

All skill guidelines are adapted from *Fundamentals of Nursing* (9th Ed.) Potter and Perry (2017).

Maternal Health Competencies - Medication Administration

Administration of Any Medication

1. Introduce self to patient
2. Have patient verbally state two acceptable identifiers:
 - a. Name (First and Last)
 - b. Date of Birth (DOB)
3. Review provider or standing order. Obtains patient's written consent if required per agency policy
4. Assess for contraindication(s), including allergy
5. Perform the “6 Rights” of medication administration
 - a. Patient
 - b. Medication
 - c. Dosage
 - d. Route
 - e. Time
 - f. Documentation
6. Instruct patient on medication (purpose, potential side effects, warning signs, etc.)
7. Perform hand hygiene prior to administration
8. Don gloves, if indicated per agency policy
9. Aseptic preparation of medication dose, verifying expiration date
10. Administer medication
11. Doff gloves and perform hand hygiene
12. Assess effectiveness of the medication, any adverse reactions or side effects, if applicable
13. Document administration (medication, time, date and route), patient instruction, and response according to agency protocol

Oral Medications

14. Never leave medication unattended, and remain with patient until it is ingested

Oral Glucose Tolerance Test (OGTT)

Types of Oral Glucose Testing and result parameters

- A. 1-Hour Challenge Test = ≥ 140 mg/dL
- B. 2-Hour 75-gram
 - a. FBS = ≥ 92 mg/dL
 - b. 1-hr. = ≥ 180 mg/dL
 - c. 2-hr. = ≥ 153 mg/dL
- C. 3-Hour 50-gram
 - a. FBS = ≥ 95 mg/dL
 - b. 1-hr. = ≥ 180 mg/dL
 - c. 2-hr. = ≥ 155 mg/dL
 - d. 3-hr. = ≥ 140 mg/dL

1. Confirm patient has been fasting for 8 hours prior to test, advise fasting to continue until the conclusion of test period
2. Instruct patient to report to laboratory to have fasting blood specimen drawn accompanied by completed requisition form
3. Provide patient with prescribed glucose drink with instructions to ingest within 5 minutes
4. Note the time the patient finishes ingesting it and notify laboratory personnel of the time
5. Patient is to remain on premises (waiting area)
6. Patient will be notified by the laboratory personnel when to return for a second blood specimen draw
7. Document administration (medication, time, date and route) and patient instruction
8. Patient meets with provider to review results after laboratory results are made available
9. Develop/review with patient a plan of care and any follow-up recommendations per provider

Withdrawing Medication from Vial or Ampule

Vial

1. Remove cap covering top of unused vial exposing sterile rubber seal, keeping it sterile
2. If multi-dose vial has been used before, swab top of vial with alcohol, allow to dry
3. Pull back plunger to draw amount of air into syringe equal to volume of medication to be aspirated from vial
4. Inject air into vial
5. Invert vial, keep needle below medication level
6. Allow air pressure from vial to fill syringe
7. Withdraw prescribed dose
8. Withdraw needle from medication vial
9. Expel excess air from syringe prior to administration
10. Carefully recap filter needle using one-handed technique and remove from syringe

11. Discard needle into sharps container
12. Replace syringe with appropriate needle for administration, if applicable
13. For multi-dose vial, make a label that includes date, time and initials indicating when it was opened or last accessed
14. Store medication as prescribed by manufacture once opened

Reconstituting (powdered) Medication

1. Remove cap covering vial of powdered medication and cap covering vial of proper diluent
2. Swab both vial tops with alcohol and allow to dry
3. Draw up diluent into syringe
4. Inject diluent into powdered medication
5. Mix medication thoroughly by rolling in palms, do not shake
6. Reconstituted medication in vial is ready, draw into a new syringe
7. Read label carefully to determine dose after reconstitution
8. Draw up reconstituted medication in syringe
9. Carefully recap needle using one-handed technique and remove from syringe
10. Discard needle into sharps container
11. Replace syringe with appropriate needle for administration, if applicable

Ampule

1. Tap top of ampule lightly and quickly with finger until medication moves from neck of ampule
2. Wrap scored neck of ampule with alcohol swab wrapped by 2x2 clean gauze
3. Apply light pressure snapping the neck quickly and firmly away from hands
4. Invert ampule
5. Insert a filter needle into the center of the opening, not allowing needle to touch rim of ampule
6. Withdraw entire contents of ampule into syringe
7. Expel excess air bubbles, remove needle from ampule
8. Gently tap side of syringe to cause bubbles to rise toward needle
9. Draw back slightly on plunger and expel excess air
10. Carefully recap filter needle with one-hand technique and remove from syringe
11. Discard ampule pieces and filter needle into sharps container
12. Replace syringe with appropriate needle for administration
13. Expel excess air from syringe and any excess medication prior to administration

