Abstract

Tracheostomy tubes (TT's) may be used short and long term to maintain patent upper airways after the endotracheal tube (ETT) has been removed. Cost and complications are associated with the presence of TT's. Successful decannulation of short term TT's should occur in a timely manner. There are many different approaches to decannulation with no evidence based practice (EBP) guideline for TT decannulation. A retrospective chart review was conducted on 250 charts in an effort to identify, in adults with TT's in a long term acute care (LTAC) hospital in the Midwest United States, whether or not application of the TT downsizing portion of the Tracheostomy Management Protocol (TMP) impacted rates of successful decannulation. Final data analysis was conducted on 98 (39%) participants. The majority were White (N=94, 96%) and female (N=55, 56%). Most participants (78/98;79.6%) were on the TMP, downsized, and successfully decannulated, with a median time of six days from time of first downsizing to time of decannulation. This LTAC had higher rates of and shorter time to successful decannulation than reported in the literature. Based on these findings, downsizing the TT prior to decannulation improves patient success and shortens time to decannulation prior to discharge from the LTAC hospital. However, results of the Fisher's Exact analysis were not statistically significant (p = .484), suggesting that no statistical relationship exists between downsized and remained decannulated after 72 hours.

Research should be expanded to evaluate why downsizing prior to decannulation may play a role in successful removal of the TT. Research to assess the impact of psychological, social, and cultural status on shorter time to and higher rates of successful decannulation for this

unique and growing patient population may prove to be useful. Findings from additional research combined with the results of this study could be incorporated into development of a TMP EBP guideline for adults in LTAC hospitals throughout the world caring for patients with TT's. The EBP guideline could be incorporated into practice by advanced practice nurses, respiratory therapists, and physicians around the world.

Keywords: tracheostomy tube, weaning protocol, downsizing, decannulation, adults, long term acute care, evidence-based practice