

Chapter 33 Pharmacology and Preparation for Drug Administration (Williams) & Chapter 2 Administration of Drugs (Ford)

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VNSG 2331 Advanced Nursing Skills

Objectives

Discuss areas of concern regarding medication administration to children or the elderly.

Summarize the routes of medication administration.

Calculate drug dosages using a formula.

Determine the six rights, patient rights, and safety checks to perform to prevent medication errors.

Medication Administration & Safety

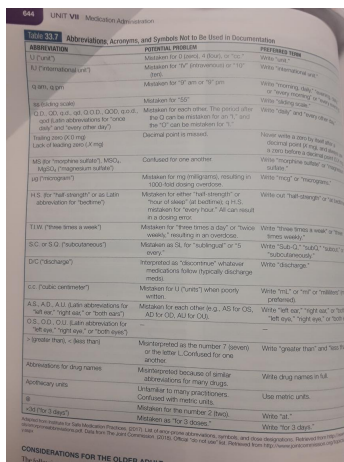
- Check each med order to determine if...
- **Appropriate** for patient
 - ? Drug
 - ? Dose
 - ? Timing

Example:

Nauseated patient?
Conscious patient refusing rectal route?
Very thin patient needing deep IM?

Medication Administration & Safety

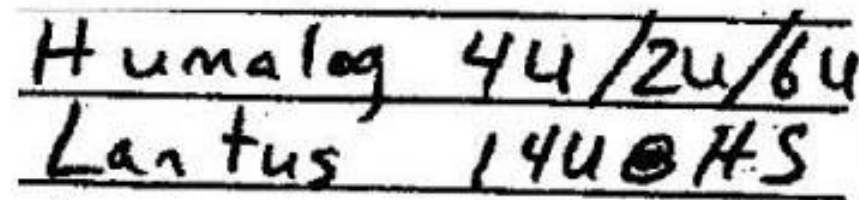
- Nurses must monitor lab results related to drug administration
 - Example: furosemide and Potassium (K+)
- Where does the body breakdown medications?
 - Kidney
 - Liver
- Only use standardized list of abbreviations
- Do Not Use List (Next slide)



Williams Book, Pg. 644

Official "Do Not Use" List¹

Do Not Use	Potential Problem	Use Instead
U (unit)	Mistaken for "0" (zero), the number "4" (four) or "cc"	Write "unit"
IU (International Unit)	Mistaken for IV (intravenous) or the number 10 (ten)	Write "International Unit"
Q.D., QD, q.d., qd (daily)	Mistaken for each other	Write "daily"
Q.O.D., QOD, q.o.d., qod (every other day)	Period after the Q mistaken for "I" and the "O" mistaken for "I"	Write "every other day"
Trailing zero (X.0 mg) Lack of leading zero (.X mg)	Decimal point is missed	Write X mg Write 0.X mg
MS	Can mean morphine sulfate or magnesium sulfate	Write "morphine sulfate" Write "magnesium sulfate"
MSO ₄ and MgSO ₄	Confused for one another	



Safety Guidelines

- Don't rush
- Avoid distractions
- **Follow 6 rights**
 - Right Drug
 - Right Dose
 - Right Route
 - Right Time
 - Right Patient
 - Right Documentation

Always look up unfamiliar medications !

Right Patient

- Use 2 methods of identification (Name & DOB)
- Visual
 - ID Band
 - Pictures
- Verbal
 - Ask to identify "Can you please tell me your name?"
 - "Can you please tell me your date of birth?"



Right Drug

- Compare Medication Administration Record (MAR) with
- Label of medication
- As medication is removed from medication bin/cart
- Before actual administration of medication



Right Dose, Right Route, Right Documentation

- Prescription Order must include:
- Patient's name
- Drug name
- Dosage form
- Dosage route
- Dosage to be administered
- Frequency of administration
- Provider's signature must be included



Right Documentation

Immediately following administration of medication...

- Record dosage, not "tablet, capsule...")
- Record location of medication administration (left deltoid, right abdominal quadrant...)

Especially important with PRN (as-needed) medications

Most analgesics require 20-30 minutes before drug begins to relieve pain.

Verbal Orders

In emergency situations:

Verbal order may be received and followed...

But Provider must write and sign order as soon as emergency is over

Telephone verbal order:

Write down order and repeat back information exactly as written, and ask for confirmation of correctness

Documentation -Is the message clear?

Patient was alert and unresponsive."

