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## Creating a multidisciplinary tracheostomy team in a sub-regional hospital: better together

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### Background

A tracheostomy is a surgical procedure where a small tube is inserted into the trachea, providing an artificial airway to assist breathing and sputum clearance. A tracheostomy can be temporary or permanent. Tracheostomy care involves specialised clinical skills to ensure safe, effective and consistent practice. Lack of clinician experience and training can impose a significant risk of adverse events, including tracheostomy occlusion, accidental decannulation (removal of tracheostomy tube), and death. For patients, the experience of having a tracheostomy tube can be quite upsetting, and may lead to long term psychological issues. Patients are comforted when they are assured that the clinicians caring for them are competent and the care they receive is coordinated with a clearly communicated plan.

Due to the complexity involved, tracheostomy care in the inpatient setting requires specialised input from multiple disciplines including medical officers, physiotherapists, intensive care nurses, dieticians and speech pathologists. The collaboration and communication between these teams is essential. Evidenced based guidelines<sup>1</sup> recommend hospitals appoint a multi-disciplinary tracheostomy review team to direct tracheostomy care. There is evidence to support that tracheostomy teams are able to reduce time to decannulation, hospital length of stay as well as adverse events<sup>1,2</sup>.

At Northeast Health Wangaratta (NHW), a 241 bed sub-regional health service in Victoria, we provide acute care to approximately 1-3 inpatients per year with a new or existing tracheostomy. Up until recently, we did not have a model of care to look after patients with a tracheostomy. Policies, procedures, staff training and coordination of care were lacking. The low frequency of presentations created significant challenges in ensuring clinicians had currency in these specialised skills. At present, there is no state-wide tracheostomy consultation service in Victoria to assist regional hospitals, such as NHW, with this complex patient group.

At NHW, reasons for the insertion of a new tracheostomy over the past 5 years have included: prolonged mechanical ventilation, upper airway obstruction presenting in the emergency department, frequent aspiration post stroke, upper airway occlusion secondary to metastatic cancer, and vocal cord palsy following removal of thyroid. A proportion of our tracheostomy patients were transferred to a metropolitan hospital for further care. Others were successfully decannulated while

an in-patient at NHW. And some patients have had their tracheostomy tube inserted at a metropolitan hospital and were transferred back to NHW once they were stable for further acute care and rehabilitation. With the large number of surgeries performed each year, our staff require advanced airway skills in the event of an airway emergency. Hence, although tracheostomy patients present infrequently at NHW, we must be competent and we must be ready.

## Aim

A multidisciplinary tracheostomy resource team was created at NHW to improve the safety and quality of care provided to patients with a tracheostomy. Established in mid-2018, the team includes a consultant physician, anaesthetist, critical care nurse, speech pathologist, physiotherapist and nurse educator. The team is responsible for reviewing all tracheostomy patients and providing them with a comprehensive tracheostomy management plan. The tracheostomy team acts as a consultative service whereby the patient remains under the bed card of their treating team. This service model aims to ensure that all NHW patients with a tracheostomy receive safe, best-practice care, delivered in a coordinated way. The team is also responsible for overseeing purchasing and stocking of tracheostomy related equipment, staff training and the development of policies and procedures around tracheostomy care.

## Relevance

Maintaining a skilled workforce in tracheostomy care is a significant challenge for regional hospitals given that such patients are complex to manage and present infrequently. Coupled with the potential for serious adverse events (e.g. tracheostomy obstruction, accidental decannulation), tracheostomy patients represent a high risk population in regional settings.

## Method

To gain the necessary skills, the six team members attended four-days of training under the supervision of the eminent multidisciplinary Tracheostomy Review and Management Service (TRAMS) at Austin Health, Melbourne. The training was funded by a competitive NHW Travelling Scholarship.

