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Vanderbilt University
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LeBonheur
Children's Hospital



Johns Hopkins
Hospital

TEAM ISSUE # 2

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- Ventilator Play Group
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Clinical Expert Interview: Starting a Tracheostomy Team



**Carmin Bartow, MS, CCC-SLP, BCS-S
Vanderbilt University Medical Center**

Carmin is a licensed and certified speech-language pathologist who is Board Certified in Swallowing and Swallowing Disorders. She is currently employed at Vanderbilt University Medical Center specializing in dysphagia management, trach/vent intervention, and in swallowing disorders in the head and neck cancer population. In addition to her clinical responsibilities, she facilitates a head and neck cancer support group and enjoys presenting and teaching at Vanderbilt as well as at state and national conferences. Carmin has authored an ASHA publication titled *“Tracheostomy Tubes in Adults; Management of Communication and Swallowing Impairments.”* She teaches Dysphagia as an adjunct professor at Tennessee State University and is an Educational Consultant for Passy-Muir, Inc.

1. What made you decide that a team approach for the management of patients with tracheostomy was necessary at Vanderbilt University Medical Center (VUMC)?

The short answer: I saw inconsistencies with trach management throughout the hospital and I knew we could do better. Our speech pathology staff evaluates and treats tracheostomized patients in all areas of our 800 bed hospital including the Emergency Department, step-down units and in eight different ICUs. We were continually noticing differing tracheostomy practice patterns across VUMC depending on the area, unit, or service in which the patient was placed. Nursing knowledge and skills in managing patients with trach tubes varied. In addition, there was a lack of standardization for sizing of the trach tube, trach care, cuff deflation, use of the Passy-Muir® Valves, referrals for swallowing assessments, downsizing, and decannulation. With these inconsistencies, it became apparent that tracheostomy management needed improvement.

I knew that tracheostomy teams existed in many institutions to better manage patients with trach tubes. I began to wonder whether a trach team would be feasible at VUMC. Initially, I had concerns that a trach team wouldn't work in a hospital the size of Vanderbilt – too many trachs (approx 600 per year), too many ICUs, too many staff members to train and too many different services to include. I was also concerned I would encounter resistance and thought that someone other than a speech-language pathologist would need to take the initiative and lead in this endeavor. For quite some time, I waited for an MD to have the big “ah-ha” moment and magically fix the problem. But as you can imagine, that didn't happen and as time passed, the problems continued.

“Results revealed that nurses needed more education and mentoring with tracheostomy management.”

I kept the trach team idea in the back of my mind and eventually decided to survey staff about trach issues. In particular, I wanted to determine nursing comfort and skill level in managing patients with tracheostomy tubes. Results revealed that nurses needed more education and mentoring with tracheostomy management. These results along with the inconsistencies observed by the SLPs were the impetus to begin researching tracheostomy teams. I read numerous articles and discovered the many benefits of establishing trach teams: increased use of the Passy-Muir Valve, reduced length of stay, quicker decannulation and cost savings. I watched the Passy-Muir webinar about tracheostomy teams and learned important steps and components of trach team development. In addition, I called hospitals that had successful trach teams in place and took copious notes about what worked and what didn't. The information I gathered led me to believe that a trach team could certainly benefit both patients and staff and had potential to be a reality at VUMC.



PMV® 2001
(Purple Color™)



2. What steps did you take to develop your team?

One of the first steps I took was to gain allies. I needed support and someone to champion this endeavor.

I started discussions with a Head and Neck Surgeon who was immediately interested and agreeable to continued meetings and discussions about a trach team initiative. We began monthly meetings and gradually invited other staff to get involved. For approximately two years a group consisting of an Otolaryngologist, Speech Language Pathologist, Case Manager, and Director of Peri-Operative Services met to develop our version of a tracheostomy team. We developed documents, procedures, team goals, tasks, financial goals and plans, etc. These documents and plans were ultimately presented to administration in anticipation of implementing the VUMC trach team.



The Vanderbilt University Medical Center Trach Consult Service. From L to R: Nina Collins, MSN, RN, ACNP-BC; Oscar Guillaumondegui, MD (Trauma); Alexander Gelbard, MD (Otolaryngology); and Carmin Bartow, CCC-SLP, M.S. BCS-S. Not pictured: Clint Leonard, MSN, RN



A Passy-Muir Valve and swallowing assessment is automatically ordered for all new trach patients at Vanderbilt University Medical Center

3. Did you meet any obstacles?

Yes! Our first attempt at the creation of a tracheostomy team was unsuccessful for many reasons. Administration was interested, but the budget didn't allow for any new hires at the time. There was some resistance from other services who performed tracheotomies since they were not involved in the planning meetings. Lastly, our main advocate accepted a chair position at another institution. Unfortunately, with budget limitations, resistance from other services, and no champion to advocate for us, interest dwindled and the initial trach team initiative was laid to rest.

