SUCTIONING PROCEDURE
USE OF IRRIGANTS

PURPOSE:

To assist in the removal of bronchial secretions that cannot be expectorated by the patient spontaneously.

POLICIES/PERSONNEL

1. Suctioning is a shared procedure between Respiratory Care and Nursing Service.
2. Suctioning is ordered on a prn basis; Respiratory will perform procedure with respiratory treatments and as often as time allows.
3. RRT 1 AND 2, CRTT 1 AND 2.

EQUIPMENT:

Sub-micron mask
Suction Regulator/Equipment
Suction cannister
Connective tubing
02 flow meter
Resuscitation bag
Sterile suction catheter
Sterile gloves
Sterile cup (if needed)
Sterile H20
Stethoscope
Metered vials of normal saline (for tenacious
secretions) or other irrigant

Water soluble lubricant (for N-T auctioning) Personal Protective Equipment (gown, goggles, gloves

INDICATIONS:

1. Visible presence of secretions in tube orifice
2. Coarse tubular breath sounds on auscultation
   in patient unable to cough or without artificial airway in place.
3. Patient with an artificial airway.

PROCEDURE:

<u>Preparation</u>

1. Review the patient's chart for physician order, and note any indications, contraindications, or potential side effects of therapy ordered. Review the patient's history, physical diagnosis, progress notes, CXR, lab reports (including PFT's and ABG'S) and medications before performing the procedure.
2. Identify patient by comparing hospital and billing numbers on the armband to those on the physicians' orders for therapy.
3. Examine and auscultate patient.
4. Assemble Equipment:
   Attach connective tubing to suction regulator/equipment and inlet of suction container. Connect suction machine to vacuum wall outlet. Turn vacuum on, and occlude tip of connective tubing. If no suction is demonstrated on gauge, tighten all connections. If still no suction occurs increase vacuum. If still no

suction occurs, label machine "defective" obtain another suction machine, reassemble and retest.

5. Identify patient by verification of name on armband and by verbal questioning.
6. Identify yourself and your department.
7. Inform the patient/family of the procedure and its purpose. Be prepared to answer any questions about the procedure that the patient may have.

Implementation

1. Wash hands and apply personal protective equipment as indicated (gloves and sub-micron masks mandated). (gowns, eye protection if splashing is likely to occur.)
2. Adjust vacuum between -80 to -120mmHg for adults or -60 to -80mmHq for pediatrics.
3. Position the patient by extending the neck slightly to facilitate entrance into the trachea (especially for nasotracheal auctioning).
4. Open suction catheter exposing only the connector, attach to connective tubing and maintain sterility of catheter.
5. Fill sterile box with sterile water, and place a dab of water-soluble lubricant on sterile envelope if nasotracheal auctioning is to be performed.
6. Check heart rate before, during and after procedure. If tachycardia or bradycardia occurs discontinue the procedure until it resolves.
7. Place sterile gloves on both hands.
8. Remove suction catheter from envelope maintaining sterile technique. NOTE: coat tip of catheter with lubricant only if nasotracheal suctioning is to be performed.
9. If patient has an artificial airway in place, hyperoxygenate with a resuscitation bag or mechanical ventilator. If patient is receiving oxygen therapy, request several deep breaths before suctioning.
10. Insert the catheter through the nose or endotracheal tube to the point of restriction without applying suction. NOTE: do not aggressively force the tip of the catheter through any obstructions in the nose. Withdraw the catheter and reposition the patient's head and try again.
11. After the restriction has been passed, slowly advance catheter. Ask patient to take deep breaths or watch for inspiration. Pass catheter into trachea.
12. Once catheter has been placed in trachea, slowly withdraw while applying intermittent suction and rotating catheter. Remember: Suction should not be applied for more than 10-15 seconds.
13. Hyperoxygenate the intubated patient or request the non-intubated patient to take several deep breaths.
14. Auscultate the patient's chest; if secretions can still be heard repeat the suctioning procedure (5-10ml of normal saline may be used to loosen tenacious secretions). Before re-suctioning, clear catheter with sterile water.

Follow Up

1. Discard gloves and catheters in an aseptic manner, clear connective tubing with remaining sterile H20 and turn off suction.
2. Return the patient to comfortable position.
3. Discard personal protective equipment and wash hands.
4. Document procedure as per department guidelines.
5. Inform nurse and/or physician of any pertinent request, complaints or reactions to the therapy.

Precautions/Complications,

1. Hypoxia
2. Vagal stimulation: Cardiac arrhythmia
3. Tracheitis

4 Damage to mucus membranes
5: Airway occlusions
6. Sudden death
7. Bleeding disorders

USE OF IRRIGANTS:

1. Saline
2. Sodium Bicarbonate

PROCEDURE:

1. Upon physician order for $NaHCO_3$.
2. Mix irrigant solution utilizing 1:1 or 1:2 ratio of Sodium Bicarbonate to normal saline.
3. Check suction setup for correct functioning.
4. Hyperoxygenate and hyperexpand lungs. Suction as per protocol utilizing 1-5 ml of irrigant as needed. Note patient's tolerance
5. Record suctioning procedure as per department guidelines on Respiratory Progress Notes or ventilator flow sheet. Note the amount of sodium Bicarbonate used to suction each patient.

REFERENCES:

1. *AARC Clinical Practice Guidelines,* 1993.
2. Burton, Gee, Hodgkin, **Respiratory Care,** 1977.

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