

LESSON PLAN: 7

COURSE TITLE: MEDICATION TECHNICIAN

UNIT: II GENERAL PRINCIPLES

SCOPE OF UNIT:

This unit includes medication terminology, dosage, measurements, drug forms, transcribing physician's orders, packaging, storage, infection control, and accountability.

INFORMATION TOPIC: II-7 OR DEMONSTRATION:

PACKAGING, STORAGE, INFECTION CONTROL AND ACCOUNTABILITY
(Lesson Title)

OBJECTIVES – THE STUDENT WILL BE ABLE TO:

1. Identify and compare the three basic types of medication packaging.
2. Identify types of storage and security systems.
3. Identify how different types of drugs should be stored.
4. Select appropriate techniques in maintaining infection control utilized in medication administration.
5. Examine accountability procedures for individual, stock, controlled substances, and emergency drugs.

SUPPLEMENTARY TEACHING/LEARNING ITEMS:

1. Handwashing facilities: hot and cold running water, soap, paper towels, waste basket, hand lotion.
2. Samples of bubble cards, unit dose cards from other systems.
3. Sample emergency drug tray.
4. HO 15: Infection Control.
5. HO 16: Sample Completed Controlled Substance Record.
6. HO 17: Sample Controlled Substance Shift Change Count Check Sheet.
7. HO 18: Medication Disposition Form.

INFORMATIONAL ASSIGNMENT:

Read Lesson Plan 7 prior to class and be prepared to discuss the information presented. Read facility's policies regarding storage, handling, and security of medications.

INTRODUCTION:

Regulations are established for the packaging, storage, and handling of drugs in long-term care facilities. These specify locked areas for all medications, double locked areas for controlled substances, refrigeration of biologicals, and separation of external from internal drugs. Only nonprescription drugs are allowed as stock medications. Good methods of infection control must be established in handling and distributing drugs.

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OUTLINE:

I. Medication Packaging

- A. Traditional – doses dispensed in a bottle.
- B. Modified unit dose – doses dispensed on “bubble” or “blister” card.
- C. Unit dose – doses dispensed individually wrapped.
- D. Unit dose and modified unit dose organization.
 - 1. “Time pass” system – doses are organized by time of administration. At least one dose of all meds administered at a particular time is grouped together. For example, in a bubble card system, a medication given at 8AM and 8PM would have one card of doses stored in the “8AM” group and one card in the “8PM” group.
 - 2. “Sectional pass” system – doses are organized by resident name. At least one dose of all meds administered to a particular resident is grouped together. For example, in a bubble card system, a medication given at 8AM and 8 PM would have one card of doses stored in the “section” for that resident and would be used twice a day.

II. Types of Storage and Security Systems

- A. A locked room used for storing medication only. Doors should be self-closing and locking for security purposes.
- B. Medication cabinets with locks.
 - 1. Individual compartments or bins.
 - 2. Shelves without compartments or bins.
- C. Medication carts with locks that have individual bins or trays and a lockable drawer.
- D. Automated dispensing systems.
 - 1. Specially designed cabinets that provide single doses for individual residents.

2. When the cabinet is used only for controlled substances and emergency supplies, it may be controlled by the facility or pharmacy.
 3. When the cabinet is used for all medication it is electronically controlled by the pharmacy. The pharmacy requires a prescription order before releasing doses to facility staff. This procedure eliminates individual prescription containers except for special needs.
 4. The user enters resident information, drug information and a personal access code to obtain a dose.
 5. Two basic cabinet types.
 - a. Unit doses stored in drawers with separate compartments for each drug. The user selects the correct compartment.
 - b. The dose is supplied to the user in a “vending machine” manner and the user does not have access to the storage area.
- E. Refrigerator – the refrigerator should be in a locked medication room. If the refrigerator is not in a secured area, the refrigerator door should be locked or the drugs should be in a locked container permanently attached to the inside of the refrigerator. Drugs should be stored in a separate, sealed container if food is also stored in the same refrigerator. The refrigerator temperature should be maintained between 36° and 46° Fahrenheit.
- F. Controlled substances.
1. Schedule II controlled substances must be stored under double lock and the keys should be different. They may be stored in:
 - a. A locked cabinet or drawer within a locked room. Keys to the cabinet or drawer must be different than the door key.
 - b. A locked compartment in a locked cabinet or drawer with 2 different keys.
 2. On a medication cart, Schedule II controlled substances must be stored in the locked drawer and the cart kept locked or secured behind a locked door. Two different keys for the locks are required.
 3. If Schedule II controlled substances are in single use packaging with minimum quantities, they may be stored with other drugs under a single lock.
 4. Other controlled substances may be double locked as necessary for security.

