dropper**

Answer the following questions 92 through 95 referring to the above devices.

- 92.** The physician orders Haldol Solution 2mg by mouth at bedtime. Which of the measuring devices above would you use to measure 2mg of Haldol?
- A. Medication Cup.
  - B. Tablespoon.
  - C. Oral Syringe.
  - D. Oral Dropper.
  - E. None of the above devices should be used.
- 93.** The physician orders Potassium Chloride Solution 1 tablespoonful mixed with water or juice every morning. Which of the measuring devices would you use to measure 1 tablespoon of Potassium Chloride?
- A. Medication Cup.
  - B. Tablespoon.
  - C. Both A (Medication Cup) and B (Tablespoon) may be used.
- 94.** An order is received for Mellaril 10mg every morning. The physician orders Mellaril Liquid, since the resident is not able to swallow tablets or capsules. Which of the measuring devices above would you use to measure 10mg of Mellaril?
- A. Medication Cup.
  - B. Tablespoon.
  - C. Oral Syringe.
  - D. Oral Dropper.
  - E. None of the devices should be used.
- 95.** The physician ordered Dilantin Suspension 4ml by mouth three times daily for a resident. Which measuring device would you use to measure 4ml of Dilantin?
- A. Medication Cup.
  - B. Tablespoon.
  - C. Oral Syringe.
  - D. Oral Dropper.
  - E. Both A (Medication Cup) and D (Oral Dropper).

## Metric System

1 ounce (oz) = 30ml

1 Tablespoon (Tbsp) = 15ml

1 teaspoon (tsp) = 5ml

1 milliliter (ml) = 1 cubic centimeter (cc)

**Use the above information on the metric system to answer questions 96 through 99.**

- 96.** The physician's order is for Milk of Magnesia 2 Tbsp. by mouth at bedtime. How much would you give using the metric system?
- A. 30 ml.
  - B. 45 ml.
  - C. 10 ml.
  - D. 60 ml.
- 97.** The physician's order is for Lactulose 2 tsp. by mouth at bedtime. How much would you give using the metric system?
- A. 10 ml.
  - B. 15 ml.
  - C. 20 ml.
  - D. 30 ml.
- 98.** The physician's order is for Riopan Liquid 2 every 4 hours as needed for heartburn. How much would you give using the metric system?
- A. 1 ml.
  - B. 2 teaspoons.
  - C. 2 Tablespoons.
  - D. Can't tell how much to give from this order.
- 99.** The physician's order is for Haldol Liquid Concentrate 2ml every 8 hours. How much would you give?
- A. 1 milligram (mg).
  - B. 2 milligrams (mg).
  - C. 5 milligrams (mg).
  - D. None of the above are correct.

## Labels

|   |                             |
|---|-----------------------------|
| <b>Group Care Pharmacy<br/>701 Barbour Drive<br/>Raleigh, NC 27603<br/>919-855-3765</b> |                             |
| Rx 200000   | 01/03/03                    |
| Jim Barefoot  |                             |
| Take one tablet by mouth three times daily before meals and at bedtime.                 |                             |
| Metoclopramide 10mg   | #30 tablets                 |
| Dsp. By J. Brickley, RPh.   |                             |
| Dr. Doug Fitzgerald   | Refills: 0<br>Exp. 01/30/04 |

**Use the above prescription label to answer questions 100 through 103.**

- 100.** The order on the MAR for the above resident is: **“Propulsid 10mg one tablet three times daily before meals and at bedtime.”** The medication container received from the pharmacy is labeled as indicated above. You should:
- A. Give the medication received from the pharmacy three times daily before meals and at bedtime.
  - B. Not give the medication and leave a note for staff on the next shift.
  - C. Not give the medication and notify the supervisor, pharmacist, nurse or physician according to the facility’s policy.
- 101.** According to the prescription label, there are no refills for the medication. Which of the following statements is true?
- A. The medication should be discontinued after the 30 tablets are administered.
  - B. The physician should be contacted regarding the refills, before all the medication is administered.

**102.** The name of the pharmacist is:

- A. Dr. Doug Fitzgerald.
- B. Jim Barefoot.
- C. J. Brickley.
- D. Not given.

**103.** If a prescription label becomes soiled or directions change, you should:

- A. Write the directions on the medication label so everyone can read the directions.
- B. Call the pharmacy for a new label and tape the new label over the soiled or incorrect label.
- C. Report it to the supervisor, nurse or pharmacist.

## Medication Administration Records

**Refer to the medication administration record (MAR), Attachment A, on Page 24 to answer questions 104 through 110.**

**104.** The physician ordered Darvocet N-100 1 tablet every 4 hours by mouth as needed for pain. The medication order for Darvocet is **not** transcribed correctly on the MAR because:

- A. Specific administration times are not scheduled for prn medications.
- B. Administration times on the medication administration record (MAR) should include 12PM and 4PM.

**105.** On 02/09/00, the physician discontinued Lasix 40mg by mouth once daily and ordered Lasix 40mg by mouth twice daily. Were the orders for Lasix transcribed correctly on the MAR?

- A. Yes
- B. No

**106.** On 02/06/00, the physician ordered Coumadin 5mg by mouth every other day. The facility did not receive the Coumadin until 02/13/00. According to the MAR, was the Coumadin administered as ordered?

- A. Yes
- B. No

**107.** The physician ordered Tylenol 325mg 1 to 2 tablets by mouth twice daily. Is the documentation for the administration of the Tylenol correct on the MAR?

- A. Yes
- B. No

**108.** On 02/03/00, the physician ordered Amoxicillin 250mg by mouth 3 times daily for 10 days. According to the MAR, was the Amoxicillin administered as ordered?

- A. Yes
- B. No

**109.** The physician ordered Nitro-Dur (Nitroglycerin) 0.4mg patch with directions to apply one patch every morning and remove at bedtime. Was the Nitroglycerin patch administered as ordered, according to the MAR?

A. Yes

B. No

**110.** On 02/08/00, the physician increased Capoten 25mg three times daily to Capoten 50mg three times daily. Was the Capoten order for 50mg three times daily transcribed correctly on the MAR?

