ALL WALES SPECIAL INTEREST GROUP
SPECIAL ORAL HEALTH CARE

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Dysphagia and Oral Health

Recommendations for the dental team for the management of oral health care of children and adults with dysphagia

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The All Wales Special Interest Group for Special Oral Health Care (SIG) is a group of Specialists in Special Care Dentistry, Special Care Dentists and Dental Care Professionals who advise the Clinical Directors of Community Dental Services in Wales

Dysphagia and Oral Health

Recommendations for the dental team for the management of oral health care of children and adults with dysphagia (April 2014)

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Introduction

These recommendations have been produced to help inform and support the dental team when providing oral health care for children and adults who have dysphagia. It is based on published research and guidance, and on expert advice and best practice.

What is dysphagia?

Dysphagia is a difficulty with swallowing, where there is a problem with the passage of food and liquids from the mouth, into the throat and down the oesophagus. This is usually due to a neurological, psychological or physical impairment of the oral, pharyngeal or oesophageal mechanisms or the 'perception' that there is an impediment to the normal passage of swallowed material[1, 2]. It is also described as a cluster of symptoms occurring as a result of an underlying disease or disorder[68].

There are many causes of dysphagia (Appendix 1). Onset can be sudden due to an event such as stroke, infection or trauma, or gradual as in progressive illnesses such as Huntington's disease or myasthenia gravis. It may develop secondary to oral or oesophageal malignancy or its treatment, or be a symptom of a psychological condition. In children, dysphagia is predominantly caused by a developmental disability e.g. cerebral palsy, cleft lip/palate, prematurity or infantile reflux[5].

How common is dysphagia in the UK?

The prevalence of dysphagia is uncertain, as many cases remain undiagnosed or under reported. However some UK data is available:

- In 2011-12, 29,334 patients were admitted to hospitals in the UK with a primary diagnosis of dysphagia, while 661 patients were seen as outpatients (Hospital Episode Statistics, NHS 2013)[3].
- The incidence of dysphagia was 11.4% in a community study of 'healthy' 69-98 year olds[4].
- 10% of acutely hospitalised older people have some form of dysphagia[1].

What are the symptoms of dysphagia?

Signs and symptoms of dysphagia will vary from person to person; symptoms are dependent on the type and extent of the swallowing disorder, their age and other health factors (Appendix 2).

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It is important that the dental team understands the oro-facial symptoms of dysphagia. These include:

- Poor tongue control during chewing or difficulties pushing food to the back of the throat,
- Inability to close lips,
- Pocketing / pouching of food in cheeks or under the tongue,
- Loss of sensation affecting the individual's ability to feel food or liquid in the mouth.

The presence of xerostomia (dry mouth) can exacerbate these symptoms.

How is dysphagia diagnosed and managed by health care professionals?

Diagnosis requires a systematic clinical approach, including diagnostic interventions such as video-fluoroscopy or endoscopy. Multidisciplinary health professional management may involve medical professionals, nursing staff, speech and language therapists, physiotherapists, radiologists, occupational therapists, dieticians and dentists with experience in managing dysphagia[5].

The dental team have a role in the diagnosis of dysphagia especially in older adults, including identifying symptoms (Appendix 2)[69]. A screening algorithm can be used for adults to assist in diagnosis and referral to a multidisciplinary care pathway (Appendix 3).

Multiagency working is crucial to good patient management and speech and language therapists (SaLT) have a key role in the diagnostic assessment of dysphagia. For those people with a high risk for aspiration, the dental team should be included in SaLT dysphagia diagnostic care plan (Appendix 4). This would allow appropriate oral care risk assessments and oral care plans to be implemented at an early stage.

Dieticians are integral to the multidisciplinary dysphagia management team. Nutritional management for people with dysphagia may include how the individual is positioned when swallowing, texture-modified diets, use of fluid thickeners, tube feeding or percutaneous endoscopic gastrostomies (PEG).

SIGN (2010) advises that all staff, carers and stroke survivors who have dysphagia, should have the knowledge and skills for safe feeding[6]. The guidance includes:

- Adaptations of positioning for mouth care
- Modifications to the consistency of food and drink
- Food placement in the mouth
- Management of behavioural and environmental factors
- Delivery of oral care
- Management of choking
- Assessment and management outcomes communicated to all involved in the patient's care, including the patient.

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Why does dysphagia concern the dental team?

Dental teams must be aware of the risks associated with dysphagia. Tooth brushing is essential to ensure plaque removal and reduce pathogenic organisms in the mouth[9-11], to prevent oral and dental disease and reduce the risk of aspiration pneumonia[6, 8, and 12] especially in dependent and older people. Recurrent respiratory infections occur in 40% of people with learning disabilities who have dysphagia[67]. The National Patient Safety Agency (2007) reports that poor oral health and hygiene are risk factors and should be identified in adults with a learning disability with dysphagia[7]; it highlights the importance of the dental team in the management of care.

Some people with dysphagia have a higher risk of poor oral health[13]. These include those:

- With gastric or nasal tubes
- Nil-by-mouth
- On oxygen therapy
- Receiving chemotherapy
- With neuromuscular impairment with swallowing difficulties
- Who are immunocompromised.

The most common oral problems associated with dysphagia are:

- Poor oral clearance or pouching of food
- Greater accumulation of plaque and/or calculus
- Increased susceptibility to dry mouth
- Aspiration risk during dental treatment
- Increased caries-risk in dentate patients on some nutritional supplements and thickeners.

Some people with dysphagia are more anxious about oral care and dental treatment because they believe it could cause them to choke. They may also lack confidence in their ability to swallow. Support from the dental team who are skilled in dysphagia oral care management will help to improve techniques and confidence. Mouth care is a fundamental right of all people regardless of whether or not a person has capacity to consent to oral procedures.

Oral Health Care Pathway for people with dysphagia

Raising awareness of the importance of good oral hygiene is important for people with dysphagia, healthcare professionals and carers[14-16]. A robust oral health care pathway will ensure that the individuals, their carers as well as health care professionals receive evidence based advice and information, risk assessment and appropriate oral care from dysphagia skilled dental care teams.

An Oral Health Risk Assessment (OHRA) is recommended if a person is in hospital, a care home or is dependent on carers for oral care. An OHRA will help identify risk factors such as aspiration or poor oral health, and help to develop an individualised oral care plan[6,12,16,19-22]. An example of an OHRA

can be found in Appendix 5; it may be used or adapted by nursing and support staff.

