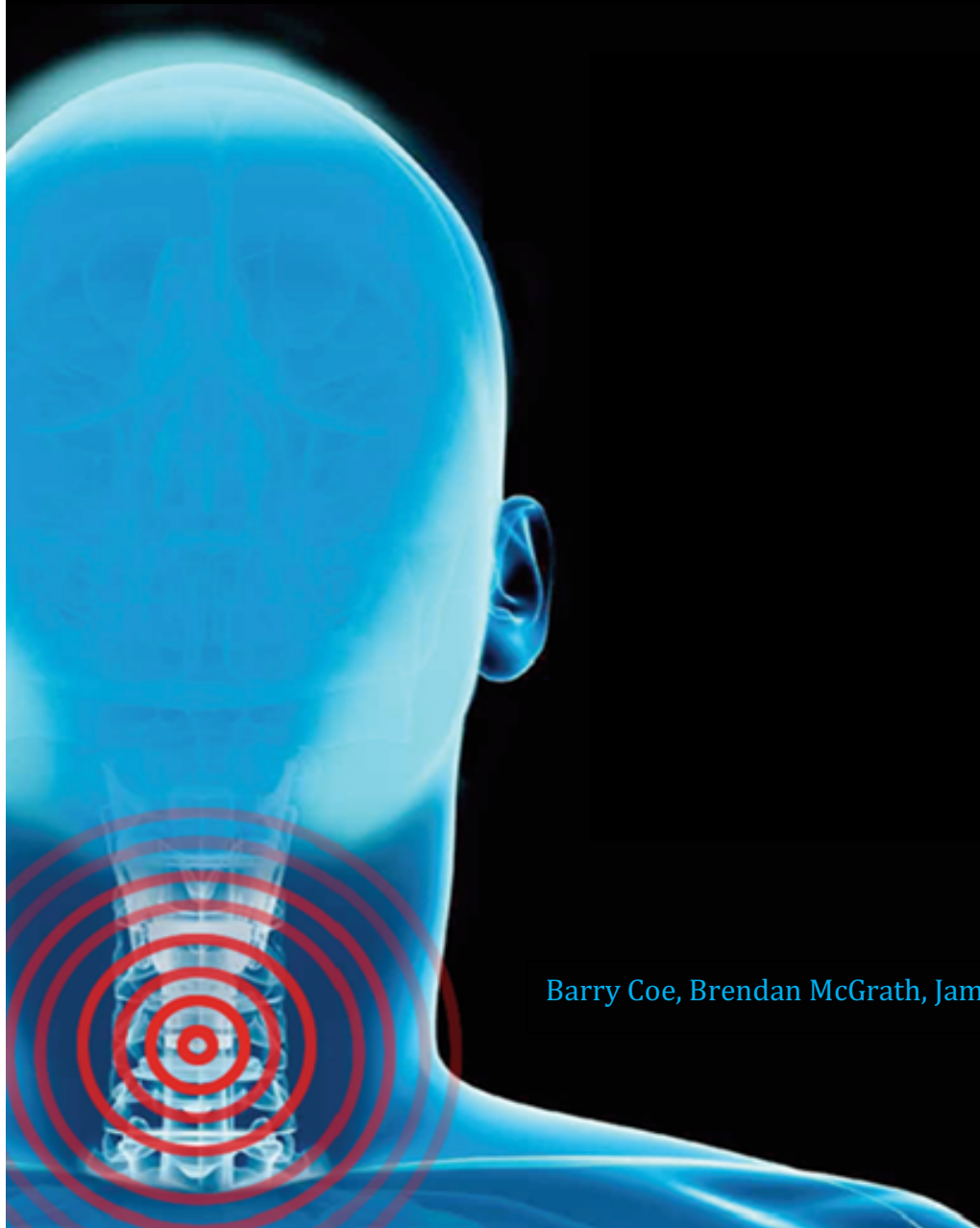




**Improving
Tracheostomy
Care**

Non-medical Competencies for Tracheostomy and Laryngectomy care



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Non-medical Competencies for Tracheostomy and Laryngectomy Care