A. Yes

B. No

MEDICATION ADMINISTRATION RECORD

| Medications   | Hour | 1      | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |  |
|---|------|--------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| DARVO CET-N-100<br>Take 1 tablet by mouth every 4 hours as needed for pain.       | 8AM  | T      | T | T | T | T | J | J | J | J | J  | T  | T  | T  | T  | J  | J  | J  | J  | J  | T  | T  | T  | T  | J  | J  | J  |    |    |    |    |    |  |
|   | 8PM  | D      | D | D | D | D | C | C | C | C | D  | D  | D  | D  | C  | C  | C  | C  | C  | D  | D  | D  | D  | C  | C  | C  | C  |    |    |    |    |    |  |
| LASIX 40mg.<br>Take 1 tablet by mouth <del>once</del> every day <b>twice</b>      | 8AM  | T      | T | T | T | T | J | J | J | J | J  | T  | T  | T  | T  | J  | J  | J  | J  | J  | T  | T  | T  | T  | J  | J  | J  |    |    |    |    |    |  |
|   | 4PM  |        |   |   |   |   |   |   |   | J | C  | D  | D  | D  | D  | C  | C  | C  | C  | C  | D  | D  | D  | D  | C  | C  | C  | C  |    |    |    |    |  |
| COUMADIN 5mg.<br>Take 1 tablet by mouth every other day.                          | 6PM  | —————> |   |   |   |   |   |   |   |   |    | D  | D  | D  | C  | C  | C  | C  | C  | D  | D  | D  | D  | C  | C  | C  | C  |    |    |    |    |    |  |
|   |      |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| TYLENOL 325mg<br>Take 1 to 2 tablets by mouth twice daily.                        | 8AM  | T      | T | T | T | T | J | J | J | J | J  | T  | T  | T  | T  | J  | J  | J  | J  | J  | T  | T  | T  | T  | J  | J  | J  |    |    |    |    |    |  |
|   | 8PM  | D      | D | D | D | D | C | C | C | C | C  | D  | D  | D  | D  | C  | C  | C  | C  | C  | D  | D  | D  | D  | C  | C  | C  | C  |    |    |    |    |  |
| AMOXICILLIN 250mg<br>Take 1 capsule by mouth 3 times daily for 10 days.           | 8AM  | ————>  |   |   | T | T | J | J | J | J | J  | T  | T  | T  | T  | J  | J  | J  | J  | J  | T  | T  | T  | T  | J  | J  | J  |    |    |    |    |    |  |
|   | 2PM  | ————>  |   |   | T | T | J | J | J | J | J  | T  | T  | T  | T  | J  | J  | J  | J  | J  | T  | T  | T  | T  | J  | J  | J  |    |    |    |    |    |  |
|   | 8PM  | ————>  |   |   | D | D | D | C | C | C | C  | C  | D  | D  | D  | D  | C  | C  | C  | C  | C  | D  | D  | D  | D  | C  | C  | C  | C  |    |    |    |  |
| NITRO-DUR 0.4mg/hr<br>PATCH ----Apply 1 patch every morning and remove at bedtime | 8AM  | T      | T | T | T | T | J | J | J | J | J  | T  | T  | T  | T  | J  | J  | J  | J  | J  | T  | T  | T  | T  | J  | J  | J  |    |    |    |    |    |  |
|   |      |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 50mg<br>CAPOTEN <del>20mg</del><br>Take 1 tablet by mouth 3 times daily.          | 8AM  | T      | T | T | T | T | J | J | J | J | J  | T  | T  | T  | T  | J  | J  | J  | J  | J  | T  | T  | T  | T  | J  | J  | J  |    |    |    |    |    |  |
|   | 2PM  | T      | T | T | T | T | J | J | J | J | J  | T  | T  | T  | T  | J  | J  | J  | J  | J  | T  | T  | T  | T  | J  | J  | J  |    |    |    |    |    |  |
|   | 8PM  | D      | D | D | D | D | C | C | C | C | C  | D  | D  | D  | D  | C  | C  | C  | C  | C  | D  | D  | D  | D  | C  | C  | C  | C  |    |    |    |    |  |
|   |      |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|   |      |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |

Charting for the month of: **2/01/00** through **2/29/00**

Physician: **Dr. Moses** Telephone # **919-555-1212** Medical Record #:

Alt. Physician: Alt. Physician Telephone #:

Allergies: **No Known Allergies (NKA)** Rehabilitation Potential:

Diagnosis: **Congestive Heart Failure, Hypertension** Admission Date: **5/03/96**

Resident: **Slippery Raccoon** Date of Birth: **10/17/30** Room / bed #: **BW999**



## Infection Control

- 111.** A used lancet or syringe should be discarded in:
- A. The wastebasket in the resident's room.
  - B. The kitchen wastebasket.
  - C. A plastic bag.
  - D. A leakproof, puncture resistant container, such as a sharps container.
- 112.** Gloves should be worn:
- A. When inserting suppositories.
  - B. When applying a transderm patch such as Nitroglycerin.
  - C. When changing a dressing.
  - D. All of the above.
- 113.** When administering medications to a resident's eye, you are to wash your hands:
- A. Only after administering the eye medication.
  - B. Only before administering the eye medication.
  - C. Before and after administering the eye medication.
- 114.** Handwashing with soap and water is the one of the most important measures or ways to prevent the spread of germs or infection.
- A. True                      B. False
- 115.** An antiseptic gel or product should be used for handwashing in place of soap and water, when soap and water is not readily available.
- A. True                      B. False
- 116.** When crushing medications, it is important to use procedures that prevent contamination of other medications crushed afterward.
- A. True                      B. False

**117.** Gloves and supplies that are soiled may be discarded in a wastebasket in the resident's room.

A. True

B. False

**118.** It is **not** necessary to change gloves between residents when administering eye drops or applying transderm patches such as Nitroglycerin.

