

The Role of The Speech and Language Therapist In Critical Care



- ▶ ‘People with a range of illnesses, diseases and accidents are admitted to critical care units for urgent medical and nursing care. They may experience either temporary or long term difficulties with swallowing and communication.
- ▶ These needs are very important for patients and their recovery, so speech and language therapists (SLTs) can help to evaluate difficulties.
- ▶ Early speech and language therapy input can improve patient care and outcomes; helping to reduce the length of time spent in critical care or hospital, which helps to save hospital resources.
- ▶ SLTs provide specialist knowledge and skills about the functions of the throat for speaking and swallowing, so they understand what is the best type of therapy for improvement.
- ▶ SLTs are key members of the multidisciplinary team and support critically ill patients in their therapy and clinical management of communication, voice, swallowing, ventilator and tracheostomy weaning.’

DYSPHAGIA: A DIFFICULT DIAGNOSIS TO SWALLOW

Dysphagia is the medical term for swallowing difficulties. Some people with dysphagia have problems swallowing certain foods or liquids, while others can't swallow at all.

Signs and symptoms of dysphagia

- Takes a long time to chew
- Food getting stuck in the throat
- Changes in voice, including nasal or 'wet' speech
- Difficulty chewing or controlling food in the mouth
- Coughing or choking when swallowing
- Changes in eating habits, such as eating slowly or avoiding meals altogether
- Significant unintended weight loss
- Recurrent chest infections or pneumonia
- Nasal regurgitation



 **RCSLT**

FIND OUT MORE AT [RCSLT.ORG/DYSPHAGIA](https://www.rcslt.org/dysphagia)

How speech and language therapy can help

Speech and language therapists have a unique role in the assessment, diagnosis and management of swallowing difficulties.

They:

- Play a key role in the diagnosis of dysphagia
- Help people regain their swallowing through exercises, techniques and positioning
- Promote patient safety through modifying the texture of food and fluids, reducing the risk of malnutrition, dehydration and choking
- Promote quality of life, taking into account an individual's and their families' preferences and beliefs, and helping them adjust to living with swallowing difficulties
- Work with other healthcare staff, particularly dietitians, to optimise nutrition and hydration
- Educate and train others in identifying, assessing and managing dysphagia, including families and the wider health and care workforce

 **Giving Voice**[™] | Speech and Language
Therapy transforms lives



Causes of dysphagia

Ageing

Oesophageal / upper GI

Oncology

Connective tissue disorders

Autoimmune

Post-surgery

Neurology e.g.