Background:

The National Tracheostomy Safety Project (NTSP) is a UK charity dedicated to improving the quality and safety of care for patients with tracheostomies and laryngectomies through education. The Global Tracheostomy Collaborative (GTC) is a Quality Improvement Collaboration between hospitals around the world with similar aims to the NTSP, but providing additional resources to support change in our healthcare systems. The NTSP secured funding from the Health Foundation to implement the GTC resources into 20 diverse UK hospitals in 2016. This project is called Improving Tracheostomy Care (ITC).

During 2017, as part of the ITC Project, we undertook a number of qualitative exercises with Champions from our 20 participating NHS trusts, in order to gauge levels of support and resources required to successfully improve tracheostomy care across a variety of hospitals. A rapid Delphi consensus exercise ranked 'competencies' as the single intervention with highest agreement. A further exercise demonstrated that less than half of sites involved in the Project had mandated competencies for nursing staff.

However, we found little consensus regarding the format and assessment process that a competency document should adopt. During the project, we have learned that each site has its own internal and external factors which may affect how change can be adopted, as well as its own specific tracheostomy population with their own specific needs; a lack of consensus is therefore unsurprising. However, there remains a need for nationally agreed tracheostomy competencies and the following document can be used as a guide or template for this, and when developing local competencies for tracheostomy care.

Competency development:

The ITC project hosted a number of meetings for multidisciplinary staff involved, representing the participating NHS sites. Draft themes were developed by consensus and presented for feedback. Evidence in the medical literature was used where possible, but high quality, relevant peer reviewed literature is lacking in this area. Much of this document represents opinion, but the opinions are taken from a multidisciplinary expert panel, and determined through a formal consensus exercise.

It is anticipated that not all of these competencies are relevant to all individuals or to all stages of training, and some sites may have comprehensive, existing resources. The competencies provided here are also deliberately detailed, in the anticipation that they will be adapted by those using them to suit their local needs.

The Assessment Process:

In order to improve the safety of care, the NTSP recommends limiting the number of wards or locations within an organisation that patients with tracheostomies or laryngectomies will be managed. These locations are commonly referred to as cohort wards. The aim for any tracheostomy cohort ward should be to have at least one nurse (or healthcare provider appropriate to the setting) per shift to be competent (Level 3) in each relevant tracheostomy related competency.

Each of the following competencies can be assessed for healthcare staff in regular, direct contact with tracheostomy or laryngectomy patients. In certain areas and on certain wards some of the following competencies may not be appropriate. Similarly, not all of the following competencies will be appropriate for certain members of the multidisciplinary team.

The method of achieving competence and the evidence required for this should also be locally agreed. The following document allows for self-assessment and multiple further assessments in order to highlight individual learning needs and demonstrate progression. However, one assessment process may be all that is required to deem a practitioner competent. We recommend that before implementing a competency framework, these competencies should be reviewed by a local, multidisciplinary, expert panel.

Levels of Competence 1 to 5 (novice to expert):

Novice-Level 1

Novices have no experience of the situation they find themselves in, and they operate by closely following rules laid down by others. They perform a series of tasks without understanding, or referring to, the context within which they are operating.

Advanced Beginner- Level 2

Advanced beginners have had exposure to the situation they find themselves in. This could be through a combination of clinical practice, simulation workshops, study sessions or e-learning that enables them to discuss or demonstrate an understanding of the competency.

Competent- Level 3

The Nursing and Midwifery Council (2010) define competence as “the combination of skills, knowledge and attitudes, values and technical abilities that underpin safe and effective nursing practice and interventions”. Competent practitioners use conscious, analytical contemplation of the situation to plan and implement the appropriate action to ensure the most satisfactory outcome.

