Nasogastric/Orogastric Tube Insertion and Maintenance in Adults Policy and Procedure

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1.0 Purpose

To outline the practice standards and guidelines for the management of nasogastric (NG) and orogastric (OG) tube insertion, maintenance and gastric decompression in adults.

2.0 Scope

Nurses, Nurse Practitioners (NP), Physicians, Registered Dietitians, Pharmacists and Pharmacy Technicians.

3.0 Policy

3.1 A Provider order is required to insert and remove a NG or OG tube including type and/or size.

3.2 Confirmation with the Provider is required for a nurse to insert a NG or OG tube for whom there is an increased risk of aspiration or malposition such as:

a. Confused/uncooperative during insertion
b. Sedated
c. Decreased cough-gag reflex/swallowing impairment
d. Decreased level of consciousness
e. Mandible wiring
f. Esophageal or Gastric Anastomosis following surgery (full/partial gastrectomy)
g. Esophageal Varices or GI Bleeding
h. Suspected / Confirmed basal skull fracture or facial fractures
i. Suspected / Confirmed spinal fracture (cervical)
j. Repair of frontal sinus
k. Recent ear, nose or throat surgery
l. Epistaxis or sinusitis
m. Intubated with endotracheal tube or with tracheostomy

3.3 Insertion of a NG or OG tube will be performed by nurses and NP's with demonstrated Competence.

3.4 Confirmation of tube placement after insertion/reinsertion must be verified using a chest x-ray by Provider or Radiologist when not inserted in Interventional Radiology or endoscopy. Following placement, Provider or Radiologist shall confirm and document that tube is ready for enteral feeding.

3.5 When a guide wire is used for insertion, the guide wire will remain in situ until the x-ray has been reviewed by the authorized Provider and appropriate placement is confirmed. On confirmation of placement flush tube with 10 ml of water and remove stylet with gentle traction.

4.0 Procedure for Tube Insertion:

4.1 **Collect Supplies:**

a. Enteral nutrition feeding tube (Levin or small bore weighted feeding tubes)
b. Water soluble lubricating jelly
c. Oxygen saturation monitor
d. Wall suction set up
e. Tape/ securement device
f. Tissues/towel
g. Emesis basin
h. Cup of water and straw for patient (unless contraindicated)
i. Penlight/flashlight
j. 60 mL compatible syringe
k. Sterile water for flushing

4.2 Follow Routine Practices Policy and Procedure.

4.3 Position the patient in Semi-Fowler position in bed (head of the bed elevated at 30-45 degrees) unless contraindicated (e.g., spinal precautions).

4.4 Use penlight/flashlight to examine patient's nasal/oral cavity prior to insertion.

4.5 To determine the insertion length for a NG or OG tube:
Measure from the tip of the nose to the earlobe and from the earlobe to the tip of the xiphoid process. Mark the length of the tube to be passed with a small piece of tape or marker on tube.

4.6 Apply oximeter to measure patient's oxygen saturation throughout the procedure.

4.7 Lubricate 2-3 inches of the distal end of the tube with water soluble lubricating jelly.

4.8 NG Tube Insertion:

a. Instruct patient to extend head and neck back against pillow. Support patient's head with your nondominant hand while inserting NG tube.
b. Insert tube slowly through nare with curved end pointing downward and towards nasal septum. Proceed slowly and gently.
c. Once past the posterior nasopharynx, stop tube advancement, allow patient to relax.
d. Instruct patient to flex head forward, take a small sip of water and swallow or dry. swallow (if oral fluids contraindicated). Advance tube 2.5 cm to 5 cm with each swallow.
e. If patient begins to cough, gag, or choke, withdraw slightly and stop tube advancement. Instruct patient to breathe easily and take sips of water, unless contraindicated.
f. Check back of oropharynx using flashlight and tongue blade for possible coiling of tube.
g. While advancing tube, have patient flex neck with chin down to help with passage of tube. Continue to advance the tube until the marked position on the tube is reached.
h. Secure the NG tube by using an adhesive tape or securement device to the patient's bridge of nose.

4.9 Small Bore Weighted Feeding Tube Insertion:
Follow insertion instructions above with these additional steps:

a. Once measured, use the printed centimeter marks on the tubes to aid insertion. These marks will also help check for tube migration.

b. Instill 10cc sterile water before beginning insertion to activate the inside Hydromer coating.
c. To activate the Hydromer coating on the weighted tip of the tube, submerge the weight assembly in the water for at least five seconds for lubrication.
d. Once placement has been confirmed, reactivate the internal Hydromer by instilling 10cc sterile water to reactivate the Hydromer coating before removing the stylet.
e. Once stylet is removed it cannot be reinserted.

4.10 OG Tube Insertion:

a. Insert tube into the oral cavity over the tongue, proceed slowly and gently.
b. When the tube hits the oropharynx, if the patient is able, have patient flex his/her head forward and swallow water from cup with a straw. If a straw or oral fluids is contraindicated, or is unsafe to do so, ask the patient to dry swallow if able.
c. If patient begins to cough, gag, or choke, withdraw slightly and stop tube advancement. Instruct patient to breathe easily and take sips of water, unless contraindicated.
d. Continue to advance the tube until the marked position on the tube is reached.
e. Secure the OG tube by using an adhesive tape or securement device to the patient's cheek.
f. Secure the end of the tube to patient's gown by wrapping tape around the tube and taping it to the patient's gown.
g. Document in the Enteral Nutrition Assessment including tube size and length in comment box.

