

Mouth Care Matters

A guide for hospital healthcare
professionals **Second Edition**



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1

Introduction

Key messages

- MCM is a training initiative to improve the oral health of hospitalised patients
- The MCM website contains a number of resources that are available to use
- MCM training is not just for nurses but a range of health care professionals



1.1 What is Mouth Care Matters in hospitals?

Mouth Care Matters (MCM) is a training initiative aimed at improving the oral health (health of the mouth) of hospitalised adult patients.

This guide complements the Mouth Care Matters training that has been delivered in hospitals. The information to the best of our knowledge, is up-to-date and evidence-based.

The programme was developed and piloted at East Surrey Hospital, and then rolled out across 13 trusts in Kent, Surrey and Sussex in 2016. Following this the MCM team has provided training to over 80 trusts in England. From a comprehensive review of the current literature and working with hospitals all over the country we found a need to improve oral health. This guide includes findings from focus groups, clinical audits, patient cases and direct observations of mouth care being carried out on patients on the hospital wards.

Mouth Care Matters is based on four key themes. Hospital staff require the:

- **Knowledge** of the importance of mouth care and good oral health and the links to general health and well-being
- **Skills** gained through training about how to carry out a mouth care assessment and to support people with mouth care
- **'Tools'** such as toothbrushes to provide good mouth care
- **Support** when necessary from doctors/dentists and the mouth care team

Mouth Care Matters
Health Education England NHS

M Mouth Care Pack after 24 hours of admission
O Oral assessment
U Unhealthy mouth & the affects on nutrition, hydration & dignity
T Tools & products
H Help & level of support
S Sunflower & denture care

What is MOUTHS?
MOUTHS is an acronym designed to help remember the 6 key points for carrying out good mouth care.
By using MOUTHS in patients daily mouth care routine, their overall dignity and wellbeing will be greatly improved.

The Mouth Care Pack...
Screening sheet, Mouth care assessment, Daily recording sheet

What to look for?

- 1 Lips: Pink & moist
- 2 Tongue: Pink, moist & clean
- 3 Teeth & gums: Clean, teeth are not broken or loose. Gums are not bleeding / inflamed
- 4 Cheeks / palate / under tongue: Clean, saliva present & looks healthy
- 5 Dentures: Clean & comfortable. It is important that both the dentures and the mouth are cleaned daily

5 How to remove & clean a denture

Tools
Small headed toothbrush, Dry mouth gel, Non-foaming toothpaste, Named denture pot if available

Remember
Denture sunflower
Place the sunflower at the bedside to easily identify patients who have dentures to help reduce loss or damage

About 'Mouth Care Matters' posters

Mouth care assessment guide

Lips			
Action	None	Dry mouth care	Refer to DOCTOR
Tongue			
Action	None	Dry mouth care	Refer to DOCTOR
Teeth & Gums			
Action	2x daily toothbrushing	Daily toothbrushing, clean the mouth	Refer to DOCTOR
Cheeks, Palate & under the Tongue			
Action	None	Clean the mouth, dry mouth care, ulcer care	Refer to DOCTOR
Denture			
Action	Clean daily	Denture care, encouragement	DATIX if lost, refer to dental team if lost or broken

Poster to help identify a healthy & unhealthy mouth

1.2 The Mouth Care Matters training programme

Factoring in time for additional training for busy health care professionals can be difficult. MCM training can be delivered in various formats including:

- Small group classroom teaching sessions
- Ward-based, hands-on training
- Sessions tailored to specific groups for example the speech and language team, palliative care, chemotherapy, oncology, doctors, dieticians and the pharmacy team
- E-Learning
- MCM short video clips
- MCM resources (guide, posters etc.)
- MCM website

1.3 Who is Mouth Care Matters training for?

MCM is not only about training the nursing staff in a hospital. Oral health promotion is also important for other health care professionals involved in the care of hospitalised patients including doctors, speech and language therapists, dieticians, occupational therapists and pharmacists. Working together we can form a more holistic approach to patient care including

mouth care. Educating patients, families and carers about the importance of mouth care and oral health in relation to general health is also very important.

1.4 Investing in Mouth Care - Mouth Care Quality Improvement Lead

As part of the Mouth Care Matters training programme in Kent, Surrey and Sussex 13 trusts recruited a mouth care lead. This lead is responsible for:

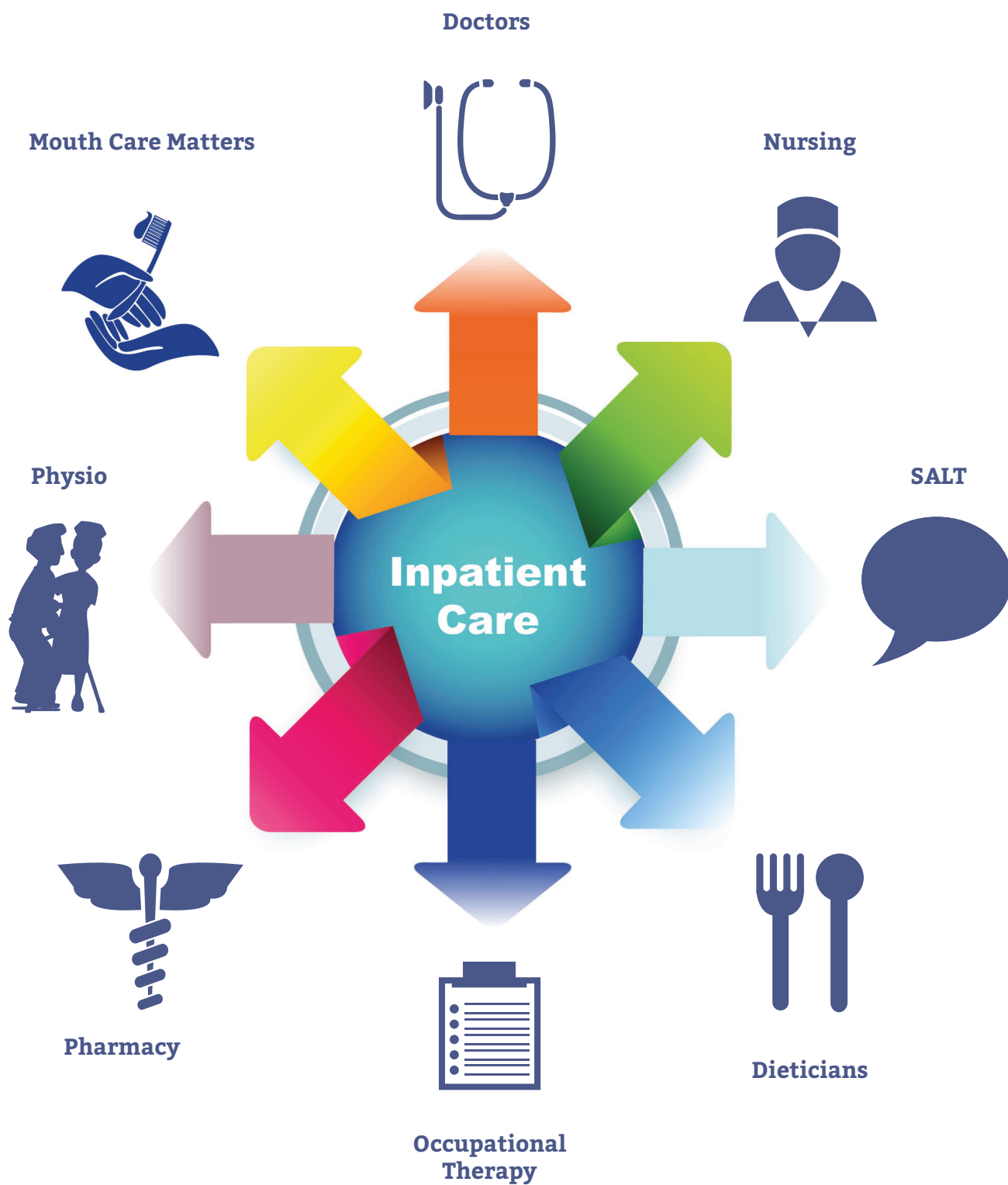
- Ward-based training
- Classroom training
- Supporting staff and carers with mouth care in challenging situations
- Liaising when urgent dental referrals are needed during an inpatient stay
- Signposting patients to appropriate dental services on discharge
- Supporting the hospital with mouth care policies and audit
- Mouth Care Matter promotional and social media work
- Monitoring standards of mouth care

Mouth Care Matters supports the need for every hospital to have a dedicated mouth care lead or mouth care champions. Many trusts all over the country now have mouth care leads.