G. Access control – access should be limited to persons authorized to administer medications.

1. Keys should be controlled to limit access to drugs and limited to the minimum number necessary.
2. All keys should be accounted for at each controlled substance inventory counting.
3. Keys should be carried and never left unattended.
4. When using access codes, they should be protected and never shared with others.

III. Storage for Different Types of Drugs

A. Internal.

1. Tablets and capsules – kept in original container.
2. Liquids are kept in the original container; some may require refrigeration.
3. Eye, ear, or nose – may be stored with rest of the resident's internal medications, but it's important to keep the container clean. Keep in original container. It is safest to separate medications by route to avoid confusion.
4. Inhalers, suppositories are kept in original containers (suppositories may need to be refrigerated).

B. External – store separately from internals to reduce chance of error and contamination.

1. Liquids – keep on different shelf; a different cabinet is even better.
2. Ointments – keep in individual cardboard box or other container.

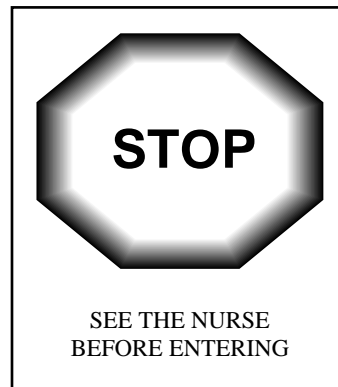
IV. Infection Control (HO 15)

A. Infection control in equipment and drug storage area.

1. Frequency of cleaning
 - a. Shelves, bins, and refrigerated containers should be cleaned weekly or more often if needed with soap and warm water.



- b. Medication carts and trays should be cleaned after each use with soap and warm water.
 2. Disinfectants – use a disinfectant appropriate for area to be cleaned according to the label on container or package insert.
- B. Infection control during administration of drugs.
 1. Keep paper soufflé cups and plastic medication cups upside down on a clean surface such as a clean paper towel.
 2. When giving the medication cup to the resident, remember that if your hands have contact with the resident your hands must be washed before you give medication to the next resident. Alcohol gel is a good substitute for cleaning your hands if you are not near a sink. Using alcohol gel would NOT be appropriate before the administration of ophthalmic preparations.
 3. When picking up a medication cup that the resident has handled, pick it up by the base – NEVER the top.
 4. When giving medications mixed with applesauce (or any other substance deemed appropriate by the facility), use a separate clean spoon for each resident.
 5. Dispose of used medication cups in the waste basket.
 6. Handling of external drugs.
 7. Internal/external drug separation.
 8. Cart.
 9. Trays.
- C. Standard Precautions.
 1. Hands-Hand hygiene is the most effective method of preventing the spread of infection.
 - a. Perform hand hygiene before and after contact with each resident.
 - b. Always perform hand hygiene before and after the use of gloves.
 - c. If hands come in contact with blood and/or body fluids containing blood, wash immediately with soap and water and report to licensed nurse or follow facility policy.



- d. Always wash hands with soap and water before eating, clocking out and before and after using the bathroom.
- 2. Wear gloves when administering:
 - a. Vaginal medications.
 - b. Rectal medications.
 - c. Ophthalmic Medications-do not use alcohol based handrub prior to administering ophthalmic medications
 - d. Other medications that specify the use of gloves such as topical medications and transdermal patches
 - e. Medications that put the medication technician at risk of having contact with body substances, mucous membranes or non-intact skin.

