Department of Health Government of Nunavut	NURSING POLICY, PROCEDURE AND PROTOCOLS **Community Health Nursing**	
TITLE:	**SECTION:**	**POLICY NUMBER:**
Nasogastric	Clinical Procedures	11-007-00
EFFECTIVE DATE: / **REVIEW DUE:**	**REPLACES NUMBER:**	**NUMBER OF PAGES:**
February 10, 2018 / February 2021		5
APPLIES TO:		
Community Health Nurses		

POLICY 1:

Nasogastric (NG) drainage tubes are inserted for drainage of gastric content. It is the registered nurses responsibility for the care and maintenance of NG tubes.

POLICY 2:

Insertion and removal of NG tubes requires a physician order, except in urgent and emergency situations. Registered nurses are only permitted to insert and remove NG tubes in populations not at high risk for misplacement.

PRINCIPLES:

Registered Nurses are not authorized to insert NG tubes in high risk populations:

Nasocranial surgery or trauma, maxillofacial trauma, pharyngeal surgery or trauma, acute head injury, basal skull fracture, cerebrospinal fluid rhinorrhea, post-op esophageal and gastric surgery, recent radiation therapy to the mediastinal area, or known or suspected partial obstruction in the naso-pharyngeal or oro-pharyngeal areas.

DEFINITIONS:

Levine® nasogastric tube: Rigid single lumen tube with no venting ability.

Salem® nasogastric tube: The Salem Sump® Tube is a rigid double lumen tube, comprised of a large lumen for suction drainage and a smaller vent lumen through which outside air is drawn.

Anti reflux valve: A one way air vent valve that prevent gastric fluid backing up into the vented lumen of the Salem® nasogastric tube.

RELATED POLICIES, GUIDELINES AND LEGISLATION:

Procedure 11-007-01 Nasogastric Tubes: Nursing Considerations
Procedure 11-007-02 Insertion and Maintenance

REFERENCES:

Potter, P.A. & Perry, A.G. (2010). *Clinical Nursing Skills & Techniques*, 7th edition, Mosby: Toronto.

PROCEDURE 11-007-01

NURSING CONSIDERATIONS:

Policy 11-007-00: *Nasogastric Drainage Tube* relates to Inserting and Maintaining a Nasogastric Tube for Gastric Decompression (refer to Potter & Perry, 2010, p. 914) for additional detailed procedures).

1. Prior to gastric drainage tube placement, review the chart for client conditions that may increase the risk of tube misplacement. This includes the following client groups:
   - Nasocranial surgery or trauma, maxillofacial trauma, pharyngeal surgery or trauma, basal skull fracture, cerebrospinal fluid rhinorrhea, post-op esophageal and gastric surgery, recent radiation therapy to the mediastinal area, or known or suspected partial obstruction in the naso, oro pharyngeal areas.

2. Levine® tubes are not recommended for extended periods of drainage.
   - Following the application of suction, tissue may enter the drainage eyes of the tube and cause a substantially higher increase in vacuum pressure when the stomach and tube are empty.

3. Salem Sump® Tubes have two lumens; a larger lumen acts as a drain and a smaller lumen acts as a vent.
   - The continuous venting of atmospheric air through the smaller tube allows continuous drainage through the larger tube and thus prevents tissue grab and high suction levels which traumatize tissue.

4. Never clamp off the air vent, connect to suction or use for irrigation.

5. Tube placement verification: Air auscultation will **not** be utilized to determine either initial or on-going placement as research has demonstrated that it is unreliable.

6. Do not give more than 30 ml of water at a time when facilitating insertion.

7. NG insertion is very uncomfortable for the client; continually assess the client during the procedure.

8. It is not recommended that Salem/Levine drainage tubes be used for feeding purpose. However, if this occurs, follow Policy 11-006-00: *Enteral Nutrition*.

9. Geriatric considerations:
   a. Remove any ill-fitting dentures prior to NG tube insertion
   b. Oral and nasal mucosal drying may be present; ensure adequate lubrication for insertion.

PROCEDURE 11-007-02

PROCEDURE 1: INSERTION

1. Nurses may insert NG tubes as outlined in Potter & Perry (2010, p.914), except in clients at risk for misplacement (see Policy 11-007-00: *Nasogastric Drainage Tube*).

