Importance of early SLT intervention & FEES on ICU

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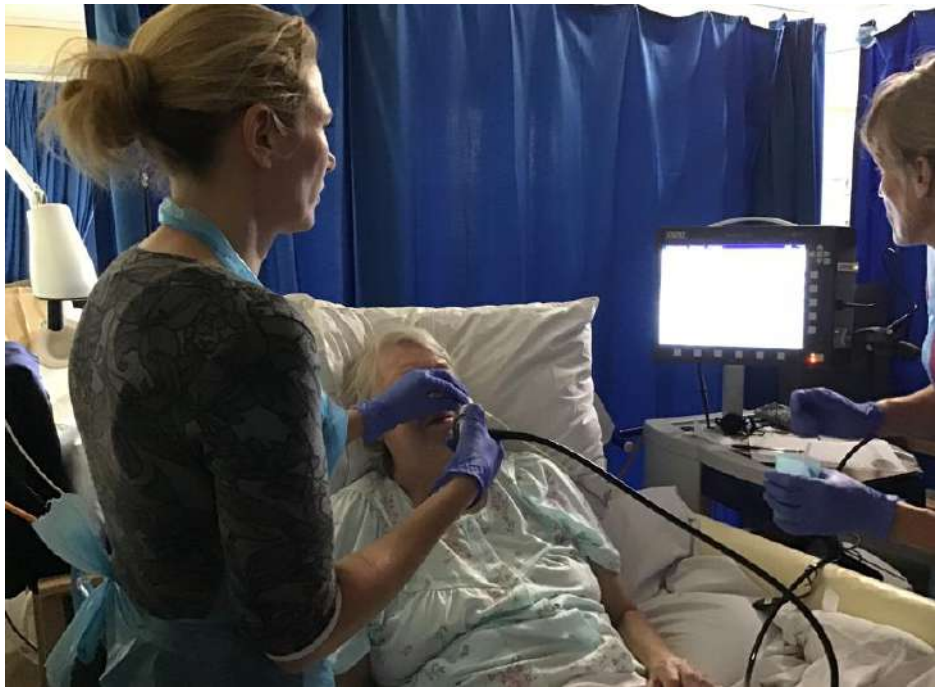

IMPORTANCE OF EARLY SLT INTERVENTION & FEES ON ICU

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SLT on ICU

Who has SLT on ICU?

Who has access to FEES?

Occupations in the audience?

Why SLT on ICU?

Education

COMMUNICATION:

Patients who are having difficulties with communication

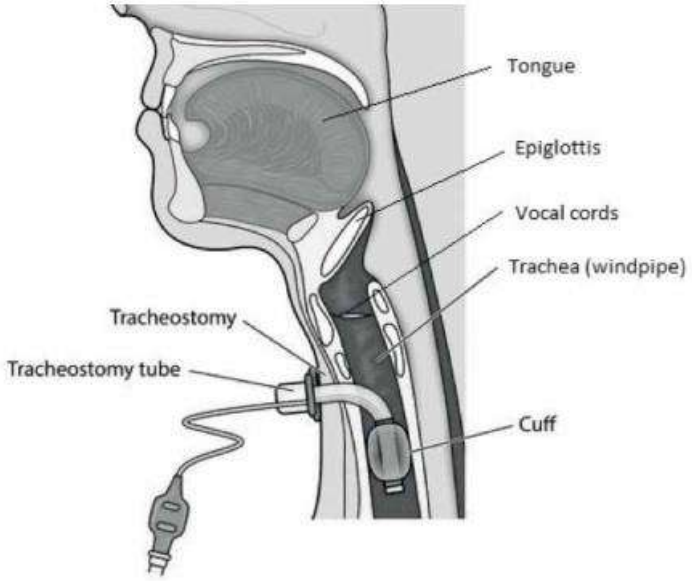
SLT can advise on communication support where appropriate

SWALLOW:

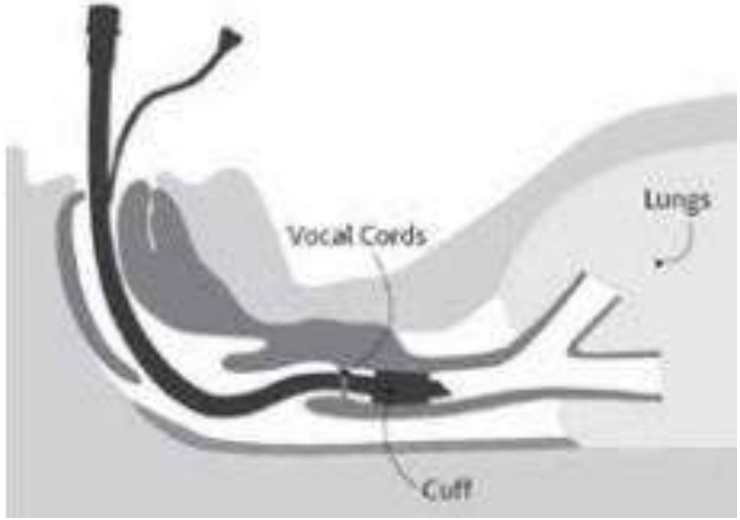
- Assessment of swallow to identify ability to eat & drink safely as soon as possible
- Secretion management

