TRACHEOSTOMY REVIEW AND MANAGEMENT SERVICE (TRAMS)

CLINICAL GUIDELINE

MANDATORY TRACHEOSTOMY EQUIPMENT & EMERGENCY TRACHEOSTOMY MANAGEMENT POSTER

Staff this document applies to:

- Nurses, Medical Staff, Speech Pathologists and Physiotherapists on all campuses, including the Intensive Care Unit (ICU).
- Does not apply to the community.

Related Austin Health policies, procedures or guidelines:

- Tracheostomy - Stoma Care
- Tracheostomy - Emergency Response to Accidental Tracheostomy Decannulation
- Tracheostomy - Humidification of Inspired Gases in Patients with a Tracheostomy
- Tracheostomy - Management of Patients with Tracheostomy
- Tracheostomy - Planned Tracheostomy Decannulation Procedure
- Tracheostomy – Recognising and Clearing a Blocked Tracheostomy Tube
- Tracheostomy - Suctioning via the Tracheostomy Tube
- Tracheostomy – The Suctionaide Tube, use of
- Tracheostomy - Changing a Tracheostomy Tube
- Tracheostomy Care Changes In Response To Suspected Or Confirmed Covid-19
- Austin Health COVID PPE Guidelines

Key points:

- Emergency Tracheostomy Management Poster

Purpose:

All safety information and equipment for tracheostomy care and emergency management must be immediately available for tracheostomy care and emergencies. This document outlines the procedures and equipment for routine and emergency care of patients with a tracheostomy tube.

Definitions:

1. **Mandatory Bedside Tracheostomy Equipment:** Essential equipment that is present and accessible at the bedside and is available for routine and emergency care of patients with a tracheostomy tube.

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2. **Mandatory <u>Transport</u> Tracheostomy Equipment:** Equipment that must accompany a patient who has a tracheostomy during all transfers within Austin Health or to another hospital.
3. **Emergency Tracheostomy Management Poster:** This is a cognitive aid that provides important information to assist in the management of tracheostomy emergencies. The front of the poster outlines the immediate response required by ward clinicians. The reverse side of the poster is for Advanced Airway Responders following escalation to RESPOND BLUE.

Clinical Alert:

The patient with a tracheostomy is at risk of respiratory failure and/or arrest in the event of complications or emergencies.

Mandatory Tracheostomy Equipment (Bedside and Transport)

- The primary nurse caring for the patient is responsible for ensuring that mandatory tracheostomy equipment is present at the bedside and during transport of the patient.
- The mandatory equipment must be set up prior to receiving a tracheostomy patient.
- Tracheal dilators must only be used by staff trained in use of tracheal dilators

Emergency Tracheostomy Management Poster

- The Emergency Tracheostomy Management Poster (Front side) must be clearly visible and placed above the patient's bed. This assists with the primary response and ward level management of tracheostomy emergencies.
- The Emergency Tracheostomy Management Poster (Reverse side) is to assist the Advanced Responders in an emergency following escalation to RESPOND BLUE.

Expected Outcome:

- All mandatory equipment will be readily available and visible at the patient's bedside at all times and prior to the patient arriving to the ward.
- When a patient who has a tracheostomy tube is transported anywhere in the hospital or to another campus, the tracheostomy mandatory equipment and poster must be taken with them.
- Any mandatory equipment that is used is to be replaced immediately.
- The Emergency Tracheostomy Management Poster will be filled in by:
    - The anaesthetist and/or surgeon responsible for forming new tracheostomies in theatre prior to the patient leaving theatre.
    - The intensivist responsible for forming new tracheostomy in the ICU
    - TRAMS for all ward patients except Ear Nose & Throat (ENT) Acute and readmitted Victorian Respiratory Support Service (VRSS) patients
    - Primary Nurse where ENT or VRSS is the primary unit
- The Emergency Tracheostomy Management Poster is clearly displayed, with complete and current patient related information. The poster will remain with the patient at all times.

Equipment:

1. **Mandatory <u>Bedside</u> Tracheostomy Equipment**

- Emergency Tracheostomy Management Poster
- Tracheostomy checklist (available via SMR Forms: M31.43)
- Humidifier set at 37° C
    - You may use an MR850 humidifier or obtain an AIRVO2 from the TRAMS department Level 3 HSB Monday to Friday 8:30am to 5:00pm. Outside of business hours, an AIRVO2 can be obtained by contacting the after-hours site manager or ward supplies
    - Refer to the Oxygen Therapy Manual for the setup information
    - Check that the humidifier is set to 37°C and a minimum flow of 30L/min flow (exceptions to the delivery of 37°C may exist within the VRSS)
- Functioning suction device, suction canister and tubing
- Suction catheters: standard size 12FG (If a mini tracheostomy tube is in situ, use size 8 or 10FG)
- Yankauer sucker
- Cuff manometer (if tracheostomy has an air-filled cuff). This can be sourced from TRAMS during business hours (Ext 3095) or from the transferring ward after hours.
- Tracheal dilators, for use by trained staff only. (Sterile Stores Level 2, Ext: 3860)
- Bag-Valve-Mask (BVM) (e.g. AirViva), with tracheostomy connector and face mask. (Sterile Stores Level 2 Ext: 3860)
- 2 spare cuffed tracheostomy tubes (one the same size as the tube in situ and another one a size smaller). (Sterile Stores Level 2 Ext: 3860 or contact TRAMS for advice on Ext 3095)
- 10mL syringe
- Water for cleaning suction tubing
- Waste disposal bag
- Tracheostomy dressings (pre-cut by the manufacturer)
- Tracheostomy tapes
- Routine tracheostomy personal protective equipment (PPE)
    - Clean gloves
    - Protective eyewear* (Safety shield or goggles)
    - Disposable apron*
    - Surgical face masks*
    - * For use during aerosol generating procedures (AGP) e.g. tracheostomy suctioning or any procedure that may stimulate forceful coughing (including cuff deflation and one-way valve trials), provision of nebulisers (if required), use of in/ex-sufflation devices or procedures that require the clinician to be in close proximity to the open tracheostomy.

2. Mandatory Transport Tracheostomy Equipment

- Emergency Management Poster
- All items listed above in 'Mandatory Bedside Equipment'
- Portable battery operated suction unit

- Routine tracheostomy PPE should be worn by the healthcare worker responsible for tracheostomy care during transport

3. Emergency Tracheostomy Management Poster

- This should accompany the patient at all times (including during transport)
- Laminated colour version in A3 preferable
- Front side clearly displayed

Procedure:

- At the commencement of each shift, ensure mandatory equipment is available at the patient's bedside and is in working order.
- If the patient is being transported, ensure the mandatory transport tracheostomy equipment and poster is sent with the patient.
- Source Emergency Tracheostomy Management Poster from TRAMS Mon – Fri 8.30am-5pm or print a temporary copy from below.
- Display 'Front' side of the Emergency Tracheostomy Management Poster above the patient's bed.

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Legislation/References/Supporting Documents:

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Endorsed by:

- TRAMS Tracheostomy Policy and Procedure Committee
- Clinical Nursing Standards Committee
- Deteriorating Patient Committee – (Emergency Tracheostomy Management Poster)
- Austin Health Airway Group

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Emergency Tracheostomy Management Poster (Cognitive Aid): FRONT SIDE

EMERGENCY TRACHEOSTOMY MANAGEMENT

PRIMARY RESPONDERS

Not to be used for laryngectomy patients

Blocked tracheostomy

1	Initiate Respond Blue	■ Call 2222
2	Remove	■ Inner cannula (if present) ■ Speaking Valve ■ HME
3	Deflate the cuff	
4	Instill/ Suction/ Nebulise	■ Instill 5ml saline lavage ■ Suction ■ Apply saline nebuliser and suction PRN
5	Oxygen	■ Apply oxygen via nose/ mouth and tracheostomy If tracheostomy remains blocked: > 7 days post initial insertion, consider tracheostomy change by experienced staff < 7 days post initial insertion, do NOT change the tracheostomy. Wait for CODE BLUE team

Accidental decannulation

1	Initiate Respond Blue	■ Call 2222
2	Oxygen	■ Apply oxygen via nose/mouth and tracheostomy stoma if required Consider: > 7 days post initial insertion, experienced staff can reinsert the tracheostomy < 7 days post initial insertion, do NOT reinsert tube. If long blue stay sutures present, pull anteriorly to keep stoma open while waiting for CODE BLUE team

Bleeding from tracheostomy

1	Initiate Respond Blue	■ Call 2222
2	Protect airway	■ Inflate cuff ■ Sit patient up Note: Hyperinflation of tracheostomy cuff +/- direct digital compression may help in the event of catastrophic bleeding
3	Oxygen	■ Apply oxygen via tracheostomy if required
4	IV access	■ Establish wide bore IV access Note: <10mls bright blood activate Urgent Clinical Review Notify surgeon responsible for inserting tracheostomy A CT angiogram neck is recommended to exclude possibility of a tracheo-arterial fistula

FRONT – this side to be displayed

To be completed by airway specialist at time of insertion (Anaesthetist or ICU Doctor).
If not completed please contact: TRAMS (x3095 - Mon-Fri 8:30 to 5pm) / Anaesthetics (x3186) / ICU Doctor (x8409)