It was certainly disappointing but I knew that we had given it a valiant effort and thought it was time to move on. But... those pesky little trach problems persisted! Every time I encountered a size 8 trach that had not been downsized in a timely manner, a cuff that had not been deflated, or a patient that should have had a Passy-Muir assessment much earlier, I felt the need to get back on the horse and try again. So after a few months of frustration, I started over. This time, I sought to include additional professionals from other services. I found a new champion who was a Trauma MD and we gradually started a new version of the VUMC Trach Team. TAKE 2! We included a Registered Nurse (RN) who was extremely knowledgeable in tracheostomy tubes, a Nurse Practitioner (NP) who had experience in trach management and education, and an Otolaryngologist with a special interest in management of complex airways. We also had consultants from Patient Education, Respiratory Therapy and Case Management. This new team proved to be the multi-disciplinary group to make things happen!

Clinical Expert Interview *(continued)*

4. After you rallied the troops a second time, describe specific actions your team has taken to improve patient care.

I am happy to say that the VUMC Trach Consult Service exists! It was a long road, nearly 3 years in the making, but well worth the time and effort. I'd like to share some of the improvements in practice patterns and procedures as a result of the implementation of the Trach Consult Service:

- Tracheotomies are performed within 24 hours of request
- Designated NP for the Trach Consult Service who rounds on patients daily. Patients are seen routinely on post-op day two and five and throughout their hospitalization as needed
- Standardized care throughout VUMC for trach sizing, cuff deflation, downsizing, and decannulation
- Development of an outpatient Trach Clinic. If a patient is discharged with a trach, he/she is automatically scheduled in the Trach Clinic for follow up
- Creation and implementation of new VUMC tracheostomy protocols, policies, order set and patient education hand-outs
- Passy-Muir® Valves and swallowing assessments are part of the order set for all new trachs, so patients are talking and eating much sooner
- On-going staff education

VUMC has a credo which states "We provide excellence in healthcare, research and education. We treat others as we wish to be treated. We continuously evaluate and improve our performance." I believe that with implementation of the Trach Consult Service we are adhering to our credo and meeting our goal of excellence in patient care.



Speech-language pathologist Carmin Bartow places a PMV® 2001 on a patient at VUMC

5. Would you say there is one key element to making your team successful?

Yes, a major focus for us has been education. To ensure the success of the VUMC Trach Consult Service, we needed to enhance staff knowledge and skills regarding the management of tracheostomy tubes. Tracheostomy education is now an integral part of what we do.

We have created an education document entitled "Nursing Management of Tracheostomy." This step-by-step document outlining the nursing role in managing a patient with a tracheostomy tube has been distributed to all nurses in all units. We have created a webinar which can be assigned for nursing annual competencies. We are on the monthly agenda to provide tracheostomy education during new nurse orientation and ICU orientation. We provide educational booths and lectures at unit board meetings and safety fairs.

Included in all of our tracheostomy education presentations and documents is information about the Passy-Muir Valve. Details about use, need for complete cuff deflation, care, cleaning, placement, removal, and troubleshooting are included. It is our goal that this education be on-going across the institution.



PMV® 007
(Aqua Color™)



Since the implementation of the Trach Consult Service, the management, standardization and care of the patient with a tracheostomy tube has greatly improved. I believe this has enhanced patient quality of life as well, due to better trach care, quicker referrals for Passy-Muir® Valves and swallowing assessments, and more timely decannulation. My message to clinicians who feel that a trach team may benefit their patients is to find colleagues and a champion with similar goals in mind and don't give up!



Carmin Bartow, MS, CCC-SLP presents a tracheostomy lecture which is a component of the Critical Care Track during the Nurse Residency Program for new nurses



Educational materials utilized for tracheostomy education during the Safety Fair at Vanderbilt University Medical Center

Upcoming Events

American College of Chest Physicians CHEST Conference 2015

October 25 – 28, 2015, Montreal, Canada

BOOTH
615

American Association for Respiratory Care AARC 61st International Congress

November 7 - 10, 2015, Tampa, Florida

BOOTH
431

American Speech-Language-Hearing Association ASHA 2015 Convention

November 12 - 14, 2015, Denver, Colorado

BOOTH
704

Vibra Hospital of Richmond Training Session

November 12, 2015, Richmond, Virginia

East Tennessee State University Department of Communicative Disorders Conference

November 20 – 21, 2015, Johnson City, Tennessee

South Carolina Speech Language Hearing Association Annual Convention

February 25 - 26, 2016, Columbia, South Carolina

Anne Arundel Medical Center Conference

April 21, 2016, Annapolis, Maryland



The Cutest Hour at LeBonheur

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

Toby Tracheasaurus™ is a favorite therapy tool of pediatric therapists. We often hear stories about how children are introduced to the Passy-Muir Valve through interactive play with Toby, the toy dinosaur who has his own tracheostomy and valve. Recently we learned that Toby is quite popular in a group therapy session for children with tracheostomies and on ventilators.