TRACHEOSTOMY:

- Optimise communication by supporting cuff deflation and use of one-way valves for verbal communication
- Aiding airflow helps to re-stimulate the sensation in the larynx aiding swallowing and cough



Communication



- Being ‘Voiceless’
- ETT
- Language abilities
- Tracheostomy
- Delirium
- Losing sense of ‘self’ and ability to express themselves and choices and preferences
- Voice changes

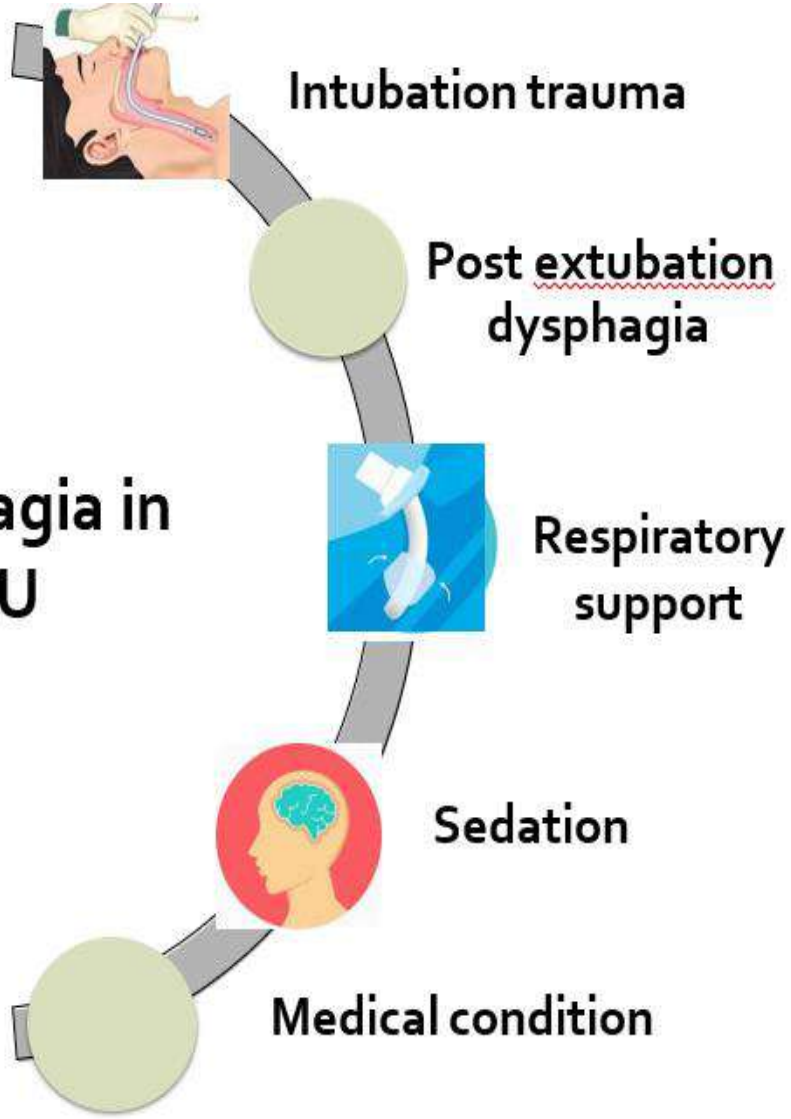
Dysphagia

Multifactorial:

- Direct trauma to structures
- Neuromyopathy
- Diminished laryngeal sensory
- Gastroesophageal reflux
- Dys-synchronous breathing and swallowing
- Pharmacological effects

- Zuercher et al (2019), Ponfick (2015)

