## BECAUSE YOU NEED TO ...

# TALKOMUIR

Passy-Muir® News, Events and Education









Abigail

Sebastian

### **Rehabilitation Issue**

The Passy-Muir® Valve plays a very critical role in the rehabilitation of tracheostomy and ventilator patients of all ages across the continuum of care. You are probably aware of the importance of the valve for communication and swallowing rehabilitation. However, you might not be as familiar with the many pulmonary and physical rehabilitation benefits that the Passy-Muir Valve provides. In this issue, you will learn that beginning in the intensive care unit, the valve is an essential component for achieving the multiple and complex rehabilitation goals of tracheostomy and ventilator patients. Clinicians who understand the importance of the multidisciplinary team share their strategies for successful rehabilitation in this newsletter and at the 2011 AARC and ASHA National Conventions. Join Passy-Muir for special event live webinars in celebration of Respiratory Care Week this October and learn more about the Passy-Muir Valve and Rehabilitation.

## Did you KNOW?

Patients in intensive care can lose about 2% of muscle mass a day during their illness.

The Passy-Muir® Valve can be used as soon as 48 hours post tracheostomy.

Source: Griffith, et al. 1999

## **Pulmonary Rehabilitation Begins in the ICU**

By Gail Sudderth, RRT, Clinical Specialist, Passy-Muir, Inc. Mary Spremulli, MA, CCC-SLP, Clinical Consultant, Passy-Muir, Inc.

When the term "pulmonary rehab" is mentioned, most practicing healthcare practitioners conjure up images of patients performing six minute walks, exercise while seated using an arm cycle, or laps walking on a track hooked up to an oxygen saturation and heart rate monitor. While this description may generally be true, it applies to patients who have already recovered, maybe even to the point where they have been discharged to home and are traveling to a facility for pulmonary rehab.

What about pulmonary rehab for patients in the hospital or in ICU? Recently, much has been written about early mobilization of patients in the ICU, not just range of motion and exercising while remaining in bed or standing at the bedside. Although more study needs to be done in this area, there appears to be a correlation between earlier mobilization of patients and improved outcomes. To take this a step further, what about stable tracheostomized and/or mechanically ventilated patients in the hospital or the ICU? Can they participate in pulmonary rehabilitation and early mobilization? Of course, the answer is YES! The patient with a tracheostomy both on and off mechanical ventilation can achieve the same benefits as any other patient. There are some things to consider however, including coordination of therapies, especially between the respiratory care practitioner (RCP) and the speech language pathologist (SLP).

Atrophy of the muscles, including those of respiration and swallow, occurs rapidly during times of critical care illness. Standing, walking, turning in bed, talking and even singing uses many muscle groups that interact constantly, and the loss of coordination of these muscles may be even more pronounced during times of illness. Therefore, strategies for strengthening the respiratory muscles should be incorporated into the overall therapy plan in the ICU, beginning as soon as the patient is able to tolerate cuff deflation and even before attempting standing or walking. Tasks such as speaking, coughing, and breath-holding involve use of muscles of both the upper and lower airway. Early use and rehabilitation of these muscles by performing expiratory muscle training exercises may improve endurance and exercise tolerance, which could in turn impact weaning from mechanical ventilation and decannulation.

The placement of the tracheostomy tube with an inflated cuff creates a "disconnect" between the upper and lower airways, bypassing the normal mechanisms that create and maintain positive airway pressure in the lungs. Because of this, patients with tracheostomy may find it harder to perform exercise even for very short periods or become short of breath easily. By achieving full cuff deflation along with the use of the Passy-Muir® Valve, a more normal closed aero-digestive physiology is restored including airflow and positive airway pressure. Now, the therapist can

## Fall 2011





Althea

PMV<sup>®</sup> 2001 (Purple Color™)





The two pictures above:

Therapists at Madonna Rehabilitation Hospital in Lincoln, NE using expiratory muscle training devices with ventilator patients.