Roles of health care professionals in mouth care

Health Care Professional	Roles in mouth care and oral health may include:
Doctors	Diagnosing and prescribing for oral conditions such as ulcers and oral thrush
Nursing staff	Carrying out mouth care assessments and assisting or supporting with mouth care
Speech and language therapist (SALT)	Identifying patients who have poor oral health and require support, advising on oral care for people including those with dysphagia or oral hypersensitivity
Dietetics team	Nutritional advice taking into account oral health
Occupational therapists (OT)	Helping to advise and/or create aids for toothbrushes for patients with physical disabilities
Pharmacists	Advising patients/carers on drug related oral problems including dry mouth
Physiotherapists	Role can involve looking in the mouth and make other teams aware of poor oral conditions
Hostess/Porters	Being vigilant about dentures that are often left on trays/bed linen and between ward transfers
Volunteers	Can play a role in asking if patients have products for mouth care or signposting for help

Diagram to illustrate the Mouth Care Matters team as part of a multidisciplinary team involved in patient care



2

Why do we need Mouth Care Matters training?

Key messages

- Oral health has been found to deteriorate in hospitalised patients
- Some patient groups will have an increased risk of developing problems with their mouths
- There are a number of barriers that may prevent nursing staff from providing/assisting with mouth care



2.1 What is the impact of hospitalisation on oral health?

There is evidence that hospitalisation is associated with a deterioration in oral health of patients (Terezakis et al., 2011). This in turn has been linked to:

- **An increase in hospital-acquired infections (see section 4.2)**
- **Poor nutritional intake**
- **Longer hospital stays**
- **Increased care costs**

Poor oral health is strongly associated with malnutrition and this in turn can affect a patient's recovery (Gil-Montoya et al., 2008) thus increasing time in hospital.

There are certain groups of patients that will be more at risk of developing mouth related problems due to either one or a combination of medical, cognitive or physical disabilities (see section 18).

Table to show groups of patients who have an increased risk of poorer oral health

Dementia	Oxygen therapy
Frail older people	Ventilated patients
Learning disabilities	Immunocompromised
Palliative care	Head & neck radiation
Chemotherapy	Poor mobility
Delirium	Stroke
Mental health	Physical disability

2.2 We are a changing population

We are an ageing population; it is predicted by 2020, around 20% of the population of the United Kingdom will be aged 65 or older (ADHS, 2009). As people get older they are at a greater risk of developing medical, physical or cognitive problems and they may need more help with personal care, including mouth care.

2.3 Our mouths are changing

As people are living longer, they are also retaining their teeth for longer. In 1968, 37% of the population had no teeth in their mouths and this dropped to only 6% in 2009 (ADHS, 2009). Older people are more likely to have large fillings,



Image shows an implant retained denture

crowns, bridges and dental implants, all of which need meticulous care to maintain and keep healthy. Unfortunately as the population gets older, many people will develop medical, cognitive or physical disabilities that mean they are less able to care for their mouth.

2.4 We are taking more medication

Patients who are hospitalised are generally more likely to be taking more medication. Dry mouth or xerostomia is a common side effect of over 400 medications (see Section 24 for list of drugs). Having a dry mouth can have a significant negative effect on oral health. This can cause pain, difficulty in eating and speaking and an increase in dental disease such as dental decay, gum disease and thrush. Steroids and antibiotics can also lead to changes in our immune system and make patients more susceptible to fungal infections.

2.5 What are the barriers to providing good mouth care in hospitals?

There is a wealth of evidence that shows that mouth care is frequently neglected or not a priority for hospitalised patients. A study of hospitalised patients by Sousa et al., (2014) found that patients' oral health was not being assessed and that hospitals had few policies in place for routine oral health practice. It has also been shown that there is little standardisation in the delivery of oral [care](#) and that a lack of equipment, such as toothbrushes and toothpaste can mean that nurses are sometimes improvising with forceps and gauze (Stout, Goulding and Powell, 2009). Common nursing barriers to providing or assisting patients with mouth care in hospital

have been researched (Adams, 1996; Preston et al., 2006). These include:

- **Lack of knowledge**
- **Lack of training**
- **Lack of time**
- **Lack of equipment**
- **Lack of oral assessment tools**
- **A disagreeable attitude towards mouth care**
- **Attitude towards own dental health**

In a survey of 1756 staff members carried out by 32 trusts in England between 2018 and 2019, the most significant barriers to providing mouth care to patients in hospital were:

Patient compliance	38%
Time	25%
Lack of tools	16%
No training	13%
Do not like it	1%
Other	7%

2.6 References

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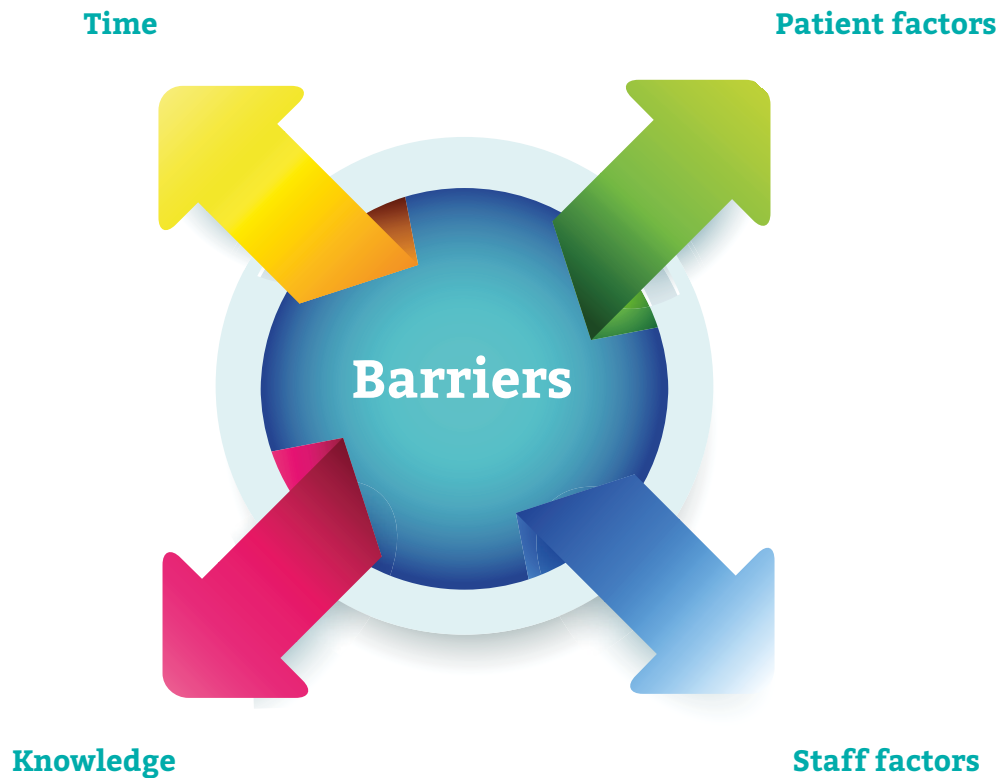
An audit of patient notes at East Surrey Hospital was carried out (January 2015) to look at whether adults who have been hospitalised for more than 24 hours have a record of either a mouth care assessment or mouth care supportive measures.

The results of this audit show that only 15% of patient notes examined in this audit had a completed mouth care assessment, all of which were from either the intensive care or high dependency units.

There was no evidence of any mouth care assessment or mouth care supportive measures in any of the notes examined from the medical wards.

One set of notes did however, specify that the patient was independent and could deliver their own daily mouth care.

Diagram to illustrate the barriers to good mouth care



In a survey of 765 nursing staff on oral care across Kent, Surrey and Sussex, 96% felt that assessing and providing mouth care is part of their role as a nurse.

Only 55% of the nursing staff that completed the survey had received training in assessing patients' mouths and/or providing or assisting with oral care. Of those who had been trained, the majority had received it once as part of their nursing training.

3

Why is oral health important for hospitalised patients?

Key messages

- Good oral health is the absence of pain and disease with the ability to eat, drink and communicate. This is important for quality of life
- Poor oral health can lead to dehydration and malnutrition for hospitalised patients contributing to delayed recovery and an increased hospital stay
- Good oral health is important for patient dignity and is an essential part of patient care



3.1 Definition of oral health

In 2016 the World Dental Federation (FDI) updated the definition of oral health to emphasise the relationship to general health : “Oral health is multi-faceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow and convey a range of emotions through facial expressions with confidence and without pain, discomfort and disease of the craniofacial complex”.

Good oral health is more than just an absence of disease and is important for:

Eating and drinking

If patients are having difficulty with eating and drinking as a result of a mouth related problem such as a painful ulcer, this may impact on their nutritional uptake or contribute to malnutrition affecting their recovery and can impact on the length of their hospital stay.

Speaking and socialising

Poor oral health can affect the ability to speak, smile, kiss or socialise and patients may find it difficult to communicate with hospital staff, family and friends. Sadly, denture loss is a common problem in hospitals and this can cause distress in terms of eating and appearance to a patient.

Quality of life and dignity

Poor oral health can affect a patient's self-esteem and dignity and this in turn can lead to unhappiness, all of which can impact on a patient's recovery.

