TRACHEOSTOMY / LARYNGECTOMY ('neck-breathers') – CARE OF ADULT PATIENTS POLICY

POLICY

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Sponsor (Position)	Medical Director		
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Lead Division/ Directorate	Surgery, Anaesthetics and Critical Care		
Lead Specialty/ Service/ Department	Critical Care		
Position of Person able to provide Further Guidance/Information	Lead Author		

Associated Documents/ Information	**Date Associated Documents/ Information was reviewed**
1. See Appendix A (list of resource documents to accompany policy)	See Appendix A
Template control	June 2020

CONTENTS

1.0 INTRODUCTION

This document outlines the basic standards and requirements that contribute to best practice for safe, adult tracheostomy care in hospital, both within the Critical Care environment and cohort wards at Kingsmill Hospital. Whilst the main emphasis of the document is on tracheostomy care and management, there is reference in the emergency management sections to the laryngectomy patient, or "neck breather".

A tracheostomy is a surgical opening in the anterior wall of the trachea to facilitate ventilation; the opening is usually maintained by use of a tracheostomy tube.

The indications of tracheostomy can be varied, ranging from airway obstruction, weaning from mechanical ventilation or for airway protection in patients with severe neurologic injury. Tracheostomy is a common procedure in the critical care unit. Depending on the reason for insertion of the tracheostomy, it can be temporary or permanent.

Tracheostomies can be effective in accelerating weaning from mechanical ventilation and facilitating early discharge from level 3 care, though the evidence is equivocal. This often results in patients with temporary tracheostomies being cared for in multiple locations. As with all procedures, the benefits are associated with risk, both during and after insertion. The most common problems, in both general wards and critical care, are related to obstruction or displacement.

A drive to use resources effectively has encouraged earlier discharge of patients with a temporary tracheostomy to intermediate and ward care. This creates a risk that they are cared for separately from the clinical services that are best placed to identify and treat the potentially life-threatening complications associated with a temporary tracheostomy. It is therefore very important that there is clear documentation and communication, together with explicit responsibility and training, for the healthcare staff involved.

Patients at risk of a long-term tracheostomy or more complex input include:

- Neurological issues
- Smoke inhalations/burns
- Anatomical issues/surgery
- High spinal injury
- Cranial nerve damage
- Cough issues
- Poor swallow
- Repeated number of intubations or demonstrated high tube tolerance with ETT off sedation.
- Chronic conditions of ventilation

A total laryngectomy is an operation to completely remove the larynx, usually following a diagnosis of cancer. Before surgery the oesophagus and the trachea meet to form the pharynx above the larynx. After a total laryngectomy the oesophagus and trachea are permanently separated. The trachea is brought out through a permanent opening, or stoma, at the front of the neck. The patient will breathe through this stoma for the rest of their life and the oesophagus is repaired to make a complete tube. This means that the lungs have been disconnected from the mouth and nose and are now only connected to the stoma in the patient's neck. Therefore, ventilatory support in resuscitation **must be given via the stoma**. The major effects of removal of the larynx are permanent loss of normal voice and alteration of the airway.

There are also increasing numbers of patients being discharged to community care with a long-term or permanent tracheostomy, many of whom will require future admissions to hospital for non-tracheostomy related conditions.

2.0 POLICY STATEMENT

Tracheostomies and Laryngectomies have many benefits, however there are associated risks and complications. Historically, lessons learnt from airway incidents have highlighted poor communication, lack of care planning and poor choice of ward placement as being contributory factors. However, these risks can be significantly minimised by

- Developing a workforce in relation to tracheostomy/laryngectomy care and emergency response.
- Provide clear pathways to ensure that patients with a tracheostomy or laryngectomy are identified upon admission to hospital.
- Provide cohort wards for patients with a tracheostomy/laryngectomy, when patients do not require a Critical Care bed.
- Provide standardised documentation and care plans.
- Have a multi-disciplinary team approach to holistic care planning, weaning and decannulation processes.

It is of utmost importance that a patient with a neck stoma is identified correctly as to whether they have a tracheostomy or a laryngectomy.

The standards within this document have been based upon evidence and recommendations from the following sources:

The Intensive Care Society
The National Tracheostomy Safety Project
St George's Hospital Tracheostomy Guidelines
The Difficult Airway Society The 4th National Audit Project (NAP 4)
Lessons learnt and shared from previous tracheostomy related incidents.

This clinical document applies to:

- All clinical staff working at Sherwood Forest Hospitals
- All areas where Tracheostomy and Laryngectomy patients are receiving treatment as an inpatient.
- Outpatient areas who see 'neck breather' patients from the community and may be required to respond to airway incidents.
- Adults who have a Tracheostomy or Laryngectomy

This policy is **not** intended to be applied to the following patient groups:

Paediatric patients (16 years and under) and neonates

3.0 DEFINITIONS / ABBREVIATIONS

ACCU	Adult Critical Care Unit (Intensive Care Unit - ICU)
CCOT	Critical Care Outreach Team
ENT	Ear, Nose, Throat
EtCO2	End Tidal Carbon Dioxide
IPPV	Intermittent Positive Pressure Ventilation
LMA	Laryngeal Mask Airway (also iGel)
MDT	Multidisciplinary Team
PMV	Passe-Muir Valve
SLT	Speech and Language Therapy

TSG	Tracheostomy Steering Group. A group of professionals established to develop policy and maintain oversight of tracheostomy care and strategy within the trust. Governance and Risk management also for part of the Terms of Reference for this group.
Trust	Sherwood Forest Hospitals NHS Foundation Trust
Staff	All employers of the Trust including those managed by a third party on behalf of the Trust

Cohort wards: This term refers to designated wards that cater holistically for the needs of the patient with a tracheostomy. Use of cohort medical/surgical wards minimises risks to in-patients by the provision of an environment and workforce that are equipped to meet the specialist airway needs of this patient group, in terms of clinical skills plus basic and emergency tracheostomy equipment.

First responder skills: This term relates to a practitioner who is first to attend or discover a tracheostomy/laryngectomy emergency. This may be a nurse or allied health professional, for example a physiotherapist, or a doctor. 1st responder skills may be required at any point or location during a patient's stay in hospital. A first responder is expected to be able to:

- Recognise a tracheostomy emergency
- Summon appropriate help
- Provide 1st responder airway troubleshooting and support until advanced help arrives, as per emergency algorithm (NTSP Poster – available to download on Tracheostomy homepage in intranet).

Second responder skills: The 2nd responder is a practitioner who is skilled in advanced airway manoeuvres and equipment during a tracheostomy/laryngectomy emergency, in accordance with the Tracheostomy 2nd responder algorithm. This person is likely to be an anaesthetist or critical care doctor.

Tracheostomy weaning: this is a structured, elective process that prepares a patient for eventual, planned, permanent removal of the tracheostomy tube.

Tracheostomy decannulation: Under controlled situations, this term refers to the elective removal of a tracheostomy tube by a competent practitioner at the endpoint of successful weaning. However, accidental decannulation is the result of a non-elective removal / displacement of a tracheostomy tube. This is most likely to occur in patients who are confused / agitated. The risk of this is heightened in areas where nurse to patient ratios are insufficient to closely observe the tracheostomy patient.

4.0 ROLES AND RESPONSIBILITIES

4.1 Consultants

As the professional with overall clinical responsibility for the patient, the consultant will ensure that all medical staff are aware of the guidelines, that clinical standards are maintained and any necessary deviation from the guidance is documented in the patients records. It is the consultant's responsibility to highlight the training needs of junior surgical/ medical staff.