"Tylenol q am .325 mg for pain > 4 X3d"

"Patient has chest pain if she lies on her left side for over a year."

"D/C meds"

"The skin was moist and dry."

"She is numb from her toes down."

"Physical therapy QD, given 3 cc of Phenergan before for prn nausea"

"The patient has done well without oxygen for the past year."

"Acetaminophen 625mg PO BID for pain greater than 4 every 6 hours."

General Principles of Drug Administration

Have knowledge of each drug BEFORE you administer:

- Reason for use
- Drug's actions
- Drug's potential adverse reactions
- Special precautions
- Normal dosage ranges
- Use reliable resources for information
- Be alert of patient allergies and significant family history of allergies
- Be alert for adverse reactions!

General Principles of Drug Administration

- Never crush tablets or open capsules without checking with Clinical Pharmacist:
 - Some can be crushed or opened for tube feedings
 - Some medications have special coating to delay absorption of drug or gastric irritation
 - Capsules are gel that dissolve on contact with a liquid
- **Never give a medication that someone else has prepared!**



<https://www.youtube.com/watch?v=fUjH5NBrtPc&t=5s>

Situations Requiring Consideration BEFORE Administering Medications

- Previous adverse reactions
- Patient/Family comments
 - Drug looks different than one previously received
 - Drug was just given by nurse
 - Belief that medication has been discontinued by Provider
- Change in patient's condition
 - Vital signs
 - New symptoms



Safety Guidelines

Clarify	Clarify illegible writing
Don't give	Don't give drug if not clearly labeled
Look up	Look up any unfamiliar drug
Have	Have another nurse check your math
Review	Review MAR for drug interactions

Safety Guidelines

- If patient is receiving multiple drugs with the **same action...**
- **Question the drug order.**
- Have another nurse double-check an order when...
- **Giving a high-risk drug.**
- Only use single dose packs...
- **Once.**
- Question pharmacist if needing to use multiple tablets or vials to prepare...
- **A single dose of medication.**
- Check med 3 times...
- **Before you give it!**



Before medication can be given

- Must have Provider Order

Types of Medication Orders

- Standing Order
 - Approved under specific condition in the absence of Provider
 - *Pre and Postop surgery*
- Single Order
 - Administer medication one-time
 - *Valium 10 mg IM at 10:00 am*
- PRN Order
 - Administer medication as needed
 - *Percocet 1 tablet PO every 4 hours PRN for pain of 6-10 scale*
- STAT Order
 - One-time order given as soon as possible
 - *Morphine 10 mg IV STAT for cardiac pain*

The Medication Order

What does this say?

① *Painmar 4mg IV x 1 stat*
 ② *Ativan MD BID*
 ③ *Pink Flow to BP*
 ④ *Rel 940 Hemo/Alb*
 ⑤ *Keep sat > 75% sat*

NDC 69452-335-43 Amoxicillin and Clavulanate Potassium for Oral Suspension, USP

400 mg/57 mg (per 5 mL)

When reconstituted, each 5 mL contains:
 AMOXICILLIN, 400 mg,
 as the trihydrate
 CLAVULANIC ACID, 57 mg,
 as clavulanate potassium

Rx Only 100 mL (when reconstituted)

BIONPHARMA



HR Tutor

Temple College LVN - Temple Instructor Student View

Return to Courses and View Activities

▲ Aaron Andrews - Male, 08/15/1972 (50 years old), 60 in, 122 lb P 2020

Medication Administration for

08/15/2022



Previous 8 hours

Medication	0800	0900
AMOXICILLIN		Scheduled
Dose/Frequency: 750 mg Every 12 Hours Schedule: 0900, 2100 Route: Oral Start Date: 08/15/2022 0800 End Date: Dispensed: SUSPENSION; ORAL 250MG/5M		

Aaron Andrews DOB: 8/15/1974

Amoxicillin 700 mg, every 12 hours, IV

Dr. Derek Shepherd
 Grey Sloan Memorial Hospital

EHR Tutor

Temple College LVN - Temple Instructor Student View

Return to Courses and View Activities

▲ Aaron Andrews - Male, 08/15/1972 (50 years old), 60 in, 122 lb P 2020

Attending: John Mack, MD

Allergies: Latex, Amoxicillin... »Read More

Medication Administration for

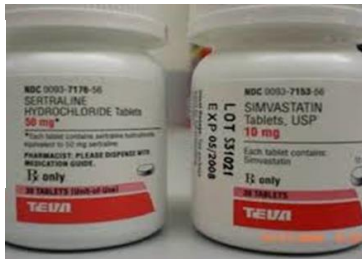
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Look–Alike Sound-Alike Drugs (LASA)