3.2 Oral hygiene and oral health

Good oral hygiene practices are essential to ensure the maintenance of good oral health. Oral diseases are largely preventable either through the regular removal of plaque deposits, the delivery of fluoride (most commonly through using a fluoride toothpaste), modifying the diet (reducing frequency of sugar) or through the cessation of risky behaviours such as smoking and alcohol consumption in excess (Public Health England, 2014).

Although good oral hygiene practices may not seem a key priority for hospitalised patients, good oral care will improve not only the patient's oral health and prevent oral pain and infection but will also impact on a patient's overall health and wellbeing. Locker et al. (2002) have shown that in medically compromised patients, oral health problems significantly affect their wellbeing and level of life satisfaction.

Ben is a 60-year-old patient with Parkinson's disease who has been admitted to hospital for a kidney infection. He has been leaving most of his meals untouched for two days and the doctors think it may be side effect of his antibiotics. They are concerned this may cause his kidney function to further deteriorate. He mentions to a nurse that he has a broken tooth and it is cutting into his tongue causing a large ulcer. The nurse arranges for a dentist to come and see Ben. They smooth the tooth and Ben immediately feels better and he starts to eat and drink again.

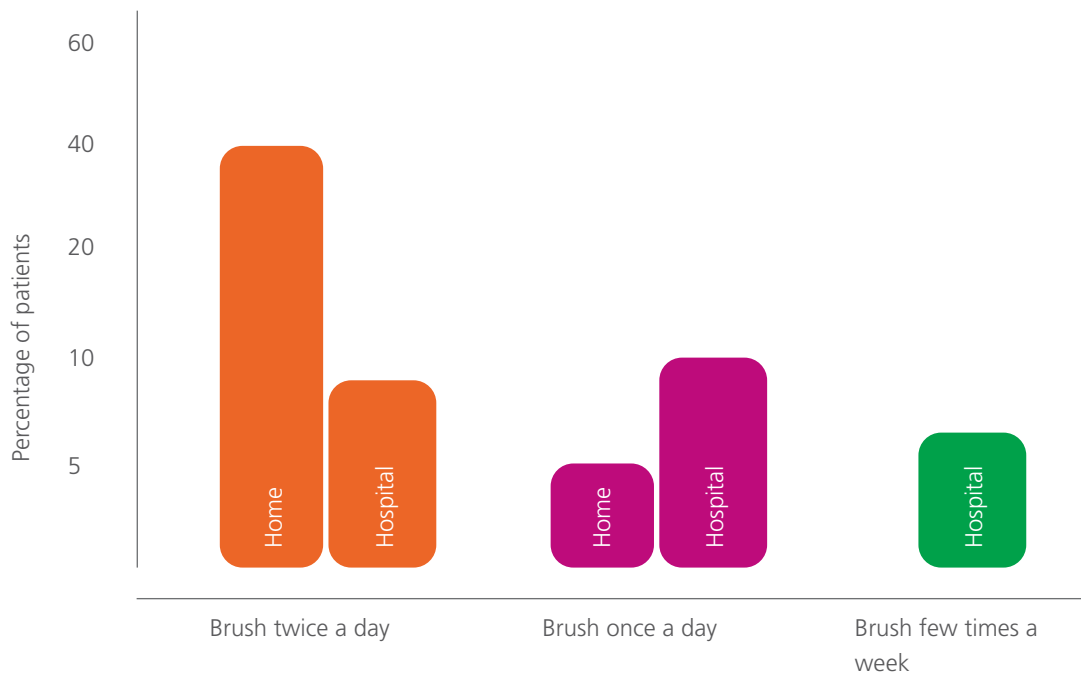
Inpatient questionnaire findings

We asked 348 inpatients in hospitals in Kent, Surrey and Sussex about their oral hygiene both at home and whilst in hospital. The results are represented in the graph below.

Only 20% were asked during their admission about oral health problems

32% were experiencing problems with their oral health

31% felt their oral health had deteriorated during their hospital admission



3.3 References

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4

Oral health and general health

Key messages

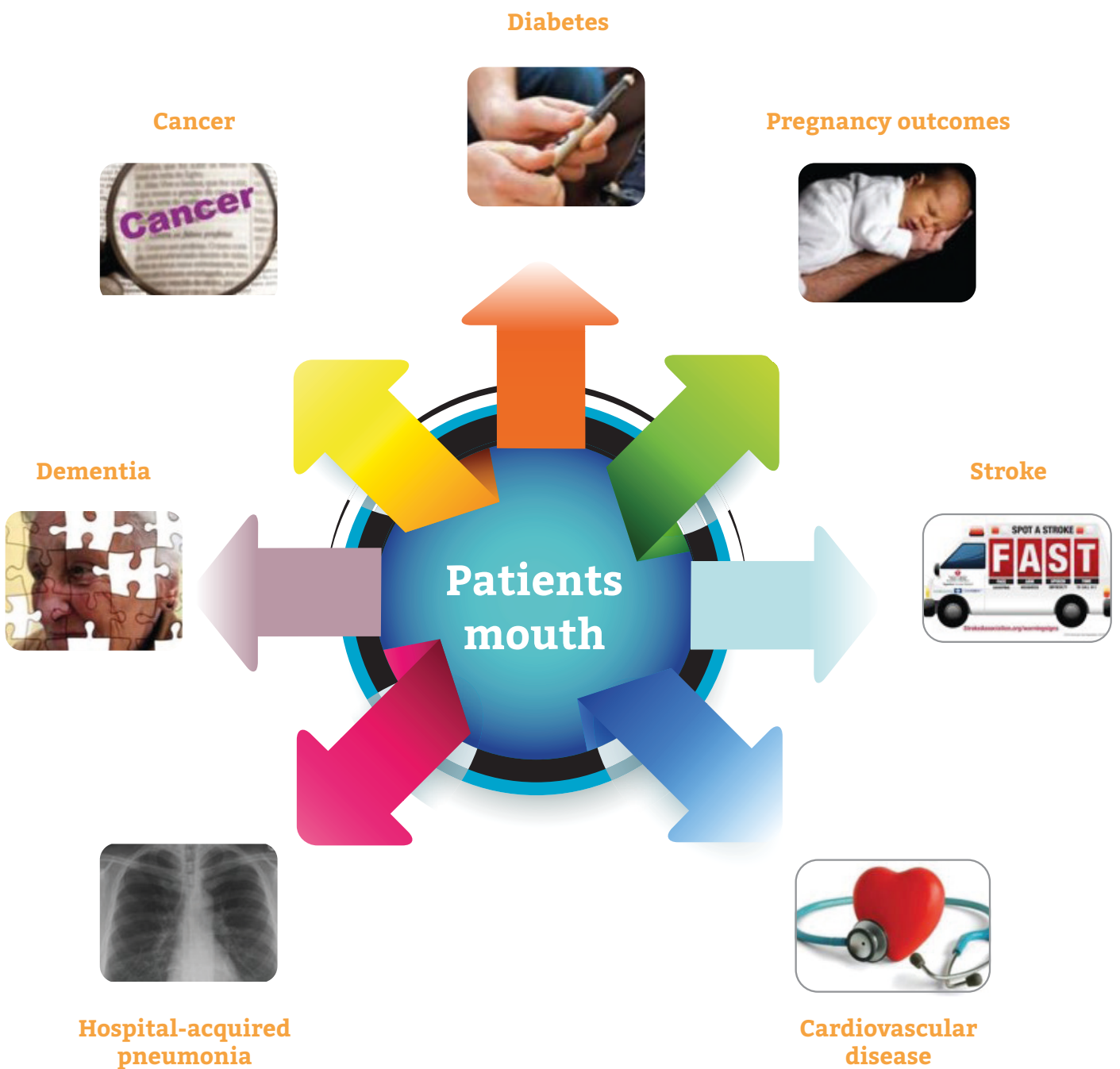
- Oral health is linked to general health
- Poor oral hygiene is associated with hospital acquired pneumonia
- There is a two-way relationship between diabetes and gum disease



4.1 Oral health links to systemic disease

There is increasing evidence to show that poor health and poor oral hygiene are linked to general health and chronic systemic disease. This can be broken down into:

- Oral health and hospital-acquired infections
- Oral health and chronic diseases



4.2 Hospital-acquired infections linked to poor oral hygiene

Hospital-acquired pneumonia (HAP)

Dental plaque contains many different species of bacteria, some of which can cause pneumonia. Aspiration (inhalation) of oropharyngeal secretions (including dental plaque) has been found to be associated with pneumonia (Scannapieco, 2006, Manger et al., 2017). Patients lying supine in a hospital bed and older patients with decreasing levels of consciousness are more likely to aspirate oral secretions. Hospital acquired pneumonia (HAP) is reported to be responsible for approximately 15% of all hospital-acquired infections and is the second most common hospital acquired infection. HAP increases hospital stays by an average of eight days and mortality rates are high; between 30 and 50% (NICE, 2014).

