

NURS
Medications & Safety Guidelines
OUTLINE

- I. Five Rights
 - 1. Patient
 - 2. Medication
 - 3. Route
 - 4. Time
 - 5. Dose
 - 6. The unwritten 6th is right documentation

- II. Five Methods of Medication Application to Mucous Membranes
 - 1. Spraying
 - 2. Swabbing
 - 3. Instilling
 - 4. Irrigating
 - 5. Douching

- III. Smith & Duell, Clinical Nursing Skills, 5th edition, Chapter 16
 - 1. Oral Medications^B p. 377
 - 2. Parenteral Medications^B p. 381
 - 3. Topical Medications^B p. 401
 - 4. Mucous Membrane Medications^B p. 408
 - 5. Suppository Medications^B p. 413
 - 6. Irrigations^B p. 416

- IV. Types of Topical Preparations
 - 1. Powders
 - 2. Ointments
 - 3. Creams/oils
 - 4. Lotions
 - 5. Counterirritants
 - 6. Astringents/alcohols

Non Injectable Medications

1. Safety Guidelines
 - a. Five Rights
 - b. 3-Way Client check
2. Preparation
 - a. Unit Dose System
 - b. Med Cart
 - c. Prevention of Injuries
 - d. Narcotics
3. Oral Medications
4. Sublingual/Buccal Medications
5. Topical Medications
6. Eye medications
 - room temperature
7. Ear Medications
 - body temperature
 - differences between infant and adult
8. Mucous Membrane
 - a. Methods: Swab; spray; irrigate; douche; instill
9. Inhalation
10. Suppository Medications
11. Vaginal Irrigations

Typical Preparations Applied to the Skin

Preparation	Purpose
Powders	To promote drying of the skin To prevent friction
Ointments	To provide prolonged contact of a medication on the skin To soften skin
Creams & Oils	To lubricate and soften the skin To prevent drying of the skin
Lotions	To protect the skin To soothe the skin
Counter-irritants	To relieve discomfort
Astringents & Alcohols	To cool the skin To dry the skin

All of the following information was obtained from Smith & Duell, Clinical Nursing Skills, 5th edition Chapter 16

ORAL ADMINISTRATION

NURSING PROCESS DATA

Assessment (Data Base)

1. Assess that oral route is the most efficient means of medication administration.
2. Check medication orders for completeness and accuracy.
3. Assess that five rights for medication administration are followed.
4. Determine client=s physical ability to take medication as ordered.
 - Swallow reflex present
 - State of consciousness
 - Signs of nausea and vomiting
5. Make sure you have the correct medication for the client.
6. Evaluate correct dosage when calculation is needed.
7. Observe that client swallows medications when administered.

Planning (Objectives or Rationale)

1. To offer the most common, easiest, and least expensive route of administering medications
2. To ensure that client absorbs medication
3. To provide sustained drug action

Evaluation (Expected Outcomes)

1. Client is able to ingest and absorb medication without interference
2. Client experiences a sustained action of drug and a positive effect on the body

CLINICAL ALERT

- § Some medications should not be crushed or opened for easy administration
- § Check with pharmacy for liquid medication or call the physician if crushing medication is contraindicated
- § Do not crush *sustained-release tablets* or open *sustained-release capsules* as it will result in the client receiving too much drug too soon
- § Do not crush *enteric-coated tablets*, which are not meant to be absorbed by or activated in the stomach
- § Do not alter *carcinogenic* or *teratogenic tablets or capsules* as this could expose the nurse to harmful substances that might be inhaled or absorbed through the skin

TOPICAL ADMINISTRATION

NURSING PROCESS DATA

Assessment (Data Base)

1. Observe for open lesions, rashes, or areas of erythema and skin breakdown
2. Assess for known allergies as related by the client or as noted in the chart
3. Assess condition of ear or eye and surrounding areas
4. Observe local changes in the eye, ear, or skin occurring from the use of the drug
5. Check medication expiration date
6. Assess for proper medication administration
7. Assess client=s ability to cooperate during administration, because medications are instilled into the lower conjunctival sac

Planning (Objectives or Rationale)