Evidence suggests that nurses have little knowledge of the link between poor oral health, dysphagia and pneumonia, so further mouth care training is recommended[17,18]. A study of Intensive Care Units found that oral care protocols are not followed by nurses, despite evidence that it reduces patient mortality[23]. In 2012, Wales 1000 Lives Plus launched a national programme for nurses on *Mouthcare for Adults in Hospital* (MAH)[24]; this programme recognises the need for specific support for people with dysphagia. The British Society for Disability and Oral Health has also published guidelines for oral health care of people with dysphagia[19].

Current evidence-based practice for preventive oral health care has been produced by BASCD (2014) and should be followed[61].

Oral health care for people with dysphagia

Everyone diagnosed with dysphagia should have in place a care pathway that includes an Oral Health Risk Assessment and Oral Care Plan[25]. Oral care protocols for children and adults are found in Appendices 6 & 7.

Body position is very important. Ensure safe body and head positioning before carrying out any mouth care procedures. If a person is supine, the head and body should be raised to a position of 30-45 degrees or the head tilted carefully to one side ensuring the neck is well supported[9,10,64]. Residual food, debris or secretions must be removed before any mouth care regime[10,16] and regular oral suctioning maintained throughout. If suction equipment is not available, a clean towel or cloth can be used instead. Children and some adults with unsafe swallows should be supervised during oral hygiene procedures due to the increased risk of aspiration.

Oral foam swabs have limited efficacy and are banned in Wales due to their significant aspiration risk[11,16,28,29]. Suction (aspirating) toothbrushes can be used and may result in better oral health and reduced oral bacteria than manual toothbrushes without suction[30]. Examples of this equipment can be found in Appendix 8. Power operated toothbrushes have been found to be more effective than manual toothbrushes[33]. Collis Curve toothbrushes or super-brushes may also help carers for adults and children with limited tolerance and cooperation for dental care[43,44] (Appendix 8).

Mouth care for children and adults without teeth includes using a small, soft toothbrush, moistened with water to avoid build up of dried secretions in the mouth [25]. For people with teeth, tooth brushing is recommended twice daily, with a **dry** toothbrush, using non-foaming (sodium lauryl sulphate-free [SLS]), fluoride toothpaste. It is important to ensure the excess is spat out, removed by suction[25] or a clean towel or cloth. To reduce calculus build-up, anti-calculus toothpastes can be used [34,60] (Appendix 9). Daily tooth brushing has

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been found to improve oral hygiene by 50% in older people with oropharyngeal dysphagia and reduced levels of aspiration pneumonia[70].

For children and adults aged over three years, use a non-foaming toothpaste with at least 1400 ppm sodium fluoride[31,32]. A higher strength fluoride toothpaste can be prescribed by dentists for those aged over 10 years.

For people who have difficulty with cooperating for tooth brushing, 12-hourly use of chlorhexidine digluconate gel or spray is advised, depending on the age and weight of the person [25,59]. People with dysphagia should **not** use a mouth wash.

Three to six monthly dental check-ups and individually devised mouth care regimes are recommended for all people with dysphagia, depending on their oral health risk factors[35-37].

If a person has oral hypersensitivity or abnormal bite reflexes that impede mouth care[26], speech and language therapists can advise on oral desensitisation techniques or provide facial oral tract therapy[27]. In some circumstances, careful use of mouth props or finger protection may help to carry out mouth care safely (Appendix 8).

Meticulous denture hygiene will reduce plaque and oral microbial accumulation[41]. Dentures should be removed, cleaned thoroughly with a brush and soaked for at least three minutes in dilute sodium hypochlorite or chlorhexidine digluconate. They should be stored dry, over night[42]. If denture fixatives are used, the risk of aspiration is increased, therefore advice from the dental team **must** be sought prior to use. Mouth care plans for people with dysphagia are summarised in Table 1.

Table 1: **Mouth care plans for people with dysphagia**:

	Mouth care plan
Children with no teeth	• Clean the mouth with a moist, soft toothbrush, twice daily
Children with teeth (<6 yrs)	• Brush twice a day, with small dry toothbrush • Use a toothpaste with 1400ppm fluoride and if possible one that prevents calculus build up • Watch the child when tooth brushing, to ensure that they do not choke or aspirate • Remove extra fluids with a suction or a clean towel or cloth • Apply water-based lip moisturiser as needed

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	Mouth care plan
Children >6 yrs and adults with teeth	• Do the same as for children <6 years **Also:** • Use chlorhexidine digluconate (Corsodyl) gel or spray twice daily around teeth, tongue and gingiva • Suction the mouth after mouth care
Adults without teeth	• Brush the mouth with a moist, toothbrush, twice daily • Use chlorhexidine digluconate (Corsodyl) gel or spray, twice daily in the mouth and remove the excess • Apply water-based lip moisturiser, as needed
Cleaning dentures	• Twice daily brushing of dentures with soap or denture cream • Leave dentures out at night • Soak in sodium hypochlorite or chlorhexidine digluconate for 3 minutes • Leave to dry in named denture pot

Oral Care for people with high aspiration risk

People who are at a high risk of aspiration due to an unsafe swallow must have more intensive oral health care. The American Critical Care Nursing Oral Care guidelines (2010) recommend:

- twice daily brushing of teeth, gingiva and tongue with soft small-headed toothbrush[16, 38]
- patient in a chin-tuck posture[28]
- oral moisturiser to oral mucosa and lips
- chlorhexidine digluconate twice daily[39,40].

Naso-gastric tube / PEG

Gastrostomy-fed children have significantly more calculus and plaque deposits which may harbour clinically-significant levels of bacteria and pose increased risks of aspiration pneumonia[35,36]. Nasal or oro-gastric tubes that result in an open mouth posture predispose to xerostomia[40]; therefore information on relief of dry mouth care is required.

Some people who are nil-by-mouth or stop swallowing at the normal rate may aspirate saliva. To introduce oral nutrition, SaLTs or dieticians recommend spoon-sized food and/or fluid as oral tasters to improve their swallow[62]. Some oral tasters which are high in sugar, may increase caries risk (tooth decay), therefore preventive fluoride therapy is required.