2. Verify placement and patency of NG tube daily and prior to administration of medications, if administered through the NG tube (refer to Procedure 11-006-01: *Enteral Nutrition, Nursing Considerations* and 11-006-02: *Enteral Nutrition, Care of Feeding Tubes*):

    a. Aspirate fluid and measure pH level

    b. Measurement of the external length of the tube daily

    c. Appearance of aspirated fluid

    d. Chest x-ray verification if tube suspected of migration

PROCEDURE 2: IRRIGATION

1. Nurses may irrigate NG tubes as outlined in Potter & Perry (2010, p. 919).

2. Routine irrigation of an NG tube is not required if draining well.

3. Perform hand hygiene and apply gloves.

4. Verify tube placement as per Procedure 1: Insertion. Re-connect NG tube to connecting tube.

5. Draw up 30ml of normal saline into catheter tip syringe.

6. Clamp NG tube. Disconnect from connecting tubing and lay end of connection tubing on towel.

7. Insert tip of irrigating syringe into end of NG tube. Remove clamp. Hold syringe with tip pointed at floor and inject saline slowly and evenly. Do not force solution.

8. Do not use the air vent lumen on the Salem tube for irrigation, as it may clog.

9. If resistance occurs, check for kinks in tubing. Turn client onto left side. Repeated resistance should be reported to the physician.

10. After instilling saline, immediately aspirate, or pull back slowly on syringe to withdraw fluid.

    a. If amount aspirated is greater than amount instilled, record difference as output.
    b. If amount aspirated is less than amount instilled, record difference as intake.

11. Use a syringe to place 10ml air into blue pigtail of the Sump tube, to ensure patency of air vent.

12. Reconnect NG tube to drainage or suction. Repeat irrigation if solution does not return.

13. Remove and discard gloves and perform hand hygiene.

PROCEDURE 3: SUCTIONING

Establish the suction setting for Salem® tube:

> **Intermittent Suction from a Thermotic Pump (Gomco):** Set suction on "high" setting (e.g. Gomco, 120mmHg.): Use of intermittent suction at this level assures that the level of suction reaching tissue at the drainage eyes of the Salem Sump® Tube will never exceed 20mmHg, thus staying below the level of possible ulceration.
>
> **Intermittent Suction from a Central Suction Source**: Set suction at low level, and increase suction until fluid flow or bubbling is observed in the suction drainage lumen of the Salem Sump® Tube.
>
> **Continuous Suction:** Set suction at a low level and increase suction until flow or bubbling is observed in the suction drainage lumen of the Salem Sump® Tube. Suction should be applied at low levels to avoid overpowering the sump.

Regardless of the type of suction used, it is essential that the vent not be closed while suction is applied to the tube. The Salem Sump® Tube is designed not to occlude. Closing the vent would stop the sump action of the tube, and result in the same problems inherent in Levin tubes.

Establish the suction setting for Levin® tube:

> Use intermittent low suction (80-120mmHg) unless otherwise ordered.

PROCEDURE 3: DISCONTINUATION

Nurses may discontinue NG tubes as outlined in Potter & Perry (2010, p.919).

DOCUMENTATION:

Document the following in the client's health record:

a. Date, time, type, size and route of insertion

b. Initial external length measurement

c. Any special care requirements

d. X-ray verification

e. Verification of tube placement – measurement of external length of tube, consistency, colour, quantity and pH result of gastric aspirate

f. Client response (insertion, removal)

g. On fluid management record (as required), quantity of drainage, quantity and type of irrigation used.

REFERENCES:

Potter, P.A. & Perry, A.G. (2010). Clinical Nursing Skills & Techniques, 7th edition; Mosby: Toronto.

Metheny N.A., Titler M. (2001). Assessing Placement of Feeding Tubes, *American Journal of Nursing,* 101(15) pp.36-45.

Kendall Company (2000). *Clinical considerations In The Use Of The Argyle Salem Sump Tube With Salem sump Anti-Reflux Valve*

Approved by:	Effective Date:
11 FEB 2011 **Chief Nursing Officer** **Date**	April 1, 2011
February 11, 2011 **Deputy Minister of Health and Social Services** **Date**	