

Healthcare Professional (HCP) Paediatric Long-Term Ventilation (LTV) Competency Sign-off Document

Version 1.0 December 2023. To be reviewed by December 2024

Name of HCP _____
Department _____
Trust _____



Scope of this document

This competency document (2022) was amended from a competency document developed by Tracheostomy and Long-Term Ventilation (LTV) specialists, and the Paediatric Pan London Long Term Ventilation (PPLTV) Group. The PPLTV 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 (ODN) 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 the HCP Paediatric LTV Competency Sign-off Document. It 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 and LTV as well as those requiring NIV on a long-term basis. It is to be used alongside the HCP Paediatric LTV Competency Guidance Document to assist with sign-off. It is to be used in combination with the relevant user guides/ guidance notes for the ventilators in use. **The LTV Guideline (2023) developed by the Paediatric LTV ODN Collaborative can also be used for guidance on LTV care.**

This document has been divided into two sections: **Section 1** covering the Core LTV Competencies including the theory and care required universally for all patients requiring LTV and **Section 2** covering the equipment that may be required. The competencies in which there are differences between Tracheostomy ventilated patients and those using other ventilator interfaces, such as NIV masks etc. have been highlighted through splitting the sign-off box for that competency (TrLTV and NIV).

The aim of the competency document is for the HCP to have the ability to **safely** care for children on Long Term Ventilation, with or without a Tracheostomy in situ. **An HCP is deemed competent to safely care for a CYP on LTV following completion of Section 1 including the LTV Competency Completion Record at the end of the section on this HCP Paediatric LTV Competency Sign-off Document.** They should then undertake any relevant training for each piece of equipment that they may use. This can be done at a later date, as they use each relevant device. Section 2, the Ventilator Specific Training Record at the end of this document can then be completed for each device they have received training in.

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 this HCP Paediatric LTV 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 the HCP Paediatric LTV 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 HCPs completing this process. Until such a time, a pragmatic approach should be applied.

Educator Confirmation on page 11 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 all the training done previously, or as a minimum, check the training record and schedule (pages 4 & 5), and check each assessor signature for each competency (pages 6-11).

CONTENTS

Pages	
Section 1 Pages 4-11	<ul style="list-style-type: none">• Training Schedule and Record of Assessors• Core LTV Competencies to be completed as a minimum• LTV Competency Completion Record for Core LTV Competencies
Section 2 Pages 12-15	<ul style="list-style-type: none">• Equipment and Ventilator Specific Training Record

Training Schedule

This training schedule can be used to detail any training sessions completed or planned, and who delivered these *e.g.*
Ventilator Company training, Practice Development Nurse (PDN) training

Date and Time	Session	Trainer name	Trainer Signature
Date	Ventilator training sessions (<i>name and make of ventilator</i>)	Trainer name	Trainer Signature
	Vent 1:		
	Vent 2:		
	Vent 3:		
	Vent 4:		

Signature record of Assessors and Supervisors

Any staff member who supervises or documents within this competency document must complete an entry below to validate competence.

Name	Designation	Signature	Initials

Section 1: Core LTV Competencies (Non-ventilator specific)	Self-Assessment	Assessor Sign & Date	
Understanding the need for ventilation			
Discusses the different reasons a CYP may require ventilation			
Discusses the different types of ventilators and how to access ventilator specific information			
Describes the differences between CPAP and BiPAP and the implications for the CYP			
Describes in basic terms the different Modes of delivering Bi-level ventilation (BiPAP) <i>i.e. ST/ Pressure Support, Pressure Control</i>			
Discusses the different levels of dependency of CYP on LTV and the differences between NIV and Tracheostomy ventilation			
Discusses what RAMP is in basic terms and why this would be set for a CYP			
Understands what a Respiratory Action Plan (RAP)/ Escalation Plan is and what to do if your CYP does not have one available to access			
Discusses why a CYP may have more than one Program set			
Discusses what should be done if the settings are different from the prescribed ventilation plan			
Demonstrates daily safety checks that need to be completed for a CYP on NIV/Tracheostomy ventilation			
Humidification			
Discusses when an HME needs to be part of the ventilation circuit and when this may not be required	NIV	N/A	N/A
	TrLTV		
Explains why and when humidification is required		6	