Safety Guidelines

- Performing 3rd and Last Accuracy Check...
- Perform 6 rights
- Use 2 identifiers
- Check for allergies
- Perform at the bedside with Scanner
- Sign that you gave med only after the patient takes it
- **NEVER EVER LEAVE MEDS AT PT'S BEDSIDE!!**

Safety Guidelines

Working with the patient for error prevention:

- Empower patient
- Teach about the importance of proper pt identification
- Familiarize pt with color, shape, & purpose of each med
- Obtain a complete drug hx from pt
- If pt questions a particular drug, STOP and investigate.



"ACTUALLY, A SIDE EFFECT LIKE THIS IS FAIRLY COMMON WITH THAT PRESCRIPTION!"

Drug Response

- Primary Effect
 - Desirable
- Secondary Effect
 - May be desirable or undesirable (side effects) or adverse effects (more serious)

When administering a first dose medications (especially ones that have common or serious, side effects) monitor for side and adverse effects!

Examples: Penicillin, Sulfa, Ibuprofen and naproxen...

Safety Guidelines

If a medication error occurs, the nurse must report it immediately!

- Whoever conducts, or discovers, the error is responsible for completing the incident report!

Med errors can result in an adverse drug reaction, which is the 4th leading cause of death in the U.S



Considerations for Infants & Children

- Dosage based on:
 - Age
 - Size
 - Weight
- Not given as a standardized amount
- Involve parents, they can give drug if oral.
- Do not equate medication to candy.

Considerations for the Older Adult

- May have chronic medical conditions and need to take multiple drugs.
 - Watch for drug interactions.
- Metabolism of drugs is slowed
 - May require lower doses (*especially if they have kidney or liver problems*).
- May be on long-term anti-inflammatory drugs for arthritis
 - Watch for GI bleeding and anemia.



Considerations for the Older Adult

- May need a pill organizer
- More likely to have blood pressure fluctuations w/ position changes
 - Fall precautions
- May become quickly dehydrated & experience electrolyte imbalances (diuretics)
- May have limited finances



<https://www.youtube.com/watch?v=rY0h2UbtQlw>

Considerations for the Older Adult

- May not be able to open childproof bottles due to arthritis.
- May be non-compliant – Why?
- Give detailed med teaching before discharge.
 - May benefit from home health for assistance with meds.

May have limited vision

- May need someone to administer or color-code their meds

Muscles weaken causing possible swallowing problems.

- **Always assess the patient's swallowing ability before administering po meds.**

If they have had a previous stroke

- Place meds to strongest side of mouth.

Considerations for the Older Adult

Problems with Nonadherence

Patient may not understand the drug's action.

Might not understand that the drug is to be used on a continuous basis.

Evaluate for side effects

Males often stop meds due to urinary retention or sexual dysfunction.

Problems with Nonadherence

- Meds may be too expensive and feels better after first round of prescription.
- The patient can't remember to take the drug
- May refuse to depend on meds to get well or to maintain health.
- Ask pharmacist for resources; Search the internet
- Most importantly – EDUCATE the Patient!!

Legal Control of Drugs

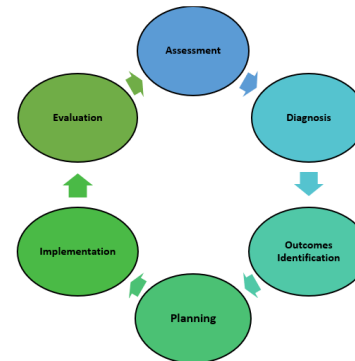
- Federal laws control drug distribution, sales, testing, naming, and labeling of medications
- The Comprehensive Drug Abuse Prevention and Control Act of 1970
- Regulated all controlled substances (Table 33.3)
- Classifies drug to their usefulness and potential for abuse
- Security of controlled drugs is shared by pharmacists and nurses
- Wasting or discarding narcotic medication MUST be verified and witnessed by 2 licensed nurses

