St. James's Hospital
Tracheostomy Care Working Group.

Tracheostomy / Laryngectomy: Emergency Management of Patients' SOP
SJH:N069.15 version 5.

This Standard Operating Procedure (SOP) is effective from September 2020 onwards and is due for renewal in September 2023. It will be reviewed during this time as necessary to reflect any changes in best practice, law, and substantial organisational, professional or academic change. This SOP is supplementary to the Tracheostomy Care and Management Guideline (SJH:N069). The standards must be undertaken by healthcare responders in the event that any of the emergencies described herein occur.

1.0 Safe Practice

1.1 These tracheostomy guidelines have been designed to support ward-based nurses and allied health professionals in the safe and effective management of the patient with a tracheostomy.

1.2 It is recognised that many healthcare workers find unforeseen tracheostomy emergencies extremely stressful. Prompt recognition of symptoms and an appropriate response (as directed herein), are paramount in delivering effective intervention and care (McGrath 2014).

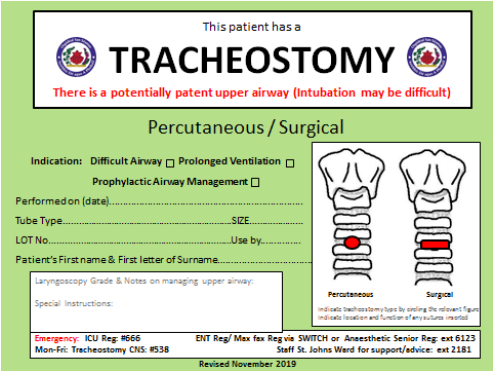
- Staff caring for a patient with a tracheostomy must be aware of and understand the purpose of a tracheostomy and be able to identify red flags associated with the management and care of tracheostomy patients. (McGrath 2014).

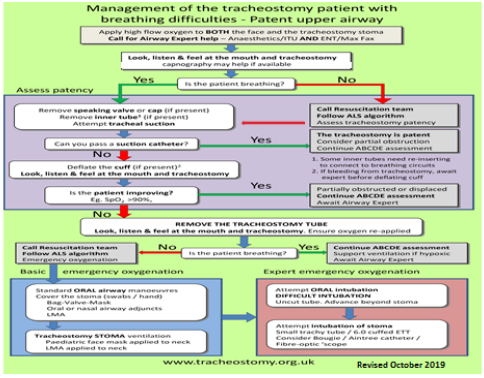
1.3 Staff assigned to the patient's care must ensure that they are informed and aware of the following patient-specific information:

- Why the tracheostomy was performed in the first instance.
- Whether the upper airway is patent, obstructed partially or completely.
- How long the tracheostomy has been established (McGrath & Bates 2011).

2.0 Bed Signs

2.1 Two signs must be placed over the patient's bed space. Tracheostomy Sign with details specific to the patient facing outward and sign with emergency airway algorithm facing outward**.** To comply with GDPR the patient's first name and initial of surname should be used.





Tracheostomy Bed sign: Template can obtained from: (Tracheostomy.org.uk**)**

2.2 ALL information required in emergency situations regarding the patient's tracheostomy is available on the bed sign.

3.0 Tracheostomy emergencies

The most commonly occurring emergencies associated with managing a patient with a Tracheostomy are as follows:

- Respiratory or cardiac arrest.
- Tube occlusion. (Blocked with secretions or displaced within the airway)
- Accidental decannulation / tube falls out.
- Resuscitation of an adult with a laryngectomy stoma.

3.1 In general, responders must note that maximum ventilation and oxygenation occurs when there is a Cuffed, Non-Fenestrated tube in situ.

3.2 In the event an emergency occurs where a patient has a Cuffless Fenestrated tube in situ, the aim is to change the tube to a Cuffed, Non-Fenestrated tube as soon as possible, i.e. as soon as a competent practitioner becomes available.

3.3 Immediately however, in order to commence effective ventilation, the responder should change the inner tube to a non-fenestrated type as is done for general suctioning of a patient with a fenestrated tube in situ.

