Health Care Professional (HCP) Paediatric Tracheostomy Competency

Guidance Document

Version 1.0 December 2023. To be reviewed by December 2024

The Yorkshire and Humber Paediatric Critical Care Operational Delivery Network

Thames Valley and Wessex CHILDREN AND YOUNG PEOPLE Operational Delivery Network

North Thames Paediatric Network Connecting paediatric services

East of England Paediatric Critical Care Operational Delivery Network

Scope of this document

This competency document (2022) was amended from the Parent/ Carer competency document developed by Tracheostomy and LTV Specialists, the Paediatric Pan London Long Term Ventilation (PPLLTV) Group and Great Ormond Street Hospital (GOSH) ENT Advanced Nurse Practitioner (ANP) Jo Cooke. The PPLLTV Group is a group of Clinical Nurse Specialists and Allied Health Professionals. The authors are experts in the care of paediatric Tracheostomy, Tracheostomy LTV (TrLTV) and Non-invasive Ventilation (NIV) and work within the Operational Delivery Networks of East of England, North and South Thames, Thames Valley and Wessex, and Yorkshire and Humber. These competencies are aimed at Healthcare Professionals (HCPs) working outside of the main Tertiary settings and looking after patients in their local healthcare environment. These competencies are freely available for use by all, but practitioners should always refer to their local guidance if planning to use them in their own service.

This document is a guide for the assessor to enable sign-off of the associated competency document. It follows the same format as the HCP Paediatric Tracheostomy Competency Sign-Off Document and has been devised to enable the assessment of a Healthcare Professional's (HCP's) competence to care for a child and young person (CYP) requiring a Tracheostomy. **The LTV Guideline (2023) developed by the Paediatric LTV ODN Collaborative can also be used to support this document.**

The document has been divided into two sections: **Section 1** covering the Core Tracheostomy Competencies including the theory and care required universally for all patients requiring a Tracheostomy and **Section 2** covering the Specialist Tubes and Aids that may be required in some cases. Previous versions of these competencies included a note on "Tracheostomy Aware (TA)/ safe" to enable HCPs that had awareness but were not fully signed off as competent to care for a CYP with a tracheostomy under supervision. Tracheostomy Aware (TA)/ safe has been removed so that a local risk assessment with a pragmatic approach can be undertaken.

The aim of the competency document is for the HCP to have the ability to **safely** care for children with a Tracheostomy in situ. **An HCP is deemed competent to safely care for a CYP with a tracheostomy following completion of Section 1 including Tracheostomy Competency Completion Record at the end of the section on the HCP Paediatric Tracheostomy Competency Sign-Off Document.** They should then undertake any relevant training for each Specialist Tracheostomy or Tracheostomy Aid that they may use (Section 2). This can be done at a later date, as they use each relevant device.

The professional should demonstrate that they can undertake each relevant section and can consistently replicate each aspect of care in a variety of contexts. The expectations of HCPs without a professional registration may vary between trusts, it is advised that all professionals work within their scope of practice. Where medication administration and clinical assessment skills are referred to, a non-registered HCP should discuss with a senior staff member what is appropriate according to their local policy.

Once the HCP feels confident and competent, they should sign each relevant competency in the HCP Paediatric Tracheostomy Competency Sign-Off Document. Each competency will then be assessed and signed, by a qualified professional (Assessor) once competency has been deemed to have been achieved, using this HCP Paediatric Tracheostomy Competency Guidance Document to assist. The time in which confidence and competence is achieved will vary dependent on the HCP's level of experience and exposure. An Assessor is described as a senior staff member. They should have clinical experience and competency in line with local policy as well as having experience in supervision and assessment. It is however, recognised that when introducing this competency document, there may be insufficient HCPs that have achieved these competencies to be supervisor and assessor of HCP's completing this process. Until such a time, a pragmatic approach should be applied.

CONTENTS

Training Tables

The next 2 pages of the HCP Paediatric Tracheostomy Competency Sign-Off Document have been created to provide evidence of training received and to document assessors that have signed the competency document. Below are examples of the pages you will find in the competency document.

Training Schedule

Date & Time	Session	Trainer name	Trainer Signature
This section requires you to input any training sessions completed related to Tracheostomy care. This can include Tracheostomy Company Representative training on equipment, Tracheostomy Study Days, BLS, Bedside teaching etc. *This can be completed by the HCP and the trainer. It can be utilised by the trainer to identify when another session is required for the HCP and particularly useful if many trainers are involved.*			

Signature record of supervisors/assessors

Name	Designation	Signature	Initials
Any HCP signing this document should input their details on this page. The member of staff signing each competency should have confidence the HCP can undertake each relevant section safely and can consistently replicate the aspect of care in a variety of contexts.			
Copies of these pages can be made once they are full.			