A. True

B. False

# **SECTION 2**

## **ANSWERS TO STUDY GUIDE QUESTIONS**

## Answers to Study Guide Questions

### Abbreviations/Medical Terminology

1. E.
2. C.
3. D.
4. A
5. B
6. D.
7. B.
8. A.
9. C.
10. E.
11. D.
12. B.
13. E.
14. A.
15. C.
16. D.
17. A.
18. B.
19. C.
20. E.

**(Refer to Attachment B – “Abbreviations”, Page 48)**

21. C. PD is not an abbreviation for route of administration.  
PO means orally or by mouth.  
IM means intramuscularly or into the muscle.  
SL means sublingually or under the tongue.
22. A. Under the tongue.

23. **D.** PD is not an abbreviation for dosages or strengths.
24. **B.** It is not OK to guess if you are not sure of an abbreviation. If you are not certain of an abbreviation, you should refer to the list of abbreviations in the facility or get help from the supervisor, nurse, or pharmacist.
25. **A.** Approved abbreviations may vary between facilities. Some facilities do not use certain abbreviations because of the potential of medication errors. It is important for you to know the facility's policy.
26. **B.** A milliliter is not the same as a milligram. Volume refers to the amount of liquid in a container and it is measured in milliliters (ml) and cubic centimeters (cc). Strength refers to the amount of drug. Strength is measured in milligram (mg), grams (gm), micrograms (mcg) and milliequivalents (mEq). **(Refer to Attachment C – “Conversion Table”, Page 49.)**

### **Regulations**

27. **A.** Refer to regulation 13F/13G .1006. The regulations do not prohibit adult care homes from having over-the-counter medications as stock. Although, the over-the-counter medications may be kept as floor stock, a physician's order is required to administer any medication, prescription and non-prescription. Only the prescription items listed in regulation 13F/13G .1006 are permitted to be kept as house stock in adult care homes.
28. **B.** When administering medications, you are to observe the resident actually taking the medication. If the medications were left with the resident, you would not be certain if the resident took the medication or not, and the medication would also not be stored appropriately. Refer to regulation 13F/13G .1004 and .1006.
29. **A.** State regulations for adult care homes require medications to be administered as prescribed by a resident's physician or prescribing practitioner.
30. **A.** Refer to regulation 13F/13G .1004. A medication scheduled for administration at 8AM would have to be administered between 7AM and 9AM, in order for the administration to be considered timely. This does not apply to medications prescribed in accordance with meals or medications such as insulin.

- 31. A.** Residents do have the right to refuse medications. An adult care home should have a policy on contacting the resident's physician when a resident is refusing medications. A resident is never forced to take medications.
- 32. A.** Oral or internal medications are stored separately from external or topical medications for safety reasons. Refer to regulation 13F/13G .1006.
- 33. A.** Effective 02/15/00, unlicensed staff administering medications in adult care homes must have validation of skills by a registered nurse or pharmacist before administering medications. Refer to regulation 13G .0403 and .0503 or 13F .0403 and .0503.
- 34. A.** Additional documentation or records are necessary for controlled substances because each dose of a controlled substance has to be accounted for. When a dose of a controlled substance is prepared for administration and then not administered, it is destroyed at the facility and specific information must be recorded. It is very important that you understand the facility's policy and procedure for controlled substances. Refer to regulations 13F/13G .1007 and .1008.
- 35. B.** Unlicensed staff in adult care homes are not allowed to administer IM injections. Unlicensed staff in adult care homes may administer subcutaneous injections, excluding anticoagulants such as heparin, if appropriate training is provided. Refer to regulation 13F/13G .1004.
- 36. A.** The physician or prescribing practitioner must sign the verbal or telephone orders within 15 days from the date the order is given. A telephone or verbal order is also signed/initialed and dated by the person taking the order. Refer to regulation 13F/13G .1002.
- 37. E.** The amount or quantity of medication administered, the time of administration, and the initials of the person administering the medication is required on the MAR for all medications administered. The effectiveness of PRN medications also has to be documented on the MAR. Refer to regulation 13F/13G .1004.
- 38. B.** Regulations for adult care homes prohibit staff from repackaging more than one dose of a medication for subsequent administration. It is usually allowable for **one** dose of medication to be removed from the original container and placed in another container for later administration. Remember that anytime **more** than one dose of medication from a supply is placed in another container and labeled, it is considered dispensing.

When a medication is released to the responsible party, the facility must document the name of the medication, strength and the quantity released. The facility must also document the quantity of medication returned. Non-prescription medications that are not packaged and labeled by a pharmacist are released in the original container. Refer to regulation 13F/13G .1003.

Since Mr. Jones is going away for a week, more than one dose of medication would be released. The medications must be sent in containers that have been filled and labeled by a pharmacist or dispensing practitioner. The medications released must also be documented on the appropriate facility form.

- 39. D.** Refer to regulation 13F/13G .1002. The resident's physician or prescribing practitioner must be contacted anytime clarification is needed about a medication order. A facility should verify orders whenever a resident is admitted or readmitted to the facility.
- 40. A.** All medication orders are to be maintained in the resident's record in the facility. This helps to ensure that medications are administered as prescribed. Refer to regulation 13F/13G .1002.

The pharmacy also has to maintain orders or prescriptions for medications dispensed, but these records are maintained for the pharmacy.

- 41. C.** Only medications, including non-prescription medications, prescribed by a physician or a prescribing practitioner are administered to a resident. A physician's order is required for any medication administered. Refer to regulation 13F/13G .1002 and .1004. Refer to regulation 13F/13G .1003 for packaging requirements of non-prescription medications. Non-prescription medications can produce unwanted effects or adverse effects and interact with medications.
- 42. A.** Only oral solid medications such as tablets and capsules may be prepared in advance. Medications prescribed for PRN administration and liquid medications are only prepared immediately prior to the medications actually being administered. Medications are not crushed until immediately prior to the medications actually being administered. Refer to regulation 13F/13G .1004.

