Overcoming Barriers to Speaking Valve Use: Success Through Teamwork

Disclosure Statement

- Passy-Muir, Inc. has developed and patented a licensed technology trademarked as the Passy-Muir® Tracheostomy and Ventilator Swallowing and Speaking Valve. This presentation will focus primarily on the biased-closed position Passy-Muir Valve and will include little to no information on other Speaking valves.

Presenter

Nicole Riley, MS CCC-SLP
Director of Clinical Education
Passy-Muir Inc.
nriley@passy-muir.com
(949) 783-3755

Nonfinancial — No relevant nonfinancial relationship exists.

Course Outline

1. Evidence for Passy-Muir Protocols
2. Common barriers and practical strategies to overcome barriers to Passy-Muir Valve Use
3. How to implement a Passy-Muir protocol
4. Forming a tracheostomy team
5. Outcomes and Case Studies

My Story at Barlow

Benefits of the valve:
- Voice/Speech Production
- Improved swallowing
- Secretion management
- Restores positive airway pressure
- Restores PEEP
- Weaning
- Decomannulation
- Quality of Life

Why make the Passy-Muir® Valve a standard of care?
Overcoming Barriers to Speaking Valve Use:
Success Through Teamwork

Nicole Riley, MS CCC-SLP
Director of Clinical Education
Passy-Muir Inc.
Overcoming Barriers to Speaking Valve Use: Success Through Teamwork

Barrier 3: “We need to wait until the patient is on a trach collar”

Disuse Atrophy

• Mechanical ventilation can cause atrophy, and injury of diaphragmatic muscle fibers
• “Patients in intensive care lose about 2% of muscle mass a day during their illness.”
• Muscle weakness predicts pharyngeal dysfunction

Passy-Muir Valve facilitates weaning

• Greater tolerance of weaning attempts leading to independent breathing
• Patients have reported that breathing is easier and have been able to tolerate trials of CPAP longer
• Multidisciplinary teams incorporating the valve have had improved outcomes

Before Passy-Muir Valve

After Passy-Muir Valve

Nicole Riley, MS CCC-SLP
Director of Clinical Education
Passy-Muir Inc.
Overcoming Barriers to Speaking Valve Use: Success Through Teamwork

Use of the Passy-Muir can facilitate weaning

 Barrier 4: “The patients are too sick”

Patients should be medically stable

 Barrier 5: “The Ventilator will continuously alarm”

Set your pressure alarms appropriately

 Barrier 6: “Tracheostomy tube is too large”
Overcoming Barriers to Speaking Valve Use: Success Through Teamwork

Nicole Riley, MS CCC-SLP  
Director of Clinical Education  
Passy-Muir Inc.
Overcoming Barriers to Speaking Valve Use: Success Through Teamwork

Role of Speech-Language Pathologist
• Help assess airway patency
• Assess swallow ability and diet recommendations
• Assess vocal ability – Speech/swallow exercises
• Monitor tolerance
• Recommend wear time
• Educate caregivers

Role of Respiratory Therapist
• Help assess airway patency
• Adjust and monitor ventilator
• Technical troubleshooting
• Monitoring of pt status
• Cough/breathing techniques

Barrier 8: Lack of Knowledge/Inconsistency

Educate
• Be a leader
• Physician support is KEY!
• Pulmonologists, RTs, SLPs, nursing
• Use Passy-Muir webinars/inservices
Performance Improvement
- Protocol to assess all tracheostomy patients for Passy-Muir Valve within 72 hours of admission
- Criteria:
  - Tolerate cuff deflation
  - Patent upper airway
  - >48-72 hr post trach
  - Medically stable
    - FO2<60%
    - PEEP<10
    - PIP<40

Competency

<table>
<thead>
<tr>
<th>Name</th>
<th>Watched vent application webinar</th>
<th>Verbalized understanding of protocol</th>
<th>Performs procedure for placing Passy-Muir Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Doe</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td>Matt Smith</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td>Jane Jones</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td>Henry Cooper</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td>Andrea Thompson</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td>Margaret Miller</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td>Dave Parker</td>
<td>❑</td>
<td>❑</td>
<td>❑</td>
</tr>
</tbody>
</table>

Track your compliance
- SLP completes Passy-Muir Valve evaluation form within 72 hours of admission OR states reason patient was not a candidate.
- 98% compliance for PMV assessment at Barlow

Barrier 9: No Protocol

Multi-disciplinary Tracheostomy Weaning Protocols
- Increase amount of patients decannulated
- Reduce time to decannulation
- Assign clear responsibilities
- “The tracheostomy tube decannulation process is well suited for therapist-implemented protocols.”

http://passymuir.com/policiesandprocedures

Nicole Riley, MS CCC-SLP
Director of Clinical Education
Passy-Muir Inc.
Cuff Deflation as Tolerated

- **Stop Criteria:**
  - Respiratory rate greater than 35
  - Heart rate changes by 20 bpm
  - SpO2 less than 90%
  - FiO2 greater than 60%
  - Pt complains of difficulty breathing 6/10

Stop criteria present:
- YES: Re-inflate cuff and reassess patient before progressing
- NO: Advance to One-Way Valve

Speaking Valve as Tolerated

- **Stop Criteria:**
  - Respiratory rate over 35
  - Heart rate changes by 20 bpm
  - SpO2 less than 90%
  - FiO2 greater than 60%
  - Pt complains of difficulty breathing 6/10

Stop criteria present:
- YES: Remove valve and consult physician for possible downsizing
- NO: Advance to One-Way Valve as Tolerated

Capping as Tolerated

- **Stop Criteria:**
  - Respiratory rate greater than 35
  - Heart rate changes by 20 bpm
  - SpO2 less than 90%
  - FiO2 greater than 60%
  - Pt complains of difficulty breathing 6/10

Stop criteria present:
- YES: Reassess patient to determine barriers. Patient may need additional trach tube downsizing.
- NO: Consider recommendation for decannulation from physician after 24-48hrs

Decannulation!

- Requires an order

Candidates for Decannulation

- Have the indications for trach resolved or improved?
- Weaned from mechanical ventilation, effective coughing, no significant upper airway lesion
- Absence of distress, stable arterial blood gases, hemodynamic stability, absent fever
- A peak cough flow of 160 liters/minute
- Survey; patient’s level of consciousness, cough effectiveness, secretions, oxygenation

Success!

- Earlier decannulation times
- Reduced restraint use as patients were less anxious
- Individual success stories

---

Summary

- Be a leader
- Provide research to support your information
- Educate the clinicians and MDs
  - Use Passy-Muir webinars
  - Consider live webinars or inservices
- Implement a protocol
- Competencies
- Build your team!

Q and A

Presenter

Nicole Riley, MS CCC-SLP
Director of Clinical Education
Passy-Muir Inc.

nriley@passy-muir.com

(949) 783-3755

Nonfinancial — No relevant nonfinancial relationship exists.