Ventilator-assisted pneumonia (VAP)

VAP is defined as pneumonia that develops 48 hours or longer after mechanical ventilation is given by means of an endotracheal tube or tracheostomy. Bacteria can colonise the endotracheal tube and VAP results from bacteria invading the lower airways. Intubation can lead to an increase in oral and gastric secretions entering the lower airways and some evidence suggests that oral bacteria could be a cause of VAP (Shi et al., 2013). Many studies have looked into the links between improving oral hygiene and reduction in VAP, there is some evidence but it still remains statistically weak.

4.3 Links to general health and systemic disease.

Diabetes

There is now a significant amount of evidence indicating a two-way relationship between periodontal (gum) disease and diabetes (Pirkko et al., 2018). Poor glycaemic (blood sugar) control in diabetics may be a risk factor for periodontal (gum) disease and uncontrolled periodontal disease could have an adverse effect on glycaemic control (Taylor et al, 2008).

Cardiovascular disease

There is high quality evidence to support an association between cardiovascular disease and oral health (Dietrich, et al). There is evidence that in people with periodontal (gum) disease there is an increase in both the prevalence and incidence of cardiovascular disease. There are several theories suggested to explain this, including a similar

inflammatory response (Beck et al., 1996), direct bacterial inflammation or an increase in C-reactive protein.

Infective endocarditis

Infective endocarditis results when bacteria enters the blood stream of a susceptible individual and colonises the endocardium (lining of the heart). This leads to inflammation of the endocardium and heart valves. The disease carries a high mortality risk and can be caused by bacteria in the mouth. A study has found that poor oral hygiene and gingival bleeding after tooth brushing is associated significantly with infective endocarditis-related bacteria in the blood (Lockhart, 2009). Oral hygiene, particularly in those who have a prosthetic heart valve or a history on endocarditis is important in reducing the risk (Strom et al., 2000).

Stroke

A relationship between periodontal disease and stroke has been suggested, for similar reasons as for cardiovascular disease (Meurman et al., 2004). However, the evidence is not as substantial.

Pregnancy outcomes

Evidence indicates an association between periodontal disease and adverse pregnancy outcomes. Good oral health is an important part of routine preventive care, and should be emphasised during pregnancy (Xiong et al., 2007). Pregnant women are also entitled to free NHS dental treatment whilst pregnant and until their baby is 1-year-old.

Dementia

There have been some initial studies suggesting a link between periodontal disease and dementia. It may be that when people develop later stages of dementia the ability to care for their mouth decreases leading to an increase in poor oral hygiene and periodontal disease (Daly et al., 2017). However, more studies need to be done to investigate and further establish the link and reasons (Iacopino, 2009, Bei et al.,).

Cancer

The most consistent risk for cancer and periodontal disease is found in oral and oesophageal cancers. There is some evidence suggesting a shared genetic risk for periodontal disease and cancer (Fitzpatrick et al., 2010).

A MCM video on oral health and links to general health can be accessed here <https://www.youtube.com/watch?v=Ge9WGTp5y3o&feature=youtu.be>

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5

A healthy mouth

Key messages

- A healthy mouth includes a healthy tongue, palate, cheeks and teeth
- Oral problems can make it harder to eat and drink leading to dehydration and malnutrition
- Poor oral health has a negative impact on general health

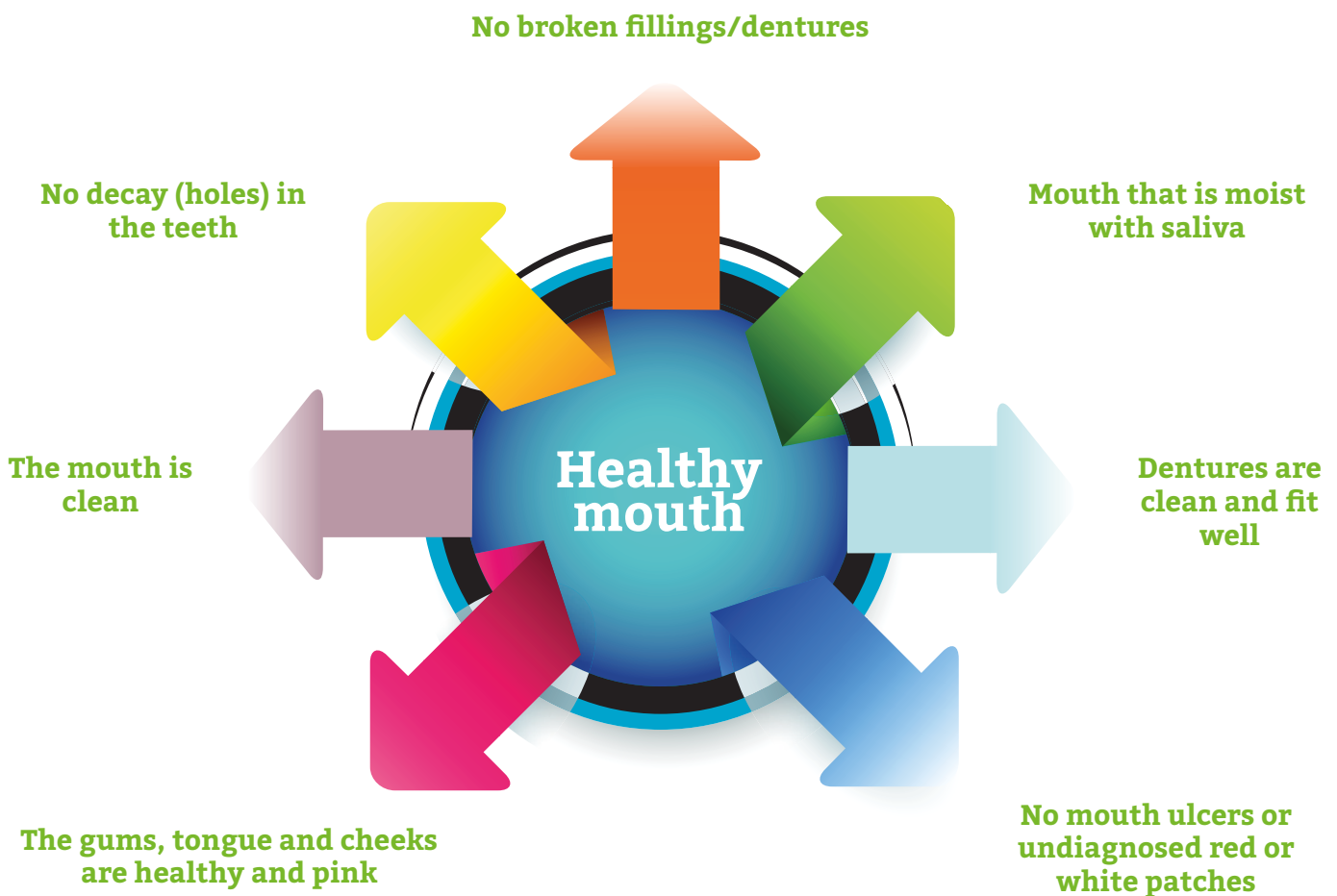


5.1 Why 'Mouth Care Matters' and not 'Dental Care Matters'?

Often mouth care is thought of as brushing teeth and cleaning dentures. It should also include care for the whole mouth including the tongue, palate and cheeks. Mouth care is an

essential part of personal care and many patients will require some level of support to prevent their oral health deteriorating during their admission (Essence of Care, 2010).

5.2 What does a healthy mouth look like?





An example of an unhealthy mouth. Very poor oral health with broken teeth, dental decay and poor gum health



An example of a clean and healthy mouth showing teeth with fillings

5.3 What does an unhealthy mouth look like?



5.4 Are all healthy gums pink?

Gums are often described as pink and healthy when they are not inflamed as a result of bacterial plaque. Signs of inflamed gums are redness, swelling and bleeding. In people from different racial backgrounds it can be normal for gums to sometimes be darker as a result of increased pigmentation. This is what the picture below is showing.

Healthy gums that are darker due to racial pigmentation



Red and inflamed gums where dental plaque is present



Dental plaque

Red inflamed gums

5.5 When to seek medical/dental advice

Some patients, when admitted to hospital, will have pre-existing oral health problems, such as tooth decay or gum disease. Other patients will have a healthy mouth when initially admitted but during their hospital stay will develop problems related to their mouth.

It would be unrealistic to expect that hospitalised patients should and could have all their dental problems treated whilst they are in hospital. Any urgent mouth related problems (likely to be affecting a patient's general well-being) should be addressed as soon as possible. If health professionals are made aware of non-urgent problems, this is a good opportunity for oral health promotion. Patients should be advised to see their dentist or find a dentist for care upon discharge (See section 23).

Some hospitals will have on site maxillofacial/dental departments who may be able to accept urgent referrals or links to a domiciliary service but many will not. For hospitals where there is no dental department it is important to know whom to contact for dental advice or urgent care when required. It is the responsibility of the trust to have appropriate services for inpatients including urgent dental access, however this is often not well known or established.

