



GENERAL GUIDELINES FOR ADMINISTERING MEDICATIONS

SELF-STUDY LEARNING MODULE No. 5

Includes:

- Learning Objectives
- General Guidelines for Administering Medications Self-Study Learning Module including 2009 National Patient Safety Goals
- Two Attachments: Do Not Use Abbreviations and Look Alike, Sound Alike Medications
- Post-Quiz
- Healthcare Associate Answer Sheet (must be turned in to receive credit for completing the Module)
- Post-Quiz Answer Key
- Reference hand-out, "Basic Guidelines for Drug Administration"

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Learning Objectives

- ❑ Understand what a medication error is
- ❑ Understand common causes of medication errors
- ❑ Understand medication administration basics
- ❑ Understand the five patient rights of medication administration
- ❑ Understand basic clinical principles of administering medications safely
- ❑ Understand basic guidelines to avoid medication errors
- ❑ Understand basic principles of documenting medications
- ❑ Understand duty to report medication errors
- ❑ Review 2009 National Patient Safety Goals



GENERAL GUIDELINES FOR ADMINISTERING MEDICATIONS

This module is intended as a general guide for review of basic medication administration. It is not a substitute for a medication administration course. The assignment facility's policies and procedures must be followed. If you have a concern over a facility medication administration policy, please express your concerns to your facility supervisor and ATC.

A **medication error** is a mistake made by a health care provider, caregiver, or patient during the process of prescribing, transcribing, administering, dispensing, or using a medicine. Medication errors can have serious results for patients, such as pain and suffering, treatment delays, loss of income, and higher medical bills. Although most medication errors can be corrected, some can be life-threatening for the patient. Medication errors can also affect healthcare workers by causing guilt, anxiety and self-doubt.

Common Causes of Medication Errors

- Human error is the precipitating factor in nearly all medication-related errors.
- Packaging and labeling similarities can cause confusion and possible errors.
- Similar drug names and the increasing number of new drugs.
- Communication problems, such as prescribers' illegible handwriting, has resulted in misinterpretation and incorrect transcription of written medication orders.
- Abbreviations: While abbreviations save time, they can be misinterpreted.
- Lack of familiarity with a drug.
- Failure to verify or question an order.
- Failure to carry out orders.
- Failure to note or act upon patient allergies.
- Failure to consider drug interactions (especially when there are drugs being prescribed by different prescribers).
- Failure to properly educate the patient/family about the drug(s) the patient is taking.
- Failure to note contraindications to administration.
- Failure to react to adverse reactions.
- Busy day: Economic constraints increasingly pressure staff to provide broader levels of care to sicker patients but to use fewer resources. These hectic environments can foster an error even when the staff is thorough and well-intentioned.
- Lack of adequate patient teaching upon discharge to avoid self-medication errors and lack of instruction on side-effects and adverse effects and how to react to them.
- Miscommunication, such as sloppy handwriting and lack of documentation.
- Performance issues such as working too fast, interruptions and fatigue.
- The agency environment: Always remember that you are held accountable to performing duties up to the accepted standard of care. You are responsible for having knowledge about the medications you administer. If you are unfamiliar with a drug, look it up before administering. If you remain unsure about safe administration, check with the pharmacist, your supervisor or co-workers before administering. You are the patient's advocate and must always consider the patient's safety first.
- Common Prescriber or Transcriber Errors:
 - Decimal point errors.
 - Unit of measurement errors.

- Failure to make dose adjustment for impaired renal/hepatic function or advanced age.
- Incorrect frequency.
- Possible drug interactions: Erythromycin ordered for patient taking terfenidine (Seldane)
- Prescription for a drug the patient is known to be allergic to, for example Augmentin ordered for patient with penicillin allergy.

Review of Medication Administration Basics

Routes of Administration:

- Oral
- Sublingual
- Buccal
- Parenteral
 - Intradermal
 - Intramuscular
 - Intravenous
- Topical
 - Ophthalmic
 - Otic
 - Nasal
 - Nebulizers
 - Vaginal
 - Rectal
 - Transdermal

Essential Parts of a Drug Order:

- Full name of patient
- Date order was written
- Name of drug
- Dosage and frequency of administration
- Method/route of administration
- Prescriber's signature

Five Patient Rights of Medication Administration:

- **The right drug.** It is critical that you read and reread medication orders and drug labels.
- **The right patient.** Check the first and the last name on the patient's chart. Double-check it with the patient's ID band. It is also a good idea to ask the patient to state his or her name, if possible and appropriate.
- **The right dose.** Check all abbreviations. Verify all drug measurements, decimal placements and all special instructions.
- **The right route.** Make sure that medications are being given by the correct route.
- **The right time.** Always document times of medication administration on the patient's chart.