3.4 To commence ventilation via a non-cuffed tracheostomy tube the responder should undertake the following actions to prevent air escaping through the upper airway:

- Gently tilt the patient's chin upwards.
- Seal the patient's mouth (only required as breaths being administered).
- Hold the patient's nose shut with index finger and thumb (only required as breaths being administered).

3.5 Respiratory/Cardiac Arrest Response for a Patient with a Tracheostomy (As per SJH Resuscitation Guidelines, plus additional Tracheostomy Requirements).

3.5.1 In the event that a patient is observed to have collapsed the responder should ensure a safe approach and proceed as follows:

3.5.1.1 Check the patient and see if he/she responds.

3.5.1.2 If unresponsive call the Cardiac Arrest Team: dial 2222.

3.5.1.3 Assess the Carotid Pulse and breathing: take at least 5 seconds and no more than 10 seconds. In the event that there is **no pulse present**, commence chest compressions by:

3.5.1.3.1 Placing the heel of one hand on the centre of the patient's bare chest.

3.5.1.3.2 Putting the heel of the other hand on top.

3.5.1.3.3 Perform compressions to a depth of 2 inches.

3.5.1.3.4 Perform compressions at a rate of 100-120 per minute.

3.5.1.3.5 Allow full chest recoil.

3.5.1.4 Open the airway by:

3.5.1.4.1 Lying the patient flat.

3.5.1.4.2 Remove any clothing from the neck, including any stoma cover, but do not remove any tube in place.

3.5.1.4.3 Apply high flow oxygen to BOTH the face and the tracheostomy tube.

3.5.1.4.4 Check the patency of the inner cannula.

3.5.1.4.5 If available use support under the shoulders to ensure that the neck is fully extended.

3.5.1.5 Assess Breathing – take at least 5 seconds and no more than 10 seconds in order to establish the following:

3.5.1.5.1 Is the patient breathing adequately (other than occasional gasps)?

3.5.1.5.2 Has the patient a cuffed tube in situ?

3.5.1.5.2.1 If **yes**, then ensure that it is inflated with 5-7mls of air using a 10mlsyringe.

3.5.1.5.2.2 If **no,** then work with what you have remembering that if a green fenestrated inner cannula is in situ, change it to a clear non-fenestrated one.

3.5.1.5.3 When possible, change to a cuffed tube (to be performed by a competent practitioner only).

3.5.1.5.4 Give 2 breaths via the tracheostomy tube with the Bag Valve Mask (BVM), delivering each breath over 1 second to make the patient's chest rise.

3.5.1.5.4.1 Attach a catheter mount to the top of the cuffed tracheostomy tube.

3.5.1.5.4.2 Attach the Bag Valve Mask to 15L oxygen.

3.5.1.5.4.3 Remove face mask from the BVM apparatus and attach catheter mount.

2. Catheter Mount

3. Catheter Mount with Ambu-Bag attached

3.5.1.6 Continue with Basic Life Support until the arrival of cardiac arrest team.

3.5.1.7 Basic Life Support requires providing 3**0 compressions to 2 breaths** for 5 cycles, and then change / rotate compressor every 5 cycles.

3.5.1.8 If confident that a **pulse is present** continue with rescue breathing providing one breath every 5-6 seconds, and reassess carotid pulse every 2 minutes.

3.5.1.9 **Resucitation during COVID-19 outbreak:** Airway management during arrest should not commence until anaesthetics arrive but the inner cannula should be checked and replaced if necessary.

3.6 Tube Occlusion: Blocked with secretions distally or displaced within the airway.

3.6.1 In the event that a patient is observed to have or potentially have a tube occlusion the responder should proceed as follows:

3.6.1.1 Assess the patient for signs of respiratory distress.

3.6.1.2 Check the patency of the Inner Cannula and change if necessary.

3.6.1.3 Call for help as appropriate. Consider:

- Ward Staff.
- ENT/Max Fax team.
- Tracheostomy CNS #538.
- Intensive care doctor #666 or EXT 6123.

