Speech and Language Therapist eating, drinking and swallowing guidance

DRAFT FOR CONSULTATION

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We appreciate any comments provided to us during the consultation, all of which will be reviewed by the working group within the context and scope of the project. We ask that, where possible and relevant, you accompany any counter arguments to statements made in the document with supporting evidence e.g. a research reference.

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Thank you for your support with this project.

**Title: Eating, drinking and swallowing - guidance**

**Announcement (Green Box at the top of page which doesn’t change throughout): Line on the guidance and links to resource page, frameworks etc, last updated info.**

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**1.0 Introduction**

The speech and language therapist (SLT) has a key role in assessment and management of eating, drinking and swallowing difficulties (ED and S) including assisting service users to make informed decisions around eating and drinking to maximise quality of life. The assessment and management of ED and S requires person-centred care and involves a multi-disciplinary and multi-agency care approach. Individuals with long-term conditions who have transient, intermittent, persistent or progressive ED and S difficulties often remain at risk of associated complications. SLTs have a key role in educating/training others in identifying, assessing and managing ED and S difficulties.

The ‘normal’ swallow needs the respiratory, oral, pharyngeal, laryngeal and oesophageal anatomical structures to function in synchrony, which is dependent upon the motor and sensory nervous system being intact. Difficulties in ED and S may also be called dysphagia or feeding difficulties in children. Difficulties may occur in the pre-oral, oral, pharyngeal and oesophageal stages of ED and S.

Throughout this guidance, the word ‘feeding’ is used to describe early feeding development including breastfeeding/chest feeding, bottle feeding and early weaning. We recognise other terminology may be preferred and this should be discussed with families to ensure the language used by professionals is inclusive.

ED and S difficulties can result from many conditions and are often secondary to a primary psychological, emotional, neurological, physical and/or developmental condition. However, ED and S difficulties may be the first/only presenting symptom of a condition and therefore require careful investigation to help with differential diagnosis. ED and S difficulties can result in, or contribute to malnutrition and dehydration, respiratory infections, weight loss or poor growth in infants and children, sometimes resulting in serious adverse health effects and death. They can also result in reduced wellbeing and quality of life for the individual and their wider families. ED and S difficulties are also associated with an increased morbidity and an increased mortality.

Difficulties in sensory perception may create sensitivities and may also lead to psycho-behavioural difficulties in relation to food and drink. Children and adults may have additional anatomical, learning, communication, and sensory, behavioural and physical needs. The nature of their difficulties may be acquired or congenital. In both children and adults, ED and S difficulties can present as acute or chronic, and within these categories, be static or progressive in their presentation.

**2.0 Causes of ED and S difficulties**

The ability to swallow can be influenced by several factors including, but not limited to:

* coordination and strength of the muscles
* posture
* bolus size
* texture of bolus
* disuse of swallow due to pain
* illness
* change in taste
* nausea
* ageing
* cognition
* respiratory and cardiac problems.

Issues such as fatigue can also impact on an individual’s ability to eat and drink. Some conditions may be present from in utero such as genetic conditions (congenital) or others may occur at different points on the life span (acquired).

**2.1 ED and S difficulties in children**

ED and S difficulties in children can be associated with several different conditions:

* **Prematurity** – between 26.8% and 40% of infants born prematurely (Lee et al 2011; Morgan, Ward and Murdoch 2004)
* **Childhood onset disability** – between 21% and 44% of children with childhood onset disabilities e.g. acquired traumatic brain injury, Rett syndrome (Arvedson et al, 1994; Morton et al 2002; Taniguchi and Moyer, 1994; Newman et al 2001; Weit et al 2011)
* **Oncology/tumours** Brain, spinal and head and neck tumours can result in swallowing difficulties in children
* **Cerebral palsy** – between 31% and 99% of children with cerebral palsy will experience difficulties with ED and S (Calis et al, 2008; Mirrett et al, 1994; Reilly, Skuse and Poblete, 1996; Waterman et al, 1992; Wright, Wright and Carson, 1996)
* **Infectious diseases**, e.g. meningitis can result in damage to the neural pathways required to swallow
* **Neuromuscular diseases** - 47.2% of children with neuromuscular disease have ED and S difficulties with 90% having chewing difficulties, 43% having swallowing difficulties and 33.3% having problems with both chewing and swallowing (Kooi-van Es, 2020)
* **Respiratory difficulties,** e.g. chronic lung disease, structural abnormalities of the upper respiratory tract, tracheostomy can impact on ED and S particularly breath/swallow coordination
* **Cardiovascular disorders,** e.g. for those with congenital heart disease, 42.9% experienced feeding and swallowing difficulties with 32.9% experiencing aspiration (Norman et al, 2022)
* **Gastrointestinal difficulties**, e.g. gastro-oesophageal reflux, oesophagitis, oesophageal atresia
* **Structural abnormalities** e.g. 50.3% of those with laryngomalacia (Simons et al, 2016), 92.9% of children with a vocal cord palsy experience ED and S difficulties with 57% showing silent aspiration on videofluoroscopy (Irace et al, 2019). Between 17%-55% of children with a repaired oesophageal atresia experience swallowing difficulties (Coppens et al, 2016).
* **Craniofacial conditions**, e.g. 80% of children with a cleft lip and/or palate experience difficulties prior to the cleft being repaired with 14% continuing to experience difficulties afterwards (Alfwaress et al, 2017), 47%-100% of children with Pierre Robin sequence experience difficulties (Paes et al, 2017)
* **Congenital syndromes**, e.g. up to 87% of infants with Prader-Willi will experience aspiration events (Parisa et al, 2017), 89.8% of infants with Down’s syndrome experiences oral stage difficulties with 72.4% experiencing pharyngeal difficulties (Narawane et al 2016)
* **Learning disability** - There is limited information on the prevalence of ED and S difficulties for children with a learning disability, however data from adult learning disability prevalence studies show it is an important consideration for this population.

Infants and children have changing anatomy and may need to overcome developmental challenges or alter pre-learned aversive patterns and behaviours associated with eating and drinking. Many conditions causing ED and S difficulties will persist into adulthood. It is important to consider the transition between services and how conditions causing ED and S difficulties may intersect.

**2.2 ED and S difficulties in adults**

Dysphagia in adults can occur because of a range of medical disorders (Ribeiro et al, 2024). These include but are not limited to:

* **Ageing and frailty** - Those adults who are over 65 often present with symptoms of ED and S difficulties i.e. up to 43% of over 65s admitted to an acute elderly ward may have symptoms (Olesen et al, 2021), There is a high association between frailty in older adults and ED and S difficulties (Bahat et al, 2019). For those over 80 the incidence during acute admission is up to 82.4% (Mateos-Nozal, 2020). The complex relationship between frailty and associated general medical conditions e.g. urinary tract infections, needs further research to explore the direction and causality of this relationship
	+ **Autoimmune conditions** – autoimmune neurogenic dysphagia may present as a symptom of an autoimmunity or as the sole presentation (Stathopoulos and Dalaka, 2023). 36-56 % of service users with idiopathic inflammatory myositis can experience ED and S difficulties (Labeit et al 2020). Service users with HIV/AIDS may present with a variety of ED and S difficulties (Cohen, Seedat and Sawasawa, 2023)
	+ **Cardiovascular disorders** may impact on ED and S difficulties (Yuan, 2014)
	+ **Connective tissues disorders** - 53-58% of service users with conditions such as systemic sclerosis experience ED and S difficulties (Galli, 2020)
	+ **Covid and Long Covid** – 94% of service users in intensive care with covid-19 experienced dysphagia (Clayton, Freeman-Sanderson, and Walker, 2024) after 12 weeks or more 20% of service users with long-covid experienced voice and throat problems (Whittaker et al, 2022)
* **Functional neurological disorders** (FND) with approximately 21% of people with FND experiencing ED and S difficulties (Barnett, Armes, and Smith, 2018).
* **Genetic conditions/syndrome -** The incidence and prevalence of ED and S difficulties related to genetic conditions varies according to each specific condition. For example, ED and S difficulties is a key symptom of oculopharyngeal muscular dystrophy (Werling et al, 2015). It is important to consider how genetic conditions identified in childhood may impact on ED and S over the lifespan and how other acquired causes of ED and S difficulties may impact on pre-existing difficulties. New drug treatments for conditions such as Spinal Muscular Atrophy (SMA) type 1 are extending life expectancy; therefore, new protocols for ED and S will be required if/when children reach adulthood.
* **Head and neck cancer** – 89% of service users reported ED and S difficulties post laryngectomy (Arenaz Búa et al, 2018), 54.9% of service users with head and neck cancer experiences ED and S swallowing difficulties (Zebralla et al, 2021)
* Infection – ED and S difficulties may be secondary to an infection of the nerves innervating the muscles of the head and neck e.g. Ramsay Hunt syndrome (Shim et al, 2011). Up to 66 % of people with Bell's Palsy experience ED and S difficulties (Seçil and Aydogdu, 2002).
* **Iatrogenic causes** e.g. the use of antipsychotic medication (Miaronsa and Rofes, 2018 radiotherapy (Caudell et al 2008)
* **Learning disabilities** - 8.1% to 11.5% of adults known to learning disabilities services, will have ED and S difficulties (Chadwick and Jolliffe, 2009; Ball et al., 2011) and 15% of adults known to learning disability service have mealtime support needs (BAll et al, 2011). It is important to consider how new or existing ED and S difficulties impact people with learning disabilities and the transition of children from paediatric to adult services.
* **Mental health** – ED and S difficulties are highly prevalent in mental health conditions, with figures varying from 19% to 46% (Guthrie et al., 2023).  When clinically assessed between 32%-45% of people showed signs of ED and S difficulties which increased to between 84% and 93% when instrumentally assessed (Affoo et al, 2013). Between 23-31% of individuals with schizophrenia experience ED and S difficulties (Regan, Sowman, and Walsh, 2006)
* **Neurological disorders** - up to 50% of people post stroke (Cohen et al; 2016); approximately 50% of people with Parkinson’s disease (Panebianco et al; 2020); between 30-100% of people with Motor Neurone Disease (Panebianco et al 2020); approximately 31% of people with Multiple Sclerosis (Panebianco et al 2020); between 16-83% of people with Progressive Supranuclear Palsy (Litvan et al, 1996). 85% of people with Guillian Barre syndrome experienced ED and S difficulties for at least 4 weeks (Pace et al, 2009). 34.4% of people with a subarachnoid haemorrhage experience ED and S difficulties (Kesser et al, 2020). Wilson’s disease, dementia, polyneuropathy, head injury (up to 93% Hansen et al 2008, 27-30% Takizawa et al 2016).
* **Oncology -** Lung cancer may affect the ability to coordinate breathing and swallowing, the primary tumour may affect the nerves for swallowing innervation or treatment such as radiotherapy may impact ED and S difficulties, 85% of people with a brain tumour experienced ED and S difficulties for at least 4 weeks (Pace et al, 2009).
* **Respiratory causes** – Cardiopulmonary disorders may cause ED and S difficulties for example 15-20% of people with chronic obstructive pulmonary disease (Mokhlesi et al 2002), 11-93% of people with a tracheostomy tube (Skoretz, 2020). Individuals who are dependent on ventilation can also experience these difficulties i.e. post- extubation dysphagia is present in 3-62% of individuals (Skoretx et al, 2010)
	+ **Surgery** – surgery to any of the structures related to swallowing can have a significant impact on ED and S. Adults over 65 who have swallowing difficulties pre thyroid and parathyroid surgery were 3.07 times more likely to have swallowing difficulties post-surgery which could persist up to 6 months post operatively (Crepeau et al, 2024), 19.4% of people experience ED and S difficulties post anterior cervical dissection and fusion (Tsalimas, 2023). Research has shown ED and S difficulties post cardiac surgery in up to 52% of cases of which 53% silently aspirated (Plowman et al, 2023).
	+ **Trauma** - This may be related to the cervical spine, face, brain (Borders et al, 2018) or other insults to the aerodigestive trace e.g. thermal burns (Clayton et al, 2020)
* **Tracheostomy** – post-extubation ED and S difficulties can occur in 3-62% of service users (Skoretz, Flowers, and Martino, 2010).

