



Department of Nursing POLICY AND PROCEDURE

POLICY NUMBER: 350
VERSION: 1

SUBJECT: EPINEPHRINE 1:1000 ADMINISTRATION

PURPOSE: To establish a protocol to ensure the safe administration of epinephrine 1:1000.

POLICY: To ensure the safety of all patients receiving epinephrine 1:1000. The procedure must be performed within the guidelines established by this policy.

NOTE: THIS PROCEDURE REQUIRES AN INDEPENDENT DOUBLE-CHECK OF THE PURPOSE, DOSE, AND ROUTE OF ADMINISTRATION.

DEFINITIONS:

Anaphylaxis- An allergic reaction that affects whole body systems; will be fatal if not treated immediately.

Respiratory distress- Signs of labored breathing that if left untreated may lead to a respiratory arrest. Signs to look for are tachypnea, accessory muscle use, tachycardia, retractions, nasal flaring, grunting, wheezing, etc.

Cardiac arrest- Temporary or permanent cessation of the heart.

Independent double-checks- High risk medications require a second licensed nurse to double-check the order to administer select medications that have a potential to cause harm.

Two authorized clinic staff independently:

- Compare the, medication and label with the order,
- Use two patient identifiers,
- Verify dose calculations (if calculations are involved),
- Verify that the dose is safe and appropriate for administration,
- The medication should not be administered until both agree.

Intravenous- within a vein

Subcutaneous- within subcutaneous tissue

Inhalation- medication delivered through the respiratory system

Racemic- epinephrine that has a slightly different chemical composition and is given via inhalation.

Subcutaneous administration of epinephrine 1:1000:

Equipment:

- Prescribed medication
- 1 milliliter (ml) syringe with 25-27 gauge, ½ to 5/8 inch needle
- Alcohol wipes
- Clean gloves
- Cotton ball or gauze pad
- Filter needle, 1 ml syringe without needle, separate ½ or 5/8 inch needle (for use with a glass ampule).

Note: If epinephrine is in a glass vial it must be drawn up using a 5 micron filter needle. The needle must then be changed to a ½ or 5/8 inch needle.

PROCEDURE:

1. Verify provider order prior to administering medication to a patient. Double check dose, route and purpose with a second licensed nurse.
2. Assess patient for allergies prior to administering medication.
3. The patient identity is verified using two identifiers, patient name and either the MRUN or date of birth.
4. Medication expiration date is checked prior to administering any medication.
5. Medication labels are checked three (3) times during medication preparation.
 - a. When comparing medication with the provider's orders
 - b. Before opening container
 - c. After medication is removed from container
6. Perform hand hygiene.
7. Cleanse/disinfect rubber septum and/or outside of a glass vial.
8. Prepare medication for administration.
9. Apply clean gloves.
10. Locate appropriate injection site and cleanse injection site with alcohol swab and allow to dry.
11. Pinch the skin up with non-dominant hand.
12. Using dominant hand dart needle gently into the skin at 45 - 90° angle.

13. Inject medication into subcutaneous tissue.
14. Withdraw the needle. Activate safety device on needle/syringe.
15. Dispose of needle and syringe in sharps container.
16. Remove gloves and perform hand hygiene.
17. Documentation on progress note or electronic record should include:
 - a. Name of medication
 - b. Date, time, dosage, route and site as applicable
 - c. Signature and initials of clinical staff administering medication
 - d. Reassessment following administration.

INTRAMUSCULAR administration of epinephrine 1:1000

EQUIPMENT:

- Prescribed medication
- 3 ml syringe with 21-23 gauge, 1 to 1 ½ inch needle (based on size and weight of patient and viscosity of medication)
- Alcohol wipes
- Clean gloves
- Filter needle, 1 ml syringe without needle, separate ½ or 5/8 inch needle (glass ampule).

Note: If epinephrine is in a glass vial it must be drawn up using a 5 micron filter needle. The needle must then be changed to a 21-23 gauge, 1 to 1 ½ inch needle.