Section 1: Core Tracheostomy Competencies Performance criteria and knowledge required Guidance Notes	
There are many Trust specific information leaflets and teaching videos available, please refer to your Specialist Centre	
Health and safety awareness and environment checks	
Explains the underlying reasons for a CYP requiring a Tracheostomy and associated medical conditions	Discusses that the clinical need for a tracheostomy can vary. Discusses the importance of knowing if the CYP has a patent upper and lower airway and that this may have implications and/or special considerations for overall management. Is aware that the CYP should have a specific care plan to refer to and is aware that this can be obtained from the Specialist Centre.
Demonstrates awareness of the types of Tracheostomy tubes and understands how to identify what tube is in use	Discusses that there are various different types of tracheostomy tubes which can vary in style and dynamics e.g *length, fenestrated, cuffed etc*. Can identify what tracheostomy tube is in use and where this information can be found. Discusses MRI/surgical compatibility (Refer to local policy). Understands the importance of reporting any tube concerns and discuss what to look for in the CYP when existing tubes need to be upsized or changed.
Explains the need for continuous supervision/ monitoring by a Tracheostomy trained and competent HCP and/ or parent/ carer	Refer to local policy on monitoring and supervision requirements. Can perform an A to E assessment on a CYP with a tracheostomy see *LTV Clinical Guideline (Page 5*).
Can identify and is familiar with relevant care plans and emergency escalation plans	• Respiratory Action Plan (RAP) if available • Tracheostomy Bed Heads: Trust or NTSP version • NTSP Emergency Algorithm: https://www.tracheostomy.org.uk/NTSP-Algorithms-and-Bedheads

Section 1: Core Tracheostomy Competencies Performance criteria and knowledge required	Guidance Notes
Health and safety awareness and environment checks continued	
Explains the importance of the Tracheostomy emergency box and can identify the core items required to be in the box for a non-cuffed Tracheostomy tube, explaining what each of the items are used for	Discusses the emergency tracheostomy box, list what should be in the emergency box and how it would be used in an emergency situation refer to *LTV Clinical Guideline* (*Appendix K).* Discusses that there may be a specialised tube or the patient may not have a patent upper airway requiring additional emergency equipment. Discuss where to access further guidance on this *i.e from Specialist Centre.* Discusses that most hospitals use the blue Kapitex 'Trachi case' as its easily recognised as the emergency box. If a different box is used then it must be identifiable. Discusses that there may be some centre specific guidance and to follow advice from the Specialist Centre.
Explains the need to ensure emergency equipment is available, intact and checked every time the care of the CYP is taken over	Discusses Tracheostomy safety checks in reference to *LTV Clinical Guideline (page 4).*
Describes and demonstrates Tracheostomy safety checks	Bedside safety checklists are in place: follow local policy or advice from Specialist Centre regarding daily Tracheostomy Safety Checklists. This safety handover must be completed every time care is handed over. The 4 T's can be a useful Tracheostomy Checklist: • **T**ape Tension is correct and supports the tube. • **T**ube is patent- suction. • **T**racheostomy emergency box has the correct contents. • **T**ube chart/bedhead is complete.
Suctioning via a Tracheostomy	
Recognises the signs that a CYP needs to be suctioned and can discuss the implications and complications of suctioning	HCP can identify the indications for suctioning see *LTV Clinical Guideline (Appendix M)* for further guidance. HCP can discuss the complications of suctioning see *LTV Clinical Guideline (Appendix M)* for further guidance

Section 1: Core Tracheostomy Competencies Performance criteria and knowledge required Guidance Notes	
Suctioning via a Tracheostomy continued	
Demonstrates how to use different suctioning devices and the effect of pressure when suctioning	Is able to discuss the suitable pressures for the CYP based on their age refer to local guidance and *LTV Clinical Guideline (Appendix M)*. Is able to follow manufacturers instructions on use specific to each suction unit that is being utilised. Is aware of correct clinical waste disposal procedures as per local infection control guidance.
Explains the importance of choosing the correc t size suction catheter for the Tracheostomy in use and length to suction	Is able to discuss the size of suction catheter utilising the formula: ID of Tracheostomy used x 2 e.g., 3.5 Tracheostomy x 2 = 7.0 Fr catheter. In instances where there is no available size i.e *size 9fr catheter for a size 4.5 Tracheostomy go to the closest size down catheter (size 8fr).* Is able to discuss how to measure the correct suctioning length and where to find this information- Use the bedhead tube charts. Is able to discuss the complications of suctioning beyond the tube tip i.e., cause tissue damage and distress to CYP. Too short could prevent effective removal of secretions and could lead to a blocked tube.
Explains the suction procedure for a Tracheostomy, demonstrates appropriate suction technique and assesses effectiveness of suction	Is able to demonstrate the correct suction procedure, see *LTV Clinical Guideline (Appendix M*). Can identify what monitoring and assessments should be in place during suctioning. Understands the actions to take if CYP deteriorates during a suctioning procedure. Is able to assess effectiveness of procedure and respond appropriately.
Explains how to assess secretions, identify any changes and discusses who to contact when concerned	Is able to discuss the differences in secretions and identify any changes from baseline *e.g.:* • *Colour (yellow, green, blood stained)* • *Consistency e.g., thicker, stickier than normal* • *Increased frequency of suctioning* • *Change of odour* Is able to discuss what steps need to be taken to manage the secretions. Understands who to escalate to if there are changes e.g.: • *Relevant medical team* • *Parent/primary caregiver*

