HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

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| **Department:** | Neonatal Intensive Care Unit (NICU) | | |
| **Document:** | Departmental Policy and Procedure | | |
| **Title:** | Insertion of Nasogastric/Orogastric Tube | | |
| **Applies To:** | All NICU Staff | | |
| **Preparation Date:** | January 12, 2025 | **Index No:** | NICU-DPP-044 |
| **Approval Date:** | January 26, 2025 | **Version :** | 2 |
| **Effective Date:** | February 26, 2025 | **Replacement No.:** | NICU-DPP-044 (1) |
| **Review Date:** | February 26, 2028 | **No. of Pages:** | 4 |

## 1. PURPOSE:

1.1 To safely provide route for enteric feedings for infants who cannot feed orally.
1.2 To administer medications.
1.3 To decompress or empty stomach.

## 2. DEFINITONS:

2.1 **Nasogastric tubes** are inserted through the nares and then passed into the stomach whereas orogastric tubes are inserted via the mouth and then passed into the stomach.
2.2 Abbreviations:
NG: nasogastric, OG: orogastric, CPAP: Continuous Positive Airway Pressure

## 3. POLICY:

3.1 Nasogastric/ orogastric tubes are inserted by staff nurses with or without written order
3.2 Indications:
- 3.2.1 Infants receiving mechanical ventilation or nasal CPAP.
- 3.2.2 Feeding and administration of enteral medications for:
  - 3.2.2.1 Preterm infants < 34 weeks gestation.
  - 3.2.2.2 infants with insufficient oral intake due to poor sucking.
  - 3.2.2.3 Infants with respiratory symptoms preventing oral feeding.
- 3.2.3 Decompress and empty the stomach for surgical or non-surgical conditions.

3.3 Functioning suction apparatus and catheters should be available and ready in case there is any regurgitation.
3.4 Do not push against any resistance. Perforation occurs even with little force or sensation of resistance Evaluate for possible esophageal perforation after insertion if there is :
- 3.4.1 Bloody aspirate.
- 3.4.2 Increased oral secretion.
- 3.4.3 Acute respiratory symptoms, pneumothorax.
- 3.4.4 Failure to obtain gastric contents and air at calculated depth.

## 4. PROCEDURE:

4.1 Identify the patient by four (4) names for Saudi and complete name for Non-Saudi and medical record number.
4.2 Connect infant to vital signs monitor and monitor infant's heart rate and observe for respiratory distress throughout the procedure.
4.3 Prepare required equipment.
4.4 Choose the appropriate size tube (Table I). When feeding an extubated infant who is still experiencing
some respiratory symptoms, use an orogastric tube, even in large infants, to keep from blocking the nares.

**Table 1:appropriate size of nasogastric/orogastric tubes:**

| Neonate's weight | Enteral feeding tube size |
|---|---|
| <1000 gm | 5-6 Fr |
| 1000-2500gm | 6-8 Fr |
| >2500 gm | 8-10 Fr |

4.5 Swaddle infant to provide comfort and provide sucrose for two minutes prior to the procedure, according to the neonatology department policy.

4.6 Wash hands and put on non-sterile gloves (risk of contact with body fluids).

4.7 Measure the NG tube from the tip of the infant nose (or mouth for OG) to the ear lobe, plus from the earlobe to halfway between the xiphoid and umbilicus. Mark length on the feeding tube with a loop of tape.

4.8 Clear nose and oropharynx by gentle suctioning if necessary.

4.9 Position the infant supine with his head turned to the side and head of bed elevated.

4.10 Lubricate the tip of the tube into about 3 inches of sterile water.

4.11 Insert the tube through the nose or side of the mouth and advance it gently into the esophagus until it reaches the pre-measured insertion length.

4.12 If you encounter resistance do not push past the resistance, withdraw the tube slightly and attempt at a different angle. Stop procedure if there is onset of any respiratory distress, cough or struggling.

4.13 Secure the NG tube with tape using the least amount of tape as possible and apply the tape over pectin based barrier to prevent skin breakdown.

