TRACHEOSTOMY CARE

STROKE DAY PRESENTATION

Tracheostomy CNS team.

St James Hospital

TRACHEOSTOMY CNS TEAM

Who are we?

Tracheostomy CNS service is run by 2 WTE posts shared amongst 3 staff

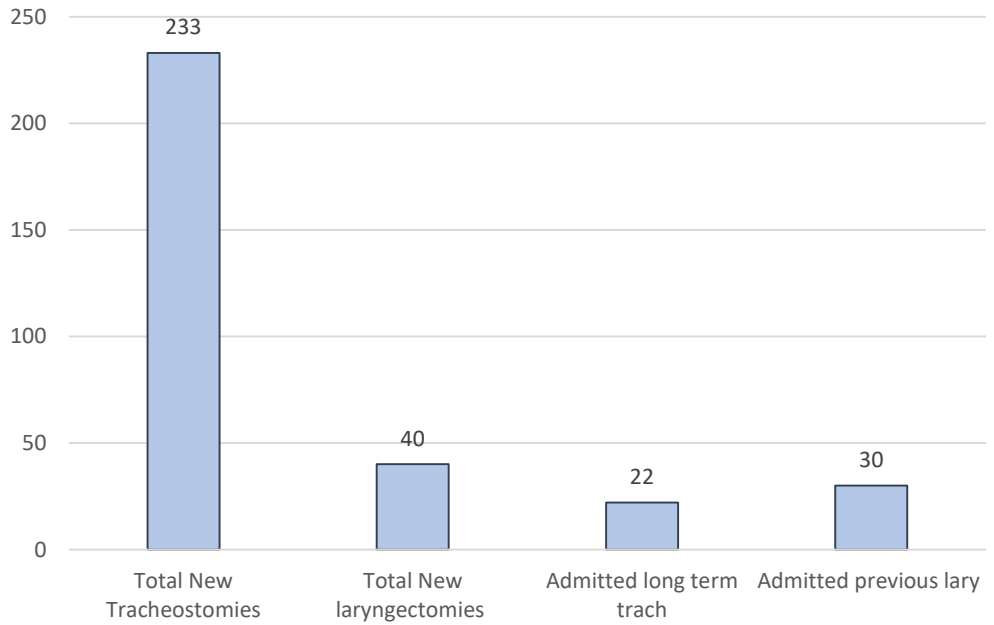
What we do ?

The tracheostomy team provides support and education to all 'Neck Breathers', i.e. all patients' with a tracheostomy tube or laryngectomy stoma.

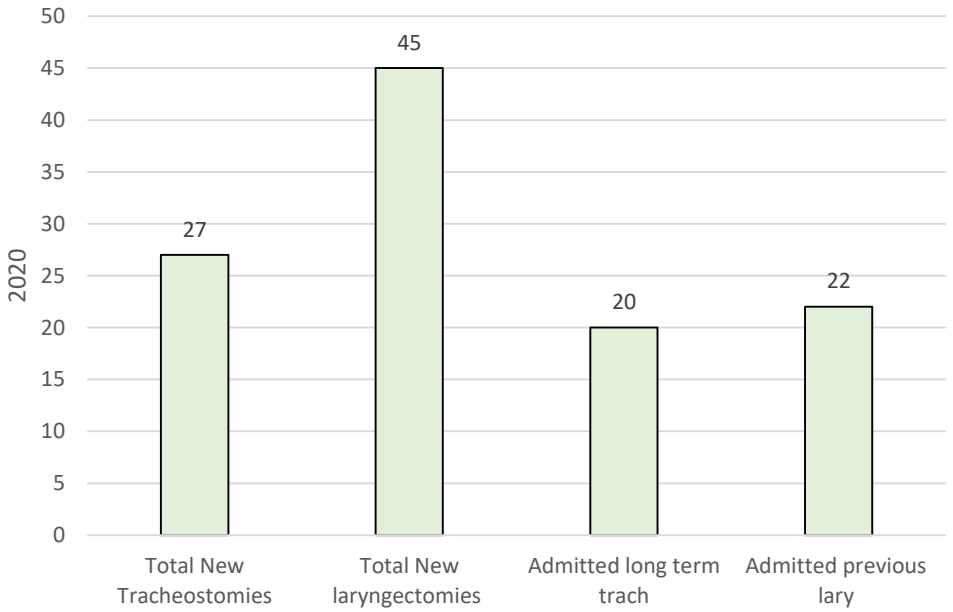
What does our service include?

