Methods of Administration

Medication Administration
Interpreting Medication Orders

Calhoun Community College
Let’s Review

- \[ 1.25 \text{ L} = \underline{\hspace{2cm}} \text{ mL} \]
- \[ 2.5 \text{ g} = \underline{\hspace{2cm}} \text{ mg} \]
- \[ 0.125 \text{ mg} = \underline{\hspace{2cm}} \text{ mcg} \]
- \[ 2.5 \text{ tsp} = \underline{\hspace{2cm}} \text{ mL} \]
- \[ 3 \text{ oz} = \underline{\hspace{2cm}} \text{ mL} \]
Answers

- 1.25 L = 1250 mL
- 2.5 g = 2500 mg
- 0.125 mg = 125 mcg
- 2.5 tsp = ______________ mL
- 3 oz = ______________ mL
Section One

* Convert between traditional time & military time
24-Hour Clock
Comparison of Traditional & 24-Hour Clock

Military time is used to bypass opportunities for error

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<th>AM</th>
<th>Int’l. Time</th>
<th>PM</th>
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<td>12:00 noon</td>
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<td>2300</td>
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Practice Time

- Convert to military time:
  - 5:30 am - _________________________
  - 5:30 pm - _________________________

- Convert to traditional time:
  - 0200 - ___________________________
  - 1400 - ___________________________

- Convert to military time:
  - 1230 am - ___________________________
  - 1230 pm - ___________________________
Answers

- Convert to military time:
  - 5:30 am - 0530
  - 5:30 pm - 1730

- Convert to traditional time:
  - 0200 - 2:00 am
  - 1400 – 2:00 pm

- Convert to military time:
  - 1230 am - 0030
  - 1230 pm - 1230
Section Two

* Medication Administration (errors, rights)
* Identify equipment used in medication administration
* Measure medication amounts using different syringes and medication cups
2010 National Patient Safety Goals

established in 2002 to help accredited organizations address specific areas of concern in regards to patient safety

- NPSG.01.01.01: Use at least two patient identifiers when providing care, treatment and services.
National Patient Safety Goals

1. Improve the accuracy of patient identification.
2. Improve the effectiveness of communication among caregivers.
3. Improve the safety of using high-alert medications.
5. Improve the safety of using infusion pumps.
6. Improve the effectiveness of clinical alarm systems.
7. Reduce the risk of health care-acquired infections.
8. Reduce the risk of patient harm resulting from falls.

There more here: https://www.jointcommission.org/hap_2017_npsgs/
The Six Rights of Medication Administration

The Six-Eight Rights of safe and accurate medication administration:

- the (1) right ___________ must receive
- the (2) right ___________ in
- the (3) right ___________ by
- the (4) right ___________ at
- the (5) right ___________ followed by
- the (6) right ________________.

Failure to do any of these rights constitutes a medication error......

- 7th right: Right to ________________......
- 8th right: Right to be ____________ about the medication
The Six Rights of Medication Administration

The Six-Eight Rights of *safe* and *accurate* medication administration:

- the (1)right *patient* must receive
- the (2)right *medication* in
- the (3)right *dosage* by
- the (4)right *route* at
- the (5)right *time* followed by
- the (6)right *documentation*.

- Failure to do any of these rights constitutes a medication error......

- 7th right: Right to *refuse*.
- 8th right: Right to be *educated* about the medication
Routes of administration

- **Oral (p.o.)** – given by mouth (form tablets, capsules, liquid)
- **Sublingual (SL)** – placed under the tongue where they are easily absorbed thru blood vessels (DO NOT SWALLOW)
- **Buccal** – placed in mouth against mucous membrane of cheek, dissolves easily
- **Parenteral** – given by route other than mouth; IV, IM, SQ, ID
- **Insertion** – placed into body cavity and dissolves at body temp (suppository)
- **Instillation** – in liquid form placed into body cavity (eye ointment, nose gtts, ear gtts)
Routes of administration

- **Inhalation** – admin into resp tract by nebulizers (etc. asthma)
- **Intranasal** – solution into the nostrils
- **Topical** – applied to the external surface of the skin (lotion, ointment or paste)
  - **Percutaneous** - absorbed directly through the skin or mucous membranes (ointment, powder, lotions, liquid).
- **Transdermal** – contained in a patch or disk and applied topically. Slow release 24 hrs to 7 days
Equipment used for oral medication administration

- Medication Cup (plastic)
- Soufflé Cup (paper)
- Calibrated Dropper
- Calibrated spoons
- Nipple
- Oral Syringes
1 mL Syringe

Image 4. Syringe: 1 mL.

Copyright © 2006 by Mosby, Inc. All rights reserved.
3 mL Syringe

Image 5. Syringe: 3 mL.