Post- extubation

Trauma

Vascular

Psychogenic

Trache/Vent

General medical eg UTI

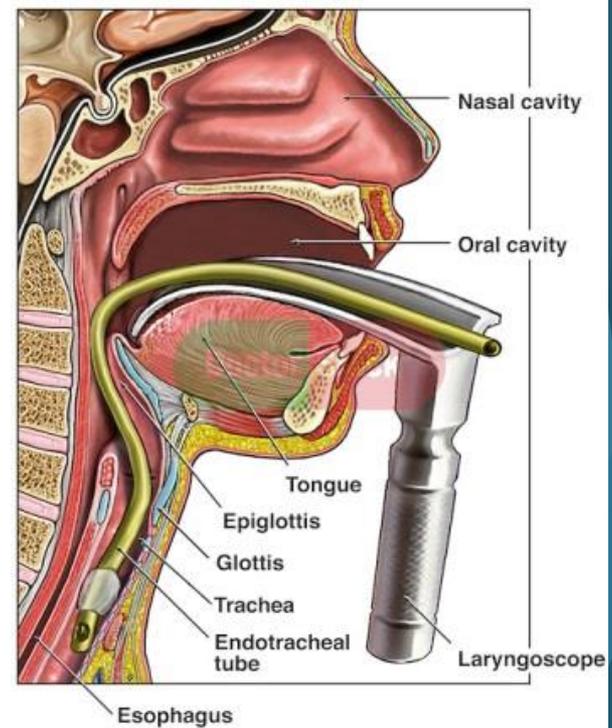
Learning disability

Iatrogenic

Respiratory

The Impact of Intubation on Swallowing

- The insertion of the Endotracheal tube (ETT) to assist with breathing is passed between the vocal cords and is directed into the wind pipe (trachea).
- The ETT rests on the base of tongue and can lead to **atrophy** of muscles
- Lack of airflow through larynx and pharynx combined with presence of ETT leads to altered laryngeal and pharyngeal **sensation**
- Inflated cuff and presence of ETT can lead to **reduced frequency of swallowing and disuse atrophy**
- ETT insertion may result in bruising/ swelling and/ or other damage to the inside of the throat (larynx). This can cause trauma to the vocal cords/larynx resulting in **reduced airway protection**
- Post extubation dysphagia is thought to affect up to 60% of adult ICU patients with a reported 50% incidence of aspiration associated with increased length of stay, reintubation and mortality (Brodsky et al., 2016; Scheel et al., 2016).



Advice:

- Ensure that the patient is sat upright when they are eating/ drinking
- Avoid using a spouted beaker or a straw unless advised by the Speech and Language Therapist
- Take a slow pace when feeding patients
- Ensure small sips of fluids
- Ensure small bites/ mouthfuls of food
- DO NOT add ‘thickener’ to drinks unless advised by the Speech and Language Therapist. It is more harmful to aspirate on thickener than thin fluids.
- If your patients can’t finish their meals because they are too tired or have reduced appetite they may need to be seen by a dietitian who can help ensure they are meeting their nutrition/ hydration requirements
- **If in doubt always refer/ seek support from your Speech and Language Therapist**

MDT dysphagia management

SLT - assessment, management (including recommendations and written advice for patient/family/carers), liaison, education and training, communication assessment and support, onward referrals

Physiotherapists - positioning, mobility, chest physio, suctioning

Dietetics - nutrition management- enteral or oral feeding

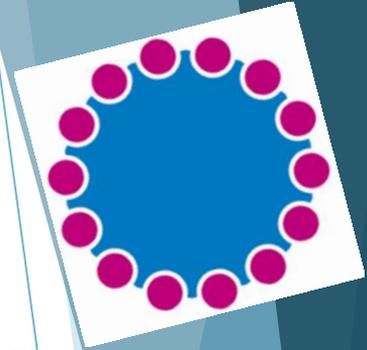
Occupational Therapists - adaptive equipment, seating, cognitive/perceptual/behaviour

Pharmacy - adapting medication for ease of swallow or enteral feeding tubes

Nurses/carers - ensuring SLT advice is followed, assisting patient with eating and drinking, monitoring patients, food/fluid charts, mouth care, suctioning, trache/ventilation/O2

Medics - prescribing thickeners and oral care products, decisions regarding non-oral feeding, ethical decisions (eating and drinking with an unsafe swallow), advising SLT on patient's underlying condition and medical management plans

Radiographers - videofluoroscopy, (water-soluble contrast or barium swallow)





The International Dysphagia Diet Standardisation Initiative (IDDSI) is a global standard with terminology and definitions to describe texture modified foods and thickened liquids used for individuals with dysphagia of all ages, in all care settings, and for all cultures. The IDDSI framework consists of a continuum of 8 levels

FOODS



The International Dysphagia Diet Standardisation Initiative 2016 @http://iddsi.org/framework/.

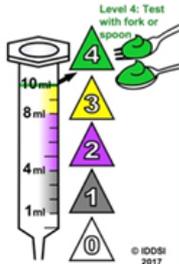
<https://iddsi.org/>

Attribution is NOT PERMITTED for derivative works incorporating any alterations to the IDDSI Framework that extend beyond language translation. Supplementary Notice: Modification of the diagrams or descriptors within the IDDSI Framework is DISCOURAGED and NOT RECOMMENDED. Alterations to elements of the IDDSI framework may lead to confusion and errors in diet texture or drink selection for patients with dysphagia. Such errors have previously been associated with adverse events including choking and death.

FLUID DESCRIPTORS

1 SLIGHTLY THICK

DDSI
ddsi.org
Flow Test
IDDSI level depends on liquid remaining after 10 seconds flow.



