Dignity Health
Saint Francis Memorial Hospital

RESPIRATORY CARE SERVICES
PATIENT CARE POLICY

SUBJECT:	**TRACHEOSTOMY MAINTENANCE/WEANING PASSY-MUIR VALVE / BUTTON**	NO:	**D - 550**
		PAGE:	**1 of 5**

To provide the respiratory therapist guidelines for taking care of the non-ventilated tracheostomy patient

Consider the use of humidification for all tracheostomy patients.

Passy-Muir Valve

DESCRIPTION

The Passy-Muir Valve (PMV) is small, lightweight, and designed to fit the universal 15mm hub of tracheostomy tubes. The valve allows patients to get re-acclimated to their upper airway and allows vocal fold function and health of the laryngeal mechanism, which is important for clearing secretions, voicing and swallowing. It is easily adapted for use in-line with a ventilator circuit and can be used in conjunction with closed suctioning systems, swivel adapters, supplemental oxygen, and humidification.

PURPOSE

To provide the Respiratory Care Practitioner and Speech Therapist guidelines in the use of Passy-Muir Valve. The Passy-Muir Valve is used for the following clinical benefits for the tracheostomized patients:

- Communication (speech production)
- Improves Swallow/Reduced Aspiration
- Facilitates Secretion Management
- Restores Positive Airway Pressure
- Expedite Weaning
- Reduces Decannulation Time
- Facilitates Infection Control
- Improves Quality of Life

GENERAL INFORMATION

Indications for Use of the Passy-Muir Speaking Valve:
All tracheostomy and ventilator dependent patients who are awake and responsive should be considered for PMV candidacy if they meet the initial screening assessment. During expiration, air passage must be sufficient around the tracheostomy tube and through the upper airway.
The PMV is intended for single patient use only.
Indications for use include but are not limited to:

- **Ventilator Dependent Patients**
- **Neuromuscular Disease**
- **Quadriplegia**

- **Head Trauma**
- **Chronic Obstructive Pulmonary Disease**
- **Tracheomalacia**
- **Mild Tracheal and/or Laryngeal Stenosis**
- **Bilateral Vocal Cord Paralysis without significant airway obstruction**
- **Non-Obstructive Laryngeal Tumors (can include patients who have vocal cord dysfunction following surgical resection of the tumor)**
- **Sleep Apnea patients who are tracheostomized as an alternative to plugging when awake**
- **Patients who emotionally or physically are unable to tolerate tracheal plugging.**

Contraindications for Use of the Passy-Muir Speaking Valve

- **Unconscious and/or Comatose Patients – The patient should be awake, responsive and attempting to communicate**
- **Inflated Tracheostomy Tube Cuff – If the cuff cannot be deflated, the PMV must not be used as the cuff would cause an obstruction to exhaled air flow.**
- **Foam-filled Cuffed Tracheostomy Tube – Inadvertent re-inflation of the cuff can potentially occur, maintenance of cuff deflation cannot be ensured. Foam-filled cuffed tubes are designed to inflate when the pilot line is open to the atmosphere.**
- **Severe Airway Obstruction**
- **Unmanageable, Thick Secretions – the presence of thick and copious secretions in the airway can make breathing difficult for patients.**
- **Severe Risk for Aspiration**
- **Severely Reduced Lung Elasticity**

This device is not intended for use with endotracheal tubes or other artificial airways
Do not use during sleep
Humidification devices do not affect PMV use. Heat moisture exchange (HME) is not recommended.