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5 ml and 10 ml Syringe

Image 6. Syringe: 5 mL.

Image 7. Syringe: 10 mL.
Insulin Syringes

- Insulin syringes are used only to measure and administer insulin.
  - U-100 insulin most common form

- They are calibrated in units.

- U-100 insulin syringes are available in 50 and 100 unit capacities.
Insulin Syringes

Comparison of insulin syringes:

50 unit syringe

100 unit syringe
Safety Syringes
Tuberculin Syringes

- Uses
  - Subcutaneous injections
  - Intradermal injections
  - Doses less than 1 mL

- Examples:
  - PPD skin test
  - Vaccines
  - Heparin
  - Pediatric medicines
  - Allergen extracts
Tuberculin Syringes

1 mL Tuberculin Syringe

0.5 mL Tuberculin Syringe
Tuberculin Syringes

Comparison of tuberculin syringes:

0.5 mL syringe

1 mL syringe
Safety Syringes and needless systems
Section Three

* Understanding and interpreting physicians orders
The Drug Order

The drug order consists of seven (7) parts

1. Full ________ of the patient
2. _____ and _____ when the order was written
3. _____ of the _______ to be administered
4. _________ of the drug
5. ____________ by which the drug is to be administered
6. ____________, time, and special instructions related to administration
7. ____________ of the person writing the order
The Drug Order

The drug order consists of seven (7) parts

1. Full name of the patient
2. Date and time when the order was written
3. Name of the medication to be administered
4. Dosage of the medication
5. Route by which the medication to be administered
6. Frequency, time, and special instructions related to administration
7. Signature of the person writing the order
Example: The Drug Order

- Identify the missing part of the medication order:
  - Septra DS tab 1 daily
  - Prednisone 10 p.o. every other day
  - 25 mg p.o q 12 h, hold if B/P < 100 systolic

- Identify the mistake in the following order and correct the order:
  - Lasix 10.0 mg p.o. b.i.d.
  - Haldol .5 mg p.o. t.i.d.
Answer

- Identify the missing part of the medication order:
  - Septra DS tab 1 daily (Route)
  - Prednisone 10 p.o. every other day (unit of measure, i.e. mg, g, etc.)
  - 25 mg p.o q 12 h, hold if B/P < 100 systolic (name of medication)

- Identify the mistake in the following order and correct the order:
  - Lasix 10.0 mg p.o. b.i.d. (trailing zero not needed)
  - Haldol .5 mg p.o. t.i.d. (zero missing before the decimal)
Examining Drug Orders

- All parts of the drug order must be stated clearly, for accurate, exact interpretation.
- Standard abbreviations and symbols must be used.
- Read back of oral orders is a requirement of the Joint Commission.
- If you are ever in doubt as to the meaning of any part of a drug order, ask the writer to clarify.
Practice Questions
A client is to receive their scheduled medication at 0830 and at 1830. Write in traditional time the times your client will receive their medication?

___________________________

A client is to receive their scheduled medication q.i.d. How many times a day will your client receive their medication?

_______________________________
A client is to receive their scheduled medication at 0830 and at 1830. Write in traditional time the times your client will receive their medication?

0830 = 8:30 am    1830 = 6:30 pm

A client is to receive their scheduled medication q.i.d. How many times a day will your client receive their medication?

q.i.d = 4 x day
A client is to receive medication via the buccal route. What instructions should the nurse give this client?

A. Suck on the medication until it dissolves.
B. Let the medication dissolve under the tongue.
C. Chew the medication slowly, then swallow.
D. Place the medication between your cheek and gum.
A client is to receive medication via the buccal route. What instructions should the nurse give this client?

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C. Chew the medication slowly, then swallow.
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The physician orders medication for your client. When researching the medication prior to administration, the nurse notes that the dosage is outside the usual range.

What should the nurse do?

A. Give the medication as ordered.
B. Give the dosage stated in the reference.
C. Notify the physician to clarify the order.
D. Consult a pharmacist to clarify the order.
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The physician orders 50 mg of Demerol to be given intramuscular every six hours as needed for pain. What order is written correctly?

A. Demerol 50.0 mg IM q 6 h prn pain
B. Demerol 50 mg IV q 6 h prn pain
C. Demerol 50 mg IM q 6 h prn pain
D. Demerol 50 mg IV p 6 h prn pain
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A nurse is administering an oral narcotic. The client accidentally drops the medication on the floor. What is the correct way to dispose of this medication?

A. Throw the medication into the trash can in the client's room, then record the wastage on the appropriate form.

B. Dispose of the medication in front of another licensed nurse, then record the waste per facility procedure.

C. Flush the medication down the toilet in the client's bathroom, then locate another licensed nurse to co-sign the wastage.

D. Have a nursing assistant observe the disposal of the medication, then record the waste on the appropriate form.
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