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Intensive Care – intubated/ventilated

In intensive or critical care units, meticulous oral hygiene will help to prevent ventilator-associated pneumonia (VAP)[45]. Within 48 hours of hospital admission, the oral flora in critically-ill patients changes from gram positive organisms to predominantly gram negative which are more virulent and increase the risk of hospital-acquired pneumonia[25]. Toothbrushing every 12 hours leads to lower incidences of ventilator-associated pneumonia (VAP)[64,71] although further research is needed[65].

The use of chlorhexidine digluconate gel or spray has been found to significantly decrease aerobic pathogen colonisation in ventilated patients[46,48,49,63,66]; it decreases the incidence of VAP by 40%[66] and reduces mortality[63]. Water-based intraoral moisturisers may also be used and can reduce VAP[50].

Suctioning equipment must be single-use as it becomes colonised with potential pathogens within 24 hours[47]. The oral hygiene regime for people who are intubated or ventilated is summarised in Appendix 10[25].

Some nursing staff have a strong dislike for carrying out oral care and the attitudes of care staff to oral care need to be addressed[12,56], including fear of dislodging the endotracheal tube or finding the space limited for oral hygiene procedures[57]. Mouth care training will improve confidence in providing oral care.

Table 2: Mouth care for people with unsafe swallows

No teeth	• Every 2-3 hours, clean the mouth with a moist, soft toothbrush using clean water • Apply water-based lip moisturiser, every 2-3 hours
Children with teeth <6 yrs	• Every 2-3 hours, clean the mouth with a moist, soft toothbrush using clean water • Apply water-based lip moisturiser, every 2-3 hours • Brush twice daily with small, soft toothbrush with non-foaming fluoride toothpaste • Use suction or swabs to remove extra fluid
Children aged >6 yrs and adults with teeth	Do the same as for children <6 years and also: • Use chlorhexidine digluconate gel or spray, twice daily around teeth and mouth
Adults with dentures	• Dentures must be removed and left out of the mouth while intubated/ventilated • Soak in dilute sodium hypochlorite or chlorhexidine digluconate for 3 minutes • Leave to dry in named denture pot

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Oral Nutritional Supplementation and oral health

SIG Wales (2009) suggests that people prescribed oral nutritional supplementation (ONS) containing carbohydrates have a significantly increased risk for dental caries[51]. The Welsh Government's nutrition guidelines recommend that everyone placed on ONS should have an oral health risk assessment, advice on good mouth care and be referred to a dental team[52]. Additional risks factors for those on ONS are described in Table 3.

Table 3: Additional risk factors for ONS and dental management

Risk Factors:	Recommendations:
Xerostomia/dry mouth	Water spray/atomiser, saliva substitutes Regular fluoride varnish applications High-fluoride toothpastes (2800 -5000 ppm fluoride) prescribed by a dentist[31]
Poor manual dexterity	Use of electric/battery operated toothbrush or super-brush
Dependent for self-care	Assisted tooth brushing regime
Dentures	Careful cleaning and care with denture fixatives

Dental treatment for people with dysphagia

The provision of dental treatment requires careful assessment and appropriate precautions to manage identified risk. A dysphagia risk assessment tool has been developed to assist in developing individual dental treatment plans (Appendix 11). This includes identifying higher risk patients, ensuring the correct dental equipment is used and the patient is positioned safely.

Dental teams require specialised mouth care training in providing appropriate information and treating people with dysphagia. This may be provided by the local Community Dental Service in Wales.

Mouth care education and training

Training in mouth care for nurses and carers has had little priority over the years[56-58]. In Wales, this lack of training has been highlighted by the Fundamental of Care (FOC) hospital audits[53,54]. It is essential that oral health care training be included in the induction process for nursing, health and social care support staff in private home care agencies, residential homes and

hospitals[14,55]. It is imperative that oral health care is included as a core topic in the nursing undergraduate curriculum in Wales. Further funding should be made available to support evidenced-based mouth care training for qualified staff, healthcare support workers, carers in care homes and those working in the community.

Information booklets for patients with dysphagia, their parents, and to support workers and nurses in providing mouth care for patients with swallow difficulties and dysphagia are free to download (Appendices 12 and 13).

Conclusions

Research into the development of these guidelines has identified the paucity of evidence and publications on oral health and dysphagia. However, the recommendations in this report have drawn upon the published evidence, and the professional knowledge and experience of a group of clinicians who are specialists in Special Care and Paediatric Dentistry, and who are members of the All Wales Special Interest Group in Special Oral Health Care (SIG).

Further research is required to support the recommendations in this document for this very vulnerable group of people with dysphagia.

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Recommendations for local protocols : children and adults who have dysphagia

1. Development of a local oral health care pathway for people with dysphagia.

2. Ensure local dental services have specialists in paediatric dentistry and special care dentistry who can provide oral care for children and adults who have dysphagia, and train other members of the dental team.

3. Oral Assessment criteria and a protocol that identifies risk factors for oral health will be included in the overall, unified assessment or under-nutrition care plan in order to:
   - Identify individual oral care needs and develop a Personal Oral Care Plan
   - Provide appropriate preventive advice, fluoride supplementation and oral hygiene equipment
   - Identify need for and access to dental services.
   - Access a care pathway to more specialist dental services.

4. Access to specialist oral health advice and support for children and adults who have dysphagia.

5. Provision of oral health education and promotion for patients, health care professionals and carers of people who have dysphagia that address:
   - Use of care pathways and protocols for mouth care
   - Their oral health needs
   - Oral hygiene techniques and fluoride therapy for the prevention of caries and periodontal disease
   - Oral health care problems associated with high sugar containing foods and oral nutritional support (sip feeds).

6. Establish dental services that link into care pathways to ensure:
   - Access to emergency dental care
   - Access to routine oral care and advice
   - Appropriate specialist dental services, especially for those that require special care dentistry i.e. people with severe dysphagia
   - Support for health professionals and carers in oral care
   - Procedures for continuity of dental care on discharge from hospital and rehabilitation
   - The workforce has the appropriate skill mix

Training issues for healthcare providers and carers of people with dysphagia

a) Health care professionals should have knowledge and understanding of:
   - Scientific basis for oral health and disease
   - Oral risk assessment criteria and tools for assessment
   - Risk factors for oral health for children and adults with dysphagia
   - Current oral care practices appropriate to individual needs
   - Practical oral care techniques that encourages fluoride supplementation
   - Oral hygiene aids to support clients with oral hygiene
   - Availability and access to local dental services or specialist services.

b) Dental teams should have formal training in:-
   - The effects of dysphagia and its impact on oral health
   - Identification of patients requiring more specialised dental care services
   - Oral health promotion and preventive regimes for this client group
   - Dental care management and prevention of aspiration
   - All Wales Mouthcare for Adults in Hospital programme.

