

# Reducing PPRs (Potentially Preventable Readmissions): Tracheostomy Management Services Averts Readmissions

Joann Miller

It is critical for health care to develop an organized, proactive, multidisciplinary approach to manage chronic tracheostomy associated complications. Instilling personal self-management skills prior to patient transitioning will not only create compliant patients resulting in reduced readmissions but will also reduce hospital costs.

Presently, comprehensive guidance of tracheostomy management services does not universally exist nor do patient self-management plans. Patient self-management plans are not routinely used and do not exist at all in many markets.

"Too often patients are sent home without proper instructions on how to care for themselves. A patient with congestive heart failure, left guessing about what to do, is more likely to be readmitted. Just one averted readmission through better patient instruction can save \$5,000 or more."<sup>1</sup> For tracheostomy patients the savings nearly triple that of non-trached patients. Just one averted readmission of a tracheostomy patient through better patient instruction can save on average \$14,500.

Inconsistent levels of knowledge and variations in clinical practice represent a patient safety threat throughout all disciplines of tracheostomy patient care. Tracheostomy care re-admittance due to nosocomial infections or airway complications can result in prolonged re-hospitalization and even death.

"The top ten procedures associated with the most costly stays in hospitals, with the mean charges for the hospital stay, according to 2003 statistics from 17 selected states are:

- 1 Organ transplantation, including transplants of the lung, heart, spleen, intestine, liver and pancreas and excluding kidney, bone, corneal and bone marrow transplants — \$275,621
- 2 Tracheostomy — \$240,010
- 3 Bone marrow transplant — \$207,622
- 4 Destruction of lesion of retina — \$197,169
- 5 Ileostomy and enterostomy — \$129,499
- 6 Heart valve procedures — \$125,545

Joann Miller, is a communications consultant for Wright Solutions LLC and can be reached at joann.miller@wrighttrachsolutions.com. Wright Solutions is based in Florida and can be found on the Web at www.wrighttrachsolutions.com or (305) 393-7379. This article was provided by Wright Solutions.

- 7 Kidney transplant — \$115,023
- 8 Swan-Ganz catheterization — \$105,421
- 9 Extracorporeal circulation auxiliary — \$99,057
- 10 Gastronomy — \$98,772

CCS Principal Procedure statistics as of 2008, show 3% of patients requiring a tracheostomy were admissions from Long Term Care (LTC) facilities with 10% from other hospitals, 62% from emergency departments and 25% primary/acute care patients within the current facility, with an average length of stay of 30 days at a total cost of \$252,110.<sup>2</sup>

With tracheostomy second to organ transplantation it is not only the second most expensive hospital stay, it is among the longest length of stay (LOS). Tracheostomy procedures are not in themselves costly but are associated with critical illness and expensive ICU stays.

Standard tracheostomy care is no longer acceptable. "A dispiriting truism of modern medicine is that clinicians routinely do not provide treatments proven to reduce complications and save lives... Respiratory care is not immune to this problem: multiple published studies demonstrate deficits in the quality of care for patients with severe respiratory disease. Unfortunately, lagging behind our understanding of the evidence gap is our understanding of how to bridge that gap... as governments, payers, and patients demand more accountability in healthcare, it is increasingly important that all healthcare practitioners be familiar with its tenets."<sup>3</sup>

The Agency for Health Care Research and Quality (AHRQ) has, through a grant opportunity, titled, Researching Implementation and Change while Improving Quality (R18). AHRQ underlined the importance of implementation of quality improvement strategy, "...There is increasing evidence that success in achieving quality improvement goals is at least partially attributable to implementation processes and contexts and not just to the nature of the quality improvement strategy..."<sup>4</sup>

Tracheostomy patients are among the most fragile of patients, and among the most likely to require readmission due to complications and infections of their dramatically altered and vulnerable upper respiratory system. "...readmission rates of these patients is higher than non-tracheostomized patients (4–10% 2). This higher readmission rate may be the reflection of the degree of compromise of these patients leading in fact to the need of tracheostomy. The already established ICU readmission

predictors of non tracheostomized patients did not apply to tracheostomized patients....)<sup>6</sup>

Respiratory care practitioners must create a New Standard throughout respiratory care disciplines from initial patient admission to transition and after care whether the transition is home care or LTC.

Further, patients requiring a tracheostomy as a principal procedure are readmitted to hospitals and emergency departments at an average cost of \$14,500. Historically, adult tracheostomy patients average two re-hospitalizations annually due mainly to Potentially Preventable Complications (PPCs) brought on by being sent home without proper instructions on how to care for themselves. Pediatric readmissions surpass that of adult readmissions in all statistical data currently available.

Humidification of the sinus, oral and nasal cavities and trachea must be included in the New Standard in patient self-management skills prior to patient transitioning from acute care to home or LTC. The Wright Face & Tracheostomy Nebulizing Mask Delivery System, is easily adopted into patients' self-management plans.

Initially invented for patients readmitted due to humidification treatment non-compliance, the Wright Mask is a convenient delivery system which turns non-compliant patients into compliant comfortable patients, able to enjoy an improved quality of life both at home or in LTC.

When included in discharge plans, outpatient humidification with the Wright Mask Delivery System complements and improves standard treatment in tracheostomy care management goals just as inpatient humidification does.

The ultimate goal of the Wright Mask Delivery System is to reduce the need for readmission due to PPCs such as tracheostomy associated pneumonia, mucous plugs or trachea infection. Through proper and regular use within Patient Self-Management Plans, the Wright Mask stands to reduce healthcare costs and possibly reduce mortality rates caused by PPCs.

"...Good discharge plans can help reduce the rate of unplanned readmissions by giving patients the care instructions they need after a hospital stay and by helping patients recognize symptoms that may require immediate medical attention."<sup>6</sup>

"Reducing readmissions is a priority among the medical community, researchers and policymakers who are focused on identifying the causes of readmissions and implementing evidence-based strategies to reduce those that are preventable. One national study found that almost one-fifth of Medicare patients are readmitted within 30 days of discharge and a third are re-hospitalized within 90 days."<sup>7</sup> "As such, examining readmission rates is important from both a quality of care and cost standpoint. While not all readmissions can be prevented, high-quality care may lessen the need for subsequent hospitalizations."<sup>8</sup>

## Can Outcomes of Intensive Care Unit Patients Undergoing Tracheostomy Be Predicted?

Reasons for Readmission of 15 Patients to the Intensive Care Unit

Diagnosis/Organ Dysfunction	n
Necessitating Readmission	
Respiratory	9
Cardiac	3
Sepsis	0
Gastrointestinal bleeding	2
Unknown	1

The above identifies a small sample of reasons for readmission to ICU of tracheostomy patients. The authors of this study "... undertook this retrospective review of data from patients who underwent tracheostomy in our ICU to determine if specific diagnostic factors could be identified in this population, with the thought that identification of any such factors might lead to changes in clinical management strategies or patient-safety initiatives."<sup>9</sup>

CMS tracking of readmission rates for certain high-volume or high-cost conditions is scheduled to begin in 2012; the need for each and every clinician to do what one can to prevent re-hospitalization of this patient population is now more than ever in the hands of all disciplines of tracheostomy patient care.

### References

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