

Airway Before All Else

The Tracheostomy and Laryngectomy Safety Project

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Introduction

Patients with tracheostomies/laryngectomies have altered upper airway anatomy and physiology and present a unique challenge to medical and nursing staff. Many of the equipment related to tracheostomy/laryngectomy care can be baffling to the uninitiated and the identification of problems related to tubes is an important patient safety issue.

Recently in the North West of England, there have been a few unfortunate incidents involving patients with tracheostomy and laryngectomy. These incidents have led to patient death.

This project was set up to address growing concerns regarding knowledge of airway management in these patients. We aimed to address baseline knowledge of tracheostomy/laryngectomy care and implement an educational programme to address learning needs thereby improving quality of care.

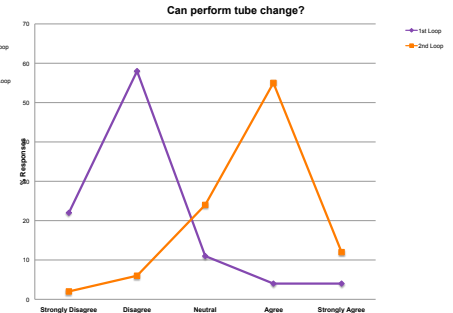
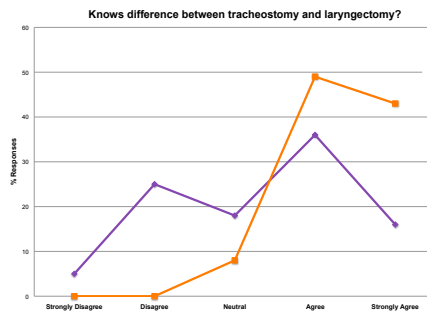
Methods

Data was collected prospectively from doctors of all grades, medical students, and specialist nurses at the Hospital Grand Rounds of the Royal Albert Edward Infirmary.

An educational programme was initiated including lecture based learning and hands-on workshops.

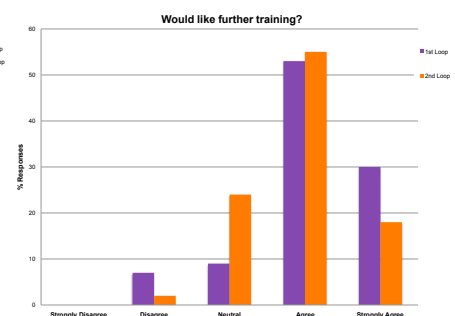
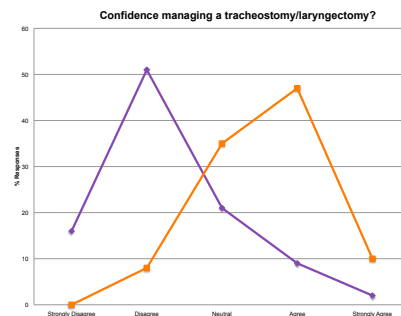
This utilised didactic lectures, demonstrations, visual aids, a low-fidelity tracheostomy/laryngectomy simulator and scenarios based on the National Tracheostomy Safety Project (NTSP) tracheostomy/laryngectomy emergency algorithms¹. The confidence of attendees to manage tracheostomies/laryngectomies was assessed before and after the training initiative using 5 point Likert scales².

Results



Following results of the initial audit cycle the following were implemented:

- Teaching session at the hospital grand rounds. This outlined basic knowledge of tracheostomy/laryngectomy and emergency management algorithms.
- Hand-on workshops
- Implementation of identification signs above patient's beds indicating whether the patient has a tracheostomy or laryngectomy and emergency management algorithms.
- Teaching and training was extended to nursing staff and as part of mandatory induction for all junior doctors.



Results also showed a significant improvement in knowledge about the following: oxygen administration, identification of different types of tracheostomy tube, speaking valves and heat moisture exchangers. Also, despite receiving training, many responders were keen on further training

Conclusion

- It is important for staff to be trained to deal with airway emergencies in this subgroup of patients.
- This can be ensured by having regular hands-on training sessions and increasing awareness of their special needs.
- This is in line with the NCEPOD recommendation of mandatory tracheostomy training for all staff³.

References:

1. National Tracheostomy Safety Project <http://tracheostomy.org.uk/>
2. Likert R, (1932) A Technique for the Measurement of Attitudes. *Archives of Psychology* 140: 1–55.
3. On the right trach? National Confidential Enquiry into Patient Outcomes and Deaths; 2014