Injectable Medications

Select appropriate injection site, and equipment used for prescribed dose

- a. Intradermal
- b. Intramuscular
- c. Subcutaneous

Intradermal (ID) Injection

1. Location
 - a. Inner forearm
 - b. Upper back
2. Site - lightly pigmented, free of lesions, and relatively hairless
3. Syringe choice
 - a. Tuberculin
 - b. Small hypodermic
4. Needle gauge and length
 - a. 25 to 27 gauge
 - b. 1/2 to 5/8 inch for adults and children
5. Perform hand hygiene prior to administration
6. Don gloves
7. Aseptic preparation of medication dose from ampule or vial, verifying expiration date
8. Cleanse site with alcohol swab in a circular motion for approximately 2 inches
9. Wipe site dry with sterile 2x2 gauze
10. Gently pull skin to a taught state for easier needle penetration
11. Angle of insertion approximately 3mm below skin surface
 - a. 5-15 degree
 - b. Bevel of the needle is pointed up
12. Administer medication
 - a. Correct injection of medication is indicated by a small wheal approximately 6 mm in diameter appearing just under the surface of the epidermis, if not test results will not be valid
13. Withdraw needle while applying gauze gently over site
14. Activate needle safety device
15. Discard syringe into sharps container
16. Do not massage the site
17. Lightly apply band-aid if needed
18. Doff gloves and perform hand hygiene
19. Assess effectiveness of the medication, any adverse reactions or side effects, if applicable
20. Document administration (medication, time, date and route), patient instruction, and response according to agency protocol

Intramuscular (IM) Injection

1. Location, palpate bony landmarks and be aware of potential complications associated with each site
 - a. Ventrogluteal
 - i. Preferred and safest for all adults, children, toddlers and infants
 - ii. Especially for medications that have larger volumes (>2 mL) and more viscous and irritating
 - b. Vastus Lateralis
 - i. Preferred for adults, children, toddlers and infants
 - c. Deltoid
 - i. Use this site only for small ($\leq 2\text{mL}$) medication volumes, when giving immunizations, or when other sites are inaccessible because of dressings or casts
 - ii. Use patient's non-dominant arm
 - iii. Recommended use for only patients with well-developed musculature
2. Site - consider the following:
 - a. Free of bruising, abrasion, infection or necrosis
 - b. Underlying bones, nerves and major blood vessels
 - c. Volume of medication to be administer
 - i. Well-developed adult patient tolerates 2 to 5 mL of medication into a larger muscle without severe muscle discomfort
 - ii. Children, older adults, and thin patients tolerate only 2 mL
 - iii. Do not give more than 1 mL to small children or older infants
 - iv. Do not give more than 0.5 mL to smaller infants
3. Z-Track Method, should be used to minimize local skin irritation by sealing the medication in muscle tissue
4. Syringe choice
 - a. 2 - 3 mL for adults
 - b. 0.5 - 1 mL for small children and infants
5. Needle gauge and length, the following is recommended:
 - a. Corresponds to site of injection, age, and size of patient; length may vary outside of these guidelines for patients who are smaller or larger than average
 - b. 20 to 25-gauge medications in aqueous solution
 - c. 18 to 21-gauge medications in oil-based solution
 - d. Ventrogluteal
 - i. Child, 0.5 - 1 inch
 - ii. Adult, 1.5 inches
 - e. Vastus Lateralis
 - i. Child, 5/8 - 1 inch
 - ii. Adult, 5/8 - 1 inch
 - f. Deltoid
 - i. Child, 0.5 - 1 inch
 - ii. Adult 1 - 1.5 inches

