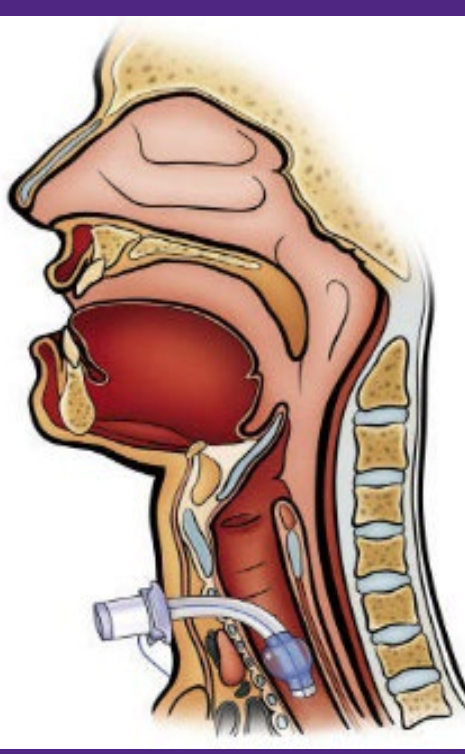


# Rehab Airway Management Team: Lessons Learned from the COVID-19 Pandemic Frontlines



Julie Gaven MS CCC-SLP, Kenneth Stephens MSRT, Allison Wilder MS CCC-SLP & Latasha Williams MSN RN CRRN



## BACKGROUND

Historically, patients with artificial airways (i.e., tracheostomy tubes or “trachs”) are among the most medically complex individuals we are honored to serve in our **75-bed inpatient rehabilitation center**. This quality initiative was developed to improve rehab patient safety by consistently promoting best airway practices as the pandemic progressed, effectively expedite decannulations (trach removals), and facilitate optimal home discharge outcomes for rehab patients with artificial airways throughout the COVID-19 pandemic and beyond.

## PROJECT AIMS

The **priority areas** our airway management team strive to positively impact are as follows:

- Optimize trach patient safety by preventing airway-related events of harm in rehab
- Improve consistency and thoroughness of education related to trach management via hands-on caregiver training
- Maximize potential decannulation (trach removal) opportunities during the pandemic.
- Facilitate safe home discharge outcomes for our patients with trachs whenever possible.

## PROJECT STRATEGY

Our **Rehab Airway Management Team** quality initiative was launched in September of 2020 and has proven to be a sustainable and effective platform for creative, interdisciplinary airway problem-solving endeavors ever since. In response to an increased number of respiratory failure survivors being admitted to inpatient rehab during the initial waves of the COVID-19 pandemic, this group proactively heightened their interdisciplinary communication, trach care vigilance, and avenues for increasing consistent follow-through on airway recommendations in order to facilitate optimal outcomes for rehab patients with artificial airway-related needs.



A tracheostomy tube is usually placed emergently to bypass an upper airway obstruction, to clean and remove excessive secretions from the airway, or to more effectively deliver oxygen and humidification to a patient's lungs via mechanical ventilation.