Wasting Medication with 2 Nurses

Schedule I	No accepted medical use, high potential for abuse	Heroin, methamphetamine, marijuana
Schedule II	High potential for abuse, severe psychological or physical dependence	Cocaine, oxycodone
Schedule III	Potential for abuse less than Schedule I and II	Ketamine, anabolic steroids
Schedule IV	Low potential for abuse relative to Schedule III	Midazolam, diazepam
Schedule V	Mixtures containing limited quantities of other scheduled material	Codeine preparations - 200 mg/100 ml, motofen

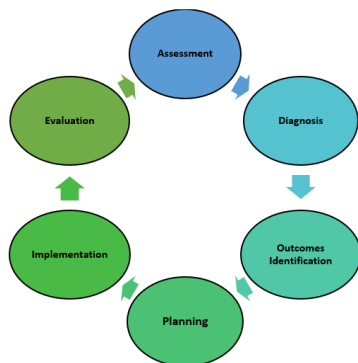
Legal Control of Drugs

- Schedule II and III are dispensed in limited amounts to nursing units
- Stored in locked narcotic drawer/units
- The licensed nurse is responsible for security of these medications and must account for each dose that is used!
- A record is kept on which nurse gives, to whom and when
- When content of locked narcotics drawer are counted at change of shift
 - Record of each dose given and remaining
 - Must have nurses from consecutive shifts to count the drugs together!



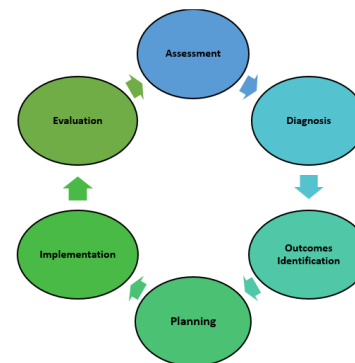
Nursing Process- Assessment

- Assess medical condition & drug being administered
- Assess drug action & contraindications
- Assess medication reconciliation
- Assess allergies
- Assess whether the medication will affect vital signs, therapies, interactions with organs...



Applying the Nursing Process-Assessment

- Assess lab results
- Assess for side-effects
- Assess nursing implications
- Assess for possible drug interactions
- Are there any foods the pt should avoid?



Applying the Nursing Process-Assessment

- Assess swallowing ability
- Assess the site for sufficient tissue for Injection?
- Assess which site is best for absorption?
- Assess patient's attitude about drugs
- Never give an unfamiliar drug!

Applying the Nursing Process-Planning

- Plan to look up unfamiliar meds before administering them.
- Plan and establish a medication administration schedule
- Plan time for patient teaching
- Plan before giving a med and perform the 6 rights of med administration.



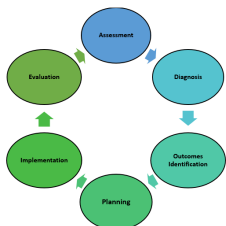
Applying the Nursing Process-Planning

Plan ahead & anticipate pt's needs.

- Does the patient have something to drink?
- Do they need a snack?
- Do you need something to mix their crushed meds with?
- Is the patient diabetic?

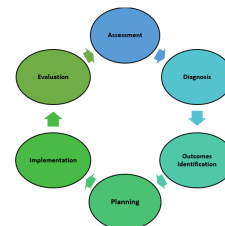


Applying the Nursing Process-Implementation



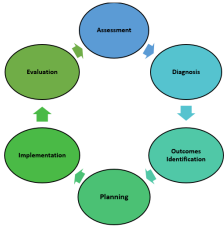
- Action: Meds are given by the person preparing them.
- Action: Do not leave at the bedside.
- Action: Narcotics and controlled substances are kept under lock and key.
- Action: Orders must be checked before drugs are given.
- Action: Avoid distractions.

Applying the Nursing Process-Implementation



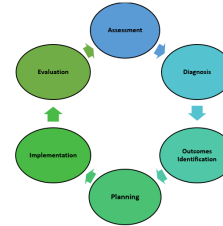
- Action: Must know the drugs being given, their action, the dosage, and any precautions.
- Action: Use aseptic technique.
- Action: Hand hygiene
- Action: Dispose of dropped pills
- Action: Don't handle/touch meds

Applying the Nursing Process- Implementation



- Action: Obtain complete med history (admission)
 - Is med consistent with patient's diagnosis and treatment plan?
 - Is patient receiving two similar meds?
- Action: Assess for allergies
- Action: Provide patient teaching
- Action: Verify the MAR against Provider's orders

Applying the Nursing Process- Implementation



- Action: Check pertinent lab values
- Action: If the patient questions order, STOP and verify!
- Action: Document after giving meds