Policy and Procedure

Subject: Passy-Muir Speaking Valves (***PMV***)

POLICY APPLIES TO: CC, PMRU, OUTPATIENT (Pulmonology Clinic in conjunction with Outpatient Therapy Services)

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Manual: Patient Care

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Purpose: To establish standard protocol for evaluation and ensure quality therapeutic intervention for patients using the PMV.

PMV provides vocalization without finger occlusion for short-term and long-term tracheostomy patients.

Scope: Use of PMV by all qualified and properly trained staff members.

Evaluation of PMV use by all qualified and properly trained Respiratory Therapists and Speech-Language Pathologists.

Policy: All PMV evaluation and treatment orders must be written or approved by physician.

Trained staff members (to include Rehab, Education, and Nursing) and families will work in collaboration with Respiratory Therapy and Speech Pathology for use of the PMV.

Initial evaluation of PMV tolerance to be performed by Speech Pathology in collaboration with Respiratory Therapy with subsequent treatment plan established as warranted.

Product Information:
The Passy-Muir Speaking Valve (PMV) is a simple medical device used by tracheostomy and ventilator patients. When placed on the hub of the tracheostomy tube or in-line with the ventilator circuit, the Passy-Muir Valve redirects air flow through the vocal folds, mouth, and nose enabling voice and improved communication. The patented "No Leak" design of the Passy-Muir Valves mean that the valve is always in a closed position until the patient inhales. The valve opens easily with less than normal inspiratory pressures and closes automatically at the end of the inspiratory cycle without air leak and without patient expiratory effort. Unlike open position speaking valves, the closed position of the Passy-Muir Valve allows the patient to create a positive airway pressure and restores the patient to a more normal "closed respiratory system". The "closed system" also creates a protective column of air in the tracheostomy tube with resists secretions from moving up the tube and occluding the valve. Instead, secretions may be coughed up around the tube and expectorated or sectioned from the mouth. The Passy-Muir Speaking Valve is intended for use in providing vocalization without a finger occlusion.

Benefits of Use:
1. Restores positive airway pressure
2. Superior voice/speech production (vs. leak speech)
3. Improves swallow and may reduce aspiration
4. Expedites weaning
5. Reduces decannulation time
6. Improves oxygenation
7. Improves olfaction
8. Facilitates secretion management
9. Facilitates infection control
10. Interchangeability between tracheostomy and ventilator use

Contraindications for Use of PMV:
1. Pressure support of >20 (general rule – may consider case by case)
2. Peep of >10 (general rule – may consider case by case)
3. Receiving >50% oxygen support
4. Unconscious/comatose patients
5. Severe Medical Instability
6. Foam Filled, Cuffed tracheostomy tube
7. Severe airway obstruction
8. Thick and copious secretions
9. Severe risk for aspiration
10. Reduced lung capacity
11. Tracheal edema
12. Severe tracheal stenosis

Procedure for Evaluation of Passy-Muir Speaking Valve Use/Tolerance:

1. Verify order for Speaking Valve (SV) Evaluation and Treatment in patient medical chart and signed by physician.
2. RT and SLP perform SV Evaluation at patient's bedside.
    a. The role of the SLP and RT during the evaluation will be to explain the purpose of the speaking valve, ensure full cuff deflation, suction if necessary, evaluate for oral and nasal patency, place the valve if warranted, monitor clinical status, and provide patient/caregiver education.
    b. The RT will perform manometry to evaluate inspiratory and expiratory pressures to determine whether to proceed with PMV donning and full evaluation. PMV evaluation will proceed if transtracheal pressures are less than 10cmH2O.
    (Manometry results >10cmH2O require consideration of tracheostomy downsizing to be able to tolerate PMV and the PMV evaluation will be complete at this time.)
    c. The RT will also adjust ventilator settings as needed/appropriate.
    d. The SLP will evaluate speech and voice as well as examine secretion management.
3. Record baseline heart rate, respiratory rate, and pulse oximeter reading.
4. Suctioning patient's tracheostomy as needed (as the cuff is deflated) and orally as needed.
5. If patient has a cuffed tracheostomy, full cuff DEFLATION is required
6. Manometry evaluation – proceeding with evaluation steps if pressures appropriate
7. Examine patient to ensure nasal and/or oral patency
8. Donn the PMV if patency observed
9. Continue monitoring of vital signs, work of breathing, respiratory rate, heart rate, color, oxygen saturations, general condition, and voicing.
10. The length of the initial placement will be dependent upon the patient's level of tolerance.
11. Trial will discontinue if signs and/or symptoms of respiratory distress are observed
12. Trial will also be discontinued if patient demonstrates intractable coughing.
13. Based on the assessment results, a Plan of Care (POC) will be developed to increase use of the speaking valve. The patient's care team will assist in monitoring patient's tolerance during wear time. SLP and RT may make recommendations regarding the following parameters:
    a. Who may place the Speaking Valve
    b. How long the valve may be donned on the patient
    c. When PMV should be doffed - based on patient HR and O2 saturations while donned – remove it if O2 saturation is below the patient's identified O2 saturation limits or HR above the patient's identified HR limits and allow pt. break.
    d. Level/Type of supervision needed when PMV donned
    e. Delivery method of oxygen or humidification during PMV use (RT Recommendations)
    f. Vent setting changes during PMV use (RT Recommendations and Responsibility)
    g. Conditions under which PMV use is contraindicated.
14. The patient and family (as warranted) as well as staff will be educated on PMV donning and doffing as well as the recommended wear schedule.
15. Wear time will be documented by trained staff in EMR on the "Speaking Valve Application" procedure.
16. Wear time will be documented by families on paper documentation sheet provided by SLP and information will be entered into EMR by SLP at later date with comment – "as documented by caregiver"

Patient admitting from home with PMV: If a patient is admitted with prior/current use of PMV, the following must be completed:

1. Order from physician obtained to perform PMV evaluation with RT and SLP
2. Family/Caregiver bring PMV with patient at time of admission.
3. Plan of Care to be determined following results of evaluation.

Training/Education:

1. Clinical Care Staff will be trained and demonstrate competency in PMV donning and doffing annually (Nursing – including CNAs and NT; RT, Rehab (all therapies), Education – including PAAs)
2. Patient families will be trained and demonstrate competency in PMV donning and doffing. Training completion to be placed in patient's medical chart in "Patient/Family Education"

Special Considerations:

1. PMV should NOT be worn while a patient is asleep or receiving RT aerosol treatments.
2. Families may place PMV following documented training from SLP and/or RT and demonstrating competency with donning/doffing PMV.
3. SLP must consult with Physician prior to ordering Speaking Valve Evaluation and verify order prior to initiating evaluation.
4. If a patient does not tolerate PMV or demonstrate adequate patency for trial, the SV Eval and Tx order will be discharged and reordered as warranted.
5. If a patient is evaluated for Speaking Valve use while ventilated and begins sprinting process off the ventilator - the RT will notify SLP Department of sprinting trials so the PMV can be pulled and re-evaluated on the patient during periods of spontaneous breathing trials (Sprints). PMV to be reissued with specific instructions for use on and off ventilator as warranted.
6. All PMVs are SINGLE patient use DME and must be discarded if the patient no longer needs it or discharges from hospital.
    a. PMVs should only be issued after manometry testing is completed
    b. Following patient demonstration of oral/nasal patency, PMV will be issued to patient for evaluation. If patient does not tolerate PMV at time of initial evaluation, the SLP will label and save the PMV and utilize same PMV for re-evaluations for same patient.
    c. PMVs issued to patients will be documented under charge/credit in EMR.
7. At time of discharge, a LMN will be written and signed by PCP to request 2 PMV – one to come to TCCRH to replace PMV issued during admission and one to be delivered to patient so patient has 2 for use post discharge.

Cleaning:

1. Clean PMV after each use
2. Wash in warm, soapy water
3. Rinse thoroughly with WARM water – do not use hot water
4. Let air dry
5. DO NOT use the following items for cleaning PMV:
    - Hot water or harsh chemicals
    - Peroxide, bleach, vinegar, or alcohol
    - Brushes
6. If the PMV makes "honking" noise or sticks when in use, clean the SV again. If the sound continues, contact SLP for replacement SV.