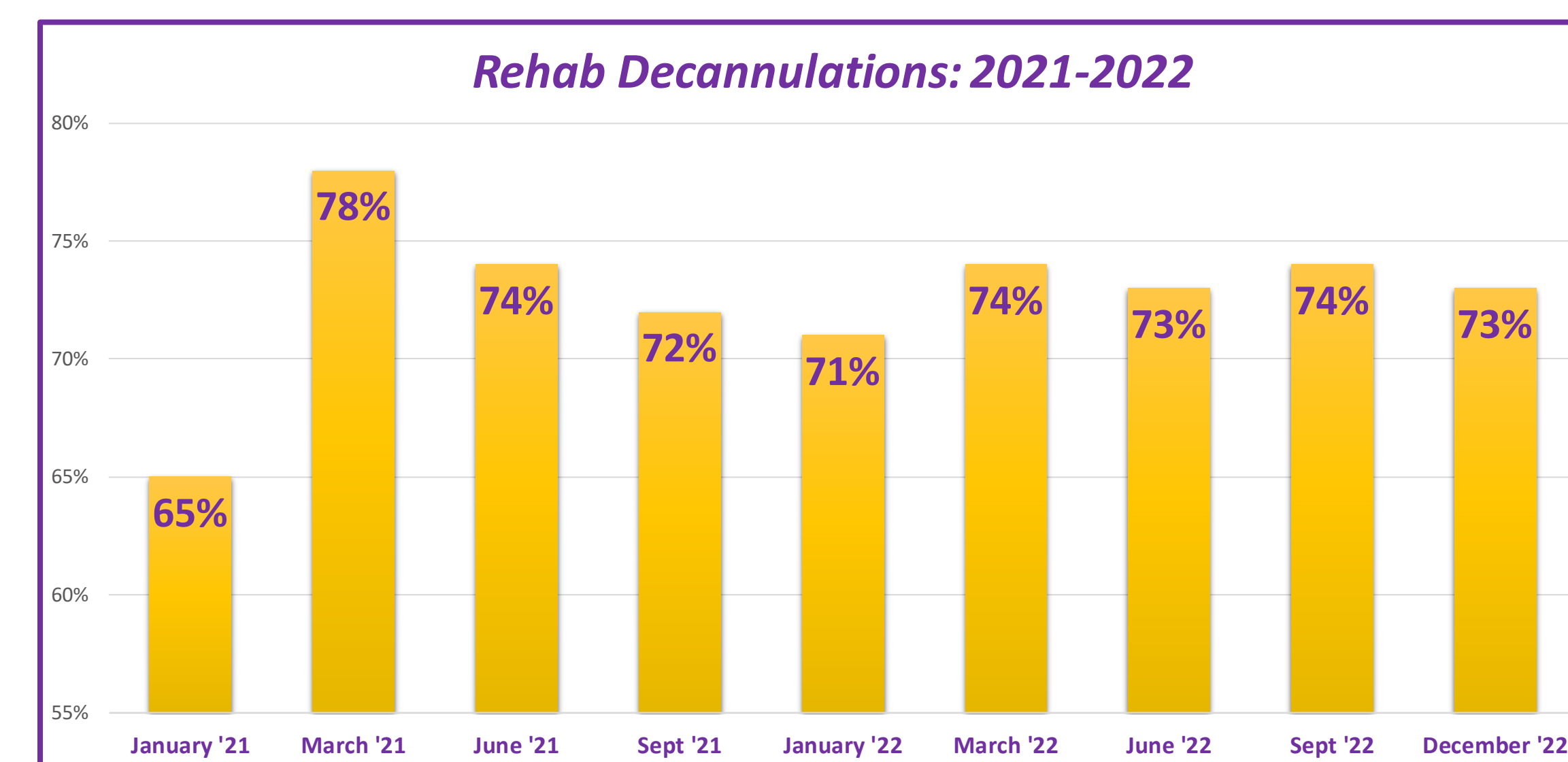
## CHANGES MADE (PDSA CYCLES)

We accomplished these goals by prioritizing weekly interdisciplinary rounding efforts, implementing trach-focused education processes, and creating dedicated discharge planning tools for our rehab teams to facilitate consistent follow-through on holistic patient-centered airway recommendations. Actions taken included the following:

- ❖ **Implemented a weekly rounding initiative** involving interdisciplinary chart reviews and multifaceted collaboration by Speech-Language Pathologist (SLP), Respiratory Care Practitioner (RCP) and Nursing (RN) team members to monitor and actively promote best practices in tracheostomy care during patients' rehab stays.
- ❖ **Developed and expanded** a comprehensive progress note template capturing interdisciplinary discussions in charts with patient-specific airway, swallowing and other recommendations updated on at least a weekly basis.
- ❖ **Supported patients** with diaphragmatic pacers and mechanical ventilator weaning needs during their rehab stays.
- ❖ **Encouraged a culture shift** to focus on earlier caregiver airway management education with ALL disciplines, with particular emphasis on return demonstration of hands-on training with RCPs at least 48 hours prior to discharge.
- ❖ **Continued regular check-ins** with primary therapists and ongoing discussion with interdisciplinary rehab teams at biweekly patient care conference meetings to ensure follow-through on patient-specific trach recommendations.
- ❖ **Facilitated prompt follow-up**, care plan clarifications & trach troubleshooting for patients with artificial airways.
- ❖ **Provided proactive recommendations** and championed patients' progression towards expedited decannulations and home discharges (rather than SNF/nursing home or LTACH destinations) throughout the COVID-19 pandemic.
- ❖ **Created and shared** a streamlined “discharge planning checklist” to help guide rehab case managers in ordering the correct airway-related DME at least 72 hours prior to discharge dates for all trach patients on all rehab teams.
- ❖ **Promoted optimal airway care** by communicating best practices on a consistent and ongoing basis to prevent drift amidst medical staffing changes and census surge challenges throughout the recent waves of the pandemic.
- ❖ **Communicated quarterly updates** to rehab MDs, nursing & allied health leadership to inform them of our trach patient successes, airway challenges and opportunities for improvement throughout our rehabilitation center.