Proficient- Level 4

Proficient practitioners use their expertise to critically analyse and evaluate situations. They can identify the most important and relevant elements of a complex situation and make decisions based upon a broad perspective and knowledge.

Expert- Level 5

Experts are able to focus on a relevant part of a situation using intuitive skills to follow an appropriate course of action. An expert practitioner will develop a ‘feel’ for a situation and have a plan for any given outcome.

(Adapted from Benner, 1984)

Tracheostomy & Laryngectomy competencies:

1. Safe suctioning
2. Bed head signs
3. Emergency algorithms
4. “Red flags” and complications
5. Inner tube care
6. Humidification
7. Anatomy and physiology
8. Tube change:
 - a. Elective tube change
 - b. Emergency tube change
9. Cuff management
10. Stoma and skin care
11. Communication and speaking valves
12. Swallowing and SALT guidelines
13. Transfer
14. Documentation
15. Weaning
16. Family
17. Laryngectomy-specific
18. Sub-glottic suctioning
19. Discharge

Notes

- SA – Self-Assessment
- Initial, Mid and Final are assessments at different stages of training that may or may not be applicable to the learner

Skill/Knowledge		Assessment			
1. Effectively and safely perform suctioning of a tracheostomy/ laryngectomy tube.		SA	Initial	Mid	Final
1.1	Can demonstrate the ability to check and prepare all necessary equipment				
1.2	Ensures patient is informed and reassure about the suctioning to be performed				
1.3	Performs suction effectively in accordance with local procedure				
1.4	Dispose of all waste material effectively				
1.5	Ensure patient is comfortable post procedure.				
1.6	Can discuss the main complications of tracheostomy/Laryngectomy suctioning A. Trauma/Bleeding B. Hypoxia C. Bradycardia D. Bronchospasm E. Pain/anxiety				

Skill/Knowledge		Assessment			
2. Bed head signs		SA	Initial	Mid	Final
2.1	Can discuss the importance of the correct use, position and documentation of a bed head sign				
2.2	Can describe the basic differences of the Adult Tracheostomy and Laryngectomy bed head signs				
2.3	Can describe the basic differences of the Paediatric Tracheostomy and Adult bed head signs (where applicable)				

Skill/Knowledge		Assessment			
3. Emergency algorithm		SA	Initial	Mid	Final
3.1	Has successfully completed an emergency algorithm training session.				
3.2	Can demonstrate where to find a colour copy of the correct type of bed head sign with attached emergency algorithm				
3.3	Can discuss and demonstrate the ability and need to call for expert airway help				
3.4	Can demonstrate the ability to assess the Tracheostomy/Laryngectomy patients breathing.				
3.5	Can assess the ability to assess the Tracheostomy/ Laryngectomy tube patency				
	<ul style="list-style-type: none"> A. Speaking valve cap removal B. Can pass a suction catheter C. Can deflate the cuff D. Re-assess breathing 				
3.6	Can demonstrate the ability to remove the Tracheostomy/Laryngectomy tube				
3.7	Can demonstrate the ability to perform primary emergency oxygenation.				
	Standard airway manoeuvres <ul style="list-style-type: none"> A. Cover the stoma B. Bag-valve -Mask C. Oral or Nasal airway adjuncts D. Subglottic airway devices Tracheostomy stoma ventilation <ul style="list-style-type: none"> A. Paediatric face mask to stoma B. LMA applied to stoma Can describe NO oral airway with Laryngectomy patients				
3.8	Can discuss the differences between the Adult, Paediatric and Laryngectomy algorithms (where applicable)				