Section 1: Core Tracheostomy Competencies Performance criteria and knowledge required	Guidance Notes
Tracheostomy tape changes and stoma care	
Explains the <u>safe positioning</u> of the CYP whilst changing the Tracheostomy tapes or Tracheostomy tube	Is able to discuss with the safe positioning of the CYP in order to carry out the tape change e.g. *lying down, neck extended, sitting up, swaddled, in a wheelchair*. Dependant on age and CYP mobility. Note: CYP preference should never compromise safety.
Explains how to correctly assess the Tracheostomy site, surrounding skin and recognise a granuloma	Can discuss signs of site/neck infection and what to look out for e.g.: • Redness, rash and/or inflamed, broken skin areas, bleeding, discomfort with Tracheostomy care, offensive smell. • Generalised signs of an infection in the CYP: temperature, lethargy, not normal self. Discuss the formation of granulomas both externally and internally. Be aware of the causes: rubbing of tube, irritation from the suction catheter and how to reduce the likelihood of them forming. Understands appropriate escalation if concerned: • Relevant medical team/tissue viability/ENT • Parent/primary caregiver *See Appendix 1: Stoma Guidance for an example guide (always check your local policy and procedures).*
Demonstrates the <u>safe holding</u> of the Tracheostomy tube during a tape change	Is able to demonstrate safe holding of the tube during the tape change and how it changes during cleaning/applying the dressing. Please refer to *LTV Clinical Guideline (Appendix L*) Discuss the importance and can demonstrate supportive positioning of the CYP during tape change *e.g. supporting the tube AND back of head or back- <u>2 points of contact when sitting up.</u>*
Demonstrates the correct technique for carrying out a Tracheostomy <u>tape change</u> including positioning, cleaning, securing and ensuring adequate stock of anything in use regularly	Discuss rationale for daily changes and cares. Can prepare and involve the CYP for the tape change. This could involve distraction, use of music, tv and position *i.e using a shoulder roll for neck extension (if appropriate), swaddling young children ensuring the child is comfortable with good access to the Tracheostomy site.* Discuss and list equipment required for a tape change refer to *LTV Clinical Guideline* (*Appendix L)*. Discuss any potential problems that may occur when changing tapes. ***Here is one example of a changing Tracheostomy video however please adhere to local policy and use local resources where possible:*** **<u>https://youtu.be/OxE-3cemHoU</u>** Explain and demonstrate the procedure for cleaning the Tracheostomy site and changing of the dressing and tapes.

Section 1: Core Tracheostomy Competencies Performance criteria and knowledge required	Guidance Notes
Tracheostomy tape changes and stoma care continued	
Discusses the safety aspects of bathing/ showering a CYP with a Tracheostomy	Understands the safety aspects of bathing/showering a CYP with a Tracheostomy e.g.: use of HME, consideration of water level in bath no higher than chest level, consideration of equipment e.g, supportive chair for bath/shower, head protector, shower bib.
Tracheostomy tube change	
Discusses when/ why a tracheostomy tube would need to be changed	Discusses potential situations where a tracheostomy tube would need to be a changed including planned and emergency situations.
Can prepare and discuss all the necessary equipment required for a Tracheostomy tube change **https://youtu.be/6vrYRKLhZSg**	Discuss rationale for tube change e.g., planned/unplanned/emergency. Can distinguish between an unplanned vs an emergency tube change *e.g. accidental decannulation or CYP/responsible HCP has accidentally cut the tube.* Can prepare and involve the CYP for the tube change (if it's an emergency this may not be possible). Lists and prepares the equipment required for a tube change see *LTV Clinical Guideline (Appendix N).* Discuss any potential problems that may occur when changing tube *e.g. unable to insert or bleeding and the actions to take.* Discuss the importance of replenishing stock of equipment as it is used including ensuring the appropriate number of spare Tracheostomy tubes is available usually a minimum of four in circulation is advised i.e: *1 in child's neck, 1 for routine tube change, 1 in emergency box and 1 spare*. If there are less than four available please consult with your Community Team and Specialist Centre.
Demonstrates the correct technique for carrying out a Tracheostomy tube change	Describe the frequency for changing the Tracheostomy tube based on manufacturers guidance, CYP's clinical need and tube integrity checks *e.g. this can vary from 7-28 days.* Describe and demonstrate the process as per *LTV Clinical Guideline* (*Appendix N)*. Check stoma and tube position (rule out any potential complications before attempting to change i.e., tight stoma, granulation tissue). Understands that the Tracheostomy tube is inserted in a curved motion, not to be forced and obturator to be removed immediately. Is able to discuss appropriate assessment of CYP. Following tube change.

