To: EMS Operational Programs  
    EMS Clinicians  
    EMS Medical Directors  

From: Timothy Chizmar, MD, FACEP  
    State EMS Medical Director

Date: February 14, 2020

RE: Protocol Change to Needle Decompression Thoracostomy (ALS) – Pediatric Patients Under 15 Years of Age - Effective Immediately

Effective immediately, the needle decompression site for pediatric patients under 15 years of age has been changed to the second (2nd) intercostal space, at the mid-clavicular line on the anterior chest wall.

The needle decompression site for patients 15 years and older will remain unchanged, namely the fifth (5th) intercostal space at the anterior axillary line (preferred) or second (2nd) intercostal space at the mid-clavicular line (backup if the 5th intercostal space is not available).

Please find a copy of the revised protocol attached: p. 257, Indications, (3) Allowable site, (b) Children under 15 years of age; this section contains the only change from the prior protocol.

For further information on this matter, please contact the MIEMSS Office of the Medical Director.
7. **AIRWAY MANAGEMENT: NEEDLE DECOMPRESSION THORACOSTOMY (NDT)**

a) **PURPOSE**

Needle Decompression Thoracostomy is the procedure of introducing a needle/catheter with a minimum length of 3.25 inches and a minimum diameter of 14 gauge (with optional add-on flutter valve attached) into the pleural space of the chest to provide temporary relief for the patient suffering from a tension pneumothorax.

b) **INDICATIONS**

1. Patients who are assessed to have a life-threatening tension pneumothorax in extremis with absent lung sounds AND clear evidence of hemodynamic compromise to include hypotension (SBP < 100 mmHg), and/or arrest

2. If traumatic arrest is suspected due to multi-system blunt trauma, or due to penetrating neck, chest, or abdominal trauma, bilateral needle decompression should be performed. Once catheters are placed, **do not remove**.

3. **Allowable site:**
   a. Adults and children 15 years of age and older:
      i. Fifth (5th) intercostal space, anterior axillary line
      ii. If fifth (5th) intercostal space site is not available, use second (2nd) intercostal space at the mid-clavicular line on the anterior chest wall
   b. Children under 15 years of age:
      i. Use the second (2nd) intercostal space, at the mid-clavicular line on anterior chest wall

c) **CONTRAINDICATIONS**

Patients whose tension pneumothorax can be relieved by the removal of an occlusive dressing from an open chest wound

d) **POTENTIAL ADVERSE EFFECTS/COMPLICATIONS**

1. Intercostal vascular or nerve injury
2. Pneumo/hemothorax
3. Direct damage to the lung
4. Pericardial/cardiac injury
5. Infection

e) **PRECAUTIONS**

1. Reassessment of catheter patency
2. Second decompression may need to be performed if reaccumulation, catheter occlusion, or dislocation is evident.