**3.0 Vulnerability, Risk Issues, and the Role of Speech and Language Therapy**

With an ageing population surviving longer, the number of people living with major illness is projected to increase by over a third by 2040 (Health Foundation 2023) and with increasing survival rates of pre-term babies, children and young adults with complex health needs living into adulthood, the need to consider ED and S decisions in the presence of risk is likely to increase. Decisions are made even in early life for some babies to continue to breast feed with acknowledged risks. Extensive consideration is taken in relation to benefits for infant and mother for long term outcomes for infant and wellbeing of mother. Breast milk may result in fewer respiratory consequences if aspirated than artificial formula (Hersh et al, 2022)

The RCSLT has produced [Guidance for healthcare professionals around eating and drinking with acknowledged risks: Multidisciplinary team guidance for the shared decision-making process](https://www.rcslt.org/members/clinical-guidance/eating-and-drinking-with-acknowledged-risks-risk-feeding/) (adults).The RCSLT recognises the need for paediatric guidance around eating and drinking with acknowledged risks and will be developing guidance in due course.

Guidelines suggest that people who present with indicators of ED and S difficulties should be referred to someone with relevant skills in diagnosis and assessment of dysphagia (NICE, 2006). SLTs have a unique HCPC recognised and registered role in identifying and managing ED and S difficulties associated with a broad range of developmental, neurological and head and neck disorders. There is evidence that interventions, behavioural and other, used by SLTs in the treatment of ED and S are effective. SLTs should use [evidence-based practice](https://www.rcslt.org/members/research/evidence-based-practice/) or best available evidence to support any aspect of ED and S care. SLTs are key members of the neonatal and paediatric multidisciplinary team, supporting early communication, feeding, and swallowing through skilled observation, assessment, collaborative management planning and education. (Murphy et al, 2021; Marks, Gordon and Parnell, 2022).

The overall aims of the SLT working with an individual with ED and S difficulties include:

* Information gathering which can include discussions with parents, carers, family members and the multiprofessional team
* Detailed and accurate assessment (there may be multiple assessments over time) leading to accurate diagnosis of ED and S difficulties which may assist with the differential medical diagnosis and/or the developmental profile
* Reducing risks (including reducing or preventing aspiration) with regards to swallowing function.
* Balancing any potential risks with quality of life, taking into account the individual’s preferences and beliefs, family dynamics and lifestyle.
* Working with other members of the team, particularly dieticians, to optimise nutrition and hydration.
* Stimulating improved swallowing with oral motor/sensory exercises, swallow techniques, positioning and swallow rehabilitation

It is recognised that prompt intervention in the management of ED and S can prevent costly and life-threatening complications, such as aspiration pneumonia (Feng et al., 2019). When working with individuals who are undergoing surgery or treatments, such as chemotherapy or radiotherapy, the SLT has a preventative role in strengthening the individual’s swallow pre-treatment. The SLT should have a clear understanding of local and national policies and procedures for safeguarding and mental capacity law in relation to ED and S and play a key role in supported decision making.

**4.0 Impact of eating, drinking and swallowing difficulties - adults**

Difficulties with ED and S may have life-threatening consequences and can lead to an impaired quality of life. This may be due to embarrassment, lack of enjoyment of food, or inability to participate in food-related social activities, which can have profound social consequences for both the person and members of the family. ED and S difficulties can present in many ways, and the patient may demonstrate one or several of the following symptoms:

* Food spillage from lips
* Taking a long time to finish a meal
* Impaired/reduced chewing ability
* Dry mouth
* Drooling/ impaired oral management of secretions
* Nasal regurgitation
* Food sticking in the mouth, throat or behind the breastbone
* Poor oral hygiene
* Coughing and choking or gagging when swallowing
* Regurgitation of food
* Wet voice or hoarseness
* Weight loss or not meeting expected weight gain
* Repeated respiratory infections
* Food refusal or fear of eating
* Feeling of pain or discomfort when swallowing
* Reduced E and D enjoyment
* Difficulty co-ordinating breathing and E and D

Individuals who do not have appropriate ED and S assessment and management may be at risk of:

* Aspiration pneumonia (Cohen et al 2016; Chang et al, 2022)
* Community acquired pneumonia (Almirall et al, 2013)
* Choking and death (Marik and Kaplan, 2003; Hemsley et al, 2018)
* Poor nutrition and weight loss (Wright et al, 2005; Saleedaeng, 2023)
* Dehydration (Cohen et al 2016; Connolly, 2010; Reber, 2019)
* Compromised general health (Leder and Suiter, 2009)
* Increased caregiver burden (Rangira et al, 2021)
* Hospital admission or extended hospital stay (Low et al, 2001; Patel et al, 2018)
* Reduced quality of life (Nguyen et al, 2005; Smith, Bryant and Hemsley, 2021)

**Mental Health**

People with mental health conditions and ED and S difficulties may have severe negative physical health consequences, such as poor nutrition and hydration, choking and premature death (Guthrie et al., 2023).  Studies demonstrate that ED and S difficulties can impact on social participation and inclusion, with people reported to have reduced control over decisions, feeling stigmatised, and isolated, which further impacts mental health (Aldridge and Taylor, 2012; McHutchion et al., 2021; Smith et al., 2023). It is generally recommended that an assessment should include a functional ED S assessment during a mealtime rather than a snapshot bedside assessment.  The use of videoing within assessment has some potential.

* **Medication Side effects -** Many individuals with mental health conditions may be prescribed medications that can affect ED and S function. Antipsychotics, antidepressants, anxiolytics, and mood stabilizers can cause dry mouth, ED and S difficulties, or changes in saliva consistency, which may increase the risk of aspiration or choking during swallowing. Antipsychotics can also cause changes in muscle tone (reduced) and to alter the level of consciousness (reduced alertness) which can increase the risk of penetration/aspiration and choking.
* **Psychiatric Symptoms -** Mental health conditions such as schizophrenia, bipolar disorder, or severe depression can manifest with symptoms such as psychomotor agitation, catatonia, or cognitive impairments that may impact the coordination and safety of swallowing. Assessing the individual's current psychiatric symptoms and their effect on ED and S is essential for understanding the associated risks.
* **Emotional Factors -** Mental health conditions often coexist with emotional distress, anxiety, or trauma-related responses that can influence swallowing function. Individuals may experience fear or discomfort related to ED and S, leading to avoidance behaviours, reduced oral intake, or psychogenic dysphagia. Understanding the emotional context of dysphagia is crucial for effective assessment and intervention.  It is important to consider how previous traumas around ED and S may impact on the service user's current presentation including childhood experiences.
* **Cognitive Functioning -** Many mental and physical health conditions (e.g. TBI, stroke etc) are associated with cognitive impairments, including deficits in attention, memory, executive function, and problem-solving skills. These cognitive challenges can impact an individual's ability to follow swallowing precautions, adhere to dietary modifications, or use compensatory strategies effectively. They can also have an impact on the individual’s ability to take part in swallowing rehabilitation, maintain ED and S independence, take part in discussions and decision making, and impact on their understanding of risks and benefits of ED and S recommendations. Comprehensive ED and S assessments should include evaluations of cognitive functioning to tailor interventions accordingly.
* **Social Support and Environment -** Social factors, such as living arrangements, caregiver support, and mealtime environment, play a significant role in managing ED and S difficulties in the mental health population. Individuals with mental health conditions may face challenges in accessing appropriate mealtime support, maintaining a consistent eating schedule, or communicating their ED and S difficulties to others (Gutherie et al, 2023). Assessing the social support network and identifying potential barriers to safe swallowing is essential for developing holistic dysphagia management plans.
* **Eating disorders -** The role of the SLT within eating disorder services is evolving to include input for communication and ED and S difficulties for this population both for adult and paediatric services.

**Pneumonia**

Pneumonia is a major cause of morbidity and mortality after stroke or head injury that can be associated with ED and S difficulties. Sellars et al, (2007) in a study of 412 patients determined the key characteristics that would predict patients at high risk for post-stroke pneumonia. These included older-age, dysarthria, severity of post-stroke disability and an abnormal water swallow test. ED and S difficulties have been identified as a serious risk factor for developing aspiration pneumonia in frail older people. The pathogenesis of aspiration pneumonia in immunocompetent elderly people has been attributed to oropharyngeal colonisation of respiratory pathogens and subsequent aspiration–inhalation of infectious particles (Rofes et al 2010). ED and S difficulties have also been proposed as an independent risk factor associated with community-acquired pneumonia in the elderly (Almirall et al, 2013).

**Respiratory Health**

Aspiration related to ED and S does not always result in respiratory deterioration and other factors can have a significant effect on the development of aspiration pneumonia e.g. poor oral health, clinically assisted artificial nutrition and hydration and reduced mobility. (Gillman, Winkler and Taylor, 2016; Ball, Meteyard and Powell, 2023). However, certain patient populations are more vulnerable to respiratory deterioration because of ED and S difficulties than others e.g. COPD, progressive neurological conditions and following a stroke (Prather et al, 2014; van der Maarel-Wierink et al, 2011; Yuan et al, 2015; Lin and Shune, 2020).