Types of Medication Orders:

- Stat order
- Single (one time) order
- Routine (ongoing) order
- Sliding scale

Calculating Dosages:

$$\begin{array}{r} \text{Dose on hand} \\ \hline \end{array} = \begin{array}{r} \text{Desired dose} \\ \hline \end{array} \quad \text{Cross-multiply to solve.}$$

Quantity on hand X (amount to give: ml, mg, etc.)

- Example: A patient's doctor ordered 75 mg of a drug IM. The drug is available in a pre-packaged syringe containing 100 mg of the drug per 1 ml. How many mls would you give?

$$\begin{array}{r} \text{Calculation: } 100 \text{ mg (dose on hand)} \\ \hline 1 \text{ ml (quantity on hand)} \end{array} = \begin{array}{r} 75 \text{ mg (desired dose)} \\ \hline X \text{ ml (amount to give)} \end{array}$$

Cross multiply to obtain: $100 \text{ Xmgml} = 75 \text{ mg}$

Solve for X to obtain: $X\text{ml} = 75\text{mg} \div 100 \text{ mg}$

Answer: **X ml = 0.75**

Guidelines for Administering Medications:

- Identify the patient. Check patient ID band and ask the patient his/her name if possible. In facilities where ID bands are not worn, use picture MAR, etc. per facility policies and procedures. If you are uncertain about patient identity, ask a regular staff member at the facility who is familiar with the patients to identify them for you.
- Administer the drug following the 5 patient rights of medication administration.
- Assist the patient as necessary, provide teaching.
- Record drug administered and time.
- Evaluate and document the patient response.

Oral Medications:

- Be alert and check for possible food or drug interactions.
- Do not crush or dissolve solid drugs without approval as this could change how the drugs work or how fast they are absorbed.
- Watch the patient take the medication. **Never leave the medication at the bedside for the patient to take later.**

IV and Other Lines:

- Set continuous infusion pumps properly. Find out about the pump if you are unfamiliar with it.
- Look up manufacturer's guidelines for how fast you should administer an IV push.
- Make sure that any push drug you give is compatible with the solution the patient has infusing.
- Before giving a drug through a secondary IV line, such as a piggyback set, make sure you know what is going through it to avoid compatibility problems.
- Make sure IVs are patent before hanging antibiotics or giving IV pushes.
- Watch for redness or tissue damage at and around the IV insertion site.
- Needless to say, make sure you identify each line the patient may have in place and administer medications through the appropriate line. It is recommended that each line the patient has be clearly identified with a label on the tubing and at the site of insertion.
- PCA (Patient Controlled Analgesia)
 - Examples of drugs used - Demerol, MS, Dilaudid

- Know difference between basal and demand rate
- Witness recommended to verify correct medication hung, machine at correct settings, medication wasted when syringe replaced in machine or when PCA is discontinued
- Related nursing care – patient teaching, monitor vital signs, read machine to determine amount/frequency of use, pain level, LOC, report and document abnormalities immediately
- Epidural
 - Examples of drugs used - Fentanyl with or without Marcaine, Duramorph
 - Some epidurals are patient controlled (PCEA)
 - Witness recommended to verify correct medication hung, machine at correct settings, medication wasted when syringe/bag replaced in machine or epidural is discontinued
 - Related nursing care – check orders for specifics, monitor vital signs as per facility protocol/orders, make sure pump is set correctly, assess and document pain level, LOC, level of extremity movement and sensation, continuous pulse oxymetry, usual to have foley catheter, if not assess bladder every hour, report all abnormal vital signs immediately, assess for complications and report immediately, such as respiratory depression, hypotension, etc.
 - If you witness catheter removal (or if you have prior experience and if you are allowed to remove the catheter by facility policy), ask about and document catheter and tip intactness; assess site. Check facility policies and procedures, some facilities may require the catheter be sent to pathology.
- Blood and blood products
 - Typing and cross-matching
 - Know the different blood products
 - Infuse with NS
 - Procedure for getting from blood bank in lab, double-checking with another nurse before hanging, co-signature required
 - Nursing assessment prior to starting and during infusion (vital signs and documentation)
 - Signs/symptoms of adverse reaction (rash, hives, increase in temperature, respiratory problems, etc.) to include intervention (stopping infusion, immediate reporting to physician) if detected

Injections:

- Match the syringe size to the volume of the dose as much as possible.
- Watch the injection site for redness or tissue damage. Document and report as appropriate.