- 43. D.** Staff is required to document on the MAR when a medication is administered, omitted, or refused. The MAR is a legal document on how medications are administered by the facility. It is important that the documentation on the MAR is accurate. If a medication is omitted, you must document the reason, such as the resident was out of the facility or the medication was not available, on the MAR. A facility is required to have procedures for staff to follow for documenting on the MAR when a medication is administered, omitted or refused. Refer to regulation 13F/13G .1004.
- 44. C.** An order from a physician or prescribing practitioner is required before any medication, prescription and non-prescription, is administered to a resident. Refer to regulation 13F/13G .1004.
- 45. C.** All medications, including PRN's, are to be administered as prescribed; therefore, PRN medications must be given according to the frequency (how often a medication can be given) and reason(s) specified by the physician or prescribing practitioner. PRN medications can not be administered any more frequently than ordered by the physician or prescribing practitioner. If the resident is requesting or needing the medication more frequently or requests the medication for another reason or symptom, the physician should be contacted. Refer to regulation 13F/13G .1004.

It is true that PRN medications are administered when needed by the resident, but the frequency and reason for administration is according to the physician's order.

- 46. A.** You document immediately after you administer the medications to a resident and after you observe the resident actually take the medications and prior to administering another resident's medications. Remember, it is important for documentation on the MAR to be accurate. Documenting immediately after you administer a medication helps to ensure accurate documentation. Precharting or documenting the administration of a medication before the medication is administered is prohibited. Refer to regulation 13F/13G .1004.
- 47. C.** Once a medication has been removed from the labeled package or container and prepared for administration, the medication is not put or placed back in the package or container. Medications are not transferred from one container to another except when prepared for administration.

If there is reason to believe the resident may take the medications later during the medication pass, such as after encouraging the resident to take the medications, the medications may be kept and administered. This is done in accordance with the facility's policy and procedures. Otherwise, the medications should be promptly disposed of in accordance with the facility's policy and procedures.

If an oriented and alert resident refuses medications frequently, it may be better to see if the resident will take the medication before always removing the medication from the package/container. Always contact the supervisor, nurse or pharmacist when you have residents refusing to take medications, according to the facility's policy. Refer to regulation 13F/13G .1003 and .1007 and .1008.

**48. B.** Medications stored in a refrigerator containing non-medication-related items such as food, are to be stored in a separate container. Unless the refrigerator is locked or stored in a locked medication area, the medications in the refrigerator have to be stored in a locked container. In this example, the refrigerator is accessible to residents; therefore, the medications stored in the refrigerator have to be stored in a locked container. Refer to regulation 13F/13G .1006.

**49. D.** Residents have the right to administer their own medications. A physician's order is necessary for the resident to self-administer.

The medications still have to be stored in a safe and secure manner in the resident's room. Storage of these medications will depend on the medication, the facility, and the other residents at the adult care home. A facility that has confused and wandering residents may have to require the medications to be stored in a locked area, while another facility without any confused or wandering residents may not. The medications are to be stored out of the site of visitors and other residents.

The facility has a responsibility for monitoring the resident, and if there is a change in the resident's physical or mental abilities, the physician must be contacted. (Monitoring residents and contacting the physician if there is a change in the resident's physical and mental abilities applies to all residents.) If the resident is non-compliant with the administration or facility's policies and procedures, such as storage, then the physician should also be contacted.

If there is a physician's order for a medication to be self-administered, there is no requirement for staff to observe the resident take each dose of the medication. This should not be necessary if the resident is capable of self-administering. It is helpful to have the medications that are self-administered on the MAR, but staff should not document on the MAR that they are administering the medications. Refer to regulation 13F/13G.1005 and .1006.

### **Medication Administration**

- 50. D.** One of the six rights with medication administration is the right resident. The best way of identifying residents in adult care homes is by using photographs. Relying on staff and residents is not a safe or acceptable procedure for identifying residents. The photographs also need to be kept updated when a resident's appearance changes.
- 51. A.** Checking the medication label against the MAR three times is done before each medication is administered to a resident. This is added protection for you and the resident. This applies to all situations whether the staff, resident, or medication is new.
- 52. B.** Residents have the right to refuse medications, and the refusal of a medication is **not** a medication error.

A medication error occurs when a medication is not administered as prescribed. Examples of medication errors include: omissions; administration of a medication not prescribed; wrong dosage; wrong time; wrong route; crushing a medication that shouldn't be crushed; and documentation errors. When a medication error is made or discovered, it should be reported immediately to the supervisor, nurse, pharmacist or physician according to the facility's policy. The supervisor or health professional will have to determine the next appropriate steps to be taken. Recognizing medication errors and acting quickly to correct them helps prevent more serious problems. Refer to regulation 13F/13G .1004.

- 53. B.** Contacting the supervisor, nurse, pharmacist or physician is the correct answer. The physician or prescribing practitioner must be contacted when clarification of medication orders or prescriptions is required. Clarification is needed when staff or health professionals can not read the physician's handwriting or the directions are incomplete. Depending on a coworker or family member may not give accurate information. You never guess what the physician may have written!

**54. B.** When a resident has difficulty with swallowing the resident is at risk of aspiration. Aspiration is defined as inhaling a substance into the lungs. When a substance such as liquid or food is inhaled into the lungs, it may cause a more serious problem. The resident may develop a condition called aspiration pneumonia. Aspiration pneumonia is an infection that may develop when food or liquid enters the lungs and can lead to life-threatening conditions. This is why it is important for you to report changes such as difficulty with swallowing to the supervisor, nurse, or physician.

Asthma is when a person has difficulty breathing.

Arrhythmia is when a person has an abnormal heart rate.

Arthritis is when a person has difficulty with movement due to inflammation or swelling in the joints.

**55. C.** Gloves are required when applying topical medications. This is protection for you and the resident.

**56. A.** An inhaler must be shaken before each and every time the inhaler is used. This helps to ensure that the proper amount of medication is administered.

**57. D.** It is best to have the resident lie on his back with his head lower than shoulders for a few minutes to ensure the medication reaches the nasal tissue. If the resident can not or will not lie down, the resident should remain with his head tilted slightly back for a few minutes. The resident does not need to have his head tilted back for 60 minutes.