V. Accountability System

- A. Individual prescription non-controlled substance medications.
 - 1. Administration records.
 - 2. Acquisition procedure.
 - a. New orders.
 - b. Refills.
 - 3. Disposal procedure.
 - a. A single dropped or refused dose is disposed of according to facility policy. Make the nurse aware of the situation so that the medication can be replaced if necessary.
 - b. Medication technicians may not dispose of medications except for a single contaminated or refused dose. Destruction of "bulk" unwanted non-controlled drugs must be done by a nurse and a pharmacist or by two nurses.
- B. Nonprescription – OTC (over-the-counter) medications can be purchased by the facility and do not need state approval.
 - 1. Administration records or MAR.
 - 2. Acquisition procedure – follow facility policy.

3. Disposal procedure – follow facility policy.
- C. Controlled substances.
1. Individual prescription or Emergency Medication Supply.
 2. Administration recorded on Medication Administration Record (MAR) and Individual Controlled Substance Record.
 3. Acquisition procedure.
 - a. New orders.
 - b. Refills.
 4. Receiving records (HO 16).
 - a. May be on a separate receiving record.
 - b. Record on Individual Controlled Substance Record.
 - c. Delivery record for pharmacy.
 5. Reconciling drug count/inventory.
 - a. Frequency – each shift or per facility policy.
 - b. Compare count to individual controlled substances record (HO 16).
 - c. Document completion on Controlled Substance Count Check Sheet (HO 17).
 6. Discrepancies in the count must be reported to the Director of Nursing and others as required.
 7. Waste must be witnessed and documented according to state regulations and facility policy.
 8. Destruction of unused drugs when discontinued is according to state regulations and facility policy.
 9. Theft of controlled substances
 - a. Common methods of theft include:
 - i. Theft of medications left unlocked and unattended.
 - ii. Break-in of locked storage area.

- iii. Falsification of records.
 - iv. Replacement of a controlled substance with another medication.
- D. Emergency drug supply and STAT kit – may consist of life saving type drugs as well as starter doses and OTC Meds.
 - 1. Administration records (MAR).
 - 2. Acquisition procedure.
- E. Disposal – according to regulations and facility policies.
 - 1. Single doses of contaminated or refused medications.
 - a. Non-controlled substances may be destroyed by the medication technician.
 - b. Controlled substances may be destroyed by the medication technician and a nurse.
 - 2. Medications may be released to the resident or responsible individual upon discharge.
 - 3. Medications may be returned to the pharmacy according to the Board of Pharmacy Regulations.
 - a. Controlled substances and medications that have been in the resident's possession cannot be returned.
 - b. Any medication that is still in the manufacturers original packaging and has not been opened or full cards of medication that have not been altered in anyway (for example, no pills have been popped and the card has not been written on) may be returned to the pharmacy for a refund.
 - c. Regulations allow reuse of only certain unit-dose packages. The pharmacy may refuse to accept other medications.
 - 4. Other medications not in current use must be destroyed by a pharmacist and licensed nurse or two licensed nurses within 30 days.
 - 5. Records of medication(s) released, returned, or destroyed must include resident's name, date, medication name and strength, quantity, prescription number and signature of persons involved.

F. Physical considerations for medications.

1. Expiration dates – medications are assigned an expiration date by the manufacturer and when they are repackaged by the pharmacy.
2. Storage temperatures – storage temperatures affect the shelf life of medications. Consult the pharmacist if a medication has not been stored properly.
 - a. Refrigerator 36°-46°F.
3. Contamination – some medications, such as eye drops, are sterile. Most liquid medications contain preservative to resist bacterial growth. All medications should be handled carefully to prevent contamination.
4. Deterioration – examine all medications and packages for physical signs of deterioration such as discoloration, crumbling, sediment, crystal formation, and cracked or leaking containers.
5. Tampering – many sealed packages can be opened, the medication removed and a substitute put in its place. Examine packages, especially controlled substances packages for signs of tampering.