5.6 References

Department of Health (2010) Essence of Care: Benchmarks for Personal Care.

From a survey carried out in 13 trusts in Kent, Surrey and Sussex only one had a pathway for urgent dental conditions. In other trusts if there was an urgent problem such as a broken jaw or facial swelling they would call the ENT or the maxillofacial team. However, for patients with ongoing oral pain the medical team would normally manage this with analgesia.

The following table is a guide for when medical/dental advice should be sought. In the absence of dental advice, discuss with the medical team involved in a patient's overall care.

Urgent – Needs referral ASAP	Non urgent – Advise to see dentist on discharge
Creamish coating on tongue/palate that may be thrush (medical)	Broken/decayed teeth, not causing pain/intermittent pain
Painful ulcers or non-healing ulcers present for more than two weeks (medical)	Chronic gum disease /bleeding gums
Dental abscess, swollen face, severe and enduring dental pain (ideally dental/maxillofacial)	Cosmetic dental treatment
Excessive bleeding from the mouth (dental/maxillofacial)	Dentures that are loose
Dental trauma (dental/maxillofacial)	Sensitive teeth
Dentures lost or broken in hospital (needs to be reported)	Bridge or crown that has fallen out may need to wait until discharge before they can be remade by a dental professional
Teeth that are so loose they are an aspiration risk (dental/maxillofacial)	
Patients with physical, cognitive or medical disabilities where hospital staff are struggling with oral hygiene (dental or nurses with enhanced oral health skills)	

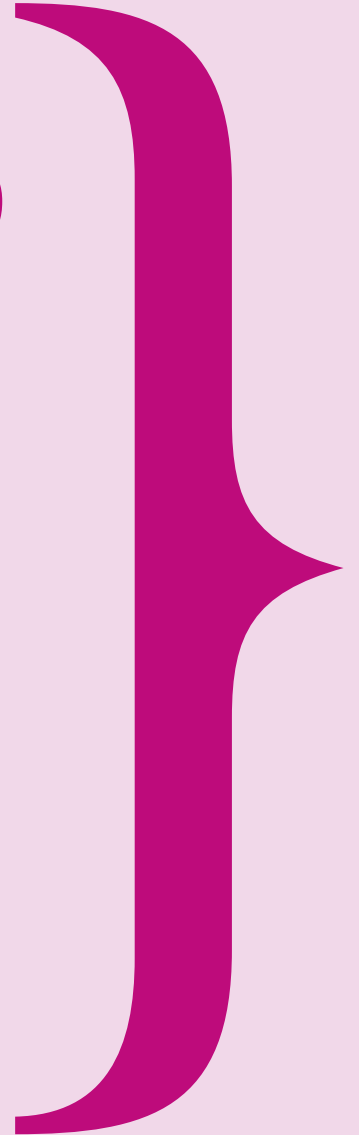
48-year-old Alex was admitted to hospital after collapsing at work and suffering a stroke. He reported that he had ongoing toothache before being admitted. For the week after his stroke his main complaint was severe toothache impacting on his eating and sleeping. There were no links to a dental service at the hospital and so they arranged for Alex to be transferred to a local dentist who provided treatment to get Alex free of pain. Alex reported that the dental treatment made the most difference to him during his hospital stay. It is important that all hospitals have pathways with a dental service for patients, however these pathways often do not exist.

6

Dry mouth (xerostomia)

Key messages

- A dry mouth is a common problem in hospitalised patients, especially in older patients
- There are many different causes of a dry mouth
- A dry mouth increases the risk of developing other oral problems



6.1 What is a dry mouth?

A dry mouth is caused by a lack of saliva in the mouth. Saliva is a clear watery liquid that is produced and released from the salivary glands around the mouth.

6.2 What are the functions of saliva?

- **Lubrication of the mouth**
- **To help with swallowing and talking**
- **To control the pH of saliva from 6-7.4 Low pH is acidic and can damage tooth surfaces**
- **Helps to remove food debris from the mouth**
- **Saliva contains enzymes and antigens to protect against bad bacteria**
- **Saliva contains calcium and other minerals which help repair tooth enamel**
- **Saliva helps to keep dentures more securely in place**

6.3 What are the signs and symptoms of a dry mouth?

A dry mouth ranges in severity, so signs and symptoms will vary.

Signs: frothy or stringy tenacious sticky saliva, absence of saliva, dry, crusted and cracked lips, lips sticking together, tongue sticking to palate, teeth sticking to cheeks, increase in decay, gums are shiny and red, dried secretions, food debris or coatings in mouth, tongue can feel rough and fissured.

Symptoms: sensation of dryness, pain with eating food, swallowing medication or speaking, dry cough or a burning sensation.

6.4 What are the causes of a dry mouth?

Dehydration

Conditions that lead to dehydration, such as fever, excessive sweating, vomiting, diarrhoea, blood loss and burns can cause a dry mouth.

Medication

A dry mouth can be a side effect of over 400 medications (see section 24). Among the more likely types to cause problems are some of the drugs used to treat depression, nerve pain (neuropathy) and anxiety, as well as some antihistamines, decongestants, muscle relaxants and pain relieving medications.

Systemic health conditions

Conditions such as diabetes, cystic fibrosis, rheumatoid arthritis and Alzheimer's can lead to a dry mouth.

Sjögren's disease

A medical condition that causes dry mouth, dry eyes and sometimes presents a secondary autoimmune disease such as rheumatoid arthritis or lupus.

Radiotherapy

Radiotherapy to the head and neck can affect the functioning of salivary glands leading to a reduction in saliva production.

Chemotherapy

Chemotherapy drugs can change the nature of saliva and the amount produced. This may be temporary with normal salivary flow returning after treatment has been completed.

Mouth breathing

Breathing through the mouth can cause the mouth to dry out and becomes more common in older people.

Oxygen therapy

Short or long term oxygen therapy can lead to a sensation of dryness in the mouth and throat.

6.5 What is the impact of a dry mouth on hospitalised patients?

A dry mouth is extremely common in hospitalised patients and can have a significant impact on their overall health and quality of life. Patients may complain of a very sore mouth and this may mean that they have difficulty opening their mouth, cleaning their mouth, eating and drinking and wearing their dentures. As a result, a dry mouth can affect recovery and cause weight loss.

Fissured tongue, often seen in patients with a dry mouth



Very dry mouth with stringy and crusty saliva



It is important to be aware that patients may not complain of a dry mouth but complain of difficulty chewing and swallowing or even thirst. Patients with a dry mouth can also suffer from a sore throat and are more susceptible to problems such as decay, gum disease, thrush and ulcers. Patients who are nil-by-mouth or at the end-of-life will often have very dry painful mouths and this can sometimes result in the buildup of dried saliva secretions, cracking and bleeding from the mouth causing distress.

6.6 Prevention

Depending on the cause, prevention of a dry mouth may not be possible. If medications are the cause, long term it may be possible to seek medical advice on the potential to swap to a different drug, which may not have this side effect.

A nurse called the mouth care team for advice for an older female patient with a sore mouth that was dry and looked yellow on one side. The patient had been reviewed by her doctor who had diagnosed her with oral thrush and

prescribed Nystatin. The patient described to the mouth care team that her mouth was very dry and that she had trouble swallowing medication. The patient had been unable to swallow her medication and the yellow capsule got stuck to her cheek and slowly disintegrated in her mouth causing pain and ulceration. The management was to stop the Nystatin, provide regular dry mouth care and to review the medications and see if they could be changed to a liquid form. The nursing staff, pharmacist and doctor were all informed to highlight the importance of dry mouth as a risk factor for medication safety.



6.7 Management of a dry mouth for hospitalised patients

- Frequent sips of cold water (need to check with the speech and language therapist team if the patient has swallowing problems)
- Chewing sugar-free chewing gum or sucking on sugar free sweets can help some patients who have functioning salivary glands to secrete saliva
- Water based mouth moisturising gels or sprays can be used as often as required. These can be applied before mouth cleaning and eating so that it is less painful for patients with a severe dry mouth
- Regular mouth assessments to check for signs of thrush
- Use of mild flavoured sodium lauryl sulphate (SLS) free toothpaste to cause less irritation to a dry sore mouth
- Avoid dry food that will be difficult and painful to eat like crackers
- Advice on the frequency of sugar intake to prevent dental decay. In the long term, these patients may be prescribed high fluoride toothpastes by a dentist
- Considering humidified oxygen for those on oxygen therapy

6.8 Saliva substitutes/moisturising agents

There is a move away from calling products 'saliva substitutes' as it is extremely difficult to produce a substance that replaces saliva. More recently, products tend to be marketed as dry mouth products or mouth moisturising products and include gels, sprays and toothpastes. Not all patients will find them effective. Some gels may contain animal products or ingredients derived from milk and staff need to be aware of this when prescribing and administering these products.