Clinical team at Kindred Hospital, Wilkes-Barre, PA ambulating a ventilator patient using the PMV® 007.

include many of the therapies prescribed in the plan as they would for any "pulmonary rehab" patient including patients who still require mechanical ventilation. For patients with tracheostomy to be successful, a dedicated team approach by the RCP and the SLP assures that synchronous and adequate ventilation is maintained during the therapy sessions.

The following list of therapies can be performed by tracheostomized and ventilator dependent patients utilizing a mouth piece or mouth seal in conjunction with the Passy-Muir Valve. While some of these therapies may be prescribed primarily as an adjunct to broncho-pulmonary hygiene (airway clearance) regimens or for lung expansion, therapies that provide expiratory resistance have also been reported to strengthen the muscles of respiration and improve overall strength and duration of exercise.

Respiratory muscle training while using the Passy-Muir Valve can include:



Instruction in diaphragmatic breathing and pursed lip breathing



Expiratory muscle training using a device such as

- EMST 150
- Threshold PEP



Therapies to assist in lung expansion coughing and airway clearance

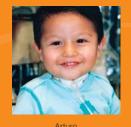
- Acapella
- EZ Pap
- The Breather



Sapienza, M., & Wheeler, K. (2006). Respiratory muscle strength training: Functional outcomes versus plasticity. Seminars in Speech and Language for a special edition called New Frontiers in Dysphagia Rehabilitation, 27(4): 236-244.

Pitts, T., et. al. (2009). Impact of expiratory muscle strength training on voluntary cough and swallow function in Parkinson disease. Chest, 135: 1301-1308.

Baker, S. et. al. (2005). Examination of strength training and detraining effects in expiratory muscles. J Speech Lang Hear Res, 48: 1325-1333.







## **Facility Spotlight**

By Julie Kobak, MA, CCC-SLP, Vice President of Clinical Education, Passy-Muir, Inc.

## Nationwide Children's Hospital - Advancing Developmental Outcomes in the NICU

Ranked by U.S. News & World Report in 2010 as one of "America's Best Children's Hospitals," Nationwide Children's Hospital in Columbus, Ohio has always had a very strong focus and commitment to the developmental needs of their pediatric patients. In particular, the speech-language pathologists provide early intervention to address communication and verbal development for even the youngest and most critical patients in the NICU. Although they would routinely assess

for and place Passy-Muir® Swallowing and Speaking valves on babies who have a tracheostomy tube when off of the ventilator, they rarely used the valve with infants and children still dependent on the ventilator, and therefore were not able to access all aspects of their development.

patients on a recent visit to the hospital. I joined speech-language pathologist, Jennifer Finch, for her therapy session with Grady, a 16 month old who was born premature with Grade III and IV intraventricular hemorrhages and a severe case of BPD. He had been hospitalized and ventilator dependent since birth in a hospital in another state but his parents transferred him to Nationwide Hospital because of its exceptional developmental program and BPD ventilator weaning program.

I had the opportunity to meet the team and one of their

As we entered Grady's room, he was reclined in his portable highchair vocalizing loudly to his mom. We were joined shortly by his neonatologist, Dr. Shepherd, who stopped by to meet me and tell me more about the Passy-Muir protocol development. First, Jennifer explained that it was important to the

team to "have consistency with the referral process". She said that through the use of objective guidelines they are able to identify the children who were valve candidates earlier and more clearly. Although there are specific ventilator parameters and transtracheal pressures as part of their criteria, she cautioned that these parameters are guidelines only. For example, Grady was well above their assessment criteria for both ventilation and transtracheal pressure, but he clearly demonstrated other signs that he was a good candidate for the Passy-Muir Valve. He was leaking air around his uncuffed tracheostomy tube and had some occasional vocalization. Because of Grady's high ventilating pressures, Dr. Shepherd said, "For children like Grady, our initial concerns were that it would make their work of breathing worse or that it would make them less successful on their CPAP/pressure support trials. But it hasn't worked out that way in the least. They do not have negative consequences having PMVs in place. We think we have been able to add developmental progress with little expense, which has been great."

