

Geisinger / HEALTHSOUTH Rehabilitation Hospital

SERVICE Acute Adult Rehabilitation Speech Therapy	ISSUED BY Acute Adult Rehabilitation & Respiratory Therapy	SOP No.	PAGE 1 of 3
SUBJECT Passy-Muir Tracheostomy and Ventilator Speaking Valve (PMV)	REVISED/REVIEWED 6/99; 9/00; 1/01; 5/07	EFF. DATE 1998	

PURPOSE:

To restore oral communication for those patients who are tracheostomized and/or ventilation dependent

PROCEDURE:

1. The Passy-Muir Valve (PMV) will be available in the Acute Rehab Services Department following a physician's order, as clinically evaluated and indicated by the Physician, Respiratory Therapist, Speech-Language Pathologist, and/or Nurse.
 - a. Clinical Indications:
 1. Minimum 48 hours post-tracheostomy placement
 2. Patient is demonstrating expressive communication attempts.
 3. Patient is alert and responsive.
 4. Patient has stable vital signs. (HR, RR, BP, SaO₂)
 5. Patient is able to tolerate cuff deflation.
 - b. Contraindications:
 1. Patient with a foam-cuffed tracheostomy tube
 2. Patient who is unable to tolerate cuff deflation
 3. Severe upper airway obstruction
 4. Severe COPD / end-stage lung disease with reduced lung elasticity
 5. Copious, thick, unmanageable secretions requiring frequent suctioning
 6. CPAP/PEEP > 5 cm H₂O
 7. Bilateral vocal cord paralysis
 8. Increased atelectasis
 9. Patient who is comatose
2. The Respiratory Therapist and Speech-Language Pathologist will schedule a joint session to initially place / evaluate the appropriateness of the utilization of the PMV as needed.
3. The Respiratory Therapist and / or Speech-Language Pathologist will describe the mechanics and utilization of the PMV to the patient, staff, and / or family members present.
4. The Respiratory Therapist or Nurse will suction the trach / oral cavity per protocol.
5. FOR NON-VENTILATOR DEPENDENT PATIENTS:
 - a. The Respiratory Therapist or Nurse will deflate the cuff completely. Oral suctioning may be needed at this time.
 - b. The Speech-Language Pathologist will instruct the patient to inhale. On exhalation the tracheostomy tube will be occluded manually with a gloved finger and the patient will be instructed to vocalize on the exhalation phase several times to insure glottal patency.

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- c. Initially the Speech-Language Pathologist or Respiratory Therapist will place the PMV on the hub of the trach tube by gently stabilizing the tracheostomy tube with one hand and attaching the PMV with the other hand using a ¼ twist.
- d. The Respiratory Therapist, Speech-Language Pathologist and / or Nurse will monitor the patient's tolerance of the PMV throughout the trial and evaluate the patient's respiratory status looking for signs of fatigue, hemodynamic changes and SPO2 changes.
- e. The Speech-Language Pathologist will instruct the patient to open his / her mouth and exhale through the oral cavity. Verbalizations / vocalizations will be elicited utilizing techniques as needed.
- f. At the completion of the 15 minute trial or as tolerated by the patient, the Respiratory Therapist or Speech-Language Pathologist will remove the PMV by placing one hand on the tracheostomy neck plate and with the other hand will gently twist the PMV in a clockwise motion off the hub of the tracheostomy tube.
- g. After the trial, the Nurse or Respiratory Therapist will re-inflate the cuff, as appropriate.

6. FOR VENTILATOR-DEPENDENT PATIENTS:

- a. The Respiratory Therapist will note the exhaled minute volumes and peak inspiratory pressures (PIP) to compare with measurements post cuff deflation.
- b. The Respiratory Therapist will readjust the ventilator alarms. At NO time should the alarms be completely disabled. It may be necessary to switch to infant alarms for disconnect protection.
- c. The Respiratory Therapist or Nurse will deflate the cuff completely. Oral suctioning may be needed at this time.
- d. The Respiratory Therapist will place the PMV in line with the ventilator / BIPAP unit using the standard six inch wide bore flex tubing (remove the omniflex, swivel and/or in line suction unit). The PMV is placed directly on the hub of the trach tube by gently stabilizing the tracheostomy tube with one hand and attaching the PMV with the other hand using a ¼ twist using the six inch flex tubing to connect the PMV to the ventilator wye or the BIPAP whispervlave connector.
- e. The Respiratory Therapist will adjust the sensitivity to prevent autocycling, but still allowing the patient to trigger the ventilator.
- f. The Respiratory Therapist will adjust the Pressure Control (PCP) / Tidal Volume (Vt) / Pressure Support (PS) to keep the inspired volumes consistent with those prior to deflating the cuff and to maintain patient comfort and stability throughout the trial.

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- g. The Respiratory Therapist , Speech-Language Pathologist, and / or Nurse will assess the patient's respiratory status looking for signs of fatigue, hemodynamic changes and SPO2 changes.
 - h. The Respiratory Therapist will turn off the F-P humidifier off during the trials as they tend to alarm with high flows. If the patient is using the HME it is important that it be placed between the PMV and the patient so some moisture may be gained.
 - i. The Speech-Language Pathologist will instruct the patient to open his / her mouth and exhale through the oral cavity. Verbalizations / vocalizations will be elicited utilizing techniques as needed.
 - j. At the completion of the 15 minute trial or as tolerated by the patient, the Respiratory Therapist will remove the PMV from the ventilator circuit by placing one hand on the tracheostomy neck plate and with the other hand will gently twist the PMV in a clockwise motion off the hub of the tracheostomy tube, re-attach the in-line suction unit, re-inflate the cuff and return the patient to his/her previous ventilator settings.
7. At the completion of the trial frequency and duration of the PMV will be determined by the Respiratory Therapist and Speech-Language Pathologist and recommendations for continued trials with graded increases in wearing time will be made. A physician's order must be obtained with such recommendations for continued use of the PMV.
8. The Respiratory Therapist and / or Speech-Language Pathologist will complete the "PASSY-MUIR VALVE (PMV) NOTICE" (see attached) with recommendations for wearing the PMV. This document will be posted in the patient's room.