EQUIPMENT

1. Passy-Muir Tracheostomy and Ventilator Speaking Valve Patient Care Kit
   - A. One PMV (either a PMV 005 (white), PMV 2000 (clear), PMV 2001 (purple, SFMH preferred) or PMV 2020 (clear, for Jackson trach)
   - B. Instruction Booklet
   - C. Storage Container
   - D. Patient Handbook
   - E. Warning Labels
2. PMV Secure-it* – used to keep the PMV attached to the tie.
3. PMV O_2 adapter* – allows easy inhalation of supplemental oxygen and humidity

PROCEDURE

1. Upon receipt of a physician's order, the speech pathologist or nurse notifies respiratory therapy.
2. An initial screening for candidacy for PMV placement is conducted by the speech pathologist and respiratory therapist, and should include the following criteria.
   - 48 hours time lapse post tracheostomy placement.
   - Airway Patency - Without known upper airway obstruction/deviations.
   - Cognitive Status - Awake, and showing adequate language comprehension and some attempts to communicate verbally, gesturally, or in writing.
   - Stable vital signs (HR, RR, BP, Oxygen Saturation).
   - Review respiratory course, including weaning attempts, amount and viscosity of secretions, frequency of suctioning, and expected duration for tracheostomy.
   - Ability to tolerate cuff deflation

- Secretion management

3. If the patient is considered an appropriate candidate for a PMV placement. The initial placement is considered by respiratory therapy and speech pathology, based on the patient assessment.

Patient Assessment: The patient should be assessed before, during, and after PMV placement for, but not limited to, the following:

- Vital signs (e.g., heart rate, respiratory rate, oxygen saturation)
- Breath sounds
- Change in patient's color and responsiveness
- Work of breathing
- Tracheal and oral secretion status

4. The primary respiratory therapist will suction the patient prior to placement of the PMV. Cuff deflation is done by the respiratory therapist.
   - **Suctioning:** It is recommended that both tracheal and oral suctioning be performed as needed. This includes before and after deflating the tracheostomy tube cuff.
   - **Cuff Deflation:** Slowly deflate the cuff of the tracheostomy tube (if present). The patient may need to be suctioned again following cuff deflation to remove secretions that were present on and/or above the cuff. The patient with a cuffed tracheostomy tube should be evaluated for a cuffless tracheostomy tube if medically appropriate to eliminate the need for cuff deflation with use of the PMV.

     WARNING: TRACHEOSTOMY TUBE CUFF MUST BE COMPLETELY DEFLATED BEFORE PLACING THE PMV. PATIENT WILL BE UNABLE TO BREATHE IF CUFF IS NOT COMPLETELY DEFLATED. PMV CANNOT BE USED WITH FOAM FILLED CUFFED TRACHEOSTOMY TUBES. THE PMV CAN BE USED WITH A CUFFED TRACHEOSTOMY TUBE IF THE CUFF IS COMPLETELY DEFLATED AND THE PATIENT HAS SUFFICIENT AIRFLOW AROUND THE TRACHEOSTOMY TUBE AND BULK OF THE DEFLATED CUFF.

5. For tracheostomized, non-ventilator patients, the speech pathologist (SLP) will assess vocal quality by using digital occlusion of the tracheostomy tube and asking the patient to phonate. The speech pathologist will place the Passy-Muir Speaking Valve, and instruct the patient in voice and breathing techniques to re-orient them to use of the upper airway.
6. Tolerance to the Passy-Muir Valve will be assessed objectively (pulse oximetry, HR, RR), and through observation of the patient and their own report of ease in breathing and speaking. Initial wearing time for the PMV will be individually decided based on patient tolerance and motivation.
7. Upon removal of the PMV, the cuff will be re-inflated by respiratory therapy. The PMV will be placed in its storage container, which will be labeled by the SLP.
8. Ongoing use of the Passy-Muir Valve will be individually decided and the speech pathologist responsible for appropriate Written/Verbal communication with respiratory care and nursing staff.
9. PMV placement for patients who are tracheostomized and on a ventilator will be conducted with respiratory only. The respiratory therapist will be responsible for cuff deflation, placement of the PMV in-line and any necessary ventilator adjustments/manipulations, Objective and subjective monitoring of the patient's tolerance to the valve will be conducted.
10. Difficulties encountered by the patient during the initial PMV placement will be documented in the medical record. If vocal fold pathology or upper airway obstruction is suspected, the primary physician will be notified by the speech pathologist for possible, additional ENT referral.
11. Education regarding use of the Passy-Muir Valve for the patient, medical/nursing staff, and patient's family, is the responsibility of the speech pathologist and respiratory therapist. Specific instructions should be documented in the patient's medical record, and when

indicated, additional written instructions in the patient's room. Continued teaching may be indicated if the patient changes nursing units, nurses, or therapists within the hospital.
Education: To reduce anxiety and ensure successful transition to the PMV, the patient, family and all personnel (all shifts) working with the patient should be instructed in the directions for use of the PMV including contraindications, cautions and warnings. Review all package inserts and labeling with patient, family and staff. Free patient information and clinical in-service videos are available from Passy-Muir Inc. to assist you with your educational efforts.