4.14 Tube Placement:

- 4.14.1 The correct position for a NG tube is the mid- or distal stomach.
- 4.14.2 After insertion, measure the length of the tube from the edge of the nose (or mouth for OG tubes) to the external end of the tube and document it on the nurses progress notes in the infant's medical record and on the Naso/orogastric tube position check list. Changes in this measurement helps detect tube displacement.
- 4.14.3 Checking tube position is required at the following times (tube can become dislodged after initial placement):
  - 4.14.3.1 Before each intermittent feeding.
  - 4.14.3.2 Before medication administration.
  - 4.14.3.3 Every 4 hours with continuous feedings.
- 4.14.4 Check tube position by:
  - 4.14.4.1 Use 5 ml syringe to aspirate any contents; describe (e.g. color: clear, light yellow green, milk, mucous), measure it and determine its pH to confirm placement (stomach pH is 4 or less).
  - 4.14.4.2 Check any change in the tube marking from the nose (or mouth for orogastric tubes) to the external end of the tube. These tube markings enable accurate measurement of depth and length and the position of the tube.
  - 4.14.4.3 The gold standard for confining tube placement is an X-ray. Although radiography is the most reliable indicator of feeding tube position, X-rays should not be 'routinely' used. It only confirms tube positioning at the exact time of the X-ray.
- 4.14.5 Checking the position of the tube by auscultation for a "pop" over the left upper quadrant of the abdomen after 1-2 cm of air are rapidly passed with a syringe into the NG is not reliable as the "pop" can be heard even if the tube is in the esophagus.
- 4.14.6 Suspect perforation or misplacement if:
  - 4.14.6.1 pH is more than 5.
  - 4.14.6.2 No air or fluid is returned.
  - 4.14.6.3 If there is onset of respiratory distress.
  - 4.14.6.4 Blood or straw coloured fluid with streaks of bright blood (could indicate pleural placement).
  - 4.14.6.5 Difficult insertion.

4.15 For gravity drainage, attach specimen trap and position it below level of stomach, and for feeding, attach a syringe.
4.16 Change the NG tube every 3 days and alternate nostrils.
4.17 Check the integrity of the nose and the surrounding skin and document daily paying particular attention to the position of the tube as it exits the nose and the tape. Reposition as required to prevent tissue damage.
4.18 Pinch or close gastric tube during removal to prevent emptying contents into pharynx.
4.19 Special situations:
4.19.1 Postoperative neonates with trachea-esophageal fistula repair have NG tube placed in the Operating room. If this tube is dislodged, do not replace it yourself. Surgeons must be notified as re-insertion may perforate the surgical site.
4.19.2 For infants receiving CPAP, orogastric tube is needed for decompression of air that may enter the stomach due to the increased air flow related to the manner of ventilation. If the neonate is receiving feeds, clamp the tube for 30 minutes after feeds and then re-open it to allow for gastric decompression.
4.19.3 Use orogastric tube for infants with cleft palate malformation.

## 5. MATERIALS AND EQUIPMENT:

5.1 Non sterile gloves (risk of contact with body fluids)
5.2 Appropriate size naso / oro /gastric tube
5.3 Lubricant; sterile water or saline
5.4 Syringe
5.5 Stethoscope
5.6 Measuring tape (to measure external length of tube )
5.7 pH indicator paper
5.8 Specimen trap
5.9 Suction equipment (in case there is any regurgitation)
5.10 Cardiac monitor
5.11 Adhesive tape

## 6. RESPONSIBILITIES:

6.1 Physician
6.2 Nurse

## 7. APPENDICES:

N/A

## 8. REFERENCES:

8.1 Sehnert N, Ramasethu J. Gastric and Transpyloric tubes. Atlas of Procedures in Neonatology. 2OI2;291-298
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8.3 Matheny N, Wehrle M, Wiersem L, et al. Testing feeding tube placement: auscultation versus pH method. Am J Nurs 1998t 98: 37
8.4 Gallaher K, Cashwell S, Hall V et al. Oro gastric tube insertion length in very low birth weight infants. J Perinatol 1993; I3: 128.

## 9. APPROVALS:

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