TRAMS are leaders in this space, having previously trained tracheostomy teams from large health services such as Monash Health. Austin Health is also the lead Australasian site for the Global Tracheostomy Collaborative. Established in 2002, TRAMS have provided specialist consultation to over 500 Austin Health patients. The training program included a complete package, encompassing:

- attendance at a 1-day Interprofessional Tracheostomy skills workshop
- observing complex tracheostomy patients in the acute wards and ambulatory care
- attending multi-disciplinary handover meetings
- tutorials with some of the leading professionals in tracheostomy management, such as lead Speech Pathologists & Physiotherapists, Director of ICU, Director of the Victorian Respiratory Support Service, Director of the Victorian Spinal Cord Service, ENT specialists, and specialist nurses.

The NHW multi-disciplinary tracheostomy resource team was formed without additional EFT. Staff absorbed this work into their existing roles.

## Results

Team members found the training program at Austin Health immensely valuable, and benefits included:

- increased confidence in tracheostomy-related skills and clinical decision making
- greater understanding of how a multidisciplinary tracheostomy team operates, including the specialist skillset each discipline contributes to the team
- development of relationships with TRAMS clinicians – facilitating opportunities to gain advice in the future
- obtaining copies of Austin Health tracheostomy resources e.g. policies, guidelines, posters, e-learning packages
- greater awareness of mandatory equipment requirements
- a team bonding experience.

In the four months following the training, the team achieved the following:

- officially launched and promoted the service to NHW clinicians and visiting medical officers
- created a tracheostomy policy, outlining the model of care including safety aspects, with links to on-line resources and e-Learning packages on the TRAMS website
- created bed-side tracheostomy emergency posters
- reviewed and updated all tracheostomy-related equipment, including the creation of ‘tracheostomy boxes’ that include all mandatory bedside equipment and posters
- developed a staff training calendar inclusive of simulations, lectures and practicals to increase tracheostomy skills across the NHW workforce—particularly targeting Critical Care Unit and Emergency Department.

In the first six months following the creation of the tracheostomy resource team, two patients required review. One patient was transferred from a metropolitan hospital to NHW to receive rehabilitation two days after his tracheostomy tube was removed. The Critical Care Nurse on the team provided advice on appropriate dressings and management of the stoma to ensure fast closure and healing. The second patient required an insertion of a tracheostomy tube following upper airway issue. TRAMS clinicians were contacted for expert advice and the patient was reviewed by one team member, unfortunately four of the team members were on unplanned leave at the time.

## Conclusions

Caring for patients with a tracheostomy in a regional acute health service is challenging given the low number of presentations. Working together as a multidisciplinary team is essential to deliver comprehensive and safe tracheostomy care to regional patients. Partnering with an expert metropolitan tracheostomy service made the development of this team possible. Ongoing support from TRAMS will be necessary to ensure the best possible care is provided to our patients with a tracheostomy into the future.

## Recommendations

- Regional hospitals caring for tracheostomy patients should appoint a multidisciplinary tracheostomy review team as per evidenced based guidelines.
- A state-wide tracheostomy consultation service should be developed in Victoria to provide ongoing specialist advice, support, and education to regional hospitals caring for patients with a tracheostomy. The incorporation of telehealth services would be ideal.

## References

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## Presenter

**Dr Brooke Winzer** is the Chief Physiotherapist at Northeast Health Wangaratta (NHW), a 241-bed sub-regional hospital in the Hume region of Victoria. Brooke leads a team of 26 physiotherapists, along with her job-share partner, Erin Anderberg. Brooke is currently the site coordinator of two clinical trials at NHW and is supervising an Honours student from Charles Sturt University. Brooke also educates allied health, nursing and medical staff on topics including physical activity and cancer; oxygen therapy; non-invasive ventilation; chest physiotherapy and Spirometry. Previously, Brooke has been a sessional lecturer at The University of Queensland (Brisbane) and Charles Sturt University (Albury). Brooke completed a full-time PhD at The University of Queensland (School of Medicine) in 2012. Her thesis, titled 'The Effect of Exercise on Cancer Risk Factors in Males with Barrett's Oesophagus', included three publications in international journals (*Cancer, Causes & Control, BMC Cancer* and *PLOS ONE*). She was also successful in obtaining \$85,436 in competitive grant funding for the project.