4.2 Matrons, Ward managers, ENT specialist nurses and CCOT nurses

It is the responsibility of the above to ensure that:-

- All nursing staff are aware of these guidelines
- All nursing staff are competent to undertake their role in caring for a tracheostomy or laryngectomy patient
- All nursing staff have access to and are given time for appropriate training

- Any adverse incident reported that relates to a patient with a tracheostomy or laryngectomy is investigated and action plans developed to prevent the future occurrence
- Ensure that patients are managed in accordance with the policy and for escalating any situations where safe placement cannot be achieved
- Levels of staffing are provided as deemed necessary to achieve the care below:

Description of Condition	Nursing Requirement
Unstable airway requiring very frequent tracheostomy intervention (e.g. ½ -1 hourly) with frequent periods of de-saturation and/or mucous plugging	1:1 nursing care from a tracheostomy trained nurse e.g. ACCU environment (minimum Level 2 area)
Complex tracheostomy requiring frequent tracheostomy intervention (e.g. 1-2 hourly) including regular deep suction. Tracheostomy needs may be unpredictable.	Cohort nursing with 1-2 tracheostomy-trained nurses constantly in the vicinity. If such patients are managed in a single room they may require 1:1 nursing
Standard tracheostomy requiring intervention usually every 2-4 hours	Usually cohort nursing. If managed in a single room need checking at least hourly, and Oxygen Saturations monitor on when left alone, if saturations are unstable. Suitable for cohort wards.
Simple stable tracheostomy requiring occasional intervention only e.g. suction or change of inner tube just 1-2 times a day	May be managed in a lower dependency area with or without an Oxygen Saturations monitor at times when there is no nurse within the immediate vicinity, depending on individual requirements and level of risk. Cohort area, Level 0.
Ceiling of treatment (including planned end-of-life care) mean that tracheostomy interventions may be limited as part of an overall planned withdrawal of interventions to allow a dignified death	Patients are usually managed in a single room. They are likely to have high levels of nursing intervention for their other requirements (i.e. symptom control and palliative care) but the tracheostomy itself is not the priority for nursing management.

4.3 All clinical staff including AHP's

It is the responsibility of each member of staff involved in the management of tracheostomy or laryngectomy care to:

- Comply with standards set out in these guidelines
- Ensure they adhere to the training requirements set out in these guidelines
- Work within their own training and competence and seek advice where necessary
- Refer appropriately and efficiently to other members of the MDT as needed
- Report all issues related to tracheostomy and laryngectomy (including near miss events) using SFH local incident reporting system(Datix)

All incidents reported should be discussed at relevant clinical governance meetings or at the Tracheostomy Steering Group. Any actions resulting from the incident should be implemented.

4.4 Tracheostomy Steering Group

This group oversees tracheostomy policy, governance and risk management. The group comprises senior specialists across the tracheostomy team covering all clinical aspects. The group is chaired by the trust tracheostomy lead clinician.

4.5 Tracheostomy Multidisciplinary Team - MDT

The Tracheostomy MDT is held weekly on a Monday lunchtime at 1200. This is a clinical meeting to discuss inpatient tracheostomy cases. The group comprises multi-disciplinary stakeholders – Ward 21 and ACCU Consultants, Physiotherapists, SLT, Dietitians, CCOT & ENT Specialist Nurse.

The group meets both on MS Teams and in the seminar room on Ward 21.

Each patient discussed must have a MDT form filled in and this is then filed in the notes. The group will ensure that the outcome of the MDT is conveyed to the clinical team looking after the patient. In the case of patients on ACCU the attending Physiotherapist/ Tracheostomy Lead will discuss the case with the ACCU Consultant of the week prior to and after the meeting. If possible the ACCU consultant should attend. The ACCU band 7 nurse will attend to ensure continuity of care.

4.6 Ear, Nose, Throat speciality (ENT)

- An established pathway for accessing experienced ENT support in and out of hours via switchboard. This will be the on-call speciality doctor who will liaise with the consultant to decide if the patient can be treated at KMH or needs transfer to NUH.
- KMH ENT cover is from 8am Monday morning to 5pm Friday evening. Outside these hours ENT cover is provided by NUH.

5.0 APPROVAL

Following consultation, this policy has been approved by the Trust's Deteriorating Patient Group.

6.0 DOCUMENT REQUIREMENTS (POLICY NARRATIVE)

6.1 Cohort wards / patient placement / bed management:

- To minimise risks of airway related incidents, the need for cohorting tracheostomy patients must take precedence over other clinical diagnoses.
- In-patients with a tracheostomy who do not require a critical care treatment, are cared for in designated, tracheostomy cohort wards. This includes:
    - Patients admitted to hospital from the community with a long-term tracheostomy who are usually self caring.
    - Patients with a tracheostomy who are transferred in / repatriated from another hospital.
    - Patients who have had a tracheostomy performed during their hospital stay.
- Patients who are stepping down from a critical care area to a ward are transferred to designated tracheostomy cohort wards. If a bed is not available on a cohort ward, patients should remain in critical care until one is available.
- **Prior to stepping down from a critical care area, patients must have a tracheostomy tube with an inner cannula in place**.
- Hospital Co-ordinators / Bed Managers / Site Managers who are responsible for patient placement / bed allocation are aware of and adhere to local policy in relation to the cohort wards for tracheostomy patients.
- There is sufficient respiratory physiotherapy and other appropriate AHP staff investment at cohort ward level, to match the requirements of the tracheostomy patient.

Cohort wards must ensure that:

- They maintain a stock of essential tracheostomy equipment on their ward, in readiness for tracheostomy patient admissions and a standardised tracheostomy trolley.
- They provide emergency bedside tracheostomy equipment for all tracheostomy patients.
- The ward is staffed with a minimum of 2 registered nurses per shift who have received tracheostomy training.
- Nursing staff have access to tracheostomy training and updates at least annually.
- Nurse / patient ratios are assessed for each shift, to ensure that not only the tracheostomy patient is adequately observed, but also to ensure that the care of other patients is not compromised by the increased dependency / acuity of the tracheostomy patient.
- **The cohort wards will be A&E, EAU, Ward 21, Ward 31(elective surgical patients only), Ward 42 and 44.**
- Tracheostomy patients whom are deemed high risk acuity will be transferred to ACCU if clinically required (joint decision between admitting consultant and Critical care Consultant), or Ward 21 if medium acuity. Low acuity patients with tracheostomies will be cared for on ward 44 or 42.
- Patients ***not*** requiring Critical Care admission will be triaged by the on-call Respiratory Consultant between the hours of 8-8 (Mon-Fri) to the appropriate cohort ward. Outside of these hours; this will be the responsibility of the Medical Registrar who can be supported by clinical input from CCOT.
- The duty surgical team will be made aware of an elective patient admitted to ward 31.
- Matrons will be responsible for supporting the appropriate nursing levels required to maintain the safe care of this group of patients. Ward leaders or nurse in charge to highlight with matrons and consultants if the number of tracheostomy patients on one ward becomes a concern.

6.2 Tracheostomy Emergency – Recognition and Response. (inc Laryngectomy)

- The emergency team may be summoned via switchboard: **Dial 2222 'Tracheostomy Emergency in area…..'**
- Click **HERE** for protocol found on Tracheostomy intranet
- The Critical Care Outreach Team are available 24/7 for advice in non-life-threatening situations.

Areas that care for tracheostomy patients will:

- Assess and establish whether the patient is a laryngectomy or a tracheostomy and mark the bedspace with the appropriate Bedhead sign.
- Know how to call for the Emergency Tracheostomy Team
- Provide printed Bedside Emergency Algorithms for airway difficulty / respiratory distress in the tracheostomy patient, including management of bleeding from the tracheostomy.
- Ensure that clinicians caring for tracheostomy or laryngectomy patients have completed training in resuscitation via a tracheostomy or laryngectomy.
- Ensure that tracheostomy emergency equipment is available at the bedside / with the patient at all times, including for transfers to other departments.
- Provide Difficult Airway Trolleys in Critical Care areas, with equipment for secondary responders to use during advanced airway manoeuvres.

Resuscitation of Laryngectomy Patients

If the patient has had a laryngectomy, air movement (either spontaneous or ventilated) is not possible via the nose and mouth. Laryngectomies are also at increased risk of airway obstruction. In this case the following adaptations must be made:

- Remove the clothing from the patient's neck.

- Ensure stoma is patent. Wipe any mucus from the stoma site.
- A Provox speaking tube should be removed for resuscitation.
- Listen and feel for air movement at the stoma whilst looking for chest wall movement.
- If they are not breathing or making only occasional gasps or weak attempts at breathing you must put out a **2222 Cardiac Arrest Call**

Please see algorithms on Tracheostomy Home Page on the Intranet.

Emergency tube changes should be reported via Datix.

6.3 Consent and patient / carer / relative's information for tracheostomy insertion:
Whenever a patient has mental capacity, consent for a tracheostomy insertion must be obtained from the patient. However, when a patient lacks capacity, a Consent Form 4 should be used and how the decision represents the best interests of the patient should be documented clearly.

In addition to verbal discussions with patients / relatives / carers in relation to tracheostomy insertion and care, written patient / carer information about having a tracheostomy will be provided, including

- Indications for a tracheostomy
- Risks / complications associated with a tracheostomy
- What to expect regarding care of the tracheostomy
- Patient resources can also be found on the 'Tracheostomy Home Page' on the intranet

6.4 Tracheostomy Insertion:
The tracheostomy can be inserted percutaneously in the critical care unit or surgically in the operating theatre. The choice of technique depends on the previously mentioned factors. Prior to the procedure the clinical team will choose the most suitable method in conjunction with MDT input. The preferred size and type of tracheostomy tube should be agreed on by the clinical team prior to commencing the procedure.