Establishing whether a respiratory complication is directly related to an ED and S difficulty remains complex and is often based on clinical hypotheses (rather than investigations such as biopsies of the lungs). Poor oral health is linked to developing aspiration pneumonia (Scannapieco, 2023; Khadka et al, 2021). Lung health is likely worse affected depending on what is being aspirated. Water alone is considered potentially less of a risk if aspirated than other food/fluid. Increasing evidence suggests that respiratory coordination is key for safe swallowing, thus it can be hypothesised that poor respiratory health could lead to dysphagia (Hopkins-Rossabi et al, 2021).

**The elderly**

In elderly patients ED and S difficulties can confound existing problems such as diabetes and wound healing (Cheng et al, 2023; Zakaria et al, 2018). Guidelines produced by the Royal College of Physicians (2021) require the early diagnosis and effective management of ED and S difficulties, stating that it has been found to reduce the incidence of pneumonia and improve quality of care and outcomes. Studies suggest that around 30% of older people in hospital and up to 68% of those in nursing homes have ED and S difficulties (Wirth, 2016). Sarcopenia is also thought to be a major cause of ED and S disorders in the elderly (Abu-Ghanem, Graf, and Govind, 2021). ED and S difficulties can cause anxiety at mealtimes; either the individual not wanting to eat alone for fear of choking or feeling embarrassed at their slow and altered eating behaviour (Costa Bandeira et al, 2008).

**5.0 Impact of eating, drinking and swallowing difficulties - neonates**

**Respiratory Health for Neonates**

Babies born preterm have an immature respiratory system, causing their respiration (gas exchange) to be inefficient (Smith et al 2010). Respiratory distress syndrome is a common difficulty for babies born preterm and may lead to requiring some form of respiratory support and potentially surfactant administration e.g. LISA (Yadav et al, 2023, NHSGGC, 2024). As care continues outside of the uterine environment, the normal process of lung development can be impaired leading to bronchopulmonary dysplasia (BPD) or chronic lung disease (CLD) (Bonadies et al, 2020).

Babies born at term can have a different physiology of respiratory compromise. These can include congenital diaphragmatic hernia, meconium aspiration syndrome and persistent pulmonary hypertension of the newborn (Gallacher et al 2016). Abnormalities of the anatomy of the head and oesophagus can occur during embryological development leading to infants requiring neonatal care and possible ventilatory support e.g. tracheo-oesophageal fistula, oesophageal atresia, micrognathia and choanal atresia.  Structural difficulties can also be caused by trauma after surgery, intubation or as a planned procedure e.g. tracheostomy. These can include vocal cord palsy, subglottic or oesophageal stenosis, laryngomalacia, tracheomalacia and/or bronchomalacia and a high arched palate (Hysinger, 2021).

The impact for communication and feeding for infants with difficulties related to their respiratory health may include:

* delayed or interrupted suck feeding opportunities due to medical status, interventions or surgery for example, long gap oesophageal atresia and tracheo-oesophageal atresia awaiting repair
* risk of negative sensory experiences around the face and mouth
* delayed introduction or inconsistent opportunities for suck feeding, interaction and early communication
* difficulties coordinating sucking, swallowing and breathing during suck feeding
* reduced stamina and endurance for suck feeding
* reduced ability to achieve sucking pressure impacting feeding efficiency
* altered airflow impacting sensory experience within the pharynx and larynx.
* reduced airway protection resulting in aspiration
* noise from ventilatory devices can impact hearing, listening and attention (Richard et al, 2020).
* limited vocalisation with tracheostomy impacting communication development

**Impact of respiratory health for speech, language and communication development**

A neonatal admission can affect parents, causing stress and anxiety, which can impact on infant-parent bonding, and attachment, shared interactions and speech, language and communication opportunities (Shaw et al, 2013) Infants with difficulties related to their respiratory health may have longer hospital admissions and prolonged stays which can impact their speech, language and communication and neurodevelopmental outcomes (Harding et al, 2022).

**Ventilated Associated Pneumonia (VAP)**

VAP is a type of healthcare-associated infection (HAI). It is a lung infection that can develop in an infant in neonatal care if they require for example, repeated and prolonged endotracheal intubation and mechanical ventilation (Bancalari et al 2018, Donn S et al 2020 and Garland 2010). VAP overall is the second most common HAI in neonatal units. Preventative strategies include moving to non-invasive respiratory support, when possible, limiting antibiotic hand exposure, good hand hygiene and pre-feeding strategies e.g. mouth care with mother’s expressed breast milk (MEBM) (Klomplas et al 2022).

**Feeding and Non-Invasive Respiratory Support in Neonatal Care**

Currently there is a lack of guidance and varied opinion in the literature regarding feeding on non-invasive respiratory support. Following a review of the literature; a RCSLT position paper was developed which recommends both caution and shared clinical decision-making with parents, carers and the neonatal MDT when considering suck feeding opportunities for infants requiring non-invasive respiratory support. Individualised SLT assessment and intervention should consider medical complexity, gestational age, level of respiratory support, weight, developmental readiness, and suck feeding method(s) within the context of the changing physiological, anatomical, neurological, and developmental background of the infant who requires non-invasive respiratory support (RCSLT, 2023).

**Aspiration of breast milk and artificial formula**

Breast milk contains nutritional elements and biological elements that protect an infant. Infants who are exclusively feeding with breast milk are at less at risk of respiratory illness and hospitalisation (Mineva et al, 2023). Breast milk may result in fewer respiratory consequences if aspirated than formula (Hersh et al, 2022). The protective factors and antibacterial content of breast milk may support recovery from aspiration and prevention of respiratory illness. However, there is minimal research to support or negate this theory. Further research regarding the incidence of aspiration for infants receiving suck feeds on non-invasive respiratory support, with analysis of the milk type and recovery, may give some insight into this.

**Transition from the Neonatal Unit**

BPD or CLD in infants is the main indication for home oxygen therapy in neonatal care. These infants require supplementary oxygen but are ready to transition to home with community nursing support. These infants will require ongoing support for their communication and feeding development to ensure it is neuroprotective and supports progression alongside their emerging developmental maturation and abilities (Harding et al, 2015, Kamity et al, 2021, Park et al 2015, Connel et al 2023).

Infants who require continued significant ventilatory support e.g. mechanical ventilation and non-invasive ventilation at the end of their neonatal period will transfer to their specialist paediatric setting fur further long-term ventilation support (LTV). Continued support in the longer term for these infants and families is essential for improved feeding, communication and neurodevelopmental outcome. (Ross and Brown, 2013; Hawdon et al, 2000).

**6.0 Impact of eating, drinking and swallowing difficulties - children**

**Term Infants Requiring Neonatal Care**

Infants born at term with complex medical needs requiring care on the Neonatal unit may present with Dysphagia. This may be evident in a variety of forms:

* Lack of/poor reflexes related to feeding e.g. sucking
* Unable to manage own secretions requiring regular suction possibly indicating a delayed or absent swallow
* Unable to latch onto nipple/teat
* Unable to demonstrate suction and compression effectively to remove milk
* Unable to coordinate suck/swallow/breathe pattern
* Coughing, choking or gagging when swallowing
* Respiratory infection
* Poor weight gain

Infants who do not have the appropriate feeding management on the neonatal unit are at increased risk of:

* Aspiration
* Increase in medical interventions
* Poor chest health
* Learnt aversive feeding patterns
* Poor weight gain and nutrition
* Increased Anxiety and distress of family with significant impact on maternal health
* Increased length of stay and readmissions

**Children**

ED and S difficulties can impact on a number of physical, social and psychological consequences including poorer quality of life. In children, there are serious implications for both survival and brain development if nutrition is insufficient for developmental needs (Boyle 1991). There is increasing awareness of compromised swallowing in preterm babies.

Respiratory disorders caused by aspiration can seriously affect the child’s ability to survive or thrive. In addition, ED and S difficulties can significantly impact on life, for example the child’s ability to participate in mealtime tasks (Morgan et al., 2004, Morgan et al, 2023). This can cause stress for the child and family (Morgan et al, 2012). There is particular need to give support to families of children who are tube fed as it is important to develop systems to have a pleasant feeding/ mealtime to establish a good carer-child relationship (Sullivan et al., 2005). Stressful feeding and mealtimes can impact on wellbeing, social interaction and lead to behavioural issues (Tan et al 2022).

**Respiratory health**

Respiratory needs in children can lead to ED and S difficulties as well as being an outcome of them. Structural and physiological issues such as complex airways from TOF-OA, laryngomalacia, tracheomalacia, vocal cord palsy, and laryngeal trauma impact on the mechanism of swallow and breathing co-ordination and airway protection.

Children with a history of prematurity and respiratory needs requiring respiratory intervention such as ventilation or a tracheostomy have a higher risk of aspiration (Sabotka et al, 2022). The impact of poor oral hygiene in ventilated neonate/paediatric inpatients, with subsequent increase in bacterial colonisation of the oropharynx, can also lead to higher risk of ventilator associated pneumonia (NHSGGC, 2024). Chronic lung disease from prematurity can impact on the development of feeding skills which can continue into childhood.

ED and S difficulties in children can lead to aspiration, including silent aspiration, which can lead to further respiratory complications such as pneumonia and chronic lung disease. Silent aspiration was found to be prominent in children with neurological based dysphagia (Arvedson et al 1994). Sabotka et al (2022) found that children with chronic subclinical aspiration were at risk of chronic cough, airway inflammation and more severe respiratory infections.

ED and S difficulties have been identified as one of 9 risk factors that contribute to respiratory disease in children with Cerebral Palsy (Gibson et al, 2021), with respiratory causes being a major reason for premature death (Blair et al, 2019). Consideration of management of ED and S as part of preventative action for respiratory illness in CP is being developed with the [Association of Paediatric Chartered Physiotherapists in the UK](https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://apcp.csp.org.uk/system/files/publication_files/Risk%2520Identification%2520Matrix%25202024.pdf&ved=2ahUKEwi9o5Hv_faHAxVOWkEAHegzDqYQFnoECBAQAQ&usg=AOvVaw0fHzUi7jYiLuJpOyaMPftr) (ACPC 2024)

**7.0 Assessment**

**7.1 Adult**

Swallow screening is a minimally invasive procedure that determines the possible presence of ED and S difficulties. Screening protocols indicate the presence of clinical signs that may be indicators of ED and S difficulties. Screening protocols are usually carried out by nursing staff or other health care professionals. SLTs have a role in establishing ED and S screening procedures in an organisation. For people with ED and S following a stroke, evidence from the Sentinel Stroke national audit programme (SSNAP) shows that delays in the screening and assessment of ED and S are associated with an increased risk of stroke-associated pneumonia (Bray et al, 2017).

