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| **Skill Sheet** |
| **Needle Decompression of Tension Pneumothorax** |
| **Objective:** **DEMONSTRATE** the appropriate procedure for needle decompression of a tension pneumothorax. |
| **References:** |
| PHTLS (Military Version) Eighth Edition, Jones and Bartlett Learning |
| **Evaluation:** Students will be evaluated as a Pass/Fail (P/F). The instructor will verify the accuracy of the student’s ability to properly manage a simulated tension pneumothorax on a mannequin’s thoracic section and perform a NDC by means of observing the student’s procedures and technique. |
| **Materials:** |
| Student Checklist |
| Needle decompression simulator, Betadine/alcohol prep, needle/catheter 14 gauge and 3.25”, ½ inch gauze tape. |
| **Instructor Guidelines:** |
| 1. Provide each instructor with a Student Checklist. |
| 1. Ensure student has all student-required materials. |
| 1. Read the Learning Objective and the evaluation method to the student. |
| 1. Explain the grading of the exercise. |
| 1. Allow time for the students to extract the information required from the instructor-provided scenario. |
| **Performance Steps:** |
| 1. Prepare equipment. |
| 1. Verbalize that body substance isolation (BSI) precautions were considered. |
| 1. Verbalize that the progressive respiratory distress is due to chest trauma. |
| 1. Identify the second intercostal space (ICS) on the anterior chest wall at the mid-clavicular line (MCL) on the same side as the injury; approximately two-finger widths below the clavicle. |
| 1. Verbalize that the needle to be used for the procedure is a 3.25 inch, 14 gauge needle. |
| 1. Verbalize the importance of ensuring that the needle entry site is not medial to the nipple line. |
| 1. Clean the site with an antimicrobial solution (alcohol or Betadine). |
| 1. Insert the needle into the chest.   - Remove the plastic cap from the 3.25 inch, 14-gauge needle. Also remove the cover to the needle’s flash chamber.  - Insert the needle into the skin over the superior border of the third rib, MCL, and direct the needle into the second ICS at a 90 degree angle.  - As the needle enters the pleural space, a "pop” was felt, followed by a possible hiss of air. Insure that the needle is advanced all the way to the hub.  - Remove the needle, leaving the catheter in place.  - If tension pneumothorax recurs (as noted by return of respiratory distress), repeat the  needle decompression on the injured side. |
| 1. Stabilize the catheter hub to the chest wall with ½ inch gauze tape. |
| 1. Listen for increased breath sounds or observe decreased respiratory distress. |
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| 1. Remove gloves and disposes of them appropriately. |
| 1. Document the procedure on the TCCC Casualty Card. |

Decompress the Chest: Needle Decompression

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| **Task** | **Completed** | | |
|  | **1st** | **2nd** | **3rd** |
| Verbalized that body substance isolation (BSI) precautions were considered. | **P / F** | **P / F** | **P / F** |
| Assessed the casualty to ensure the respiratory distress was due to chest trauma. | **P / F** | **P / F** | **P / F** |
| Identified the second ICS on the anterior chest wall at the MCL on the same side as the injury; approximately two-finger widths below the clavicle and not medial to the nipple line. | **P / F** | **P / F** | **P / F** |
| Cleaned the site with an antimicrobial solution. | **P / F** | **P / F** | **P / F** |
| Inserted the needle into the chest at a 90 degree angle to the chest wall. | **P / F** | **P / F** | **P / F** |
| ***INSTRUCTOR: Administratively gain control of the needle and place it in a sharps container.*** | | | |
| Stabilized the catheter hub to the chest wall with adhesive tape | **P / F** | **P / F** | **P / F** |
| Listen for increased breath sounds or observe decreased respiratory distress. | **P / F** | **P / F** | **P / F** |
| Removed their gloves and disposed of them appropriately. | **P / F** | **P / F** | **P / F** |
| Documented the procedure on the appropriate medical form. | **P / F** | **P / F** | **P / F** |

**Critical Criteria:**

\_\_\_\_\_ Did not know that the needle to be used was a 14 gauge, 3.25 inch needle.

\_\_\_\_\_ Did not recognize progressive respiratory distress as an indication for needle

decompression.

\_\_\_\_\_ Did not perform the needle decompression at the proper landmarks or on the same side as

the chest injury.

\_\_\_\_\_ Did not secure the catheter hub to the chest wall.

\_\_\_\_\_ Performed the procedure in a manner that was dangerous to the casualty.

**Evaluator's Comments:**

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| Student Name: |  | | Date: | |  | | |
| Evaluator: |  | Pass: | |  | | Fail: |  |