The gels can be applied to all parts of the mouth including the lips, tongue and cheeks and should be slowly massaged into the tissues (as if you were massaging a cream to treat dry skin). Gels can be applied with fingers or a small-headed toothbrush or MouthEze oral cleanser (see section 19.4). Independent patients may prefer to self-administer a dry mouth spray. When a patient has dried secretions that are difficult to remove the gels can be massaged into the surfaces of the mouth and left for a few minutes to make them easier to remove and cause less discomfort to the patient.

When dry mouth gels are not massaged into the mouth they can form a further sticky layer making the mouth more uncomfortable. **Correct application is very important to reduce this.**

Sometimes pilocarpine drops are prescribed orally or topically to stimulate saliva production. Side effects including nausea and blurred vision are common and not always well tolerated.



Applying dry mouth gel to MouthEze cleanser

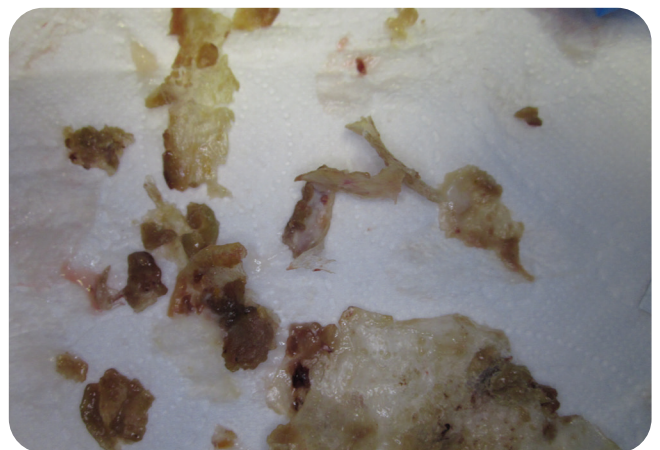
Dry mouth video

This MCM video shows you how to care for a dry mouth can be downloaded and used for training. https://www.youtube.com/watch?v=nKN6-HbZ_D8&list=PLrVQaAxyJE3eYeayCLSUFpxtkMxWmRo7L&t=0s&index=4

Dry mouth products	Notes on products
Oralieve mouth moisturising gel and toothpaste	Contains traces of whey protein derived from milk
Bioxtra gel/spray and toothpaste	Contains traces of products extracted from milk and eggs
Biotene products	No animal products
Saliva Orthana spray	Contains animal products (porcine mucin)
Aquoral spray	No animal products
Xeroxin spray	No animal products
Glandsodane spray	Acidic so do not use long term in patients with natural teeth
Saliveze oral spray	No animal products



Dried secretions in a patient admitted to hospital



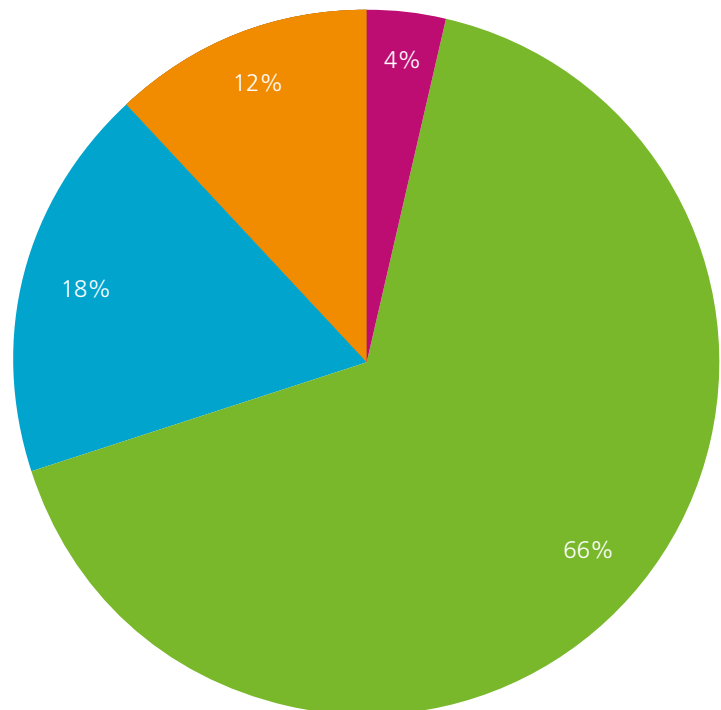
Dried secretions removed from a mouth

6.9 Mouth audit at East Surrey Hospital

An audit carried out at East Surrey Hospital looked at the incidence and severity of a dry mouth using a dry mouth scale (Challacombe scale). This scale identifies 10 signs of oral dryness and produces a score of 0-10.

The mouths of 50 patients at random from a variety of wards were examined for dryness. It was found that over 85% of patients had some form of a dry mouth. The chart below shows the severity of dry mouths found, with the majority having a mild dry mouth exhibiting 1-3 signs of dryness.

A pie chart to show the breakdown of severity of dry mouth on the wards at East Surrey Hospital.



6.10 References

Challacombe scale. Available at:

<http://www.challacombescale.co.uk/index.html>

(Accessed 1st October, 201).

José was admitted to hospital and was on an end-of-care plan. His only complaint was pain from his mouth. The palliative care team were concerned and requested input from the mouth care team. He was seen by the team who found that he had a very dry mouth with bleeding cracked lips and lots of dried oral secretions. His tongue and cheeks were sticking to his palate. Dry mouth gel was massaged all around his mouth and this made José feel more comfortable and helped to alleviate his symptoms. The nursing staff were advised to provide dry mouth care every two hours. José was reviewed every day and his family said that he seemed much more comfortable in his final days.

7

Dental decay (caries)

Key messages

- Dental decay is caused by bacteria present in dental plaque that converts sugar into acid
- Decay can be prevented by removing bacterial plaque twice daily by brushing teeth effectively and reducing sugar consumption
- Toothpaste containing fluoride strengthens teeth against decay



7.1 What is dental decay (caries)?

The demineralisation (destruction) of tooth tissue (enamel and dentine) due to acid produced by bacteria.

7.2 Signs of dental decay

Decay may first appear as a brown stain on the tooth and will then develop into 'holes' in the teeth, which may lead to teeth fracturing or breaking down. If left untreated the decay can spread into the blood and nerve supply (the pulp) of the tooth and cause inflammation, which is painful and may develop into a dental abscess. Sometimes teeth may fracture leaving roots in the gums that may cause pain and infection.

7.3 Symptoms of dental decay

Initially, dental decay is symptomless but as the 'hole' gets bigger and spreads deeper into the tooth, symptoms can arise. These include pain and sensitivity, particularly to sweet foods.



Dental decay

7.4 Causes of dental decay

The mouth contains up to 650 different types of bacteria that form part of a sticky white substance called plaque that adheres to the teeth. When we eat or drink something sugary the bacteria absorbs the sugar and converts it into acid. The acid attacks the teeth and causes demineralisation; this is where the tooth tissue loses minerals and becomes softer.

Each time we eat, the pH in our mouth drops (i.e. it becomes more acidic) and our teeth are at risk of decay. Sugars make the pH drop even further as they are readily metabolised by the bacteria in comparison to other foods and nutrients. It takes approximately 30 minutes for the pH to return to neutral and this is achieved by the neutralising effect of our saliva. Below a pH of 5.5, the teeth are susceptible to demineralisation and decay. Therefore, the more frequently sugar is consumed throughout the day, the greater the amount of time spent in the 'danger zone' and the greater the risk of decay.

Dental infection



Retained root after decayed tooth fractured with lump on gum (dental infection)

7.5 Prevention of dental decay

Dental decay is preventable through the control of sugar in the diet and good oral hygiene. It is important that fluoride toothpaste is used as the fluoride helps to prevent, control (promotes remineralisation) and arrest (stop) decay.

Teeth should be brushed twice daily, once last thing at night and at one other time during the day with a small-headed brush. Fluoride works topically and so after brushing remove the excess toothpaste by spitting or suctioning. There is no need to rinse the mouth out after brushing. For further information on advice to prevent dental decay and dental disease please refer to the 'Delivering better oral health' toolkit in the reference section. Brushing should take two minutes to complete using a circular motion with the bristles of the brush directed 45° towards the gum line.

7.6 Management of dental decay in hospitalised patients

It is not the role of health care professionals (with the exception of dentists and dental therapists) to diagnose dental decay. However, health care professionals may come across patients with broken teeth, teeth with holes, or teeth with dark brown staining. If the patient has no symptoms or only complains of intermittent mild pain the patient should be advised to seek dental treatment from their dentist following discharge. If the patient has symptoms affecting their everyday well-being (e.g. constant pain, sharp teeth causing ulceration to cheek or tongue, or a swelling next to the tooth), the patient should be referred for dental advice if available.

There will be some very vulnerable patients in hospital who may not be able to clearly communicate when they are in pain, such as patients with advanced dementia or with low levels of consciousness. If dental decay is seen in vulnerable patients during a hospital stay they should be signposted to appropriate services after discharge, for example the salaried dental services who treat patients with special care needs. This can form part of the advice on the discharge report.

