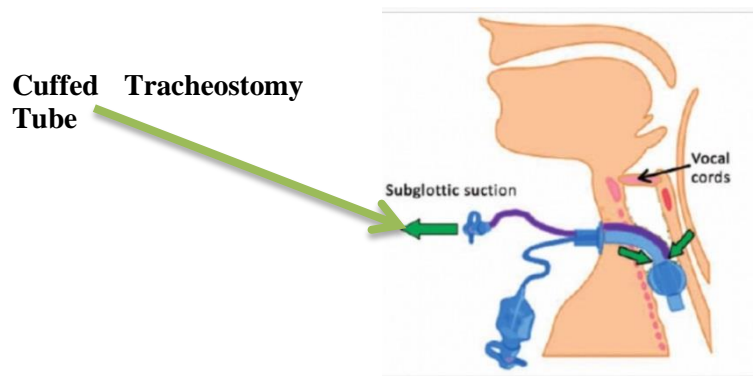




**St. James's Hospital
Tracheostomy Care Working Group.**

**Tracheostomy Cuffed Tube Care SOP
SJH:N069.8 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 for providing care to patients' with Cuffed Tracheostomy Tube (see below picture of a cuffed tracheostomy tube).



1.0 Indications for Cuffed Tube Use

- Immediately post operatively – reduces aspiration (does not fully prevent) of blood or serous fluid from the wound.
- Seals the trachea to facilitate mechanical ventilation.
- Stabilises the tracheostomy tube in the trachea.
- Helps to protect the airway from aspiration due to laryngeal incompetence.
- Minimises aspiration of leakage from tracheo-oesophageal fistula above cuff level.

2.0 Cuffed Tracheostomy Tube Nursing Management

2.1 Tracheostomy cuff is usually inflated **only** in the following circumstances:

2.1.1 The patient is being mechanically ventilated.

2.1.2 Less than 24/48hours post insertion.

2.2 Inflation is specifically ordered by doctor/SLT/Tracheostomy CNS, e.g. high risk of aspiration from gastric or oral secretions.

2.3 It is unusual for patients on general ward areas to need their cuff inflated. In the event that a patient has an inflated cuff their status must be frequently assessed to determine if the patient is suitable for cuff deflation.

2.4 The assessment and instruction regarding cuff inflation must be undertaken by a member of the ENT, Oral and Maxillofacial team, Intensive Care team, SLT or the Tracheostomy CNS.

2.5 In the event that **cuff deflation** is indicated, the nurse/SLT must undertake the following procedures:

2.5.1 Explain procedure to the patient.

2.5.2 Suction oropharynx.

2.5.3 If the patient has a subglottic suction aid tube, gently aspirate the suction port using a 10 mL syringe, this will remove most of the secretions that may have pooled on top of the inflated cuff. It is safe to trial cuff deflation post aspiration of the port (refer to [Tracheostomy tubes available in St. James's Hospital](#) document for additional information).

2.5.3.1 However, if the patient does not have a subglottic suction aid tube prior to cuff deflation, the nurse/SLT with the assistance of a second health care professional (HCP) should suction via the tracheostomy tube while the second HCP slowly aspirates air from air inlet port.

2.5.4 Once deflated, expiratory noises may be heard as air passes up around the tracheostomy tube. The Nurse must reassure the patient that this is normal and will settle.

2.5.5 Indications for cuff re-inflation (National Hospital for Neurology and Neurosurgery 2003)

- Desaturation (must check inner cannula first).
- Respiratory distress and coughing requiring constant suctioning.
- Constant oral drooling.
- No swallow observed.
- Haemorrhage from tracheostomy.

2.5.6 In the event that **cuff re-inflation** is indicated the HCP must undertake the following procedures:

2.5.6.1 Inject approximately 5-7mls of air via the air inlet port to achieve airway seal.

2.5.6.2 Check cuff pressure (refer to section 2.5.7).

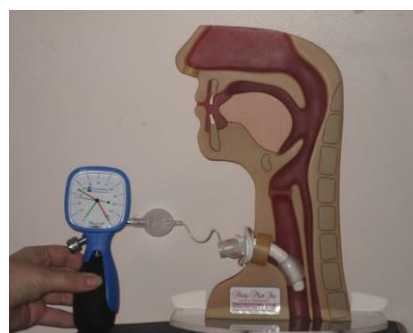
2.5.6.3 Apply a one-way valve system (only applicable to Portex tubes), to prevent injected air from escaping.

2.5.7 Cuff Pressure Measurement

2.5.7.1 Ideal cuff pressure is 25cmH₂O – cuff pressures can range from 22cmH₂O – 32cmH₂O.

High pressures may be required to prevent leaks during positive pressure ventilation; cuff pressures should not exceed 32cmH₂O.

2.5.7.2 Cuff pressures must be measured using a hand held cuff manometer attached to the air inlet port of the tracheostomy tube. Palpation of the external balloon is **not** an adequate method of pressure estimation (Faris et al 2007). See pictures below;



- 2.5.7.3** Procedure for measuring cuff pressure:
- 2.5.7.3.1** Perform hand hygiene.
 - 2.5.7.3.2** Attach clean pressure monitor to cuff balloon and read pressure.
 - 2.5.7.3.3** Ensure cuff pressure is within recommended limits.
 - 2.5.7.3.4** Inflate/deflate using inflation bulb and release screw/or red button as required.
 - 2.5.7.3.5** Document cuff pressure.
- 2.5.7.4** In the event that air continues to leak with pressure exceeding 32cmH₂O, this indicates that the tube needs to be upsized or a trial of an adjustable flange tube should be undertaken to achieve an adequate seal.
- 2.5.7.5** An over-inflated cuff, i.e. with cuff pressure too high, can lead to trauma of the tracheal mucosa which can cause ulceration or stenosis. If left over a prolonged period this can result in a Tracheoinnominate Fistula (TIF). This can be fatal and immediate ENT surgical intervention is required.
- 2.5.7.6** An underinflated cuff, i.e. pressure too low, can lead to an inadequate seal around the cuff, increasing the risk of aspiration and causing loss of positive pressure where the patient is ventilated.
- 2.5.7.7** Cuff pressure monitors must be cleaned between patient use with warm water and detergent, dried and disinfected with Klorsept 17. Note: Cuff Pressure manometer must be patient designated in critical care areas and wiped with large 70% alcohol wipe between each use on patient. On discharge of patient manometer must be cleaned with detergent and warm water, dried and disinfected with Klorsept 17.
- 2.5.7.8** Where a cuff is inflated the cuff pressure must be measured (See Appendix 12 for procedure), and recorded on EPR via 'Lines and Devices-Airway Management' (refer to [Recording Tracheostomy Observations on EPR](#) document for additional information), at least daily or more frequently where indicated for a specific patient or ward / unit policy or Respiratory Assessment Sheet on ICCA if in ICU.

Links to related PPPGs:

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