Section 1: Core Tracheostomy Competencies Performance criteria and knowledge required	Guidance Notes
Tracheostomy tube change continued	
Describes how to clean and store Tracheostomy tubes	Is able to find and follow manufacturers guidance/local policy on cleaning and storage of Tracheostomy tubes. Is aware of the importance of checking tube integrity and number of times the tube can be used according to local policy.
Humidification via a Tracheostomy	
Explains the reasons for using artificial humidification and its importance	Can identify the need and importance of artificial humidification *e.g. secretion changes, blockages and infection risk.*
Discusses the different humidification devices	Awareness of different methods to deliver humidification *e.g. Heat Moisture Exhanges (HME), humidifier, nebulisation (see appendix 3)*.
Discusses when a nebuliser may be required and demonstrates how to assemble a nebuliser set up for a CYP with a Tracheostomy	Is able to discuss why a CYP may require a nebuliser and recognise any changes in secretions. Can appropriately set up and administer a nebuliser. Always refer to prescription and local guidance.
Discusses when nebulised antibiotics may be required. Discusses and demonstrates safe delivery of nebulised antibiotics to a CYP with a Tracheostomy	Awareness of why/when to administer the nebulised antibiotics, seek advice from your Specialist Centre. Demonstrate the setup of the nebuliser system to administer antibiotics. Awareness of the complications of delivering antibiotics and how to manage/mitigate this. Discuss any safety implications when administering nebulised antibiotics *(i.e. ventilation, filtering).* Please refer to local policy for guidance.
Explains the need to observe CYP during a nebulizer, can identify any changes in the CYP's condition and assess the effectiveness of the nebuliser	Is able to assess a CYP before, during and after delivering the nebuliser using an A to E assessment. Can identify complications of delivering a nebuliser and how to escalate appropriately.
Can demonstrate how to clean and store nebuliser equipment after use	Demonstrate how to separate the nebuliser system, clean, store and replace as per local guidelines.

Section 1: Core Tracheostomy Competencies Performance criteria and knowledge required	Guidance Notes
Action plan for clinical deterioration	
Discusses an A to E assessment for a patient with a Tracheostomy in situ	It is important to understand and recognise the baseline parameters for the CYP. Please follow the CYP's Respiratory Action Plan from their Specialist Centre if one is available. An assessment of the CYP should be taken when care has been taken over following a structured A to E assessment *see LTV Guideline (Page 2)*.
Explains signs of distress or changes in clinical status and discusses what appropriate course of action should be taken	Able to recognise deterioration of a CYP with a Tracheostomy and how to respond appropriately. Refer to and understand the escalation plan (if applicable).
Discusses different ways of delivering oxygen to a Tracheostomy when required	Is able to discuss different methods of oxygen delivery to a Tracheostomy *e.g. Swedish nose/ HME, humidified high flow Oxygen device, trache mask, ventilator/circuit if LTV etc.* Is aware of the PPLOG Home Oxygen Discharge Bundle or similar document for further guidance and advice. **Paediatric Pan London Oxygen Group, Romford, East London (pplog.co.uk)**
Tracheostomy care - emergency procedures	
Discusses potential emergency situations	Can discuss potential reasons why a Tracheostomy tube may need to be changed in an emergency *e.g. dislodged, blocked, tube integrity*
An emergency event management video has been watched	NTSP example below or use local alternative. Emergency Tracheostomy Management in Hospital - YouTube
Demonstrates a single person tracheostomy tube change *(if applicable or required by local policy- required if HCP is likely to be off the ward alone with the CYP)*	Can demonstrate positioning and management of a single-handed tube change on CYP or mannequin and how to secure ties (usually velcro refer to local policy).

Section 1: Core Tracheostomy Competencies Performance criteria and knowledge required Guidance Notes	
Tracheostomy emergency procedures - ***this section should be signed off by someone who has tracheostomy competency and has undertaken training to be able to teach Basic Life Support (BLS). Where this is not currently possible, a senior staff member with EPLS or equivalent who has undertaken tracheostomy training would suffice.***	
HCP is up to date with BLS mandatory training and can demonstrate and discuss the NTSP emergency algorithm in the event of a respiratory arrest **https://www.tracheostomy.org.uk/NTSP-Algorithms-and-Bedheads**	Can identify and manage: • A blocked Tracheostomy tube and a dislodged tube following the NTSP Algorithm • Can perform/demonstrate the Seldinger Technique • Can confidently utilise emergency equipment adapting for a Tracheostomy *i.e. using a Bag-Valve Mask directly on a Tracheostomy tube* Understands how to manage the emergency event if the CYP does not have a patent upper airway. Use of LMA/ Face mask over the stoma to ventilate (if applicable) watch the NTSP video of how to use an LMA/ face mask https://www.youtube.com/watch?v=xVzCpWHoeNs

Section 1: Core Tracheostomy Competencies Performance criteria and knowledge required	Guidance Notes
Travel and transport	
Discusses additional risks that need to be considered to ensure safety of CYP with a Tracheostomy when out of the hospital environment	Can discuss the need for appropriate training and confidence to provide all aspects of a CYP's Tracheostomy cares before travel/ transport. Can discuss what considerations need to be given to the place or department that they are travelling to and what facilities may be there *e.g. Mains power, easy access, extra space, lifts, familiarity, other trained adults.* Is able to discuss the potential risks of transferring a CYP with a Tracheostomy and how these risks could be managed. Utilise the **PREPARED** acronym: • **P**ack your equipment - all essential equipment and supplies must be easily accessible. • **R**e- think travel/journey/activity if CYP unwell/unstable. • **E**mergency equipment must be checked pre- journey. • **P**repare for emergencies–understand action to take for clinical emergencies, escalation plans, equipment failure, fire evacuation, vehicle breakdown etc. • **A**lternative power sources/equipment in the event of failure: always remember to take the mains lead. • **R**e-stock and re charge your equipment when you return. • **E**nsure you take sufficient supplies e.g. suction catheters, oxygen, nebuliser solution, PPE. • **D**riving If your CYP needs to be transferred in a vehicle, have you got all the equipment that you need safely secured but still easily accessible? Are you able to provide cares to the CYP when required? Who is around to help if needed? What happens if you get stuck in traffic or need to divert?