3.6.1.4 Administer oxygen to BOTH tracheostomy and face if there is a patent upper airway.

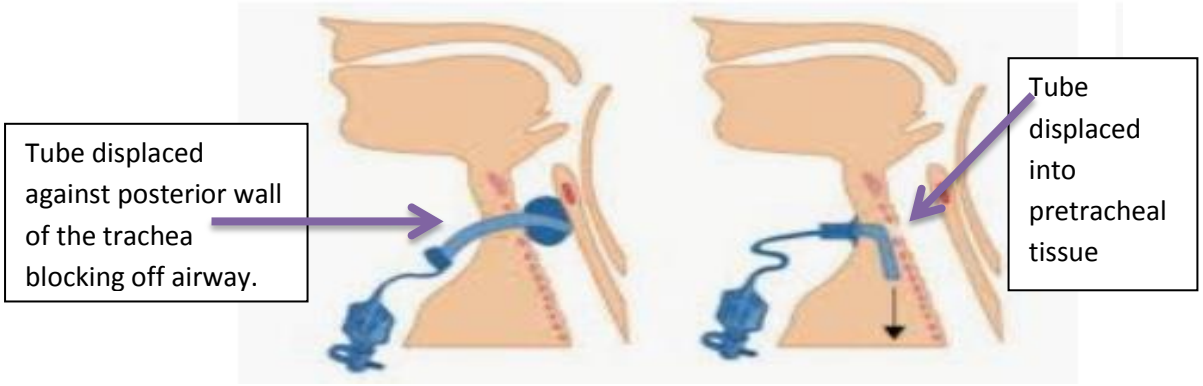
3.6.1.5 Monitor oxygen saturation level.

3.6.1.6 Suction patient as per guidelines. If resistance is noted ie suctioning catheter not passing freely even though inner cannula is patent -this is a red flag and immediate action is warranted.

3.6.1.7 If the patient has a cuffed tube deflate it and see if any improvement in respiratory distress or saturations.

3.6.1.8 Check for breath/ airflow coming from the tube using the back of your bare arm. If the tube is in the correct position ie in the airway you should feel strong airflow on your arm.

3.6.1.9 In the event that you cannot feel airflow from the tube it is likely that the tube has become displaced from the airway and this can prove catastrophic if the appropriate action is not taken.



3.6.1.10 Once established that the tube is likely occluded or displaced from the airway the responder should undertake the following **(Except in ICU settings):**

3.6.1.10.1 **<u>Remove the tube</u>**: Ensure that the cuff is deflated prior to removal, if a cuffed tube is in situ.

3.6.1.10.2 Apply oxygen to BOTH stoma and face mask, and reassure the patient until help arrives.

3.6.1.10.3 Await anaesthetic/ICU, ENT assistance.

3.6.1.10.4 Reinsert tracheostomy tube **if competent** to do so.

3.6.1.10.5 Where reinsertion cannot be undertaken, i.e. no competent person present, the responder must keep the stoma open using a tracheal dilator from the emergency tray.

3.6.1.10.6 The dilators must be inserted in a north/south position

1. Use of Tracheal Dilators in a North South Position

3.6.1.10.7 **Always remember a tube that has become blocked or has displaced from the airway serves no function and should be removed (Except in the ICU setting where anaesthetic assistance should be sought prior to tube removal.**

3.7 Accidental Decannulation, i.e. Tube falls/ or is pulled out.

3.7.1 In the event that a patient is observed to have experienced decannulation, i.e. an unplanned tube removal, the Responder should proceed as follows:

3.7.1.1 **Don't Panic**. Tracheostomy stoma/tract is normally well formed after 5-7 days.

3.7.1.2 Reassure the patient.

3.7.1.3 Call for help as appropriate. Consider:

- Ward Staff.
- ENT/Max Fax team.
- Tracheostomy CNS #538.
- Intensive Care Doctor #666 or ext 6123.
- Clinical Facilitator ICU (if incident within the ICU setting).

