

**HACKETTSTOWN REGIONAL MEDICAL CENTER
CARDIOPULMONARY
SUCTIONING (ALL AGES)**

Effective Date: December 2012

Policy No: 3B.017

Cross Referenced:

Origin: Cardiopulmonary

Reviewed Date: 12/2012

Authority: Cardiopulmonary Manager

Revised Date: 12/2012

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SCOPE

All members of the Cardiopulmonary Department

PURPOSE

To provide naso-tracheal suctioning of adult, children and infant patients with an ineffective, inadequate cough and/or inability to effectively mobilize secretions exists.

DEFINITION

Naso-tracheal suctioning is a component of bronchial hygiene therapy and involves the mechanical aspiration of pulmonary secretions from patients'.

NASO-TRACHEAL SUCTIONING

Equipment:

- Necessary:
 - Vacuum source
 - Calibrated, adjustable regulator
 - Collection bottle and connecting tubing
 - Sterile disposable gloves
 - Sterile suction catheter of appropriate caliber
 - Sterile water and cup
 - Sterile normal saline, if instillation is desirable
 - Water-soluble lubricant
 - Naso-pharangeal airway, if needed (nasal trumpet)
 - Goggles, mask and other equipment for Standard Precautions
 - Oxygen source with a calibrated metering device
 - Manual resuscitation bag equipment with an oxygen enrichment device
 - Stethoscope

- Optional:
 - EKG monitor
 - Pulse oximeter
 - Sterile sputum trap for culture specimen
 - Oxygen insufflation device, if necessary

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Personnel:

- Personnel responsible for performing naso-tracheal suctioning should demonstrate the following:
 - Knowledge of proper use and assembly of all equipment used
 - Ability to recognize abnormal breath sounds by auscultation
 - Knowledge and understanding of the patient's history, disease process and goals of treatment
 - Knowledge and understanding of the basic physiology and pathophysiology of the cardiopulmonary systems
 - Ability to monitor vital signs, assess the patient's condition, and appropriately respond to complications or adverse reactions to the procedure
 - Ability to modify techniques and equipment in response to complications or adverse reactions
 - Knowledge of basic EKG interpretation
 - Ability to assess the need for and provide cardiopulmonary resuscitation
 - Ability to evaluate and document the effectiveness and patient response to the procedure
 - Knowledge and understanding of the CDC guidelines for standard precautions
 - Knowledge of signs and symptoms of decreased cardiac output, oxygenation and perfusion
 - Ability to teach patient and his/her family the procedure for home and extended careThe patient and his/her family who are responsible for naso-tracheal suctioning outside the hospital should be able to return demonstration accurately on the following:
Knowledge, skill and understanding of the assembly, use, maintenance and cleaning of all equipment used; ability to assess the need for and patient response to the procedure; ability to assess the need for and provide cardiopulmonary resuscitation.

PROCEDURE

- Patient Preparation:
 - In preparation for the suctioning event, check that the manual resuscitation bag is connected and working properly. Check that the suction set-up is connected and working properly. Gather equipment.
- Suctioning Procedure:
 - Explain procedure to patient.
 - Properly position patient.
 - Monitor vital signs before, during and after procedure (breath sounds, oxygen saturation, respiratory rate, heart rate, blood pressure, if necessary.)
 - Evaluate patency of nares. Use naso-pharyngeal airway if necessary.
 - Pre-oxygenate patient before beginning suctioning.

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- Using aseptic technique, open sterile suction catheter, apply sterile gloves and assemble and prep (lubrication).
- Gently glide suction catheter into on of patient's nares. Slowly continue to advance the catheter on inspiration, through the epiglottis and into the trachea. Continue to advance the catheter until resistance is met or until the cough reflex is stimulated.
- While withdrawing the catheter, apply intermittent suction. The entire suctioning event should be approximately 10-15 seconds. Suction pressure should be set as low as possible while effectively clearing secretions.
- Never force the catheter into the airway.
- Wait a few minutes, allowing the patient to rest and monitoring vital signs, before suctioning again, if necessary.
- Discard catheter and dispose of equipment in appropriate trash container.
- The physician will be notified of any adverse reactions.
- Sputum should also be monitored according to the follow characteristics: color, volume, consistency and odor. The physician will be notified of any changes in these from baseline.

Health care providers should remain sensitive to possible hazards and complications and take all necessary precautions to ensure patient safety. Remember, secretions in peripheral airways are not directly removed by naso-tracheal suctioning.

Hazards/Potential Complications:

- Hypoxemia
- Arrhythmias
- Hypotension
- Lung collapse- pneumothorax, atelectasis
- Damage to nares
- Infection

Nosocomial Infection Prevention:

- CDC Guidelines for standard precautions should be strictly followed at all times.
- All equipment and supplies should be disinfected per Infection Control Policy and Procedure or discarded.

