

# Communication and Swallowing post Tracheostomy.

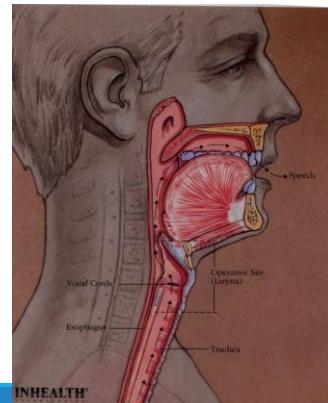
SPEECH AND LANGUAGE THERAPY DEPT  
ST. JAMES'S HOSPITAL

## COMMUNICATION



## Facilitating Communication

- Ideally, preserve/facilitate **oral** communication where feasible.
- Allow patient participation in decision making/treatment planning
- Reduce likelihood of adverse incidents
- Improve overall quality of life.

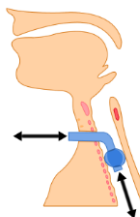


## Normal Speech

- ✓ Breath - expiration
- ✓ Vocal Cords
- ✓ Articulation

## Effects on Communication

- Query underlying diagnosis
- Majority of air no longer directed through larynx so unable to produce voice.
- Especially so with large tubes and/or when the cuff is inflated



National tracheostomy safety project [www.tracheostomy.org](http://www.tracheostomy.org)

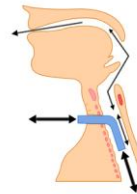
## Non-Verbal Communication Options

- Call system
  - Yes/no questions
  - Mouthing ( reduced rate, key words, over articulation)
  - Writing
  - "Low tech" communication aid ( pictures, alphabet chart )
  - "High tech" aids e.g. GOTALK , Light-writer
  - Electrolarynx
- ❖ Be aware of patients linguistic and cognitive skills.  
May be impaired e.g CVA/TBI

## AAC



## Speaking Valves



Facilitate communication by redirecting airflow through vocal folds.

National tracheostomy safety project [www.tracheostomy.org](http://www.tracheostomy.org)

## Passy Muir Speaking Valves



## Other speaking valves



## Benefits of PM Speaking Valves

- ✓ Facilitate improved voice production & oral communication
- ✓ Positive effects on swallow and secretion management
- ✓ Restores physiological PEEP
- ✓ Expedites weaning/decannulation time
- ✓ Improves smell/taste

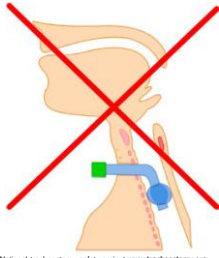


## Contraindications for Speaking Valves

- Less than 48 hours post tracheostomy.
- Inability to tolerate full cuff deflation.
- Upper airway obstruction/tracheal oedema or stenosis.
- Medical/respiratory instability
- Severe aspiration/tenacious secretions.
- Anarthria or severe dysarthria.
- Unconscious/comatose patients.
- Laryngectomy.



## Important!!!!



**Never** place a speaking valve when the cuff is **INFLATED!!!**

The patient will not be able to breathe out!

National tracheostomy safety project [www.tracheostomy.org](http://www.tracheostomy.org)

## Safe Cuff Deflation

- Medical clearance is mandatory before first attempt at cuff deflation.
- Explain process to patient
- Oral and tracheal suction prior to deflation
- Tracheal suction as cuff is deflated (2 people)
- Slow deflation
- May be “leak speech” following deflation

## Fitting the speaking valve

- Attach the SV to the hub of the tracheostomy tube
- Monitor the patient's physiological and clinical response to the use of the SV for indications of intolerance. (*increased work for breathing, fatigue, decreasing oxygen saturation levels, a change in skin colour, excessive coughing*)
- If valve poorly tolerated, remove and re-inflate cuff
- Aim to **gradually** increase tolerance of the speaking valve
- SLT will assess voice quality/communication and carry out therapy as appropriate.

## Care of Speaking Valve

- SV to be worn as tolerated, especially when talking and swallowing. (Gradual build-up of tolerance)
- SV to be removed if having breathing difficulties.
- SV to be removed when sleeping (?)
- Should be cleaned daily in mild soapy water. Rinse thoroughly in warm (not hot) and let air dry.
- Single patient use only.
- Lifespan of approx. 2 months.