Skill/Knowledge		Assessment			
4. Effective and early recognition of tracheostomy “Red Flags” and complications		SA	Initial	Mid	Final
4.1	<p>Can identify and all emergency equipment.</p> <ul style="list-style-type: none"> A. Suction and correct suction catheters B. Oxygen with correct delivery system (tracheostomy mask, paediatric mask, Bag-Valve-Mask, T-piece or Waters circuit as applicable) C. Tracheostomy Box, as per local standard. D. Resus/advanced airway trolley 				
4.2	Can demonstrate the knowledge and ability to call for expert airway help.				
4.3	<p>Can discuss the tracheostomy “Red Flags”</p> <ul style="list-style-type: none"> A. Airway B. Breathing C. Tracheostomy-specific D. General 				
4.4	<p>Can discuss the general complications of a tracheostomy/laryngectomy, and demonstrate the effective and early treatment of</p> <ul style="list-style-type: none"> A. Tube Blockage B. Tube displacement C. Increased viscosity/dry secretions D. Increased chest infections E. Bleeding 				

Skill/Knowledge		Assessment			
5. Can effectively and safely perform tracheostomy inner tube change/care for double-lumen tracheostomy tubes		SA	Initial	mid	final
5.1	Can discuss the rationale for inner tube change.				
5.2	Demonstrates the ability to safely remove, clean and re-insert a tracheostomy inner tube <ul style="list-style-type: none"> A. Ensure that the patient is in a comfortable position B. All equipment is prepared C. The inner tube is changed as per local procedure D. The “removed” tube is cleaned and stored as per local policy E. The patient is observed post procedure for any signs of complications 				
5.3	Demonstrates the ability to replace “used” inner tube effectively				
5.4	Can describe the minimum frequency that the inner tube needs to be replaced as per local policy				

Skill/Knowledge		Assessment			
6. Humidification		SA	Initial	mid	final
6.1	Can describe the normal anatomical humidification processes				
6.2	Discuss the importance of humidification in a patient with a tracheostomy or laryngectomy and describe appropriate methods of humidification				
6.3	Can describe, discuss and apply (set up) the different methods of humidification. <ul style="list-style-type: none"> A. Warm humidification B. Cold bath humidification C. Humidification and Moisture Exchangers (HME's) eg. Swedish nose D. Laryngectomy bib E. Nebulisers 				
6.4	Can assess and document the effectiveness of the applied humidification				

Skill/Knowledge		Assessment			
7. Anatomy and physiology		SA	Initial	mid	final
7.1	Can discuss the anatomy and physiology of the upper airway				
7.2	Can discuss the indications for a tracheostomy/laryngectomy				
7.3	Can discuss the altered anatomy and physiology, of the patient with tracheostomy				
7.4	Can discuss the altered anatomy and physiology of the Laryngectomy patient				
7.5	Can discuss the differences in management of Laryngectomy and Tracheostomy patients				

Skill/Knowledge		Assessment			
8a. Can safely and effectively perform a ROUTINE tracheostomy tube change.		SA	Initial	Mid	Final
8a.1	Can prepare the patient and environment for the routine tracheostomy tube change.				
8a.2	Can effectively access and use all emergency equipment				
8a.3	Can identify and contact the correct expert airway personnel as necessary				
8a.4	Can safely/effectively perform a routine tracheostomy tube change as per local procedure				
8a.5	Can safely/effectively perform a routine tracheostomy tube change as per local procedure (local check list completed)				
8a.6	Can ensure that the patient is reassured and comfortable post procedure, ensure that any problems, concerns or heightened observation are highlighted to the correct personnel.				

Skill/Knowledge		Assessment			
8b. Can safely and effectively perform an EMERGENCY tracheostomy tube change.		SA	Initial	Mid	Final
8b.1	Can effectively access and use all emergency equipment				
8b.2	Can safely/effectively perform an emergency tracheostomy tube change as per local procedure (Local check list completed) (This may be demonstrated on a manikin)				
8b.3	Can identify and contact the correct expert airway personnel as necessary				
8b.4	Can ensure that the patient is reassured and comfortable post procedure, ensure that any problems, concerns or heightened observation are highlighted to the correct personnel.				
8b.5	Can discuss how to refer the patient to a higher level of care, and arrange safe transfer to the same.				