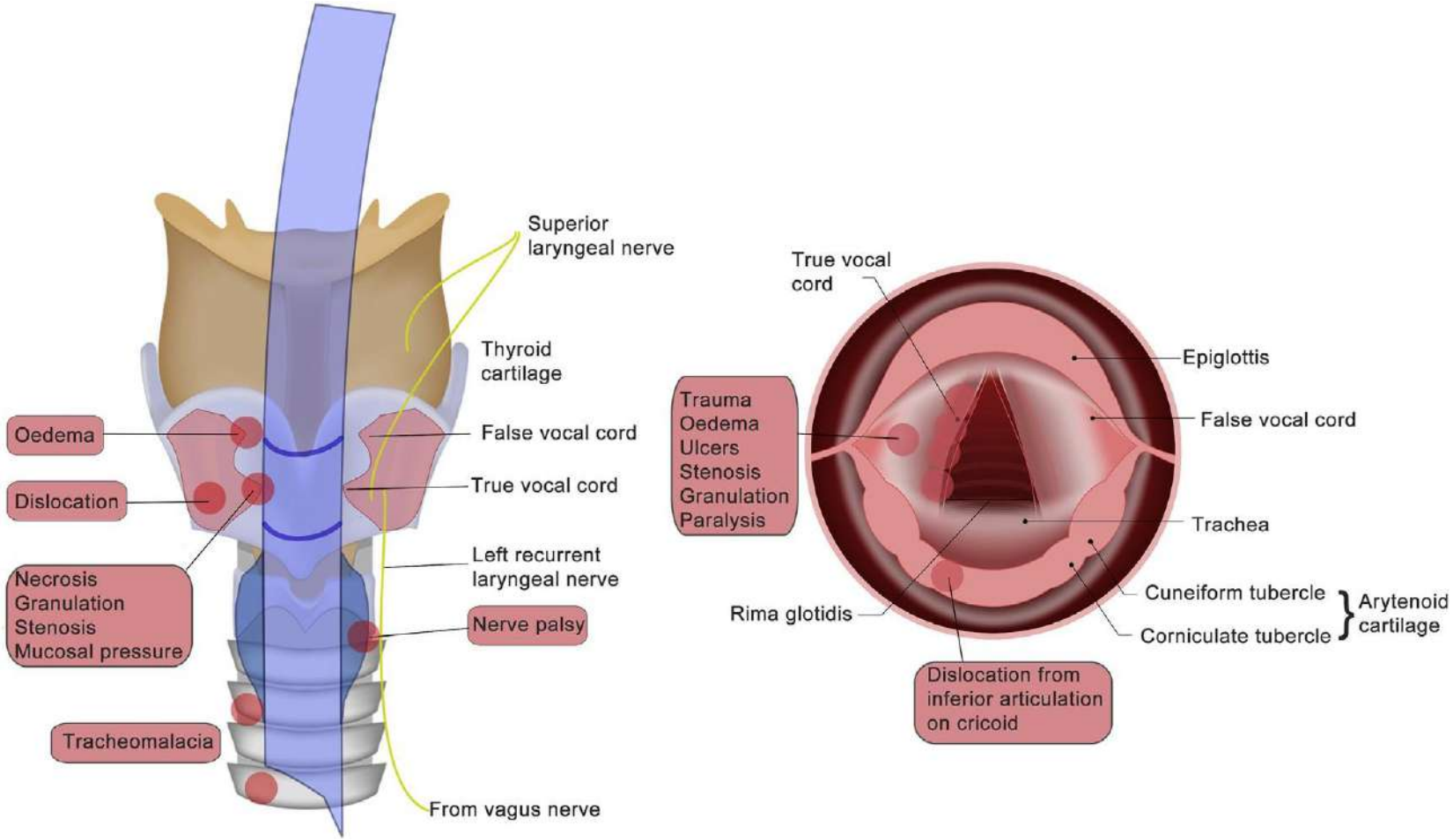
Dysphagia in ICU



Intubation trauma	83% have laryngeal injury VC palsy/oedema, reduced airway protection
Post extubation dysphagia	Up to 60% affected even after short intubation
Respiratory support	Ventilation, tracheostomy (50-80% aspirate) HFNS >40%
Sedation	Delirium, cognition affect
Medical condition	Sepsis, ARDS, AKI, reflux, H&N surgery, Covid (75%), ICU myopathy (91% dysphagic)

