APPENDIX O: NEEDLE DECOMPRESSION OF TENSION PNEUMOTHORAX

1. Identify signs of a tension pneumothorax:
   a) Absent or decreased breath sounds on the affected side

   AND

   b) One or more of the following:
      i) Severe dyspnea/tachypnea
      ii) cyanosis/hypoxia
      iii) hypotension

2. Identify the site for needle decompression on the same side as the pneumothorax:
   a) The second intercostal space on the mid-clavicular line.

   or

   b) The fifth intercostal space on the anterior axillary line.

3. Cleanse the overlying skin with antiseptic solution.

4. For adults, use a 14 gauge, 3.25 inch (8.25cm) over-the-needle catheter. For children, use a 18-20 gauge, 0.8-1.6 inch (2 - 4 cm) over-the-needle catheter. Insert catheter through the skin, perpendicular to the chest wall, above the rib and direct it just over the rib. Hold in place for 5-10 seconds to allow for air decompression.

5. Remove the needle, advance the catheter to the hub, and secure in place for patient transportation.

6. If first attempt is not successful in decompressing the tension pneumothorax, a second attempt should be made at the other site on the same side.

7. If first attempt is successful, but the tension pneumothorax recurs, perform a second decompression, using a new catheter.

8. If second attempt of needle decompression does not resolve signs of the tension pneumothorax, begin rapid transport and consider other etiologies for clinical findings.