**58. A.** The answer is to flag the MAR and return later in the medication pass to administer the medications. Flagging the MAR will help to remind you to return later in the medication pass. When a medication can not be administered during the scheduled medication pass, document that the medication was not administered on the MAR in accordance with the facility's policy. It is a violation of resident's rights to administer medications to a resident when the resident is using the bathroom or receiving personal care such as bathing.

**59. B.** Allergic reactions can include rashes, swelling, itching **and** may be life threatening. This is why it is important to document information about the resident's allergies in the resident's record and MAR and report allergic reactions or suspected reactions promptly.

- 60. C.** Always use the MAR when administering medications and check the medication label with the MAR. All of the other examples are reasons for medication errors.
- 61. D.** Medication errors may threaten the resident's life and safety by producing bad or adverse effects and interfere with the effectiveness of the medication.
- 62. C.** Medications that are discolored or outdated/expired should never be administered. You always check the expiration date on the medication label before administering medications. If you can not find the expiration date on the medication label, you should ask the supervisor or pharmacist. If you notice a difference in the appearance of a medication, you should contact the pharmacist.
- 63. C.** The best answer is to ask the supervisor, nurse, or pharmacist to calculate the dosage with you. Administering the proper amount of medication is very important and some calculations may be difficult.
- 64. C.** Medications prescribed before meals are generally to be administered about 30 minutes prior to the resident eating.
- 65. A.** All of the choices may apply, but the main concern is that the resident may never take the medication and someone else may. Leaving the medications unattended is not a safe practice.
- 66. D.** When administering medications, you compare the directions on the label with the information or order on the MAR 3 times. The MAR is always used when you are administering medications. If you notice that the color or shape of a medication is different or changed, you should always contact your pharmacist before administering a medication. You should never rely only on the color, shape or location of a medication.
- 67. A.** When a medication can not be administered during the scheduled medication pass, you are to document the reason. If the medication is administered at a later time, you are to document the time the medication was administered. You should always let the supervisor, nurse, or pharmacist know when medications, especially ones prescribed more frequently than once daily, are administered late in case other administration times for a medication need to be changed.
- 68. C.** Always double-check a medication and medication order, if a resident expresses concern about a medication you are about to administer. The resident may be right!

- 69. D.** To avoid medication errors, the medication label and MAR are compared 3 times: when selecting or removing the medication from the supply or storage area; before pouring the medication; and after pouring and before returning the medication to the supply or storage area.
- 70. C.** All medications, including non-prescription medications, require a physician's order to be administered. When family members or residents bring in medications to be administered and there is no order, the physician should be contacted regarding administration.
- 71. B.** If you discover or know a resident's record indicates that the resident is allergic to a medication that has been prescribed, the physician should always be contacted and reminded or told about the allergy. Physician's records may not always be updated or accurate or the allergy warning could have been overlooked. It is also possible that the resident's record at the facility is not accurate.
- 72. A.** The MAR is always changed to reflect new orders. Remember that the MAR is a legal document, and it must be kept updated. It is very important that documentation on the MAR be accurate. An accurate MAR promotes safe medication administration and resident safety.
- 73. A.** Resident's allergies should be documented on the MAR and in the resident's record. Having the information on the resident's record is helpful when orders are received and having the allergy information on the MAR is helpful to staff administering medications. If a resident does not have any known allergies, it should be written in the resident's record and MAR. Usually you will see "NKA" for No Known Allergies. It is also important that the pharmacy is always notified of any allergies or changes in allergies.
- 74. A.** A drug reference helps you find information about medications. A facility should have a reference available for staff to use. A reference is not a substitute for contacting the pharmacist, nurse or physician when you have questions about a resident's medication, but it will help answer questions about medications. You should use a reference that is easy to understand. References written for non-health professionals are available at pharmacies and not very expensive. It is important to have current and updated drug references available.
- 75. B.** If you have a question about a medication such as the dosage, you should always contact the pharmacy before administering the medication.

- 76. B.** Medications have side effects and many medications can cause a resident to become confused. This is especially true for elderly residents. It is important to report changes noticed with residents to the supervisor, nurse, pharmacist, or physician, according to the facility's policy. The facility's policy is to identify who will contact the physician of any changes noticed with a resident. A medication may be the reason for this change in the resident.
- 77. A.** Medications are to be administered as prescribed. A delay in administering a medication such as Nitroglycerin or insulin may be life threatening.
- 78. B.** Sublingual means under the tongue. Chewing or swallowing a medication that is to be administered sublingually may alter the effectiveness of the medication. An example is Nitroglycerin tablets.
- 79. E.** Side effects of medications may include changes in a resident's behavior, a rash, and/or a change in swallowing or in walking. Any changes with a resident should be reported immediately to the supervisor, nurse, pharmacist, or physician, according to the facility's policy. It is important to have the resident's record and MARs available when you contact the supervisor, nurse, pharmacist or physician. The facility's policy is to identify who will contact the physician of any changes noticed with a resident.
- 80. C.** Medication orders are transcribed or written onto the MAR when an order is obtained or received. If a medication arrives from the pharmacy or is found in the resident's supply of medications and there is no order on the MAR, then an order must be found before writing the medication order on the MAR. If an order can not be found, the pharmacy is contacted immediately.

Two reasons why a medication order would not be on a MAR are:

- 1) The order was not transcribed or written onto the MAR when received.
- 2) There is no order for the medication in the resident's record in the facility. It is possible that the medication was not ordered for the resident.

Directions on the medication label should not be copied onto the MAR, unless you know the label matches the medication order in the resident's record. Remember that the MAR is to match the orders in the resident's record also.

**81. B.** When the directions on the medication label do not match the order on the MAR, you are not to administer the medication. The orders in the resident's record must be checked before administering the medication. Always contact the supervisor, nurse or pharmacist if you can not find an order or need assistance.

Two reasons why the directions on the medication label and the information on the MAR would not match are:

- 1) An order was changed and the MAR was not updated. If the MAR is not correct, then continuing to administer the medication as written on the MAR would result in a medication error.
- 2) The order was changed on the MAR but the facility's policy on direction changes for medication labels was not followed. If you administered the medication according to the directions on the medication label then a medication error would occur.