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Dysphagia and Oral Health

Dysphagia organisations and websites

NHS Choices - dysphagia	**www.nhs.uk/conditions/Dysphagia/Pages/definition.aspx**
Resource for people with dysphagia	**www.dysphagia.org.uk/**
Dysphagia resource centre	**www.eguidelines.co.uk/resource_centre/dysphagia/index.php**
UK swallowing research group (UKSRG):	**www.uksrg.org.uk/**
National Patient Safety Agency: Ensuring safer practice for adults with learning disabilities who have dysphagia	**www.nrls.npsa.nhs.uk/resources/?entryid45=59823**
NHS Education for Scotland: Dysphagia resources	**www.nes.scot.nhs.uk/education-and-training/by-discipline/allied-health-professions/about-nes-ahp/resources-and-publications/dysphagia-dvd/dysphagia-resources.aspx**
The Dysphagia Research Society	**www.dysphagiaresearch.org/**
National Foundation of Swallowing Disorders	**www.swallowingdisorderfoundation.com/**
Keele University: Medicines Optimisation in Patients with dysphagia	**www.dysphagia-medicine.com/**
American Speech-Language-Hearing Association	**www.asha.org/public/speech/swallowing/Swallowing-Disorders-in-Adults/**

Dysphagia and Oral Health

Appendix 1: Causes of Dysphagia (World Gastroenterology Organisation, 2007)[2] – this list is not exhaustive

Oropharyngeal:

Mechanical and obstructive causes:	Neuromuscular disturbances:	Oral causes:
• Infections • Thyromegaly • Zenker's diverticulum • Reduced muscle compliance • Head and neck malignancies • Cervical osteophytes • Facial trauma	**CNS diseases:** • Stroke • Cranial nerve or Bulbar palsy • Multiple Sclerosis • Motor Neurone Disease; Amyotrophic lateral sclerosis • Parkinson's Disease **Contractile disturbances:** • Cricopharyngeal spasm • Myasthenia Gravis • Oculopharyngeal muscular dystrophy	• Poor dentition • Oral ulcers • Xerostomia • Poor lip seal • Underactive/ hyperactive gag reflex • Primitive oral reflexes

Oesophageal:

Mucosal diseases:	Mediastinal diseases:	Disease affecting smooth muscle & its innervation:	Other:

• Peptic stricture secondary to gastric reflux disease
• Oesophageal rings/webs
  ○ Sideropenic dysphagia
  ○ Plummer-Vinson syndrome
• Oesophageal tumours
• Injury: chemical, radiation, trauma
• Infectious oesophagitis.
• Eosinophilic oesophagitis
	• Tumours: Lung cancer, Lymphoma
	• Infections: TB, Histoplasmosis
	• Cardiovascular: Dilated auricula, Vascular compression
		• Scleroderma
		• Achalasia: Idiopathic, Chaga's disease
		• Other motility disorders
		• Post-surgical: Fundoplication, Anti-reflux devices
			• Intraluminal foreign bodies
			• Psychological

Dysphagia and Oral Health

Appendix 2: Signs and symptoms of dysphagia (World Gastroentrology Organisation, 2007)[2]

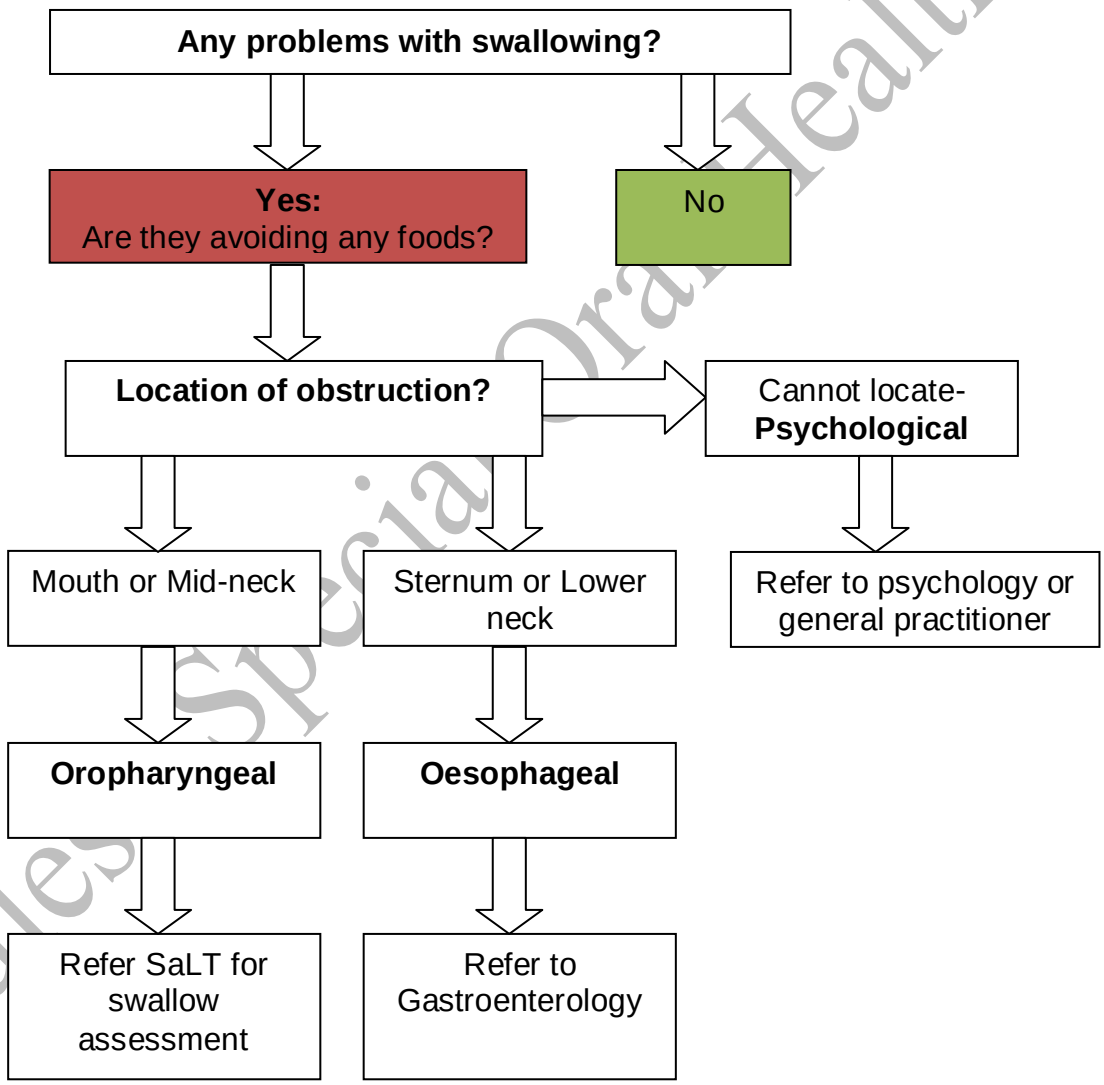
- Eating slowly
- Trying to swallow a single mouthful of food several times
- Difficulty in co-ordinating sucking and swallowing
- Gagging during feeding
- Drooling
- A feeling that food of fluids are getting stuck in the throat
- Discomfort in throat or chest
- Congestion in the chest after eating or drinking
- Coughing or choking when eating or drinking
- Wet or raspy sounding voice after eating or drinking
- Tiredness or short of breath while eating or drinking
- Frequent respiratory infections
- Colour change after eating such as going blue or pale
- Spitting up or vomiting frequently
- Food or fluids coming out of the nose
- Frequent sneezing after eating
- Weight loss
- Difficulty speaking
- Double vision
- Halitosis
- Nasal speech