VI. Summary and Conclusion

- A. Medication packaging.
- B. Types of storage and security systems.
- C. Storage for different types of drugs.
- D. Infection control.
- E. Accountability system.
- F. Physical considerations for medications.

The next lesson is on body systems, related diseases and conditions, drugs and observations.

INFECTION CONTROL

A system of infection prevention and control currently in use is called Standard Precautions or Body Substance Precautions (BSP). This system focuses on keeping all moist body substances (blood, feces, urine, wound drainage, tissues, oral secretions, and other body fluids) from the hands of personnel. This is done primarily by increased glove usage and hand hygiene. Hand hygiene is performed using soap and water or an alcohol based handrub to decontaminate the hands. The Standard Precautions system is consistent with recommendations from the Centers for Disease Control (CDC), the American Hospital Association, and Occupational Safety and Health Administration (OSHA) that point out the need to consider ALL blood and ALL body fluids as potentially contagious regardless of the resident's diagnosis. In order to comply with the CDC policies, the following recommendations should be used. The need to use barriers must focus on the caregivers' routine contact with the residents.

Because a medical history and examination cannot reliably identify all persons with infectious diseases, we treat ALL blood and body substances as potentially infectious rather than to focus precautions only on the residents that are diagnosed with infectious diseases.

Implementing the Standard Precautions System includes the following elements and should be followed by ALL personnel at all times, regardless of the resident's diagnosis.

Standard Precautions

1. Wear gloves when it is likely that hands will be in contact with mucous membranes, non-intact skin and/or ANY moist body substance, (blood, urine, feces, wound drainage, oral secretions, sputum, vomitus, or items/surfaces soiled with these substances). Gloves should be changed and hand hygiene performed between residents. If a glove is torn or a needle stick or other injury occurs, the glove should be removed, discarded in appropriate container, hands washed with soap and water, and a new glove used promptly as patient safety permits (report needle sticks or other injuries per facility policy).

REMEMBER: Gloves are not a cure-all. They reduce the likelihood of contaminating the hands, but hand hygiene should be performed before donning and after removal of the gloves.

- a. Use examination gloves for procedures involving contact with mucous membranes, unless otherwise indicated, and for other resident care procedures.
- b. Change gloves and perform hand hygiene between residents.
- c. Do NOT wash or disinfect examination gloves for reuse.
- d. Use general purpose utility gloves (e.g., rubber household gloves) for housekeeping or instrument cleaning involving blood contact. These utility

gloves may be decontaminated and reused but should be discarded if they are peeling, cracked, or discolored; or if they have punctures, tears, or other evidence of deterioration.

2. Wash hands often, always between residents' care and after any contact with body substances or contaminated material. Pay particular attention to around and under fingernails and between fingers. Always keep your hands away from your face or you may give yourself the infectious organisms.
3. Wear masks and/or eye protection when it is likely that eyes or mucous membranes will be splashed with body substances (your charge nurse will give you further direction).
4. Protect your clothing with a plastic apron or gown when it is likely that clothing will be soiled with body substances.
5. Health care workers with draining lesions or weeping dermatitis must refrain from all direct resident care and from handling resident care equipment until cleared by a physician. These conditions put the employee and the resident at risk of infections.
6. Discard trash in plastic bags according to facility policy.
7. If the resident has a disease which is transmitted in whole or part by the airborne route, use the "Stop Sign Alert" on the resident's door. This will allow the nurse to give the individuals wishing to enter the room specific instructions regarding the resident (e.g., tuberculosis). The nurse instructs non-immune persons to not enter the room of persons with specific diseases (e.g., chicken pox, measles, and mumps). Precautions for residents with airborne diseases include: private room, "Stop Sign Alert" on door, and door closed.
8. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

Some Examples of Situations Using Standard Precautions

1. Follow Standard Precautions when caring for residents with bowel and/or bladder incontinence.

It is not possible to clean an incontinent resident without having contact with stool and or urine. Gloves should be worn routinely and for helping residents with toileting activities. A plastic gown or apron may also be needed for cleaning incontinent residents and for changing their clothes and bed linens. Obtain the plastic gown or apron before the tasks are begun.