Section 1: Core Tracheostomy Competencies Performance criteria and knowledge required Guidance Notes	
Travel and transport continued	
Explains/ demonstrates how to calculate the amount of oxygen required for the duration of an outing/ transport off the ward	Journey time X prescribed O2 requirement = Total amount needed for journey, double the amount for safety. **<u>For example:</u>** **CYP requires 2L/min continuous Oxygen and is going out for 60 mins.** **Therefore, they need 60 x 2 = 120L of oxygen.** **Double this for safety: 120 x 2 = 240L to cover you in the event that the trip is longer than expected.** **BOC Medical Cylinder data chart:** **Cylinder code= capacity in litres.** **AZ 170litres** **C 170 litres** **D 340 litres** **CD 460 litres** **E 680 litres** **J 6800 litres**
Discusses potential adverse events that may occur whilst the CYP with a Tracheostomy is away from the bedspace	HCP can discuss the action/ who to contact if the equipment fails whilst moving CYP. Discuss the actions to be taken in the event of an emergency: • Blocked tube/ decannulation • Equipment fails/ oxygen runs out/ battery fails on suction machine • Forgets emergency equipment • Runs out of disposables *(i.e. suction catheters)*
Discusses/ demonstrates safe securing of equipment to transfer CYP with a Tracheostomy onto bed/ wheelchair/ buggy and into vehicle	HCP can safety load equipment onto the buggy/ wheelchair/ trolley/ cot/ bed whilst it still being easily accessible and usable. Awareness of weight safety limit on buggy/wheelchair and what equipment may need to be carried out by an Occupational Therapist. HCP can strap equipment onto the wheelchair/ buggy/ trolley when in a vehicle or if CYP is in a car seat securing the equipment safety in the vehicle. Assuring loose equipment *e.g. oxygen cylinder is secured*.
Discusses how Tracheostomy care can be delivered in wheelchair/ buggy/ vehicle	Discussions regarding carrying out Tracheostomy care *e.g. suctioning, tape and tube changes whilst the CYP is in buggy/ wheelchair/ vehicle.* This will be risk assessed per CYP and discussed with you on an individual basis.

Section 2: Specialised Tracheostomy Tubes & Tracheostomy Aids

The next section covers the usage of **specialised tubes**:

- Cuffed Tracheostomy tubes
- Double Lumen Tracheostomy tubes
- Tracheostomy tubes with a Subglottic port

Tracheostomy Aids:

- Speaking Valves (One-way Valves)

These Tracheostomy tubes/ Tracheostomy aids will not be applicable to all, so please only complete those which are appropriate for the HCP and their working environment. There is an additional sign off record page at the end of each section.

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Section 2: Specialised Tracheostomy Tubes & Tracheostomy Aids Performance criteria and knowledge required	Guidance Notes
Cuffed Tracheostomy Tube	
Discusses the differences between a cuffed and uncuffed Tracheostomy tube and the management of these	Discuss the reasons why a cuffed tube would be used rather than an uncuffed tube *(e.g. aspiration, protect lower airways, support ventilation).* Discuss the complications of cuffed tubes and how to mitigate these see tube specific competency. Discuss and demonstrate the cuff management plan *(i.e. timings of deflations, time off from the cuff, the specifics and how to deflate /inflate cuff, safety implications and monitoring)* refer to the patient specific Respiratory Action Plan (RAP). Discuss the safety implications of the CYP having a cuffed tube: *i.e. what extra equipment is required to manage the cuff and refer to the safety plan accordingly*. Take care when changing tapes that the cuff inflation port/ pilot balloon is safely away from being cut. Explain risks and indications for cuff deflation: *i.e. secretions above the tube may fall down into the lungs* Demonstrate the correct process of deflating tubes/ suctioning first and after deflation. Discuss oral suction and whether this is to be carried out. *See LTV Clinical Guideline (Appendix N).*

Section 2: Specialised Tracheostomy Tubes & Tracheostomy Aids Performance criteria and knowledge required Guidance Notes	
Care of a Cuffed Tracheostomy tube: There are 3 common cuffed tubes used in Paediatrics: TTS, Air cuff, Fome cuff	
Discusses and demonstrates care of a Tight To Shaft (TTS Cuff) 	HCP is to understand: • The need for a TTS and why this tube was chosen. • This cuff is a high-pressure cuff and must be deflated regularly to protect the tracheal lining. • The cuff is filled with sterile water. Demonstrate safely inflating the cuff. • The cuff is inflated with the minimum (not default amount) amount of water that manages the issue *(i.e. supports the ventilation leak).* • Discuss the importance of 2-4 hourly cuff deflations and can demonstrate how to deflate the cuff safely as per local guidelines. • Discuss what to observe for whilst the cuff is deflated. *See LTV Clinical Guideline (Appendix N).*
Discusses and demonstrates care of an AIRE Cuff  	HCP is to understand: • The need for an air cuff and why this tube was chosen. • This cuff is a low-pressure cuff. • The cuff is filled with air using a manometer. • The cuff is inflated with the minimum (not default amount) amount of air that manages the issue (i.e., supports the ventilation leak). • Demonstrate safely inflating the cuff using a manometer (stay in the green in most cases). • Discuss the importance of cuff deflations and knows how to deflate the cuff safely (using a syringe). • Discuss what to observe for whilst the cuff is deflated. *See LTV Clinical Guideline (Appendix N).*