## Ventilated Patients

Consider:

- Overall medical status
- Level of alertness
- Cognitive status

SJH guidelines as follows:

- Mode of ventilation: Pressure support, CPAP, volume support
- Levels of ventilatory support:
  - PEEP 6 or lower
  - PS 8 or lower and weaning
  - FIO<sub>2</sub> 45% or less
  - RR <30

## Placement of speaking valve for ventilated patients



## Troubleshooting

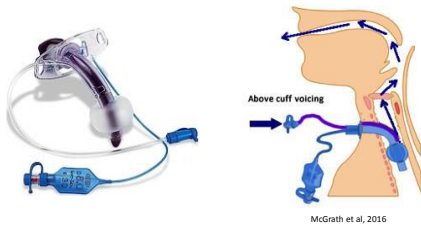
- **Breathing difficulties:** (consider patient position, upper airway obstruction, cuff deflation, secretions, anxiety)
- **Coughing** (common++, consider secretions, anxiety, changed sensation)
- **Weak voice** (consider vocal cord function, myopathy, reduced airflow)
- **Reduced tolerance of speaking valve**
- **Anxiety**

## Options?

- Fenestrated tubes
- Downsizing tracheostomy tube
- Above cuff voicing



## Above cuff vocalisation

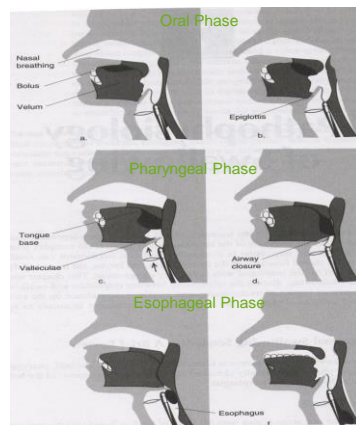


McGrath et al, 2016

## Speaking valve with AIRVO



## SWALLOWING



Normal Swallow

Adapted from Dikeman and Kazandjian (1995)

“Truth is, none of our patients had swallow problems till the speech therapist arrived”



## Tracheostomy and swallow

High risk group:

Aspiration in 50-87% of patients (Goldsmith 2000, Tokip et al 1996, Egan et al 1994)

Consider underlying diagnosis

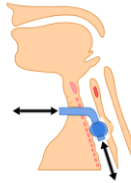
Effects of tracheostomy

- Reduced laryngeal elevation
- Obstruction of oesophagus?
- Disuse muscle atrophy
- Disruption of airway pressures
- Reduced cough reflex
- Reduced subglottic pressure
- Desensitisation of larynx
- Persistent effects of ET intubation

(Goldsmith 2000)

## Myths of the Inflated Cuff

- Does not prevent aspiration!
- Bolus already aspirated
- Incomplete cuff seal especially on liquids
- Aspirated material may pool above the cuff and be aspirated on cuff deflation.
- Bacterial colonisation may occur
- Ideally have cuff deflated BUT patients may be able to swallow with cuff inflated

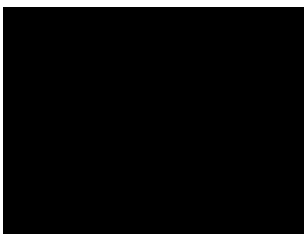


National tracheostomy safety project [www.tracheostomy.org](http://www.tracheostomy.org)

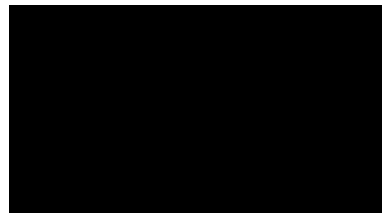
## SLT Dysphagia Assessment

- Medical history (underlying diagnosis?)
- Bedside clinical dysphagia evaluation: oromotor examination, food/fluid trials with palpation, cervical auscultation and/or pulse oximetry.
- Blue Dye Test: High level of false negatives
- Videofluoroscopy of swallow (modified barium swallow)
- Fiberoptic Endoscopic Examination of Swallow (FEES)

## Videofluoroscopy



## FEES



## Clinical Signs of Dysphagia

**The following signs may be suggestive of dysphagia:**

- ✓ Coughing during or after eating/drinking
- ✓ Wet, gurgly voice
- ✓ Effortful swallow
- ✓ Repeated swallows required to clear a single bolus
- ✓ Food/fluid stained secretions seen on suctioning
- ✓ Repeated, unexplained RTIs

## Strategies to facilitate safe oral intake:

Oral care

Modified diet/fluids if recommended.

Feed only when alert and sitting upright.

Facilitate airflow through larynx through use of a speaking valve where indicated

Reduced bolus size and reduced rate of intake

Reduced amounts to allow for fatigue effect.

Safe swallow guidelines as per swallow chart.

Continue to monitor for acute/chronic signs of aspiration.

***If swallowed material detected through tracheostomy tube on suctioning, nil by mouth & inform team/SLT***

Any Questions?