After completion of the swallow screening tool, if an individual is deemed to have clinical signs of ED and S difficulties, a referral should be made for a full clinical swallowing evaluation (CSE). ED and S assessment falls within the remit of the SLT. Oesophageal assessment does not usually form part of the routine SLT examination however SLTs should have a good awareness of causes and signs of oesophageal dysphagia which may warrant further investigation by the medical team and how these may affect difficulties during the oral and or pharyngeal stages of swallowing.

A CSE completed by a SLT should involve a holistic and service-user centred synthesis of many different sources of information, including a thorough case history including medical, social, cultural and religious factors, history of ED and S difficulties and current presentation. One of the aims of a CSE is to identify or develop a reasonable hypothesis of how anatomy, physiology and/or neurology is contributing to the person’s ED and S difficulties. A clinical swallowing evaluation should include or consider the following aspects:

* an orofacial and cranial nerve examination
* consideration of the impact on service user’s participation/wellbeing including the presence of an advanced directive
* contextual factors that may impact on an individual’s presentation
* consideration of a risk assessment regarding aspiration, including consideration of [eating and drinking with acknowledged risks](https://www.rcslt.org/wp-content/uploads/2021/09/EDAR-multidisciplinary-guidance-2021.pdf)
* health and safety considerations (e.g. infection control, personal protective equipment (PPE), food handling, moving and handling)
* consideration of the need for an instrumental swallow assessment (VF, FEES, Manometry) to provide more in-depth physiological and anatomical information on swallowing that can inform dysphagia intervention and management – see separate RCSLT guidance on these
* Trials with appropriate volumes and consistencies of diet and fluids

Templates such as [this](https://www.rcslt.org/members/clinical-guidance/dysphagia/dysphagia-learning/attachment/templates-for-eds-assessment/) one developed for the pre-registration ED and S competencies online eLearning are a useful starting point in developing organisation specific documentation.

Following completion of a CSE the following outcomes may result:

* diagnosis of characteristics of ED and S difficulties and their severity
* recommendations for management/intervention that are jointly agreed with the service user
* consideration of the role of clinically assisted nutrition and hydration
* prognosis for improvement, maintenance or deterioration of function
* referral for other services or professionals. Including instrumental ED and S assessments

**7.2 Neonates and medically complex term infants**

The holistic care of an infant and family requiring SLT assessment is underpinned within family integrated care, trauma-informed care and long-term neuroprotective care. A fully embedded MDT team would approach the assessment of an infant and family within the remit of medical stability, readiness and cue based. When infants and families require specialist SLT assessment this will involve:

* General observation, medical history, respiratory status, stability on handling and level of readiness cues
* Consideration of parental wishes, concerns
* Pre-feeding assessment – Oro facial examination including cranial nerves, mouth care, non-nutritive sucking, skin to skin, supportive tube feeding, management of secretions, level of and maintenance of alert state, feeding cues, reflexive patterns
* Feeding assessment. If breast feeding discussing expressing, milk supply, last expression, skin to skin contact, NNS at recently expressed breast. If bottle feeding consideration of positioning, teat choice and flow of teat. It must be ensured parents are given the first opportunity to experience a bottle feed with their infant. The consideration of multiple feeders needs to be considered for assessment and management.
* consideration of the need for an instrumental swallow assessment (VF, FEES) to provide more in-depth physiological and anatomical information on swallowing that can inform intervention and management ([RCSLT neonatal guidance](https://www.rcslt.org/members/clinical-guidance/neonatal-care/neonatal-care-guidance/)) However, the method of feeding should be considered prior to the consideration of instrumental assessment specifically in relation to breast feeding (RCSLT Neonatal Instrumental position paper - currently being finalised)

Quality narrative can be given around the feed and further strategies identified using assessment tools e.g. UNICEF UK Breastfeeding tool, UNICEF UK bottle feeding tool, the Infant Driven Feeding Scales (IDFS) (Waitzman, Ludwig, and Nelson, 2014). Other tools include pulse oximetry and cervical auscultation (CA).

Following completion of a holistic feeding assessment the following outcomes may result:

* diagnosis of characteristics of feeding skills/dysphagia within developmental framework
* recommendations for management/ intervention/strategies
* prognosis for development of feeding skills
* referral for other services or professionals.

**7.3 Children**

SLT assessment of children with eating, drinking and swallowing difficulties may need to consider several areas. All assessment should be underpinned by person-centred care and consideration of the child’s own health, wellbeing and lifestyle; however, it is acknowledged that assessment protocol may differ in different settings and services. Assessment may include, but is not limited to:

* General observation. This may need to take place in a variety of settings including hospital, neurorehabilitation/care facilities, the child’s home and education settings.
* Comprehensive case history, including consideration of developmental milestones, gross motor skills and history of ED and S skill patterns and behaviours.
* Caregiver interview, including consideration of ongoing support caregivers may require in relation to the child’s ED and S
* Oral examination, including assessment of oral structures and dentition
* Discussions around oral care, including existing oral care, use of equipment such as toothbrushes, toothpaste and tolerance to oral care
* Observation of mealtime, including the child’s management and tolerance of all texture consistencies and level of assistance / support required.
* Cervical Auscultation (CA) and pulse oximetry
* Instrumental assessment if appropriate e.g. videofluoroscopy, FEES, manometry
* Consideration of eating and drinking with acknowledged risk (EDAR), requiring liaison with paediatrician.

**Paediatric Feeding Disorder (PFD)**

PFD is a diagnosis that sits within the International Classification of Functioning, Disability and Health and is coded within the ICD-10. It is defined as ‘*impaired oral intake that is not age-appropriate and is associated with medical, nutritional, feeding skill, and/or psychosocial dysfunction’*. All children with oropharyngeal dysphagia could be described as having a PFD however there are a significant number of children who have PFD that do not have pharyngeal dysphagia e.g. a child with a long history of reflux (medical dysfunction cause) may have PFD affecting all four areas, impacting oral feeding development, although having a typical swallowing mechanism. There is a central role for the SLT with assessment and treatment of Paediatric Feeding Disorders (PFD). The role of the SLT within PFD is to assess and treat the skills related to feeding and eating (oral sensory-motor skills, swallowing and communication at mealtimes) and the impact this has on the child’s development and functioning. The SLT should operate within an MDT framework, to ensure medical, nutritional, skill-based and psycho-social drivers for the feeding difficulties are addressed. The SLT has a role to play in educating and supporting MDT awareness and understanding of PFD as a developmental condition that is more common in children with neurological and developmental differences, providing adaptations and adjustments to tailor the therapeutic MDT approach to individual need. The SLT has a role to play in training caregivers and those who work with the CYP, with specific strategies to support communication and interaction at mealtimes.  For optimal outcomes, SLT input should be offered within the above framework, however it is recognised that there is variation with service provision across the country.

**Avoidance, Restrictive Food Intake Disorder (ARFID)**

There is a growing awareness of the role for the SLT with ARFID. It is a diagnosis within the DSM-5 and is defined as ‘an eating or feeding disturbance as manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with one (or more) of the following: significant weight loss (or failure to achieve expected weight gain or faltering growth in children); significant nutritional deficiency; dependence on enteral feeding or oral nutritional supplements and marked interference with psychosocial functioning’. There are often additional complexities around unmet/unidentified needs in terms of neurodiversity such as Autism, language difficulties and selective mutism (sometimes known as situational mutism).  Both children and adults can experience ARFID. The role of the SLT within ARFID is not only to  rule out structural/anatomical difficulties,  alongside an education element but to support MDT awareness, understanding and identification of the language and communication needs of the individual, the impact this is having on their day-to-day function and how these hidden needs may be driving some of the ARFID presentation. Alongside assessment and support any intervention needs to be MDT led and should consider psychoeducation work around the individuals presentation.  For optimal outcomes for people with ARFID, SLT input should be funded so that services are embedded within the MDT.

**8.0 Considerations of equality, diversity and inclusion**

Conductingand synthesising information gathered duringan ED and S intervention plan can be very challenging because clinicians must take into consideration multiple factors. For example, a clinician must consider the medical history/diagnosis, the prognosis, as well as individual viewpoints and wishes such as food preferences, cultural background, overall wellbeing and QoL, to provide equitable person-centred care.

Although eating and drinking are essential for obtaining the vital nutrition that the body needs, they are also integral parts of cultural identity, social interaction, participation and inclusion. As previously described, ED and S difficulties not only impact physical health, but they can be detrimental to wellbeing, impacting the mealtime experience, independence, inclusion and social participation. That is not only due to the physical manifestations, but it can also be a result of the ED and S intervention methods, such as food and fluid modification, restrictions of certain food types, positioning, environmental adaptations, assisted feeding, and feeding tubes (Krekeler et al., 2018; Egan et al., 2020; Leslie and Broll, 2022). People with ED and S difficulties may face multiple barriers when it comes to inclusion and social life fulfilment. For example, difficulties in finding modified food in restaurants impedes social participation and inclusion (Ambrocio and Shune, 2022). In addition, people with feeding tubes often face discrimination and exclusion from public places during feeding time, leading to devastating feelings and moments for the people and their carers (Brotherton et al., 2007; Taylor et al., 2022).

Furthermore, eating and drinking are recognised to be interwoven with someone’s culture and social identity. Culture encompasses patterns of human behaviours that include language, customs, beliefs and values (Riquelme et al., 2023). As the UK population is increasingly diverse, clinicians must be culturally responsive (Health inequalities guidance, RCSLT 2021). SLTs should be culturally competent when treating ED and S difficulties because food, drinks and mealtimes can have symbolic meanings for individuals, and often represent an individuals’ identity. Mealtime adaptations may have a detrimental effect on an individual’s personal identity and may affect social inclusion (Ambrocio and Shune, 2022). Similarly, individual religious beliefs, which are part of someone’s culture and identity, additionally influence eating and drinking. Food often is intricately tied to religious practices, where some religions have a clear set of dietary laws (Leslie and Broll, 2022). Individual dietary preferences such as a vegetarian or a vegan diet also play an important role in someone’s beliefs and identity and must also be considered when agreeing an ED and S intervention plan. In order to support clinicians and organisations in providing equitable, inclusive, person-centred care, the RCSLT (2022) provided practical steps and tools in the ‘[Analysing diversity, equity and inclusion in speech and language therapy’ position paper](https://www.rcslt.org/wp-content/uploads/2023/02/Anti-racism-survey-report-Feb-2023.pdf).