1. To provide continuous absorption of medication
2. To protect the skin, eye, or ear
3. To stop, slow, or prevent the growth of microorganisms
4. To provide a local anesthetic to specified parts of the body
5. To provide direct route for antibacterial medications
6. To decrease intraocular pressure
7. To provide pupillary dilation to facilitate eye examination
8. To soften ear wax

Evaluation (Expected Outcomes)

1. Skin is returned to normal state
2. Alleviation of symptoms for which medication was administered
3. Decreased pain
4. Control of microorganisms
5. Desired therapeutic effect is obtained
6. Eye or ear evaluation is accomplished
7. Intraocular pressure is reduced

MUCOUS MEMBRANE APPLICATIONS

NURSING PROCESS DATA

Assessment (Data Base)

1. Assess that the drug can be administered sublingually
2. Assess client=s ability to understand and follow oral directions
3. Check underneath client=s tongue for lesions. If present, do not give medication
4. Assess for dyspnea, labored breathing, and wheezing
5. Assess vital signs
6. Assess for known allergies as related by the client or as noted in the chart
7. Assess for proper medication administration
8. Assess for side effects of inhaled agents (tremors, nausea, tachycardia, dysrhythmias)

Planning (Objectives or Rationale)

1. To provide appropriate surface for effective absorption
2. To confine drug actions to the airway, preventing systemic drug effects
3. To improve breath sounds and decrease subjective breathing effort
4. To provide relief for bronchospasms due to asthma or allergic reactions
5. To apply an agent that stops, slows, or prevents infection
6. To facilitate ease and consistency of self-administration

Evaluation (Expected Outcomes)

1. Therapeutic effect is achieved as chest pain is relieved following administration of nitroglycerin
2. Client response is improved within minutes of administering quick-acting glucose
3. Immediate alleviation of symptoms for which medication was administered such as decreased wheezing, decreased shortness of breath, or decreased fatigue
4. Sustained prevention of respiratory distress
5. Breath sounds improved
6. Increased activity tolerance with less dyspnea or fatigue

SUPPOSITORY ADMINISTRATION

NURSING PROCESS DATA

Assessment (Data Base)

1. Observe for signs of rectal irritation or bleeding
2. Observe for hemorrhoids
3. Check sphincter control
4. Observe for presence of vaginal irritation or discharge

Planning (Objectives or Rationale)

1. To provide alternative route when upper GI tract is malfunctioning as in vomiting
2. To offer alternative route when the drug has offensive taste or odor
3. To maintain chemical integrity of drug when digestive enzymes change the chemical properties of the drug
4. To obtain high blood concentration of the drug
5. To assist in bowel elimination

Evaluation (Expected Outcomes)

1. Medication is inserted without technical difficulties
2. Medication enters the bloodstream and is effective
3. Medications are retained without expulsion
4. Bowel elimination is achieved

IRRIGATIONS

NURSING PROCESS DATA

Assessment (Data Base)

1. Identify purpose of irrigation
2. Assess the area surrounding part being irrigated for signs of irritation, sloughing of tissue, and edema
3. Assess area being irrigated for itching, burning, and pain
4. Assess client=s response to irrigating solution and irrigation

Planning (Objectives or Rationale)

1. To administer an irrigation using appropriate technique
2. To cleanse an area of excess drainage, debris, or irritating substances
3. To administer an antiseptic solution
4. To apply heat or cold

5. To remove foreign objects

Evaluation (Expected Outcomes)

1. Area being irrigated is cleansed of debris or irritating substances
2. Foreign objects are removed
3. Heat or cold treatments are provided

PARENTERAL ADMINISTRATION

NURSING PROCESS DATA

Assessment (Data Base)

1. Check that appropriate method for administration of drug was ordered
2. Assess condition of administration site for presence of lesions, rash, inflammation, lipid dystrophy, ecchymosis.
3. Assess for tissue reaction from previous injections
4. Assess client=s level of awareness
5. Check client=s written history and ask for oral history for past allergic reactions
Do not rely solely on client=s chart
6. Review client=s chart noting previous injection sites, especially insulin and heparin administration sites.