7.7 References

<https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention>



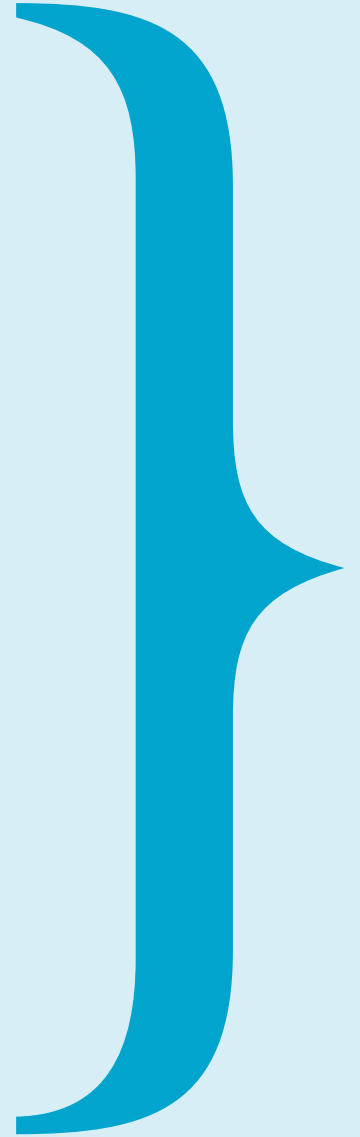
Tooth brushing

8

Diet and oral health

Key messages

- Sugar advice in relation to dental disease may need to be modified for patients in hospitals
- Although frequent intake of sugary snacks and drinks can lead to decay, there is a need to balance hydration and nutritional needs of patients who are not well and have a limited appetite
- Brushing last thing at night and at another time of day with a fluoride toothpaste can help to limit the progression of dental decay



9

Fluoride

Key messages

- Use a fluoridated toothpaste twice daily
- Adults should use a toothpaste containing at least 1350ppm fluoride
- If possible spit out excess toothpaste and do not rinse for 30 minutes after tooth brushing



9.1 What is fluoride?

Fluoride is a natural mineral that is found in fruit, vegetables, fish and tea. It is added to toothpaste and has contributed to a significant decline in both the incidence and prevalence of dental decay over the past few decades.

9.2 How does fluoride work?

Fluoride strengthens the tooth enamel, making it more resistant to decay. Applied topically, it is in direct contact with the teeth. This is why dentists advise not to rinse after brushing your teeth, neither with water or mouthwash, as this washes away the fluoride present in the toothpaste. You need to simply spit out the excess toothpaste; this will ensure that the fluoride is in contact with the teeth for as long as possible, allowing it to work.

Hospitalised patients can be encouraged to do this. For patients with dysphagia, advice can be sought from the speech and language team and oral suctioning can be useful.

9.3 How much fluoride is enough?

The evidence to support the twice-daily use of fluoridated toothpaste is extensive. The Department of Health Delivering Better Oral Health toolkit (PHE, 2017) recommends that adults should use a toothpaste that:

Contains at least 1350ppm (parts per million) fluoride. This information can be found on the back of the toothpaste. Most over-the-counter toothpastes and those available on the high street contain 1000-1500ppm fluoride, although there are some that have less than 1000ppm or no fluoride at all; these toothpastes will provide little or no protection against tooth decay.

A higher concentration of fluoride provides better protection against decay. For those patients at a high risk of developing tooth decay, high fluoride toothpaste with a concentration of either 2800ppm or 5000ppm may be prescribed by a dentist or a doctor. These should be used in the same way as any other toothpaste; a pea-sized amount, twice daily.

Patients should be advised to use a fluoride toothpaste in hospital and on discharge.

9.4 References

<https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention>

10

Tooth surface loss

Key messages

- Tooth surface loss is the wearing away of tooth surface not caused by bacterial activity
- There are three main types of tooth surface loss
- Tooth surface loss is becoming increasingly more common due to changes in lifestyle



10.1 What is tooth surface loss?

Tooth surface loss is the non-carious loss of tooth tissues. It is not caused by bacterial acid, which is the cause of dental decay. There are three main types; erosion, attrition and abrasion. Tooth surface loss is becoming more common with changes in diet, habits, lifestyle, and increasing life expectancy.

10.2 Signs of tooth surface loss

As teeth wear away they may appear thinner, shinier, or become shorter.

10.3 Symptoms of tooth surface loss

The symptoms of tooth surface loss can range from no symptoms, to sensitivity to hot and cold, to extreme pain.

10.4 Tooth erosion

Erosion is caused by frequent or prolonged exposure to acid. The acid can be extrinsic (from food and drink) or intrinsic (gastric acid as a result of acid reflux or frequent vomiting).

10.5 Management of tooth erosion in hospitalised patients

Patients should be advised to see their dentist on discharge for monitoring of the erosion. If the patient has severe pain affecting their everyday wellbeing they should be referred for dental advice. Avoid giving sugar or sugar free acidic drinks to patients with dry mouths as it can increase the level of acid attack to the teeth. If a patient is suffering from acid reflux or vomits frequently they should avoid brushing their teeth until 30 minutes afterwards.

Acidic food and drink include:

- Fruit, especially citrus fruits
- Fruit teas
- Fruit juices and energy drinks
- Fizzy drinks including fizzy water
- Alcohol
- Vinegar

*List is not exhaustive



Dental erosion



Tooth erosion - hard outer surface of tooth (enamel) has worn thin

10.6 Tooth abrasion

Abrasion is the wearing away of the tooth surface by a mechanical force; this is most commonly caused by using too much pressure when tooth brushing. It is more common in the older patient, where the gums have receded (shrunk back) exposing the roots of the teeth. Unlike the crown of the tooth, roots do not have a coating of enamel and the dentine is softer and hence will wear away faster. Often people suffer from a combination of erosion and abrasion; the acid attacks cause the teeth to be softer and more prone to being damaged by mechanical forces such as tooth brushing.

10.7 Management of tooth abrasion in hospitalised patients

Patients should be advised to see their dentist on discharge for monitoring of the abrasion. If the patient has severe pain affecting their everyday well-being they should be referred for dental advice. MCM advises that hospitalised patients should use a small headed soft toothbrush and not to brush with excessive force.



Tooth abrasion caused over time by hard toothbrushing

10.8 Tooth attrition

Attrition is the wearing away of a tooth as a result of tooth-to-tooth contact, this is commonly called tooth grinding or bruxism.

The extent of attrition varies from the wearing away of the enamel, exposure of dentine or in extreme cases the teeth are worn away to gum level. People with learning disabilities and mental health issues are more prone to grind their teeth.

Other causes of attrition include:

Clenching and grinding; people will often perceive they grind their teeth when they are stressed.

A lack of teeth; where people have multiple dental extractions the remaining teeth are subjected to a greater force and this can lead to an increase in tooth wear.

Habit; some people constantly chew, for example, gum or tobacco and therefore bring their teeth together more often.

A tip - how much force to use when brushing a patient's teeth:

- Write your name with your non-dominant hand
- This is the force you should use when brushing your own teeth or another person's teeth

10.9 Management of tooth attrition in hospitalised patients

Patients should be advised to see their dentist on discharge for monitoring of the attrition. If the patient has severe pain affecting their everyday well-being they should be referred for dental advice. However, attrition is generally not painful but if symptoms arise, seek dental advice.

Some patients may have mouth guards that they wear at night to prevent damage from grinding. Many patients with learning disabilities or neuro-disabilities may not be able to comply with wearing mouth guards so they will need to be monitored more closely long term by the dental team.

Tooth attrition (with erosion)



11

Periodontal (gum) disease

Key messages

- Gum disease is an inflammatory disease of the gums and bone that support teeth
- Good tooth brushing is important to help stop the progression of gum disease
- Gum disease is linked to cardiovascular disease and diabetic control



11.1 Definition of periodontal (gum) disease

Periodontal disease, commonly known as gum disease, is an inflammatory disease of the gums and bone that surround teeth and is caused by bacteria in dental plaque. There are two main stages:

Gingivitis

This is the first stage of gum disease where the gums become inflamed, red and can bleed when brushed. Gingivitis is a reversible condition with good oral hygiene and daily removal of plaque.

Periodontitis

If gingivitis is left untreated it can progress to periodontitis. Periodontitis is where the bone supporting the teeth is affected and in some cases can result in tooth loss. Periodontitis is irreversible, but progression can be halted with treatment and improved oral hygiene.



Dental plaque

Gingivitis

Early stages

Reversible with good oral hygiene

Gums are swollen and red and bleed when brushed



Gingivitis

Periodontitis

Later stages can be halted with treatment
 Teeth appear longer as gums recede
 Teeth may be loose and move
 (they can be an aspiration risk if very loose)



Advanced periodontitis



Moderate periodontitis

11.2 Causes of gum disease

Dental plaque is a soft white substance that adheres to teeth and contains up to 650 different types of bacteria. The bacteria causes an inflammatory reaction in the gums that initially manifests as red, inflamed gums that bleed when brushed. This can eventually lead to destruction and loss of the bone that supports the teeth. There are additional risk factors for gum disease including smoking, increasing age, medication, systemic disease (e.g. diabetes) and genetics.