Moreover, vulnerable populations, such as those with learning disabilities (LD) are often excluded from the decision-making process and often face health inequalities in accessing appropriate care, as has been described in the RCSLT Learning Disabilities position paper (2023). This report demonstrates that children and adults with LD are often treated unfairly and excluded by health and care professionals from the decision-making process, leaving them to feel powerless. In general, patient adherence in ED and S management, was found to be affected by the influence that individuals have over treatment decisions, such as food modification (Smith et al., 2024). In their systematic review Krekeler et al., (2018) demonstrate that patient adherence to an ED and S intervention plan is influenced by the ability of the patient to remain independent and by the influence they have over decision making process.

Access to healthcare services for vulnerable communities is frequently impeded. [The RCSLT (2023) Health inequalities guidance](https://www.rcslt.org/learning/diversity-inclusion-and-anti-racism/health-inequalities/addressing-health-inequalities/) highlights how health inequities are more likely to be experienced by those from 'under-served' or marginalised groups, such as black and minority ethnic groups, those who identify as lesbian, gay, transexual, queer/questioning, intersex and asexual, plus (LGBTQIA+), groups with specific social and economic status (e.g., employment, religious beliefs, stigmatised populations, etc.), health status (e.g., people with LD), and those living in socio-economically disadvantaged areas. The guidance additionally highlights the SLT's role in reducing health inequalities and health disparities, as well as the responsibility of both individuals and organisations to understand and recognise the communities they serve.

Furthermore, in their study Witham et al., (2020) demonstrates that underserved populations are often excluded from study trials. For example, in the scoping review of Hirschwald et al., (2024) authors describe that the underserved groups in ED and S and Parkinson disease were the groups of younger people (<50), older people (80+), women, etc. According to the National Institute for Health and Care Research (NIHR), failing to include a broad range of participants is impacting the generalisability of findings. To address inequalities in health and care studies, NHIR developed the INCLUDE project, which healthcare researchers are advised to consult when setting a research project.

According to the government ([GOV.UK 2022](https://www.gov.uk/government/publications/health-disparities-and-health-inequalities-applying-all-our-health/health-disparities-and-health-inequalities-applying-all-our-health)), health inequalities and health disparities are sometimes used as interchangeable terms. This has been described by them and The King’s Fund (2020) as:

“Health inequalities are unfair and avoidable differences in health across the population, and between different groups within society, while ‘health disparities adversely affect groups of people who have systematically experienced greater obstacles to health”

The RCSLT’s commitment to equality diversity and inclusion, aims to support diversifying the SLT profession and to provide equitable person-centred and holistic care to those with speech, language, communication, and swallowing difficulties. As it is highlighted in the Analysing diversity, equity, and inclusion in speech therapy (RCSLT, 2022), “It is the moral and legal obligation of speech and language therapists to provide equitable service to everyone.” This report outlines the six calls to action which are the practical steps to initiate a plan to promote equity, diversity and inclusion, in the SLT profession, to the services provided to service users, organisations including HIE, and the wider community.

**Practical steps:**

This is a non-extensive list of recommendations. This list hopes to inspire clinicians to further promote Equality, Diversity and Inclusion in their practice. Please see resources page for further resources

* SLTs must put service users at the centre of the intervention plan and decision making. SLTs must take into consideration service user viewpoints, preferences, wants and needs and work in partnership with service users and their families or carers. Clinicians must empower service users in decision making.
* Develop strategies to increase cultural competency. Clinicians should dynamically demonstrate cultural humility, which is the lifelong commitment to self-evaluation and self-critique of biases and to take practical steps to tackle them. Clinicians must dynamically assess and reflect upon their conscious and unconscious biases to avoid discrimination.
* Dysphagia researchers should take into consideration the ‘roadmap’ and the recommendations of the NIHR [INCLUDE project](https://www.nihr.ac.uk/documents/improving-inclusion-of-under-served-groups-in-clinical-research-guidance-from-include-project/25435)  to include populations that are undeserved.
* SLTs should implement specific guidelines such as ‘’Eating and drinking with Acknowledged Risks”, when suitable/appropriate.
* SLTs should provide their recommendations in an accessible format
* SLTs should provide necessary training regarding intervention modalities to the service users and their carer’s, in order to support inclusion, promote participation and to ensure equitable person-centred care.
* Organisations such as hospitals, care homes etc., must make necessary provisions to assure that individual needs will be covered, including religious diets, culturally sensitive diets, cultural appropriate utensils etc.

**9.0 Health and well-being for adults**

Understanding the emotional and psychological issues related to ED and S difficulties is crucial in supporting the health and well-being of service users. When recommending any intervention consideration should be given to whether the treatment creates a burden that outweighs the potential benefit. It is important for SLTs to respect the wishes of the service user and their families/carers including social and cultural considerations. It is good practice to consider the following aspects to support health and wellbeing:

* Physical health impact- e.g. risks of malnutrition and dehydration, weight loss, preventing chest infections, reducing coughing/choking risks, complications associated with tube feeding
* Psychological impact- anxiety/fear/embarrassment of eating in public, negative body image
* Impact on activity and engagement- impact of ED and S difficulties on mealtime experiences, increased length of mealtimes, reduced choice and control, less enjoyment from food, social isolation
* Cultural/spiritual impacts- food as a celebration, religious events, cultural identity
* Impact on carers- carer burden, stress/fear around food preparation, social isolation, secondary stress i.e. supporting mealtimes
* Use of ED and S specific quality of life measures as part of the assessment/ management processes

**9.1 Health and wellbeing Infants and families requiring neonatal care**

**Psychological impact for parents and carers**

Parents and carers experience separation and psychological distress which impacts on family mental health, wellbeing and interaction with their infant (Shaw et al, 2013). Mothers with infants in neonatal care are at higher risk of postpartum depression, stress, anxiety and disempowerment. (Muller-Nix, et al 2024, Alkozei et al, 2014 and Aagaard and Hall, 2008). This can have an impact on bonding and infant early interaction skills. Language, cognitive and emotional development are closely linked to parent affect, and early negative experiences can impair the development of these early skills and parent-infant relationship (Treyvaud et al, 2009; Treyvaud et al, 2013).

SLT assessment and management for parents and babies is based around current research related to trauma informed care and underpinned by multiprofessional working. There is understanding the impact of early trauma has long term impacts on outcomes and well-being (Evans et al, 2023).

**Physical health impact**

There are a number of co-existing aetiologies related to infants born early or infants born at term but medically complex. These include necrotizing enterocolitis (NEC), CLD, BPD, Intraventricular haemorrhage (IVH) grade 3-4, Hypoxic-ischemic encephalopathy (HIE), Patent Ductus Arteriosus (PDA), syndromes, and upper airway difficulties. This can lead to poor growth and nutrition, desaturations and bradycardic episodes requiring medical intervention, aspiration, long term medical interventions e.g. oxygen requirement and longer-term tube support (Kamity, Kapavarapu and Chandel, 2021).

**Cultural/spiritual impacts**

Families and infants requiring neonatal care will have their own individual cultural and spiritual needs including engagement in cultural practices, family celebrations, rituals and religious days. It is important that all neonatal health care professionals increase their understanding and knowledge of different cultural and spiritual needs to support the care for families and infants, so that it is sensitive and appropriate and support experiences and outcomes (MBRRACE-UK, 2024; Ng and Funf, 2023; NHS Race and health observatory, 2023)

**9.2 Health and wellbeing for children and families**

Literature reviews have shown that childhood ED and S difficulties can have a significant emotional impact on parents and/or caregivers, particularly increased stress around mealtimes, negative impact on child interaction and increased feelings of social isolation (Silva et al, 2023). It is therefore important to consider the needs of both the child and family in management and intervention options for ED and S.

Interventions to support feeding at birth and with infants may continue to have impact on functional ED and S as children grow. Trauma, stress of decreased nutritional intake and medicalised experiences of mealtimes can continue to negatively influence child and carer / family wellbeing. Early intervention for feeding difficulties can also influence sensory needs / experience with food and drink as children grow

As well as impacting on respiratory needs, ED and S difficulties can have negative consequences for growth, nutrition, hydration and bowels, with associated impact on skin integrity, immune system support and illness recovery.

Social activity and participation, along with links to cultural food-based traditions, can also be impacted. Decreased participation in social gatherings based around food / drink has been reported with feeding difficulties impacting on social participation of children and families (Simione et al, 2020).

**10.0 Instrumental assessments of EDS difficulties**

The most common instrumental assessments within the UK are videofluoroscopy and FEES. Each has its own set of indicators and risks and the treating SLT should be aware of these. Guidance on the use of pharyngeal high-resolution manometry is underway and will be added to this guidance in time.

**Videofluoroscopic Swallowing Study**

[**RCSLT position paper: Videofluoroscopic evaluation of oropharyngeal swallowing function (VFS) the role of SLTs** (2013)](https://www.rcslt.org/wp-content/uploads/media/Project/RCSLT/videofluoroscopic-position-paper.pdf). Please note that this position paper had been deemed a priority for RCSLT to update.

The following videofluoroscopy competencies were developed by Greater Glasgow and Clyde NHS trust:

[VFS competencies: Adult level 1](https://www.rcslt.org/wp-content/uploads/media/Project/RCSLT/vfs-compentencies-al1.doc)

[VFS competencies: Adult level 2](https://www.rcslt.org/wp-content/uploads/media/Project/RCSLT/vfs-compentencies-al2.doc)

[VFS competencies: Adult level 3](https://www.rcslt.org/wp-content/uploads/media/Project/RCSLT/vfs-compentencies-al3.doc)

[VFS competencies: Adult level 4](https://www.rcslt.org/wp-content/uploads/media/Project/RCSLT/vfs-compentencies-al4.doc)

The competencies below were developed by Annie Aloysius and Imperial College Healthcare NHS Trust (2008):

[VFS competencies: Paediatric](https://www.rcslt.org/wp-content/uploads/media/Project/RCSLT/vfs-compentencies-paediatric.doc)

**Flexible endoscopic evaluation of swallowing (FEES)**

The RCSLT Flexible endoscopic evaluation of swallowing (FEES): the role of speech and language therapy position paper, competency framework and training logs and other supporting resources can be [**accessed here**.](https://www.rcslt.org/members/clinical-guidance/fees/)

**High resolution manometry (HRM)**

RCSLT is currently developing guidance on the use of HRM. This section will be updated with the resources once publish.

**11.0 Oral Health** **Adults**

Good oral health refers to the promotion and maintenance of a clean mouth including the teeth, gums, cheeks, tongue and palate (Department of Health (BASCD), 2014). Poor oral hygiene can lead to dental caries, periodontal gum disease, the development of ulceration, soreness, cracked lips and fungal infections, and is associated with increased bacteria in the mouth and in saliva (National Clinical Stroke Guidelines, 2023; Ortega, 2014; Scannapieco, 2021).