Planning (Objectives or Rationale)

1. To perform the injection as painlessly as possible
2. To ensure proper drug administration
3. To observe and report side effects of the drugs administered
4. To alternate injection sites according to protocol

Evaluation (Expected Outcomes)

1. Injection is completed without technical complications
2. Injection is as painless as possible
3. Injection sites remain without lesions

VARIOUS ROUTES/SITES

Intradermal (ID)

Needles gauges/lengths

27-gauge, 1/2 to 2/3 needle

26-gauge, 1/2 to 2/3 needle

25-gauge, 2/3 needle ◯ this is the most common one used today

Purpose: diagnostic testing ◯ body=s reaction is readily visible

Sites

Inner aspect of the forearm

Landmarks: 1 hand up from the carpals and 1 hand down from the antecubital fossa

Scapular area of the back

Landmarks: tell them to look up these in a book in the Nursing Learning Center called the Anatomy Coloring Book

Medial thigh ◯ seldom used except in allergy testing

Upper chest ◯ seldom used

15° angle of injection ◯ makes a wheal or bleb ◯ do not massage

Subcutaneous (SC)

Needle gauges/lengths

25-gauge, 2/3 needle is the most common

Can also use all of those that are used for ID=s

Because of the fattening of America some places are also using 23-gauge, 1/2 needles

Purpose: for meds that are slowly absorbed; to produce a sustained effect

Sites

Lower abdomen (from umbilicus down)

Landmarks: 2 finger breadths (FB=s) below the umbilicus to 4 FB=s below the umbilicus avoiding the midline of the abdomen (Alternate areas are 4 FB=s to 6 FB=s below the umbilicus or 2 FB=s above the umbilicus)

The remaining two landmarks are the iliac crests and the pubic symphysis

Posterior-lateral aspect of the upper arms

Landmarks: 1 hand down from the acromial process and 1 hand up from the olecranon process

Anterior Thigh

Landmarks: 1 hand down from the greater trochanter and 1 hand up from the lateral femoral condyle (or patella)

Scapular area ◦ the landmarks are the same as for an ID

Angle of injection is 45° for most SC=s

Special SC=s

Insulin ◦ preferred site is the abdomen unless it is contraindicated ◦ if using an insulin syringe, the angle of injection is 90° ◦ there is still site rotation but it is within the site itself

Heparin ◦ preferred site is the abdomen ◦

DO NOT massage either insulin or heparin

If drawing up two types of insulin (a short and long acting) always inject air into the long acting first but draw up the short acting first

Intramuscular (IM)

Deltoid

Needle gauge/length: 23-25-gauge, 1/2" to 1"

Landmarks: acromial process to axillary fold, divide arm in half and administer into the posterior half
Never inject more than 1 mL into the deltoid per injection

Thigh, crest and buttock

Needle gauge/length: 20-22 gauge, 1"-2" ◦ use 12G most of the time

With oil base meds use a 20-gauge

With water base meds use a 21-22-gauge

Never inject more than 3 mL per injection and never more than 5 mL per site

Landmarks for vastus lateralis (antero-lateral thigh):

1 hand down from the greater trochanter and 1 hand up from the lateral femoral condyle (patella) ◦ then bisect the thigh in half lengthwise and administer injection in the outer portion

Landmarks for the iliac crest:

heel of hand on the greater trochanter then middle finger on the iliac crest and point index finger towards the anterior superior iliac spine ◦ this site is also called the ventral-gluteal site

Landmarks for the dorsal gluteal site:

using the iliac crest and gluteal crevices as vertical lines and the greater trochanter as a horizontal, draw a box on one cheek, administer injection in the upper outer quadrant

OR

using the greater trochanter and the posterior superior iliac spine and the iliac crest as points on a triangle, administer injection in the middle of the triangle

Z-track method ◦ can be used to administer any IM but must be used when administer meds that are caustic or staining to the skin ◦ usually use the dorsal gluteal because it can be hidden under underwear ◦ the alternative is the vastus

Method: pull skin laterally and insert needle, aspirate and inject ◦ then remove needle and release skin at the same time. Do Not massage