Wallace 2022, Zielske 2014, Brodsky 2018, Shinn 2019, Marvin et al 2021

Intubation Trauma

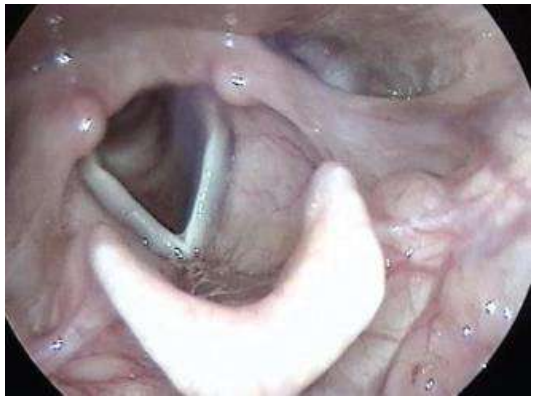


Wallace & McGrath 2021

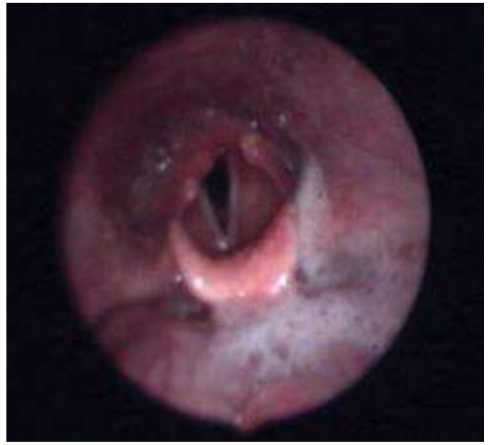
Implications of intubation/ ETT for swallow & voice

Intubation can result in voice & swallowing difficulties due to:

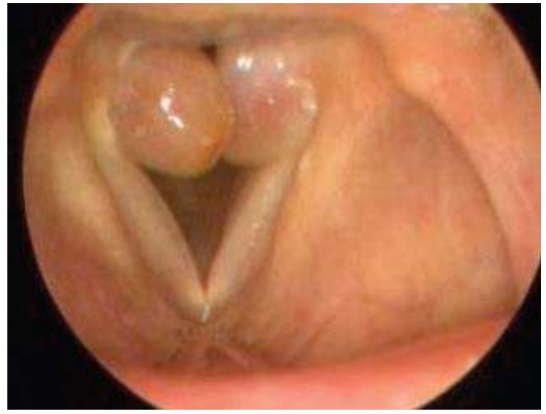
- *ETT/Larynx interface – causing laryngeal trauma:*



Normal



Right vocal cord palsy



Intubation granuloma

- *Reduced laryngeal sensation leading to impaired timing of airway protection*
- *Laryngeal and intra laryngeal muscle atrophy (weakness of muscles)*
- *Un-co-ordinated respiration and swallowing pattern*

Risk Factors for Laryngeal Injury

- Emergency intubation
- Reintubation
- Diabetes
- Difficult airway
- Tube size (>size 7 ETT)
- Obesity
- Duration
- Age

(Shinn et al 2019)

Intubation Trauma

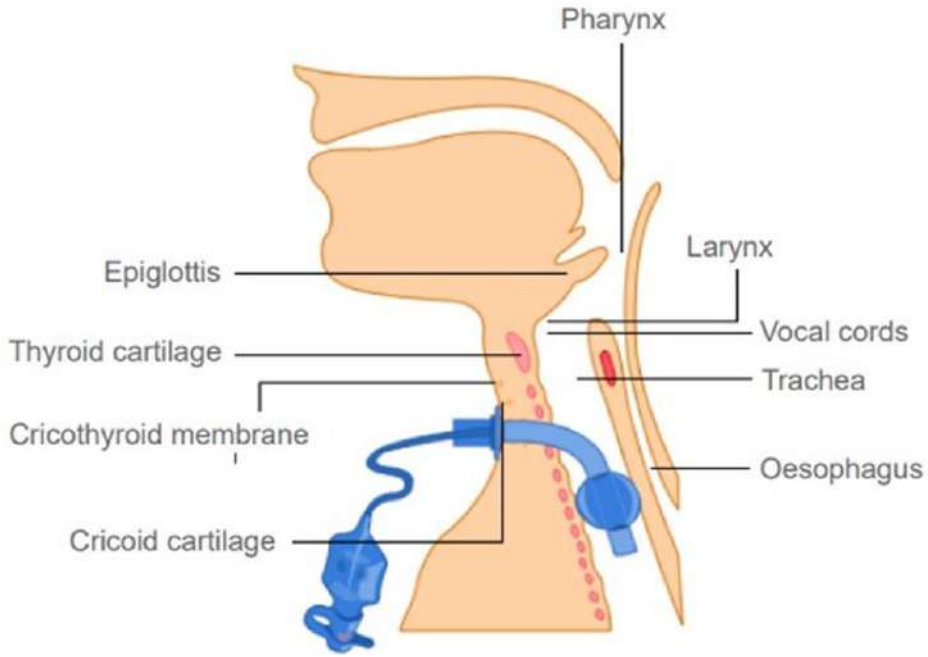
- PED effects up to 60% of adult ICU patients
- 50% incidence of aspiration and pneumonia
- Increased length of stay on ICU and longer recovery
- HAP can increase ICU stay by 8 days
- Reintubation and mortality
- Increased resource use
- Poor QOL & psychological impact

(Brodsky 2017, Scheel 2016, Shinn 2019, Verma 2021)

Signs/Red Flags for Laryngeal Injury

- Stridor
- Dysphonia - 21% of patients post extubation presented with vocal fold palsy
- Sore throat or pain on swallowing (odynophagia)
- Poor secretion management
- Failed/prolonged intubation
- Low threshold for FEES/FNE!

