

# Southern Illinois Regional EMS System

## II-12 INTRAMUSCULAR ADMINISTRATION OF MEDICATIONS

### Indications:

- When medication administration is required (non auto-injector) and the necessary or preferred route of administration is an approved intramuscular location.

### Complications:

- Allergic reaction / anaphylaxis
- Hemorrhage
- Severe pain at injection site
- Redness, swelling, or warmth at the injection site
- Tingling or numbness

### Equipment:

- PPE
- Appropriate syringe
- Appropriate safety needle for withdrawing and/or injecting
- Antiseptic solution for cleaning
- 4x4 gauze
- Appropriate medication

### Procedure:

- Receive and confirm medication order from Medical Control or from standing order.
- Assemble all necessary equipment.
- Verify the “6 Rights of Medication Administration”
  - Right Patient
  - Right Drug
  - Right Dose
  - Right Route
  - Right Time
  - Right Documentation
- Check the medication expiration date.
- Look for container leak, abnormal color, or possible contamination.
- Rule out allergy to the medication.
- Explain the procedure to the patient.
- Draw the medication into the syringe for administration.
  - Vial
    - Cleanse rubber stopper with alcohol prep.
    - Inject air into vial in equal amount as volume to draw into syringe.
  - Ampule:
    - Break glass top at the scored line.
    - Draw medication with a filtered needle.
    - Avoid touching the glass edges with the needle.

# Southern Illinois Regional EMS System

## II-12 INTRAMUSCULAR ADMINISTRATION OF MEDICATIONS

- Choose the appropriate injection site.
  - Deltoid muscle – injection volume should not exceed 1 mL
  - Vastus lateralis – injection volume should not exceed 3 mL
  - Ventrogluteal – injection volume should not exceed 3 mL
  - Dorsogluteal – injection volume should not exceed 3 mL
    - The thigh should be used for pediatric patients. (should not exceed 1 mL volume)
- Expose and cleanse the injection site with alcohol prep pads.
- Insert the needle into the site with a smooth and steady motion at a 90 degree angle.
- Aspirate the syringe looking for blood.
  - If blood is present in the syringe after aspiration:
    - Withdraw the syringe and needle.
    - Apply pressure to the site to stop bleeding.
    - Dispose of the sharp in an appropriate sharps container.
    - Attempt another administration.
- Inject the medication.
- Withdraw the needle quickly and dispose in an appropriate sharps container.
  - Do not recap the needle.
- Apply pressure to the site with a 4x4 gauze pad.
- Monitor the patient for desired effects and possible side effects.

### Documentation:

- Fully document the procedure, including:
  - Medication and concentration
  - Dose
  - Route
  - Time
  - Who administered the medication
  - PPE and equipment used
  - Effects, desired or side effects
  - Complications

### BLS Intramuscular Administration of **Epinephrine 1:1000**

- Follow the above procedural guidelines with the following exceptions/restrictions:
  - BLS personnel will use Epinephrine 1:1000, 1mg / 1mL vials.
  - BLS personnel will use 1 mL syringes.
  - BLS personnel will use the appropriate needles.
    - 23 gauge, 1 inch length for pediatric patients.
    - 22 gauge, 1.5 inch length for adult patients.
  - BLS personnel will use the vastus lateralis site for all epinephrine injections.
  - Adult dosing: **0.3 mg**, (> 30 kg / 66 lbs) may repeat in 10 minutes if little or no response.
  - Pediatric dosing: **0.15 mg**, (< 30 kg / 66 lbs) may repeat in 10 minutes if little or no response.