



CHANGING A TRACHEOSTOMY TUBE

Staff this document applies to:

- Nurses, Physiotherapists and Medical staff, on all campuses
- Victorian Respiratory Support Service (VRSS) and the Tracheostomy Review and Management Service (TRAMS) who manage patients with a long term tracheostomy in the community.

Does not apply to tracheostomy tube changes for:

- Microvascular free flap surgery patients.
- Patients identified as 'high risk' for complications by the treating team, TRAMS or as listed on the ICU Tracheostomy Discharge Form (FAH113050). For these patients please contact ICU or TRAMS for further discussion.

Who is authorised to Perform this Procedure:

Clinical staff who have been trained in changing tracheostomy tubes (TT).

State any related Austin Health policies, procedures or guidelines:

- [Tracheostomy - Mandatory Equipment & Emergency Tracheostomy Management Poster](#)
- [Emergency Response to Accidental Decannulation](#)
- [Recognising and clearing a blocked Tracheostomy Tube](#)
- [Suctioning via the Tracheostomy](#)
- [Tracheostomy Cuff Management](#)
- [Tracheostomy Related Bleeding](#)
- [Aseptic Technique](#)

Purpose:

- Removal of one tracheostomy tube (TT) and replacement with another of the same or different type/size.
- Changes occur on a PRN, routine or emergency basis.

Definition:

High risk TT change

- Patients identified as 'high risk' for complications by the treating team, TRAMS or as listed on the ICU Tracheostomy Discharge Form (FAH113050)
- Known complications with previous TT changes
- A patient who presents with insufficient information related to TT insertion or changes
- A patient who is completely dependent on invasive ventilation, especially on primary TT change
- If 7 days or less since initial TT insertion

Airway Specialist

- ICU Consultant, Anaesthetist, ENT, Thoracic or Maxillofacial surgeon

Clinical Alerts:

- Changing a TT carries significant risks including loss of airway or bleeding.
- Emergency TT changes occur when the tube has become blocked or accidentally dislodged
- In the mechanically invasively ventilated patient, cuff failure may require urgent TT change
- Downsizing a TT carries significant risk. It may cause increased work of breathing, respiratory distress, reduced cuff seal and decreased SpO₂
- Upsizing a TT can cause bleeding and trauma. It will also reduce the airflow around the TT and may impact on speech. Any upsizing should be discussed with an airway specialist. Speech Pathology consult may be required
- When changing to a different type or size TT, consider fibre optic endoscope examination to confirm TT position within trachea
- A TT change is a two-person procedure in the acute setting because the airway must be secured at all times.
- A patient completely dependent on mechanical invasive ventilation optimally requires 3 clinicians to undertake the procedure. One clinician is solely responsible for securing the ventilation in the acute setting.
- TRAMS Community or VRSS Outreach patients with a long term TT, well-formed stoma and stable airway can have their TT changed by one person or with an assistant (i.e. carer).
- If patient considered 'high risk' for TT changes, seek advice from an airway specialist to determine the most appropriate procedure and location for these changes.

Expected Outcome:

- TTs are routinely changed every 6-8 weeks or when clinically indicated.
- A confirmed fault in TT should be rectified as a priority. If the fault compromises the patient, a TT change should be considered.

Equipment:

- Appropriate TT for insertion.
- Spare TT of the same size; extra TT one size smaller.
- Lubricant.
- 10ml syringe (non-luer lock).
- Dressing pack.
- Sterile normal saline.
- Stoma dressing.
- Tracheostomy tapes or ties.
- Clean gloves (sterile gloves required if < 7 days post initial insertion).
- Safety eye wear.
- Suction catheters, standard size 12s should always be available.
- Suction device and tubing.
- Yankauer suction catheter
- Cuff manometer (utilised in the hospital setting if air-filled cuff).
- Stethoscope.
- Tracheal dilators - for use by trained staff only.
- Water for cleaning suction tubing.
- Waste disposal bag.
- Pulse oximetry.
- Air Viva with flex tubing and 15mm tracheostomy swivel connector and face mask

Procedure:

Stage 1 – Preparation (applies to all TT changes)

- Check mandatory tracheostomy equipment is available and working.
- Place the oximeter on the patient and if required, pre-oxygenate the patient.
- Explain the procedure to the patient.
- Position the patient comfortably with neck slightly extended (remove head pillow).
- Suction the oral cavity.
- If the TT has an above cuff suction port, remove above cuff secretions.
- Suction via TT if indicated
- Ensure new suction catheter is connected and ready for use.
- Open dressing pack.
- If the new TT has a cuff, check that the cuff functions correctly.
- Check that the introducer can be removed easily.
- Lubricate the TT and introducer.
- Clean the stoma site with normal saline.