Tracheostomies



- Secretions:
  - ✓ How are they managing their secretions?
  - ✓ How much suctioning do they require?
  - ✓ What "type" of secretions? Oral vs. chest

- Why cuff down? "Laryngeal wean"
  - ✓Restoring laryngeal sensation
  - ✓Voice
  - ✓Swallow

- Communication support

Benefits of one-way valves

Restores airflow and sensation

- Voice and communication
- Sense of taste and smell

Impacts swallowing and may reduce aspiration

- Airflow and sensation

Restores physiological positive pressure

- Improve gas exchange, O2, reduces atelectasis

Improves secretion management

- More effective cough, less suction needed

Expedites weaning and decannulation

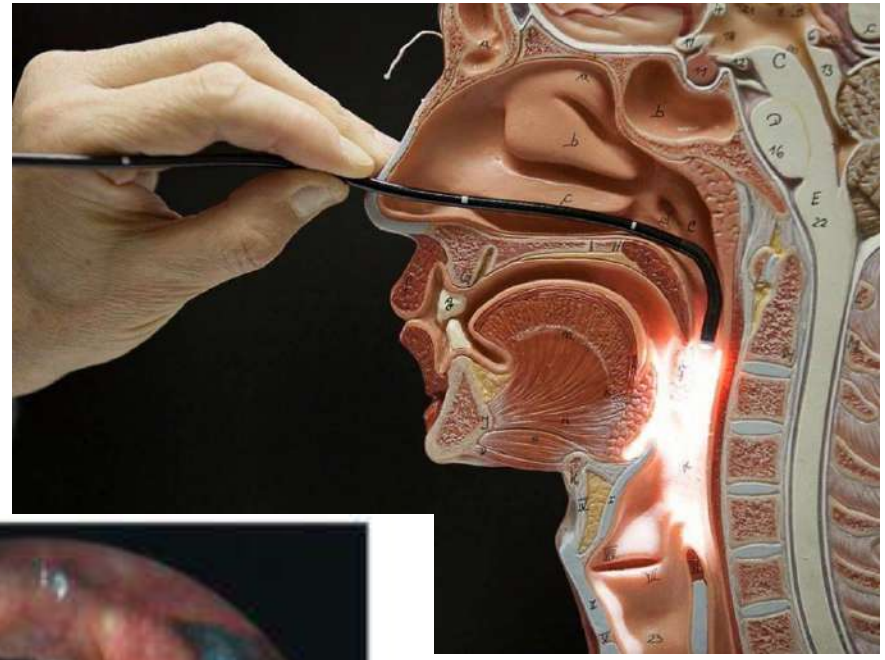
Improves core stability and mobility

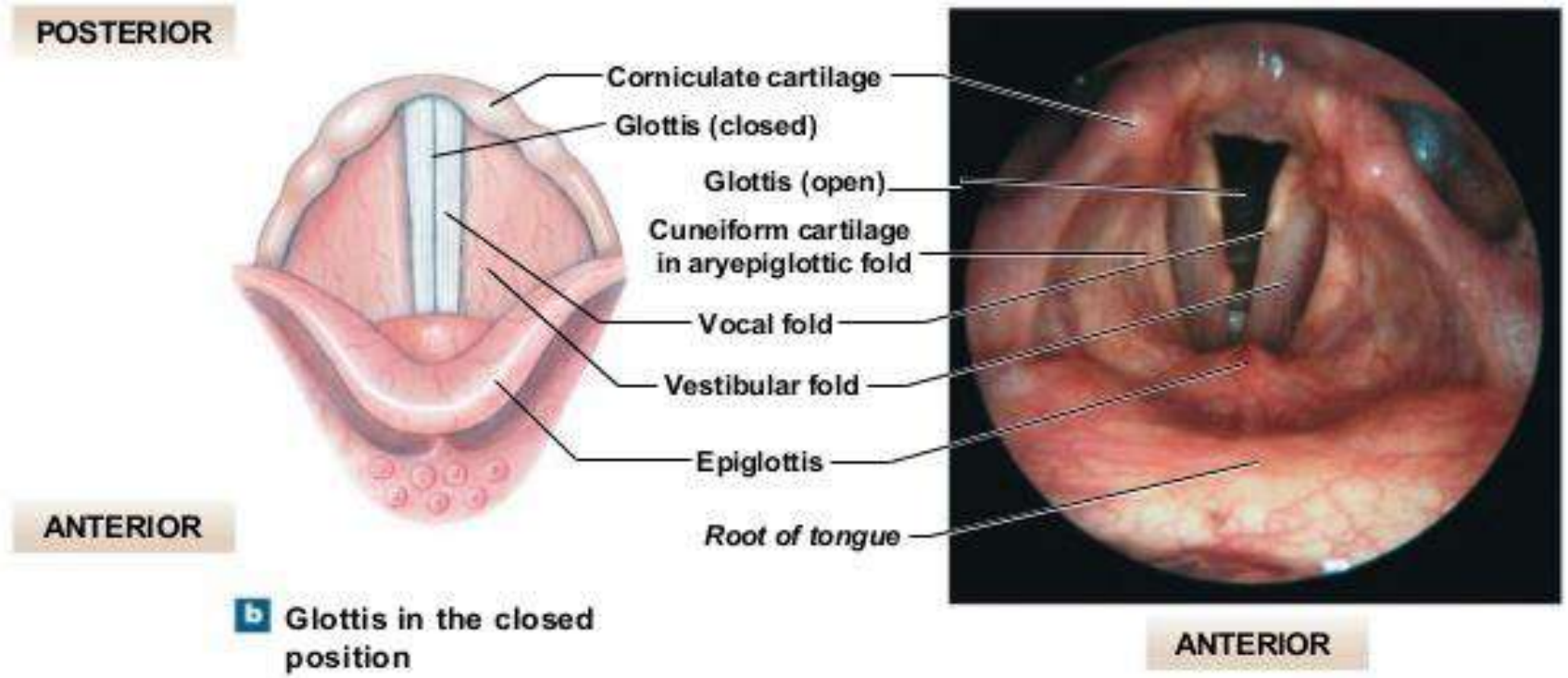
Improves quality of life

- Some evidence that no harm for patients to have overnight/ when asleep (Gross et al 2007, Am et al 2021)

What is FEES?