Section 1: Core LTV Competencies (Non-ventilator specific)	Self-Assessment	Assessor Sign & Date
Humidification continued		
Discusses different humidification devices for Tracheostomy and Non-Invasive Ventilation		
Discusses how humidification can be used if the CYP is suffering from thick tracheostomy secretions, severe oral dryness and nasal congestion, specifically how a change in environment may alter humidification needs		
Explains the importance of humidifier positioning		
Discusses the reasons for NOT transporting a CYP on a wet circuit and the importance of this		
Explains why an integrated humidifier cannot be used on a Tracheostomy		
Oxygen		
Discusses the use of Oxygen according to CYP's Respiratory Action Plan (RAP) for routine and escalation management		
Demonstrates and discuss the methods of Oxygen administration for a CYP on LTV, how this may differ between different ventilators and where this information can be found	NIV	
	TrLTV	
Nebulisation		
Explains when a nebuliser may be required and can demonstrate how to deliver this to the CYP that has LTV with discussion of differences if the CYP is unwell, dependant or non-dependant on ventilation <i>etc.</i>		
Demonstrates how to remove the nebuliser, clean equipment and discuss how frequently to change consumables		
Discusses when nebulised antibiotics may be required. Discusses and demonstrates safe delivery of nebulised antibiotics to a CYP with LTV		

Section 1: Core LTV Competencies (Non-ventilator specific)		Self-Assessment	Assessor Sign & Date
Ventilation operation Air inlet Filters			
Explains the purpose of the air inlet and aware of the importance of keeping this clear			
Discusses how frequently the air inlet filter should be changed and that more frequent changes may be required and the reasons for this			
Ventilator power supply			
Demonstrates how to connect the ventilator to the main power supply			
Explains what to do in a power outage or evacuation			
Demonstrates where to locate battery life information on the ventilator. Discusses when batteries need charging, how to do this, the need to ensure the battery supply is sufficient for CYP dependency and factors that affect battery life			
Discuss the differences between an internal/external battery and awareness that some ventilators may not have a battery. Discuss the implications of this and where this information can be found. Discuss factors affecting the battery life			
Circuits			
Discuss the different types of circuits that may be used in LTV			
Demonstrates the set-up of a wet and dry circuit for NIV and discusses the different parts in each circuit	Wet		
	Dry		
Demonstrates the set-up of a wet and dry circuit for TrLTV and discusses the different parts in each circuit	Wet		
	Dry		
Discuss the importance of an exhalation/ leak port on a single limb circuit, where it is located and demonstrate how to check patency	NIV		
	TrLTV		8

Section 1: Core LTV Competencies (Non-ventilator specific)	Self-Assessment	Assessor Sign & Date
Circuits continued		
Discuss the risks if the exhalation/ leak port becomes blocked and explain what may block it		
Discuss the different sizes of circuit available, why a patient may be on the particular sized circuit and risks if they do not have the correct circuit in place		
Discuss when consumables (interface (NIV)/circuit/filters) need changing and why		
Discuss how to troubleshoot common problems regarding circuit <i>e.g. failed learn circuit, leak, rain out, temperature variations, environmental influences</i>		
Ventilation operation- Alarms		
Discuss the importance of an A-E assessment when responding to your alarms		
Discuss the importance of having appropriate alarms set and the implications on ventilation if alarms are set incorrectly		
Demonstrate how to check the alarms are working and how often to do this		
Demonstrate how to troubleshoot alarms using an A-E assessment of the CYP		
Discuss the level of importance of alarms <i>e.g. information alarm and warning alarms</i>		
Discuss the processes to follow if you cannot find the cause of the alarm and who to contact		
Demonstrate and discuss how to solve unintentional leaks on an NIV interface		
Discuss the effect of some nebulisers in circuits and how this can trigger alarms		9

Section 1: Core LTV Competencies (Non-ventilator specific)	Self-Assessment	Assessor Sign & Date
NIV interface		
Demonstrate how to fit the interface correctly and check the tightness of the straps. Explain the implications of a poorly fitted interface		
Discuss the different vented interfaces and the importance of the exhalation/ leak port		
Discuss the risk of CYP airway obstruction and action to take if this occurs		
Explain early signs of a pressure sore and how to escalate appropriately		
Discuss how to obtain a new interface if required		
Demonstrate how to clean and dry the interface and how often this should be carried out		
Transferring of the patient		
Discuss the equipment needed to transfer, and how to safely secure all equipment		
Demonstrate/ discuss how to calculate the amount of Oxygen and battery needed for transfer time		
Discuss how to select the appropriate Bag-Valve-Mask with correct facemask (or laryngeal mask if appropriate)		
Discuss the equipment needed and demonstrate how to check the function of the ventilator prior to transfer	NIV	
	TrLTV	
Discuss the safe unpacking and recharging of equipment following a transfer		