The team at LeBonheur Children's Hospital pulled out all the stops to make this special play group happen. I recently spoke to Amy Claire Petro, the speech-language pathologist who initiated this program with child life specialist Molly Pearce, two nurses, Hillary Arnold and Virginia Burbank, and a physician, Dr. Stephanie Storgion. Amy Claire started her story by telling me why the team at her hospital felt this group was needed. The majority of the children who have tracheostomies and are mechanically ventilated have spent the first year or more of their lives in the hospital, often confined to just one single hospital room. When these children are discharged home, they quickly experience "sensory overload" from the stimulation of new environments. Amy Claire said, "Some children have been so overwhelmed by new sounds and sights when leaving the hospital that they don't even make it past the car ride home and have to turn around." She knew that they had to find a way to get these patients out of their rooms to experience new environments and to socialize with other children prior to discharge into the bigger world.



Clinicians at LeBonheur Children's Hospital facilitate a play group for children on ventilators. *Standing (L to R):* Tandra Robinson, RN, Molly Pearce, CCLS, Stephanie Storgion, MD; *Seated (L to R):* Laurie Braswell, OTR/L, Mary Holland Morris, CCLS, patient Jaylen, Amy Claire Petro MS, CCC-SLP, Sheri Sills, RT.

But getting three or more children with trachs and vents in the same room at the same time is no easy matter. According to Amy Claire, it took a couple of years to work out all of the logistics. The first challenge was to identify a physical space in the hospital large enough to work with up to five ventilator children and their caregivers and equipment, and to install the appropriate number of oxygen and suction outlets. The second challenge was to coordinate the staff so that there was a therapist for every child in the group who would be responsible for attending to suctioning and all other respiratory needs. Multiple disciplines share this responsibility, including nurses, respiratory therapists, occupational therapists, speech pathologists, physical therapists and child life specialists. One nurse comes in on her day off as a volunteer to assist with ventilator management.

"Some children have been so overwhelmed by new sounds and sights when leaving the hospital that they don't even make it past the car ride home and have to turn around."



May Swain (patient) is held by Molly Pearce CCLS as she makes music with Kahlilah Brooks, MT-BC Board Certified Music Therapist.



A young patient, Cody Lewis, plays with occupational therapist, Laurie Braswell OTR/L.



Mya Swain and Cody Lewis meet for the first time as they play with Toby Tracheasaurus™. Cody uses the PMV® 2000, clear speaking valve, in-line with his ventilator.



Example of books and art supplies used during story time and play activities.

The play group now meets every week on Thursday afternoon. During fun activities, the therapists co-treat and address specific therapy tasks while the children experience social time with their peers. For example, while the children are painting, the physical therapist works on positioning and the occupational therapist addresses sensory and fine motor goals. During story-time, the speech pathologist focuses on Passy-Muir® Valve wear-time, vocalizations and attention to tasks. Amy Claire said it is a great opportunity for the children to tackle social skills that are often difficult for them, such as turn-taking and learning to accept “no.”

The children are not the only ones who benefit from the group. All of the staff receive great joy watching the children play and interact. According to Amy Claire, “Doctors will just stop by because they are having a rough day and need a happy moment.” The parents and caregivers are very pleased with the group. For one family with two young children diagnosed with myotubular myopathy, this therapy group was the first time the two brothers were able to meet!

The play group has been so successful that plans are in the works to add another “outing” for the children on Wednesdays called “Children’s Chapel.” Many of the families look forward to taking their children to church services when they go home, so an activity like this can prepare them for what most of us take for granted. We look forward to hearing more about the children’s adventures at LeBonheur!