Orientation



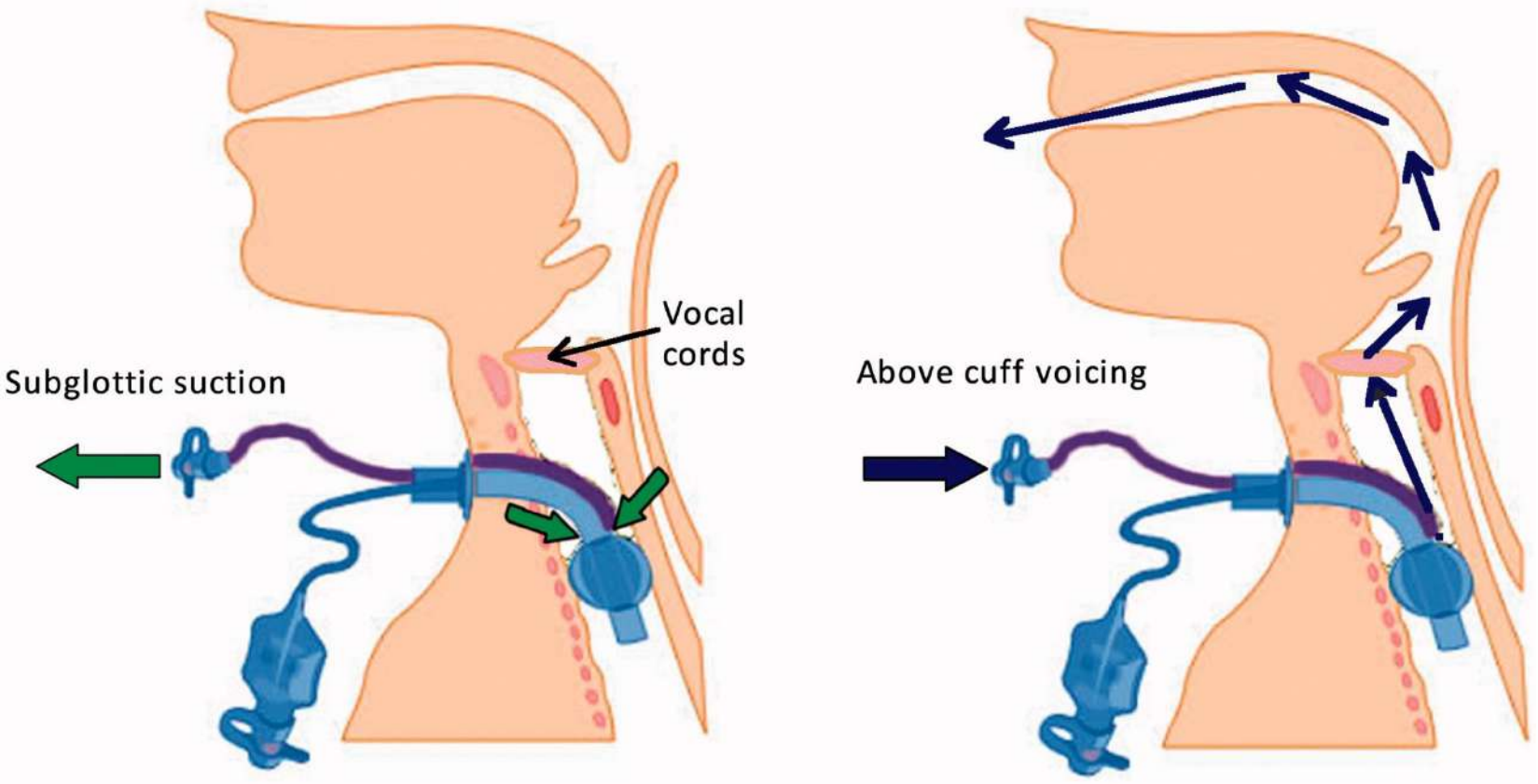


b Glottis in the closed position

When not to scope…

- BOS/facial #
- Severe epistaxis in last 6 weeks
- Trauma to nasal cavity in last 6 weeks
- Sino-nasal and anterior skull base tumours/surgery
- Nasopharyngeal stenosis
- Craniofacial abnormalities

Above Cuff Vocalisation (ACV)