There is evidence to suggest the combined effects of poor oral hygiene and ED and S difficulties may increase the risks of an individual developing aspiration pneumonia (Khadka et al, 2020, Azarpazhooh and Leake, 2006; Drancourt, 2022; Logemann et al, 2013). As a result of poor oral hygiene saliva contaminated with multiple bacteria can harbour microbes that if aspirated may result in pneumonia. Additionally, more residuals of microbes may remain in the lower airways due to an ineffective cough reflex and weakened respiratory system. Evidence supports the use of oral health care interventions such as regular tooth brushing, to reduce the frequency of pneumonia and to improve quality of life (Manger et al, 2017; Wu et al, 2022; Remijn, et al, 2022; Tada and Miura, 2012). SLTs have a key role in raising awareness and supporting the training of carers and other health care professionals in this important area.

**Barriers to good oral health**

Service users can face multiple barriers to achieve good oral health which can include (Hansen et al, 2021; Leggett et al, 2023; Palmers et al, 2022):

Service user barriers

* Individual’s physical, mental and cognitive ability to carry out effective oral hygiene, seek dental services and make choices about healthy eating (British Society for Disability and Oral Health. 2001).
* A lack of perceived need, inability to express need and lack of ability for self-care.
* Communication difficulties – difficulties communicating discomfort or pain.
* Fear and anxiety of visiting the dentist
* Financial or logistical barriers to accessing dental services e.g. a lack of dental services nationwide.
* Side effects of medication or treatments e.g. radiotherapy, chemotherapy

Carer barriers

* Challenges in providing a recommended healthy and nutritionally complete diet for people with dysphagia.
* Need for high calorie food supplements, sugar based liquid medication, and laxatives may increase the risk of dental cavities.
* Knowledge and skills of carers

Professional service providers (dentists)

* Low confidence and lack of experience of supporting people with e.g. movement disorders, learning disabilities, or mental health difficulties (Komin and Weerapol, 2020*)*.

Physical barriers to accessing Oral Care

* Mobility difficulties
* Difficulties attending appointment (e.g. ambulance transfers)

**Specific Oral Complications**

* Self-Injurious Behaviours (SIB) e.g. Oral self-mutilation or self-injurious behaviour (e.g. Self-biting of lips, tongue and hands). This can lead to infection, scarring and permanent tissue damage.
* Drooling resulting from: Impaired oral muscle control (e.g. poor lip seal), decrease in frequency of spontaneous swallowing, side effects of certain medications
* Dry mouth resulting from: certain medications, anxiety, drug misuse, radiotherapy, certain medical conditions e.g. Sjogrens
* Abrasions or wearing away of the tooth surface due to vigorous teeth brushing, or eating non-food items e.g. coal, soil, pebbles.
* Attrition or wearing down of the biting and chewing surfaces of teeth often because of tooth grinding (bruxism).
* Erosion – non-bacterial chemical process caused by contact with acid (e.g. foods, reflux, excessive vomiting).
* Intraoral prostheses or surgical reconstruction (e.g. obdurators, free flap tissue repair)

**Oral health care pathway**

If the individual is dependent on others for oral care carrying out an Oral Health Risk Assessment (OHRA) is recommended.

‘[Mouth Care Matters (MCM)](https://mouthcarematters.hee.nhs.uk/index.html)’ is a Heath Education England initiative to improve the oral health of patients in hospital through education and training. Their resources are available for both children and adults. These include screening and assessment tools, resources for improving oral care and training packages.

**Oral Health Care for Neonates**

Regular oral care for neonates and infants with expressed breast milk (EBM) has demonstrated a reduction in ventilator assisted pneumonia (VAP). Overarching positive oral experiences for all neonates, infants and children is essential.

**Oral Health Care for Children**

[Mini mouth care matters (2019)](https://mouthcarematters.hee.nhs.uk/links-resources/mini-mcm-resources-2/index.html) resources are available for infants and children. An introduction of a toothbrush and fluoride toothpaste should be supported on dental eruption. It also may be appropriate to consider non-foaming (SLS free) toothpaste for children at risk of aspiration.

**12.0 SLT Intervention and management- Adult**

ED and S difficulties should be managed following comprehensive clinical assessment of the individual (see Assessment section) and the management plan should be agreed with the service user. ED and S intervention and management should aim to optimise service user’s potential for oral nutrition, hydration and participation/quality of life whilst managing and reducing risks of aspiration, choking and other adverse effects on health and well-being.

Intervention may include:

* Working with an individual to develop a person-centred management plan, taking into consideration aspects such as the safety and efficiency of a swallow and clinical presentation. This may include education about normal swallowing, the nature of the individual's ED and S difficulties, and counselling around potential for improvement or trajectory of change.
* Determining when there may be a rationale for clinical intervention to support swallow rehabilitation and improved swallow physiology.
* Considering additional factors in relation to ED and S aside from the anatomical/physiological presentation to support an individual (eg. posture, environment, support staff).
* Promoting nutritional intake and hydration.
* Being aware of the mental capacity legislation and how this may play a role in ED and S intervention.
* Contribution to EDAR discussions and planning

Intervention and management may be direct or indirect and may involve rehabilitation and/or compensatory strategies.

**Therapeutic strategies and interventions**

Selection of the recommended treatment options should be based on clinical rationale and assessment hypothesis, taking into consideration points such as underlying aetiology and expected progression (e.g. progressive or non-progressive), the current evidence base and the service user and their caregivers' views and the presence of any advanced directives.

Any ED and S treatment plan must always put the service users’ viewpoints at the heart of any decision-making process. Clinicians need to take into consideration service users’ opinion, perspectives, goals, culture and overall wellbeing, before setting any therapeutic plan as described in the HCPC standards of practice. Poor adherence to ED and S recommendations is often associated with reduced control over decision making and not considering their wants/needs among others, such as lack of proper training about ED and S compensatory strategies, and reduce social participation (Krekeler et al., 2018; Smith et al., 2023)

SLTs should be aware of the contraindications for intervention/management strategies for a specific condition as well as harms that could occur for an individual. (Cheng et al 2022).

Treatment options may be rehabilitative or compensatory. Rehabilitative techniques such as exercises (Expiratory Muscle Strength Training, Masako, resistive lingual isometric exercises) aim to make a lasting change to the individual’s swallowing by improving underlying physiological function. Biofeedback is an effective tool for some service users to help stimulate physiological change (Benfield et al, 2019; Albuquerque et al, 2019; Battel, Calvo, Walshe 2021; Archer, Smith and Newham, 2021; Hou et al, 2024).

Compensatory strategies generally alter the swallow when used but do not create lasting change e.g. head rotation, chin tuck posture. They can include modifications to diet and fluid consistencies. Adaptive equipment and environmental modifications should be considered when appropriate. This could include working with other members of the MDT e.g. occupational therapy (Gutherie et al, 2023).

The published evidence base for many interventions, including optimal recommendations for dosage, is growing, but more high-quality research is needed. Clinicians should apply the principles of [evidence-based practice](https://www.rcslt.org/members/research/evidence-based-practice/) when planning dysphagia intervention. [Advances in the Treatment of Dysphagia in Neurological Disorders: A Review of Current Evidence and Future Considerations - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9578488/)

**Innovative Dysphagia rehabilitation methods**

Several innovative techniques are available, with varying levels of evidence, and these methods generally aim to improve swallow function. These include interventions such as Neuro-muscular electrical stimulation, pharyngeal electrical stimulation, IQORO, Respiratory muscle strength training, McNeil Dysphagia Programme, sensory input tools, chewy tubes, and Ora-light tools. Other devices may aim to develop and maintain oro-motor skills alongside swallow with the use of ‘bridge devices’ such as silicone/netted feeders. Please refer to the section on new devices.

**Texture modification**

Modifications to diet/fluid texture may include changing the viscosity of liquids and/or altering the texture of solid foods. RCSLT recommend the use of the standardised terminology set out in the [International Dysphagia Diet Standardisation Initiative (IDDSI)](https://iddsi.org/). It is important to remember that IDDSI is a communication tool and not an intervention plan. When recommending modifications to an individual’s diet and fluids, consideration should be given to the following:

* Impact of the modified consistency on the individual’s swallowing physiology and function.
* Aspiration risk.
* Increased risk of malnutrition and dehydration.
* Preferences of the individual and their families and/or care givers and the impact on quality of life.
* Consultation with the inter-professional team including the dietitian and pharmacist to help ensure that the service user’s nutritional and medication needs continue to be met.
* [Capacity](https://www.rcslt.org/members/delivering-quality-services/supported-decision-making-and-mental-capacity/) of the individual to consent to the treatment/management plan. *Add links to mental capacity section on RCSLT website*
* For more detailed information refer to the [RCSLT position paper](https://www.rcslt.org/wp-content/uploads/2024/07/Thickened-fluids-position-paper.pdf) on the use of thickened fluids.

**Sitting upright after meals**

One of the most characteristic features of normal gastric emptying is its large variability, depending on the chemical composition of the food. The effect of different foods on gastric emptying is in large part due to the hormones released from the gastrointestinal tract that provides feedback regulation of gastric emptying (Goyal, 2019).

There is a lack of robust evidence regarding the time it is recommended to sit upright after eating and drinking. Gravity is thought to aid in the digestion of foods and sitting upright may help to reduce gastrointestinal discomfort and reflux.

It is generally recommended that, if possible, an adult is positioned in an upright position for 30 minutes after eating and drinking. For babies holding the baby upright after feeding for 10-15 minutes may help the stomach more easily digest the milk or formula they have consumed. However, the time recommended should be person specific and factors such as ability to maintain upright position, skin integrity, pain/discomfort, sitting balance safety and service user cooperation should be considered.

**13.0 SLT Intervention and management- Neonates**

SLT management is delivered as part of the MDT underpinned by developmental care and family integrated care frameworks. All decisions are made within a family centred approach with aim to support and develop oral suck feeding. Approaches to feeding support are cue-based and responsive. All feeding experiences should be positive for both infant and carer.

**Pre-feeding interventions**

Early pre feeding support is key to the development of feeding skills (British association of perinatal medicine: toolkit 1, 2020). These include:

* Skin to skin/ early positive touch in delivery room
* buccal colostrum within first 6 hrs
* mouth care with EBM
* Non-nutritive sucking
* supportive tube feeding

**Breastfeeding**

Maternal breast milk (MBM) is the optimal form of feeding for preterm infants and is associated with significant short and long-term benefits (British association of perinatal medicine, toolkit 2, 2022). Supporting the establishment of expressing to produce a sustainable milk supply is essential. Management includes:

* skin to skin
* Expressing regularly at cot side, in skin to skin
* Non-nutritive sucking (NNS) at recently expressed breast/ dummy dips
* Positioning and effective latch
* Express initially, pacing,
* time limits
* Consideration of nipple shields.

