**ORANGE COUNTY EMERGENCY MEDICAL SERVICES**
ADVANCED LIFE SUPPORT PROCEDURES

**NEEDLE THORACOSTOMY: PEDIATRIC**

#: PR-065
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## INDICATION:

Decompression of tension pneumothorax causing hemodynamic instability in a pediatric chest injury victim.

## SIGNS AND SYMPTOMS OF TENSION PNEUMOTHORAX:

Signs include:
- Chest injury, either blunt or penetrating (often with flail chest, palpable subcutaneous air, or "sucking" chest wound on side of suspected pneumothorax).
- Absence of breath sounds on the side of the suspected pneumothorax (if breathing); with presence of breath sounds on side without pneumothorax.

Symptoms include:
- Progressive dyspnea or respiratory arrest
- Poor perfusion and altered mental status.

## PROCEDURE:

- Make base contact (if in setting of an MCI, remote rescue, or tactically unstable scene proceed without base contact and document).

- Explain procedure to patient if conscious and able to understand.

- Assemble equipment:
    o 1.25 inch, 16 gauge catheter over needle if estimated weight 40 Kg (90 lbs) or less , use adult decompress ion needle (minimum 2.5 inch length) if estimated weight greater than 40 Kg.
    o Antiseptic skin wipes
    o Sterile Vaseline gauze

- Identify second intercostal space, midclavicular line.

- Prepare site with sterile skin wipe.

- Insert needle using steady pressure and ninety-degree angle (perpendicular) to chest wall in lower aspect of the second intercostal space within the midclavicular line.

- Advance needle until one of the following are recognized:
    o A sudden rush of air is expelled through the needle
    o A "popping" or "giving way" is felt as the tip of the needle enters the chest cavity
    o Air, blood or fluid is expelled through the needle when chest cavity has been entered
    o Once chest cavity is entered, advance needle and catheter ¼ inch and no further, remove needle, leaving catheter in place.
    o Arrange Vaseline gauze at base of catheter to stabilize and seal area and leave in place (do not reinsert needle into catheter due to risk of shearing apart plastic catheter).