

# NEEDLE THORACOSTOMY/ PLEURAL DECOMPRESSION PROCEDURE

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

## INDICATION

- To relieve tension pneumothorax as indicated by a combination of the following:
  - Severe dyspnea and/ or difficulty with ventilation, especially with an intubated patient
  - ALOC and or agitation
  - Absent or unequal breath sounds on affected side
  - Signs of shock
  - Neck vein distention
  - Paradoxical movement of the chest
  - Hyper resonance to percussion on the affected side
  - Tracheal shift away from the affected side

## EQUIPMENT

- 14 gauge or larger needle  $\geq$  2 inches
- Heimlich or other one-way valve
- 10 ml syringe

## PROCEDURE

- Choose appropriate site on the affected side:
  - If patient head is elevated, locate the second intercostal space, mid-clavicular line
  - If patient is flat, locate the 4<sup>th</sup> or 5<sup>th</sup> intercostal space, midaxillary line
- Prepare site with Betadine
- Attach the large gauge IV needle to a large syringe.
- With patient exhaling, introduce the needle at a 90 degree angle, just over the rib at the selected site.
- Advancing slightly superior to the rib, continue until lack of resistance or a “pop” is felt as the needle enters the pleural space.
- If the air and/ or blood returns under pressure or is easily aspirated, continue to advance the catheter superiorly and remove the needle.
- When no further air escapes, attach a one- way valve.
- Secure the catheter with the valve in a dependent position.
- Reassess patient