Dysphagia and Oral Health

Appendix 3: Care pathway for dental team who diagnose dysphagia (Logemann et al., 2013)[63]

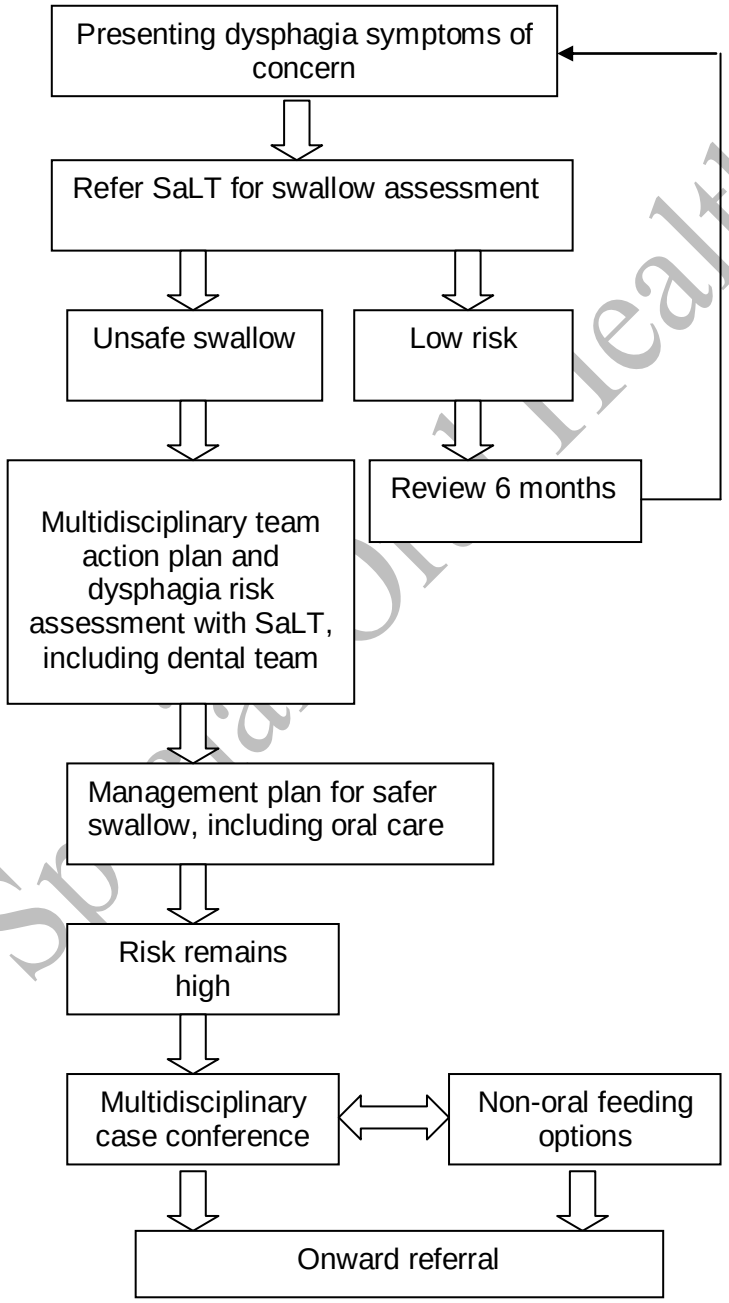
Ask:

- **Those over 60 years**
- **With neurologic disorder +/-**
- **History of head and neck damage**



Dysphagia and Oral Health

Appendix 4: Sample multidisciplinary care pathway for dysphagia (NPSA, 2007)[7]