"We're believers!
We've quickly learned that
you cannot neglect language
development while trying to
rescue them from lung disease."

In 2008, speech-language pathologists Melanie Stevens, MS, CCC-SLP and Jennifer Finch, MA, CCC-SLP, teamed up with the physicians, respiratory therapists and the ENT nurse practitioner to develop a standard and coordinated protocol for Passy-Muir Valve use with ventilator patients in their NICU Bronchopulmonary Dysplasia (BPD) unit. The protocol which was formalized in 2010 provides consistent patient selection parameters for Passy-Muir Valve assessment, outlines multi-disciplinary team member roles, and gives guidelines for the progression of Passy-Muir Valve wearing time. With use of this new protocol, all children with tracheostomies are assessed as soon as 7 days post tracheostomy when they are medically stable and tolerating cuff

deflation. The protocol is inclusive of children who are ventilator dependent, even those on full ventilator support.

PMV® 007 (Aqua Color™)





Jennifer Finch, MA, CCC-SLP providing developmental speech and language therapy to Grady.



Grady, using the PMV® 007 makes sounds with mom, Jessica.

Grady, whose peak airway pressures range from 55 to 60cm  $H_2O$ , uses the PMV® 007 in-line with his ventilator during all waking hours. Grady's mom was unable to hear Grady vocalize and cry until he was 13 months old, when the valve was placed shortly after his admission to Nationwide. She stated, "It has been a blessing to me to hear him speak. Sometimes I can hear him all the way from the nurse's station!"



Nationwide Children's Hospital clinicians (L to R) Jennifer Finch, MA, CCC-SLP, Leslie Justice, RN, MS, CPNP, and Melanie Stevens, MS, CCC-SLP

It was obvious that the team at Nationwide is excited about the results of their new protocol. The protocol along with the increased multidisciplinary team interaction has led to an increase in referrals for assessment and use of the Passy-Muir Valves as well as improved quality of patient care and developmental outcomes. Grady is beginning oral motor feeding therapy while using the Passy-Muir Valve and enjoying his first tastes of sweet potatoes and apple juice.

Dr. Shepherd summarized the team's sentiments about their Passy-Muir Valve protocol, "We're believers! We've quickly learned that you cannot neglect language development while trying to rescue them from lung disease. You have to proceed with teaching them language and how to talk even when they are on significant ventilator support."

You can learn more about the Nationwide Protocol by visiting their poster session at the 2011 ASHA Convention or by reading their article which will be published in the December issue of Neonatal Intensive Care.

See page 11 for details.

Scan here to watch a video of Grady and the team from Nationwide Children's Hospital.

Or visit: http://tinyurl.com/pmv-nwc









Sarah

## Communication from Both Sides of the Bedrail: Insight from a Respiratory Care Practitioner

Interviewed by Gail Sudderth, RRT, Clinical Specialist, Passy-Muir, Inc.

**Ashley Oliver** woke up from a medically induced coma one month following an automobile crash that almost took her life. Fortunately, she has since made a complete recovery and is now a student at University of Alabama at Birmingham, pursuing her BS in Respiratory Therapy. Ms. Oliver shares her unique perspective on what it is like to be a patient with a tracheostomy and unable to communicate.



Ashley Oliver

"My first memories were waking up in a step-down unit and having no recollection of the accident or what had happened to me. I remember now feeling very sad when I thought I would never speak again. Soon, I figured out that if I pushed on my cervical collar and occluded the tracheostomy tube, a faint voice would come out. Then I was told that I wouldn't need the collar anymore. Being thankful my life had been spared, I soon just accepted that I would have to use one of those voice boxes the rest of my life to speak. I tried to accept my fate; however, it was not easy at the time.

One day, Brad Shivers RCP, came in and told me he had a little cap, which was actually the Passy-Muir® Valve, that I could put on my tracheostomy tube so that I could talk!! It wasn't easy at first, but I was so

excited to be able to speak again. It wasn't long before my tracheostomy was removed and I was able to start rehab and go home.