## RESULTS/OUTCOMES

Despite the ongoing pandemic-related healthcare challenges, we have been able to sustain excellence in patient care for individuals with tracheostomies and provide an extra layer of support to clinical teams caring for this medically fragile population. As the graph below demonstrates, our dedicated rehab team has supported trach patients' progression to decannulation on 73% of opportunities over the past two years. We are also delighted to celebrate facilitating safe home discharges with >91% success over the last 16 months of the COVID-19 pandemic.



Despite ongoing challenges associated with navigating the COVID-19 pandemic, the majority (104/114 = 91.2%) of our patients with trachs have returned HOME!

In addition, we have prevented airway-related events of harm by maintaining:

- ✓ 0 trach-related pressure injuries in rehab
- ✓ 0 trach-related readmissions post-rehab
- ✓ Unplanned 'return to acute' discharges <5%
- ✓ Increased consistency in confirming completion of hands-on family education with RCP & RN team members, which has improved to >98% compliance.
- ✓ Rehab case managers have been supported in ordering correct airway DME at least 72 hours prior to discharge with >95% accuracy center-wide.



Optimizing early Passy-Muir Valve (PMV)<sup>®</sup> use has been a beneficial “stepping stone” to help improve secretion management as well as swallowing function, and progress our more medically fragile patients towards trach capping trials when medically appropriate.

## LESSONS LEARNED

- **Optimizing early Passy-Muir Valve (PMV) tolerance** allows for improved patient-provider communication, progress of safe PO intake, overall improved secretion management, and self-advocacy by our trach patients.
- **Continuous (24/7) PMV use** has been a beneficial method to improve nocturnal secretions as well as anxiety/insomnia, and gradually progress more fragile patients towards capping when medically appropriate.
- COVID-19 survivors often benefit from **frequent rest breaks** to manage fatigue levels during therapy, as well as daily resistive **respiratory strengthening exercises**.
- **Close collaboration** with rehab RCP colleagues, as well as ENT and Pulmonology consults are highly valuable for managing complex airways and unique anatomy.
- **24-hour trach capping minimums may be extended** to 48+ hours in order to monitor hemodynamic stability and ensure patients' ability to maintain and protect their airways independently prior to decannulation.
- Providers may wish to **consider potential benefits of HME use** (with trach adapter) for mobile patients whose oxygen saturations are stable on room air, but still require-or would benefit from-humidification.

## NEXT STEPS

Through continuing collaborative teamwork, pursuing clear/consistent communication, and developing additional interdisciplinary processes to promote sustained excellence in airway care moving forward, we are honored to continue serving and supporting rehab patients with artificial airways in safely returning home.

- **Weekly interdisciplinary rounding continues** for ALL airway patients throughout our rehab center.
- Rehab teams' case managers continue to utilize a **tracheostomy-specific discharge planning checklist**.
- We continue providing **hands-on airway education** for medical staff, trach patients and their families.
- **We will continue to track airway trends and provide regular updates to physician, nursing, and allied health leadership** moving forward in order to celebrate our patients' success stories and increase awareness of our opportunities for improvement.

## ACKNOWLEDGEMENTS

We would like to express our sincere appreciation and gratitude to our amazing rehab patients, interdisciplinary rehab teams, PM&R physicians and inpatient rehab leadership for their continued support of this ongoing quality endeavor.

For Research-Related Inquiries, Please Contact: Julie Gaven  
Brody School of Medicine at East Carolina University  
Office of Research and Graduate Studies  
ECU Health Medical Center-Inpatient Rehabilitation  
(252) 744-0362 | [gavenj21@ecu.edu](mailto:gavenj21@ecu.edu)