Percutaneous Tracheostomy
The percutaneous method is the most commonly used technique in critical care. It is performed at the bedside using sedation and local anaesthetic, and is often the technique of choice in the critically ill. The procedure involves the insertion of a needle through the neck into the trachea followed by a guide-wire through the needle. The needle is removed and the tract made gradually larger by inserting a single stage dilator over the wire until the stoma is large enough to fit a suitable tube (Seldinger technique).

When a patient is deemed suitable for a Percutaneous Tracheostomy then the 'Percutaneous Tracheostomy Insertion Document' is completed for that patient and retained in the notes. This document guides the operator through preparation, insertion and safety critical aspects of the process. Patient selection, contraindications, tube selection are all covered within the document.

Surgical Tracheostomy - booking flowchart is in Appendix C
A surgical tracheostomy requires the transfer of the patient to the operating theatre and is done under sterile conditions under general or local anaesthesia by the ENT surgical team. The tissues around the trachea are dissected and then the trachea is entered by making an incision in its anterior wall between the 2nd and 3rd or 3rd and 4th tracheal rings. The procedure will be documented in the notes by the surgical team including choice of tube, difficulties encountered and post operative care instructions.

6.5 Management of the Patient with a Tracheostomy

a. Staff must have received documented training on caring for patients with a tracheostomy and completed tracheostomy competencies.
b. Staff must know who to call and what to do in an emergency
c. Bedside emergency equipment must be available at all times and accompany the patient if they move around the unit/hospital. (see section 5.8) This will be kept at the bedside in a blue tracheostomy box. (Contents listed in Appendix B)
d. Bedside Equipment must be checked and documented every shift.

Routine care of the established tracheostomy
Vital signs are to be recorded at a minimum of 4 hourly frequency.

Tracheostomy Care Record: These are charts that record all aspects of bedside care / interventions related to routine care of the tracheostomy tube. The charts include timed, dated and signed entries to denote:

- Emergency equipment checks at least once per shift
- Tracheal suction episodes
- Inner tube inspections, where indicated, at least 4 hourly.
- Cuff pressures, where indicated
- Humidification checks
- Dressings changes / stoma inspections

The care pathway facilitates full MDT communication in one area of the notes. Further specialist input may be written in the medical notes if required.

Cuff Management
The tracheostomy cuff provides a seal to enable positive pressure ventilation and also provides some protection against aspiration of secretions. Over-inflation of the cuff may cause ischaemia of the tracheal mucosa and thereby lead to tracheal stenosis, tracheomalacia and arterial erosion.

The pressure within the cuff should be checked regularly (at least 4hrly) with a hand-held pressure manometer and documented. Cuff pressure should be adjusted using hand-held pressure manometer. Pressure should normally be between 15 and 25 cm H_2O and should not exceed 35 cm H_2O.

If an air leak occurs with the cuff at the maximum recommended pressure, the tracheostomy may have become displaced or may require changing. Medical or other professionals who are competent in tracheostomy management should review the patient. Fingertip pressure on the external pilot balloon is not an accurate method of measuring cuff pressure.

The cuff should be deflated with a syringe

- prior to removing the tube,
- to allow the patient to eat or drink (when this stage is reached)
- when a speaking valve (PMV) is secured to the tube. Failure to deflate the cuff when the speaking valve is secured to the tube will result in a total occlusion of the patient's airway.

Humidification
All tracheostomy patients should have a method of humidification in place. Failure to adequately humidify could result in tube blockage due to secretions becoming dry and viscous, forming a crust around the tracheostomy. Administer humidified oxygen therapy at prescribed

rate to achieve target saturations for the patient and in accordance with the Trust's Oxygen Policy. Change the tubing weekly on humidified circuits. Once oxygen therapy is discontinued, continue humidification with the use of an HME (Heat & Moisture Exchanger) or a Tracheostomy Protector over the tracheostomy tube.

Changing the Tracheostomy Inner Cannula

Inner cannulas, if being used, must be removed, inspected and cleaned at regular intervals. The frequency of inspection is determined by the volume and tenacity of a patient's secretions and the stability of patient's respiratory condition (e.g. higher level of ventilator support), but should be at least 8 hourly (NCEPOD recommendation / National Tracheostomy safety Project). Disposable inner cannulas should be discarded if soiled and replaced with a new one. Basic guidelines for changing the inner cannula of a tracheostomy tube are listed in the box below:

Guidelines for changing inner cannula

1. Position patient with neck slightly extended
2. Pre-oxygenate and suction as necessary
3. Wearing clean gloves, remove or change the inner cannula. If non-disposable clean with sterile saline 0.9% or water and air-dry thoroughly
4. Clear persistent secretions on cannula in line with manufacturer's instructions, rinsing the inner cannula thoroughly with normal saline or water before re-insertion. Do not leave inner cannula to soak

Care of the Stoma

The presence of the tracheostomy tube, the resultant secretions and stoma site in an already debilitated and possibly immunocompromised patient increases the risk of infection. Secretions that collect above the cuff may ooze out of the stoma site producing a moist environment leading to excoriation and infection. The National Tracheostomy safety project states that the site should be assessed and the stoma cleaned at the start of each shift. The back of the neck should also be assessed for redness and soreness from the Velcro tapes, but more frequently if they become soiled.

Stoma care is a two-person technique to prevent accidental decannulation. One nurse will support the tube for the duration of the procedure, whilst the other removes the tapes and performs the stoma care using clean gloves. The stoma should be cleaned with normal saline and redressed with Lyofoam © and the tracheostomy tube should be secured effectively with a commercial tracheostomy holder. Hand washing must be performed before and after the procedure and contaminated gloves changed between procedures. Eye protection should be worn for suctioning and tube changes or when there is a risk a patient may cough towards the carer. Crusted or exuding tracheostomy stomas should be swabbed, the sample sent to Microbiology and the patient's clinical team informed.

Suctioning

Tracheal suction is an essential component of secretion control and maintenance of tube patency. However, it may be both painful and distressing for the patient, and can also be complicated by hypoxaemia, bradycardia (particularly in patients with autonomic dysfunction such as in spinal injuries), tracheal mucosal damage, bleeding and infection. As a result, the suction requirements of an individual patient should be re-assessed each shift, and, wherever possible, patients should be encouraged to expectorate their own secretions.

Tracheal suctioning should be carried out using closed suction system when patient is on a ventilator. However, open aseptic suction needs to be carried out if patient is self-ventilating. Clean disposable gloves should be worn.

Documentation

Ensure that you complete the tracheostomy care pathway noting the colour, viscosity and volume of secretions. The time of suction, frequency of suction and inner tube check should also be documented.

Tracheostomy tube changes

- The **first** tracheostomy tube change:
  - Must be performed by a doctor / practitioner who is not only competent in tracheostomy tube placement, but also has advanced airway management and intubation skills.
  - Except in emergencies, should not be performed within 72 hours following a surgical tracheostomy.
  - Except in emergencies, should not be performed before 5 days (and ideally 7 – 10 days) after a percutaneous tracheostomy.
  - Requires the presence of a 2nd practitioner who is trained in tracheostomy care to a minimum level of first responder skills.
  - If clinically indicated, the change could be completed in theatre +/- the use of capnography
  - Must be recorded in the patient's records.
  - The team who inserted the tracheostomy is responsible for the first change. This is critical care if a percutaneous insertion or ENT if a surgical insertion

- Subsequent tube changes:
  - Should be performed as frequently as clinically indicated, and in accordance with the manufacturer's recommendations.
  - Must only be performed by personnel trained in tracheostomy tube changes.
  - Require the presence of a 2nd practitioner who is trained in tracheostomy care to a minimum level of first responder skills.
  - If clinically indicated, the change could be completed in theatre +/- the use of capnography
  - Must be recorded in the patient's records
  - The subsequent change may be completed by ENT specialist nurse and CCOT if deemed appropriate for the patient and staffing is available. If this is unavailable due to clinical or staffing reasons, the responsibility falls back to the initial team who inserted the tracheostomy. If it is the ENT team then please complete an ICE referral request with specific date required. If critical care then CCOT should discuss with the ACCU team in the morning huddle.