What I hope to share with others is a very unique perspective of the tracheostomized patient since I have been where they are, and now I am the caregiver. We don't realize that the average person does not fully understand what a tracheotomy is, let alone the long term implications. Not being understood was probably one of the most difficult obstacles I had to overcome while in the ICU.

As the caregiver, reading lips or hand gestures is very difficult. We may just smile and nod, tell them, "relax, it will be OK, I will come see you later," as we are leaving them. We don't mean to, and even though it is unintentional, it is neglect. Imagine how the patient must feel as we walk away.

Although we may all be guilty of making assumptions, not all trach patients are hard of hearing or suffer from brain damage. I now sympathize so much with my trach patients and their families. I am often called to a patient's room to read lips in the initial stages following the tracheostomy, since I have experience. My favorite part is then being able to share my personal experience with the patient, and their family and friends. I tell them, "Believe it or not, a trach is not the worst thing," which seems to reassure the patient and the uneasy

relatives. We strike up an instant friendship and they no longer seem so terrified of the idea of the tracheotomy. Let's be honest, a hole in your throat does not sound very enticing.

We all must remember how important the ability to communicate is for all of our patients, not only with family and friends, but with their healthcare providers as well. The Passy-Muir speaking valve is an innovative and easy way to greatly improve a patient's quality of life by giving them back their ability to speak."



Photos by Dr. Wes Granger. Used with permission.



By Mike Harrell, RRT, Director of Clinical Education - Respiratory, Passy-Muir, Inc.

## Question: How early in recovery from traumatic brain injury can a Passy-Muir® Valve be used?

Assessment of cognitive function begins very early in patients with severe traumatic brain injury, often as soon as patients begin emerging from a deep coma (1-3). The Rappaport Coma/Near Coma Scale is a standardized assessment tool that scores a patient's responses to various stimuli across all sensory domains (1). A patient's ability to vocalize or verbalize is a significant factor in this assessment. Responses to strong odors, visual, tactile and painful stimuli are also rated. An open tracheostomy tube does not allow airflow through the oral and nasal tract for olfaction nor does it allow the patient the ability to vocalize or verbalize a response. Therefore, for some tracheostomy patients, the total score of this scale can be altered, and therapeutic plans based on the assessment can be misguided. Use of the Passy-Muir® Valve can begin as soon as 48 hours after the original placement of the tracheotomy tube. Early placement of the Passy-Muir Valve can restore airflow to the upper airway allowing increased vocalizations and awareness of sensory stimulation, thus providing more complete and meaningful assessment and ultimately hastening recovery to the highest possible function.

The presence of a tracheostomy tube with an inflated cuff has significant effects on swallowing frequency and effectiveness due to decreased laryngeal excursion, subglottic pressure and oropharyngeal sensitivity (4-6). In a study by Dr. Seidl and colleagues (4), tracheostomy tubes were determined to decisively influence the swallowing behavior of vegetative patients. For patients with a Glasgow Coma Scale score below 8 points, the presence of the tracheotomy tube decreased the swallowing frequency. Removal of the tracheostomy tube significantly improved swallowing frequency for this group of patients. Therefore, the authors recommend deflation of the cuff or removal of the tracheostomy tube as a therapeutic measure to improve swallow function based on "improved sensitivity under reestablished"

physiologic expiration." For patients not ready for decannulation, cuff deflation and early use of the Passy-Muir<sup>®</sup> Valve can significantly contribute to the improvement of swallow safety and efficacy by not only restoring expiratory airflow physiology, but also reestablishing the benefits of subglottic pressure <sup>(5)</sup>.

To see a visual representation of the physiologic benefits of the closed position function of the Passy-Muir<sup>®</sup> Valve, please visit our website at:

www.passy-muir.com/education/benefits/video.aspx.



