



**St. James's Hospital
Nursing**

**Tracheostomy Care and Management Guideline
Guideline Number: SJH:N069**

Owner: Tracheostomy Clinical Nurse Specialist: Ms. J. Norton Tracheostomy Care Working Group	Approved by: Director of Nursing: Ms. S. Slattery Consultant Otolaryngologist: Mr. P. Lennon
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This guideline replaces all existing Tracheostomy guidelines from September 2020 onwards and is due for review in September 2023. It will be reviewed during this time as necessary to reflect any changes in best practice, law and /or substantial organisational, professional or academic change.

Distributed to:

- Clinical Directors
- Clinical and Directorate Nurse Managers
- Quality and Safety Improvement Directorate
- Nursing Practice Development Unit staff
- Director of the Centre for Learning and Development
- Trinity College Clinical Skills Lab Manager

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1.0 Introduction

St. James's Hospital (SJH) is committed to the provision of safe, effective, patient-centred care and treatment (HIQA 2012, Theme 2 & 3). In meeting and maintaining this standard, at St. James's Hospital the treatment and care of all patients with a tracheostomy is planned and delivered in consultation with the patient by a specialist Multidisciplinary Team under the supervision of a named Consultant, and in accordance with current evidence-based best practice guidelines.

While each patient's care and treatment is planned and delivered in accordance with their individual needs and preferences, the standardised practices directed herein should be applied where possible in order to ensure the delivery of safe and effective care that facilitates optimal outcomes for the patient and their family/carer.

A tracheostomy is a surgical opening or stoma into the trachea below the larynx. It is undertaken either electively or as an emergency to either overcome upper airway obstruction, facilitate weaning from mechanical ventilatory support and/or for the removal of tracheo-bronchial secretions. The stoma can be temporary or permanent and is usually kept patent by inserting a hollow plastic tube (i.e. a tracheostomy tube with inner cannula).

2.0 Aim

To guide staff in the procedures that they should undertake when caring for a person with a tracheostomy in order to ensure the patient's safety and to minimise the occurrence of associated risks and to assist in their recovery.

2.1 Where required further information or advice relating to general tracheostomy care or the care of a specific person with a tracheostomy should always be sought from a suitably qualified professional i.e. the patient's Medical team and/or the Tracheostomy Clinical Nurse Specialist, accessible on Bleep #538.

3.0 Scope

This guideline applies to the following:

3.1 All Health Care Professionals (HCP) working at SJH that participate in the management of tracheostomy patients (Nursing staff, Medical staff, Speech & Language therapists, Physiotherapists, Nursing students, Health Care Assistants).

3.2 Staff that undertake tracheostomy related care must accept accountability for their practice and ensure that the task undertaken is within their Scope of practice.

3.3 Nursing Competency

3.3.1 It is recommended that nursing staff who provide tracheostomy care frequently to patients should complete their tracheostomy nursing competency to safely and effectively care for patients with a tracheostomy tube. The associated nursing competencies can be accessed via the hyperlink below;

- [Tracheostomy Care](#)
- [Changing the Tracheostomy Tube](#)

3.3.2 Nursing staff in the critical care setting must complete additional components. The additional tasks are highlighted in grey in the nursing care tracheostomy competency listed in 3.3.1.

3.4 Speech and Language Therapists (SLTs) working with patients with tracheostomies are required to complete competency training in accordance with [Irish Association of Speech & Language Therapists \(IASLT\) Tracheostomy Management: Clinical Guideline, 2017](#).

3.5 Nursing students can participate in tracheostomy care as follows:

3.5.1 1st year nursing students can only observe tracheostomy care.

3.5.2 2nd, 3rd and 4th year supernumerary nursing students can carry out tracheostomy care under direct supervision of a Registered Nurse.

3.5.3 4th year Internship nursing students can carry out tracheostomy care under indirect supervision once deemed competent by a Registered Nurse. They must be reassessed each time they change ward on their internship placements to ensure safe practice. The competency can be accessed via the following hyperlink; [Tracheostomy Care and Management Competency for Nursing Interns](#).

3.6 Health Care Attendants working in ENT/Max Fax wards who are trained in Health Service Skills QQI (Quality Qualifications Ireland) Level 5 and have attended the tracheostomy study day and successfully completed the ‘[Competency for Safe Management of Patients with Tracheostomies/ Laryngectomies by HCAs on St. John’s ward](#)’ are permitted to carry out tracheostomy related care within their scope.