12. Ongoing monitoring of the patient's tolerance to the PMV should be conducted by speech pathology throughout the patient's hospital stay.
13. If a patient fails an initial PMV placement, criteria for re-assessment should be established by the speech pathologist and respiratory therapist, and alternative communication options explored by the speech pathologist.

Tracheostomy Button

PURPOSE

To provide the Respiratory Care Practitioner guidelines in the use of tracheostomy button for the purpose of keeping the tracheostomy stoma patent for tracheal suctioning and emergency intubations.

GENERAL INFORMATION

1. If patient is able to stay off ventilator and adequately breathing on his/her own via T-piece or trach talk, they could be eligible for a "tracheostomy button".
2. The attending physician must evaluate patient's respiratory status.
3. A physician's order is required to perform this procedure.

EQUIPMENT

Tracheostomy button
- It's always best to use the button provided with the tracheostomy.

Cotton-tipped applicators
Normal Saline

PROCEDURE

4. Explain procedure to patient.
5. Bring equipment to bedside table.
6. Suction trach if necessary
7. Clean stoma with normal saline using cotton-tipped applicators and 4x4 gauze.
8. Deflate the cuff
9. Remove trach inner-cannula, if necessary, otherwise, place button in with adequate amount of spacers. Plug button.
10. Pull out plug, if suctioning is necessary.

Record on patient's chart procedure performed and respiratory status of patient.

DOCUMENTATION

1. Obtain a Respiratory Therapy order from the physician order entry in CareConnect.
2. Document method and patient outcome in AdHoc under the AIRWAY MANAGEMENT flow sheet.

3. Document patient assessment before, during and after on initial placement of PMV or Button. Documentation should include all assessment mentioned above in PROCEDURE #2. Daily subsequent documentation requires baseline assessment mention above in PROCEDURE #3.
4. Document education on the Multidisciplinary Care Plan Charting.

INFECTION CONTROL

l. Maintain optimal aseptic technique while handling the PMV or Button.
2. PMV and Button are single patient use only
3. To clean the device
   - Swish in soapy, warm water
   - Rinse thoroughly in warm running water
   - Allow to air dry thoroughly before placing in storage
   - Do not use hot water, peroxide, bleach, vinegar, alcohol, brushes or Q-tips to clean.
4. Store in the container when not in use

SAFETY PRECAUTIONS:

l. If the patient is having any difficulty breathing, remove the PMV or Button immediately
2. Do not wear the PMV or Button while sleeping.
3. Do not use PMV with Heat Moisture Exchanger (HME)
4. Remove the PMV before giving medicated nebulizer treatments – if used accidentally during a treatment it should be removed immediately and rinsed thoroughly to remove medication residue.
5. Do not use PMV or Button inline with the ventilator.
6. Tracheostomy tube cuff must be completely deflated before placing the PMV or Button.
7. PMV must be completely clean and dry before placing it in container to prevent growth of bacteria that can cause respiratory infection.

Sponsoring Department or Committee	Approval Date
Respiratory Care Leadership	July, 2014
Speech Therapy Leadership	July, 2014
Pulmonary Services, Medical Director	July, 2014
Other Approvals	**Approval Date**
Past Approval Dates	
11/03, 5/05, 4/08, 4/10	

REFERENCE

Passy-Muir Inc, *Passy-Muir Tracheostomy and Ventilator Speaking Valve Resource Guide* 2001
Passy-Muir Inc, *Clinical Inservice Outline, 2004*