4.11 Provide mouth care at a minimum every 4 hours and PRN for patients with enteral tubes.

4.12 Verify Tube Placement Every Shift and Prior to Initiation of Enteral Nutrition Feeds:

a. Mark the tube's exit site immediately after chest x-ray confirmation and documentation of placement. Observe for change in length of external portion of the feeding tube.
b. Assess the abdomen using auscultation, palpation and inspection to evaluate for absent or abnormal bowel sounds or characteristics. If the abdomen is distended, tender and/or tense, this may indicate misplaced feeding tube.
c. Auscultate lung sounds, assess for coughing, changes in lung sounds and any signs and symptoms of respiratory distress, as this may indicate misplaced feeding tube.
d. Document findings of each verification assessment.

4.13 Tube Patency and Declogging Tubes:

a. Routine water flushes should be administered as per order for continuous feeds, before and after each intermittent feeding, medication administration and after checking gastric residuals. Use sterile water for flushing with critically ill or immunocompromised patients (patients in ICU).
b. If a feeding tube is not in use, flush twice daily with minimum of 30 mL water or as per order.
c. If feeding tube becomes clogged, follow protocol in the Enteral Feeds – New Start Order Set and procedure as follows:
    i. Dissolve one crushed Pancrelipase tablet mixed with one crushed Sodium Bicarbonate tablet in 10 mL warm water. Sterile water is the preferred diluent for medication administration.
    ii. Draw up mixture in syringe

iii. Attach an empty 10 mL syringe to the feeding tube, then draw back on the plunger of syringe to decompress all air and fluid from the feeding tube
iv. Pinch off feeding tube and discard syringe
v. Attach new syringe with Pancrelipase and Sodium Bicarbonate to end of clogged feeding tube
vi. Instill the solution into the feeding tube using gentle pressure with a back and forth motion
vii. Clamp the tube for 15-30 minutes
viii. Flush the tube gently with 20 mL warm water
ix. If unable to flush/unclog the tube, may repeat process up to 3 times
x. Notify provider if unable to unclog the tube after 3 attempts

4.14 Gastric Decompression

a. Follow gastric decompression orders:
   i. Recommended setting for "Low" suction (unless otherwise specified by Provider) is minus 40-60 mmHg and no more than 80 mmHg.
   ii. If using a Salem-Sump tube, ensure that the vent of the tube is secured in an upright position towards the patient's shoulder.
b. Ongoing assessment for:
   i. Tube patency.
   ii. Drainage type and volume.
   iii. Proper function of suction (if applicable)
c. Document gastric output volume at end of each shift in the Intake and Output Assessment.

4.15 Dressing, Skin and Tube Care

a. Assess patient's comfort related to tube placement every shift + PRN.
b. Skin Care for NG and OG Tubes:
   i. Cleanse around tube exit site daily with water and soap as tolerated. Q-tip or gauze may be used to swab gently around the site.
   ii. Rinse skin and ensure skin is dry.
   iii. Change tape/securement device q7days + PRN.

4.16 Documentation

Document in the Enteral Nutrition Assessment and Gastrointestinal Assessment as applicable.

5.0 Definitions:

Enteral Nutrition: The delivery of nutrients beyond the esophagus via feedings tubes. It is indicated for patients whose gastrointestinal tract is functional and whose oral energy/nutrient intake is insufficient to meet nutritional need. The decision to initiate enteral nutrition support is based on a nutritional assessment and should be a collaborative decision involving the patient and/or family/substitute decision maker.

Levin Tube: Radiopaque stomach tube made from PVC that may be used for short term gastric tube feeding or for decompression.

Nasogastric tube (NG): a pliable polyurethane tube that is inserted through the patient's nasopharynx into the stomach.

Orogastric tube (OG): a pliable polyurethane tube that is inserted through the patient's oropharynx into the stomach.

Provider: A healthcare professional who is permitted by Federal and Provincial legislation, their regulatory college, and practice setting (where applicable) to place patient orders and/or prescribe medications.

Salem-Sump Tube: Radiopaque double lumen PVC tube, one for suction drainage, one for sump vent primarily used for decompression.

Small Bore Weighted Feeding Tube: A pliable polyurethane tube inserted into oropharynx, or nasopharynx to the stomach. This tube includes a stylet to assist with insertion. This tube is only used for enteral feeding.

6.0 Related Documents

Total Parenteral Nutrition (Adult) - Policy and Procedure
Enteral Nutrition for Adults Policy and Procedure

7.0 Key Words

Nasogastric, Orogastric, NG, OG, feeding tube, gastric feeding tube, enteral, weighted tube

8.0 Reviewed by/Consultation with

Gastroenterologist
Registered Dietitian Group
Professional Practice Clinicians

9.0 References

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