- 1. Rappaport, M. (2005). The Disability Rating Scale and Coma/Near Coma Scales in evaluating severe head injury. Neuropsychological Rehabilitation, 15(3/4): 442-443.
- 2. Rappaport, M., Dogherty, A., & Kelting, D. (1992). Evaluation of coma and vegetative states. Archives of Physical Medicine and Rehabilitation, 73:628-634.
- 3. Talbot, L., & Whitaker, H. (1994). Brain injured persons in an altered state of consciousness: Measures and intervention strategies. Brain Injury, 8:689-699.
- 4. Seidl, R., et. al. (2005). The influence of tracheostomy tubes on the swallowing frequency in neurogenic dysphagia. Otolaryngology Head Neck Surgery, 132:484-486.
- 5. Eibling, D., & Gross, R. (1996). Subglottic air pressure: A key component of swallowing efficiency. Annals of Otology Rhinology Laryngology, 105:253-258.
- 6. Dettelbach, M., Gross, R., Mahlmann, J., et. al. (1995). The effect of the Passy-Muir valve on aspiration in patients with tracheostomy. Head & Neck, 17:297-302.







## **Featured Clinical Expert:**

## The Role of the Passy Muir Valve in Adult and Pediatric Rehabilitation

Rebecca Wills BA, CRT, CRT-NPS, Pulmonary Program Manager at Madonna Rehabilitation Hospital has been a respiratory therapist since 1993 and received her Bachelor of Arts degree in Allied Health cum laude in 2004 and her specialty designation in Neonatal/Pediatric Respiratory Care in 2009. On staff at Madonna Rehabilitation Hospital in Lincoln, Nebraska since 1996, Rebecca is the Pulmonary Program Manager and is responsible for the development, growth, quality and marketing of programs for adult and pediatric tracheostomy and ventilator patients.

### Does the placement of a tracheostomy tube have an impact on a patient's physical functioning, for example: trunk control, posture, and movement?

Absolutely! The body is designed to be a closed system. The trunk includes the abdominal and thoracic cavities, separated by the diaphragm. The vocal folds and the pelvic floor create a closed "cylinder," with the diaphragm regulating the pressure.

Trunk control, breathing and internal functions are dependent on the ability of the body to generate, maintain and regulate pressure in the thoracic and abdominal cavities. Placement of a tracheostomy tube creates a breach in that closed system, and that changes everything.





Rebecca Wills
BA, CRT, CRT-NPS
Pulmonary Program
Manager

In your experience, what benefit does a Passy-Muir® Valve have on physical rehabilitation?

The Passy-Muir® Valve plays a vital role in the rehabilitation of adult and pediatric tracheostomy and ventilator patients throughout the continuum of care. Within 48 hours of admission at Madonna Rehabilitation Hospital, the speech-language pathologists and respiratory therapists assess each tracheostomy patient's speech, voice and swallow. As part of our tracheostomy weaning protocol, an individualized treatment plan (ITP) is designed. This protocol is utilized with all patients, including our medically complex Long Term Acute Care Hospital (LTACH) ventilator patients.

Communicating with family and caregivers is vital to a patient's rehabilitation success. Use of the Passy Muir Valve restores the body's closed system. The resulting positive pressure allows for improved breath support and phonation, and louder, more natural voicing.

Early use of the Passy-Muir Valve facilitates participation in and/or the ability to direct one's own care, another core goal of rehabilitation.

Patients typically rely on tracheal suction for secretion management. Restoring an effective cough can reduce or eliminate the need for this invasive procedure. An effective cough requires adequate inspiratory volume and expiratory flow. With the valve on, the respiratory therapist can measure the patient's Peak Expiratory Flow (PEF) using a peak flow meter, and incorporate expiratory training devices and strategies to improve cough strength and quality.

Erin Reier, OTD, OTRL/L facilitates increased breathing support for Dathin while he sings in therapy.

## FALL 2011





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Madonna's interdisciplinary teams develop ITPs based on research-supported strategies. For example, physical therapist and published researcher, Dr. Mary Massery, demonstrates the relationship between breathing and postural control, and the need to treat them together in her course, "If You Can't Breathe You Can't Function". The expertise of a rehabilitation team that incorporates these strategies with the Passy Muir Valve will allow every tracheostomy patient to maximize their potential and achieve the best possible outcome. Just ask some of our patients.