3.7.1.4 Reinsert a new tracheostomy tube if **competent to do so.**

3.7.1.5 If not, keep the stoma open using a tracheal dilator from the emergency tray, ensuring that the dilators are inserted in a north/south position

1. Use of Tracheal Dilators in a North South Position

3.7.1.6 Administer oxygen via stoma until help arrives.

3.7.1.7 Monitor the patient's oxygen saturation.

3.7.1.8 Prepare for reinsertion of tracheostomy tube.

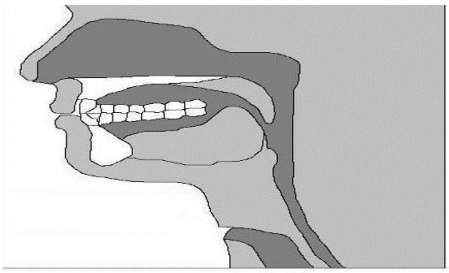
3.7.1.9 Ensure that the patient is reviewed medically post reinsertion of the tracheostomy tube.

3.7.1.10 Complete and submit an Adverse Incident Form.

3.7.1.11 Record on Tracheostomy Observations on EPR.

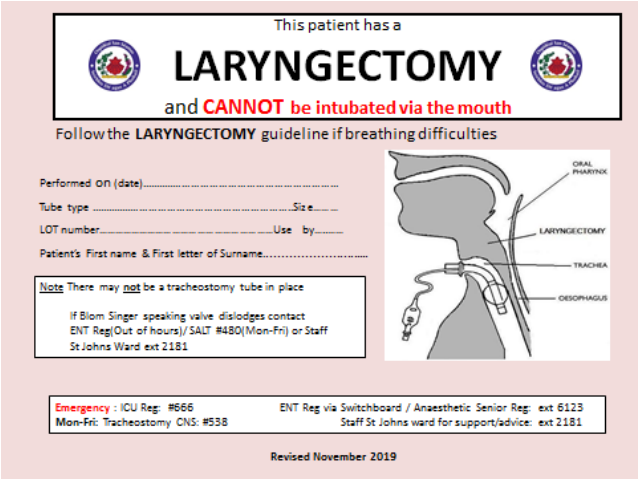
4.0 Respiratory / Cardiac Arrest in a Laryngectomy Patient

4.1 Anatomy of a laryngectomy patient (permanent neck stoma).

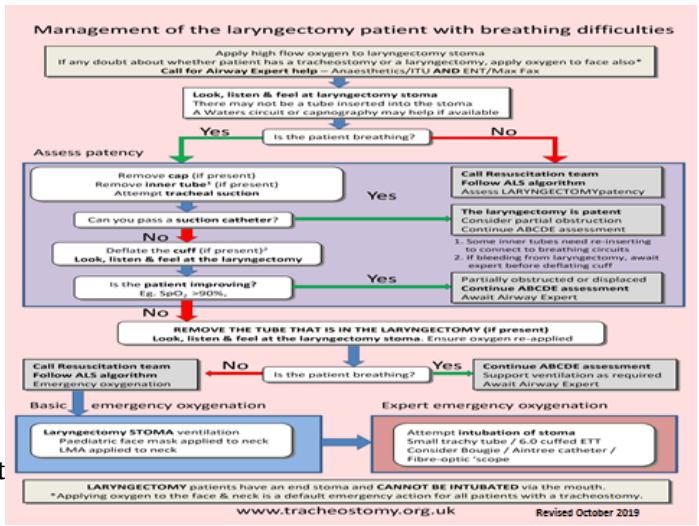


4.2 Persons caring for patients with a laryngectomy must be aware that they cannot be intubated nasally or orally.

4.3 Each patient who has a laryngectomy should have a Pink Laryngectomy Sign displayed above their bed. The sign alerts staff to the fact that the patient is a **'Neck Breather Only'**.