Care of a Cuffed Tracheostomy tube continued

Discusses and demonstrates care of a Fome Cuff 	HCP is to understand: • A Fome cuff is used for many reasons; the main one being that the CYP aspirates and it helps prevent secretions from falling into the lower airways/lungs which protects them. • This cuff is a low-pressure self-inflating cuff. • There is NO inflation using a syringe or manometer. • Discuss the importance of cuff deflations and demonstrate how to deflate the cuff safely (using a syringe, 3-way tap). • The importance of ensuring the red port is left open AT ALL times. Discuss the complications if this port is closed *i.e: the cuff becomes more rigid and cannot adapt to the movement of the airway.* • Be aware of the extra equipment required in the emergency box to support an elective and emergency tube change (syringe, 3-way tap). • Demonstrate the safe set up of emergency equipment and use the 3-way tap correctly. • Demonstrate the safe removal of a Fome cuff tube. • The technique of removing the Fome cuffed tube please seek advice from your Specialist Centre. • The replacement tube for an emergency tube change is a TTS (not a Fome cuff). • The Fome cuff tube changes can be traumatic and uncomfortable for the CYP and can cause trauma to the stoma *e.g. splitting*. HCP to observe for bleeding/ colour changes post tube change. Discuss the potential need for cauterization following a Fome cuff change and who would need to be informed: parent/ carer/ ENT Specialist • Know what to do if the inflation port gets damaged/ broken off and you are unable to deflate the cuff. Demonstrate the use Neoflon to deflate/ hold open using the 3-way tap. *See LTV Clinical Guideline (Appendix N).*
Discusses identification of faulty cuff/ cuff leak and actions to take	Can identify how you would know if a cuff was faulty *e.g. not appropriately inflating/ quickly deflating, CYP not ventilating adequately, increased vocal sounds* Explains how to escalate this *e.g. Nurse in Charge/ Medical Team/ Community Team/ Report to Tracheostomy Manufacturer*

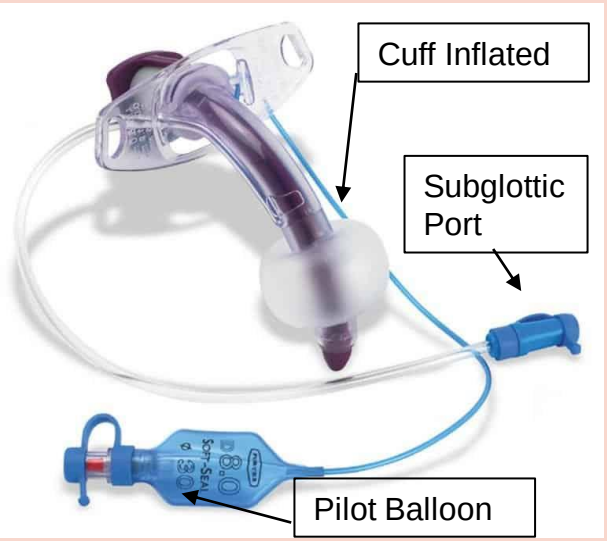
Care of a Double Lumen Tracheostomy tube

Discusses the rationale of the use of a Double Lumen Tracheostomy ***(These tubes can be cuffed and uncuffed if cuffed, please ensure Aire cuff competency is referred to)***	Is aware of the differences of a fenestrated or non- fenestrated tube. A fenestrated Tracheostomy has a hole or holes along its length to allow air flow around and through the Tracheostomy up through the upper airway. Fenestrated tubes come with 2 types of inner tube: one with holes matching the holes of the Tracheostomy (fenestrated inner tube) and one with no holes (non-fenestrated inner tube). Having a fenestrated tube may allow the CYP to vocalise effectively. HCP is to understand the need for a double lumen tube and why this tube may be chosen. If tube is cuffed, please refer to Aire Cuff management for pressure, inflation and deflation checks. See *LTV Clinical Guideline (Appendix N).*  Double Lumen Tube
Discusses the need to clean the inner cannula, frequency this is required and demonstrates how to clean the inner cannula	Prior to suctioning, inner tube must be changed to non-fenestrated inner cannula. Not doing this can allow the suction catheter to pass through the hole/holes and cause trauma to tracheal wall of give the false impression that the catheter will not pass. HCP can discuss and identify the differences between the fenestrated and non-fenestrated tubes (can identify cannula which is which). Demonstrate changing and securing of the inner cannula tubes and can articulate the importance of an inner tube in situ <u>at all times</u>.