Dysphagia and Oral Health

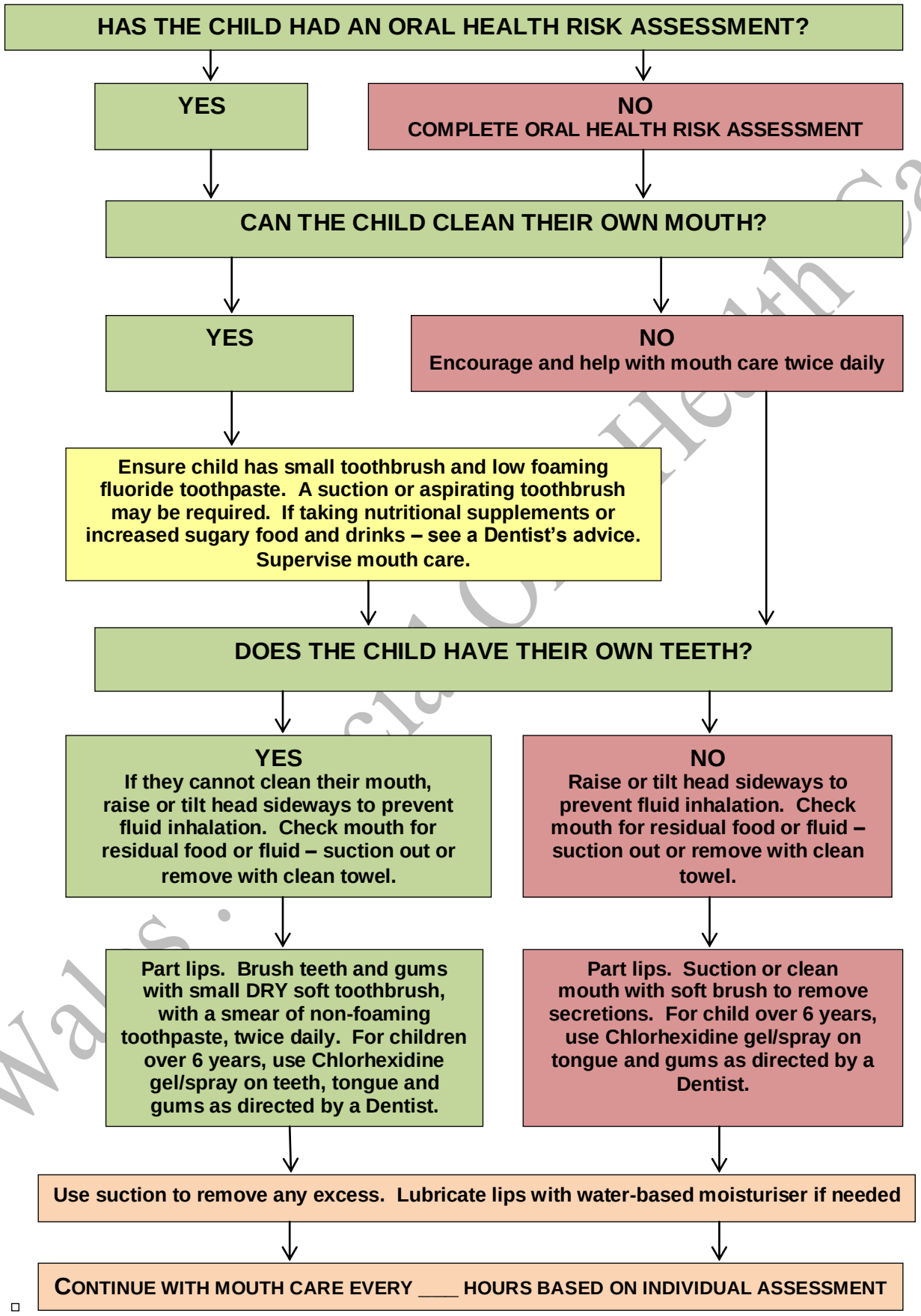
Appendix 5: Oral Health Risk Assessment for parents/carers of people with dysphagia – Note: Mouth care plans are available on: www.1000livesplus.wales.nhs.uk/mouthcare (1000 Lives Plus resources)[24]

Oral health risk assessment questions			Comments
1. Does the person have natural teeth?	❑ NO	❑ YES	Mouth care plan: Appendices 4&5 and/or refer to dental team
2. Does the person wear dentures?	❑ NO	❑ YES	Mouth care plan: Appendix 4&5. If intubated: see Appendix 8
3. Is the person at high risk of aspiration? • Episodes of choking/coughing eating or drinking • Recent history of recurrent chest infections • Thickened drinks or pureed food • Nil by mouth • Intubated or ventilated	❑ NO	❑ YES	Intubated patient see mouth care plan (Appendix 8) Liaise with SaLT – copy of diagnosis and care plan.
4. Will the person require oral nutritional supplementation for more than 3 weeks?	❑ NO	❑ YES	Seek advice from the dental team
5. Is the person fed by: - • Nasogastric tube • PEG/gastrostomy • Intravenous route	❑ NO	❑ YES	Intubated patient see mouth care plan (Appendix 8) Liaise with SaLT – copy of care plan and diagnosis
6. Does the person have any oral problems? Pain, ulcers, dry mouth, bad breath, swelling). If YES, describe the problem.	❑ NO	❑ YES	Refer to dental team
7. Is the person taking any medication that cause a dry mouth?	❑ NO	❑ YES	Liaise with medical professionals to consider alternative medication
8. Does the person require assistance for oral health care?	❑ NO	❑ YES	Arrange oral care assistance
9. Is urgent dental treatment required?	❑ NO	❑ YES	Refer to dental team
10. Does the person visit a dentist regularly? If YES, record name and address:	❑ YES When:	❑ NO	Check with patient and refer to dental team

A response in the highlighted areas signifies a need for further investigation or action.