TRACHEOSTOMY SUCTIONING

Purpose: To remove secretions from the trach tube to keep the airway open.

Equipment:

- In addition to the equipment listed above,

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- At bedside, replacement trach kit (same type and size) with obturator, inner cannula and trach ties.
- 10 ml syringe

Personnel:

- Same as above

Procedure:

- Patient Preparation:
 - In preparation for the suctioning event, check that the manual resuscitation bag is connected and working properly. Check that the suction set-up is connected and working properly. Gather equipment.
- Suctioning Procedure:
 - Explain procedure to patient.
 - Properly position patient.
 - Monitor vital signs before, during and after procedure (breath sounds, oxygen saturation, respiratory rate, heart rate, blood pressure, if necessary.)
 - Pre-oxygenate patient before beginning suctioning.
 - Using aseptic technique, open sterile suction catheter, apply sterile gloves and assemble and prep (lubrication).
 - Gently glide suction catheter into tracheostomy. Slowly continue to advance the catheter on inspiration into the trachea. Continue to advance the catheter until resistance is met or until the cough reflex is stimulated.
 - While withdrawing the catheter, apply intermittent suction. The entire suctioning event should be approximately 10-15 seconds. Suction pressure should be set as low as possible while effectively clearing secretions.
 - Never force the catheter into the trach or airway.
 - Wait a few minutes, allowing the patient to rest and monitoring vital signs, before suctioning again, if necessary.
 - Discard catheter and dispose of equipment in appropriate trash container.
 - The physician will be notified of any adverse reactions.
 - Sputum should also be monitored according to the follow characteristics: color, volume, consistency and odor. The physician will be notified of any changes in these from baseline.

Evaluate effectiveness of suctioning and validate trach tube placement by auscultation bilateral breath sounds upon completion of suctioning.

Health care providers should remain sensitive to possible hazards and complications and take all necessary precautions to ensure patient safety.

Hazards/Complications/Infection Prevention:

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- Same as above

RES-Q-VAC SUCTION SYSTEM

Purpose: To suction secretions from the oro-pharinx and naso-pharinx by a hand powered device, when wall suction or another form of powered suction device is not available. (ex. Power outage, code in hallway)

Equipment:

- Res-Q-Vac kit including fluid canisters, reusable vacuum pump handle and various sizes of suction catheters. (located on every code cart)
- Sterile disposable gloves
- Sterile water and cup
- Sterile normal saline, if instillation is desirable
- Water-soluble lubricant
- Goggles, mask and other equipment for Standard Precautions
- Oxygen source with a calibrated metering device
- Manual resuscitation bag equipment with an oxygen enrichment device
- Stethoscope

Personnel:

- Same as for naso-pharangeal suctioning above.

Procedure:

- Preparation:
 - Test the vacuum handle before using to ensure that the unit produces a vacuum. Place finger over the vacuum port and squeeze the handle. A vacuum should be felt. Do not use the device if a vacuum is not felt.
 - Attach the canister assembly to the pump by aligning the pump vacuum port with the adapter nozzle and push together.
- Suctioning Procedure:
 - Explain procedure to patient.
 - Properly position patient.
 - Monitor vital signs before, during and after procedure (breath sounds, oxygen saturation, respiratory rate, heart rate, blood pressure, if necessary.)
 - Evaluate patency of nares.
 - Pre-oxygenate patient before beginning suctioning, if necessary.
 - Attach the catheter to the canister cap by gently pushing catheter fitting into the cap nozzle until it secures.
 - Using aseptic technique, apply sterile gloves and assemble and prep (lubrication).

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- Gently glide suction catheter into on of patient's nares. Slowly continue to advance the catheter on inspiration, through the epiglottis and into the trachea. Continue to advance the catheter until resistance is met or until the cough reflex is stimulated.
- While withdrawing the catheter, apply intermittent suction. The entire suctioning event should be approximately 10-15 seconds. Suction pressure should be set as low as possible while effectively clearing secretions.
- Never force the catheter into the airway.
- Wait a few minutes, allowing the patient to rest and monitoring vital signs, before suctioning again, if necessary.
- Discard canister and catheter in appropriate trash container.
- DO NOT dispose of the vacuum pump handle.
- The physician will be notified of any adverse reactions.
- Sputum should also be monitored according to the follow characteristics: color, volume, consistency and odor. The physician will be notified of any changes in these from baseline.

Maintenance:

- To disinfect the pump handle, wipe with a neutral pH cleaner.
- DO NOT autoclave vacuum pump.
- Only the canister and catheters are disposable.