



HEALTH HOLDING

HAFER ALBATIN HEALTH  
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CHILDREN HOSPITAL

<b>Department:</b>	Pediatric Intensive Care Unit (PICU)		
<b>Document:</b>	Departmental Policy and Procedure		
<b>Title:</b>	Chest Tube Removal in Pediatric Patient		
<b>Applies To:</b>	All Pediatric Intensive Care Unit Staff		
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## 1. PURPOSE:

- 1.1 To ensure safe and consistent practice in removal of the chest tube by a physician assisted by a staff nurse.
- 1.2 To prevent complications.

## 2. DEFINITIONS:

- 2.1 **Chest Tube** – is a catheter inserted through the thorax to remove air and fluid from the pleural space and to re-establish normal intrapleural and intrapulmonic pressure.

## 3. POLICY:

- 3.1 Chest tube should be removed upon physician's order. Removal of tube is done by the physician and assisted by a competent staff nurse who passed the skill competency assessment on chest tube management – assisting in removal.
- 3.2 Strict sterile techniques should be maintained at all times to promote patient's safety.
- 3.3 Always ensure correct patient's identification (4 names for the Saudi and complete name for the Non – Saudi and Medical Record Number) and correct site.
- 3.4 If more than one tube is inserted, the appropriate tube to be removed must be identified by the physician according to the chest x – ray.

## 4. PROCEDURE:

- 4.1 Verify physician written order for the procedure.
- 4.2 Identify patient correctly using two identifiers (4 names for the Saudi and complete name for the Non – Saudi and Medical Record Number).
- 4.3 Explain the procedure to the patient/parent.
- 4.4 Prepare and organize all needed equipment on the trolley and bring it to the patient's bed side.
- 4.5 Verify the correct site and location of the procedure.
- 4.6 Provide privacy throughout the procedure and position patient comfortably. Reinforce explanation to the patient/parents the procedure to be done.
- 4.7 Connect to cardio – respiratory monitoring.
- 4.8 Perform hand hygiene.
- 4.9 Assist in clamping the chest tubes by the physician. Clamping is indicated:
  - 4.9.1 To assess if chest tube is ready for removal.
  - 4.9.2 To assess location of an air leak source (bubbling will be continuous in the water seal compartment) for less than a minute.
  - 4.9.3 To assess bubbling and fluctuation/ tidaling of the unclamped chest tube when chest tubes are attached to the same drainage unit.
- 4.10 Assist patient into comfortable semi fowler's position with a disposable pad underneath the affected site. Adjust height of bed if necessary.

- 4.11 Administer pain medication as ordered before removal of the chest tube.
- 4.12 Don gloves.
- 4.13 Prepare dressing to be placed on the chest tube site after removal.
- 4.14 Remove chest tube dressing. Leave sternal incision dressing intact.
- 4.15 Assist the physician in the performance of the procedure:
  - 4.15.1 Supply Povidone – Iodine and sterile gauze swabs and clean the drain site aseptically.
  - 4.15.2 Provide scalpel to cut the knot of the suture.
  - 4.15.3 Instruct the patient to breathe to the maximum and to hold his breath.
  - 4.15.4 The chest tube is clamped pull out tube instantly with physician's instruction during inspiration.
  - 4.15.5 Allow the patient to exhale and relax.
- 4.16 Apply pressure with sterile gauze to the wound site.
- 4.17 Cover the wound with clear, occlusive dressing, making sure all sides are securely attached to the skin for an airtight seal.
- 4.18 Monitor the site for drainage, bleeding and infection.
- 4.19 Request for chest X – ray after removal of the chest tube as ordered.
- 4.20 Discard all supplies including chest tube and drainage bottle in a bio – hazardous garbage bag.
- 4.21 Observe patient for signs of respiratory distress caused by loss of negative intra pleural pressure or tension pneumothorax.
- 4.22 Change dressing aseptically every 24 hours.
- 4.23 Document in the nurses notes all nursing care rendered, all treatment given, time of chest tube removal, name of physician who performed the procedure and patient's condition and tolerance to procedure.

## **5. MATERIALS AND EQUIPMENT:**

- 5.1 Dressing Set
- 5.2 Sterile Gauze 4x4
- 5.3 Silk Suture 2/0 and 3/0
- 5.4 Povidone – Iodine Solution
- 5.5 Scalpel
- 5.6 Chest Tube Clamps
- 5.7 Adhesive Tapes
- 5.8 Sterile Gloves
- 5.9 Sterile Water

## **6. RESPONSIBILITIES:**

- 6.1 Physician
- 6.2 Nurses




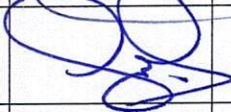


## **7. APPENDICES:**

N/A

## **8. REFERENCES:**

- 8.1 Kingdom of Saudi Arabia, Ministry of Health Baish General Hospital, 2018.

9. APPROVALS:

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