Acacium Group

Laryngectomy Care General Guidelines

Procedure Reference | SOP VENT 23

Version | V4.1

Procedure Name	Laryngectomy Care General Guidelines
Purpose of Document	To ensure that the correct preparation, procedure & outcome are achieved by implementing a consistent and systematic approach to Laryngectomy Care
Target Audience	All Nurses & appropriately trained carers
Version	V4.1
Author	Karen Matthews-Shard
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Lead Director	Karen Matthews-Shard
Review Frequency	2 yearly or when clinical or operation guidelines change
Last Reviewed	June 2024
Next Review Date	June 2026
Equality Impact Assessment (EIA) Form	Acacium Group is committed to Equality, Diversity and Inclusion and in line with our values, we strive to ensure that everyone that is part of the Acacium community is not disadvantaged or discriminated against given their individual need or characteristics. To support this, an Equality Impact Assessment has been undertaken on this policy/procedure. This information is held centrally and can be requested from the Clinical Governance Team.
About Acacium Group	Details of all Acacium Group trading companies that this policy applies to are detailed within Appendix A

Document History			
Version	**Date**	**Changes made/comments**	**By whom**
V1	Dec 2016	Implementation of document history page	KNF/VM
V1.1	Aug 2018	Annual review with updated emergency laryngectomy algorithm	KMS/SJ
V1.2	Mar 2020	Update to new Community template	CCR/CC
V2	July 2020	2 Yearly Review	Clinical Advisory Group
V2.1	Oct 2020	Updated re rebrand	CC
V3	Jul 2022	2 Yearly Review	Clinical Advisory Group
V4	Jan 2024	Rebrand	Clinical Advisory Group
V4.1	Jun 2024	Reviewed and no update needed. Review date extended	Clinical Advisory Group

Table of Contents

1. Introduction

A laryngectomy is the complete surgical removal of the larynx (voice box) which disconnects the upper airway (nose and mouth) from the lungs. The trachea is transected (cut) and then the open end is stitched onto the front of the neck. This is an irreversible operation and once it has been performed, the Client will never be able to breathe, be oxygenated or ventilated through the upper airway again.

The table below demonstrates the differences between a laryngectomy and a tracheostomy.

Laryngectomy	Tracheostomy
Larynx removed	Larynx still intact and functioning
Permanent, non – reversible	Can be temporary or permanent and is reversible
The upper airway is now disconnected from the lower airways	The upper and lower airways remain connected (unless clinical reasons mean otherwise)
Doesn't always require a tube to keep it open	Must always have a tube in to keep site open

The SOP links to Acacium Group policy on assisted ventilation and should be followed by all Acacium Group staff.

Competence against the policy and SOP will be assessed and reviewed on a regular basis.

A Client with a laryngectomy, by-passes the normal functions of the nose and mouth and therefore is at an increased risk of infection.

2. General

A laryngectomy may be performed for the following reasons:

- For cancer of the larynx
- To manage chronic aspiration of gastro-intestinal contents
- For airway protection in the case of life-threatening chronic aspiration and airway compromise or trauma.

There are associated complications post laryngectomy, this can either be immediate or in the future:

- Immediate complications post operatively:
- Risk of blockage of the trachea with blood and secretions
- Loss of normal warming and humidification in the upper airways
- Formation of a fistula
- Wound breakdown
- Infection
- Haemorrhage

Potential future complications:

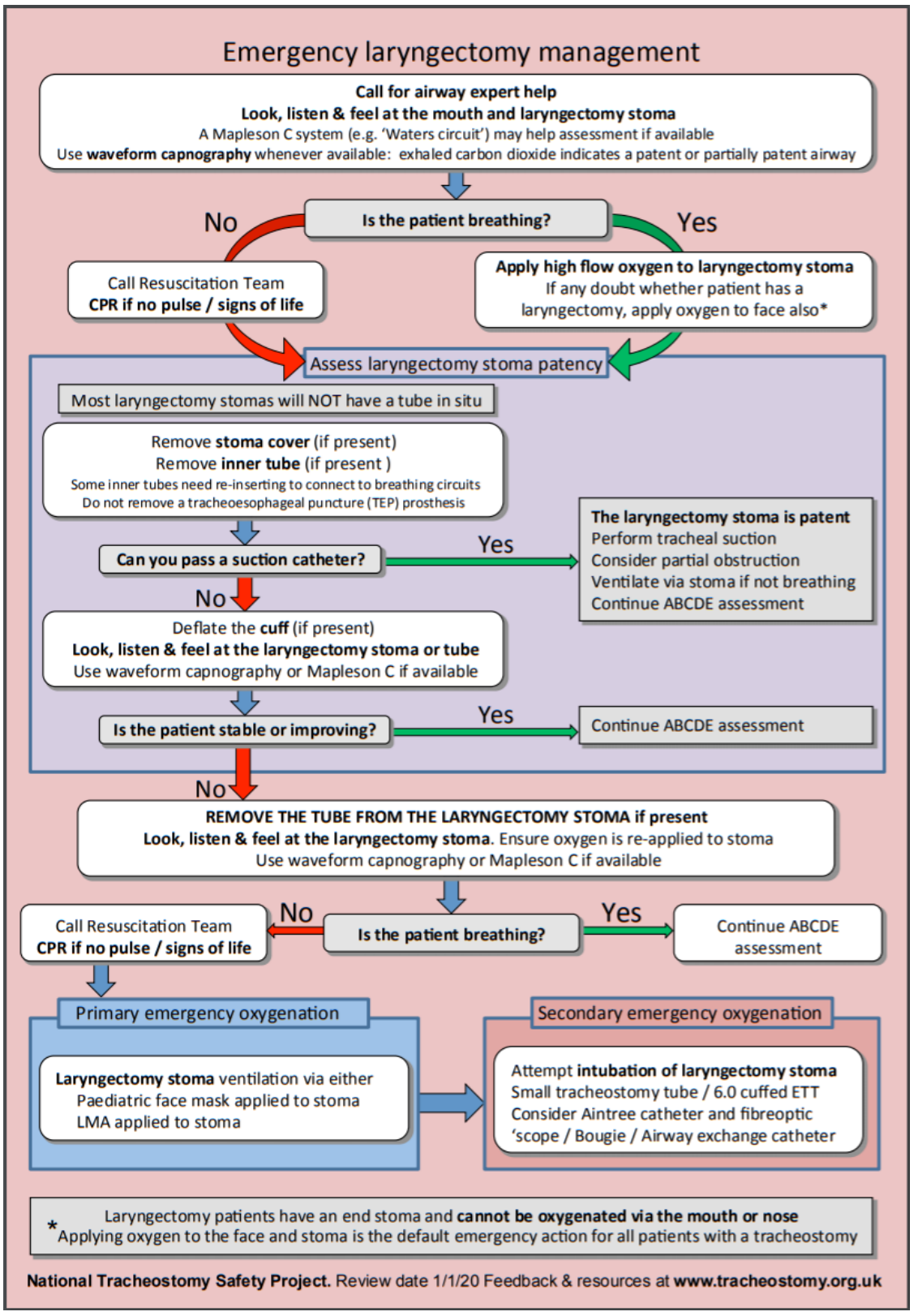
- Risk of blockage of the trachea with secretions
- Infection – pulmonary and/or stoma
- Tracheal instability
- Ulceration of the trachea
- Development of a fistula
- Stoma stenosis
- Ulceration of neck from ties/tapes being too tight.

3. Emergency Equipment

It is imperative that a Client has emergency equipment to hand in case of an airway emergency, these will be Client specific but would generally contain:

- Oxygen (if required)
- Ambu-bag and tracheostomy mask
- 2 laryngectomy tubes and or smaller tracheostomy tube if applicable and detailed in the care plan
- Tapes
- Gauze
- 10ml syringe
- Tracheal dilators
- Aqua gel
- Suction
- Spare foley catheter with spigot
- Sterile water (if required)
- Appropriate PPE as per current Guidelines

If a laryngectomy client becomes unwell, standard resuscitation procedures that involve delivering oxygen via face-masks will not be effective. The National Tracheostomy Safety Project have designed specific laryngectomy algorithms and resources to help identify neck-breathing patients and to guide responders appropriately in case of emergencies:


Emergency laryngectomy management
Call for airway expert help
Look, listen & feel at the mouth and laryngectomy stoma
A Mapleson C system (e.g. 'Waters circuit') may help assessment if available
Use waveform capnography whenever available: exhaled carbon dioxide indicates a patent or partially patent airway
Is the patient breathing?
No
Yes
Call Resuscitation Team
CPR if no pulse / signs of life
Apply high flow oxygen to laryngectomy stoma
If any doubt whether patient has a laryngectomy, apply oxygen to face also*
Assess laryngectomy stoma patency
Most laryngectomy stomas will NOT have a tube in situ
Remove stoma cover (if present)
Remove inner tube (if present)
Some inner tubes need re-inserting to connect to breathing circuits
Do not remove a tracheoesophageal puncture (TEP) prosthesis
Can you pass a suction catheter?
Yes
The laryngectomy stoma is patent
Perform tracheal suction
Consider partial obstruction
Ventilate via stoma if not breathing
Continue ABCDE assessment
No
Deflate the cuff (if present)
Look, listen & feel at the laryngectomy stoma or tube
Use waveform capnography or Mapleson C if available
Is the patient stable or improving?
Yes
Continue ABCDE assessment
No
REMOVE THE TUBE FROM THE LARYNGECTOMY STOMA if present
Look, listen & feel at the laryngectomy stoma. Ensure oxygen is re-applied to stoma
Use waveform capnography or Mapleson C if available
Call Resuscitation Team
CPR if no pulse / signs of life
No
Is the patient breathing?
Yes
Continue ABCDE assessment
Primary emergency oxygenation
Laryngectomy stoma ventilation via either
Paediatric face mask applied to stoma
LMA applied to stoma
Secondary emergency oxygenation
Attempt intubation of laryngectomy stoma
Small tracheostomy tube / 6.0 cuffed ETT
Consider Aintree catheter and fibreoptic 'scope / Bougie / Airway exchange catheter
* Laryngectomy patients have an end stoma and cannot be oxygenated via the mouth or nose
Applying oxygen to the face and stoma is the default emergency action for all patients with a tracheostomy
National Tracheostomy Safety Project. Review date 1/1/20 Feedback & resources at www.tracheostomy.org.uk

4. Laryngectomy tubes

Most Clients will not have laryngectomy tubes, however if they do there are a few different tubes including:

- Dual Cannula
- Fenestrated
- Single Cannula

5. Humidification

Following a laryngectomy, the air that client's breathe is no longer warmed, humidified and filtered by the nasal passages as they now breathe directly in an out of the stoma. Drying of the airway results in thickened airway secretions which can cause the Client problems in maintaining a patent airway. There are several methods of humidifying laryngectomies:

A laryngectomy stoma cover (captures heat and moisture from expired air)	
Laryngectomy bib (Buchanan Bib captures heat and moisture from expired air)	
HME's on a laryngectomy tube	

6. Suctioning

It is important to remember that most Clients with a laryngectomy are able to cough and clear their own secretions. Suctioning should not happen routinely or at set times, it is important that the Client is assessed prior to suctioning, and that the Client is encouraged to cough and clear their own secretions unless indicated

otherwise in their care plan. There are a range of factors that suggest a Client may require suctioning, these include:

- Noisy breathing
- Increased effort or work of breathing
- Increased or decreased respiration rate, heart rate
- Reduced oxygen saturations
- Restlessness, changes to skin colour and sweating
- Increased or ineffective coughing
- Client request

7. Cleaning the laryngectomy tube

	Action	Rationale
1.	Gain Consent, prepare the Client and explain the procedure	To ensure you obtain confirmed consent in line with legal requirements
2.	Wash your hands and set up equipment	To maintain infection control
3.	Apply PPE in line with current guidelines	To reduce the risk of cross infection
4.	Remove laryngectomy tube (replace with new tube immediately if required)	To enable cleaning of the tube. Replace with new tube if Client cannot maintain airway without it – please check Client's care plan
5.	Cleanse the outside of tube with gauze to remove all residual visible secretions	To ensure that the tube is clean
6.	Pour sterile saline into bowl and submerge tube	To clean the tube and ensure all secretions are removed.
7.	Clean through the tube with sponges or brush	To ensure all the secretions are removed and the tube is visibly clean
8.	Rinse off with saline	To wash off any secretions that are left.
9.	Check the tube for any signs of perishing or splits	Check that the tube is patent. If perished discard.
10.	Dry tube thoroughly inside with clean dry pink sponge and the outside with gauze	To ensure that the tube is clean and dry, therefore reducing the risk of infection.
11.	Store spare tube in sealed pot (or replace as required)	To keep the tube clean and try, therefore reducing the risk of infection.
12.	Remove PPE and wash your hands.	**To maintain infection control**
13.	Discard all waste into the appropriate waste bag and dispose of waste bag	**To maintain infection control and discard clinical waste in the appropriate manner.**
14.	Document the procedure in the Client's notes	**To maintain effective documentation of care given to the Client.**

8. Changing the laryngectomy tube

	Action	Rationale
1.	Gain consent and prepare the Client and explain what you are going to do	To ensure you obtain confirmed consent in line with legal requirements
2.	Wash your hands and set up the equipment	To maintain infection control.
3.	Sit the Client up	To maintain the Client's airway
4.	Apply PPE in line with current guidelines	To reduce the risk of cross infection
5.	Perform superficial stoma suction if necessary	To ensure that the Client's secretions are removed to reduce the risk of aspiration.
6.	Loosen the neck ties	To enable the removal of the laryngectomy tube.