Appendix 6: Mouth care for children with dysphagia

Dysphagia and Oral Health



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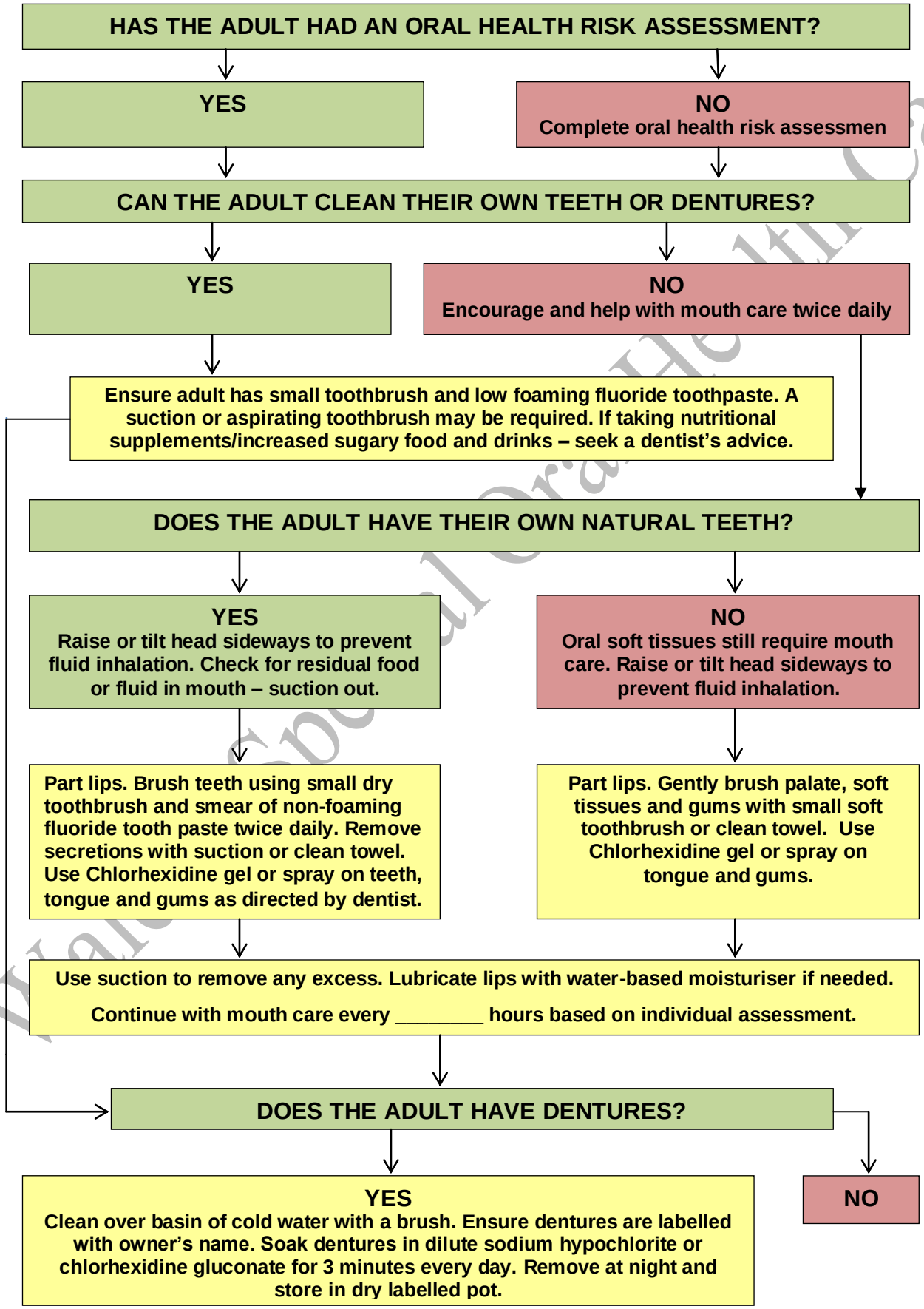
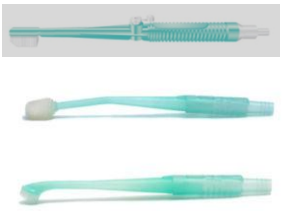
Appendix 7: Mouth care for adults with dysphagia



Dysphagia and Oral Health

Appendix 8: Suction/aspirating toothbrushes and oral care products available in Wales (Website addresses / Product lists are not exhaustive and subject to change)

Suction / Aspirating toothbrushes		Ordering
Kimberly-Clark Kim Vent: Ready care oral care		www.vap.kchealthcare.com
Oro-Care 2 Oro-Care Aspire suction toothbrush Oro-care sensitive oral suction wand		www.intersurgical.co.uk
Plaq-Vac		USA ordering

Toothbrushes for patients with limited cooperation		Ordering
Dr Barman's superbrush		www.dentocare.co.uk
Collis-Curve toothbrush		www.colliscurve.co.uk

Finger protection		Ordering
Dental shield		www.dentocare.co.uk
Open wide disposable mouth rest		www.dentocare.co.uk

Dry mouth / xerostomia		Ordering
Biotene gel/spray		www.dentocare.co.uk
Bioxtra gel/spray		www.dentocare.co.uk

Dysphagia and Oral Health

Appendix 9: List of Non-Foaming/Anti-calculus Toothpastes

The foaming agent in toothpaste is sodium lauryl sulphate (SLS). All the following toothpastes are SLS-free.
The list is complete at time of publishing, but subject to change.

SLS Free Toothpastes	Age group		Fluoride concentration
Aquafresh Children Little Teeth	Over 3 years		1400ppm
Pronamel	Over 3 years		1450ppm
Sensodyne Gum Protection	Over 3 years		1450ppm
Bioxtra	Over 3 years		1450ppm
OraNurse Unflavoured	Over 3 years		1450ppm
Ultradex	Under 3 years		1000ppm
Biotene	Under 3 years		1000pmm

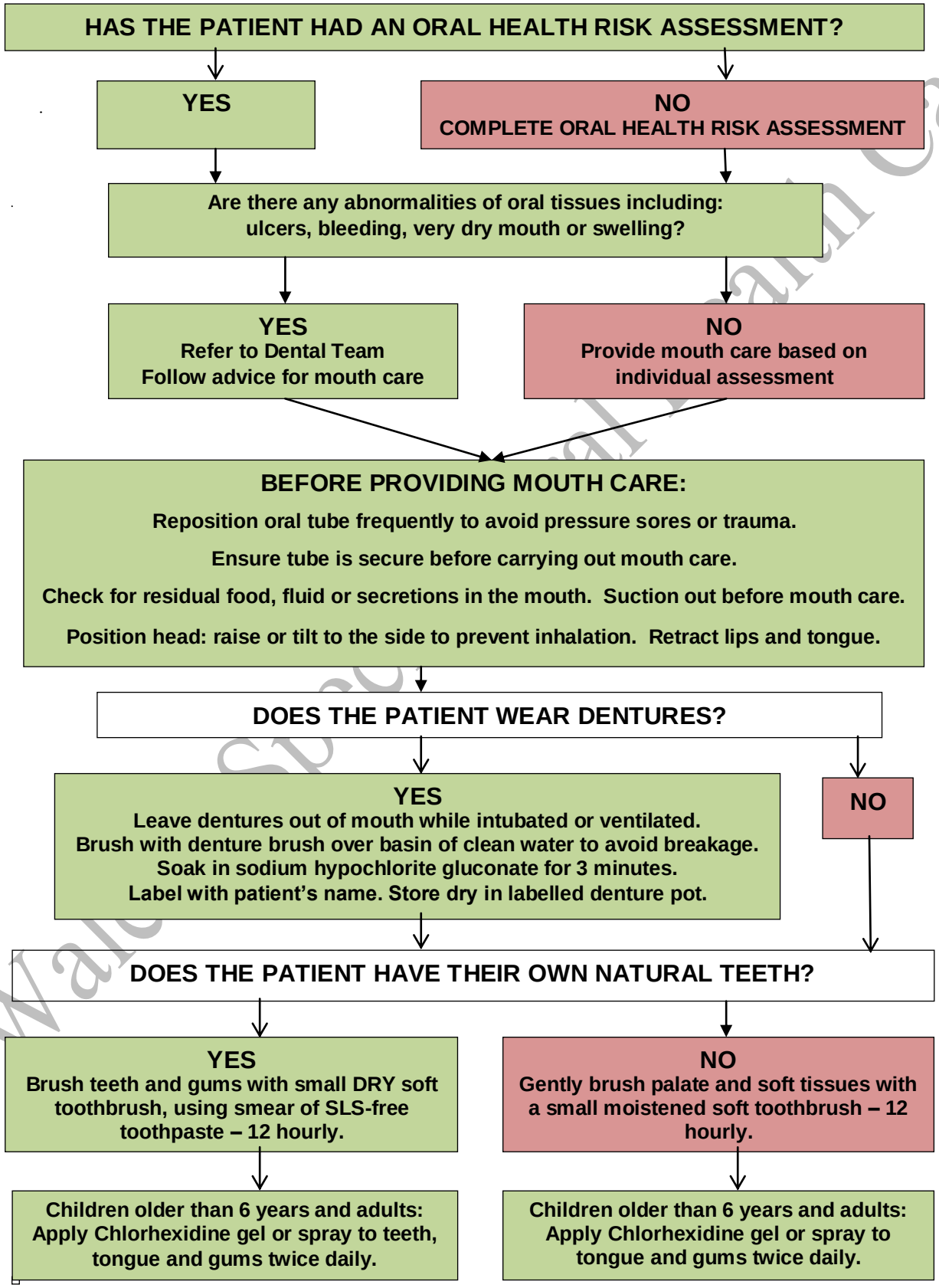
NB: Duraphat Toothpaste 5000ppm contains less SLS than Duraphat 2800ppm