**Supportive bottle feeding**

Choice of expressed breast milk or formula by family.

* Responsive cue-based feeding (White and Parnell, 2013)
* Consideration of choice of bottle/teat
* Milk flow rate (Bell and Harding, 2019)
* pacing
* Positioning – Elevated Side lying (Raczynska, Gukczynska and Talar, 2021)
* Volume limitation and/or time limitation
* The consideration of multiple feeders needs to be considered.

Infants born premature and/or with complex medical conditions may present with persistent feeding and/or swallowing difficulties. These infants will require long term tube support with continued pre-feeding management strategies to aim to promote development of oral and pharyngeal skills within a developmental framework.

**Training and the environment**

Environment: Within developmental care the environment should be appropriate to ensure neuro-protective care is optimised. Ensuring an environment is created to promote early pre-feeding skills and cue-based responsive suck feeding will have a significant impact on the feeding journey. It is key that the impact of the Neonatal environment is considered in the development of feeding skills**.**

Training: Deliver of training and education is underpinned by the principles of neonatal models of care e.g. developmental care, family integrated care, UNICEF Baby Friendly Initiative and Trauma Informed Care. Training can be offered to all members of the multiprofessional neonatal team, to SLTs and AHPs new to neonatal care and to parents and families. Training is required to support parent and family interaction and involvement with their baby’s neonatal care, early communication development, early feeding development, breastfeeding support, bottle-feeding support and feeding and swallowing difficulties which will involve supportive strategies including pacing, positioning and equipment.

**14.0 SLT Intervention and management- Paediatric.**

Dysphagia intervention and management should aim to optimise the child’s potential for oral nutrition, hydration and participation/quality of life whilst managing and reducing risk of aspiration, choking and other adverse effects on health and well-being.  Paediatric dysphagia management should consider the child’s current developmental stage, alongside future potential development. Interventions may include:

* Working with an individual, families, carers, MDT and education staff to develop a person-centred plan for managing eating, drinking and swallowing difficulties. This should take into consideration aspects such as the developmental picture, maximising nutrition, hydration, growth and the efficiency of feeding, and ED and S.
* Determining when there may be a rationale for clinical intervention to support the development of ED and S skills and providing this intervention within scope of service provision and practice.
* Considering external factors in relation to ED and S aside from the anatomical/physiological presentation to support an individual (e.g. Posture / positioning, environment, support staff).
* Considering compensatory and behavioural strategies which may be required to support a child with eating and drinking e.g. modifying fluid and food textures, feeding techniques like pacing
* Determining whether environmental adaptations or specialised equipment may be required to optimise a child’s eating and drinking skills e.g. cups/specialised straws / spoons / plates
* Determining whether there is a need for oral care intervention and provide guidance and support in line with this whilst being aware of aspects such as oral sensation and aspiration risk.
* Provide appropriate training and education to parents / carers/ education professionals to assist in the intervention / management process
* Being aware of the Gillick Competence, mental capacity legislation and how this may play a role in ED and S intervention, considering the context of who decision makers are.

The SLT should be aware of local and national guidance to guide intervention, e.g. Nice guidance NG62 – guidance for management of cerebral palsy in under 25’s. Intervention and management may be direct or indirect and may involve rehabilitation and/or compensatory strategies, training

**Therapeutic strategies and interventions**

Selection of the recommended treatment options should be based on clinical rationale and assessment hypothesis, taking into consideration points such as developmental stage, underlying aetiology and expected progression (e.g. progressive or non-progressive), the current evidence base, the patient’s and the family/carer views and the presence of any advanced directives.

SLTs should be aware of the contraindications for intervention/management strategies in specific conditions as well as any harms that could occur for an individual.

Treatment options may be developmental, rehabilitative, palliative, compensatory and/or modifications to diet and fluid consistencies.

Developmental interventions aim to increase ED and S skills.

Rehabilitative techniques such as exercises (resistive lingual isometric exercises) aim to make a lasting change to the individual’s swallowing by improving physiological/ neurological function.

Compensatory strategies alter the swallow when used but do not create lasting change on their own e.g. head rotation, chin tuck posture, but aim to maximise the effectiveness and function of existing oral or swallow skills. However, spontaneous improvement may occur concurrently.

The published evidence base for many interventions, including optimal recommendations for dosage, is growing, but more high-quality research is needed. Clinicians should apply the principles of [evidence-based practice](https://www.rcslt.org/members/research/evidence-based-practice/) when planning ED and S interventions.

**Dysphagia rehabilitation and / or skills maintenance methods.**

Several innovative techniques are now available which aim to improve swallow function and develop oral skills for eating, drinking and swallowing.

There are varying levels of evidence available for the techniques available and each should be considered on an individual person-centred basis, whilst looking at clinical need and the benefits to the child. Examples of interventions are IQORO, Ora-light, chewy tubes and sensory motor input tools.

Alternative devices also aim to develop and maintain oro-motor skills alongside the swallow with the use of ‘bridge devices’. Examples of these are silicone/netted feeders.

SLTs should work with each individual to understand if or when it may be appropriate to  use adult focused interventions. Considerations may include puberty level, physiology, growth, and underlying diagnosis, and the SLT should follow the principles of evidence-based practice.

**Texture modification**

Modifications to diet texture may include changing the viscosity of liquids and/or altering the texture of solid foods and / or temperature / portion size to facilitate safety and ease of swallowing.

 RCSLT recommend the use of the standardised terminology set out in the [International Dysphagia Diet Standardisation Initiative (IDDSI).](https://iddsi.org/) When recommending modifications to an individual’s diet and fluids consideration should be given to the following:

* Limitation of licenced thickener for under 3’s
* Impact of the modified consistency on the individual’s swallowing physiology and function.
* Gut function in neonates and paediatrics
* Contraindication of starch-based thickener with macrogol laxatives
* Aspiration risk.
* Increased risk of malnutrition and dehydration.
* Preferences of the individual and their families and/or care givers and the impact on quality of life.
* Consultation with the inter-professional team including the dietitian and pharmacist to help ensure that the service user’s nutritional and medication needs continue to be met.
* For more detailed information refer to the [RCSLT position paper](https://www.rcslt.org/wp-content/uploads/2024/07/Thickened-fluids-position-paper.pdf) on the use of thickened fluids.
* [Capacity](https://www.rcslt.org/members/delivering-quality-services/supported-decision-making-and-mental-capacity/) of the individual to consent to the treatment/management plan.

**Training and environment**

There is a significant level of dependence of paediatrics on caregivers for nutrition and hydration intake. The influence of caregiver and child relationship on ED and S has high levels of impact on skills, support and management of ED and S needs (Aldridge et al 2010, Davies et al 2006).

* Consideration of multiple environments that paediatrics may experience should also be part of any assessment and management plan (e.g. home, nursery, school, respite, hospital) and how these can impact on functional ED and S skills.
* Training is required to support appropriate and effective use of strategies, equipment, positioning guidance and texture modification by a range of people in different settings (home, education staff, respite care). Training will include people who are specific to individual care needs (family, carers, 1:1 education support) but may also be needed to develop wider scale awareness of support techniques and signs of clinical concern within education, social care and hospital settings. This is key to facilitating awareness of needs and early referral for specialist support.

**15.0 Response times and outcome measures**

**Response times**

Clinicians reserve the right to prioritise referrals in line with their professional judgement, according to the information received and according to local team prioritisation criteria to determine risk and urgency. Classification of whether a referral is urgent or non-urgent needs to be determined at a local level and the organisation should have protocols and procedures to support this decision-making process.

Many speech and language therapy services have service level agreements in place which set out the expected response times to see people with ED and S difficulties who are referred for speech and language therapy assessment. Services commissioned to provide rapid response services and who have 7-day services may be required to see individuals who are referred with 24 hours or less.

Based on consensus of expert opinion the RCSLT recommends the following responses times where a service level agreement does not exist or where the agreement does not state specific response times.

* Urgent patients are seen within 2 working days from receipt of referral irrespective of their setting
* Acute inpatients are seen within 2 working days from receipt of referral.
* For non-urgent community settings including educational settings individuals will be seen within 10 working days in locations where dysphagia services are commissioned and resourced.

**Outcome measures**

It is good practice to use outcome measures to measure the effectiveness and impact of any intervention offered. There are a number of outcome measure tools available which can provide both baseline data and show progress or impact of the ED and S intervention. Tools can measure severity of any impairment, as well as measuring aspects such as well-being and social participation. Tools can be either generic or condition specific.

Use of Patient reported outcome measures (PROMS) which show the patient experience of the care should also be considered.

For more details on outcome measures please see the RCSLT section on [outcome measures](https://www.rcslt.org/members/delivering-quality-services/outcome-measurement/) and the resources section associated with these pages.

**16.0 Devices**

There are a range of products that claim they may be used in the treatment of ED and S disorders. The RCSLT’s position on the use of these is the same as for any new intervention. For further guidance, please see our section on the [use of new interventions.](https://www.rcslt.org/members/delivering-quality-services/use-of-new-interventions-guidance/)

**Transcutaneous Neuromuscular Electrical Stimulation (NMES)**

Transcutaneous electrical stimulation involves placing electrodes on a person’s neck. Small electrical currents pass through the electrodes to stimulate the peripheral nerve supply of the pharyngeal or laryngeal muscles. The patient carries out an exercise protocol concurrently with the electrical stimulation. There are a number of NMES devices available that use different electrodes designs, positions and stimulus intensities. Transcutaneous neuromuscular electrical stimulation (NMES) is usually used as well as traditional swallowing therapy for treating oropharyngeal dysphagia. The aim of NMES is to increase the effectiveness of swallowing therapy by strengthening the muscles involved in swallowing. It also promotes recovery of cortical control of swallowing. Two systematic reviews investigating non-invasive neurostimulation therapies including NMES reported some positive effects on swallowing function and quality of life. (Li et al, 2021; Wang et al, 2021). Similar findings were also reported in recent European Stroke Organisation and European Society for Swallowing Disorders guidelines, although there is a lack of evidence of improvements in other outcomes such as mortality, pneumonia, length of stay or feeding tube removal (Dziewas et al, 2018).

In 2023 the 6th Edition of the National Clinical Guidelines for Stroke included NMES as one of the recommendations.

The recommendation states:

‘People with dysphagia after stroke may be considered for neuromuscular electrical stimulation as an adjunct to behavioural rehabilitation where the device is available and it can be delivered by a trained healthcare professional’.