Shane, a 23 year old with paraplegia following a spinal cord injury, wanted to go home. His rehabilitation goals included being independent in his transfers. With an open tracheostomy, Shane was unable to generate and maintain the internal pressures he needed to lift himself into his wheelchair. Use of the Passy Muir Valve restored his body's closed system allowing Shane to quickly meet his goal.



Dathin using the PMV® 2001 while working on pelvic positioning and weight bearing activities



Lindsay Tuxhorn, OTD, OTR-L, teaches Jerred how to use a voice-activated telephone receiver.

Jeremy, an energetic 2 year old with multiple disabilities has had a tracheostomy tube since birth. One of Jeremy's out-patient rehabilitation goals was to increase his independence through the use of a manual wheelchair. With an open tracheostomy, Jeremy did not have the trunk control to sit upright without assistance and could not generate the internal pressure he needed to propel his chair. Once the Passy-Muir Valve was introduced, Jeremy's interdisciplinary team of therapists began to focus on postural control and upper body strength and coordination. Jeremy is now able to navigate and explore his world like other 2 year olds.

Jerred, a 37 year old who had a C4 spinal cord injury on August 7, 2011 was admitted to Madonna three weeks after his injury. Ventilator dependent and unable to voice his needs or communicate with his family, Jerred was reliant on others to read his lips. Jerred's speech therapist and respiratory therapist evaluated him for the use of the Passy Muir Valve within 48 hours of his admission. With the Passy Muir Valve, Jerred is now able to utilize voice activated technology, increasing his independence via his computer. He also uses a voice activated phone so that he can stay in touch with his 11 year old daughter, Taylor, who is at home in lowa.

To watch more patients at Madonna realizing their rehabilitation outcomes with the Passy-Muir Valve visit <a href="http://tinyurl.com/mrh-pmv">http://tinyurl.com/mrh-pmv</a> or scan here.

You can attend Rebecca's presentation "Pulmonary Management of the Spinal Cord Injury Patient" at the AARC Congress 2011 on November 5th at 3:20pm.





## TALKMUI

Jack

Ros

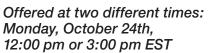
Passy-Muir, Inc. | Fall 2011

# Celebrate Respiratory Care Week

### **Free Live Event Webinars**

## Tracheostomy: Procedures, Timing and Tubes

Speaker: Gail Sudderth, RRT, Clinical Specialist Passy-Muir, Inc.



The choice of the tracheostomy tube can have an impact on the evaluation and treatment of the tracheostomized patient, therefore, a description of the various tracheostomy tubes, types of cuffs and proper cuff maintenance will be given. Case studies will be used to demonstrate the importance of selecting proper tube size and type, as it relates to upper airway assessment, swallowing, and communication options.

## Passy-Muir Valve FAQ Challenge

Speakers: Mike Harrell, RRT, Director of Clinical Education-RT Passy-Muir, Inc.



Gail Sudderth, RRT, Clinical Specialist, Passy-Muir, Inc.

### Offered at two different times: Tuesday, October 25th, 3:00 pm or 6:00 pm EST

Using an interactive polling feature, attendees can test their knowledge of frequently asked questions related to airway assessment, choosing a Passy-Muir Valve, ordering and billing information, and treatment modalities appropriate for use with the tracheostomized and ventilator dependent patient.







Passy-Muir, Inc. is an approved provider of continuing education by the Continuing Respiratory Care Education (CRCE) system of the American Association of Respiratory Care (AARC), the Continuing Education Board of American Speech-Language-Hearing Association (ASHA), and the California Board of Nursing.

## There's More to Life than Breathing

Speakers: Linda Dean, RRT, Clinical Specialist Passy-Muir, Inc.

Jack Rushton, ventilator user



#### Wednesday, October 26th, 3:00 pm EST

Join us to learn about ventilator use from Jack Rushton, who has been using a Passy-Muir Valve with his ventilator for 22 years. Get information on in-line valve placement and making ventilator adjustments from Linda Dean, RRT.