Multidisciplinary Tracheostomy Program Rounds

By Vinciya Pandian, PhD, ACNP; Therese Cole, MA, CCC-SLP; Kathryn Mattare, BS, RRT; Amanda Owen, RN, BSN, CWCN; Carol Maragos, MSN, CRNP Johns Hopkins Hospital

Background

The Johns Hopkins Multidisciplinary Tracheostomy Program was established in 2006 to improve patient care by promoting safety, decreasing complication rates, and decreasing intensive care unit and hospital lengths of stay.¹ The Johns Hopkins Multidisciplinary Tracheostomy Team (JH-MDTT), is composed of credentialed operators (otolaryngology head and neck surgeons, trauma surgeons, and interventional pulmonologists), anesthesiologists, registered nurses, respiratory therapists, and speech-language pathologists. The program has been functioning successfully under the direction of a tracheostomy nurse practitioner and a medical director. A review of data between 2004 and 2008 revealed that the program was successful in decreasing airway bleeding rates, decreasing physiological disturbances such as hypoxia and loss of airway during the placement of a tracheostomy tube, and improving efficiency of care as measured by the number of days to tracheostomy.^{1,2}

Doctor Arora and colleagues from the United Kingdom found that weekly tracheostomy multidisciplinary team ward rounds helped to improve compliance with nursing care standards and decreased duration of cannulation.³ Similarly, biweekly multidisciplinary team rounds by the Tracheostomy Review and Management Service (TRAMS) in Melbourne, Australia, resulted in a decrease in length of stay and duration of cannulation, and improvement in communication.⁴

Despite the evidence, it was only recently that the JH-MDTT realized the effectiveness of multidisciplinary tracheostomy rounds. After discussions with Doctor Arora and observations of TRAMS in action during the Global Tracheostomy Collaborative initiative kickoff meeting in the United Kingdom and Australia in 2014, its value was appreciated. As a result, the Johns Hopkins Multidisciplinary Tracheostomy Program implemented weekly multidisciplinary tracheostomy rounds in February of 2015.



Members of the Johns Hopkins Multidisciplinary Tracheostomy Team (JH-MDTT) review a patient chart during weekly rounds. *From L to R:* John Castro, RT; Ashleigh Davis, RT; Therese Cole, SLP; Vinciya Pandian, PhD, ACNP; Brendon Bower, RN; Amanda Owen, RN; Maura Costello, RN

Johns Hopkins Multidisciplinary Tracheostomy Team Rounds

The weekly multidisciplinary tracheostomy rounds are attended by the tracheostomy nurse practitioner, speech-language pathologists, respiratory therapists, wound care nurses, and bedside nurses. Unlike the ward rounds described by Arora³ and Cameron,⁴ the JH-MDTT rounds take place in both the intensive care units and the wards at the patient's bedside. The team begins to round on a patient as soon as the tracheostomy is placed.





A list of all patients with a tracheostomy is generated by the electronic medical record system on the morning of the rounds. It provides information on where the patients are located within the massive 1000-bed hospital, along with the names and contact information of the nurses who are caring for those patients. This list serves as a guide for the team to plan their rounds in an efficient manner. The JH-MDTT rounds on approximately 25 to 45 patients per week every Friday between 10:00 am and noon. Occasionally, the rounds may extend past noon, depending on the number of patients to be seen. The tracheostomy nurse practitioner and the respiratory coordinator round on every patient, but the dedicated speech-language pathologist, respiratory therapist, wound care nurse, and bedside nurse join in only when their patients are discussed.

Rounding Goals

The rounding discussion focuses on stoma wound care, communication, swallowing, management of respiratory secretions and tracheostomy tube cuff pressure, tracheostomy tube changes, and goals for decannulation.

Historically, stoma wound care was provided only when nurses identified an issue and contacted the tracheostomy nurse practitioner or wound care nurses. With the weekly rounds, the stoma wounds are now evaluated regularly, and recommendations are made for both prophylactic management and promotion of wound healing.

Goals of Tracheostomy Rounds

1. Stoma wound care
2. Communication
3. Swallowing
4. Secretion Management
5. Cuff pressure management
6. Tracheostomy tube changes
7. Decannulation planning



Members of the Johns Hopkins Multidisciplinary Tracheostomy Team (JH-MDTT) review a patient chart during weekly rounds. *From L to R:* John Castro, RT; Ashleigh Davis, RT; Therese Cole, SLP; Vinciya Pandian, PhD, ACNP; Brendon Bower, RN; Amanda Owen, RN; Maura Costello, RN

Tracheostomy patients were being evaluated for speech only if the primary team requested a consult. Often, the request could be delayed because of other urgent priorities for the medical staff. The weekly rounds have helped us to identify patients who are attempting to communicate. For patients still on the ventilator, it allows us to initiate cuff deflation and in-line Passy-Muir® Valve use earlier. When patients cannot tolerate cuff deflation, talking tracheostomy tubes are used to facilitate speech.

