Passy-Muir Tracheostomy Speaking Valves Policy and Procedure

Introduction
The Passy-Muir Valve is designed to provide the tracheostomy patient the ability to vocalize.

The Passy-Muir Valve is a bias closed position "No Leak" valve. The patented "No Leak" design of the valve means the valve is always in a closed position until the patient inhales.

The valve opens easily with less than normal inspiratory pressure and closes automatically at the end of the inspiratory cycle without air leak and patient expiratory effort. All exhaled air is redirected through the oral and nasal cavities providing clear, uninterrupted speech.

Other benefits may include, but are not limited to, the following: improved speech production, improved swallowing and reduced risk of aspiration, better secretion management, facilitates ventilator weaning, facilitates decannulation, improves olfaction, and promotes better hygiene.

Policy Statement
It is the policy of this facility to assess the ability of the tracheostomy patient to vocalize and communicate with a Passy-Muir Speaking Valve if indicated and ordered by a physician.

Indications for use can include, but are not limited to, the following:
-Ventilator Dependency
-Neuromuscular Disease
-Quadriplegia
-Head Trauma
-COPD
-Tracheomalacia
-Mild Tracheal and/or Laryngeal Stenosis
-Bilateral Vocal Cord Paralysis w/out significant airway obstruction
-PMV may be trialed 48-72 hours after a tracheotomy with physician order

<u>Note:</u>
Although PMV use can improve swallowing and may reduce aspiration in some patients, the presence and/or risk of aspiration should be evaluated carefully with each patient to assess swallowing function.

Contraindications
-Unconscious and/or Comatose Patients
-Inflated Tracheostomy Tube Cuff
-Foam Filled Cuffed Tracheostomy
-Severe Airway Obstruction
-Thick and Copious Secretions
-Severe Aspiration

Procedure
1. Verify physician's order.
2. Bedside assessment of patient should include: pre/ post heart rate and respiratory rate, SpO2, may also include blood pressure.
3. Explain procedure to patient and family.
4. Position patient in upright, comfortable position.
5. Tracheal and oral suctioning should be administered if secretion accumulation is present before and after deflating cuff, as needed.
6. Slowly deflate the tracheostomy cuff. Attach the leur-tipped syringe to the pilot line. Pull back on the plunger of the syringe until resistance is met and air can no longer be extracted.
   The cuff must be *completely deflated* before placing the PMV. If not, the PATIENT WILL BE UNABLE TO BREATHE.

7. Check the airway patency and apply the valve:

   For ventilated patients:
   a. After the cuff is fully deflated, check for tidal volume leaking around the cuff to ensure adequate air flow. Adequate air leak is usually indicated by a significant drop in tidal volume and/or peak inspiratory pressure after cuff deflation.
   b. Place the valve in line on the ventilator circuit. The aqua (PMV 007) valve will fit into most disposable ventilator tubing or can be placed near or on a swivel adapter (Omniflex) or attached to a closed suctioning system. **Do not** place further down tubing away from your trach tube due to condensation that can build up in the vent tubing.
   c. Adjust the ventilator settings per physician order to ensure patient comfort, to ensure adequate alveolar ventilation, and to ensure safe and effective ventilator alarms. (Ex: turn off peep, increase tidal volume, adjust sensitivity, adjust alarms)

   For non-ventilated patients:
   a. After the cuff is full deflated, occlude the tracheostomy tube with gloved finger on exhalation and observe for adequate air flow through the mouth and nose (e.g. listen for voice or cough, listen to airflow with stethoscope).
   b. Stabilize the tracheostomy tube with one hand while attaching the Passy-Muir Valve to the 15mm hub of the tracheostomy tube with the other hand using an approximate 1/4 twist in a clockwise direction. Oxygen may be administered via a tracheostomy collar mask or use of Passy-Muir oxygen adapter (PMA 2000).

8. Initially, staff should directly observe the patient for symptoms of respiratory distress, shortness of breath, and cyanosis and monitor vital signs to ensure that adequate air flow around the tracheostomy tube is occurring. If the patient experiences any difficulty following application of the device, **REMOVE THE VALVE IMMEDIATELY**.
9. Patients who are potentially unstable or are new to Passy Muir procedure may require further or continuous monitoring. Monitoring may also include use of a pulse oximeter and/or apnea monitor. **These devices require a physician's order. *(See Apnea Monitor Policy and Procedure*)** Such devices have auditory alarms to allow staff to be notified of changes in respiratory pattern, heart rate, or blood oxygen levels.
10. **Attach caution label to cuff pilot line**. The patient has a right to decline application of the caution label to the cuff pilot line. Patients' refusal will be documented in the medical record. If the patient declines the label to be attached to the cuff pilot line, the warning label must be placed on the wall at the patient's head of bed. In addition, nursing staff will place a warning label sticker in the nursing MAR to alert staff to importance of proper cuff deflation,
11. Use and tolerance of the Passy Muir Valve will be documented in the patient's medical record and/or respiratory flow sheets.
12. Valve removal: Remove the Passy-Muir Valve. If the patient is on the ventilator, adjust ventilator settings as physician ordered (Ex: peep turned back on, tidal volume and/or sensitivity adjusted to baseline), then re-inflate the tracheostomy cuff using 'Minimal Leak Technique' (*See Policy*). Ensure the patient is breathing comfortably, and chart adjustments in the electronic charting system.
13. Cleanse the valve daily with lukewarm water and mild, pure soap. When dry, place in the appropriate receptacle at the bedside. DO NOT USE DISINFECTANT, as this may cause the valve to stick. Replace the Passy Muir valve as needed.

Responsible Staff:
R.R.T., C.R.T., R.N., L.P.N.