- g. Needle length for immunization administration for females
 - i. Less than 130 lbs., 5/8 - 1 inch
 - ii. 130 - 152 lbs., 1 inch
 - iii. 153 - 200 lbs., 1 - 1.5 inches
 - iv. 200+ lbs., 1.5 inches
6. Perform hand hygiene prior to administration
7. Don gloves
8. Aseptic preparation of medication dose from ampule or vial, verifying expiration date
9. Replace syringe with a new needle before patient administration
10. Cleanse site with alcohol swab in a circular motion for approximately 2 inches
11. Wipe site dry with sterile 2x2 gauze
12. Pull skin laterally to the side with the ulnar side of the non-dominant hand (z-track)
13. Insert needle to the site at 90-degree angle
14. Aspirate for blood return
 - a. If blood appears, waste medication
 - b. Prepare to administer a new dose at a new site
 - c. Do not aspirate with any immunization
15. Administer medication
16. Needle should remain inserted for 10 seconds to allow medication to disperse evenly rather than channeling back up the track of the needle
17. Release the skin after withdrawing the needle
18. Massage site in a smooth, steady motion (reduces pain)
19. Activate needle safety device
20. Discard syringe into sharps container
21. Apply band-aid if needed
22. Doff gloves and perform hand hygiene
23. Assess effectiveness of the medication, any adverse reactions or side effects, if applicable
24. Check accuracy of medication volume before returning for storage if it is multi-dose vial
25. For multi-dose vial, make a label that includes date, time and initials indicating when it was opened or last accessed
26. Store medication as prescribed by manufacture once opened
27. Document administration (medication, time, date and route), patient instruction, and response according to agency protocol

Subcutaneous (SQ) Injection

1. Location
 - a. Upper arm (side or back)
 - i. Use patient's non-dominant arm
 - b. Front of thigh
 - c. Abdomen (lower portion, about 2 inches below umbilicus)
2. Site - consider the following:
 - a. Free of bruising, abrasion, infection or necrosis

- b. Frequent injections, site should be rotated with each dose
 - c. Volume of medication to be administer
 - i. Usually less than 1 mL, but up to 2 mL
 - d. Pinch skin at site
 - e. For average-size patient, inject quickly and firmly at 45-90 degree angle
 - f. For obese patient, inject at 90-degree angle below tissue fold
3. Syringe choice
 - a. Tuberculin
 - b. Insulin
 - c. Small hypodermic
 4. Needle gauge and length
 - a. 25 to 27 gauge
 - b. 3/8 to 5/8 inch for adults and children
 5. Perform hand hygiene prior to administration
 6. Don gloves
 7. Aseptic preparation of medication dose from ampule or vial, verifying expiration date
 8. Cleanse site with alcohol swab in a circular motion for approximately 2 inches
 9. Wipe site dry with sterile 2x2 gauze
 10. Insert needle into SQ tissue 45-90 degree
 11. Do not aspirate
 12. Administer medication slowly
 13. Withdraw needle quickly
 14. Activate needle safety device
 15. Discard syringe into sharps container
 16. Apply band-aid if needed
 17. Doff gloves and perform hand hygiene
 18. Assess effectiveness of the medication, any adverse reactions or side effects, if applicable
 19. Document administration (medication, time, date and route), patient instruction, and response according to agency protocol

Preparing Two Insulins

1. Perform hand hygiene prior to administration
2. Don gloves
3. Aseptic preparation of medication dose, verifying expiration date
4. Gather equipment
 - a. Prepare the Regular and NPH insulin vials for medication withdrawal
 - b. Rotate vial containing the cloudy solution NPH between the palms of the hands
 - c. Clean the rubber caps with alcohol swab
5. Draw into the syringe the amount of air equal to the volume of NPH insulin ordered, inject air into NPH vial, remove needle from vial

6. Draw into the syringe the amount of air equal to the volume of Regular insulin ordered, inject air into Regular insulin vial
7. Without removing the needle from Regular insulin vial, invert the vial and withdraw ordered amount
8. Tap syringe to dislodge any air bubbles present in the syringe
9. Prior to removing needle from vial double check Regular insulin dose with a second nurse to ensure correct dosage
10. Withdraw needle from the vial and inserts needle into NPH insulin vial. Invert the vial and withdraw ordered amount of NPH insulin
11. Prior to removing needle from vial double check NPH insulin dose with a second nurse to ensure correct dosage
12. Remove needle from vial and using a one-handed technique, replace cap over needle maintaining sterility
13. Cleanse site with alcohol swab in a circular motion for approximately 2 inches
14. Wipe site dry with sterile 2x2 gauze
15. Insert needle at a 45-90 degree angle as prescribed under SQ administration
16. Do not aspirate
17. Administer medication
18. Activate needle safety device
19. Discard syringe into sharps container
20. Doff gloves and perform hand hygiene
21. Assess effectiveness of the medication if indicated and note any adverse reactions or side effects
22. Check accuracy of medication volume before returning for storage if it is multi-dose vial
23. For multi-dose vial, make a label that includes date, time and initials indicating when it was opened or last accessed
24. Store medication as prescribed by manufacture once opened
25. Document administration (medication, time, date and route), patient instruction, and response according to agency protocol

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