- **Find more detailed information about equipment required and procedure guide on the 'NTSP: Changing Tracheostomy Tubes' resource.**
  NTSP Manual 2013 (tracheostomy.org.uk)

6.6 Weaning from Mechanical Ventilation

This process will begin on the Critical Care Unit. Usually, patients requiring a tracheostomy will have received a period of mechanical ventilation prior to the decision to insert a tracheostomy.

Some patients may wean rapidly from mechanical ventilation, others may take longer. The process of weaning from mechanical ventilation should be an individualised to the patient. Weaning is an MDT process, however the patient's lead consultant will have overall responsibility for decision making.

Prior to weaning from a tracheostomy, there is a list of considerations to assess if the patient is appropriate to commence weaning. These are considerations and not a rigid set of rules but any concerns regarding these points should be discussed as an MDT prior to commencing a wean.

- The reason for the initial insertion of the tracheostomy has resolved or been considered
- Patent upper airway
- Spontaneously breathing with a regular respiratory pattern
- Oxygen dependency less than 40%
- Strong cough
- Minimal secretions/infection free
- Adequate nutrition
- Hemodynamically and cardiovascularly stable
- MDT involvement – e.g. managing their own saliva/ability to swallow and early referral to SLT.

If the MDT decides the patient meets the criteria, then a cuff down trial can be performed. If it is decided that the patient does not meet the criteria, then the medical team should address any medical problems and reassess the weaning criteria following intervention.

Assess for Cuff Deflation Trial

The tracheostomy cuff fills the space between the tracheostomy tube and the tracheal wall and should be inflated, using a manometer, to a pressure of 15-25 cmH_2O. The purpose of the cuff is to aid effective ventilation, while the patient is mechanically ventilated, by directing the airflow into the trachea. Furthermore, the cuff reduces the risk of aspiration while patients are unable to manage their own oral secretions effectively. During a prolonged period of intubation where patients are not swallowing effectively, the cuff can be used as a risk minimising technique. An inflated cuff does not completely remove the risk of aspiration of oral secretions, because pooled saliva can leak around the sides of the cuff and introduce bacteria to the lungs.

A tracheostomy which has a cuff with a subglottic port will allow for secretions to be removed prior to cuff deflation. This should minimise the risk of patient intolerance to cuff deflation and means monitoring of the volume of oral secretions can take place. If the patient has a high volume of oral secretions, intervention needs to be taken to reduce the volume and improve saliva management.

If the patient is deemed to have minimal subglottic secretions and is otherwise medically stable, then they may be considered appropriate for a cuff deflation trial.

Cuff Deflation

Weaning usually includes increasing the time periods which the patient can tolerate the tracheostomy cuff deflated. The inflated cuff provides some protection against aspiration, although some micro-aspiration may still occur with the cuff inflated. Prolonged presence of either an endotracheal or tracheostomy tube with an inflated cuff means that the patient may have become unaccustomed to managing their own oral secretions or swallowing safely.

Periods of cuff deflation allow the patient to become re-accustomed to doing so and enable the multi-disciplinary team to assess their ability to protect their airway. Initial cuff deflation may occur when the patient is still receiving mechanical ventilation. The In-line PMV guidance provides more detail. The following criteria should be considered when assessing whether a patient is suitable for cuff deflation:

- PEEP of 8 cmH_2O or less
- Total inspiratory support of 10 cmH_20 or less
- Secretion load, including subglottic secretion load
- Any reason where airway protection may be compromised, such as neurological injury
- The patient's cognitive status

Assessment may be carried out by the anaesthetist, physiotherapist or nursing staff if they are suitably trained and confident to do so. Where possible SLT should be present for initial cuff deflation.

Phase I: Cuff Deflation (Self-Ventilating Patients only) For Ventilated patients – please refer to the In-line PMV guidance.

- Explain process fully to patient, including the possibility of an alteration in tracheal airflow sensation or that coughing may be induced
- Ensure patient positioned upright in bed or chair
- Subglottic suction completed prior to deflation if subglottic port in situ
- Ensure any excess pulmonary and oropharyngeal secretions are effectively cleared prior to deflation
- Deflate tracheostomy tube cuff completely using 10ml syringe
- Encourage the patient to cough to clear any upper airway secretions that have been lodged around the inflated cuff; suction as necessary. Simultaneous suction may be beneficial if there is a high subglottic secretion load.
- Monitor for signs of respiratory distress, if signs are present terminate trial immediately and reinflate cuff with a manometer

Phase II: Upper Airway Patency (For a Self-ventilating Patient)

- Instruct the patient to inhale through the tracheostomy tube
- Ensure that the patient can effectively and comfortably exhale using their upper airway by manually occluding the tracheostomy with a clean, gloved finger as they exhale. Release for the inhale.
- Encourage the patient to vocalise to determine presence and quality of voice
- If the patient continuously coughs with the cuff deflated and this does not resolve with either suction or reassurance then re-inflate the cuff, using a manometer to check the cuff pressure
-

Repeat this process as required until the patient can tolerate cuff deflation.

If the patient is not suitable for a cuff deflation trial then evidence supports the use of Above Cuff Vocalisation – see separate guideline.

Finger Glove Occlusion:
Finger glove occlusion is a technique used to assess airway patency. This demonstrates if there is adequate airflow around the tracheostomy tube and into the mouth and nose.

This assessment is completed by occluding the tracheostomy with a gloved finger and to assess for air flow from the mouth/nose. The tracheostomy cuff is deflated with a syringe prior to this.

During this time, the patient should be monitored closely for signs of distress, if these occur then the assessment should be stopped. These signs may include stridor or minimal breath sounds, significantly increased work of breathing and respiratory rate. This would indicate reduced airflow around the tracheostomy.

If finger glove occlusion cannot be tolerated, then a referral to ENT may be appropriate for assessment of airway patency or downsizing the tracheostomy tube.

Consideration of Tracheostomy Downsizing:
If a patient has a large tracheostomy tube e.g. size 8/9, then they may struggle to manage with a finger glove occlusion and speaking valve assessment. Downsizing may well improve airflow around the tracheostomy tube.

One Way Speaking Valve Trial:
If the finger glove occlusion trial is completed successfully, then a Passy-Muir valve (PMV) may be trialled. A PMV is a one-way speaking valve which is a device allowing you to breathe air in through the speaking valve on inspiration but closes on expiration. This means that air passes up through the vocal cords and to the nose and mouth.

When a PMV is being placed, the cuff should have been deflated (as previously described in the cuff deflation section) and there should also ideally be a fenestrated inner tube in situ. After these steps have been completed, the PMV can be placed. If the cuff has not been deflated properly, it puts an individual at risk of respiratory arrest. Alert stickers are supplied in the PMV pack.

During this time, vocalisation should be encouraged, and a swallowing assessment can be conducted when deemed appropriate by the speech and language therapists. Furthermore, during this time the patient should be monitored for a wet sounding voice or difficulty clearing secretions. These can be an indication of a patient struggling to manage their own oral secretions. If they have an increase in secretions on their chest following time with cuff deflation and PMV, this could be a sign of aspiration (Rovira et al., 2021).

If the patient tolerated cuff down with PMV, a weaning plan can be created as an MDT, with an agreed build up over time on the speaking valve. This time is not an exact measure; however, it should be based on patient tolerance and perceived risk of cuff deflation. The length of time with cuff deflation will vary from patient to patient, if there is no evidence of increased WOB, able to demonstrate a strong cough and able to manage their own oral secretions and demonstrate a good swallow then it may be appropriate to leave them with the PMV for several hours. However, if they are at increased risk of aspiration and demonstrate swallowing difficulties, the time spent with the cuff down will need to be started as a short time period. This can then be increased over time as deemed appropriate by the MDT and close monitoring of their chest secretions should be completed.

Monitoring:
During each stage of the weaning process, there are key things to be monitored. This includes:

- Increased work of breathing- visibly struggling e.g. using accessory muscles or sweating
- Decrease in oxygen saturations and subsequent increase in oxygen requirement
- Increased respiratory rate
- Increase in BP and HR

If the patient shows clinical deterioration, they should be returned to the rest period of the wean. This will involve having the PMV removed, a non-fenestrated inner tube inserted, and the cuff being reinflated.

If the weaning plan is not followed, there should be clear documentation on the weaning plan to explain why. This allows the MDT to make changes to the wean and a review can be conducted.

Consideration of a cuffless tracheostomy tube:
If a patient can tolerate prolonged cuff down and has no risk of aspiration or swallowing difficulties, then it may be appropriate to have the tracheostomy changed to a cuffless tube. This is necessary if they need to keep the tracheostomy due to an airway patency issue.