Care of a Double Lumen Tracheostomy tube continued

Discusses the need to clean the inner cannula, frequency this is required and demonstrates how to clean the inner cannula continued… 	HCP can discuss the inner tube should be changed as a minimum 4 hourly, however if secretions are thick and sticky in consistency, frequency of cleaning should be increased and humidification as well as hydration assessed. HCP can: • Discuss and demonstrate how to remove the inner cannula. (Some inner cannula can be removed by simply twisting to the right, similar action to unscrewing a bottle top. Others just click and pull out using the ring pull.) • Discuss when the fenestrated and non- fenestrated inner cannulas should be in situ, *i.e. suctioning, resuscitation must be non-fenestrated, vocalisation fenestrated to facilitate voice.* • Discuss and demonstrate cleaning (sterile water, leave to dry naturally- use cleaning swabs as necessary). • Discuss the importance of using soft swabs to prevent damage to the surface of the tube *e.g. groves that can accumulate secretion and the increased risk of infection.*
Discusses the differences in emergency management of a Double Lumen Tracheostomy tube	HCP can discuss: • For resuscitation and suction down the tube the non- fenestrated inner tube must be in situ. • If the inner tube is blocked, change it- there is no need to change the whole tube. • Ensure an inner tube is in use at all times.

Care of a Tracheostomy tube with a Subglottic Port

Discusses the rationale for the use of a Tracheostomy tube with a subglottic suction port	Tracheostomy tubes with subglottic suction port enable secretions to be removed via syringe or suctioned from above the cuff. This helps to keep the CYP airway clear and unobstructed as well as reduce chest infections.
Demonstrates safely/ effectively aspirating the subglottic suction port and discusses troubleshooting if this port was to block  	Explains and demonstrates the removal of secretions via the subglottic port (either using a 10ml syringe or by connecting a suction machine following local policy and Specialist ENT Centre guidance) and explain associated risks *e.g mucosal injury*. Pressures should be limited to the lowest/ most effective pressure which should be guided by the team managing the CYP Tracheostomy. This will be less than the limit used for normal Tracheostomy suctioning. Discusses/ demonstrates actions if port becomes blocked and understands that this should be used with caution with guidance from the Specialist ENT Centre: • Insert 3-4 ml of air via 10 ml syringe through the line to remove secretions. Alternatively push 1ml of sterile water into the port • Remove using the same syringe and discard. • Can identify the different ports and what they are used for *i.e. pilot balloon/ cuff inflation port and subglottic port.*

Section 2: Specialised Tracheostomy Tubes & Tracheostomy Aids Performance criteria and knowledge required Guidance Notes	
Care of a One–way (Speaking) Valve – A One-way (Speaking) Valve assessment must be part of an MDT review *i.e. SALT/ Specialist Nurses/ Respiratory/ ENT teams*	
Explains how One-way (Speaking) Valves for a Tracheostomy work and contraindications for their use	The valve opens to allow the CYP to breathe in through the Tracheostomy tube. When they breathe out the valve closes. This diverts the air up through the voice box, (larynx) throat and mouth/ nose, creating vocal sounds. Usually, a One-way Valve wouldn't be used with cuffed Tracheostomy tubes. However there maybe exceptions *e.g. for a CYP who has the cuff deflated during the day and a cuffed fenestrated tube*. HCP understands when never to use a one-way valve: • Unconscious or unwell CYP • Foam cuffed Tracheostomy (or if cuff is inflated at anytime) • Upper airway obstruction • When there is minimal leak around the Tracheostomy tube • Thick and copious secretions • Aspiration • Sleeping • Anything else that may compromise the airflow around the Tracheostomy tube HCP to understand that they must remove valve immediately if breathing becomes compromised: • Increased work of breathing • Decreased oxygen saturation levels • Changes to heart rate Consideration given to frequency of valve used if: • Consistency and amount of secretions. One-way valves can cause drying of secretions so may need to increase frequency of nebs when off the valve or remove valve and replace with HME for periods during the day. • Comfort/anxiety/distress levels • Refer to Specialist Centre for further guidance

Care of a one–way (speaking) valve continued

Discusses the importance of following CYP specific guidelines	Understands that one-way valve plans are put in place by the CYP's Speech and Language Team who will have assessed the CYP and their tolerance to the one-way valve. HCP can discuss reasons for limited usage and patient specific plans to be put in place.
Discusses the cleaning and maintenance required for a One-way (Speaking) Valve	Is able to discuss the cleaning procedure: Wash the valve at least once a day in warm soapy water, rinse and air dry thoroughly before reusing. The one-way valve should be replaced as per manufacturer's recommendations – *e.g. every 3 months or if damaged.*

Educator Confirmation:

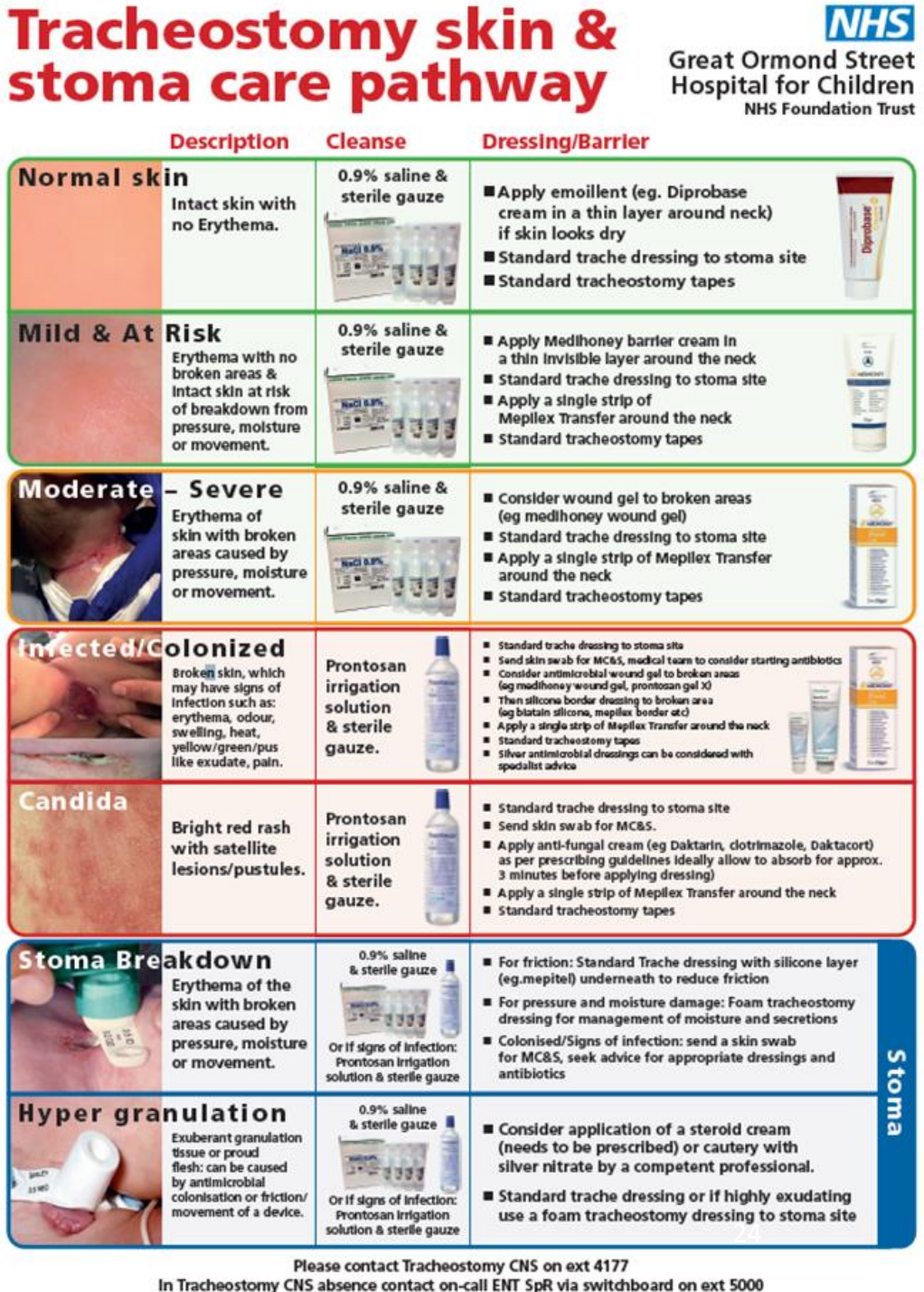
This should be completed by a senior staff member, with an Education role within the team. They should have clinical experience and competency in line with local policy as well as having experience in supervision and assessment. They should have either been aware of the training done previously in relation to the Specialist Tracheostomy Tubes & Tracheostomy Aids, or as a minimum, check the training record and schedule (pages 4 & 5), and check each assessor signature for each competency utilised in Section 2: Specialist Tracheostomy Tubes & Tracheostomy Aids of the HCP Paediatric Tracheostomy Competency Sign-off Document.

End of Specialised Tube Guidance

Appendix One

An example of a Stoma Care Pathway

***Please adhere to local policy and seek advice from your Specialist**



Appendix Two

Long Term Ventilation Guideline

SCAN ME

Appendix Three

Heat Moisture Exchangers

Image	Product name	Tidal Volumes (Vt)	Approximate Patient Weight guide	Suction port	Oxygen connection
	Gibeck Humid-Vent Mini	15-50ml	>1.5kg Max 10kg *(check Vt)*	No	No
	Freevent XtraCare Mini - *HME + Viral & Bacterial filter*	30-250ml	*>3kg (check Vt)*	No	Yes, using Freevent O2 Adaptor Mini:  *Max: 15L/min (humidification reduced)* *Ideally up to: 3-4L/min for minimal effect to humidity*
	TrachPhone HME	>50ml	>5kg *(check Vt)*	Yes	Yes, up to 2L/min
	Freevent XtraCare - *HME + Viral & Bacterial filter*	>50ml	>5kg *(check Vt)*	No	Yes, using Freevent O2 Adaptor:  *Max: 15L/min (humidification reduced)* *Ideally up to: 3-4L/min for minimal effect to humidity*
	Portex Thermovent T HME	>70ml	>10kg *(check Vt)*	No	Yes, using Thermovent T O_2 Connector:  Up to 60% oxygen
	Portex Thermovent T2 HME	>70ml	>10kg *(check Vt)*	Yes	Yes, up to 69%