4.4 The reverse of the Laryngectomy sign provides the Laryngectomy Emergency Management Algorithm.



4.5 Respiratory/Cardiac Arrest Response for a Patient with a Laryngectomy (As per SJH Resuscitation Guidelines, plus additional Laryngectomy Requirements).

4.5.1 In the event that a patient is observed to have collapsed the responder should ensure a safe approach and proceed as follows:

4.5.1.1 Check the patient and see if he/she responds.

4.5.1.2 If unresponsive call the Cardiac Arrest Team, dial 2222.

4.5.1.3 Assess Carotid Pulse and breathing, checking for at least 5 seconds and no more than 10 seconds.

4.5.1.4 In the event that there is **no pulse present** commence chest compressions by:

4.5.1.4.1 Placing the heel of one hand on the centre of the patient's bare chest.

4.5.1.4.2 Putting the heel of the other hand on top.

4.5.1.4.3 Perform compressions at a depth of 2 inches.

4.5.1.4.4 Perform compressions at a rate of 100-120 per minute.

4.5.1.4.5 Allow full chest recoil.

4.5.1.5 Open the airway by:

4.5.1.5.1 Lying the patient flat.

4.5.1.5.2 Removing any clothing from the neck, including any stoma cover.

4.5.1.5.3 Fully extend the patients neck using support under the shoulders if required.

4.5.1.6 Assess the patient's breathing status ensuring that it is adequate, i.e. breathing other than occasional gasps.

4.5.1.7 Listen and feel for air escaping from the stoma.

4.5.1.8 Watch for movement of the chest.

4.5.1.9 Establish if the patient has a cuffed tube in situ.

4.5.1.9.1 If **yes,** ensure that it is inflated.

4.5.1.9.2 If **no,** insert a cuffed tracheostomy tube (if available to you). All staff are permitted to insert a tracheostomy tube into a laryngectomy stoma.

4.5.1.9.3 Attach a catheter mount to the top of the cuffed tracheostomy tube.

. Catheter Mount

3. Catheter Mount with Ambu-Bag attached

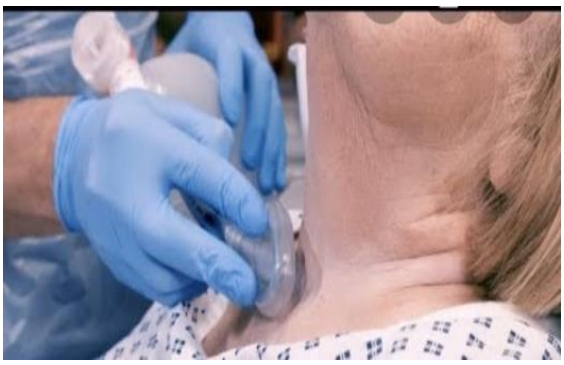
4.5.1.10 Attach the Bag Valve Mask to 15L oxygen.

4.5.1.11 Remove mask and attach to catheter mount.

4.5.1.12 Administer 2 breaths (you should see the patient's chest raise and fall).

Or

4.5.1.13 **If there is no tracheostomy tube in place, use the paediatric mask or LMA (laryngeal mask airway)** from the crash trolley with one-way valve to achieve a tight seal over the stoma, and deliver two rescue breaths.



4.5.1.14 Continue with Basic Life Support until arrival of the cardiac arrest team.

4.5.1.15 Basic Life Support requires providing **30 Compressions to 2 breaths** for 5 cycles, then change / rotate compressor every 5 cycles.

4.5.1.16 If confident that a **pulse is present** continue with rescue breathing providing one breathe every 5-6 seconds, and reassess the carotid pulse every 2 minutes.

4.5.1.17 **Arrest during COVID outbreak:** Airway management during arrest should not commence until anaesthetics arrive but staff should ensure that laryngectomy stoma is clear and to remove any visible obstruction if identified.

Links to related PPPGs:

- Tracheostomy Care and Management Guideline (SJH:N069)
- Tracheostomy Care and Management Guideline: Associated Documents