Providence Health Care	Department: **Respiratory Services**	Date Originated: September 1986 Reviewed/Revised: **November 2008**
PROCEDURE	Topic: Medical/Surgical – Nasotracheal Suctioning (Respiratory Therapy) Number: B-00-12-12061	Related Links:

APPLICABLE SITES:

St. Paul's Hospital
Mount Saint Joseph Hospital

GENERAL INFORMATION:

Nasotracheal suctioning is intended to remove accumulated secretions from the tracheal and nasopharyngeal areas that cannot be removed by the patient's spontaneous cough or other less invasive procedure such as yankeur mouth suction.

LIMITATIONS:

- Is a blind procedure with inherent risks and complications
- Not recommended in combative or uncooperative patients
- Application of suction should not exceed 15 seconds

INDICATIONS:

Inability to clear secretions in the large and medium sized airways that persist in spite of the patient's best cough effort.

CONTRAINDICATIONS:

- Occluded nasal passages
- Nasal bleeding
- Epiglottitis or croup (absolute)
- Acute head, neck, or facial injury
- Coagulopathy or bleeding disorder (INR > 1.3; PTT > 40; platelets < 50 000)
- Laryngospasm
- Irritable airway
- Upper respiratory tract infection
- Tracheal surgery
- Gastric surgery with high anastomosis
- Myocardial infarction
- Bronchospasm

HAZARDS AND COMPLICATIONS:

- Mechanical trauma
  - Perforation of pharynx
  - Nasal irritation or bleeding
  - Tracheitis
  - Mucosal hemorrhage
  - Laceration of nasal turbinates
- Hypoxemia
- Cardiac dysrhythmias or cardiac arrest
- Bradycardia
- Hypertension or hypotension
- Respiratory arrest
- Uncontrolled coughing
- Gagging or vomiting
- Laryngospasm
- Bronchoconstriction or bronchospasm
- Discomfort and pain
- Nosocomial infection
- Atelectasis
- Misdirection of catheter
- Pneumothorax
- Increased intracranial pressure
  - Intraventricular hemorrhage
  - Exacerbation of cerebral edema

ASSESSMENT OF NEED:

A baseline assessment for any indications of respiratory distress and the need for nasotracheal suctioning should be performed prior to initiating the procedure. The assessment should include the following:

- Chest auscultation
- Heart rate
- Heart rhythm and quality
- Respiratory rate
- Breathing pattern
- Evidence of increased work of breathing
- Oxygen saturation
- Skin colour
- Skin perfusion characteristics
- Effectiveness of spontaneous cough

Nasotracheal suctioning should only be performed by a skilled caregiver, and only when other methods to remove secretions from the airway have failed.

Nasotracheal suctioning should NOT be performed if the patient has an adequate and effective cough effort.

EQUIPMENT:

- Personal protective equipment
- Suction setup (regulator, canister, suction tubing)
- Sterile suction catheter kit
- Sterile water or normal saline
- Water soluble lubricant
- Oxygen therapy equipment
- Pulse oximeter
- Cardiac monitor (if in critical care areas)
- Emergency resuscitation equipment readily available
- Nasopharyngeal airway if frequent suctioning required

PROCEDURE:

1. Gather required equipment and supplies.
2. Review laboratory coagulation results (INR > 1.3; PTT > 40; platelets < 50 000).
3. Explain procedure to patient and obtain consent.
4. Wash hands and don personal protective equipment as indicated.
5. Adjust vacuum pressure to 100 – 140 mmHg.
6. Place patient in semi-Fowler's position if tolerated.
7. Using sterile technique, open the suction catheter kit and put on the sterile glove.
8. Open the sterile cup and pour sterile water or saline into the cup using the non-sterile hand.
9. Grasp the sterile catheter and remove from packaging. Lubricate with water soluble gel.
10. Gently insert catheter into patient's nare.

    NOTE: If obstruction is met, elevate the proximal end of the catheter superiorly and attempt to advance without force. If obstruction continues, attempt the alternate nare. If both nares appear to be obstructed, discontinue further attempts and notify the physician.

11. When the catheter has passed through the nasal cavity, instruct the patient to inhale deeply through their nose. Attempt to advance the catheter during the inspiratory phase.
12. Once the catheter is in the trachea, gently advance until the tip of the catheter reaches the carina, then withdraw approximately 1 – 2 cm.
13. Apply suction intermittently while withdrawing the catheter.
14. The suctioning procedure may be repeated a second time if necessary, following the steps as listed above.

15. Throughout the procedure, continuously monitor the patient's skin colour, breathing pattern and rate, oxygen saturation, pulse rate, and characteristics of secretions (colour, volume, consistency).

    NOTE: Discontinue the procedure immediately if any of the following are noted:

    - Presence of bleeding
    - Evidence of physical trauma
    - Laryngospasm
    - Change in heart rhythm
    - Vomiting or persistent gagging

16. Remove personal protective equipment and wash hands.

17. Chart all pertinent information in the Progress Notes of the patient record, and on the Respiratory Services Flowsheet if applicable.