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Effective Date:	09-30-2021	
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Department/Section:	Neonatal Intensive Care Unit	
Document Title:	ASSISTING IN NEONATAL CHEST TUBE PLACEMENT	

## **PURPOSE:**

To outline the steps in assisting physicians for neonatal chest tube placement for newborn patients in the Neonatal Intensive Care Unit.

### SCOPE:

Applies to all Neonatal Intensive Care Unit staffs of Dr. Pablo O. Torre Memorial Hospital

## **PERSON RESPONSIBLE:**

Pediatric Consultants, Resident Physicians, Registered Nurses, Registered Midwife



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#### PROCEDURE:

- 1. Chest tube insertions are done in the emergency department, NICU, or the operating room, depending on the situation.
- The Doctor/ Surgeon secures an informed consent from the parents before the operation starts.
- 3. The Circulating Nurse prepares the following needed materials:
  - a) Dressing Trolley
  - b) Scalpel (#11)
  - c) Chest Drain Insertion Pack
  - d) Sterile drapes
  - e) Small Suturing pack
  - f)Sterile Water for Irrigation (1000mls)
  - g) Chest Drain Clamps- 1 per drain
  - h) Steristrips
  - i)Chest Drai
  - j)Chest tube drainage system prepared as per manufacturer's instructions)
  - k) Analgesia and sedation (As per doctor's order)
  - l)Local Anaesthetic (as prescribed by the doctor)
  - m) 1, 3 and 5 ml syringes
  - n) Sterile Gauze Swabs
  - o) Suturing material (according to doctor's preference and order)
  - p) Sterile gloves
  - q) Cleaning agent
  - r) Sterile Surgical Gown
  - s) Drain Connection(s)
  - t)Disposable incontinence pad
  - u) Light source for improved visualisation
  - v) other material or equipment needed by the doctor/ surgeon.
- 4. The Surgeon, Resident or Intern and Circulating Nurse wash their hands before and after the operation.



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- 5. The Surgeon, Resident or Intern and Circulating Nurse don mask, gown and gloves with the use of sterile technique and universal precautions.
- 6. The team prepares and drapes the area of insertion. Patient is positioned with ipsilateral arm over the head to "open up" the ribs.
- 7. The Surgeon injects a local anesthetic into the skin of the chest.
- 8. The Surgeon, then makes a puncture through the chest wall between the ribs and over the area of lung needing drainage. The best place for insertion is the fourth intercostal space in the midaxillary line, between the 4<sup>th</sup> and 5<sup>th</sup> ribs.
- 9. The Surgeon makes a gathering stitch (suture) around the opening in the skin.
- 10. The Surgeon inserts a tube (catheter) into the lung, and the gathering suture is pulled tight around the tube.
- 11. The Surgeon sutures the tube to the skin near the insertion opening. Then a chest x-ray is done to confirm the location of the end of the catheter within the lung. The other end of the catheter is placed in a bottle of water and all connections are secured. The bottle is placed on the floor beneath the bed (dependent drainage) and may be connected to a small amount of suction.

#### REFERENCE:

Moores, D. (2018, September 29). *Chest Tube Insertion (Thoracostomy)*. Healthline. https://www.healthline.com/health/chest-tube-insertion

GUIDELINE ON THE CARE OF CHILDREN WITH CHEST DRAINS. (2015, July 27). Our Lady's Children's Hospital, Crumlin.

https://www.olchc.ie/Healthcare-Professionals/Nursing-Practice-Guidelines/Chest-Drains-July-20151.pdf



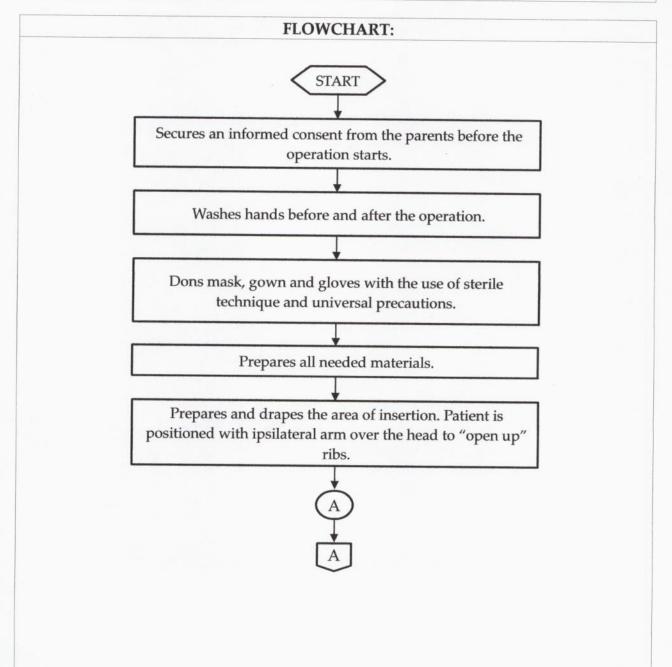
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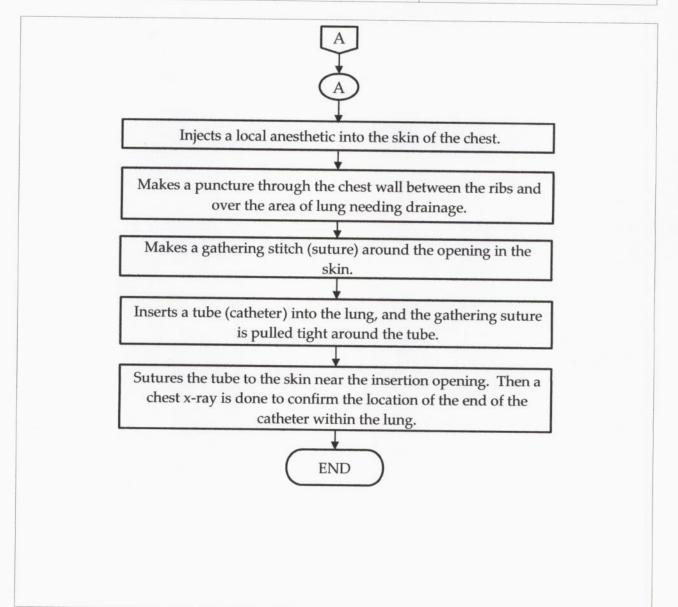


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KEYTASKS	PERSON RESPONSIBLE
<ol> <li>Secures an informed consent from the parent or relatives of the neonate.</li> </ol>	Attending Physician
2. Prepares the needed materials.	Circulating Nurse
<ol> <li>Follows Infection Prevention and Control practices before and after having direct contact with the neonates.</li> </ol>	Surgical Team
4. Prepares and drapes the area of insertion. Positions patient with ipsilateral arm over the head to "open up" the ribs.	Staff Nurse
5. Injects a local anesthetic into the skin of the chest.	Surgeon
6. Makes a puncture through the chest wall between the ribs and over the area of lung needing drainage. The best place for insertion is the fourth intercostal space in the midaxillary line, between the 4 <sup>th</sup> and 5 <sup>th</sup> ribs.	Surgeon
7. Makes a gathering stitch (suture) around the opening in the skin.	Surgeon
8. Inserts a tube (catheter) into the lung, and the gathering suture is pulled tight around the tube.	Surgeon
9. Sutures the tube to the skin near the insertion opening. Then a chest x-ray is done to confirm the location of the end of the catheter within the lung.	Surgeon



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