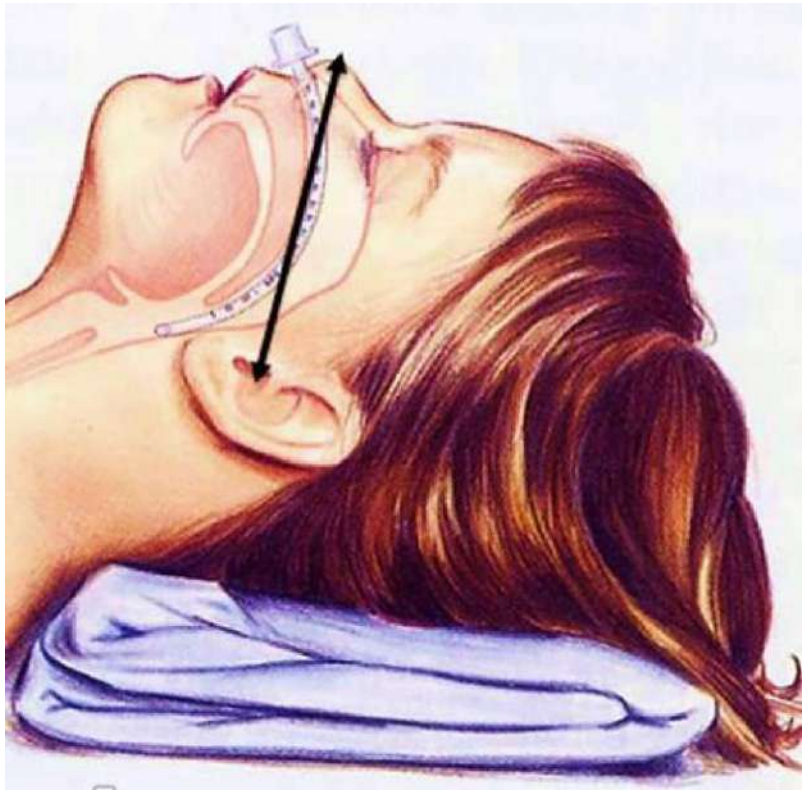
Above Cuff Vocalisation (ACV)

Does not have as many benefits as PMV:

- Can only be used for 10-15 mins
- Does not improve lung recruitment
- Does not improve subglottic pressure

*But it does have a place with laryngeal rehabilitation if cuff deflation not possible or as a bridging option