3.6.1 St. Johns’s ward HCAs escorting patients with tracheostomy must refer to and practice based on the standards described in the local policy.

3.7 For some aspects of care there is no formal assessment but there may be aspects which require a period of supervised, guided practice e.g. tracheostomy tie renewal.

4.0 Definitions/ Glossary

- Tracheotomy: Incision made below the cricoid cartilage through the 2nd and 3rd, or 3rd and 4th tracheal ring (Dougherty & Lister 2015).
- Tracheostomy: The opening or stoma made by a tracheotomy incision.
- Tracheostomy Tube: Artificial airway inserted into the trachea during tracheotomy.

4.1 Indications / Rationale for Use

- Acute and/or Chronic upper airway obstruction.
- To obtain and maintain a patent airway where compromised by injury or post head and neck surgery.
- To facilitate weaning from mechanical ventilation by decreasing anatomical dead-space.
- To prevent and/or treat retained tracheobronchial secretions.
- To reduce the risk of pulmonary aspiration.

4.2 Associated Clinical Complications

4.2.1 Immediate:

- Haemorrhage
- Pneumothorax/Subcutaneous emphysema
- Thyroid injury
- Posterior tracheal perforation
- Recurrent laryngeal nerve injury
- Cardiopulmonary arrest
- Accidental displacement of the tube
- Failure of procedure

4.2.2 Intermediate:

- Tube occlusion by secretions and/or blood
- Chest Infection, i.e. Hospital Acquired Pneumonia (HAP) up to 34% of patients with tracheostomies may develop nosocomial pneumonia (Georges et al. 2000, Vejdan and Kjosravi 2013, Cipriano et al. 2015).
- Stoma infection
- Tube displacement (McGrath 2014)
- Cuff over/under inflation
- Delayed tracheal haemorrhage

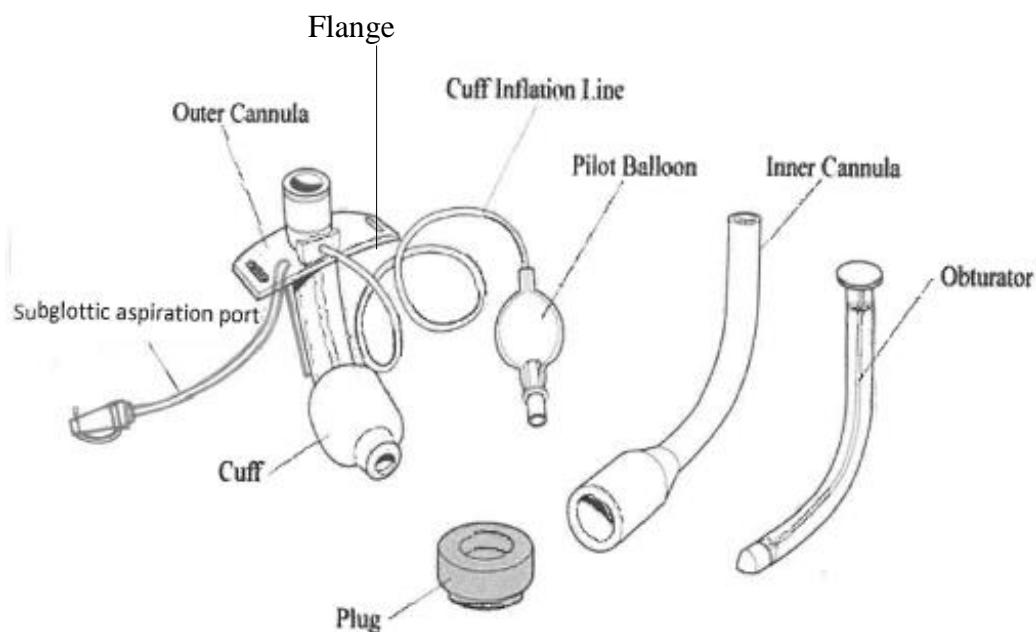
4.2.3 Late:

- Tracheal ulceration.
- Tracheo-innominate fistula.
- Tracheo-oesophageal fistula.
- Tracheo-cutaneous fistula.
- Granulation tissue (skin/tracheal).
- Tracheal stenosis (at incision or cuff site).
- Scar formation.