- Standardised tracheostomy guidelines
- SJH tracheostomy study day 4 times a year/ local in house education
- Patient and family education
- Outreach service
- Nurse led tube change clinic

Total number of neck breathers inpatient in 2020 at SJH



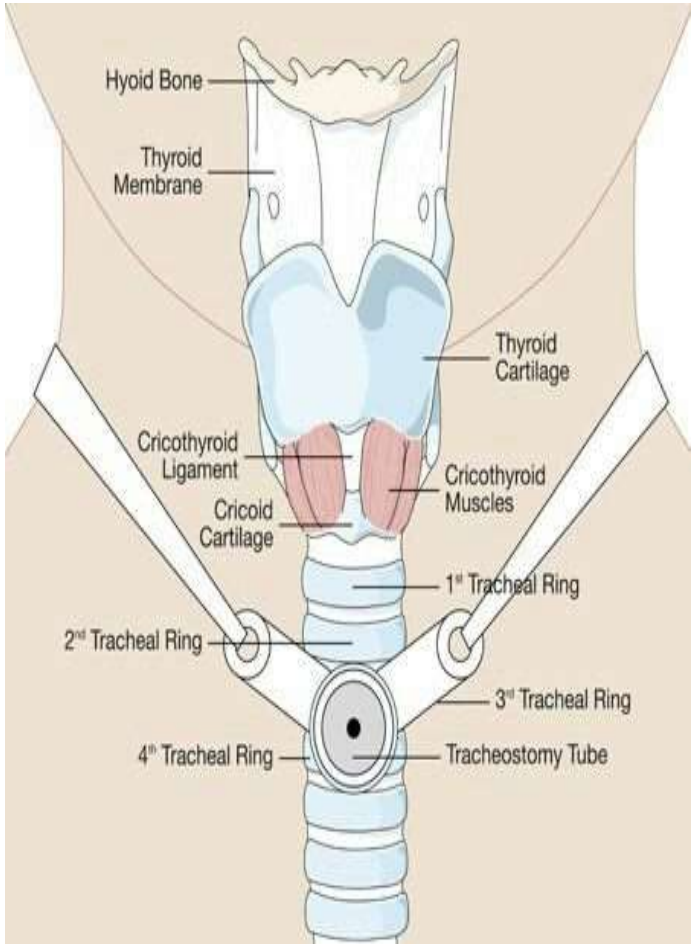
Average length of stay in days at SJH



TRACHEOSTOMY

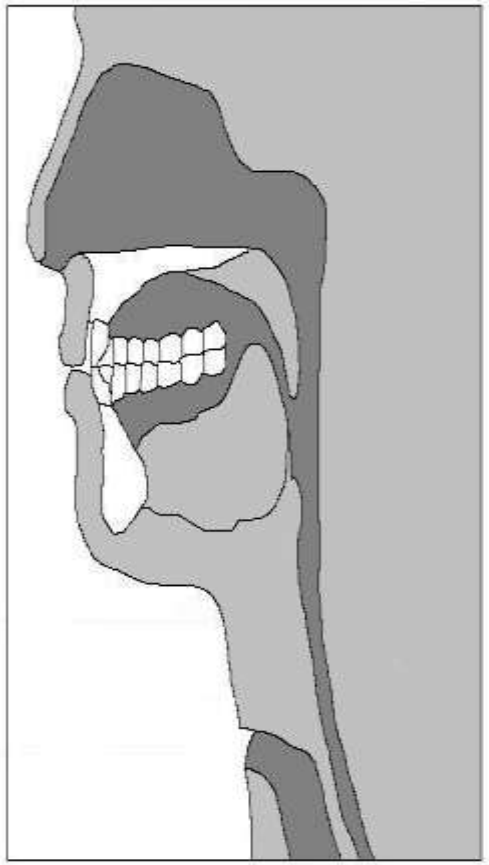
- Incision made below the cricoid cartilage through the 2nd -4th tracheal ring.

- There is still a connection between the nose or mouth to the lungs.