It is very important to always use the MAR when administering medications and compare the directions on the medication label with the order on the MAR. If the label and MAR do not match, then the orders in the resident's record are reviewed and either the MAR or the medication label are corrected according to the facility's policy and procedures.

**82. C.** "Continue previous medications" is not a complete order; therefore, the physician must be contacted for medication orders. A complete medication order includes the name of the medication, the dosage, the route of administration, the frequency of administration and reason for administration if the medication order is a PRN order. The physician may be referring to the medications ordered in the hospital and these medications may not be the same as the medications prescribed prior to the resident going to the hospital.

When a resident is admitted or readmitted, the facility may receive different forms with orders such as a discharge summary, a transfer order form and/or a FL-2. It is important that all the information is reviewed. If there is a difference between the orders on the forms, including the FL-2, the physician is contacted for clarification.

**83. B.** This order is incomplete because there is no frequency of administration (how often the medication can be given). Since the frequency of the medication order is not indicated, the physician has to be contacted before administering the Ambien. You can not assume the medication is to be administered every night at bedtime as needed for sleep. This medication is sometimes ordered every other night as needed for sleep.

It is also important to check on the frequency of administration for medication orders such as Motrin 800mg pc. The medication could be ordered once, twice, or three times daily after meals. After meals, before meals, and with meals does not always mean three times daily.

**84. C.** A medication is transcribed onto the MAR when the facility receives a medication order. This procedure ensures that the medication order on the MAR matches the order in the resident's record. Having the order on the MAR is also important to check that medications arrive from the pharmacy. If a medication has not arrived by the scheduled administration time on the MAR, you should document that the medication was not administered and the reason why. The pharmacy is also contacted about the delivery of the medication. If there is going to be a delay in obtaining a medication, the physician may need to be contacted. You should also let the supervisor or nurse know when medications are not available.

**85. A.** Household utensils such as a teaspoon and tablespoon are not used to measure liquids. Teaspoons and tablespoons are not calibrated for measuring medications. Only devices that are calibrated for measuring medications are used to administer medications.

A calibrated syringe or dropper is often necessary for measuring amounts less than 5ml and unequal or odd amounts. Medication cups may not have the appropriate markings and you would have to approximate the amount of medication to administer for amounts less than 5ml or odd amounts. You never approximate or guess the amount of medication to administer. A medication cup is placed on a flat surface and measured at eye level to ensure accuracy.

**86. E.** The answer is all of the above. Washing your hands before and after the administration of eye drops and wearing gloves when there is redness or possibility of infection are appropriate infection control measures. This is protection for you and the resident.

When administering two or more different eye drops at the same time, you should wait 3 to 5 minutes between the administration of each medication. This ensures that the medication remains in the eye. If the eye medications are administered one right after the other, the solution will just run out of the resident's eye.

The MAR is initialed or signed after the administration of any medication.

- 87. B.** Medications, including PRNs, are to be administered as prescribed. You need to look at the resident's MAR in order to know when the medication was last administered and the reason the medication is prescribed. You need to know why the medication is being requested or needed so you can make sure the medication is administered for the reason prescribed.
- 88. C.** Specific administration times for PRN medications are never scheduled on the MAR. The resident's physician needs to be contacted and told how often the resident is taking the medication. The physician may change the medication order or decide that the resident needs to be seen. Whether the order is changed or not, contact with the physician is always documented in the resident's record.
- 89. C.** You always administer medications as you were trained. You should never administer medications from memory nor have untrained staff administer medications. The MAR is always used when administering medications. It is better to go ahead and administer the medications rather than taking the medications to the workshop to administer later.
- 90. A.** Residents have the right to refuse medications; therefore, forcing the resident to take a medication or hiding the medication in the resident's food or drink are not appropriate and violate the resident's rights. Encouraging the resident to take the medication by explaining the importance and purposes of medications is appropriate. You need to be sure the resident's refusal is documented on the MAR and other forms according to the facility's policy. The supervisor, nurse or pharmacist needs to be notified of residents who refuse medications. The resident's physician may need to be contacted, so be sure you follow the facility's policy for refusals. Leaving medications with the resident is not appropriate or safe.
- 91. B.** When there is a change in a resident's behavior, physically or mentally, the supervisor, nurse or the resident's physician need to be contacted immediately. You would hold the medication since a medication may be a reason the resident's behavior has changed. Drowsiness or lethargy is often a side effect of medications.

## Measuring Devices

**Refer to Attachments C and D for measuring tips on Pages 49 and 50.**

**92. E.** A mg is not equal to a ml; therefore, you could not use the medication cup or the oral dropper. Be sure that the amount you are about to measure matches the marking on the measuring device. Household utensils such as a tablespoon are not calibrated and should never be used to measure medications. An oral syringe or measuring device that has the name of a medication on it should only be used to measure that medication. The oral syringe above has Lasix written on it and is only used to measure Lasix Solution.

The correct measuring device to measure the Haldol would be a measuring device specifically for Haldol Solution or you would have to know the “mls” to administer.

**93. A.** Only the medication cup is used. It is calibrated and has a marking to measure a tablespoon. Household utensils such as a tablespoon are not calibrated and should not be used to measure medications.

**94. E.** A mg is not equal to a ml; therefore, you can not use the medication cup or oral dropper. Be sure that the amount you are about to measure matches the marking on the measuring device. Household utensils such as a tablespoon are not calibrated and should not be used to measure medications. The oral syringe is only used to measure Lasix Solution. Again, the correct measuring device would be one specifically for measuring Mellaril Liquid or you would have to know the “mls” to administer.

**95. D.** The oral dropper is used because it has a marking to measure 4 ml. The medication cup could not be used, because it does not have a marking to measure 4 ml. You would have to approximate or guess the amount to measure, and you should never guess the amount of medication to administer. Household utensils such as a tablespoon are not calibrated and should never be used to measure medications. Remember, the oral syringe above is only used to measure Lasix Solution.