7.	Gently remove the laryngectomy tube with suction on standby	To be able to clean the laryngectomy tube.
8.	Replace the tube using aqua-gel as required for ease of insertion	To maintain patency of the Client's airway.
9.	Re-attach the neck ties	To secure the laryngectomy.
10.	Remove PPE and wash your hands.	To maintain infection control
11.	Discard all waste into the appropriate waste bag and dispose of waste bag	To maintain infection control and discard clinical waste in the appropriate manner.
12.	Document the procedure in the Client's notes	To maintain effective documentation of care given to the Client.

9. Assessment

It is imperative that a Client with a laryngectomy is frequently assessed; with the aim of identifying and rectifying actual or potential problems to assist in preventing further deterioration. Observations should identify:

- Respiratory distress including shortness of breath, stridor (noise on inspiration) wheeze (noise on expiration), changes in pallor, sweating, use of accessory muscles cyanosis
- Increased or decreased respiratory rate
- Deterioration in oxygenation
- Increase oxygen demand
- Change in the level of consciousness
- Difficulty removing secretions either by suctioning or expectoration
- Increase use of nebulisers
- Ongoing concern or unresolved issues relating to the airway
- Hydration: If the Client is dehydrated this can have a significant impact on the thickness of their secretions, the more dehydrated the Client is the increased thickness of secretions

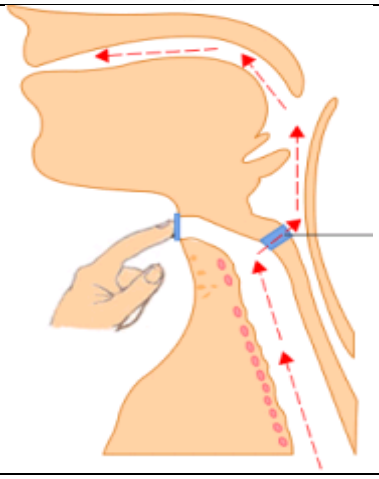
10. Emergency situations

It is imperative to remember that once a Client has had a laryngectomy, they are unable to use their upper airways, therefore their stoma is vital for sustaining life. When completing basic life support, any rescue breathes must be delivered directly through the stoma, either by using a paediatric mask attached to an ambu-bag over the stoma site or by mouth to stoma when no mask available.

Appendix B is the national standard algorithm which should be followed in emergency situations.

11. Speaking Devices

Once a Client has had a laryngectomy, they are unable to properly speak, there are several speaking devices on the market, these will be chosen/funded by the CCG/Client.

An **'electolarynx**' which vibrates the neck externally, oesophageal speech ('burping' swallowed air)	
Tracheo-o Esophageal Puncture (TEP) valve allows expired gas to be forced into the oesophagus, facilitating speech.	

12. Problem solving

Any concerns or problems should be escalated to RCL or Out of hours when safe and appropriate to do so.

Problem	Cause	Suggested action
Profuse tracheal secretions.	Local reaction to tracheostomy tube	Suction frequently e.g. every 1-2 hours
Lumen of laryngectomy tube occluded.	Tenacious mucus in tube.	Change the inner tube. Use 0.9% sodium chloride nebulisers, heat and moisture exchangers and suction. Continue to change the inner tube regularly.
Lumen of laryngectomy tube occluded cont.:	Dried blood and/or mucus in the tube.	Provide humidified air.
Laryngectomy tube dislodged accidentally.	Tapes not secured adequately.	Locate the Emergency laryngectomy box (the contents should be checked at the beginning of every shift) Re-insert the appropriate size laryngectomy tube (see Clients care plan) and secure with tapes or ties as appropriate. NB: Tracheal dilators should be available to FOR ADULTS ONLY if