4.3 Tracheostomy Tubes

4.3.1 All tracheostomy tubes used at St James's Hospital are double lumen tubes, i.e. they have both an outer and inner tube. There are 2 brands of tubes used within the hospital: **Portex and Shiley**, refer to the following documents for further information- [Tracheostomy tubes available at SJH](#) and [Tracheostomy tube size compassion chart](#). All tubes should be routinely changed every 28 – 30 days in order to comply with EU Regulations (EU Directive 1993).

4.3.2 Tracheostomy Tube Components



4.3.2.1 Outer tube/Cannula:

- Licensed for up to 30 days use only (EU Directive 1993).
- Available in various lengths and sizes
- Extended length tube can be used for patients with difficult anatomy.

4.3.2.2 Inner cannula: A removable, disposable tube that fits snugly into the outer cannula to ensure tube patency.

4.3.2.3 Tracheostomy tube inner cannulas

4.3.2.3.1 Portex inner cannula: available 20 per box and 2 per box (see picture below).



4.3.2.3.2 Shiley inner cannula regular length and extended length: available 10 per box (see picture below).



Regular length



Extended length XLT

4.3.2.3.3 Portex adjustable flange inner cannula: Available 10 per box (see picture below).



4.3.2.4 Flange: Flat plastic plate attached to outer tube/cannula which lies flush to the patient's neck.

4.3.2.5 15mm hub: Fits all ventilator and respiratory equipment (Shiley regular length and Shiley extended length (XLT) tubes must have the inner cannula in situ to connect to respiratory equipment).

4.3.2.6 Optional Features:

- 4.3.2.6.1 Cuff:** Inflatable air reservoir (high volume, low pressure). When inflated, the cuff helps anchor the tube in place and provides an airtight seal which facilitates artificial ventilation. It may also help in reducing aspiration of oral secretions, vomit and blood from the upper airways, but will not completely prevent aspiration. To inflate, air is injected via the Inlet valve.
- 4.3.2.6.2 Inlet valve:** One-way valve that prevents spontaneous escape of injected air.
- 4.3.2.6.3 Inlet line:** Route for air from air inlet valve to cuff.
- 4.3.2.6.4 Pilot Cuff:** Serves as indicator of the amount of air in the cuff.
- 4.3.2.6.5 Subglottic aspiration/suction port:** Allows for aspirated secretions that collect above the cuff of the tracheostomy tube to be removed, thereby reducing the risk of aspiration and associated risks of infection (Ledgerwood et al 2013). It can also be used for above cuff vocalisation (McGrath et al. 2016).
- 4.3.2.6.6 Fenestration:** Single or multiple holes situated on the curve in the middle of the upper aspect of the tube or inner cannula that is used to enhance the passage of air in and out of the trachea, helping patients return to normal breathing style, facilitating speech and a more effective cough (see picture below). For further information refer to [Tracheostomy Fenestrated Tube Care Standard Operating Procedure \(SJH:N069.9\)](#).



- 4.3.2.6.7 Speaking valve:** A one-way valve that redirects expiratory airflow through the larynx, facilitating voice. If the patient has a cuffed tube in place it is essential that the cuff is fully deflated before fitting the valve.
- 4.3.2.6.7.1** The Passy Muir Valve (PMV) is the speaking valve of choice in SJH but alternative valves are sometimes sourced when required (see picture on page 7).



4.3.2.6.7.2 For information on speaking valve protocol for ventilated and non-ventilated patients and COVID-19 considerations when fitting a speaking valve refer to [Tracheostomy: Non-Verbal and Verbal Communication Standard Operating Procedure \(SJH:N069.10\)](#).

4.3.2.7 Tracheostomy button or occlusive cap/plug: Used to occlude the tracheostomy tube opening as part of the weaning and decannulation process, usually in the ENT patient group. Capping ensures the patency of the upper airway prior to tube removal.



