OBJECTIVE:

To establish a policy and procedure for the use of Bilevel Positive Airway Pressure (BiPAP) or Continuous Positive Airway Pressure (CPAP) on the floor patient.

SCOPE:

Policy applies to all MCGHI Respiratory Care Services employees, Respiratory Care Instructors, and Contract Employees.

INTRODUCTION:

The respiratory care department offers BiPAP/CPAP via nasal mask or full face mask for floor patients. BiPAP/CPAP requires a physician order to include level of pressure, or order for VAuto mode, and oxygen if necessary. Documentation for BiPAP/CPAP will be recorded by the respiratory therapist every four hours on respiratory treatment flow sheet. A short progress note will also be added to the patient’s chart summarizing the past 24 hours on VAuto mode.

POLICY:

Patients requiring BiPAP/CPAP nocturnally on the floor who have never worn BiPAP/CPAP previously must be monitored in the ICU or ED for 24 hours prior to moving to the floor ward or have a pulmonary consult. BiPAP/CPAP is not to be used any time on the floor for Non Invasive Ventilation (See NIV policy). BiPAP/CPAP must never be used on trach patients. Patients who use BiPAP/CPAP at home may use BIPAP/CPAP on the floor as long as they fall within the criteria of this policy. If a patient does not know their settings, the physician must write their settings, VAuto mode can be used to find appropriate levels.

Indications:

Spontaneous breathing patient who presents with the following:

- Diagnosed Sleep apnea via polysomnography
- Documented Nocturnal Hypoventilation

Consider transferring to the ICU if patient exhibits:

- Increased accessory muscle use
- Change in mental status
- Paradoxical breathing
- Pulmonary Edema
- Increased dyspnea or shortness of breath
- Worsening ABGs
Contraindications:

- Aspiration precautions
- Impending Respiratory Failure noted by:
  - RR ≥ 35
  - $\text{SpO}_2 < 90\%$
  - Increased work of breathing (WOB)
  - Significant CO$_2$ retention > 45 or >15 from baseline
  - Decreased level of consciousness
- Obtunded or Comatose patients
- Pneumothorax
- Pathologically low blood pressure
- Cardiac Arrhythmias
- Seizures
- Trach Patients
- Hemodynamic instability
- Excessive secretions
- Inability to cooperate with procedure
- Inability to fit mask properly
- Nausea/vomiting
- Recent cranial Surgery or Trauma

Procedure:

1. Obtain physician order with type of device, appropriate settings, or order for VAuto mode, and FiO2/ or pulse oximetry saturation goal.
2. Evaluate patient for use of BIPAP/CPAP.
3. Explain BIPAP/CPAP benefits and machine operation to patient.
6. Patient data should be downloaded every 24 hours via Data Card.
7. Document in progress note pertinent information from past 24 hours from Data Card.

Continuous Positive Airway Pressure (CPAP)

1. Select the proper size mask. The mask should fit over the nose and above the lip (nasal) or, entirely encase the nose and mouth (full face mask).
2. Connect one end of the tubing to the CPAP unit, and the other end to the patient mask.
3. Adjust mask to fit properly on the patient’s face.
4. Turn CPAP unit on and check for leaks, adjust mask and headgear as needed.
5. Adjust the pressure level to appropriate settings as ordered by physician.
6. If oxygen is to be used, bleed the appropriate amount of oxygen into the airflow outlet port of the circuit.
   - Up to 4 L/min in VAuto mode.
   - Up to 15 L/min in CPAP.
BIPAP/CPAP On the Floors

7. Default Alarm settings are:
   a. Low Pressure -2
   b. Low Minute Ventilation 5
   c. High Pressure 25
   • Or adjust alarms according to patient settings
8. Record pertinent information on Respiratory Ventilator Flow Sheet.
9. Every 24 hours patient data is to be taken from VPAP by inserting Data Card in back slot and downloading on departmental card reader.
10. Write short progress note in patient’s chart.

Bi-level Positive Airway Pressure (BIPAP)

1. Use VAuto mode unless not available or specific settings ordered by physician.
2. Select the proper size mask. The mask should fit near to or just above the junction of the nasal bone and cartilage, on the sides of both external nares, and just below the lowest point of the nose and above the lip. If the full-face mask is used, select the size most appropriate to the patient facial features to assure a good seal.
3. Connect one end of the tubing to the unit and the other end to the patient mask.
4. If oxygen is to be used, bleed the appropriate amount of oxygen into the airflow outlet port of the circuit.
   a. Up to 4L/min in VAuto mode.
5. Turn unit on and check for leaks. Adjust mask and headgear as needed.
6. Also, remember that VPAP machines are not PEEP compensated (example: if order is IPAP 10 / EPAP 5, you must set machine at IPAP 15 / EPAP 5).
7. Record pertinent information on Respiratory Ventilator Flow Sheet.
8. Every 24 hours patient data is to be taken from VPAP by inserting Data Card in back slot and downloading on departmental card reader.
9. Write short progress note in patient’s chart.

Home Units

It is the policy of the Respiratory Care Department that patient owned equipment not be used to provide BiPAP/CPAP. If due to unavoidable circumstances, patient owned equipment is used, the following applies.
The Respiratory Therapist is responsible for assessment of patient who is using their home unit. Respiratory Therapist are only required to check and document this QHS. Respiratory Therapist are NOT allowed to make any adjustments to the patient’s home unit. If adjustments are to be made, the patient must be placed on the hospitals unit and the physician must write appropriate orders.

(NOTE: all patient owned equipment MUST be checked by biomed department prior to use)

DNR/DNI STATUS

Patients who are DNR/DNI status are not to be placed on BiPAP/CPAP for comfort care.