



**St. James's Hospital
Tracheostomy Care Working Group.**

**Tracheostomy Tube Change: Standard Operating Procedure
SJH:N069.12 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 \(SJH:N069\)](#) and describes standards on Tracheostomy tube change.

1.0 Tracheostomy Tube Change

1.1 Elective Indications

- Tracheostomy tubes must be changed every 28-30 days to comply with EU regulations.
- For weaning purposes (i.e. downsizing), change to cuffless or fenestrated.

1.2 Emergency Elective

- Tube dislodgement or accidental removal.
- Tube obstruction (decreased risk when using double lumen tubes). Important to note for both of the above scenarios, the most appropriate intervention may be to insert endotracheal tube when urgent medical input is required.

1.3 The recommended minimum time before the first full tube change is:

1.3.1 5 - 7 days following surgical tracheostomy.

1.3.2 7 - 10 days following percutaneous tracheostomy. To enable the tract to become established and minimise risk of occlusion.

1.3.3 The decision to carry out the 1st tube change or tube removal **must** be made by a senior member of the E.N.T, Oral and Maxillofacial or Anaesthetic/ ICU team.

1.3.4 The 1st tube change must always be carried out by a doctor or the Tracheostomy CNS or Clinical Facilitator/cANP/RANP in ICU.

1.3.5 The ICU doctor must be notified if tube change is required on a ventilated patient, in case intervention is required. The tract from the skin to the trachea may not be well formed.

1.3.6 **Subsequent tube changes can be undertaken by a registered nurse who has been assessed and is deemed competent in the procedure within his/her Scope of Nursing Practice.** Once deemed competent they in turn can access and sign off other staff members.

1.3.7 The tube change procedure should always be undertaken by 2 nurses to ensure patient safety at all times, and all changes should be [recorded on EPR i-View – 'Lines and Devices'](#), and on the patient's [tracheostomy bed sign](#). To enable the procedure to be

carried out safely during early tube changes. The second nurse is available to call for help if required.

1.3.8 In the event that the patient has undergone a laryngectomy, all health care professionals familiar with laryngectomy care are permitted to insert and or remove a tracheostomy tube as they have a permanent neck stoma.

1.3.9 A tracheostomy tube with an inner cannula in situ has a life span of 30 days. If the tube is left in any longer it does not comply with the manufacturer's recommendations or with the EEC Directive (Class 11A, Rule 7. Council Directive Concerning Medical Devices 93/94 EEC).

1.3.10 Before changing the tracheostomy tube, the type of tube, size, the date it was performed and last changed should be known. (This should be available on tracheostomy bed sign). To ensure that the correct tube size is used and to give an indication of how well formed the tract will be.

1.3.11 If the patient is being fed via naso-gastric or PEG/RIG tube, medical opinion should be sought as to the need to hold the feed. If the patient is ventilated the feed is usually held for 4 hours before the tube is changed. To reduce the risk of aspiration of feed during tube change.

1.3.12 Emergency equipment must be close at hand and checked before any patient undergoes a tracheostomy tube change.

1.4 Equipment required for changing Tracheostomy Tube:

- Functional suction and oxygen apparatus.
- Clean working area with dressing pack.
- New tracheostomy tube to be inserted.
- Smaller size tracheostomy tube in case of difficulties.
- Tracheal Dilators.
- Tracheostomy dressing (Key-hole) if required.
- Normal saline, for cleaning the area.
- Lubricating jelly (KY).
- Tracheostomy ties: Velcro +/- cotton tape.
- Disposable gloves and apron/gown.
- Face mask with shield/eye protection.
- Scissors (if cotton tape used).
- Stitch cutter (if stitched in).
- 10ml syringe (for cuffed tube).

1.5 Tracheostomy Tube Change Procedure

1.5.1 Prepare all equipment needed and check that it is in working order.

1.5.2 Explain the procedure to the patient.

1.5.3 Perform hand hygiene, don apron and eyewear (if risk identified) preparing the dressing trolley as per hospital infection control guidelines.

