NSW Speech Pathology
Evidence Based Practice Interest Group

Critically Appraised Topic (CAT)

CLINICAL BOTTOM LINE:

Based on the few articles critiqued, it is evident that management by an indentified multidisciplinary team improves patient outcomes in vascular, Traumatic Brain Injury (TBI) and specifically Spinal Cord Injury (SCI) patients in terms of their cannulation time, cost saving in length of stay, and use/time to use a speaking valve. Although unable to generate these finding to all general tracheostomy populations, the preliminary data and trends suggest that Multi-Disciplinary Team (MDT) management is safe and effective however further research is indicated to more specifically outline the outcomes.

Background and Objectives:

There has been discussion in our clinical EBP group around team members involved in the weaning and management of tracheostomy patients. Clinical experience of the group suggests the Speech Pathology involvement within a MDT setting is best practice for managing this patient group. The objective of this CAT was to find EBP literature supporting this clinical observation.

Clinical Question [patient/problem, intervention, (comparison), outcome]:

In patients with a tracheostomy, does management by an identified multidisciplinary team improve patient outcome?

Search Terms/Systems:

Search terms- Multidisciplinary team; Tracheostomy; Weaning; Decannulation

Search engines- CIAP e journals; google scholar

Also manual searching of reference lists.

Selection Criteria: CAPs chosen addressed MDT management in tracheostomy patients. All articles were NH & MRC Level IV.

Results:

Key outcomes

- 2 articles showed trends in reduced cannulation times with MDT involvement (Cameron from 22.5 days to 16.5 days (P=0.08)
- 1 article showed MDT management in TBI and vascular patients reduced cannulation time vs no MDT management (p=0.004). N=33
- No significance in functional measures (FIM/EFA) within groups
- MDT management reduced mortality, mean length of stay and mean length of stay post ICU over the study period. Cameron study median patient LOS decreased from 60 days to 41.5 days (p=0.03)
- One way speaking valve use increased from 35% to 82% (P<0.01) and median time to a one way speaking valve trial decreased from 22 days to 6 days after TT insertion (P<0.01), Cameron study
- There were 2 tracheostomy related emergency calls pre TRAMS and none post TRAMS.
- MDT was cost effective - annual cost savings from implementing TRAMS was approx 8 x greater than the cost of service provision.

References:

Dysphagic patients with tracheotomies: a multidisciplinary approach to treatment and decannulation management.
Frank U, Mäder M, Sticher H. Dysphagia. 2007 Jan;22(1):20-29.

An intensivist-led tracheostomy review team is associated with shorter decannulation time and length of stay: a prospective cohort study.
Tobin AE, Santamaria JD. Crit Care. 2008;12(2):R48.

Cameron TS, McKinstry A, Burt SK, Howard ME, Bellomo R, Brown DJ, Ross JM, Sweeney JM, O'Donoghue FJ (2009) Outcomes of patients with spinal cord injury before and after an introduction of an interdisciplinary tracheostomy team. Critical Care and Resuscitation 11 (1) 14-19

Clinical Group: NSW Tracheostomy & Critical Care EBP group	**Date:** Nov 2009