## Metric System

96. A. “Tbsp” means tablespoon and 1 tablespoon is equal to 15ml. So 2 tablespoons would be equal to 30ml.
97. A. The abbreviation “tsp” means teaspoon and 1 teaspoon equals 5ml. So 2 teaspoons would be equal to 10ml.
98. D. You can not tell how much to administer because the order is not complete. The physician ordered 2, but two what? This is not stated. You may be tempted to guess that the physician meant 2 teaspoons or 2 tablespoons, but remember when you guess, you may be right or you might be wrong. The physician is contacted for complete instructions.
99. D. The order states “2ml” and that means 2 milliliters. All the choices are milligrams (mg). Remember a milliliter (ml) is not equal to a milligram (mg).

## Labels

100. C. The medication label and the MAR do not match; therefore, you do not administer the medication. When this happens, the facility’s policy on checking the medication order and medication dispensed is followed. This usually means that the supervisor, nurse or pharmacist is contacted. The pharmacy will have to be contacted by the facility regarding the medication.

When the name of a medication dispensed by the pharmacy is different than the medication name on the physician’s order, the pharmacy is required to label the medication in a way that the facility knows the medication is the same or a generic. You will usually see statements such as “Used for” or “Dispensed for”.

Never guess or assume the medication is the same, if the medication name on the label does not match the MAR. In this case, Propulsid is **not** the same medication as Metoclopramide.

101. B. The physician must be contacted because you do not know if the medication is to be discontinued or not. The physician may want to be contacted before additional refills are allowed.

Medication orders have to be clear. A medication is not discontinued, unless there is a discontinue order or the physician orders the medication for a specific time period, i.e., for 10 days or until healed. You never assume or guess what the prescription or order means.

**102. C.** The abbreviation “RPh” means registered pharmacist. You may also see terms such as “Dispensed by (Dsp.)” or “Filled by” prior to the pharmacist’s initials. Pharmacies have many different ways of printing required information on the medication label. It is very important that you are familiar with locating information on the medication label.

**103. C.** When a label needs replacing, you should report it to the supervisor, nurse, or pharmacist. You should never relabel medications, especially prescription medications. Relabeling and any changes to the medication label are done only by a pharmacist.

### **Medication Administration Records**

**Refer to the correct medication administration record, Page 51, Attachment E.**

**104. A.** The order for Darvocet N-100 is 1 tablet by mouth every 4 hours as needed for pain. Specific administration times are not scheduled for PRN medications. “PRN” should be written in the hour or the administration time frame on the MAR. On this type of MAR, you would initial the front and document the other required information, time of administration, amount administered and reason, on the back of the MAR. There are several different types of MARs, so it is important that you know how to document information on the MAR used by the facility you work in.

If a resident is requiring frequent administration of a PRN medication, the physician needs to be contacted.

**105. B.** When an order is changed, the old order is discontinued and the new order is written on the MAR. You should date and initial entries or information you write on the MAR.

In this example, the Lasix 40mg once daily should be discontinued and the order, Lasix 40mg twice daily, needs to be written as a new order. It is not appropriate to just alter or mark through the previous medication order on the MAR. The date and time to start administering the medication is indicated by marking out the previous days.

You also need to follow the facility's policy on direction changes for the medication label. The facility's policy may be to place a "Direction change" sticker on the medication label or the medication container may need to be pulled from the medication supply.

- 106. B.** New orders are transcribed so the date and time to start administering the medication is indicated. This is done by marking out the previous days. If the medication is not available for administration at the scheduled administration time, the pharmacy is contacted and you document that the medication was not available on the MAR. A facility should have a policy on scheduling new medication orders. A delay in administering a medication may place the resident's health and welfare at risk.

If the medication is not prescribed for administration every day, mark out the days the medication is not to be administered. This helps to prevent medication errors.

There are two errors with the Coumadin order on Attachment B, Page 48:

- 1) The Coumadin was ordered on 02/06/00, but never administered until 02/13/00. There was also no documentation on why the Coumadin was not administered from 02/06/00 until 02/13/00.
- 2) The Coumadin was documented as being administered every day instead of every other day as ordered. If the days the Coumadin was not to be administered had been marked out, this error may not have happened.

- 107. B.** The amount or dosage of medication administered is required on the MAR. When the physician does not order the specific amount for administration, i.e., 1 to 2 tablets, then you have to document the amount administered also. For the Tylenol order, you have to document whether one or two tablets of Tylenol were administered.

It is best for the physician to specify the exact amount of medication to administer, especially for routine orders. Some facilities will not accept orders that do not specify the exact amount or dosage of medication to administer.

**108. B.** Short term orders, i.e., an antibiotic, should have the doses prescribed counted from the time the medication is started. You should also mark on the MAR when the medication is to stop. This helps to prevent medication errors.

The Amoxicillin was ordered three times daily for 10 days. This is a total of 30 doses. The medication was documented as being administered much longer than ordered. Counting 30 doses from the time the medication started and marking when the medication was to stop may have prevented this medication error.

**109. B.** There is no documentation of the Nitro-Dur (Nitroglycerin) patch being removed at bedtime as ordered by the physician; therefore, the Nitro-Dur was not administered as ordered. The application sites for the Nitro-Dur (Nitroglycerin) patches were not documented. This documentation is needed to rotate application sites. Rotating the application sites helps to prevent irritation of the resident's skin.

**110. B.** When an order is changed, the old order is discontinued and the new order is written on the MAR. You should date and initial orders or other information you write on the MAR

The Capoten order was not transcribed correctly. Can you tell when the Capoten order was changed on the MAR? No and it is very important for MARs to be correct.

The correct way to change the MAR is to discontinue the order for Capoten 25mg three times daily and write a new order on the MAR for Capoten 50mg three times daily. It is not appropriate to just mark through or alter the previous medication order on the MAR. Remember to date and initial the orders or information you write on the MAR.

You also need to follow the facility's policy for direction changes on the medication label. The facility's policy may be to place a "Direction change" sticker on the medication label or the medication container may need to be pulled from the medication supply.

