



RECOGNISING AND MANAGING A BLOCKED TRACHEOSTOMY TUBE

Staff this document applies to:

Medical Staff, Nurses, Physiotherapists and Speech Pathologists on all campuses

Who is authorised to perform this procedure:

Medical staff, Nurses and Physiotherapists

State any related Austin Health policies, procedures or guidelines:

- [Mandatory Equipment & Emergency Tracheostomy Management Poster](#)
- [Humidification of Inspired Gases in Patients with Tracheostomy](#)
- [Changing a Tracheostomy Tube](#)
- [Suctioning via the Tracheostomy](#)
- [Tracheostomy Cuff Management](#)
- [Escalation Response to Clinical Deterioration - Austin Hospital](#)

Definition:

- A blocked tracheostomy tube is one in which airway patency is compromised by:
 - dried secretions
 - blood clots
 - a displaced over-inflated cuff
 - the tracheal wall (if the tracheostomy tube is malpositioned)
- Indicators that a tracheostomy tube is blocked:
 - The tracheostomy tube feels roughened when passing a suction catheter
 - There is resistance felt when passing a suction catheter
 - Inability to pass a suction catheter through the tracheostomy tube

Clinical Alert:

- A blocked tracheostomy tube is an emergency, and can result in respiratory arrest or death. Call a Code Blue.
- A partially blocked tracheostomy tube can quickly progress to becoming completely blocked, and should be regarded as an impending emergency. If unable to restore complete patency, the tracheostomy tube should be changed
- Respiratory distress, increased work of breathing, or increased airway pressures in mechanically ventilated patients, should be assumed to be due to tracheostomy tube blockage until proven otherwise.

Expected Outcome

- Maintaining a patent tracheostomy tube is vital to the safety of the patient
- A patient who has a blocked tracheostomy tube will have their airway cleared or re-established quickly and safely.



Equipment:

- Functioning suction equipment
- Suction catheters: standard size FG12
- Tracheostomy tube of the same size and 1 size smaller.
- Sterile normal saline ampoules
- 10ml syringes.
- Non sterile gloves.
- Cuff manometer (if tracheostomy has an air filled cuff)
- Air viva with face mask and tracheostomy connector
- Pulse oximeter.
- Refer also to: [Mandatory Equipment & Emergency Tracheostomy Management Poster](#)

Emergency Tracheostomy Management

A. Blocked Tracheostomy

- Remove inner cannula (if present)
- Deflate the cuff
- Call a CODE BLUE
- Apply oxygen via nose/mouth and tracheostomy
- Instil 5mls saline into tracheostomy and suction

Specialist Airway Responders

Tracheostomy information

Patient _____ UR _____

Insertion method Surgical Percutaneous

Date of insertion _____ Last TT change _____

Tracheostomy size _____ Cuff Yes No

Laryngoscopy grade on intubation _____ Unknown

Obstructed upper airway Yes No Unknown

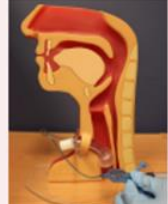
Comment _____

A Specialist Airway Responder is a physician or surgeon with an advanced airway skill level e.g. Anaesthetist, Intensivist, ENT specialist, Thoracic Surgeon or Maxillofacial Surgeon.

CODE BLUE: If Anaesthesia not present call Anaesthesia Senior In Charge (SIC) on ext 3186.

C. Bleeding From Tracheostomy

- Inflate cuff
- Sit patient up
- Apply oxygen via tracheostomy
- <10mls bright blood activate Urgent Clinical Review
- >10mls bright blood call a MET and notify surgeon responsible for inserting tracheostomy
- If major bleeding resp. distress CODE BLUE



B. Accidental Decannulation

- Call a CODE BLUE
- > 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
- Apply oxygen via nose/mouth and tracheostomy stoma if required

Alert: Hyperinflation of tracheostomy cuff => direct digital compression may help in the event of catastrophic bleeding

NOTE: A CT angiogram neck is recommended to exclude possibility of a tracheo-arterial fistula

Specialist Airway Responders

IMMEDIATE MEASURES

- Apply oxygen via tracheostomy and face mask at high flow
- Use capnography as soon as available

CONFIRM

- Tracheostomy not laryngectomy?
- Difficult upper airway? (Consider normal upper airway management)
- When was tracheostomy done?
- Surgical or percutaneous?