1.5.4 Open the tracheostomy tube onto the opened dressing pack. Don sterile gloves.

- 1.5.5 If the new tube to be used is to be cuffed, check for air leaks within the cuff by inflating it using a 10mL syringe and observe it for spontaneous deflation. Deflate the cuff. Tube should be discarded if it spontaneously deflates.
- 1.5.6 Check that the obturator (introducer) can be removed from the new tube.
- 1.5.7 Attach tracheostomy Velcro holder/cotton ties to ensure that the tube is ready for immediate securing when inserted. The use of cotton tape is recommended if the patient is confused or neurological status unknown. Velcro ties are not considered safe for use in relation to confused/agitated patients.
- 1.5.8 Lubricate the tube sparingly with water soluble lubricant to facilitate insertion. Too much lubricant will cause the patient to cough.
- 1.5.9 Remove the old dressing and clean around site.
- 1.5.10 If the tracheostomy is not newly formed, cleansing is carried out following tube removal. If the tracheostomy is well established, there is no risk of the tract closing, therefore the site can be inspected more closely.
- 1.5.11 Hyperoxygenate with 100% oxygen if the patient is ventilated, and monitor oxygen saturation levels closely to reduce the risk of hypoxia during the procedure.
- 1.5.12 Suction the oropharynx. The cuff needs to be fully deflated prior to removal. If the cuff is inflated a synchronised cuff deflation and suction technique using 2 practitioners is required. Slowly deflate the cuff using a 10mL syringe until all the air is withdrawn. Synchronised suctioning helps prevent any secretions from pooling in the oropharynx and entering the lungs.
- 1.5.13 If the patient has a subglottic suction aid tube, aspirate the suction port using a 10mL syringe before cuff deflation to remove the secretions pooling above the cuff prior to cuff deflation (refer to [Cuffed Tube Care SOP SJH:N069.8](#)).
- 1.5.14 Once the patient is relaxed and not coughing, release the old ties and remove the old tracheostomy tube on expiration. Ensuring the patient is relaxed and not coughing will facilitate removal of the tube. Expiration allows neck/shoulders to become more relaxed. Coughing tenses the neck muscles making tube insertion more difficult.
- 1.5.15 Anaesthetic team should assess if patient requires sedation.
- 1.5.16 The tube is removed with an upward and downwards motion. This motion follows the natural contours of the neck.
- 1.5.17 Insert the new tube with the obturator in place in an 'up and over' motion. The obturator helps guide the tube along the contour of the patient's neck.
- 1.5.18 **Immediately remove the obturator and insert the inner cannula. The patient will be unable to breathe if the obturator is blocking the lumen.**

- 1.5.19** Observe and listen to the patient for signs of respiratory distress. Check for good airflow through the new tube and observe the chest for rising and falling movements to ensure that the new tube is in the correct position. Air flow will be felt via the tracheostomy tube.
- 1.5.20** Secure the tube with the attached Velcro holder or cotton ties tape. To prevent dislodgement of the tube.
- 1.5.21** If the tube is cuffed and the cuff is being inflated, re-inflate the cuff with approx 5-7mls of air or to a safe pressure <25mmHg (check with a manometer if available). Over inflation of the cuff will cause tracheal mucosal damage.
- 1.5.22** Ensure the patient is comfortable with no signs of breathing difficulties. Restart/attach oxygen therapy / ventilation / Passy Muir speaking valve (always ensure that the cuff is deflated when using a speaking valve). To ensure oxygen levels and patient's breathing is satisfactory and restore patient's speech. Cuff inflation will cause airway obstruction if the valve is in situ.
- 1.5.23** Record the tube change on EPR documenting the date, time, size, types of tube and any complications experienced during the procedure.
- 1.5.24** The tube brand, tube size, tube lot number and date of change should also be recorded on the tracheostomy sign over the patient's bed. Important information to have at hand should an emergency airway issue occur. If tube found to be faulty can inform tube manufacturers from which batch the tube belongs.

Links to related PPPGs:

- [Tracheostomy Care and Management Guideline \(SJH:N069\)](#)
- [Tracheostomy Care and Management Guideline: Associated Documents](#)