Skill/Knowledge		Assessment			
9. Can safely manage an inflated tracheostomy tube cuff.		SA	Initial	mid	final
9.1	Can describe a “normal” tracheostomy tube cuff pressure reading				
9.2	Can identify and safely use a cuff pressure manometer where applicable. This includes checking a fluid or foam-filled cuff appropriately				
9.3	Can accurately document routine tracheostomy cuff pressure observations				
9.4	Can describe the symptoms of a tracheostomy cuff leak, and discuss the reporting and correct remedial actions of the same				
9.5	Can accurately document any tracheostomy cuff leak issues, and action taken				

Skill/Knowledge		Assessment			
10. Can perform effective tracheostomy/laryngectomy stoma and skin care		SA	Initial	Mid	Final
10.1	Can effectively clean and assess skin condition of the tracheostomy or laryngectomy stoma as per local policy/procedure				
10.2	Can safely perform routine wound swab of tracheostomy or laryngectomy stoma				
10.3	Can safely select and apply the appropriate tracheostomy or laryngectomy stoma dressing				
10.4	Can discuss tracheostomy / laryngectomy skin and stoma problems, and correctly refer for tissue viability input				

Skill/Knowledge		Assessment			
11 Can discuss the effective use a speaking valve, and different forms of communication for a patient with a tracheostomy / laryngectomy		SA	Initial	mid	final
11.1	Can discuss the different types of speaking valves available locally				
11.2	Can explain how one-way valves work				
11.3	Can discuss when they are and are not appropriate to use including local policies for head/neck or ENT surgery				
11.4	Can demonstrate how to safely attach and detach valve				
11.5	Can demonstrate how to clean and store the valves (as per manufacturers guidance)				
11.6	Can discuss different communication methods i.e. pen and paper, iPad, picture charts or alphabet charts				
11.7	Knows when and how to refer to SaLT for specialist assessment or advice on communication difficulties				

Skill/Knowledge		Assessment			
12. Can demonstrate knowledge of the importance of expert speech, voice and swallowing input with the tracheostomy or laryngectomy patient		SA	Initial	mid	final
12.1	Can discuss the physical and psychological impact of a tracheostomy on a patient's speech and swallowing				
12.2	Demonstrates understanding that ideally, all tracheostomy patients should be referred to SaLT as soon as the decision to wean from sedation is made				
12.3	Knows how to refer to SaLT locally, and can discuss when to refer to SaLT, as per local guidelines.				
12.4	Collaborates with the local SaLT team to develop an individualised plan of care				

Skill/Knowledge		Assessment			
13. Can safely transfer a patient with a tracheostomy or laryngectomy		SA	Initial	Mid	Final
13.1	Can effectively identify and assemble the correct equipment required to safely transfer a patient with a tracheostomy or laryngectomy				
13.2	Ensure all the equipment is in good working order				
13.3	Can identify and ensure the all the personnel required for a safe transfer are present (where applicable)				
13.4	Ensure that the receiving department/ward/unit are aware of the patient transfer are aware, and in agreement prior to transfer				
13.5	Effectively handover patient, ensuring any ongoing issues with the patient's tracheostomy or laryngectomy are identified and understood				

Skill/Knowledge		Assessment			
14. Can accurately complete all relevant local tracheostomy/laryngectomy documentation		SA	Initial	Mid	Final
14.1	Ensure that a full colour and correct type of bedhead sign is correctly completed and is clearly observable at the patient bed space.				
14.2	Can accurately record all tracheostomy/laryngectomy observations				
14.3	Demonstrates the ability to ensure that all relevant tracheostomy or laryngectomy care plans are kept up to date				
14.4	Demonstrates the ability to ensure that any issues with the tracheostomy or laryngectomy are clearly documented in the medical and nursing notes and hand over to the appropriate staff				

