

**Purpose:** To provide the procedure to be utilized by personnel in administering medication in compliance with West Michigan Regional Protocol or "local" protocol unless otherwise authorized by an on-line Medical Control Physician.

**I. Indications for Administration**

- A. Patient assessment is to be completed by on-scene EMS personnel.
- B. Need for medication identified by on-scene paramedic or as ordered by on-line medical control.
- C. Patient is interviewed for known allergies and medication history to identify risk of drug interaction or potentiation.
- D. Paramedic is familiar with the:
  1. Medication
  2. Guidelines for administration
  3. Actions
  4. Side-effects
  5. Drug interactions
  6. Contraindications

**II. Preparation for Administration**

- A. Correct medication identified
- B. Supply of medication acquired
- C. Medication is checked for:
  1. Right medication
  2. Right dose /amount
  3. Right time
  4. Right route for administration
  5. Expiration date
- D. All supplies needed are gathered and organized in work area.
- E. Communication is provided to patient regarding need for medication and its effects.
- F. Personal protective equipment is utilized.

**III. Administration**

**A. Oral Medications**

1. Open packaging over a clean work area in case medications spill from package and can be retrieved.
2. Provide medications to patient with direction on the administration (i.e.: to be chewed, swallowed, held under the tongue, or buccal, etc.)
  - a. For buccal administration of glucose paste to the patient with an altered level of consciousness:
    - 1) Position the patient on their side
    - 2) Administer small amounts of the paste between the gum and the cheek wall. Instruct the patient to swallow, if possible.

**B. Rectal Medications**

1. Attach a Teflon catheter (from an angiocath) to the end of a syringe that contains medication to be administered. Gently insert catheter into rectum and instill medication.

**C. Nebulizer Therapy**

1. Self-administered by the patient with a metered dose inhaler (MDI) or hand-held nebulizer **OR** nebulized with positive-pressure breathing device such as a bag-valve-mask **OR** with the bag-valve attached to the ET tube.
2. Medication is measured and introduced into nebulizer and 4-6 liters of oxygen is attached to nebulizer.

MEDICATION ADMINISTRATION  
PROCEDURENumber: III.C.  
Date: 3-1-2008  
Page: 2 of 3

3. Patient is instructed to breathe normally and to hold a deep inspiration every 4-5 breaths.
4. Patient is monitored throughout procedure per protocol, policy or procedure.
5. Treatment is continued until all medication is gone or is discontinued due to complication in patient condition.

**D. Inhalation Therapy**

1. Medications are held in front of nose for inhalation, **OR** applied to gauze pad and held in front of nose.
2. EMS provider must guard against self-inhalation of medication.

**E. Nasal Administration**

1. To aerosolize a medication within the nasal passage, spray medication up into nasal passage while the patient inhales per instruction. Neo-Synephrine spray is administered in this manner.
2. To anesthetize the nasal passage, lidocaine jelly is spread along a nasopharyngeal airway and then inserted and manipulated to spread medication. The lidocaine jelly should also be applied to the endotracheal tube to assist in the insertion process.
3. To administer medication for absorption through nasal mucosa, drip medication from a syringe against the nasal septum.

**F. Endotracheal Administration – No longer approved for adult patients (IO Suggested)**

1. When vascular access cannot be obtained in the pediatric patient and an endotracheal tube is in place, specific medications can be administered down the ET tube.
2. The medication is rapidly injected down the tube in a bolus that is diluted or followed by normal saline to flush the tube. The total fluid that should be administered in one bolus is 2ml min. and 10-ml max.
3. The medications that may be given down the ET tube are:
  - a. epinephrine
  - b. atropine
  - c. naloxone (Narcan)
  - d. lidocaine
  - e. midazolam (Versed)
  - f. diazepam (Valium)

**G. Subcutaneous Injections**

1. Medication is prepared in syringe 1 ml or less with needle 25-27ga, 1/2 - 5/8 inches.
2. A site is selected and cleansed (upper outer arm, front of the thigh, or abdomen).
3. Pinch skin up into a fat fold of at least 1-inch.
4. Insert needle at 45-degree angle; aspirate.
5. If no blood appears in syringe, inject medication slowly.
6. Gently massage site with alcohol wipe.
7. Dispose of syringe in sharps container.

**H. Intramuscular Injections**

1. Medication is prepared in syringe of less than 5 cc with needle 18-22ga., 1 1/2-2 inches. 0.2 ml of air may be added to syringe.
2. Site is selected and cleansed (deltoid, dorsal gluteal, ventro-gluteal, or vastus lateralis).
3. Spread skin taut, insert needle at 90-degree angle, and aspirate.
4. If no blood appears in syringe, inject medication slowly.
5. Apply slight pressure to site with alcohol wipe.
6. Dispose of syringe in sharps container.

MEDICATION ADMINISTRATION  
PROCEDURENumber: III.C.  
Date: 3-1-2008  
Page: 3 of 3**I. Intravenous/Intraosseous Medications: Bolus Dose**

1. Medication is prepared in syringe with Luer-lock connector or protected-needle. (A needle to insert into a port should only be used as a last resort.)
2. All air is cleared from syringe and excess medication expelled.
3. Site is cleansed and syringe is attached via luer-lock to stopcock, other luer-lock connector, or protected needle is inserted into capped port of IV line.
4. Patency of IV is checked by aspirating blood or by monitoring flow with no signs of infiltrate.
5. IV line is clamped or flow is controlled to flush medication, as medication is pushed into IV port.
6. Time taken to administer medication is specific to medication. Flush IV line to assure medication administration.
7. Monitor IV catheter site for signs of infiltration.
8. Dispose of syringe in appropriate container.

**J. Intravenous/Intraosseous Medications: Continuous Drip**

1. Pre-mixed intravenous medications are selected or appropriate dose of medication is added to intravenous fluid bag. Affix label to fluid container.
2. Calculations of drip rates are completed prior to administration of medication.
3. Shake bag to distribute medication, add administration line and flush.
4. IV line may be connected directly to stopcock on IV catheter or, if to be connected to main line IV, the needle must be attached to connect to port on IV line, unless needleless port is available. Main-line fluid will be turned off during piggyback drip administration.
5. Control flow rate for desired drops per minute and monitor for consistency.

**IV. Patient Assessment**

- A. Patients are assessed closely for change in condition following medication administration.
  1. Medications are discontinued when possible if untoward effects occur or as directed by physician.

**V. Documentation**

- A. Documentation of all medication administration on the Run Form will occur.
- B. Documentation will include:
  1. Name of medication
  2. Dose and concentration of medication
  3. Time of administration
  4. Route/site of administration
  5. Justification for administration:
    - a. SO= Standing Order
    - b. MD= Medical Direction
    - c. POS= Physician on Scene
  6. Document waste of narcotic with witness signature.
- C. Patient condition is documented before and after medication administration.
- D. Run-form is to be signed by the physician ordering medication, or accepting management of the patient in emergency department.