## "Yes You Can!" Cardiopulmonary Rehabilitation for the Tracheostomy and Ventilator Patient

Speaker: Linda Dean, RRT Clinical Specialist, Passy-Muir, Inc.

#### Offered at two different times: Thursday, October 27th, 12:00 pm or 3:00 pm EST

Current research is showing that early ambulation for the critical



care inpatient has many benefits, including decreasing ICU length of stay by as much as 30%. In this webinar, clinicians will learn how a comprehensive team approach and pulmonary rehabilitation with early mobilization and exercise can impact length of stay, functional outcomes and quality of life for tracheostomy and ventilator patients. The role of the Passy-Muir Valve in early mobilization will be discussed as it relates to the restoration of a closed respiratory system and positive intra-thoracic pressure for postural control, extremity force and utilization of treatment strategies that require expiratory airflow through the mouth. A case study by the rehabilitation team of Kindred Hospital Wyoming Valley in Wilkes-Barre, PA will be presented highlighting these concepts and their successful outcomes including a 13% improved weaning rate after just over one year of implementation.







## Calendar of Events

## October

- Michigan Society for Respiratory Care Conference Presentation
- National Association of Long Term Hospital (NALTH) Exhibit 6
- 6 Iowa Speech-Language Hearing Association Conference – Presentation
- 8 Intermountain Speech and Hearing Conference - Presentation
- Washington Speech and Hearing Association Conference Presentation 13
- 28 West Tennessee Chapter Society for Respiratory Care Conference – Presentation
- 29 Weisman Children's Rehabilitation Hospital, New Jersey - Seminar

### November

- 4 Kindred Hospital of San Antonio Texas Regional Conference - Presentation
- 5-8 American Association or Respiratory Care (AARC) National Congress Tampa, FL - Exhibit

Presentations:

 Pulmonary Management of the Spinal Cord Injury Patient Rebecca Wills, Lincoln, NE, Nov. 5, 3:20-4:05 pm

American Speech and Hearing Association (ASHA) National Convention 17-19 San Diego, CA - Exhibit



Presentations:

- Passy-Muir FAQ Challenge, Exhibitor Learning Lab 1 Gail Sudderth, Nov. 18, 3:30-4:30 pm
- Application of the Passy-Muir Tracheostomy and Ventilator Swallowing and Speaking Valve Linda Dean and Julie Kobak, Nov. 18, 5:00-6:00 pm
- Passy-Muir Valve in the NICU Melanie Stevens and Jennifer Finch, Columbus OH, Nov. 19, 10:00-11:30 am
- Initiating In-Line Ventilator Speaking Valve Protocols: Why and How? Kristin Dolan, Melbourne, FL, Nov. 19, 11:00 am-12:00 pm

### **December**

6 Kindred Healthcare Clinical Impact Symposium 2011, Louisville, KY - Presentation and Exhibit









PMB 273, 4521 Campus Drive Irvine, CA 92612





Talk-Muir is published by Passy-Muir, Inc. for tracheostomy and ventilator-dependent patients, their caregivers and medical professionals in an effort to provide:

- Interesting news and stories
- Resources and clinical tips
- Information about new educational opportunities
- Upcoming events and more

Story contributions and comments are welcome.

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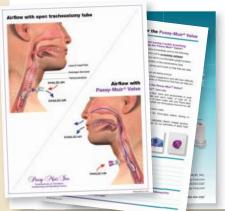
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- 30 Tablets
- Biodegradable
- Leaves No Residue
   Convenient Size

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- · Tear Sheets with colorful graphics and easy-to-read instructions
- Ideal for teaching tracheostomy concepts and clinical benefits of the Passy-Muir® Valve
- Can be individualized for each patient and taken with them wherever they go Each tablet has 35 sheets, with 3 tablets per pack. 8.5"x11" size.

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To order visit store.passy-muir.com or call 1-800-634-5397

