

- e. Insert the needle set into the skin at the insertion site until you feel the needle set tip encounter the bone itself. Verify the 5 mm mark is visible on the needle.
  - f. Apply firm and steady pressure on the driver and power through the cortex of the bone, ensuring the driver is maintained at a 90 degree angle at all times.
  - g. Stop when the needle flange touches the skin or a sudden decrease in resistance is felt. This indicates entry into the bone marrow cavity.
  - h. While supporting the needle set in one hand, gently pull straight up on the driver and lift away to remove the driver. Return the driver to its case.
  - i. While grasping the hub firmly with one hand, rotate the stylet counter-clockwise, pulling the stylet out of the catheter and place it into the empty cartridge. Discard it into a biohazard sharps container.
  - j. Proper placement of the IO catheter tip can be confirmed through the following:
    - The IO catheter stands straight up at a 90 degree angle and is firmly seated in the bone, or
    - Blood at the tip of the stylet, or
    - Aspiration of a small amount of bone marrow with a syringe, or
    - A free flow of drugs or fluid without difficulty and with no evidence of extravasation underneath the skin.
  - k. If the insertion fails confirmation or cannot be flushed, remove and dispose of the needle set. Repeat the procedure in the opposite arm or leg.
  - l. Attach the primed EZ-Connect extension set to the EZ-IO® hub.
  - m. For unconscious patients, flush with 5-10 ml Normal Saline.
  - n. For conscious or semi-conscious patients, administer IO Lidocaine [40 mg in adults, 0.5 mg/kg (max of 40mg) in pediatric patients] into the intraosseous space, over 60 seconds, to provide pain relief. After lidocaine, flush with 5-10 ml Normal Saline.
  - o. Administer the infusion or medication as per guideline or on-line medical direction. A pressure infuser (or BP cuff) can be used to maintain adequate flow rates.
  - p. Apply the wristband to the patient and secure the EZ-IO® as an impaled object.
6. Removal
- a. Attach a sterile syringe to the catheter hub.
  - b. Support the patient's arm or leg while rotating the catheter clockwise and gently pull out the catheter while maintaining a 90 degree angle.
  - c. Place removed catheter in a biohazard sharps container.
  - d. Dress the insertion site with an appropriate dressing.
7. Cleaning and Disinfecting
- a. Wipe clean with moistened cloth. Remove large contaminants.
  - b. Spray with antimicrobial solution, following the solution instructions.
  - c. Momentarily depress trigger several times during cleaning.
  - d. Clean around drive shaft with cotton applicator as needed and wipe driver dry.
  - e. Inspect driver and return to case.
  - f. Never submerge the EZ-IO® driver in any liquid at any time.

### C. Intranasal (IN) - Mucosal Atomization Device

1. Intranasal administration of medication is performed by the atomization of medication to 30 micron particle size which adheres to the nasal mucosa over a larger surface area allowing for effective absorption.
2. Half the medication volume should be administered in each nostril with no more than 1.0 ml administered per nostril.
3. Airborne PPE should be worn when administering medication via this route due to a sneeze

reflex in conscious patients.

D. Intranasal Spray – Single Dose Pre-Packaged by Manufacturer

1. Lay patient on their back.
2. Remove medication from the box. Peel the back tab to open the package.
3. Hold spray bottle with your thumb on the bottom of the plunger and your index and middle fingers on either side of the nozzle.
4. Tilt the patient's head back and support the neck with your hand. Gently insert the tip of the nozzle into ONE nostril until your fingers on either side of the nozzle are against the bottom of the patient's nose. Direct the nozzle toward the back of the nose, not the top/bottom.
5. Press plunger firmly to deliver the dose of the medication.
6. Remove spray bottle from the nostril and discard in safe place (away from children).
7. Lay patient on their side in the recovery position.

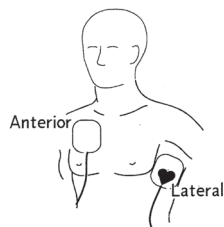
7.04 Cardiac Electrical Therapy

A. Automated External Defibrillator [BLS/ALS]

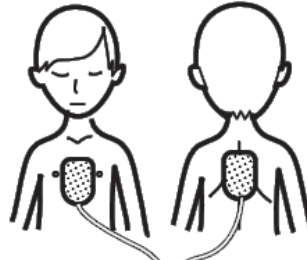
1. Apply the AED to all pulseless patients suspected of cardiac arrest.
2. Contraindications:
  - a. Patient with a pulse
  - b. Patient meets obviously dead criteria (*Ref. 8.02 A.2.c.*)
3. Use with these types of trauma patients:
  - a. Trauma secondary to cardiac arrest (i.e., MVI with minor vehicle damage and patient in cardiac arrest).
  - b. Traumatic arrests being resuscitated according to Cardiac Arrest Guidelines (*Ref. 8.04 A.1.f.*).
4. To attach defibrillator:
  - a. Press On/Off.
  - b. Bare the patient's chest. Shave the chest of any excessive chest hair.
  - c. For patients less than 8 years of age, use the 'Infant/Child' AED pads. For all others, use the standard adult AED pads.
  - d. Place the pads in accordance with the pictures on the AED pad packaging.
    - For adults, place the 'anterior' pad on the patient's upper right torso, lateral to the sternum and below the clavicle. Place the 'lateral' pad lateral to the patient's left nipple with the center of the electrode in the midaxillary line.
    - For pediatric patients, place the pads in an anterior and posterior fashion.

ADULT PATIENTS

PEDIATRIC PATIENTS



QUIK-COMBO Electrodes



- e. If the AED pads contain a CPR sensor, ensure it is placed over the sternum consistent with package labeling.
  - f. Connect the electrodes to the AED.
5. There are three possible messages after the AED has performed an analysis:
- a. If the AED detects a shockable rhythm, it will emit the charging tone and state "Stand Clear. Push Shock Button." Immediately clear from the patient and depress the shock