NPA



Rehab and therapy

Statistics across the network

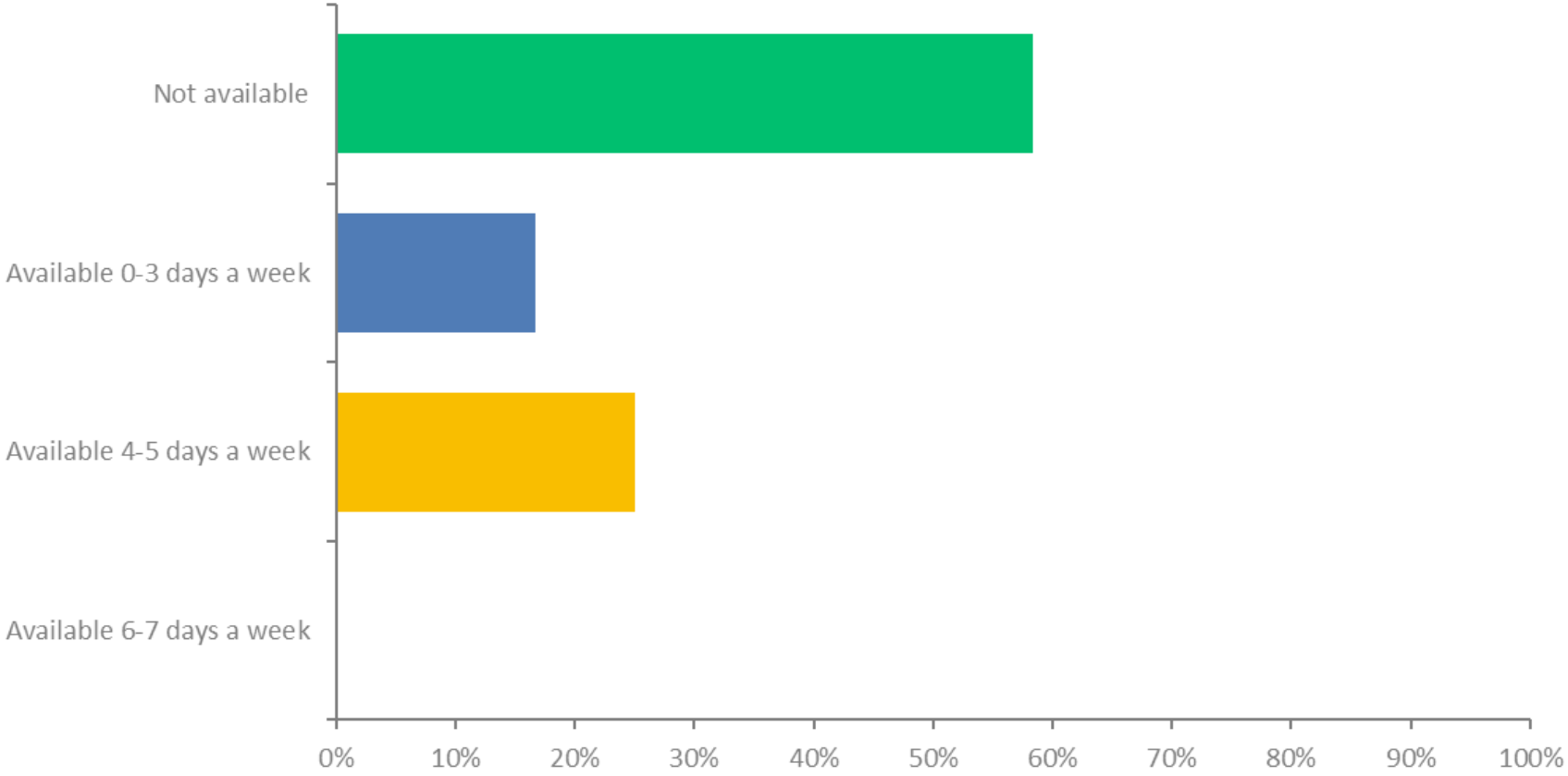
	Funded wte SLT for Critical Care			
Unit	Band 5	Band 6	Band 7	Total
Dorset County hospital		1	0.6	**1.6**
St Mary's Hospital Isle of Wight NHS Trust				**0**
Bucks Healthcare Trust			0.13	**0.13**
Frimley Health Foundation Trust				**0**
Royal Berkshire			0.6	**0.6**
University Hospitals Southampton			0.7	**0.7**
PHUT				**0**
MKUH				**0**
Hampshire Hospitals NHS Trust				**0**
Oxford Critical Care and Cardiac and Thoracic Critical Care Unit				**0**
Neurosciences ICU				**0**
Bournemouth hospital				**0**

What should the provision look like?

"A minimum staffing level of 0.1 WTE (whole time equivalent) per bed is required in order to deliver a critical care Speech and Language Therapy service. A higher level WTE may be required dependent upon local casemix, acuity, complexity, new initiatives or delivery of more than a five-day service."

(GPICS, 2022 Intensive Care Society | GPICS V2.1)

Is FEES available and utilised by SLTs to use in assessment and management of dysphagia in intensive care patients?



Benefits of SLT and FEES on ICU

- Facilitation of communication between patients and family/staff
- Safely commencing eating and drinking as early as possible
- Aiding management of secretions and swallow rehab
- Laryngeal rehab and tracheostomy weaning
- Flagging of airway abnormalities and injuries

Thank you!

Any questions?