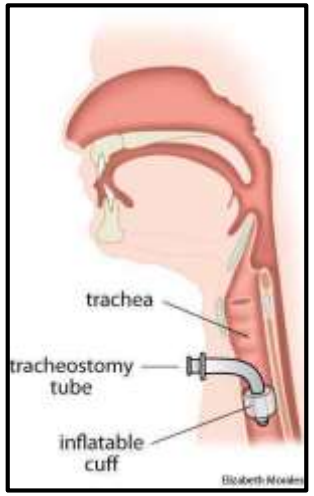


LARYNGECTOMY

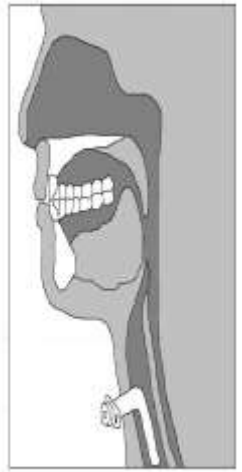
- The complete surgical removal of larynx (voice box) which connects the upper airway (nose and mouth) to the lungs .
- This is permanent and irreversible procedure
- The trachea is cut. The open end is then stitched in front of the neck



Tracheostomy vs laryngectomy



Tracheostomy	Laryngectomy
Temporary stoma maintained with tracheostomy tube	Permanent stoma
Normal anatomy is intact	Trachea permanently separated from the oesophagus
Hard tube, usually double lumen	Soft tube, single lumen. But may have tracheostomy tube if ventilated or fistula noted.
Speaking valve can be used when cuff is down	Speaking valve or caps must NEVER be used. **There is no upper airway & patient will suffocate**



INDICATIONS FOR TRACHEOSTOMY

1. Prolonged Mechanical ventilation; *Facilitate weaning, failure to extubate eg; COVID pneumonitis.*

2. Bypass an upper airway obstruction; *Tumours, trauma, infection or post operative swelling*

3. Assist with clearing of secretions; *Poor cough, chronic respiratory failure, impaired gag reflex, burns patients*

4. Prevention of aspiration of oral or gastric secretions. *Stroke, Bilateral vocal cord paralysis*

SURGICAL OR PERCUTANEOUS

Surgical

- Inserted by ENT team on theatre.
- Will have a stay suture usually secured to patients chest.
- Stay suture can be removed day 10
- Tracheostomy flange sutures can be removed day 7, *plastics neck ties*

Percutaneous

- Inserted by anaesthetics in ICU at patients bedside

Tube change

- ✓ Tube change 5-7 days post insertion as the tract is well formed.
- ✓ 1st tube change should be carried out by a competent doctor/Anaesthetist/tracheostomy CNS/ ICU ANP.

Know your patient

The purpose of a tracheostomy tube is to maintain a patient airway and permit the removal of broncho tracheal secretions

When caring for a patient it is vital that you know

- Why the tracheostomy tube was inserted in the first instance.
- Whether the upper airway is patent, partially or completely obstructed.
- How long, date the tracheostomy was performed.
- Surgical or percutaneous insertion.

Know your tube type

Know your tube type, size, inner cannula size and the tubes functions.

- Portex/ shiley
- Cuffed – non cuffed
- Fenestrated/ non fenestrated
- Adjustable flange tube
- XLT- Extended length

PORTEX BLUSELECT TRACHEOSTOMY

- Cuffed tube
- Softer flange
- Subglottic port, reduce risk of aspiration, help keep stoma dry
- PMV function
- Tube size and inner cannula size are the same.

Fenestrated & non fenestrated

- Facilitate and improve speech
- Wean towards decannulation
- Long term tracheostomy patient.

UniPerc
adjustable flange tube

Shiley extended length tube

- Portex adjustable flange is excellent if patient has a persistent air leak with regular tube or altered anatomy
- Used to bypass an obstruction further down the airway
- Uniperc inner cannula made from silicone, usually checked ever 4hrs only replaced every 24hrs

