Tracheostomy Care: Quality Improvement Project

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OxSTaR — Oxford Simulation, Teaching and Research

Background

Following the NCEPOD paper 'On the right Trach (2014), tracheostomy patients are 'cohorted' on designated ward areas where MDT staff have received appropriate training

Neurosciences wards are responsible for ~60% of tracheostomy patients

Spataro et al (2017) found a complication rate of 47% following tracheostomy procedures (most commonly obstruction, peumothorax, bleeding and infection)

Aims and Objectives

1) Drive improvement in the quality of care for patients with tracheostomies

2) To improve knowledge and confidence of staff managing patients with tracheostomies, in alignment with local OUH Guidelines

3) Implement several interventions to improve our management of patients with tracheostomies

4) To provide objective evaluation and analysis of implemented interventions, suitable for ongoing feedback

Methodology

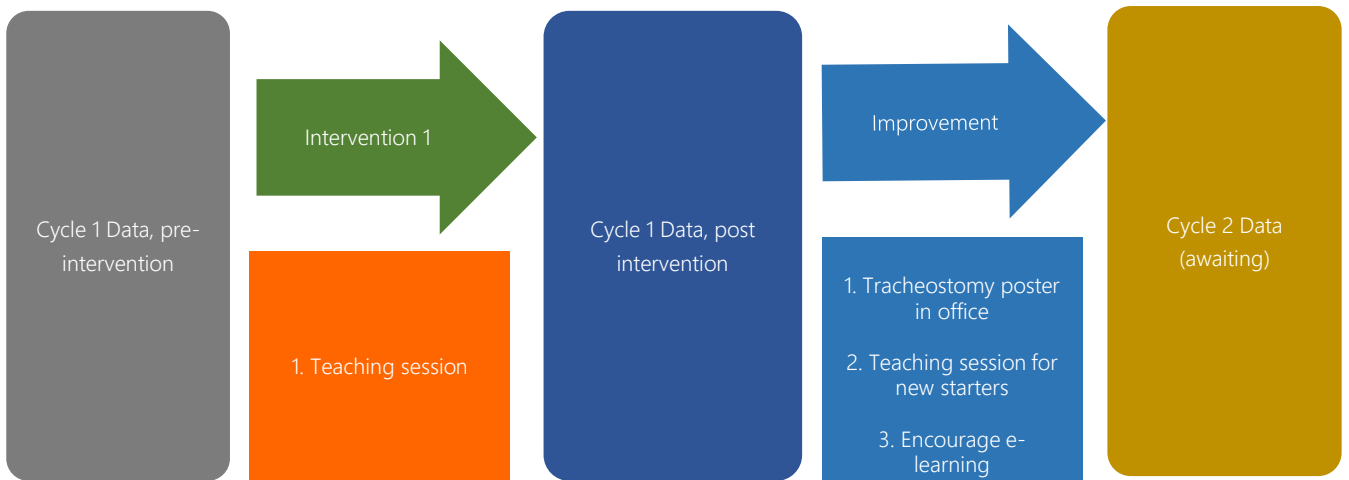Pre-teaching survey (all healthcare professionals, *n=14*)

Ward based tracheostomy teaching session. Hands on session run by tracheostomy nurse. Opportunity to learn about different tracheostomy styles, review the hospital protocols and discuss how to manage tracheostomy emergencies.

Post-teaching survey (all healthcare professionals, *n=7*)

	Standard	Target
1	Confidence in Managing Patients with a Tracheostomy	100%
2	Recognition of Tracheostomy Red Flags	100%
3	Knowledge of Emergency Tracheostomy Management Protocol	100%
4	Ability to Manage a Tracheostomy in an Emergency	100%

Cycle 1 Data, pre-intervention

→ Intervention 1

1. Teaching session

Cycle 1 Data, post intervention

→ Improvement

1. Tracheostomy poster in office
2. Teaching session for new starters
3. Encourage e-learning
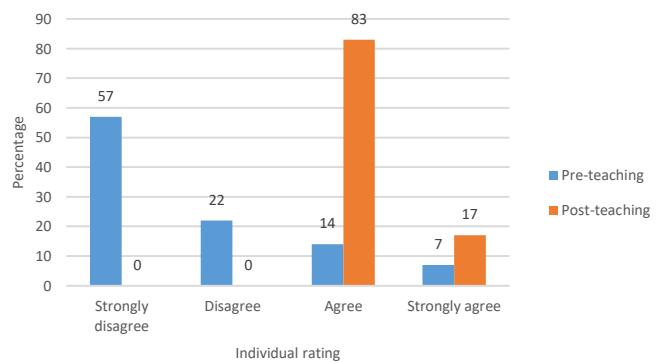
Cycle 2 Data (awaiting)

Results

Standard 1: Following the teaching session, all health care professionals felt their confidence was either reinforced or improved. There was an increase from 21% to 100% in health care professionals stating they felt confident managing tracheostomies on the ward.

Standard 2: Following the teaching session, all health care professionals were able to successfully identify 5 red flags/ signs of deterioration in tracheostomy patients. There was an increase from 21% to 100% in confidence recognising signs of deterioration in patients with tracheostomies.
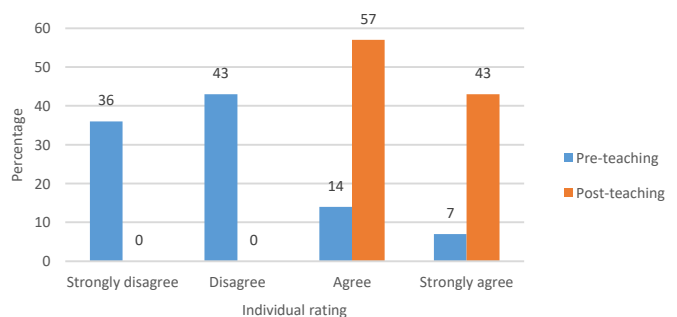
Standard 3: Following the teaching session there was overall improvement in knowledge of the emergency tracheostomy protocol. There was an increase from 50% to 100% in confidence in knowing when to put out a crash call, and an increase from 21% to 86% in confidence in knowing when to remove a tracheostomy tube in an emergency.

Standard 4: Following the teaching session there was an overall improvement in ability to manage a tracheostomy in an emergency. There was an increase from 28% to 86% in ability to known how to assess tracheostomy patency, an increase from 42% to 100% in ability to identify an inner tube, an increase from 28% to 100% in ability to determine whether the cuff is inflated or deflated, an increase from 38% to 100% in knowing how to ventilate via a tracheostomy and an increase from 21% to 86% in feeling confident in removing a tracheostomy tube in an emergency.

Confident in managing patients with tracheostomies

Individual rating	Pre-teaching	Post-teaching
Strongly disagree	57	0
Disagree	22	0
Agree	14	83
Strongly agree	7	17

Confident in recognising signs of deterioration in patients with a tracheostomy

Individual rating	Pre-teaching	Post-teaching
Strongly disagree	36	0
Disagree	43	0
Agree	14	57
Strongly agree	7	43

Discussion

Significant improvement in several areas was seen (confidence in managing tracheostomies, recognising red flags and knowledge of when to put out crash call, remove the inner tube and assess cuff inflation/deflation).

There are still areas for improvement (i.e. <100% agree) (knowing when to remove the tracheostomy tube, confidence removing the tube and assessing tracheostomy patency).

Suggestions

Doctors induction to include tracheostomy teaching (and invite MDT staff members along for refreshers)

Posters of the Emergency Tracheostomy Guidelines to be placed on the neurology ward

Encourage healthcare professionals to complete the tracheostomy e-learning module