

Subject: Scope of Practice/Procedure – ALS  
Needle Thoracostomy

Associated Policies:

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- I. Equipment
  - A. One (1) 14 gauge or larger catheter over the needle intravenous catheter at least three inches long.
  - B. One (1) antiseptic swab preferably chlorhexidine.
- II. Therapeutic Effects
  - A. Decompression of tension pneumothorax.
- III. Indications
  - A. Signs indicating tension pneumothorax including any combination of two or more of the following:
    - 1. Increasing dyspnea with cyanosis and shock.
    - 2. Decreased or absent breath sounds.
    - 3. Distended neck veins.
    - 4. Tracheal deviation.
  - B. Patients in traumatic cardiac arrest:
    - 1. Bilateral needle thoracostomy should be performed when patients meet the criteria for resuscitation per Traumatic Arrest Policy # 6542 that have known or suspected torso trauma.
- IV. Contraindications
  - A. Absolute:
    - 1. None.
- V. Procedure
  - A. Identify signs and symptoms indicating a tension pneumothorax.
  - B. Locate landmarks on the side of pneumothorax:
    - 1. Preferred site, 4th or 5th intercostal space at midaxillary line.
    - 2. If unable to access above site, the 2nd intercostal space at midclavicular line should be considered.
  - D. Prep skin with an antiseptic swab.
  - E. Using aseptic technique, insert cannula at a 90-degree angle at superior border of rib, approximately 2 inches into pleural space.
  - F. Listen for rush of air to verify entry into pleural cavity.
  - G. Remove needle.
  - H. Secure cannula
  - I. Transport immediately in position of comfort and continue high-flow oxygen.
  - J. Frequently update vital signs, lung sounds and patient's status.
  - K. Report patient response to procedure.

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- VI. Special Instructions:  
A. Inappropriate use of Needle Thoracostomy causes pneumothorax.

Approved :  Date: 7/24/20

Approved as to Form:  Date: 7/24/20