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IDDSI - Flow Test

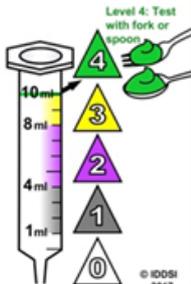
Level 1

1 SLIGHTLY THICK

The thickness level of the liquid is defined by the amount of fluid remaining in the 10 ml syringe after 10 seconds. Note that the dimensions of the syringe are important – please ensure that the length from the zero line to the 10 mL line on the syringe measures 61.5mm

2 MILDLY THICK

DDSI
ddsi.org
Flow Test
IDDSI level depends on liquid remaining after 10 seconds flow.



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IDDSI - Flow Test

Level 2

2 MILDLY THICK

The thickness level of the liquid is defined by the amount of fluid remaining in the 10 ml syringe after 10 seconds. Note that the dimensions of the syringe are important – please ensure that the length from the zero line to the 10 mL line on the syringe measures 61.5mm

3 MODERATELY THICK 3 LIQUIDISED

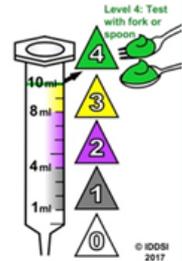
IDDSI - Flow Test

Level 3

3 MODERATELY THICK

The thickness level of the liquid is defined by the amount of fluid remaining in the 10 ml syringe after 10 seconds. Note that the dimensions of the syringe are important – please ensure that the length from the zero line to the 10 mL line on the syringe measures 61.5mm.

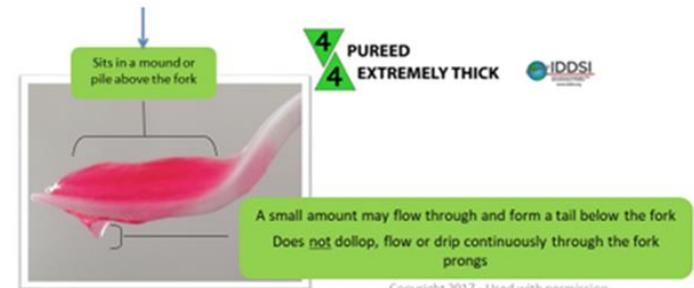
DDSI
ddsi.org
Flow Test
IDDSI level depends on liquid remaining after 10 seconds flow.



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4 EXTREMELY THICK 4 PUREED



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****THICKENER SHOULD ONLY BE ADDED TO DRINKS IF ADVISED BY YOUR SPEECH AND LANGUAGE THERAPIST****

3 MODERATELY THICK 3 LIQUIDISED

IDDSI - Flow Test

Level 3

3 MODERATELY THICK

The thickness level of the liquid is defined by the amount of fluid remaining in the 10 ml syringe after 10 seconds. Note that the dimensions of the syringe are important – please ensure that the length from the zero line to the 10 mL line on the syringe measures 61.5mm.



4 EXTREMELY THICK 4 PUREED



5 MINCED & MOIST

Soft and moist with no separate liquid. Small particle size of 4mm for adults, which is the measurement between the prongs of a typical fork. Minimal chewing is required. Lumps can be mashed with tongue. You can check this by pressing a fork into it. The food can be easily mashed with just a little pressure from the fork. You should be able to scoop it up with a fork with no liquid dripping through and no crumbs falling off the fork. The particles of food presented at Level 5 – Minced & Moist, should measure 4mm for adults and 2mm for children.



FOOD DESCRIPTORS

6 SOFT & BITE-SIZED



Bite-sized pieces of 1.5 x 1.5cm for adults (the size of an adult thumbnail), to avoid choking risk. Chewing is necessary. Tongue strength and control are needed to move food around and to swallow. You should be able to easily cut into this texture with just the side of a fork. Press into a piece of food with your thumb in the bowl of a fork – so that your thumbnail turns white. The food should squash easily and NOT return to its original shape.

7 EASY TO CHEW

Normal, everyday foods of *soft/tender textures*

Does not include: hard, tough, chewy, fibrous, stringy, crunchy, or crumbly bits, pips, seeds, fibrous parts of fruit, husks or bone