PROCEDURE:

1. Verify provider order prior to administering medication to a patient. Double check dose, route and purpose with a second licensed nurse.
2. Assess patient for allergies prior to administering medication.
3. The patient identity is verified using two identifiers, patient name and either the MRUN or date of birth.
4. Medication expiration date is checked prior to administering any medication.
5. Medication labels are checked three (3) times during medication preparation.
 - a. When comparing medication with the provider's orders
 - b. Before opening container
 - c. After medication is removed from container
6. Perform hand hygiene.
7. Cleanse/disinfect rubber septum and/or outside of a glass vial.

8. Withdraw prescribed medication for administration.
9. Apply clean gloves.
10. Locate appropriate injection site:
 - a. Dorsogluteal: upper outer quadrant of buttocks; commonly used for adults.
 - b. Ventrogluteal: lateral aspect of hips; preferred site for adults and children that have been walking for a year.
 - c. Vastus lateralis: anterolateral aspect of thighs, preferred site for infants under 7 months.
 - d. Deltoid: lateral aspect of upper arm, used for small volumes; 0.5-2 ml.
11. Cleanse injection site with alcohol wipe and allow to dry.
12. With thumb and index finger of non-dominant hand, pull the skin and subcutaneous tissue to the side or downward.
13. While maintaining traction on the skin, using dominant hand, dart needle into the skin at a 90° angle.
14. Pull back on plunger to aspirate for blood.
15. If no blood appears, slowly inject medication into muscle.
16. Withdraw the needle; do not massage the site.
17. Activate sharps safety device.
18. Dispose of needle and syringe in sharps container.
19. Remove gloves and perform hand hygiene.
20. Documentation on progress note or electronic record should include:
 - a. Name of medication
 - b. Date, time, dosage, route and site as applicable
 - c. Signature and initials of clinical staff administering medication
 - d. Patient reassessment following administration

NOTE:

1. If blood appears on aspiration, do not inject the bloody solution; stop injection, withdraw needle, and prepare another injection with new equipment and select another injection site.

Administration of racemic epinephrine:

- Equipment
- Prescribed unit dose of racemic epinephrine and any dilution ordered
- Handheld nebulizer set up
- Nebulizer

2. Verify provider order. Double check dose, route and purpose with a second licensed nurse.
3. Identify the patient using two identifiers.
4. Confirm allergy status.
5. Perform hand hygiene.
6. Obtain ordered dose of racemic epinephrine and any dilution.
7. Prepare hand held device with ordered medication;
 - a. Connect one end of the tubing to the compressor and the other end to the nebulizer jar,
 - b. Add the solution medication to the top of the medication chamber,
 - c. Insert T-piece into top of medication chamber,
 - d. Slide the mouth piece onto end of T-piece and attaches the reservoir tubing to the other end of the T-piece,
 - e. Turn the compressor on and check for aerosol mist,
 - f. Instruct the patient to inhale deeply and slowly,
 - g. Instruct patient to periodically tap the nebulizer to minimize residual volume,
 - h. Check for any residual in the chamber,
 - i. Turn off compressor when all medication has been delivered.
 - j. Monitor patient for tolerance and any improvement.
8. Report to provider
9. Documentation on progress note or electronic record should include:
 - a. Name of medication
 - b. Date, time, dosage, route and site as applicable
 - c. Signature and initials of clinical staff administering medication
 - d. Reassessment following administration

DOCUMENTATION:

1. Medication administered including route.
2. Independent double check of provider's order.
3. Patient's tolerance of procedure.

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REFERENCES:

AAACN Core Curriculum for Ambulatory Care Nursing, Third Edition, 2013.
 American Heart Association Advanced Cardiovascular Life Support, provider manual, 2011.
 County of Los Angeles Department of Health Services Ambulatory Care Annual Core Competency Study Guide, 2013.

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