Monitor Patients:

- You must always ask questions about known allergies or drug sensitivities and past experiences with side effects. Document the same.
- Inform patients about prescription and over the counter medications, such as how much, when and how to take it. Document what information you gave the patient.
- Educate patients on being alert for drug reactions and other problems.
- Communicate, document and address any reading or language barriers.
- Instruct patients whom they should call for help.

Monitor Patients for Adverse Drug Reactions (ADRs).

ADRs Can Result From:

- Foods and other drugs the patient may be taking. Ask the patient about these to ensure that medications will not be affected by the patient's diet or by other drugs (including dietary supplements) he or she may be taking.
- Use of alcohol, tobacco and/or caffeine.
- Injection reactions.
- Report all ADRs to the patient's physician immediately.

Medication Errors

If you make or discover a medication error:

- Accept responsibility and report the error to the physician, facility supervisor and ATC. Take steps to correct error by notifying the physician and following instructions. It is recommended that you do not document that an "error" has been made. Document objective facts, patient status, your actions, notifications, interventions and patient responses.
- Fill out incident reports as required. It is recommended that you do not chart in the patient record that an "incident report has been filed," unless required to do so by facility policy as this destroys the confidentiality of this internal administrative document.
- Help determine the cause of the error.

General Clinical Guidelines to Avoid Medication Errors

- **Nurses are responsible for their practice.**
- **Be knowledgeable about medications you administer, look them up in current drug books.** This is especially true for new drugs.
- Used only medications from clearly labeled containers, check expiration dates and make sure the drug is not discolored, cloudy, etc., when it shouldn't be.
- **Never leave medications unattended.**
- **RECHECK-RECHECK-RECHECK:** Use the 3-time check when giving medications:
 - When you first receive the medication order
 - When preparing the medication for administration
 - Just before giving the medication to the patient
- Some medications require 2 nurse checks, such as Insulin, Anticoagulants, and Pediatric Medications. Follow facility policies and procedures.
- If you must omit a medication, record with rationale, advise the supervisor, oncoming shift and physician as appropriate.
- When there is an order you can't read, check with the physician or pharmacist.
- Double-check orders that concern you, such as orders you believe may be unsafe or incorrect.
- Follow client facility policies and procedures at all times for **verbal and phone orders**. It is also recommended that you:
 - Repeat verbal and phone orders and ask the physician to verify them
 - Have a co-worker witness verbal orders, if possible
 - Try not to use abbreviations when writing verbal and phone orders
 - When you are taking verbal or phone orders, be careful about sound-alikes, look-alikes (similar labels or physical characteristics): "Dicloxacillin 100 mg" instead of "Doxycycline 100 mg", sodium chloride and potassium chloride
 - Get a follow-up signature on a written copy of the verbal or phone order within 24 hours.
 - Don't be afraid to speak up if you do not understand an order. Patient advocacy demands that you clarify orders.

- **Report all medication errors and take appropriate actions.** A recent study by the Institute for Safe Medication Practices (ISMP) said the most common medication errors involved analgesics, insulin, patient allergies, opiates, patient-controlled analgesia and potassium.
- **Controlled substances** (e.g., narcotics) must be kept locked and counted. Witness signature is required for any wastage or when an item is broken/defective. Defective items should be returned to the pharmacy. The patient record and controlled substance log must match exactly as to what was ordered, administered, when, by whom and to whom. Do not use “ditto” marks to indicate multiple administration of a drug. Your signature and initials are required on these records (code or pin numbers directly associated with a particular individual are also used in facilities using automated medication dispensing systems, such as Pyxis).
- Use drug incompatibility charts.
- Listen to the patient’s concerns. For example, if the patient says that the pill looks different from what he or she took before, check for a possible error.
- Transcribe orders carefully on medication administration records. Double check transcriptions someone else did for accuracy.
- Fill out medication administration records completely, including dates, times, initials, etc.
- **Do not advance chart. Documentation should be done only after the medication has been administered.**
- Document patient refusal to take medication and your notification of appropriate individuals.
- Follow approved guidelines for adding late entries. If you make a recording mistake, draw a single line through it, enter the correct information, date and initial it. Never completely obliterate any entry on the patient’s medical record. Never use correction fluid to correct misentries.
- Store drugs properly, e.g. refrigerate.
- Be careful with look-alike drugs, it is best to keep drugs with similar names or labels in separate places.
- Attend in-service training sessions when they are offered.
- Properly fill out patient charges for medications, IV fluids, etc., if applicable.
- **Always ask for help if you are unsure.**