Occlusive cap/plug

5.0 Standards

- 5.1 [Tracheostomy: Bed Side Equipment Requirements SOP \(SJH:N069.1\)](#)
- 5.2 [Tracheostomy: Insertion Techniques \(Surgical and Percutaneous\) SOP\(SJH:N069.2\)](#)
- 5.3 [Tracheostomy: Inner Cannula, Stoma and Tie care SOP \(SJH:N069.3\)](#)
- 5.4 [Tracheostomy: Flange and Stay Suture Care SOP \(SJH:N069.4\)](#)
- 5.5 [Tracheostomy: Suctioning SOP \(SJH:N069.5\)](#)
- 5.6 [Tracheostomy: Closed Suction Technique SOP \(SJH:N069.6\)](#)
- 5.7 [Tracheostomy: Humidification of Inspired Gases SOP \(SJH:N069.7\)](#)
- 5.8 [Tracheostomy: Cuffed Tube Care SOP \(SJH:N069.8\)](#)
- 5.9 [Tracheostomy: Fenestrated Tube Care \(SJH:N069.9\)](#)
- 5.10 [Tracheostomy: Non-Verbal and Verbal Communication SOP \(SJH:N069.10\)](#)
- 5.11 [Tracheostomy: Swallowing Assessment and Management SOP \(SJH:N069.11\)](#)
- 5.12 [Tracheostomy Tube Change SOP \(SJH:N069.12\)](#)
- 5.13 [Tracheostomy Weaning and Removal SOP \(SJH:N069.13\)](#)
- 5.14 [Tracheostomy: Transferring Patients \(SJH:N069.14\)](#)
- 5.15 [Tracheostomy/Laryngectomy: Emergency Management of Patients' SOP \(SJH:N069.15\)](#)
- 5.16 [Tracheostomy/Laryngectomy: Discharging Patients' SOP \(SJH:N069.16\)](#)
- 5.17 [COVID-19: Tracheostomy/Laryngectomy Patient Management SOP \(SJH:069.17\)](#)

6.0 Education and Training

- 6.1 Attendance at the Tracheostomy study day is recommended for all healthcare professionals who are actively involved with tracheostomy patient management as it provides in depth information and training on recommended care and practice.
- 6.2 Each healthcare professional is individually accountable for keeping up to date with advances in patient care procedures and must acknowledge any limitations in their own competence (see 3.3 and 3.7).

7.0 Monitoring, Audit and Quality Assurance

- 7.1 The Tracheostomy care and management guidelines are reviewed and updated as required by the Tracheostomy Working Group.
- 7.2 Compliance with the practices directed herein are routinely monitored by the Tracheostomy Working Group.
- 7.3 Non or poor compliance or practice issues are addressed by the Tracheostomy Working Group.
- 7.4 All adverse incidents and/or near misses related to tracheostomies must be reported as outlined in the [Safety Incident: Reporting & Management Policy \(SJH:QSID-004\)](#).
- 7.5 All reported incidents are analysed, and investigated as appropriate. The implementation of any required corrective actions and/or improvements are overseen by the Tracheostomy CNS in collaboration with Risk Management.

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Document Status i.e. New, Revision, replaced etc.	Version Number	Revision Date	Description of changes
Revision	5	September 2020	<ul style="list-style-type: none"> • Title changed to ‘Tracheostomy Care and Management Guideline’. Previous title: Tracheostomy Guidelines. • Whole guideline revised as per latest evidence base including COVID-19 guidance on Tracheostomy care. • Updated: Point 4.2 Associated clinical complications. • Addition: Point 4.3.2.6.5 on Subglottic aspiration/suction port. • Updated: Trays are available on St.Johns’ ward. Removed long store in ICU. • Addition: Guidance document on Tracheostomy Flags established. • Addition: New SOPs established for the following scenarios- Discharging a tracheostomy/laryngectomy patient, COVID-19 Tracheostomy and Laryngectomy patient care. • Updated: SOP on Tracheostomy Emergencies, information on tracheostomy tubes, tracheostomy monitoring sheet, NSV Codes. • Addition: Troubleshooting for AIRVO added. • Updated: Competencies for Nurses, 4th year Internship Nursing students and HCAs. • Document modified to reflect implementation of EPR. • Updated: References.
			Person Responsible: Ms. J. Norton, Tracheostomy Clinical Nurse Specialist, St. James’s Hospital.
			<ul style="list-style-type: none"> • New document number assigned to reflect updated SJH PPPG Register. • Document comprehensively reformatted to meet SJH PPPG requirements. 100 paged Tracheostomy guideline restructured to 1 guideline (10 pages), 17 SOPs and 9 Tracheostomy associated documents. The SOPs and associated documents are accessible on intranet- Tracheostomy Care and Management Guideline: Associated Documents. • Historical document log from June 2008 - Dec 2015 removed and saved in the NPDU PPG folder.
			Person Responsible: Ms. S. Vijay, Nursing Practice Development Facilitator, NPDU.