NURSING CARE FOR STROKE PATIENTS WITH TRACHEOSTOMY

- Send tracheostomy CNS referral on EPR
- Emergency equipment- *tracheostomy tray, tracheostomy dilator, green bed head sign, functional suction, spare tube, inner cannulas, sterile gloves.*
- Check cuff pressure- *Cuff remain inflated for first 24hrs, 25-30 mmhg once per shift.*
- Subglottic port aspiration- *if the tube has the function, aspirate 4hrly and record, this will reduce the risk of aspiration, keep area around tracheostomy dry and guide cuff deflation.*
- Check inner cannula- *4hrly or more frequent if sputum thick and sticky, maintaining a patient airway. must be the same size as the tube*
- Check tracheostomy site- *clean with saline, monitor for pressure sore, protect with duoderm or use aquacel foam if wet, Polymem if at risk of developing pressure sore.*
- Tracheostomy ties- *leave 1 finger space, change once a week it is a 2 person technique, if confused use both- Velcro with cotton tie over.*
- Secretion load: *Blue dye test, subglottic aspiration , scopoderm patch/ Botox*
- Communication
- Speaking valve- *PMV only place once cuff is deflated & patient is awake*
- Suction
- Humidification

CUFF PRESSURES

Cuff should remain inflated for first 24hrs post insertion to reduce risk of aspiration

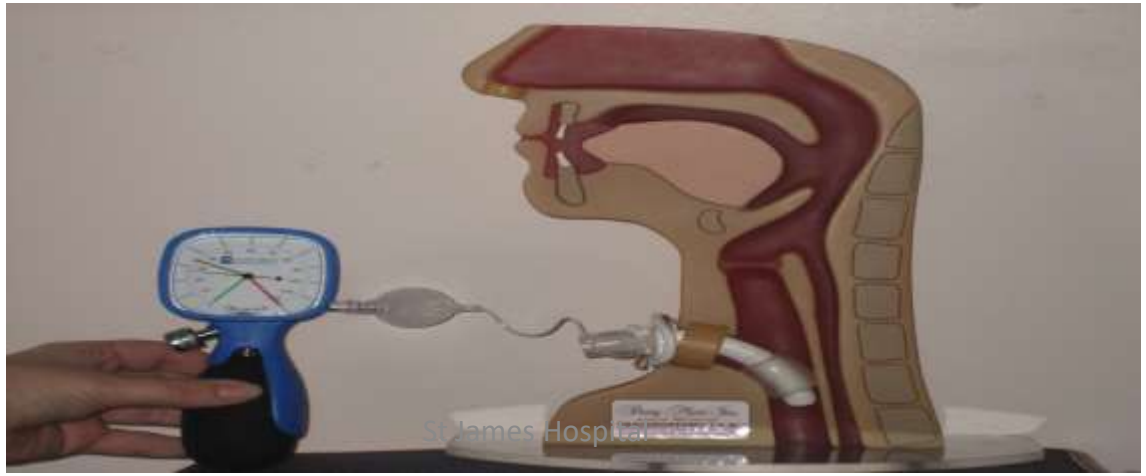
25-30mmhg- check pressure once per shift

If too high –

- can lead to trauma of the tracheal mucosa i.e., ulceration stenosis

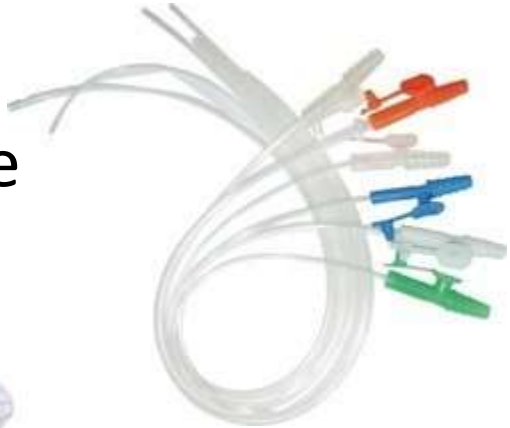
If too low –

- can lead to inadequate seal around the cuff increasing risk of aspiration
- causing loss of positive pressure if patient is ventilated.



SUCTION, EQUIPMENT REQUIRED

- Apron + gloves
- Fluid Shield mask if appropriate
- Suction circuit/portable machine
- Catheters
- Sterile gloves
- Oxygenation equipment
- SaO_2 monitor



SUCTIONING

- Suction vacuum pressure < 20kpa or 150mmHg
- Sterile technique
- Observation sheet
- Suction catheter : pens length,
- Only apply suction and withdraw in 15 Seconds
- Always use a non fenestrated inner cannula when suctioning
- Ensure suction container changed when ¾ full
- Suction catheter size; *Or size of tube add 4*

$$\frac{\text{Size of tracheostomy tube} \times 3}{2}$$