		documented in the care plan and only used if trained and competent.
Unable to insert clean laryngectomy tube.	Unpredicted shape or angle of stoma.	Remain calm as an outward appearance of distress may cause the Client to panic and lose confidence. Call for help/dial 999. Attempt to insert the smaller laryngectomy tube. If this is impossible, keep the laryngectomy tract open using tracheal dilators (if documented in the care plan) Ventilated via the stoma site if required – Remember NO upper airway present to ventilated through.
Tracheal stenosis	Tracheal stenosis due to Client coughing, Client being very anxious or because the tube has been left out too long.	Insert a smaller size tracheostomy tube. If insertion proves difficult, keep the stoma open and patent with tracheal dilators (ADULTS ONLY if documented in the care plan and you are trained and competent to do so) and call 999.
Tracheal bleeding following or during change of the tube.	Trauma due to suction or the tube being changed. Presence of tumour. Granulation tissue forming in fenestration tube.	Change the tube as planned if bleeding is minimal. Perform tracheal suction. Check observations and arrange to call for assistance or call 999 if health appears to be deteriorating.
Infected sputum.	Condition of Client often predisposes Client to infection.	Encourage the Client to cough up secretions and/or suction regularly. Change the tube as required. Clean the stoma area frequently, e.g. 4-6 hours, with sterile water/saline and gauze and document. Report concerns with Client's GP. Escalate to on call/RCL as needed. Consider contacting 999 if clinically unstable

13. Consent

Always obtain consent for any procedure to be undertaken. Should there be an absolute emergency, it is possible for carers to make decisions in the best interest of the Client as long as these are clearly identified and documented and there are no advance decisions that dictate otherwise.

14. Associated Policies / SOPs

Policies

CLIN 02 Assisted Ventilation Policy
CLIN 07 Infection Prevention Policy
ORG 03 Health and Safety Policy
CLIN 06 Consent Policy

CLIN 14 Health Records Management Policy
CLIN 12 Safe Use of Medical Devices Policy

SOPs
SOP VENT 01 Tracheostomy Dressing Change (Adult & Child)
SOP VENT 02 Tracheostomy Care General Guidelines
SOP VENT 03 Humidification of a Client's Tracheostomy
SOP VENT 04 Tracheal Suctioning (Adult & Child)
SOP VENT 05 Tracheostomy Tube Care (Adult)
SOP VENT 06 Tracheostomy Tube Change (Adult)
SOP VENT 07 Tracheostomy Tube Change (Child)
SOP VENT 08 Administration of a Nebuliser through a Ventilator Circuit
SOP VENT 09 Assembling a Ventilator Circuit
SOP VENT 10 Cleaning the Ventilator Equipment
SOP VENT 11 Safe Management of a Ventilated Client During Outings
SOP VENT 12 Safe Management of a Ventilated Client During Power Cuts
SOP VENT 13 Safe Use of Battery Packs
SOP VENT 14 Assisted Airway Maintenance and Cough (Adult)
SOP VENT 15 BiPAP
SOP VENT 16 Oral and Nasal Suctioning
SOP VENT 18 CPAP
SOP VENT 19 Mechanical Cough Assist
SOP VENT 20 Changing Tracheostomy Cotton Ties (Child)
SOP VENT 21 Changing Tracheostomy Velcro Tapes (Child)
SOP VENT 22 Phrenic Nerve Pacing
SOP VENT 24 Emergency Tracheostomy Tube Change (Adult)
SOP VENT 25 Emergency Tracheostomy Tube Change (Child)
SOP VENT 26 Nasopharyngeal Airway Management (Adult & Child)
SOP VENT 27 Nebuliser Therapy

15. References

- The Royal Marsden Hospital Manual of Clinical Nursing Procedures, Seventh edition, Dougherty L & Lister S, 2009, Wiley-Blackwell
- National Tracheostomy Safety Project (NTSP) www.tracheostomy.org.uk
- National Patient Safety Agency (2005) Patient safety Information 02. Protecting patients who are neck breathers.
- Emergency Algorithm Laryngectomy https://www.tracheostomy.org.uk/storage/files/NTSP_RED_Laryngectomy_Algorithm.pdf

Appendix A: About Acacium Group

Acacium Group consists of a number of trading companies, each providing services within core niche areas of the health and social care industries. Therefore, as this document is a Group Policy, the Policy herein applies to all trading companies detailed below:

pulse Part of Acacium Group	Thornbury Nursing Services Part of Acacium Group
Thornbury Community Services Part of Acacium Group	Scottish Nursing Guild Part of Acacium Group

Appendix B: Emergency Laryngectomy Management