Stage 2 – Tracheostomy Tube change procedure (Refer to applicable patient group: Table 1)

TABLE 1: Tracheostomy tube change in different patient groups

Hospital Patient – breathing spontaneously

- Clinician 1 deflates the cuff (if present) removes the tapes or ties and holds the TT
- Clinician 2 suctions patient via the TT until secretions are cleared
- Clinician 1 removes the existing TT
- With introducer in situ, clinician 1 promptly inserts new TT into the stoma ensuring that the tip of the TT is directed posteriorly through the stoma.
- Remove the introducer immediately and ensure airway patency by passing a suction catheter through TT.

Hospital Patient – ventilated via TT

- Clinician 1 deflates the cuff (if present) removes the tapes or ties and holds the TT,
- Clinician 2 suctions patient via the TT until secretions are cleared.
- Clinician 1 removes the existing TT.
- With introducer in situ, Clinician 1 promptly inserts new TT into the stoma ensuring that the tip of the TT is directed posteriorly through the stoma.
- Remove the introducer immediately and ensure airway patency passing a suction catheter through TT.
- Clinician 3 (if available) disconnects the ventilator circuit from the removed TT and reconnects to the new TT.

TABLE 1: Tracheostomy tube change in different patient groups (continued)

Community Patient – breathing spontaneously

- Deflate the cuff (if present) and suction if indicated
- Hold hub of TT and remove the tapes or ties
- Holding the hub, remove the existing TT
- With introducer in situ, insert new TT into the stoma ensuring that the tip of the TT is directed posteriorly through the stoma.
- Remove the introducer immediately and ensure airway patency
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Community Patient – ventilated via TT

- Clinician 1 (or Assistant) deflates the cuff (if present) and suctions if indicated
- Clinician 2 (or Assistant) removes the tapes or ties, then removes the existing TT
- With introducer in situ, clinician 2 promptly inserts new TT into the stoma ensuring that the tip of the TT is directed posteriorly through the stoma.
- Remove the introducer immediately and ensure airway patency.
- Assistant disconnects the ventilator circuit from the removed TT and reconnects to the new TT.

Stage 3 – Post Tracheostomy Tube Change (applies to all tube changes)

- Inflate the cuff (if present) and check adequate cuff pressure via a manometer or using the minimal occlusive volume technique (MOV). See: [Tracheostomy Cuff Management](#)
- Secure the TT with tapes or ties.
- Replace humidification if in use.
- Suction patient if indicated.
- Place clean dressing around stoma.
- Ensure correct mandatory tracheostomy equipment including correct sized spare TTs are at the patient bedside

Post Procedure:

- Observe the patient for signs of respiratory distress (i.e. ↑ RR, ↑ HR, ↓ SpO₂, ↑WOB). Call CODE Blue if required.
- Report excessive bleeding from stoma or excessive granulation tissue to medical staff. See [Tracheostomy Related Bleeding](#)
- Staff members should advise individuals caring for the patient to notify medical staff if blood-staining in the sputum becomes excessive or does not clear over the next few hours.
- Document the outcome of the TT change:
 - Date of TT change.
 - Cuffed TT (record amount of water/air replaced in the cuff, or manometer pressure reading).
 - Date of next routine TT change.
- Place the product sticker or note the type and size of the TT in the progress notes.

Author/Contributors:

TRAMS Policy and Procedure Committee (Updated September 2018)

Legislation/References/Supporting Documents:

Agency for Clinical Innovation (2013), Care of Adult Patients in Acute Care Facilities with a Tracheostomy: Clinical Practice Guideline

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