Skills/Knowledge		Assessment			
15. Can demonstrate the knowledge required to effectively wean a patient with tracheostomy from mechanical ventilatory support (if applicable to role)		SA	Initial	mid	final
15.1	Can discuss when it is appropriate to commence weaning				
15.2	Can explain who is responsible for making the weaning plans (local guidance)				
15.3	Can explain the stages of weaning				
15.4	Can discuss when to discontinue weaning programmes				
15.5	Can explain how to monitor the patient during weaning, including signs of respiratory distress or fatigue				

Skill/Knowledge		Assessment			
16. Can demonstrate knowledge of the support the family of a tracheostomy or laryngectomy patient requires		SA	Initial	mid	final
16.1	Can discuss the psychosocial impact on the family				
16.2	Demonstrates awareness of local family education policy for those that will be discharged with tracheostomy or laryngectomy				
16.3	Can discuss available family support after discharge from hospital				

Skill/Knowledge		Assessment			
17. Can demonstrate the skills required to care for a laryngectomy patient (if applicable to role)		SA	Initial	mid	final
17.1	Can discuss the anatomical changes to the airway following a laryngectomy				
17.2	Can discuss the different types of laryngectomy stoma equipment; <ul style="list-style-type: none"> - Stoma button - 'Lary tubes' - Baseplates and HME cassettes 				
17.3	Can demonstrate how to clean a voice prosthesis (as per manufacturers guidance)				
17.4	Can explain how to identify when a voice prosthesis may need changing				
17.5	Can identify and contact those responsible for changing the prosthesis				
17.6	Can discuss other methods of communication i.e. electrolarynx,				

	oesophageal speech, ipad communication apps				
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Skill/Knowledge		Assessment			
18. Can perform safe sub-glottic suction (if applicable to local practice)		SA	Initial	mid	final
18.1	Can describe identify the sub-glottic port				
18.2	Can demonstrate the ability to safely suction the sub-glottic port as per local policy				
18.3	Can accurately document the sub-glottic port aspirates				

Skill/Knowledge		Assessment			
19. Can demonstrate awareness of ensuring safe discharge from hospital of a patient with a tracheostomy or laryngectomy		SA	Initial	mid	final
19.1	Can discuss the discharge process: <ul style="list-style-type: none"> - Register with ambulance service - Contact electricity company to prioritise in power cut - Set-up account with consumables supplier - Follow-up appointment for tube change - GP and District Nurse referral - Tracheostomy Safety box 				
19.2	Can explain how to obtain a portable suction machine/nebuliser/other essential equipment				
19.3	Can explain the process of obtaining the necessary consumables				
19.4	Can discuss which consumables should be sent with the patient on discharge				
19.5	Can discuss which contact details will be given should issues arise on discharge (for example ward, nurse specialist, physiotherapist)				

Acknowledgements:

Thanks to those that shared their existing local documents with us, namely:

Erica Everitt- *Tracheostomy Nurse Specialist, Norfolk and Norwich University Hospital Trust.*

Paul Twose- *ICU lead Physiotherapist, Cardiff and Vale University Health Board.*

Andrew Holroyd- *CNS Head and Neck, UCLH Foundation Trust.*

Christina Lamont- *Tracheostomy Nurse Specialist, Royal Liverpool and Broadgreen University Hospital Trust.*

Sarah Wallace-*SalT lead, ITC project, Manchester University NHS Foundation Trust.*

To of the multidisciplinary staff and site leads that took part in the ITC research meetings.

Major references

Thorpe V, Wallace S, Morrow N, Ginnelly A, McGowan S, Clarke L, Reid K. 'RCSLT Tracheostomy Competency Framework 2014'

https://www.rcslt.org/members/publications/publications2/tracheostomy_competency_framework

NCEPOD: On the right trach? (2014) <http://www.ncepod.org.uk/2014tc.html>

Comprehensive Tracheostomy Care, the NTSP handbook. Available from www.tracheostomy.org.uk