Indications

To treat an illness or injury in which medication may improve patient's condition or outcome

Precautions

1. Certain medications can be given by only one route, others by several. If you are uncertain about the drug you are giving - check with Medical Control. For example, atrovent is only given in a neb.
2. Make certain that the medication you want to give is the one in your hand. Always double check medication before administration.
3. The IM route is unpredictable: Medications are absorbed erratically via these routes and may not be absorbed at all if the patient is seriously ill or injured and is therefore vasoconstricted. IV route should be used almost exclusively in the field. If an IV cannot be started, the intraosseous is a route that is more reliable than IM. The IM route may be considered as a last resort. Intra-nasal administration of Naloxone for drug OD and Midazolam for seizures may also be considered.

Technique - Injection Preparation

1. Confirm drug order, route and amount.
2. Explain the procedure and reconfirm patient is not allergic to drug.
3. Check drug name, coloration and expiration.
4. Calculate and draw up desired volume of medication into syringe.
5. Eject air from syringe.
6. All medications given I.V. may be given I.O. at the same dose.

Technique - IV and IO Bolus.

1. Clean injection port with alcohol.
2. Connect to needle-less port or insert needle into injection port, and pinch off IV tubing above injection port.
3. Inject medication at recommended rate.
4. Un-pinch tubing and flush tubing with fluid.
5. Properly dispose of syringe and medication container.

Technique - IV and IO Infusion

1. Select correct IV solution and size bag to dilute medication if not premixed.
2. Inject medication into port of IV bag and gently shake to mix.
3. Label bag with name, amount and time medication added.
4. Attach administration set and needle and purge air.
5. Clean injection port and connect needle-less port or insert needle from infusion.
6. Calculate flow rate and start infusion. An IV pump should be used.

Technique – Mucosal Atomization

1. Draw up the appropriate volume for the weight of medication to be given.
2. Attach syringe to the end of the mucosal atomization device (MAD).
3. Choose the nostril with greater patency. Place device at nostril and slowly depress the syringe plunger
4. See Mucosal Atomization Device protocol for more details on medication doses and technique.

Technique - Intramuscular injection.

1. Use a 21-22 ga. needle 1-1.5 inches long.
2. Identify appropriate injection site and clean with alcohol.
3. Stretch or flatten skin over site with your fingers and tell patient to prepare for a "stick".
4. Insert needle at 90° angle into muscle. Aspirate syringe for blood or air and slowly inject medication.
5. Withdraw needle and apply pressure to site.
6. Properly dispose of syringe and medication container.

Technique - Nebulized Inhalation

1. Establish baseline lung sounds and give patient instructions. Position patient with head elevated at least 45°.
2. Assemble equipment. Place medication in well of nebulizer. Dilute with respiratory saline to 2.5-3 ml total volume.
3. Connect nebulizer to oxygen source set at 6lpm.

4. Encourage patient to inhale normally and to take a deep breath every 3-5 inhalations.
5. Discontinue treatment when nebulizer empty and re-evaluate lung sounds.
6. Use mask instead of mouth piece if patient cannot hold mouth piece.
7. Nebulizer can be connected between bag and mask, ET tube, King tube, or inline with CPAP when assisting ventilation.

Notes

1. Extravasation of a drug during IV administration, particularly calcium or dextrose, may cause tissue necrosis. Watch carefully and be ready to stop administration immediately.
2. Allergic and anaphylactic reactions occur more rapidly with IV injections, but may occur with medication administration by any route.
3. Several medications are carried in different concentrations in an emergency medical kit. Be sure you are using the correct concentration.
4. **See individual medication protocols for documentation requirements**