Section 1: Core LTV Competencies (Non-ventilator specific)	Self-Assessment	Assessor Sign & Date
Emergency Management		
Demonstrate an A-E assessment, describe signs of respiratory distress and actions to be taken		
Discuss the escalation process for the unwell child using local resources such as PEWS		
Demonstrate and discuss the administration of Oxygen in an emergency via the ventilator and other means if there is a ventilator delivery failure		
Discuss how to contact the Tertiary LTV Centre and Retrieval Team for advice and escalation <i>(if applicable- follow local escalation policy)</i>		
Discuss how to find the CYP's escalation plan (if available) within the Respiratory Action Plan (RAP)		
HCP is up to date with Basic Life Support (BLS) mandatory training and can discuss this in relation to a CYP requiring NIV in the event of a respiratory arrest		
Demonstrate how to unlock the ventilator, make changes and re-lock the ventilator if required under consultation with the CYP's Tertiary LTV Centre and/ or the Retrieval Team <i>(if applicable)</i>		
LTV Competency completion record (Non-ventilator specific): Core LTV Competencies		
<p><u>Educator Confirmation:</u></p> <p>I certify that I <i>(name of assessor)</i> have reviewed all relevant sections of Section 1: Core LTV Competencies in this document. The competencies have been completed and an experienced member of staff has signed in each assessor section.</p> <p>Print full name..... <i>(name of assessor)</i> Role..... Signature..... Date.....</p>		
<p>To complete Tracheostomy LTV sign-off, please complete additional tracheostomy competency document <i>(This may be the HCP Paediatric Tracheostomy Competency Document associated with this LTV Competency or a local Tracheostomy Competency).</i></p>	Date completed	Assessor sign & date

Section 2: Equipment and Ventilator Specific Training Record

- The next section covers the usage of **specific ventilators and specific equipment** as different areas will use different ventilators and equipment such as circuits.
- This section is **not** a competency sign-off but is a **self-assessment training record** for the learner to record specific equipment training. The learner should sign against each point for each ventilator when teaching has been received.
- There is a ventilator training record at the beginning of this document (page 4)

Section 2: Equipment and Ventilator Specific Training Record			Vent 1	Vent 2	Vent 3	Vent 4
			Self-Assessment	Self-Assessment	Self-Assessment	Self-Assessment
Ventilator operation						
Demonstrate how to turn the ventilator power on and off and determine if using mains or battery power						
Demonstrate how to find out length of battery life						
Demonstrate how to turn on the ventilator and start ventilation and carry out safety checks						
Demonstrate how to check ventilator settings against the Respiratory Action Plan (RAP)/ Ventilator prescription						
Demonstrate how to discontinue the Ramp setting (if set) when acutely unwell						
Demonstrate how to change between CYP's set programs (<i>if applicable</i>)						
Demonstrate where the monitoring screen can be found on the device to ensure the ventilation is delivering effectively when on the CYP and aware of the need to carry out an A-E assessment of the CYP						
Demonstrate where the data can be downloaded from the ventilator e.g. USB port/SD card						
Demonstrate and explain how to identify if the CYP is triggering the ventilator or if the ventilator is delivering a mandatory breath						
Circuits						
Discuss and demonstrate the dry circuit set up on device						
Discuss and demonstrate the wet circuit set up on device		Integrated				
		External				
Discuss what a Circuit Calibration or Learn circuit is and when this should be performed (<i>if applicable</i>)						

Section 2: Equipment and Ventilator Specific Training Record

Vent 1	Vent 2	Vent 3	Vent 4
Self-Assessment	Self-Assessment	Self-Assessment	Self-Assessment

Oxygen delivery

Demonstrate how to attach Oxygen to the ventilator

Discuss and demonstrate how to measure Oxygen delivery via the ventilator when required

Nebulisation

Demonstrate how to attach a nebuliser set to the ventilator using the device available at your Trust/ healthcare setting (*Aerogen, flow driven nebuliser*)

Humidification

Discuss and demonstrate how to attach humidifier correctly to the ventilator and add water appropriately

Integrated

External

Alarms *(if applicable)*

Demonstrate where to check what alarm settings are set and discuss what they mean

Demonstrate how to check the alarms are working and how often to do this

Discuss how to troubleshoot alarms

Demonstrate how to mute/unmute the alarm and aware of the risks if the alarm was left muted

Section 2: Equipment and Ventilator Specific Training Record

Vent 1	Vent 2	Vent 3	Vent 4
Self- Assessment	Self- Assessment	Self- Assessment	Self- Assessment

Air inlet filters

Demonstrate how to locate the air inlet filters on the ventilator				
Demonstrate how to change/ clean the air inlet filter and can discuss maintenance of the filters according to manufacturers and LTV Centre guidance				

HCP Training Confirmation:

I certify that I *(name of HCP)* have completed the self-assessment for the following ventilators:

Ventilator 1 *(Make and model of ventilator)* Signature..... Date.....

Ventilator 2 *(Make and model of ventilator)* Signature..... Date.....

Ventilator 3 *(Make and model of ventilator)* Signature..... Date.....

Ventilator 4 *(Make and model of ventilator)* Signature..... Date.....