PATIENT SAFETY GOALS FOR 2009

The purpose of the Joint Commission’s National Patient Safety Goals is to promote improvements in patient safety in all types of accredited healthcare facilities, such as hospitals and long term care. The Goals highlight problematic areas in health care and describe evidence and expert-based solutions to these problems. The Goals focus on system wide solutions whenever possible. It is very important for all healthcare workers, including agency personnel, to understand the Goals because JCAHO accredited organizations are evaluated for continuous compliance with the specific requirements associated with the National Patient Safety Goals. In summary, the goals are aimed at the following:

- Improving the accuracy of patient identification;
- Improving the effectiveness of communication among caregivers;
- Improving the safety of using medications;
- Reducing the risk of health care associated infections;
- Accurately and completely reconciling medications across the continuum of care;
- Reducing the risk of surgical fires; and
- Encouraging patients’ active involvement in their own care as a patient safety strategy.

The National Patient Safety Goals are developed by JCAHO from informal recommendations made in the Joint Commission's safety newsletter, Sentinel Event Alert, recommendations from the Sentinel Event Advisory Group, sentinel events reported to the Joint Commission, and review of current patient safety literature.

Below you will find a list of the 2009 National Patient Safety Goals, which go into effect on January 1, 2009. Each goal has specific requirements that organizations must meet in order to be considered in compliance with the goal. Not every goal and requirement applies to every type of health care organization. For a full list of requirements for each goal and their specific applicability, go to The Joint Commission website at <http://www.jointcommission.org>.

Please review following attachments to this module: Official "Do Not Use" List and Look Alike Sound Alike Drugs.

2009 Patient Safety Goals

- Goal 1:** Improve the accuracy of patient identification
- Goal 2:** Improve the effectiveness of communication among caregivers
- Goal 3:** Improve the safety of using medications
- Goal 7:** Reduce the risk of health care associated infections
- Goal 8:** Accurately and completely reconcile medications across the continuum of care
- Goal 9:** Reduce the risk of patient harm resulting from falls
- Goal 10:** Reduce the risk of influenza and pneumococcal disease in institutionalized older adults
- Goal 11:** Reduce the risk of surgical fires
- Goal 13:** Encourage patients' active involvement in their own care as a patient safety strategy
- Goal 14:** Prevent health care associated pressure ulcers (decubitus ulcers)
- Goal 15:** The organization identifies safety risks inherent in its patient population
- Goal 16:** Improve recognition and response to changes in a patient's condition

PLEASE TAKE THE QUIZ THAT FOLLOWS AND TURN IT IN TO YOUR LOCAL ATC OFFICE.

POST-QUIZ

GENERAL GUIDELINES FOR ADMINISTERING MEDICATIONS

1. All medication errors must be reported.
 - a. True
 - b. False
2. The five patient rights of medication administration include the right patient, right drug, right dose, right route, and right time.
 - a. True
 - b. False
3. A non-narcotic medicine may be left at the patient's bedside for the patient to take later.
 - a. True
 - b. False
4. Witness signature is required for all controlled substance wastage.
 - a. True
 - b. False
5. Omissions of ordered medications must be documented with rationale and communicated to the physician, supervisor and on-coming shift, as applicable.
 - a. True
 - b. False
6. Advance charting of medications is allowed when multiple routine medications are being administered to several patients at one time.
 - a. True
 - b. False
7. When a medication is ordered that you are not familiar with, it is your duty to become familiar with the drug before administering it by looking it up, calling the pharmacist, etc.
 - a. True
 - b. False
8. If you administer a medication which was transcribed incorrectly on the medication administration record by the unit clerk, the error is considered not to have been yours.
 - a. True
 - b. False
9. When giving a patient discharge instructions for medications they will be taking at home, it is important to make sure they understand about side-effects and adverse reactions and how to react to them.
 - a. True
 - b. False
10. When a physician writes an order the nurse cannot understand it is his/her duty to clarify such order.
 - a. True
 - b. False



ANSWER SHEET

GENERAL GUIDELINES FOR ADMINISTERING MEDICATIONS

- *I have read “General Guidelines for Administering Medications”, Self-Study Learning Module No. 5.*
- *I have been provided with a copy of the reference hand-out entitled, “Basic Guidelines for Drug Administration.”*

HEALTHCARE ASSOCIATE SIGNATURE: _____

OCCUPATION: _____

DATE: _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

 TURN IN THIS ANSWER SHEET TO YOUR LOCAL ATC OFFICE