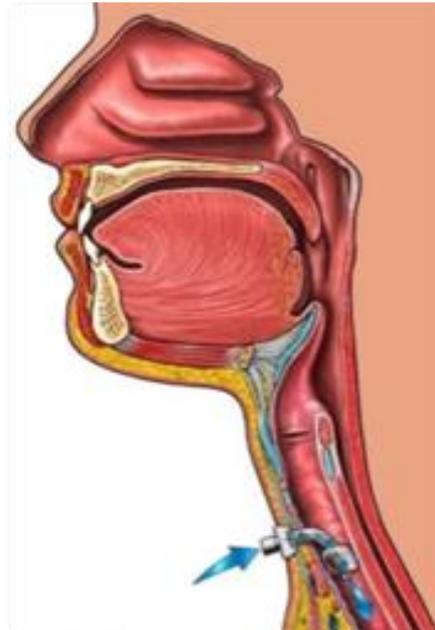
Easy to Chew foods must break apart easily with the side of a fork or spoon

7 REGULAR

Normal everyday food

TRACHEOSTOMY (trache):

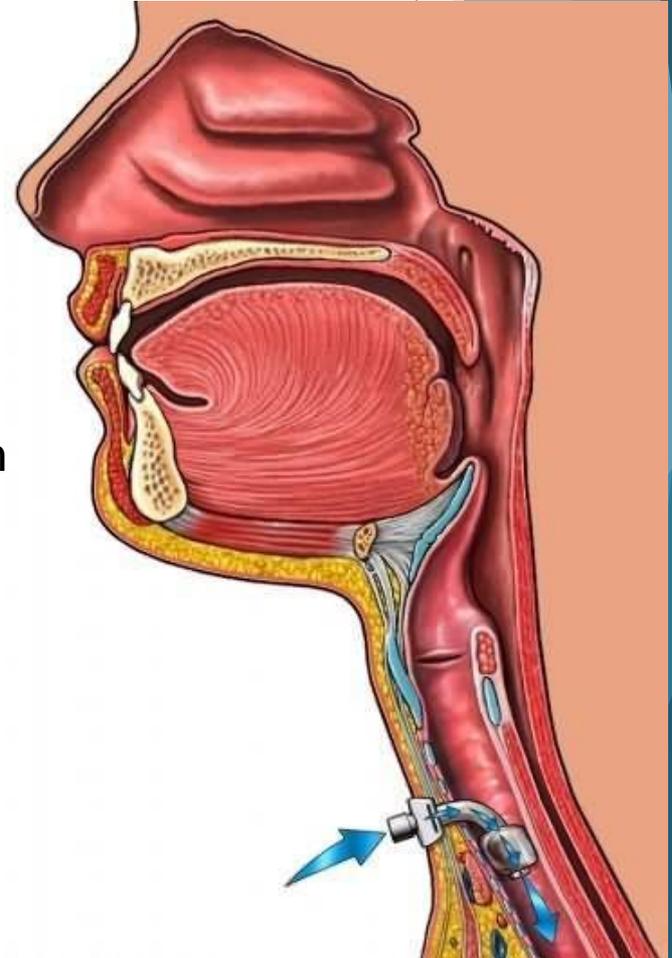
- ▶ A patient may have trache inserted when a patient is not suitable for extubation or have had failed attempts at extubation.
- ▶ The insertion of a trache enables the patient to be awake and ventilated and facilitate their weaning/ rehab.



How does a tracheostomy impact on swallowing?

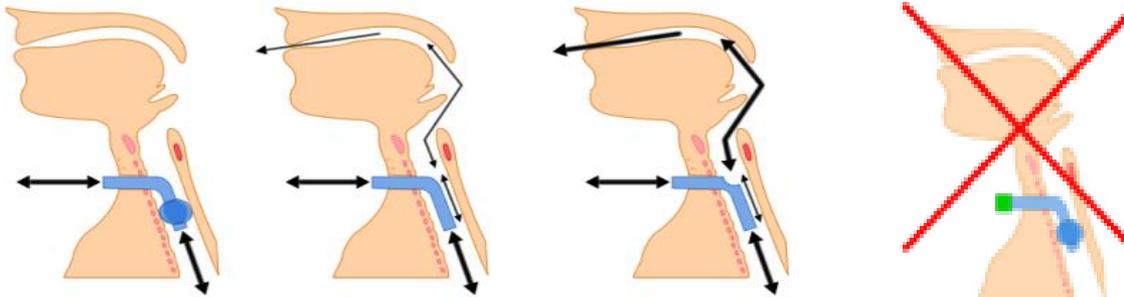
- Reduction of antero-superior movement of the larynx
- Tracheal irritation at rest and during swallowing
- Reduced laryngeal closure
- Compression of the oesophagus by the tracheostomy tube cuff
- Reduced subglottal air pressure
- Reduction or elimination of airflow through the glottis
- Blunting of the reflexive cough
- Non co-ordination of the glottic closure response
- Reduced laryngeal sensitivity
- Disuse atrophy of the laryngeal muscle