In December 2018 the National Institute for Health and Care Excellence (NICE) issued guidance to the NHS in England, Wales, and Northern Ireland on one group of electrical stimulation interventions: Transcutaneous neuromuscular electrical stimulation for oropharyngeal dysphagia in adults. NICE recommend that when using a new treatment device or approach that it should be part of service evaluation, audit or research. Thus, gathering data associated with its use is suggested.

Current evidence on the efficacy of transcutaneous neuromuscular electrical stimulation (NMES) for oropharyngeal dysphagia in adults shows there were no major safety concerns.

[**NICE Guidance on Transcutaneous neuromuscular electrical stimulation for oropharyngeal dysphagia in adults. Interventional Procedure Guidance (IPR634).**](https://www.nice.org.uk/guidance/ipg634)

An update to this guidance is expected in 2026. The RCSLT recommends carefully reviewing and following this guidance if you are considering using this approach. For questions on indemnity cover while acting on the NICE guidelines, please refer to the [use of new interventions](https://www.rcslt.org/members/delivering-quality-services/use-of-new-interventions-guidance/)section for more information.

**Pharyngeal Electrical Stimulation (PES)**

Pharyngeal electrical stimulation involves a catheter being passed through the nose and into the pharynx. The catheter delivers small amounts of electrical current to the pharynx. The electrical current travels to the brain and stimulates areas involved in swallowing, The aim is to reduce aspiration and improve secretion management and quality of life. In 2024 [NICE issued guidance](https://www.nice.org.uk/guidance/ipg781) around the use of PES

In summary the guidance states that “For people with neurogenic dysphagia who have a tracheostomy after stroke, pharyngeal electrical stimulation can be used in the NHS while more evidence is generated. It can only be used with special arrangements for clinical governance, consent, and audit or research. There are no safety concerns about pharyngeal electrical stimulation, but the clearest evidence on clinical efficacy is for people with neurogenic dysphagia who have a tracheostomy after a stroke.”

The RCSLT recommends carefully reviewing and following this guidance if you are considering using this approach. For questions on indemnity cover while acting on the NICE guidelines, please refer to the [use of new interventions](https://www.rcslt.org/members/delivering-quality-services/use-of-new-interventions-guidance/)section for more information. A single blind RCT (Dziewas et al, 2018) showed that the use of PES to aid decannulation in patients with a tracheostomy and dysphagia after stroke was effective. In this trial, PES significantly increased the number of patients who were ready to be decannulated compared to sham stimulation.

In 2023 the 6th Edition of the National Clinical Guidelines for Stroke included PES as one of the recommendations. ‘Patients with tracheostomy and severe dysphagia after stroke may be considered for pharyngeal electrical stimulation to aid decannulation where the device is available, and it can be delivered by a trained healthcare professional’.

**IQORO**

In March 2019, the National Institute of Health and Care Excellence (NICE) issued a [**Medtech innovation briefing**](https://www.nice.org.uk/advice/mib175)about the use of IQoro for stroke-related dysphagia. These briefings are designed to support commissioners and healthcare professionals who are considering whether to use a new medical device or technology and thus they particularly consider safety issues.

[NICE Medtech briefing on IQoro for stroke-related dysphagia (MIB176)](https://www.nice.org.uk/advice/mib175)

NICE’s briefing describes key evidence around the product but does not provide specific guidance or recommendations. Some of its key conclusions are:

Swallowing therapy is the usual treatment for dysphagia after a stroke. The company claims swallowing exercises can be more accurately and effectively done using IQoro. No similar technologies are currently recommended in care guidelines.

IQoro has also been used with a small paediatric case study cohort with reported improvements in saliva control (Hagg and Morris, 2022). However, there is no indication as to any other interventions that were also being used to manage saliva (medication, other therapy interventions). The authors acknowledged that further research is required. Key uncertainties around the evidence are the lack of high-quality, randomised studies and the unclear effect of IQoro compared with NHS standard care or spontaneous improvement.

More detail on NICE’s overall assessment of the evidence can be found [**here**.](https://www.nice.org.uk/advice/mib175/chapter/Clinical-and-technical-evidence) The RCSLT recommend careful consideration of this guidance, as part of an evidence-based approach to practice, when considering usage of this device. NICE recommend that when using a new treatment device or approach that it should be part of service evaluation, audit or research. Thus, gathering data associated with its use is suggested.

**Iowa Oral Performance Instrument (IOPI)**

The IOPI is a device that measures tongue and lip strength and endurance and can be used for biofeedback for oral motor exercises.

A systematic review carried out in 2020 suggests that there is positive evidence in terms of impact on tongue pressures, along with mixed results for swallow safety and efficiency (Smaoui, Langridge, and Steele, 2020).

**Expiratory Muscle Strengthening Training (EMST).**

EMST is a device-facilitated rehabilitative exercise that aims to increase the force generation capacity of expiratory and submental muscles by forcibly blowing into a handheld device with built-in resistance. (Sapienza 2007)

The strength of resistance is adjustable through a one-way spring-loaded valve. In patients with dysphagia secondary to PD, studies showed that 4 weeks of EMST reduced dysphagia severity and improved upper oesophageal sphincter function (Troche 2010), with the improvement sustained for at least 8 weeks post-training (Claus 2021)

A systematic review (Brooks 2019) suggested that EMST may be effective in improving airway protection in patients with dysphagia associated with stroke or PD. However, this finding was based on the results from only 4 RCTs. There is some limited evidence to suggest that improvements to maximum expiratory pressure translate to an improved functional swallow for service users post radiation treatment for head and neck cancer (Hutchison, 2017). Therefore, the evidence for the clinical efficacy of EMST remains limited.

Please note that the RCSLT does not “endorse” any commercial intervention or medical device.

**Oral stimulation for promoting oral feeding in preterm infants**

The evidence base is limited to support structured programmes for intra-oral stimulation for infants requiring neonatal care (Greene, 2023). SLTs would continue to promote pre-feeding interventions such positive oral touch and non-nutritive sucking.

**Therabite**

Therabite is an intraoral stretching device that aims to improve range of movement (ROM) of temporomandibular function using repetitive passive motion to stretch connective tissue, strengthen weakened muscles and mobilise joints. When used with a stretching protocol it has been found to have a positive impact on the preservation of temporomandibular ROM in patients with Spinal Muscular Atrophy and Duchenne’s Muscular Dystrophy (Morris et al, 2020). The case studies by Morris etc al (2020) cited improvement to feeding function, oral hygiene and reduced fatigue. It has also been shown to have a positive impact on ROM for service users with head and neck cancer (Pauli et al 2013; Karlsson et al 2021; Montalvo et al, 2020)

**17.0 Transition**

The SLT has an important role in the safe transition of service users between teams or settings. Intervention should be timely with clear communication and expectations between teams. It is important to consider how waiting lists may impact on safe transitions and what steps can be taken to reduce any potential risks.

**Transitions for neonates**

Families are at the centre of neonatal care and early discussions to support transition experiences during neonatal care is essential. Understanding parents and carers thought’s and feeling of the transitions they experience during neonatal care including moving through different levels of care on a neonatal unit, repatriation to another neonatal unit and preparing for home can enable the neonatal team, including an SLT to offer guidance for these next steps (Shillington and McNeil, 2021; BAPM, 2023; Deierl et al, 2018;Banerjee et al 2020)

An SLT can support transitions and repatriation by:

* Attending discharge planning meetings arranged by the team with the family.
* Providing information about communication and feeding development and how this may progress for their baby as they move through the different levels of care on a neonatal unit.
* Provide verbal and written information jointly discussed with family and neonatal team working in the next level of care a baby and family is receiving e.g. moving from intensive treatment unit (ITU) to high dependency unity (HDU) or moving from HDU to special care (SC)
* Being involved early in discussions about repatriation to reassure families the continuum of care continues. An onward referral to SLTs in a receiving unit is provided if a service is available.
* To ensure relevant care plans are communicated to receiving SLT and/or neonatal unit team. These conversations can be communicated early before repatriation takes place. A written copy should also be provided to support repatriation.
* Informing neonatal care outreach team (NCOT) service of feeding recommendations on discharge.
* Informing about local community support services for families once they leave the neonatal unit.
* Informing families about follow-up clinics available led by the neonatal unit including neuro developmental surveillance as per NICE guidelines NG72
* Discussing an onward referral to relevant community SLT team and the process it requires

**Transitions for Children**

Transition refers to a change in care or responsibility for management. Effective handover between teams is a priority, requiring good communication, professional respect and shared understanding of patient-centred care. Discharge is the end of an episode of care and may occur when the child is safe on the current ED and S recommendations, has reached their goals, or no progress is being made towards goals and ongoing monitoring is not indicated. It is important to consider discharge from the very beginning of intervention and plan appropriately.  Both effective transitions and discharges need to consider the following:

* Levels of care i.e. will the child move to a different service if their level of care changes
* Repatriation to a district general hospital (DGH)
* Transfer to Community SLT services
* Rehabilitation centres e.g. traumatic brain injury
* Can the child access specific pathways e.g. T21 pathway
* Transition to adult services
* Transition to education and Education and Health Care Plan (EHCP)
* Transitioning between different schools, educational and residential care settings, including respite services
* How the provision of funding may change which service the child is seen by this may be Local authority, Continuing Health Care or statutory services (if eligible)
* Discharge when safely managing current recommendations
* The need for long term follow-up in specific situations e.g. long-term use of thickened fluids

Points of transition or discharge can be a particularly stressful time for the child and their caregivers. Early and effective communication can help to alleviate this stress.

**Transitions for adults**

Transition refers to those points in the service user’s journey where responsibility for care transfers from one service to another. Typically, this might be when young adults reach 18 years of age and move from paediatric to adult services, but transition may also refer to movement between acute and rehab settings, hospital to community, respite or nursing care to the person’s home. Service users requiring treatment for mental ill-health may need to transfer to acute hospital should they experience a decline in their physical health presentation and vice versa and those detained within the justice system may need to leave secure settings to access specialist support or as part of their rehabilitation to return to the community,

Depending on the individual situation, transition points may trigger new legislation, for example mental capacity legislation and there may be differing expectations regarding patient autonomy, risk management and access to other agencies. SLT goals in ED and S management may change following transition as a person’s condition improves or declines and their access to more familiar environments, preferred foods, company and setting alters. Levels of risk may increase or decrease with the change in access to monitoring, equipment and other professionals.

Weller et al (2014) and CQC (2022) describe transition points as times of increased risk to service user safety. A lack of shared physical spaces or information systems and unclear boundaries creates the potential for serious adverse events. Effective handover between teams is a priority requiring good communication, professional respect and shared understanding of patient-centred care.