

CORPORATE COMPLIANCE:

This policy will adhere to all applicable rules and regulations as set forth by Federal and State regulatory agencies as well as allCorporate policies.

I. OBJECTIVE:

- A. The Passy-Muir speaking valve may be used on patients with tracheostomy tubes or on ventilator dependent patients. This one way speaking valve may be used on a limited or extended basis provided the tracheostomy tube cuff is deflated and the patient is assessed for the ability to speak without difficulty using the one way speaking valve.
- B. Candidates for the valve must meet the following criteria:
 - 1. Awake, oriented, and motivated to vocalize (intact vocal cords).
 - 2. Fenestrated trach is preferred but may not be required if airflow is adequate.
 - 3. Able to tolerate extended periods off cuff deflation.
 - 4. Able to tolerate any volume loss from around the cuff during inspiration.
 - 5. Have the ability to protect their airway.
 - 6. Upper airway must be patent in order for the patient to exhale.
- C. The valve should be removed during hours of sleep, or at daytime rest. It should only be utilized for times the patient is fully awake and needing to talk.
- D. If this is the patient's first use of the valve, a speech therapy consult is highly recommended in order to assess the ability to vocalize or evaluate other potential options.

II. EQUIPMENT NEEDED:

- A. Passy Muir valve PMV 005 (white - for non ventilator department patients).
- B. Passy Muir valve PMV 007 (aqua - ventilator speaking valve designed for fit inside adult disposable ventilator tubing).
- C. 100 cc syringe to deflate the cuff.
- D. Suction equipment for secretion removal before and after cuff deflation.
- E. Oxygen via trach mask or nasal cannula on non ventilated patients, as necessary.

III. PROCEDURE:

Non Ventilated Patients:

- A. Suction patient via their tracheostomy (non fenestrated inner cannula in place) with cuff inflated and once again after the cuff has been deflated.
- B. After cuff is completely deflated, replace inner cannula with fenestrated inner cannula, as indicated; attach the Passy Muir valve to the end of the tracheostomy inner cannula opening using a firm ¼ twist clockwise motion with one hand while holding the neck plate of the tracheostomy tube with the other hand.
- C. Continue to deliver both humidity and oxygen at prior F_IO₂, using the trach collar.

- D. After the Passy Muir valve has been placed on the tracheostomy tube, the patient will be assessed for any difficulty in their breathing or any changes in vital signs.
- E. Nursing should be advised of speaking valve placement and duration of use.
- F. In the event the patient does not tolerate the Passy Muir valve, it should be removed from the tracheostomy, the cuff re-inflated, and the previous oxygen modality resumed.
- G. The Passy Muir valve should be stored in a plastic container with the patient's name/label.
- H. The Passy Muir valve is for single patient use only and per manufacturers' recommendation, should be cleaned daily with PURE FRAGRANCE FREE soap and warm water, rinse thoroughly, and air dry.

Ventilated Patients (for PB 840, only capable with Non Invasive Ventilator {NIV} software);

- A. Prepare patient by coaching on anticipated rush of air through the mouth and nose.
- B. Note Peak Inspiratory Pressure (PIP) with tracheal cuff up (pre PIP).
- C. For PB 840, Change to NIV
 - 1. $\uparrow T_{i\text{ spont}}$ at 1.0, not available with A/C.
 - 2. May need to increase sensitivity setting to avoid auto cycling. May need to go to maximum setting to keep any PEEP, and then back off until auto cycles.
 - 3. May lose ability to maintain PEEP, though glottis may compensate.
 - 4. Increase Vt incrementally to equal pre PIP.
 - 5. set Low P alarm to <PIP.
 - 6. Turn Volume Alarms off.
 - 7. Set E_{sense} 50-80%, not available with A/C.
 - 8. Set Apnea Ventilation settings equal to above parameters.
- E. Suction patient via tracheostomy with cuff inflated and then again after cuff is COMPLETELY deflated.
- F. The aqua PMV 007 valve may be placed in-line between the swivel adapter, or suction elbow, and dead space corrugated tubing. See attached diagram.
- G. The patient will again need to be assessed for difficulty in breathing or speaking and vital signs monitored for desaturations, cardiac changes, etc.
- H. After trial period, remove PMV and restore original.

IV. DOCUMENTATION:

The Respiratory Care Practitioner should monitor the patient and be aware that the valve can increase the work of breathing. Thus, document the valve being in use, the patient's ability to talk, that the cuff is fully deflated, and a statement that the work breathing is appropriate.

V. HAZARDS/CONSIDERATION:

- A. Manufacturer recommends labeling pilot balloon with label, provided, indicating the need to completely deflate cuff with valve use.

- B. Initial use of valve may be associated with some increased work of breathing, this is normal, and an attempt to work through this phase is recommended.
- C. Other causes of increased work of breathing associated with valve use may include tracheal stenosis or malacia, or vocal cord dysfunction, or trach tube being too big. Additional possibility; temporary edema after trach change. Any difficult in breathing, valve should be removed.
- D. Do Not use HME with Passy Muir valve. HME requires exhaled gas humidity for appropriate use.
- E. Large volume/thick secretions may limit successful use of valve.
- F. "Honking" through valve indicates that valve needs to be replaced if >2 months old; <2 months old, clean in soapy warm water, rinse, and thoroughly air dry.
- G. NO FOAM CUFFED TRACH TUBES.
NO HOT WATER, PEROXIDE, BLEACH, VINEGAR, ALCOHOL, BRUSHES, OR Q-TIPS.

VI. POTENTIAL BENEFITS:

- A. Improves swallow due to pressure in trachea.
- B. Improves secretion management due to restoring of airflow through upper airway.
- C. Improves smell and taste.
- D. Impacts infection control, need not cover trach with finger to talk, acts as a filter.
- E. Assists with weaning by getting used to air through upper airway, therefore, facilitate more normal breathing, muscle training.

VII. SOURCES:

Respiratory Care Critical Care Policy and Procedure
Passy Muir Patient Handbook
Puritan Bennett Tech Support