For ALL trache patients You should refer to your SLT team for a swallowing assessment



Cuff deflation/ Passy Muir Valve (PMV)

- ▶ Deflating the trache cuff allows airflow to the upper airway and enable sensation in upper airway
- ▶ A PMV is a one way valve that allows air flow to the upper airway and restores the normal pharyngeal pressures.
- ▶ The initial assessment of cuff deflation/ PMV should always be carried out by your Speech and Language Therapist and/or Physiotherapist.
- ▶ ALWAYS ensure that you deflate the cuff FIRST and then insert the PMV. NEVER insert the PMV whilst the cuff is inflated, this could lead to **asphyxiation and fatality**.
- ▶ When removing, remove the **PMV FIRST** and then re-inflate the cuff.
- ▶ Please ensure that you follow the weaning plan for cuff down/ PMV advised by the Speech Therapists/ Physio's.



If in doubt always seek support from a senior colleague, medical team, physio or SLT

COMMUNICATION

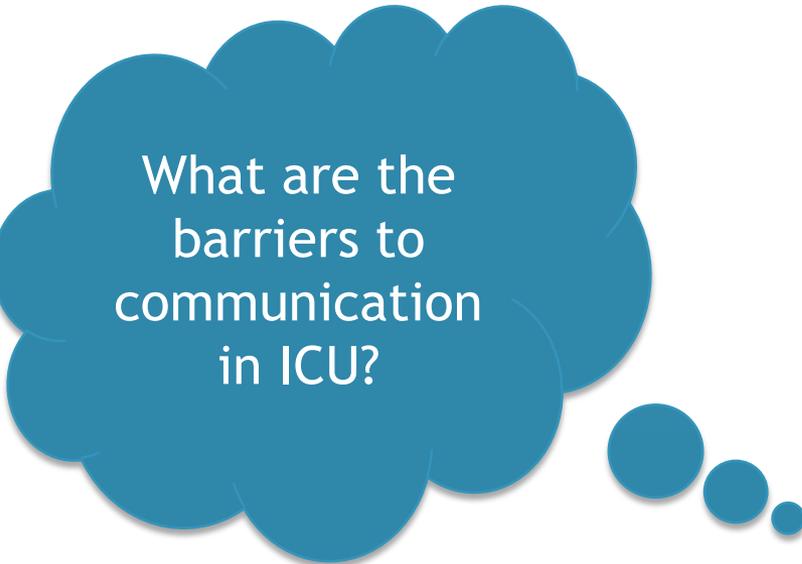
Why is communication important?

Promoting communication improves well-being, can increase compliance with rehabilitation and reduce length of stay (Hemsley et al., 2001; Bell, 1996)

- ▶ *The worst ... part of my stay in intensive care was having no ability to communicate ... and what did that mean? It meant no say in my care, no choices, no questions, no ability to reach out and no ability to be reached..."*
- ▶ Adult, South London (RCSLT Critical Care Position Paper, 2014)

COMMUNICATION CHALLENGE

You can't speak or move your hands.... Use your non verbal communication skills to communicate when your birthday is



What are the barriers to communication in ICU?

- Use of a PMV (if appropriate)
- Mouthing/Speech
- Writing - pen + paper or whiteboards
- Alphabet charts
- Picture charts
- Closed questions requiring yes/no

- Don't overload the patient

- **If in doubt - Always refer to SLT!**

- Fluctuating medical status
- Effects of sedation & medication
- Impact of ETT/trache/ventilation
- ICU Environment e.g. noise/workload
- Motor involvement e.g. oedema/weakness
- Cognition/delirium
- Neurological impairment
- Psychological issues