PATIENT

UR

Name

DOB

TRACHEOSTOMY INFORMATION

Insertion method

☐ Surgical ☐ Percutaneous

Insertion date / /

Size ☐ 6 ☐ 7 ☐ 8 ☐ 9

Cuff ☐ Yes – Air / Water ☐ No

Last tracheostomy change / /

UPPER AIRWAY INFORMATION

Date / /

Difficult upper airway

☐ Yes ☐ No ☐ Unknown

Laryngoscopy grade

Laryngoscopy device

Mask ventilation (BMV)

☐ 2 hands ☐ Guedel

LMA type / size

COMPLETED BY

Name

Designation

THIS COGNITIVE AID TO REMAIN WITH THE PATIENT AT ALL TIMES

Images in pathway title boxes adapted with permission (NTSP Manual 2013. www.tracheostomy.org.uk) Version 2.0 / Date: 31/07/2020

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Emergency Tracheostomy Management Poster (Cognitive Aid): REVERSE SIDE

EMERGENCY TRACHEOSTOMY MANAGEMENT

ADVANCED RESPONDERS

Not to be used for laryngectomy patients

Difficulty breathing or ventilating via tracheostomy tube

Stop when patient is stable

1	Remove attachments and inner cannula	Remove / disconnect ■ Ventilation circuit and filter ■ Speaking valve or heat moisture exchanger ■ Inner cannula
2	Suction	Pass suction catheter through entire length of tracheostomy tube ■ If suction catheter does not pass: **DO NOT VENTILATE VIA TRACHEOSTOMY TUBE** and proceed to Step 3 ■ If suction catheter passes easily, look listen and feel at tracheostomy – If breathing, apply oxygen via tracheostomy, consider partial obstruction – If not breathing, ventilate tracheostomy with air viva. **STOP IF HIGH RESISTANCE**
3	Deflate tracheostomy tube cuff	Look, listen and feel at mouth ■ If breathing via upper airway, apply oxygen to face ■ If not breathing, manage upper airway – mask ventilate/LMA/ intubate **Consider partial obstruction whether or not breathing**
4	Patient causes	■ Rapidly consider patient causes e.g. large pneumothorax, anaphylaxis, sputum plugging
5	Consider immediate bronchoscopy	**Consider immediate bronchoscopy of tracheostomy tube if scope available and the following apply** ■ New tracheostomy (<10 days old) and ■ Obstructed upper airway
6	Remove tube	■ Remove tracheostomy tube and proceed to the next emergency pathway (Completely removed tracheostomy tube)

Completely removed tracheostomy tube

Stop when patient is stable

1	Assess breathing	■ Patient may be breathing adequately via the tracheostomy stoma or upper airway, no immediate action may be required
2	Consider replacing tracheostomy tube	■ If greater than 7 days post initial insertion, experienced staff can reinsert tracheostomy tube
3	Upper airway	■ Manage upper airway - mask ventilate/ LMA / intubate
4	Upper airway and tracheostomy at same time	■ **Airway team** – manage upper airway ■ **Neck team** – via tracheostomy 1. Primary measures: LMA or paediatric mask over stoma 2. Secondary measures: endotracheal or tracheostomy tube in stoma **Consider:** **– traction on stay sutures** **– tracheal dilators** **– endotracheal tube on bronchoscope** **– bougie / exchange catheter** **– guidewire and Melker**
5	New surgical airway	

Bleeding from tracheostomy

Complete all steps

1	Protect airway	■ Sit upright ■ Hyperinflate tracheostomy cuff ■ Consider pushing finger on bleeding point ■ Pass large bore suction catheter if required
2	Oxygen and IV access	■ Oxygen via tracheostomy ■ Establish wide bore IV access
3	Urgent contact	■ ENT and/or Thoracic surgery ■ Charge Anaesthetist 3186 ■ Theatre ANUM 3466
4	Go to theatre or interventional radiology	**Note:** **– a small bleed may precede a life threatening bleed from a tracheo-arterial fistula**

IN ALL CASES

1. Confirm tracheostomy not laryngectomy
2. Confirm airway information on opposite side
3. Apply oxygen via tracheostomy and face mask
4. Call Code Blue 2222 and assess ABC
5. Use capnography as soon as possible
6. Call surgeon if required

THIS COGNITIVE AID TO REMAIN WITH THE PATIENT AT ALL TIMES

An advanced responder is a trainee or consultant doctor with specialist airway skills eg Anaesthetist, Intensivist, ENT/Thoracic/Maxillofacial surgeon.

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