2. When a care provider is emptying a urinary catheter bag, this should be viewed as a single interaction for a single resident and the tasks for one resident should be completed, including performing hand hygiene before going to the next resident.

Wearing gloves for emptying catheter bags is required due to the risk of contact with urine. It is unacceptable to consider it a single task to empty the catheter bags for several residents in sequence without changing gloves and washing hands between residents.

3. When a resident has a rash or skin lesions on his/her body, it could be due to any number of causes. The lesions may be due to varicella (chicken pox or zoster), herpes simplex, scabies, syphilis, impetigo, a drug reaction, or other causes. Prompt recognition of the rash, identification of the cause, prompt appropriate intervention, and proper usage of gloves and handwashing can prevent transmission of organisms to other residents and care providers.

SAMPLE CONTROLLED SUBSTANCES SHIFT CHANGE COUNT - CHECK - SHEET

Controlled Substances SHIFT CHANGE COUNT – CHECK – SHEET														
MONTH _____ Year _____														
FACILITY: _____										STATION: _____				
		Nurse (Initials)					Nurse (Initials)					Nurse (Initials)		
Date	Time	# of PKGS	ON	OFF	Date	Time	# of PKGS	ON	OFF	Date	Time	# of PKGS	ON	OFF
1	7				11	7				21	7			
	3					3					3			
	11					11					11			
2	7				12	7				22	7			
	3					3					3			
	11					11					11			
3	7				13	7				23	7			
	3					3					3			
	11					11					11			
4	7				14	7				24	7			
	3					3					3			
	11					11					11			
5	7				15	7				25	7			
	3					3					3			
	11					11					11			
6	7				16	7				26	7			
	3					3					3			
	11					11					11			
7	7				17	7				27	7			
	3					3					3			
	11					11					11			
8	7				18	7				28	7			
	3					3					3			
	11					11					11			
9	7				19	7				29	7			
	3					3					3			
	11					11					11			
10	7				20	7				30	7			
	3					3					3			
	11					11					11			
Note: Time indicates the hour when the shift starts.										31	7			
											3			
											11			
IRREGULARITIES MUST BE REPORTED IMMEDIATELY TO THE DIRECTOR OF NURSES														
NAME		SIGNATURE		INITIALS	NAME		SIGNATURE		INITIALS	NAME		SIGNATURE		INITIALS
1					5					9				
2					6					10				
3					7					11				
4					8					12				
Please return completed form to nursing office at end of month														

MEDICATION DISPOSITION FORM

Driver _____ Date _____

Please Fill In: Facility _____ Division _____ Date: _____

Rx #	Name	Drug	Label	Quantity	Return To Rx	Destroyed	Discharged W/Resident	Comments or Signatures

Signature_____
Date_____
Signature_____
Date

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EVALUATION ITEMS:

Circle the correct word(s) to complete the following statements.

1. Medicine cupboards should be washed (daily) (weekly) (when you see dirt).
2. Food used in the administration of medications may be stored in the same (refrigerator as drugs) (area as ear drops) if both food and medications are covered.
3. Topical ointments may not be stored in the same box as (oral medications) (instructions for administering).
4. Medicine cups (may be) (may not be) saved and reused.
5. Medication trays should be washed after (each use) (each shift).

Circle the letter of the best answer.

6. How are medications packaged in a true unit dose system?
 - a. In bottles and in medication carts.
 - b. In bottles.
 - c. In individually wrapped doses.
 - d. With all medications for resident in one individual package.
7. How should Schedule II controlled substances be stored?
 - a. Behind two different locks.
 - b. Behind two doors.
 - c. In the medication cart.
 - d. In the refrigerator.
8. When are controlled substances counted?
 - a. At change of shift.
 - b. At the beginning of the day.
 - c. At change of pay period.
 - d. At the beginning of the month.