

**HACKETTSTOWN REGIONAL MEDICAL CENTER
CARDIOPULMONARY
MECHANICAL VENTILATION (ALL AGES)**

Effective Date: March 2010

Policy No: 3B.021

Cross Referenced:

Origin: Cardiopulmonary

Reviewed Date: 12/2012

Authority: Cardiopulmonary Manager

Revised Date: 12/2012

Page: 1 of 2

SCOPE

All members of the Cardiopulmonary Department

PURPOSE

To provide mechanical ventilation for the specific patient population that training had been provide for, (from infant to geriatric) in the Acute Care setting. Ventilators must be setup and maintained by certified trained personnel such as Respiratory Care Practitioners that have completed in-services and competency in the particular equipment use at the critical care areas, and that includes, vent changes and or any other procedures related to maintained setup and discontinuing vent patients.

The Respiratory Care Practitioner must report to the medical staff any changes that may be recommended base on clinical observation or lab testing (such as ABG s etc.)

Indications:

- Apnea/Impending Respiratory Failure
- Surgical Procedure under General Anesthesia
- Ventilation Failure
 - Neurological problems (ex. Stroke, brain injury, spinal cord injury)
 - Muscular problems (ex. Myasthenia gravis)
 - Anatomical problems (ex. Flail chest, rib fractures, pleural effusions, pneumothorax, airway obstruction bronchospasm)
 - Gas exchange problems (ex. Lung contusion, ventilation-perfusion mismatch)
- Oxygenation Failure
 - Diffusion abnormality (ex. Pulmonary fibrosis, pulmonary edema)
 - Ventilation-perfusion mismatch
 - Dead space ventilation (ex. Pulmonary embolus)
 - Shunt (ex. Airway collapse, pneumonia, pulmonary contusion, ARDS)
 - Inability to extract at cellular level (ex. Sepsis, cyanosis, CO poisoning)

Contraindications:

- If no indication for mechanical ventilatory support exists
- Intubation and mechanical ventilation are contrary to the patient's expressed/written wishes

Equipment:

- Mechanical ventilator
- Disposable ventilator circuit
- Bacterial filter (expiratory and inspiratory side)
- In line suction catheter
- Heat and moisture exchanger (HME)
- Endotracheal tube

Approved by: See signed Authority & Approval form
month / year Committee Name

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PROCEDURE

- Obtain order and settings from physician.
- Using a cleaned ventilator, attach bacterial filter to expiratory limb.
- Assemble disposable circuit on ventilator.
- Perform 'pre-use test' on start up screen (on Servo I vent). This may be done prior to the storage of the machine, but ventilator cannot be used if test is not successfully passed.
- Select prescribed setting and appropriate alarms (see manual specific to machine for settings/alarms).
- Verify function of vent alarms.
- Start ventilation.
- Attach ventilator to patient utilizing in line suction and appropriate moisture device.
- Observe patient and make any necessary changes/titration as necessary based on patient comfort, vital signs.
- Monitor vital signs and document on ventilator flow sheet vent setting, ETT size and depth.
- Continue to monitor function of machine, patient and vital signs every 3 hours.
- When patient is to be weaned or removed from ventilator, see Cardiopulmonary Policy and Procedure Manual Section 3B Policy 23, Ventilator Discontinuation/Extubation Policy.