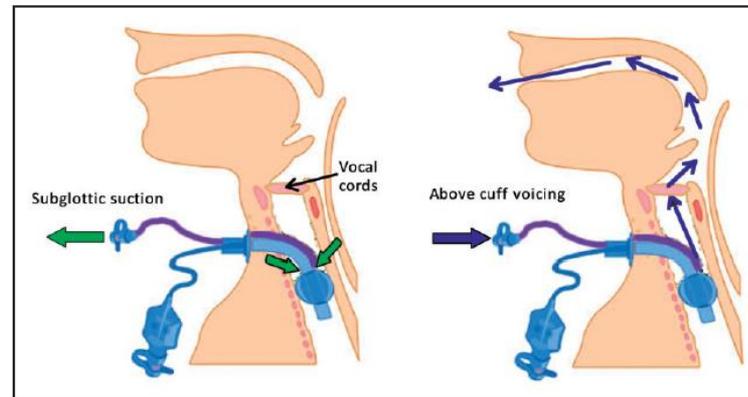


Basic ways to facilitate communication in critical care

Above Cuff Vocalisation (ACV)

‘For some patients, it is not possible to deflate the tracheostomy tube cuff. This is usually because high pressure ventilation is required or there is risk of ‘aspirating’ oral or gastric secretions or contents into the airway (the inflated cuff can offer some protection against this).

ACV uses the subglottic suction port of specialised tracheostomy tubes to deliver a low flow of gas (air or oxygen) backwards, up the subglottic suction port, to exit above the cuff. This gas flow can then travel upwards through the trachea, pass through the vocal cords and exit via the mouth. This can result in audible vocalisation in around 80% of patients who would otherwise not be able to speak. ’ (National Tracheostomy Safety Project 2022)



**If you feel your patient may be suitable - please speak with
your SLT/ Physio team**

Mouth care:

- ▶ It is really important that you keep your patients mouth clean and moist.
- ▶ If a patient has dysphagia, they may aspirate the bacteria from their mouth which could result in an aspiration pneumonia.
- ▶ Oxygen masks can dry your lips and mouth out; ensuring good mouth care can prevent soreness/ infection
- ▶ Brush teeth twice daily with toothbrush and toothpaste as well as mouth care.
- ▶ Apply lip balm - **You can only apply a non-petroleum based product whilst on oxygen**
- ▶ Please refer to your local mouth care policy for your trust specific guidance.

- ▶ **Signposting:**
- ▶ **Royal College of Speech and Language Therapists**
- ▶ **The National Tracheostomy Safety Project**

References

- ▶ <https://www.tracheostomy.org.uk>
- ▶ <https://www.rcslt.org/wp-content/uploads/media/docs/clinical-guidance/rcslt-position-statement-critical-care.pdf?la=en&hash=42823C17957D4848818438CBCD5DC3998EF0CDF7>
- ▶ <https://www.rcslt.org/wp-content/uploads/media/Project/RCSLT/rcslt-dysphagia-factsheet.pdfIDDSI>
- ▶ <https://www.rcslt.org/get-involved/swallowing-awareness-day-2022/#section-2>
- ▶ <https://iddsi.org/>

Check your understanding...

Q1. What are the signs and symptoms of Dysphagia?

Q2. How many IDDSI Levels are there?

Q3. If you have any concerns about your patients eating and drinking, what should you do?

Q4. Who is responsible for swallow awareness and safe eating and drinking?

Q5. Is it suitable to place a PMV when a patient's tracheostomy cuff is inflated?

Q6. Name some ways in which you can support a patient's communication

Answers

Q1. What are the signs and symptoms of Dysphagia?

A: Coughing, throat clearing, wet voice quality, prolonged mastication, weight loss, recurrent chest infections, nasal regurgitation, changes in eating habits, increased work of breathing when E&D

Q2. How many IDDSI Levels are there?

A: 8

Q3. If you have any concerns about your patients eating and drinking, what should you do?

A: Refer to your Speech and Language Therapist

Q4. Who is responsible for swallow awareness and safe eating and drinking?

A: Everyone!

Q5. Is it suitable to place a PMV when a patient's tracheostomy cuff is inflated?

A: No! Under no circumstances should a PMV be placed when a tracheostomy cuff is inflated. ALWAYS ensure the cuff is FULLY deflated before placing the PMV

Q6. Name some ways in which you can support a patient's communication

A: Pen and paper, alphabet chart, picture chart. Using yes/no questions. Ensure you don't overload your patient with information.

Refer to your SLT team