Patients who are weaning and progressing to decannulation must have:

- Multi-disciplinary agreement that weaning is appropriate.
- A structured and target-driven weaning plan.
- Close observation of respiratory status and progress.
- Patients must be within the following observation parameters to allow the wean to commence (unless altered by the MDT for clinical reasons –may be different on ACCU to wards)
    - HR<120
    - Systolic BP 90-150mmHg
    - Temperature <38º
    - Fi02 <40%
    - Sp02 > 94%
    - Patient is alert and orientated

For patients who may be considered to benefit from tracheostomy speaking valves as part of their weaning process, (eg Passy-Muir valves), the following criteria must be applied:

- The patient must be assessed for suitability by the Multi-disciplinary team who are competent in the use of speaking valves. This should include an assessment of the upper airway airflow +/- a referral to ENT for upper airway endoscopy if deemed clinically appropriate.
- When a speaking valve is in use, the patient must receive close observation from a practitioner who has received training in the use of tracheostomy speaking valves.
- **Never use a speaking valve while the cuff is inflated**

6.7 Decannulation

Decannulation should be undertaken as soon as is feasible in order to minimise the risks of complications. However, there are some risks associated with decannulation, including airway obstruction, aspiration, ventilatory failure, sputum retention and difficulty in oral reintubation. The decision and processes involved in decannulation should therefore demonstrate an assessment of both the risk and benefits. These should be undertaken as follows:

- Using objective criteria
- By competent staff
- In appropriate environment
- With appropriate monitoring
- With equipment/ medication available to address potential hazards
- There should be clear guidance to staff who will be monitoring the patient, to enable them to look for complications
- Clear criteria for review by specialist teams such as CCOT or ENT
- Point of contact clearly documented in order to obtain urgent review of airway

Decannulation should only be performed by clinicians verified as competent. (Physiotherapy competencies adopted pan-trust.) The MDT should be in majority agreement prior to decannulation and have considered the following:

- Can the patient follow instructions
- Observations and work of breathing is within parameters
- No upper airway patency issues (ensure a referral to ENT for upper airway endoscopy if deemed clinically appropriate)
- Minimal secretions
- The patient has an effective cough. This may be assessed formally via Peak Cough Flow. PCF should ideally be >130 mls via the mouth with tracheostomy in-situ. PCF<130 mls is not an absolute contraindication to decannulation.
- Tolerated cuff deflation and speaking valve for 24hours, where appropriate
- Swallowing secretions effectively with no aspiration concerns
- Is the patient for re-siting of the tracheostomy should the decannulation fail or is this a one-way decannulation?

A ‘Decannulation Checklist’ is completed for the patient and placed in the notes.

Planned decannulation should ideally be completed in the morning when the patient is well rested. It is advisable to avoid decannulation on cohort wards on Fridays or over the weekend. Pre and post decannulation observations should be recorded in the patient records. Decannulation is a two-person, clean glove procedure.

Following decannulation the emergency equipment should remain by the bedside for 48 hours. The stoma will be cleaned and dressed every 24 hours until healed. (See the tracheostomy care pathway for more details)

The decannulation process is as follows:

- Ensure physiotherapy assessment and treatment prior to decannulation
- The procedure is explained in full to the patient and informed consent gained
- NG feed is stopped 4 hours prior to the planned decannulation and aspirated immediately before.
- The patient is positioned sitting up and the airway is suctioned
- The cuff is fully deflated and further suction carried out as needed
- The tracheostomy ties are undone, while the tube is held by the second person.
- Any sutures in situ are removed. Sutures are normally removed at day ten following insertion.
- The patient takes a large breath in and coughs out as the tube is removed in one motion
- The stoma site is cleaned with saline/gauze, checked for infection and dried. A semi-permeable dressing is placed over the stoma.
- The patient and/ or carers are instructed to maintain pressure over the dressing with a clean hand in order to produce an adequate pressure for effective coughing and phonation
- The decision to decannulate and the procedure itself clearly documented in the patient's clinical notes
- A point of contact from the team who performed the decannulation should be left with the staff observing the patient.
- Post decannulation physiotherapy assessment is recommended to include cough assessment.
- The NG feed should be recommenced at the previous rate once the patient is comfortable and the clinical parameters are stable. This can start at 4 hours post decannulation.
- The decannulation checklist is filed in the notes.

In the event that decannulation is not successful; there must be immediate access to resuscitation and advanced airway equipment including replacement tracheostomy tubes. A clear escalation plan must have been handed over to the ward staff.

Post-decannulation Observations
After decannulation the patient should have a full set of observations carried out and then at 30 minutes post as well. Close visual monitoring is mandatory.

Concerning features are:

- Laboured or noisy breathing
- Stridor
- Increased respiratory rate
- Increased heart rate
- Increased use of accessory muscles
- Increased pattern of abdominal breathing
- Agitation or acute confusion or drowsiness
- Oxygen desaturation

6.8 Inter / Intrahospital Transfer of a Tracheostomy Patient:

- It is important when transferring or escorting a patient with a tracheostomy to an investigation, appointment or different hospital/ location, that the emergency blue box is taken together with portable suction/suction catheters.
- A member of staff competent in the management of tracheostomy must accompany the patient. If the patient is ventilated then a doctor with advanced airway skills must accompany the patient as well. Domicillary ventilation cases may be considered on an individual case basis.

- Before transfer to a new clinical area, please ensure that the tracheostomy care plan document is up to date.
- Tracheostomy patients must be accepted to a new clinical area by an appropriate consultant. The following information should be handed over before acceptance:
    - Reason and date for insertion
    - Percutaneous or surgical
    - Type and make of tracheostomy tube
    - Size, single or double lumen, cuffed or un-cuffed, fenestrated or non-fenestrated, subglottic suction port
    - Current wean in place, if any
    - Reason not yet decannulated/ still has a cuff in place
    - Any on-going issues/ ENT scoping findings
    - Current oxygen requirements
    - Communication and swallow ability
- Please note: **Single lumen tubes (these maybe adjustable flange tubes) are not to be accepted onto general cohort wards due to the high risk of tube occlusion.** Patients with a single lumen tracheostomy must be cared for within ACCU.
- **Acceptance of a tracheostomy/ laryngectomy patient from different hospitals to KMH should only be accepted by a consultant, ensuring the above clinical information has been handed over.** Once the patient has been accepted by the consultant, the flow room can be notified.
- If a patient is discharged home with a new tracheostomy or a change in the care to the tracheostomy, please ensure that the ENT/ tracheostomy specialist nurse is aware and the discharge checklist within the tracheostomy care pathway has been completed.
- If a patient is being discharged home with a new tracheostomy, or a change in usual care, ensure appropriate training have been completed.
- When a patient is discharged from the hospital, ensure the tracheostomy passport has been completed or updated as required and a comprehensive discharge summary completed.

6.9 Documentation:
Documents required for all tracheostomy patients are as follows:

Vital Signs Observations (including Early Warning Scores for ward patients):

- Patients with a tracheostomy must have a minimum of **4 hourly** vital signs and NEWS observations whilst they are in hospital, with increased frequency according to local policy and patient condition.
- Oxygen saturations and percentage of any administered oxygen must also be documented on the vital signs chart.

Emergency bedhead signs including:

- Bedside sign Tracheostomy
- Bedside sign Laryngectomy
- Emergency laryngectomy management (NTSP)
- Emergency tracheostomy management – Patent upper airway (NTSP)

Tracheostomy Insertion Pathway (Critical Care): This document will give a clear pathway and guidance to ensure national safety standards are met during tracheostomy insertion. This document includes:

- Indications and MDT discussion for insertion of tracheostomy tube
- Consent gained, along with potential complications discussed
- Pre-tracheostomy insertion checklist

- Invasive procedure safety checklist
- Tracheostomy documentation about events of the procedure

Tracheostomy Bedside Equipment Checklist: Bedside equipment should be checked once per shift and documented

Routine Tracheostomy Care Record: These are charts that record all aspects of bedside care / interventions related to routine care of the tracheostomy tube found in the tracheostomy care plan. The charts include timed, dated and signed entries to denote:

- Tracheal suction episodes and description of sputum where appropriate
- Inner tube type in situ and inspections, where indicated, at least 8 hourly.
- Cuff pressures, where indicated
- Humidification checks and mouth care
- Dressings changes / stoma inspections
- Speaking valves where indicated
- **Find more detailed information about routine tracheostomy care in NTSP links to resources and teaching videos** Tracheostomy**.**

Tracheostomy Care Plan: Provides a comprehensive assessment of care needs that spans both physical and non-physical assessments, from a multi-disciplinary team perspective. The Tracheostomy Pathway facilitates multi-disciplinary documentation that encompasses all aspects of procedures and care from initial tracheostomy insertion to decannulation. Care planning must incorporate the following elements:

- Is the tracheostomy new or established and reason for insertion and date
- Tube make, size and type
- Date of last tube change is appropriate
- Level of escalation of treatment
- Referrals completed to the MDT
- Inner tube care
- Cuff care
- Suction management, subglottic port management where appropriate and any chest physiotherapy indication
- Humidification delivery
- Nutrition and swallow assessments including communication needs and methods
- Tracheostomy dressings / skin integrity / tube security/ stoma management
- Discharge planning information where appropriate
- Mental awareness / confusion / agitation assessments

Tracheostomy/ Laryngectomy MDT meeting form: All tracheostomy or laryngectomy patients within the trust should have a weekly MDT discussion as per national guidance. Every patient that is discussed at the weekly MDT meeting every Monday should have one of these forms completed so a record of the discussion can be clearly identified in the patient records.