REMEMBER

- ABC approach
- Minimal intervention to achieve oxygenation until skilled help arrives
- Is there a surgeon available?

A. Apparently 'Blocked' Tracheostomy Tube

START and PROCEED until patient is improving, then await/consult skilled help (Consider but don't fixate on possible patient causes)

- 1 Remove HME, speaking valve and inner cannula
- 2 Suction down tracheostomy tube well beyond tube end (check length of spare tube at bedside)
 - If able to pass suction, patient may be able to breathe through tracheostomy tube.
 - If able to pass suction and patient is not breathing adequately then ventilate with air viva connected directly to the tracheostomy tube. Cease immediately if it feels obstructed.
- 3 Deflate cuff and repeat suction of tracheostomy tube
 - Patient may be able to breathe around tracheostomy tube through mouth
 - If patient is not breathing adequately then manage the upper airway with bag mask/LMA/intubation (if intubating - the tracheostomy tube may need to be removed to allow passage of the endotracheal tube)
- 4 If the patient is not improving, remove tracheostomy tube and proceed to B. 'ACCIDENTAL DECANNULATION' (Tube Out) in A Tracheostomy
 - Consider immediate fiberoptic examination before tube removal if there is a difficult upper airway

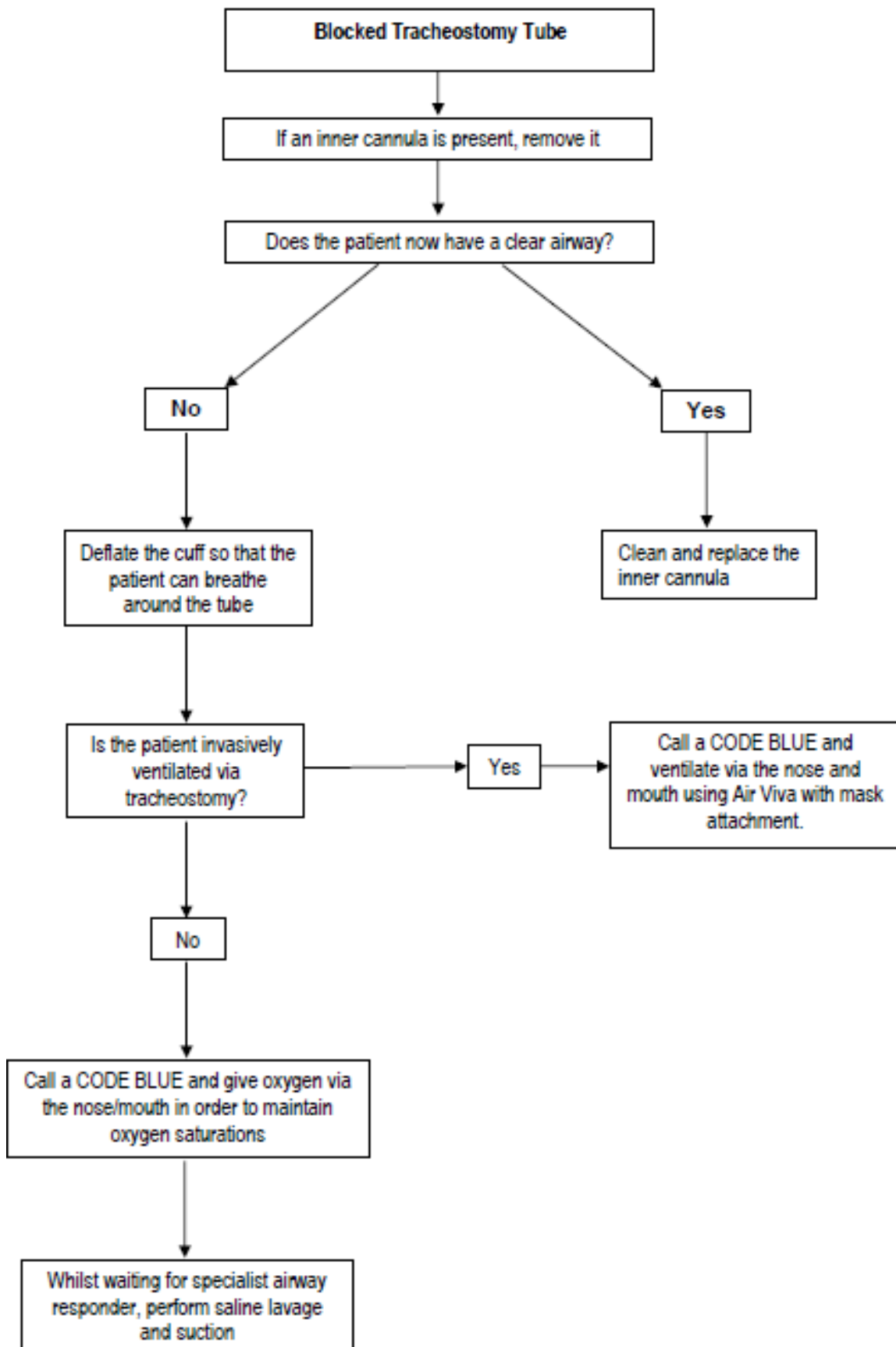
B. 'Accidental Decannulation' (Tube Out) in a Tracheostomy

