

TRACHEOSTOMY REVIEW AND MANAGEMENT SERVICE (TRAMS) CLINICAL PROCEDURE

CHANGING A TRACHEOSTOMY TUBE

Staff this document applies to:

- Nurses, Physiotherapists and Medical staff,
- Only clinicians who have completed training in changing a tracheostomy should do so
- 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 ICU. Contact ICU or TRAMS for further discussion.

Related Austin Health policies, procedures or guidelines:

[Aseptic Technique](#)

[Emergency Response to Accidental Decannulation](#)

[Recognising and Managing a blocked Tracheostomy Tube](#)

[Suctioning via the Tracheostomy](#)

[Tracheostomy - Mandatory Equipment & Emergency Tracheostomy Management Poster](#)

[Tracheostomy Cuff Management](#)

[Tracheostomy Related Bleeding](#)

Key points:

Procedure: [Stage 1 - Preparation \(applies to all TT changes\)](#)

Procedure: [Stage 2 - Changing the tracheostomy tube in the HOSPITAL INPATIENT](#)

Procedure: [Stage 2 - Changing the tracheostomy tube in the COMMUNITY PATIENT](#)

Procedure: [Stage 3 - Post Tracheostomy Change \(applies to all tracheostomy changes\)](#)

Purpose:

To describe the procedure of changing a tracheostomy tube

Rationale:

- The procedure for changing a tracheostomy involves removing one tracheostomy tube (TT) and replacing it with another, which may be of the same or a different type or size.
- Tracheostomy tube changes occur on a PRN, routine or emergency basis.
- TTs are routinely changed every 6-8 weeks or when clinically indicated.

- If a faulty TT is instilled and is impacting on a patient's condition / care, a TT change should be considered as a priority (for example in the event of cuff leak in an invasively ventilated patient.).

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 always secured.
- A patient completely dependent on invasive mechanical ventilation ideally requires 2-3 clinicians to perform the procedure. One clinician is solely responsible for securing the ventilator and managing the ventilator circuit 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.

Definitions:

High risk TT change

- Patients identified as 'high risk' for complications by the treating team, TRAMS or ICU.
- 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 it has been 7 days or less since initial TT insertion.
- If patients have been deemed high risk, tracheostomy tube changes should take place with 2 trained clinicians.

Airway Specialist or Advanced Responders

- Intensivist, Anaesthetist, ENT, Thoracic or Maxillofacial surgeon
- A trainee or consultant doctor with specialist airway skills

Equipment:

- Routine PPE for tracheostomy care: ☒ surgical mask, disposable apron, eye protection, clean gloves (NB: sterile gloves are required if < 7 days post initial insertion).
- Appropriate size of TT for insertion.
- Spare TT of the same size
- Spare TT one size smaller.
- Lubricant.

- 10ml syringe (non-luer lock).
- Dressing pack.
- Sterile saline (Sodium Chloride 0.9%).
- Stoma dressing.
- Tracheostomy tapes or ties.
- Clean gloves (sterile gloves required if < 7 days post initial insertion).
- Suction catheters, standard size F12s 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)

Stage 1 – Preparation

- Ensure 2 clinicians are present for tracheostomy change within the acute setting, however if TT change in the community setting this can be done with one clinician (see clinical alert section and High-Risk definition)
- Check that 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 (Sodium Chloride 0.9%).

Procedure: Stage 2 – Changing the tracheostomy tube in the HOSPITAL INPATIENT

Spontaneously breathing patient (NOT on a ventilator):

- Clinician 1: deflates the tracheostomy cuff (if present).
- Clinician 2: suctions the tracheostomy.
- Clinician 1: removes the tapes and then removes the existing tracheostomy.
- Clinician 1: With the introducer/obturator in situ, promptly insert the new TT into the stoma. Ensure that the tip of the TT is directly posteriorly through the stoma. Remove the introducer/obturator immediately.
- Both Clinicians: Secure the tracheostomy tapes.

- Clinician 2: suction the tracheostomy tube.

Invasively ventilated patient (ventilated via the TT)

- Clinician 1: deflates the tracheostomy cuff.
- Clinician 2: suctions the tracheostomy tube.
- Clinician 2 (or 3rd clinician if available): is responsible for managing the ventilator and ventilator circuit.
- Clinician 1: removes the tapes and then removes the existing tracheostomy tube.
- Clinician 1: with the introducer/obturator in situ, promptly insert the new TT into the stoma. Ensure that the tip of the TT is directly posteriorly through the stoma. Remove the introducer/obturator immediately and continue to physically hold new TT in placed.
- Clinician 2 (or 3rd clinician if available): reattaches the ventilator circuit to the newly inserted tracheostomy and ensure that the patient is ventilating adequately.
- Clinician 2 (or 3rd clinician if available): reinflate the tracheostomy cuff.
- Clinician 1 and 2: resecure TT with tracheostomy tapes.

Procedure: Stage 2 - Changing the tracheostomy tube in the COMMUNITY PATIENT

Spontaneously breathing patient (NOT on a ventilator):

- Deflate the cuff (if present).
- Suction the tracheostomy tube (if indicated).
- Remove the tapes and then remove the existing tracheostomy tube.
- With the introducer/obturator in situ, promptly insert the new TT into the stoma. Ensure that the tip of the TT is directly posteriorly through the stoma. Remove the introducer/obturator immediately.
- Resecure TT with tracheostomy tapes.
- Suction the tracheostomy tube if required and ensure that the tracheostomy is patent.

Invasively ventilated patient (ventilated via the TT)

- Clinician 1 (or assistant): deflates the tracheostomy cuff.
- Clinician 2 (or assistant): suctions the tracheostomy and is responsible for managing the ventilator and ventilator circuit.
- Clinician 1: removes the tapes and then removes the existing tracheostomy tube.
- Clinician 1: with the introducer/obturator in situ, promptly insert the new TT into the stoma. Ensure that the tip of the TT is directly posteriorly through the stoma. Remove the introducer/obturator immediately and continue to physically hold new tube in place.
- Clinician 2 (or assistant): reattaches the ventilator circuit to the newly inserted tracheostomy and ensure that the patient is ventilating adequately Clinician 2: reinflate the tracheostomy cuff.
- Clinician 1 and 2: resecure TT with tracheostomy tapes.

Procedure: Stage 3 – Post Tracheostomy Change (applies to all tracheostomy 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](#).
- Ensure the TT tapes or ties are appropriately secured.
- Replace humidification if in use.
- Suction patient's tracheostomy if indicated.
- Place clean dressing around stoma.
- Ensure correct mandatory tracheostomy equipment including correct sized spare TTs are at the patient bedside.

- Observe the patient for signs of respiratory distress (i.e. ↑ RR, ↑ HR, ↓ SpO₂, ↑ WOB). Call Respond Blue if any signs of distress.
- 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 bloodstaining 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.

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VRSS Outreach

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Legislation/References/Supporting Documents:

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