Tracheostomy/ Laryngectomy Admission to A&E flow chart: This document will help guide clinicians in A&E to the pathway and protocol for transfer of patients within the trust.

Tracheostomy wean and rehabilitation plan: This document will help cohort ward and critical care clinicians to follow the weaning plan set by the MDT. Should the patient not manage the wean then this should be documented and the reasons why so appropriate changes can be made by the MDT as appropriate.

6.10 Admitting a Tracheostomy Patient to the Ward

- Receive handover for the patient with a tracheostomy and confirm that the airway is patent and working.
- Check the bedside suction and oxygen are both working and that it is a new liner in the suction and has all appropriate suction and emergency oxygen masks at the bedside.
- Prepare a trolley with the correct bedside equipment the patient requires to enable safe competent care of the tracheostomy.
- Confirm that the blue trachecase that comes with the patient, contains the correct equipment for an emergency tracheostomy change and that there are two new tracheostomy tubes one the same size and one a size smaller in case of emergency.
- Read the tracheostomy passport as this gives relevant information in providing care.
- Transfer onto a trust tracheostomy care plan.
- Place the bedside alerts on the wall next to the patient with the relevant information filled out.
- Carry out normal ward admission procedures.
- Alert members of the multidisciplinary team to the fact that a tracheostomy patient is on the ward. (Medical team, CCOT, Physiotherapy and SLT, Dietician)

6.11 Admitting a Tracheostomy patient to the Critical Care Unit

A critical care nurse will require when looking after a tracheostomy patient within ACCU is:

- A blue tracheostomy box (with contents verified – see App 2)
- Spare Tracheostomy tubes
- Laminated Airway chart + Emergency care flow chart.
- Cleaning equipment for tracheostomy tube
- Tracheostomy Bedside Equipment Nursing documentation

Guidance can be provided by NiC/Nurse Educators/CCOT or ACCU Physiotherapy

6.12 Discharge from Critical Care

- Patients for discharge from ACCU will be discussed at the weekly Tracheostomy MDT ideally a week in advance of discharge, allowing the wards to plan for their arrival.
- Patients with tracheostomy are discharged only to the designated wards.(Ward 21, Ward 42, Ward 44).
- Ideally, at least 24 hours' notice should be given to the ward when transferring a patient out of ACCU to the ward area
- Patients with a tracheostomy will ideally not be discharged from ACCU between the hours of 1800 and 0800. Discharge should ideally be planned for a weekday. Discharge outside these hours should generate a Datix and the rationale should be documented in the notes.
- A **tracheostomy care plan** will be completed by the ACCU staff, CCOT and physiotherapist and communicated to the receiving ward nurse before the patient is discharged from critical care. Prior to ACCU discharge CCOT will review the patient and paperwork and advise on suitability.
- A documented visit to meet the patient and to assess dependency by a member of the receiving ward (nursing & physiotherapy) should be carried out prior to discharge.
- The patient will receive an emergency tracheostomy box **(blue box)** to accompany them at all times in case of an airway emergency.

- A **surgical tracheostomy** should **not** be discharged within 5 days of the operation unless medically escorted to a higher level of specialist care. (This does not include any wards at KMH.)

Follow-up following discharge from ACCU

a. CCOT will review the patient at least once every day to offer advice, education and support for the ward staff and assist with management of the tracheostomy
b. The physiotherapist will review the patient on arrival on the ward and plan for ongoing clinical input.
c. The standard weekly MDT meeting will discuss all patients outside ACCU with a tracheostomy.

6.13 Communication

The ability to communicate successfully is one of a patient's daily needs. Successful communication helps to maintain a sense of identity, status and well-being. In addition, it is essential to make every effort to involve the patient in decisions regarding their care. Providing them with an effective means of communication wherever possible can help achieve this aim.

Patients/relatives should be informed about the tracheostomy procedure, including the fact that the patient will be temporarily unable to speak. Information should be available in written form as well as verbal *('Rehabilitation after Critical Illness' – NICE 2009)*

Communication may be possible by mouthing however this requires patience from the communication partner and reasonable range, speed and strength of movement of oral musculature (often not present due to neurological damage). In addition the patient needs the cognitive ability to remember to slow down and articulate slowly to aid the process

With the cuff deflated, air can flow around the tube allowing for some voicing. Speaking can be aided by occlusion of the tracheostomy with a gloved finger on expiration to direct airflow over the vocal cords. When possible, patients should be provided with a speaking valve.

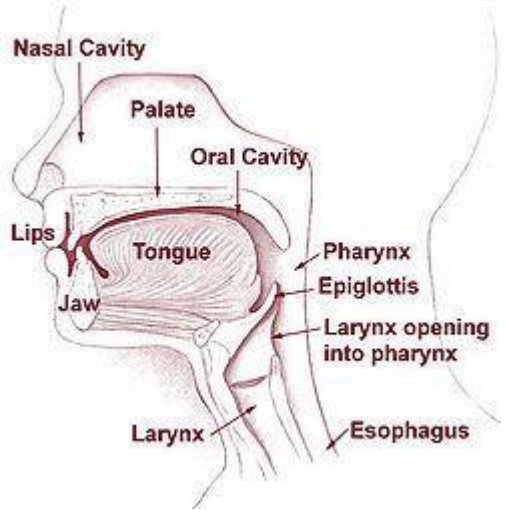
Not all patients tolerate speaking valves. Therefore alternative options may include: writing, whiteboard, alphabet charts, symbol/word selection chart. If patients are very frustrated by this method and/or are likely to require it longer term, referral to the SLT should be made for advice on electronic communication options. Referral to SLT should be made for any patient who is alert but without an effective means of communication.

To establish a method of communication in tracheostomy patients, where it is not appropriate to deflate the cuff, above cuff vocalisation could be considered. ACV aims to stimulate laryngeal sensation, improve saliva secretion clearance and facilitate vocalisation. If effective, this should help to reduce patient frustration and anxiety. Refer to the ACV guideline for details on this method.

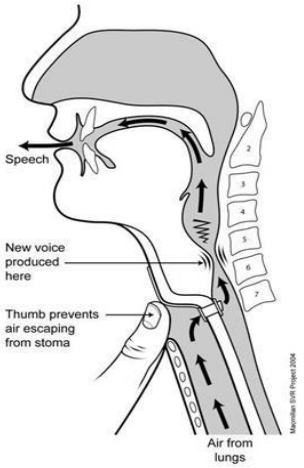
6.13.1 Laryngectomy Communication

Patients with a laryngectomy may have had surgical voice restoration (SVR). A fistula is present between the top of the trachea and the oesophagus and a valve is inserted which allows airflow into the oesophagus for speech. If the valve is dislodged, the fistula must be kept patent with a catheter until a new valve can be placed by ENT. If the SVR should become dislodged, then the ENT registrar should be contacted urgently.

Normal upper airway



Laryngectomy with SVR



6.14 Swallowing

All patients with a tracheostomy must be referred to SLT as patients with tracheostomies may experience problems with swallowing. If there are problems with swallowing, there is an increased risk of aspiration. The risk is greatest in those patients with associated neurological or mechanical causes of dysphagia, or those with significant ongoing respiratory failure.

Risk factors for swallowing problems in patients with a tracheostomy

1. Neurological factors eg. bulbar palsy/Parkinson's Disease/Guillain Barré Syndrome
2. Disuse/atrophy
3. Head and neck tumour or surgery
4. Evidence of aspiration of enteral feed or oral secretions on tracheal suctioning.
5. Increased secretion load or persistent wet/weak voice when cuff deflated.
6. Coughing and/or desaturation following oral intake
7. Patient anxiety or distress during oral intake.