\*\* The resident had 25mg tablets of Capoten available, and the pharmacy told the supervisor to administer 2 tablets of the 25mg to equal 50mg. The supervisor wrote this information on the MAR for staff. You can write additional information on the MAR if needed to help with the administration of a medication.

## **Infection Control**

**(Explanation for answers to questions 111 - 118 is located after question 118.)**

- 111. D.**
- 112. D.**
- 113. C.**
- 114. A.**
- 115. A.**
- 116. A.**
- 117. B.**
- 118. B.**

Infection control is one of your most important responsibilities. It is important to control the spread of germs and infection in a facility. The precautions you take to control the spread of infection are referred to as universal precautions. With universal precautions you treat blood and bodily fluids as infected with germs that cause disease.

Universal precautions include: washing hands before and after resident contact, such as eye drops; wearing gloves when you may be exposed to blood or body fluids; disposing of used gloves properly; disposing of needles, syringes, and lancets in leakproof, puncture-resistant containers after use; never bending, recapping, or breaking needles after use and cleaning and disinfecting medication storage areas according to the facility's policy.

Handwashing is the single most important step you can take to protect yourself and residents from the spread of germs. When soap and water is not readily available, an antiseptic gel or product is used in place of soap and water.

When crushing medications, it is very important that there is no cross-contamination (mixing of crushed medications for different residents) of residents' medications. Facilities may use different devices to crush medications. The most common method is using a pill crusher and crushing the medications using two medication soufflé cups. If a device such as a mortar and pestle is used, and the residue from the medications is present, the device has to be cleaned thoroughly before crushing another resident's medications. You should follow your facility's policy and procedures for crushing medications.

It is important that gloves are changed between residents to prevent the spread of germs.

By practicing universal precautions, you will protect yourself, residents, other staff, families, and your family from germs that cause illness. It is important that you know the policies and procedures of the facility you work in to prevent the spread of infection.

**SECTION 3**

**ATTACHMENTS**

# ABBREVIATIONS

## DOSES

gm = gram  
 mg = milligram  
 mcg = microgram  
 cc = cubic centimeter  
 ml = milliliter  
 tsp = teaspoonful  
 tbsp = tablespoonful  
 gtt = drop  
 ss = 1/2  
 oz = ounce  
 mEq = milliequivalent

## ROUTES OF ADMINISTRATION

po = by mouth  
 pr = per rectum  
 OD = right eye  
 OS = left eye  
 OU = both eyes  
 AD = right ear  
 AS = left ear  
 AU = both ears  
 SL = sublingual (under the tongue)  
 SQ = subcutaneous (under the skin)  
 per GT = through gastrostomy tube

## TIMES

QD = every day  
 BID = twice a day  
 TID = three times a day  
 QID = four times a day  
 q\_h = every \_\_ hours  
 qhs = at bedtime  
 ac = before meals  
 pc = after meals  
 PRN = as needed  
 QOD = every other day  
 ac/hs = before meals and at bedtime  
 pc/hs = after meals and at bedtime  
 stat = immediately

## OTHER

MAR = medication administration record  
 OTC = over the counter  
 SIG = label or directions



10cc = 10ml  
20cc = 20ml  
30cc = 30ml

**TIP: use an oral syringe for amounts less than 5ml**



Reminder: 1cc = 1ml  
A cubic centimeter is the same as a milliliter.

## mg. ≠ ml.

A mg is NOT the same as a ml !!!



←15ml→



This 15ml cup contains 20mg of medication in it.

This 15ml cup contains 40mg of medication in it.

**TIP: Always read the label carefully to be sure you are measuring the right thing.**

YOU CAN'T TELL THE DIFFERENCE BY LOOKING

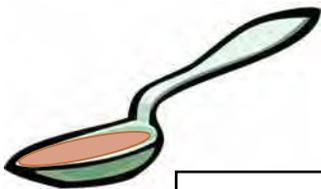


1 TSP. = 5ml.



**TIP: To be accurate, use the correct measuring tool. Ask your pharmacist. Some liquid medicines have special measuring tools.**

**TIP: Don't use household teaspoons. They are not accurate!**



=



=

1 tbsp. = 3 tsp

3 tsp. = 15ml



← 25 mL



**TIP: When measuring liquids, hold the cup at eye level.**

**ATTACHMENT D**  
**NEVER**

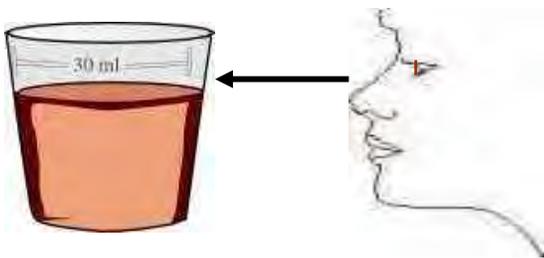
**ALWAYS**

1. **ALWAYS** measure using the metric system.

2. **ALWAYS** use an oral measuring syringe for small amounts of liquid medication.



3. **ALWAYS** hold cups at eye level when measuring.

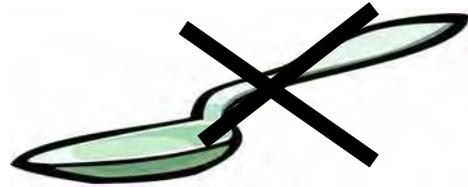


4. If the label says to measure in mls, **ALWAYS** use a measuring device that is marked in mls.

5. If the label says to measure in mgs, **ALWAYS** use a measuring device that is marked in mgs for that medication.

6. **ALWAYS** consult your pharmacist when you have a question about measuring.

1. **NEVER** use household spoons.



2. **NEVER** use cups that are not marked with the amount they hold.

3. **NEVER** switch the special droppers that come with some liquid medications.

4. **NEVER** measure mls with a measuring device that is marked in mgs.

5. **NEVER** measure mgs with measuring devices that are marked in mls.

**mg  $\neq$  ml**

6. **NEVER** leave air bubbles mixed with the liquid in an oral measuring syringe.