Anti-tartar toothpastes		Anti-calculus agent
Aquafresh tartar-control whitening		Tetrapotassium/tetrasodium pyrophosphate
Sensodyne Tartar-control plus whitening		Tetrapotassium/tetrasodium pyrophosphate
Oral B Pro-expert Whitening/All-round protection		Sodium hexametaphosphate
Oral B Proexpert Sensitive toothpaste		Sodium hexametaphosphate
Sensodyne Total Care		Zinc compounds
Colgate Total		Triclosan, copolymers

Current evidence-based preventive dental care is available at:
www.avon.nhs.uk/dental/publications/delivering%20better%20oral%20health.pdf

Dysphagia and Oral Health

Appendix 10: Mouthcare for intubated/ventilated patients



Dysphagia and Oral Health

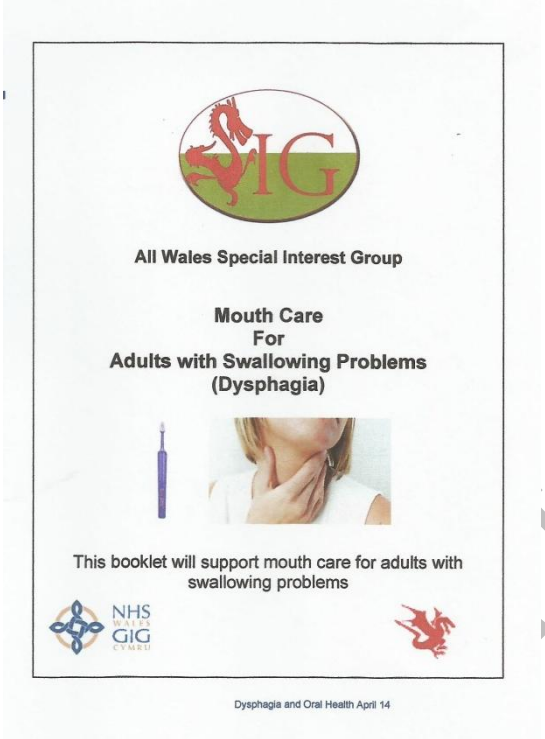
Appendix 11: Dysphagia Risk Assessment for Dental Treatment

Name:	**Date of Birth:**
Assessed by:	**Date of assessment:**
Signs/ symptoms of dysphagia (Checked Appendix 1)	**YES** **NO**
If yes, what is the risk of aspiration? (Liaise with SALT)	**HIGH** **LOW** **(Follow below)**
Likelihood of aspiration with proposed dental treatment	**HIGH** **LOW** **(Follow below)**
High-risk dental procedure (circle)	**Impression-taking** **Restorations requiring fast hand-piece** **Periodontal scaling**

Chin-tuck position for treatment	Yes	No
Head at 30-45 degrees or upright	Yes	No
Referral to dental specialist needed?	**Yes**	No
Specific instructions for dental hygienist	**Yes**	No
Upright position for dental treatment	**Yes**	No
Specific dental adjuncts needed e.g. rubber dam, mouth props, 'dry tips'	Yes	No
Saliva ejector throughout treatment	Yes	No
High volume/additional suction required	Yes	No
Reduced water flow of ultrasonic scaler/ high speed handpiece and/or frequent breaks indicated	Yes	No
Use of ultrasonic scaler/ fast handpiece contraindicated	**Yes**	No
Slow speed handpiece use only	**Yes**	No
Use of 3 in 1 water syringe with caution	**Yes**	No
Fast-setting impression/dental materials required (with no overfilling of trays)	**Yes**	No
Throat pack, during extraction(s)	**Yes**	No
Medications affecting appointment timing?	Yes	No
Specific appointment time needed? If yes, when?	Yes	No
Frequent rests or breaks required?	Yes	No
Specific toothbrush recommended? If yes, specify type:	Yes	No
Are the following required? • Sodium fluoride 0.619% or 1.1% toothpaste • Professional fluoride varnish application? (Indicate frequency)	Yes Yes	No No
Have you recommended: • SLS-free or anti-calculus toothpaste • **Aspirating toothbrush (High risk)** **Specify type:**	Yes **Yes**	No No
Signature:		**Date:**

Dysphagia and Oral Health

Appendix 12: Easy-read leaflet for Mouthcare for adults with swallowing problems (Dysphagia)



Appendix 13: Easy read leaflet for Mouthcare for children with swallowing problems (Dysphagia)

The Easy Read leaflets are free to download from the SIG website.