Patients identified as having longer term swallowing difficulties should be referred to the Nutrition Team via ICE for assessment for a longer term feeding tube placement.

6.15 Re-introduction of oral intake

Following the insertion of a tracheostomy, the patient should remain nil by mouth until SLT assessment is completed and the multi-disciplinary team determine that oral intake can be tried.

Patients with dysphagia may be able to manage modified food or fluid consistencies under the direction of the SLT and it is essential that these recommendations are followed at all times to minimise the risk of aspiration. Enteral feeding should be continued during oral trials. Please seek advice from the Dietitian on stopping the enteral feed.

7.0 MONITORING COMPLIANCE AND EFFECTIVENESS

Minimum Requirement to be Monitored (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit (HOW – will this element be monitored (method used))	Frequency of Monitoring (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results (WHERE – Which individual/ committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Standards laid out in this policy	Tracheostomy Steering Group, led by Clinical/ Policy Lead	Initial and subsequent audits using scoring matrix found on NCEPOD 'On the right Trach website': https://www.ncepod.org.uk/2014tctoolkit.html	Quarterly	Findings reported by Clinical/ Policy Lead via the Tracheostomy Steering Group and escalated via governance structures with any gaps in service delivery being highlighted at local level.
Incidents related to tracheostomy/ laryngectomy care	All staff involved in any incidents	As per Incident Reporting Policy using Datix	For ***harm*** related incidents, escalated ASAP by ENT Specialist Nurse to Clinical/ Policy Lead For ***no-harm*** related incidents, collation of incidents quarterly by ENT Specialist Nurse for Clinical/ Policy Lead	Oversight of incidents undertaken by Tracheostomy Steering Group, led by Clinical/ Policy Lead

8.0 TRAINING AND IMPLEMENTATION

Tracheostomy training is made available across the multi-disciplinary team. The following staff groups should ideally have the following tracheostomy skills and competence.

Staff group	Minimum Skills required
Anaesthetists / Intensivists	First responder training (achieved prior to being on-call) Second responder training (within 2 years of commencing training in the specialty)
ENT doctors	Basic care skills (suction, inner tube care etc) First responder training (achieved prior to being on call). Second responder training (within 2 years of commencing training in the specialty)
Other doctors (excluding FY1s), with responsibilities for: Cohort wards Cardiac arrest teams Acute Response Team	Basic care skills First responder skills (before going on call) As above
Clinical site managers	Basic care skills First responder skills (before going on call)
Registered Nurses: • Critical Care • Cohort wards • Critical Care Outreach • ENT Nurse Specialist • Head & Neck Nurse Specialist	Basic care skills (suction, inner tube care etc) Emergency algorithms as per first responder Weaning and decannulation processes
Respiratory physiotherapists	Basic care skills (suction, inner tube care etc) NTSP Emergency algorithms Weaning and decannulation processes
Speech & Language therapists	Basic care skills (suction, inner tube care etc) NTSP Emergency algorithms Weaning and decannulation processes.

9.0 IMPACT ASSESSMENTS

- This document has been subject to an Equality Impact Assessment, see completed form at Appendix E
- This document is not subject to an Environmental Impact Assessment

10.0 EVIDENCE BASE (Relevant Legislation/ National Guidance) AND RELATED SFHFT DOCUMENTS

Evidence Base:

The Health Foundation (2015) **Shine 2014 final report Improving multidisciplinary tracheostomy care: implementing the Global Tracheostomy Collaborative quality improvement project. University Hospital South Manchester** The Health Foundation, London

McGrath et al (2012), Multidisciplinary guidelines for the management of tracheostomy and laryngectomy airway emergencies **Anaesthesia**;67(9):1025-41

McGrath (Ed.) (2013) **Comprehensive Tracheostomy Care: The National Tracheostomy Safety Project Manual** NTSP Wiley-Blackwell

NCEPOD (2014)Tracheostomy Care: On the Right Trach? NCEPOD London

Web links

https://www.health.org.uk/sites/default/files/UHSM%20final%20report.pdf

https://www.ncepod.org.uk/2014tc.html

www.tracheostomy.org

Related SFHFT Documents:

- Standard Operating Procedure: Ward 31 Enhanced Care beds (Surgical)
- Weaning Policy Adult Critical Care
- In-line Passy-Muir valve Policy
- Above Cuff Vocalisation Policy

11.0 KEYWORDS

Speaking Valve; Weaning; Decannulation

12.0 APPENDICES

Appendix A	List of Resource Documents to accompany Policy
Appendix B	Tracheostomy Blue Box Contents
Appendix C	Surgical Tracheostomy Booking Flowchart
Appendix D	The intranet ‘Tracheostomy Home page’
Appendix E	Equality Impact Assessment

Appendix A: List of Resource Documents for Use in Sherwood Forest – Kingsmill Site

These are all downloadable via the Intranet – 'Tracheostomy Home Page'

Resource:	For Use By (clinical areas):	Last reviewed/ updated (mmm/yy):
• **Tracheostomy Emergency Call Flow Chart**	All	June 2023
• Tracheostomy Care Pathway (Adult)	Wards	June 2023
• Bedhead Signs Specific for **Tracheostomy** or **Laryngectomy**	ACCU Wards	June 2023
• Emergency Laryngectomy management (NTSP)	ACCU Wards	June 2023
• Emergency Tracheostomy management – Patent upper airway (NTSP)	ACCU Wards	June 2023
• Tracheostomy Bedside Equipment Daily Check	ACCU Wards	June 2023
• Tracheostomy/Laryngectomy MDT Meeting Proforma	For use in the MDT(weekly)	June 2023
• Tracheostomy A&E Flow Chart (***For ED only***)	ED only	June 2023
• Tracheostomy Wards Equipment Order	Wards	June 2023
• Tracheostomy Weaning and Rehabilitation Plan	Wards ACCU	June 2023
• Tracheostomy Insertion Pathway (Critical care) (***for ACCU only***)	ACCU	June 2023
• Tracheostomy Decannulation Checklist	Wards ACCU	June 2023

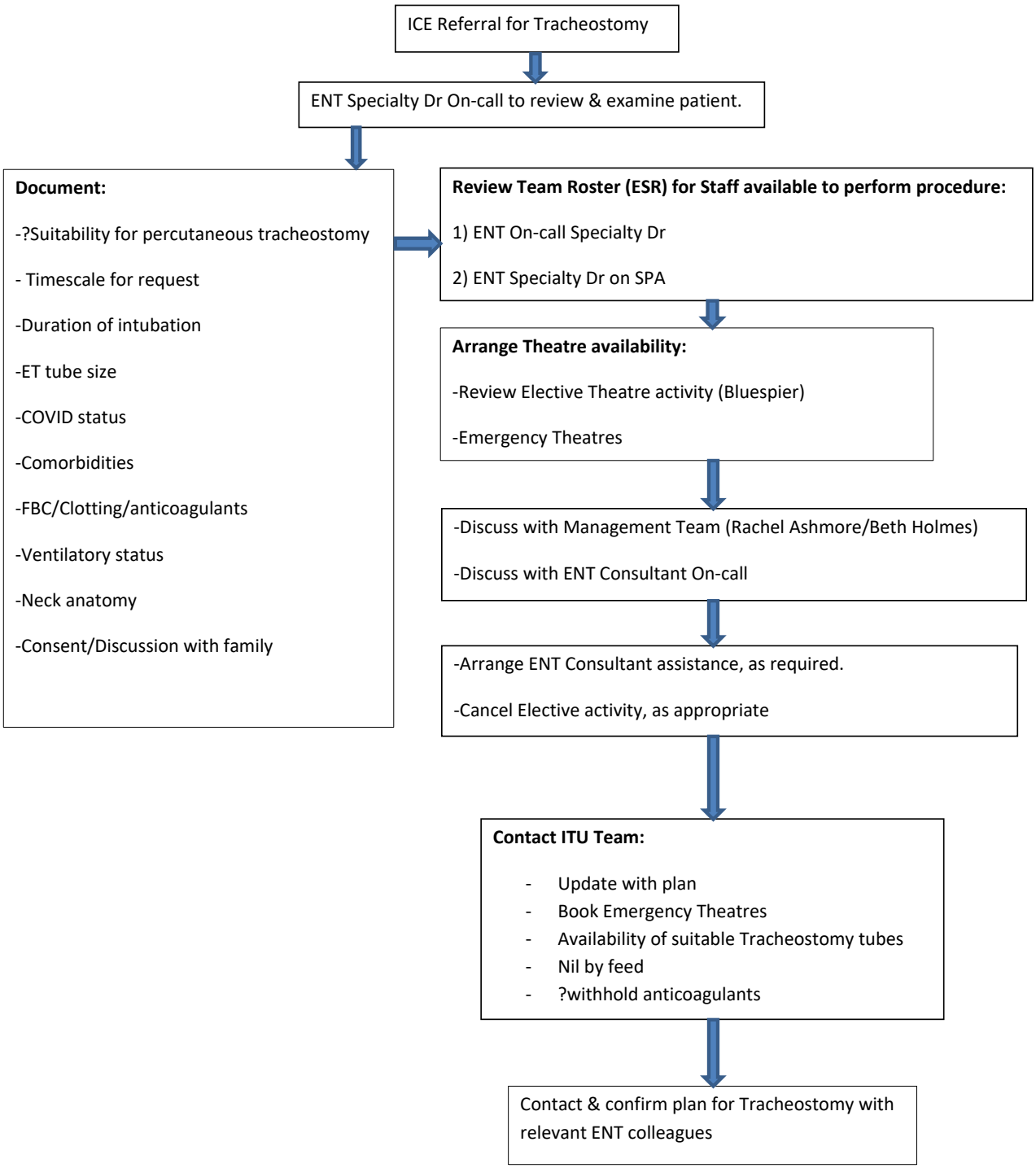
Key:

ACCU – for use on Adult Critical Care Unit
Wards – For use on wards EAU, 21,31,42,44

Appendix B: Tracheostomy 'Blue box' Contents (Trachecase)

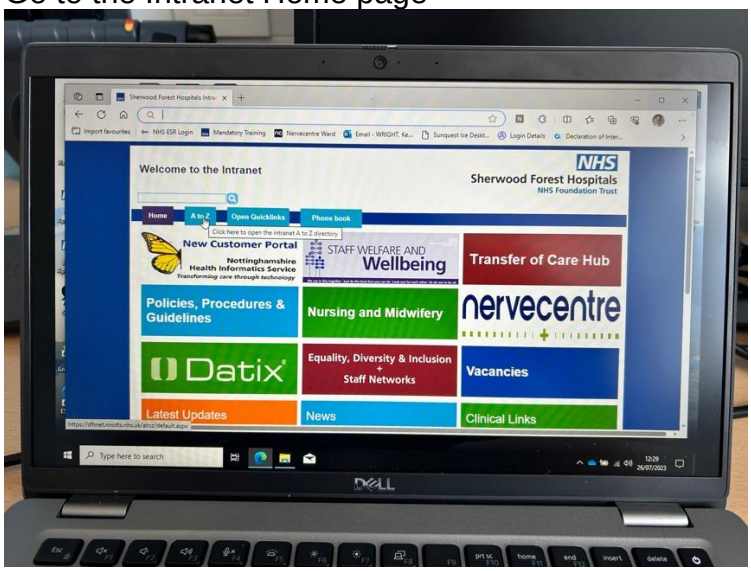
- A clean unopened tube of same type- the same size
- A clean unopened tube of same type- one size smaller
- Spare inner tubes – kept in airtight container
- Sterile water for cleaning tubes and a receptacle
- Tracheal Dilators (may be in an after-care tray or individually packaged)
- Capnography if ventilated
- Humidification of some description eg Fisher Paykel, Swedish nose, Bucanan bib, spray
- Oxygen- optional- depends on patient and their oxygen saturations / acceptable parameters
- Cleaning brushes
- Suction equipment- appropriately sized catheters
- Appropriate dressings and tube ties
- Laminated Airway Chart and Emergency Care Flow Chart- displayed on wall
- Manometer if cuffed
- Speaking valve if appropriate
- May require bung / cap during weaning process
- Passport Paperwork / 'neck breathers' documentation to record interventions / observations and on going care.

Appendix C: Organisational flow chart for Surgical Tracheostomy

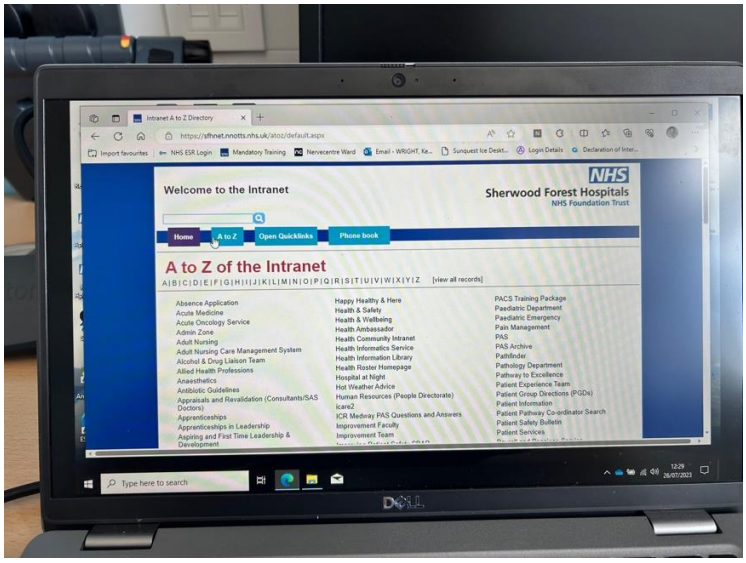


Appendix D: The Intranet 'Tracheostomy home page'

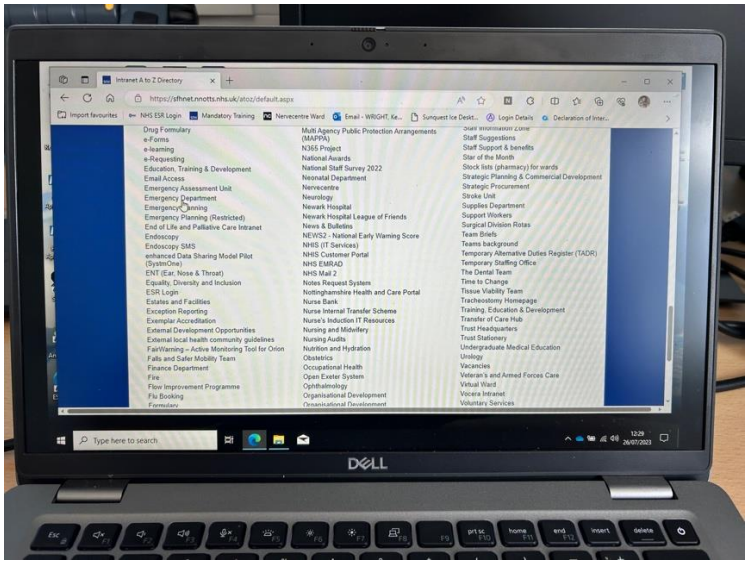
1. Go to the Intranet Home page



2. Select the A – Z tab



3. Scroll down to the T's



4. Click on Tracheostomy Homepage

APPENDIX E – EQUALITY IMPACT ASSESSMENT FORM (EQIA)

Name of service/policy/procedure being reviewed: Care of Patients with Tracheostomy or Laryngectomy			
New or existing service/policy/procedure: new policy			
Date of Assessment: 1/6/23			
For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)			
Protected Characteristic	**a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?**	**b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?**	**c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality**
The area of policy or its implementation being assessed:			
Race and Ethnicity	None – neck breathing is based on clinical conditions	Placement of neck breathing airway will always be done in patients best clinical interests	None
Gender	As above	As above	None
Age	As above	As above	None
Religion	As above	As above	None
Disability	As above	As above	Due to the ongoing care needs with the neck airway it is likely to be a MDT decision with input from Learning Disabilities champions and advocates where available
Sexuality	As above	As above	None

Pregnancy and Maternity	Highly unlikely to ever be done in these patients unless pre-existing tracheostomy is in place	As above	None
Gender Reassignment	None	As above	None
Marriage and Civil Partnership	None	As above	None
Socio-Economic Factors (i.e. living in a poorer neighbourhood / social deprivation)	None	As above	None

What consultation with protected characteristic groups including patient groups have you carried out?

- None

What data or information did you use in support of this EqIA?

- National Tracheostomy Safety Project work

As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments?

- None

Level of impact

From the information provided above and following EQIA guidance document Guidance on how to complete an EIA (click here), please indicate the perceived level of impact:

Low Level of Impact

For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.

Name of Responsible Person undertaking this assessment: Kelvin D Wright

Signature: signed electronically

Date:
1st June 2023