

SAN JOAQUIN COUNTY
EMERGENCY MEDICAL SERVICES AGENCY

TITLE: **Needle Thoracostomy Performance Criteria**

EMS Policy No. **2548**

NEEDLE THORACOSTOMY			
Name: _____ Date: _____ License # _____			
<p>Tension pneumothorax is the progressive build-up of air within the pleural space, usually due to a lung laceration which allows air to escape into the pleural space but not to return.</p> <p>A. <u>Needle thoracostomy should be performed to rapidly deteriorating adult or pediatric patient with severe respiratory distress with diminished or absent breath sounds exhibiting one or more of the following indicators:</u></p> <ol style="list-style-type: none">1. Restlessness, anxiety, or decreased LOC.2. Possible tracheal deviation away from the affected side (late sign).3. Shock syndrome (weak rapid pulse, hypertensive initially, with hypotension a late find).4. Distended neck veins (JVD).5. Progressively worsening dyspnea/cyanosis.6. Traumatic cardiac arrest. <p>B. <u>Potential complications:</u></p> <ol style="list-style-type: none">1. Conversion from a closed pneumothorax to an open pneumothorax2. If there is not a pneumothorax, insertion of a needle may produce a pneumothorax.3. Laceration of the lung or laceration of the intercostal vessels.			
<u>Equipment:</u>			
1. 10 or 14 gauge 3.25 inch decompression needle and catheter.		2. Betadine swab 3. 10 ml syringe 4. Tape	
Performance Criteria			Pass
1.	Uses universal precautions.		
2.	States indications and possible complications of the procedure.		
3.	Assembles equipment and selects appropriate size needle and cannula.		
4.	Selects optimal site based preferentially upon availability of access in the following order: <ol style="list-style-type: none">1. Second intercostal space, mid-clavicular line (left or right);2. Fourth intercostal space, midaxillary line (left or right) .		
5.	Prepare area with Betadine swab.		
6.	Firmly inserts the needle perpendicular to the chest wall, over the top of the rib until pleura is penetrated as indicated by one or more of the following: <ol style="list-style-type: none">a. A "popping sound" is heard, or giving away sensation is felt.b. A "hissing" noise follows evidence of a tension pneumothorax.c. Ability to aspirate free air or blood into the syringe.		

Effective: January 1, 2016
Supersedes: January 1, 2010

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Approved: Signature on file
Medical Director

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EMS Administrator

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Performance Criteria		Pass	Fail
7.	Advances the catheter and removes needle and syringe.		
8.	Secures needle hub in place with tape.		
9.	Reassesses patient lung sounds, respiratory status immediately, and every five (5) minutes thereafter.		
10.	Considers the following: a. The procedure may have to be repeated if the tension is not relieved. b. Air transport: The needle thoracostomy should be done prior to takeoff to allow for escape of air that may accumulate in the pleural space with atmospheric pressure changes.		

Please provide comments for any item that is marked as failed:

Name & Signature of Evaluator

Date

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