START and PROCEED until patient is improving, then await/consult skilled help

- 1 Is the patient breathing adequately via tracheostomy stoma or upper airway?
- 2 If tracheostomy stoma appears patent, briefly attempt to replace tracheostomy with a tracheostomy tube the same size or one size smaller
- 3 Manage the upper airway with bag mask/LMA/ intubation
- 4 Access the airway via tracheostomy AND simultaneously continue to manage the upper airway with bag mask/LMA or intubation
 - a. Primary measures
 - Apply LMA or pediatric face mask over stoma and hand ventilate
 - b. Secondary measures: reopen tract and insert ETT or tracheostomy tube
 - If stay sutures present, pull anteriorly to keep stoma open
 - Tracheal dilators
 - Fiberoptic bronchoscope loaded with an ETT
 - Bougie or airway exchange catheter
 - A guidewire, dilator and ETT from Meikert's kit
- 5 Consider performing alternative surgical airway

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Procedure: If Tracheostomy Tube is Blocked or Apparently Blocked:



- If the tracheostomy remains blocked, the tracheostomy should be changed:
 - If it is > 7 days post initial insertion of the tracheostomy, trained clinical staff may change the tracheostomy
 - If it is < 7 days post initial insertion of the tracheostomy, the tracheostomy must be changed by an airway specialist
- Specialist airway responders (ICU Consultant, Anaesthetist, ENT, Thoracic or Maxillofacial surgeon): refer also to the reverse side of [Emergency Tracheostomy Management Poster](#)

Post Procedure:

- Recheck all oxygen and humidification equipment.
- The treating medical team and ward physiotherapist should be notified.
- The patient must remain on a humidifier that heats to a guaranteed 37°C. The use of a Heat Moisture Exchanger (HME) is not acceptable until reviewed by the TRAMS team, a senior physiotherapist or medical staff.
- Monitor oxygen saturations continuously with 30 minute vital observations for 2 hours
- Contact TRAMS on pager 1291 during business hours to review the patient and assist with strategies to prevent further episodes of tube obstruction.
- Document in medical history (including Riskman number)
- Complete Riskman

Legislation/References/Supporting Documents:

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

https://www.aci.health.nsw.gov.au/_data/assets/pdf_file/0005/181454/ACI_Tracheostomy_CPG.pdf

Intensive Care Society Standards. Standards for the care of adult patients with a temporary tracheostomy (2014)

[http://www.ics.ac.uk/AsiCommon/Controls/BSA/Downloader.aspx?iDocumentStorageKey=5b70a7af-c79c-4e49-bca1-648b98c06598&iFileTypeCode=PDF&iFileName=ICS%20Tracheostomy%20Standards%20\(2014\)](http://www.ics.ac.uk/AsiCommon/Controls/BSA/Downloader.aspx?iDocumentStorageKey=5b70a7af-c79c-4e49-bca1-648b98c06598&iFileTypeCode=PDF&iFileName=ICS%20Tracheostomy%20Standards%20(2014))

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