Modified barium swallow (MBS) studies are typically performed for all patients with a tracheostomy. As a result of the rounds, we have identified the need to perform a bedside fiberoptic endoscopic exam of swallowing (FEES) instead of waiting for a convenient time for MBS or transporting a critically ill patient for the MBS. FEES is usually done with or without a Passy-Muir® Valve. We are able to successfully perform the FEES toward the end of rounds because all of the critical team members are available to provide assistance.



Multidisciplinary Tracheostomy Program Rounds *(continued)*

Patients with a tracheostomy tube may have copious secretions or dry thick secretions. During rounds, bedside nurses have made efforts to identify patterns of suctioning needs and retrospectively review the consistency of patient secretions. This information enables the JH-MDTT to make specific recommendations for Mucomyst or a scopolamine patch. These treatment options were usually offered as a last resort, but now are considered early in the plan of care.

Communication with the respiratory therapists during rounds regarding the tracheostomy tube enables early identification of tracheomalacia or the need for early tracheostomy tube change if cuff pressures are increased. It also facilitates identification of appropriate sizes of tracheostomy tube for ventilation and speech. When indicated, tracheostomy tubes are downsized to facilitate increased airway patency around the tracheostomy tube for use of a Passy-Muir® Valve for speech. These rounds also help us to evaluate the appropriateness for timely decannulation.

Although this article provides an editorial about the establishment of the JH-MDTT rounds, we are currently collecting outcome data to provide a more objective evaluation of this endeavor.

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Hazel, age 8 months, Laryngomalacia
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BREAKING NEWS

New Tracheasaurus Spotted at Passy-Muir Seminars



Clinicians attending Passy-Muir's national seminars may have caught a glimpse of some exciting revisions to the Toby Tracheasaurus™ pediatric program. The enhancements include new dinosaur cartoon characters, new therapeutic activity cards, and a clinically improved Toby Tracheasaurus™ Coloring & Activity Book that is sure to appeal to tracheostomized children, their caregivers and clinicians.

Each Toby Tracheasaurus™ pediatric program kit comes with a draw-string backpack containing a Toby Tracheasaurus™ Plush Toy, the Toby Tracheasaurus™ Coloring & Activity Book with crayons, and a Toby Tote™ with an assortment of therapeutic toys.

Featuring a pediatric tracheostomy tube and Passy-Muir® Valve for the purpose of demonstration and education, the Toby Tracheasaurus™ Plush Toy provides therapists with a lighthearted method to introduce children to tracheostomy and the Passy-Muir® Valve, while facilitating vocalization and enhancing therapeutic activities.

The cartoon dinosaur-themed Toby Tote™ contains clinician approved therapy toys, specifically selected to help children practice oral exhalation, promote play therapy, and reward children for therapeutic achievements. Used in conjunction with the Toby Tracheasaurus™ Coloring & Activity Book, which features an assortment of therapeutic and fun activities, the new Toby Tracheasaurus™ materials are designed to help children voice and exhale orally when using a Passy-Muir® Valve. Many of the therapeutic activities referred to in the book may be performed under supervision with toys from the Toby Tote as well as toys readily available at most stores.



The new Toby Tracheasaurus™ program features pediatric, educational and therapeutic materials

We at Passy-Muir believe that communication is the essence of the human spirit; it is essential to individual rights and dignity. Tracheostomized children should be provided with the same opportunities as others to allow them to develop communication skills. It is our sincerest hope that the Toby Tracheasaurus™ program will provide many hours of rewarding activity and will be enjoyed by children and their families.

To find out more about our Toby Tracheasaurus™ pediatric program, or to download copies of Toby coloring and activity sheets, be sure to visit us at:

www.passy-muir.com/products_edu_ped



Meet our **NEW** CONSULTANTS!



Sheila Clark, DHEd, CCC-SLP

Sheila has been a speech language pathologist for 25 years and has worked with both pediatric and adult patients in a variety of settings. She earned a doctorate in health education in 2008 and enjoys educating healthcare professionals on the use of a holistic approach to clinical care. She has worked closely with multiple disciplines to become an advanced practitioner in the specialty areas of dysphagia, neurological disorders, critical care, and the management of patients with tracheostomy and mechanical ventilation.



Sara Grzina, MHS, CCC-SLP

Sara earned her Master's Degree from University of Missouri – Columbia in 2010 and has gained more than 5 years of pediatric clinical experience working with children in NICU, acute care and outpatient settings, with specialized training evaluating and treating children with tracheostomies and swallowing disorders. Sara is currently a Speech-Language Pathologist at Mercy Kids in St. Charles, MO and Cardinal Glennon Children's Medical Center in St. Louis, MO.







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David A. Muir
Inventor

Contributions and comments are welcome.

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