11.3 Signs of gum disease

Signs of gingivitis include red, inflamed gums, which bleed upon brushing, and halitosis (bad breath).

Signs of periodontitis include wobbly teeth. Teeth look longer as the gums recede and missing teeth.

11.4 Symptoms of gum disease

The gums may or may not be sore and loose teeth may or may not be painful. Gum disease can lead to dental abscesses that can be very painful.

11.5 Management of gum disease in hospital

Regular removal of dental plaque with good oral hygiene is important to reverse gingivitis and help stop the progression of periodontitis. If teeth are very mobile (loose) there is a risk that they could be aspirated or ingested, an urgent referral should be made for dental advice.

Dental plaque can only effectively be removed from teeth by using a toothbrush. Mouth washes, foam swabs and MouthEze cleaners do not remove plaque and should not be used instead of a toothbrush.

12

Oral thrush
(candida/
fungal
infection)

Key messages

- Thrush is a common fungal infection in hospitalised patients
- Causes include a dry mouth, certain medication and poor denture hygiene
- Treatment includes antifungal medication and meticulous oral hygiene



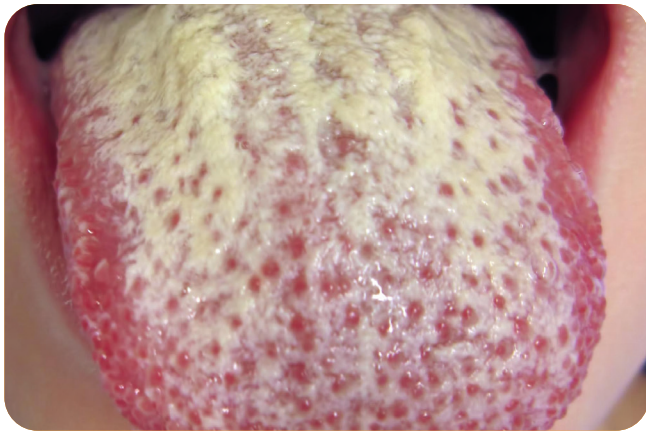
12.1 What is oral thrush?

Oral thrush is a fungal infection in the mouth caused by the fungus candida and it occurs commonly in people who are:

- **Immunosuppressed**
- **Have a dry mouth**
- **Taking antibiotics and/or steroids**
- **Not cleaning dentures effectively or wearing dentures at night**

12.2 Causes of oral thrush

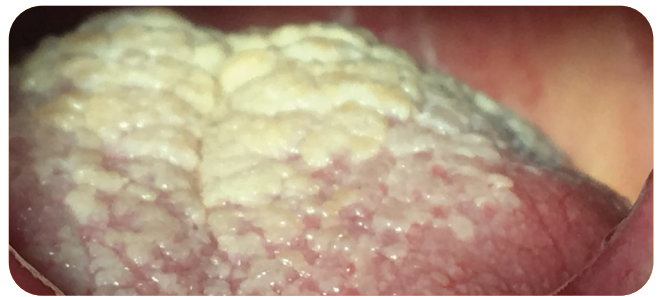
The mouth provides an ideal place for fungal infections to spread, as it is moist and warm. Candida can be present in a healthy mouth and is kept in check by the body's immune system. However, this balance can be disrupted meaning that the candida can thrive and proliferate leading to an overgrowth.



Oral thrush

12.3 Signs of oral thrush

Oral thrush appears most commonly as creamy white or sometimes red patches on the palate, top surface of the tongue or any areas in the mouth. The white patches can be rubbed off (e.g. when eating or cleaning the tongue) and can leave a painful raw area that may bleed. Thrush can develop quickly under dentures that are not removed every night and is often not spotted for this reason. Fungal infections under a denture is commonly referred to as denture stomatitis.



Thrush on tongue



Extensive spreading fungal infection

Risk factors for oral thrush:

- A dry mouth (saliva contains antifungal enzymes)
- Steroids including steroid inhalers
- Antibiotic use
- Wearing dentures (especially if not cleaned properly) at night
- Older age
- An impaired immune system
- Smoking

12.4 Symptoms of oral thrush

Oral thrush can have no symptoms at all or cause soreness and difficulty with eating and swallowing.

12.5 Management of oral thrush in hospitalised patients

- Keep the mouth as clean as possible; use a small-headed toothbrush to clean teeth, gums and tongue at least twice a day.
- Treat a dry mouth, ensure patient is adequately hydrated and use mouth moisturising products appropriately.
- Refer for advice from a medical team who can diagnose thrush and prescribe an antifungal medication. Any underlying causes should also be identified and treated, if possible.
- Advise the patient to leave dentures out of their mouth at night (the mouth will still need to be cleaned as above).
- Dentures should be cleaned thoroughly with a small toothbrush/denture brush to remove debris and plaque.
- Patients should be advised not to smoke.
- If the thrush is thought to be associated with the use of a steroid inhaler the patient should be encouraged to rinse their mouth with water after use.
- Toothbrushes should be disposed of after treatment to prevent reinfection.

Oral thrush under denture (denture stomatitis)

Dentures are porous and have very small holes in them, which can harbor fungal species. It is therefore important that dentures are removed at night and are kept clean. The



Denture stomatitis

key to keeping dentures clean is removing them regularly and brushing away food debris and plaque deposits. Some patients may wish to use a commercial denture cleaner and instructions should be followed. Dentures should be placed in a named denture pot with water when not in the mouth.

Although some guidance recommends soaking the dentures in Milton's (2% sodium hypochlorite) solution, there is a risk that the solution could be accidentally ingested by a confused or partially sighted patient. Dentures can be soaked in chlorhexidine (0.2% solution) for 15 minutes twice a day but again the risk of accidental ingestion needs to be weighed up against the benefit to the patient.

12.6 Antifungal medication

There are a number of different antifungal medications that can be used to treat oral thrush and which one to use will usually depend on where the fungal infection is in the mouth and how severe the infection is.

- Nystatin - prescribed as an oral suspension, should be held in the mouth four times daily (after meals) for as long as possible for topical effect and then swallowed. For patients with swallowing disabilities or who cannot swish it around their mouth it can be applied to the tongue with the dropper and brushed into the tongue.
- Miconazole - prescribed as a gel and applied to the affected area 4 times daily (after meals) and can be swallowed. It can also be applied to the denture surface in contact with the palate and placed in the mouth. It should be sugar-free to help minimise the risk of decay.
- Fluconazole - systemic treatment and prescribed as a tablet. This is generally prescribed when patients have a fungal infection in more than one site.
- Chlorhexidine (0.2%) - cleanse and soak denture in mouthwash for 15 minutes twice a day (BNF).

12.7 References

Joint Formulary Committee. British National Formulary (online) London: BMJ Group and Pharmaceutical Press www.medicinescomplete.com [Accessed on 2/3/19].

13

Angular cheilitis

Key messages

- Angular cheilitis occurs when the corners of the mouth become inflamed, cracked, crusty and split
- Bacterial and fungal secondary infection is common
- Treatment involves clearing the infection and protecting the area with a mouth moisturising gel/lip balm/emollient cream



13.1 What is angular cheilitis?

Angular cheilitis is a condition where one or both corners of the mouth become red, inflamed, crusted and cracked.

13.2 Causes of angular cheilitis

Angular cheilitis is more common in adults who wear inadequate dentures that do not sufficiently support the lip, people who persistently drool, have chronic bowel problems or a deficiency of iron or vitamin B. The area can become infected by candida, or by bacteria, often *Staphylococcus aureus*. Patients who are immunocompromised and patients with diabetes are also at increased risk.



Angular cheilitis

13.3 Signs of angular cheilitis

Signs include redness, swelling, crusting and cracking at the corners of the mouth. The corners of the mouth tend to be persistently wet.

13.4 Symptoms of angular cheilitis

Some patients may not have symptoms but for many it can be extremely painful.

13.5 Management of angular cheilitis in hospitalised patients

The treatment of angular cheilitis depends on the cause. For symptomatic relief keep the inflamed area lubricated with a lip balm or thick emollient cream. The majority of cases of angular cheilitis have an infectious origin and should be treated as such. Patients may be prescribed fusidic acid and 1% hydrocortisone cream (to counter inflammation) which works effectively for bacterial infection and can be applied to the corners of the mouth.

For fungal infections, an antifungal topical treatment such as miconazole gel or nystatin can be applied to the affected area.

Patients with poorly fitting or no dentures should be advised to see their dentist on discharge from hospital.

For people with long term chronic angular cheilitis, treatment can involve the use of dermal fillers or botox to even out the creases at the corner of the mouth.

14

Mouth ulcers

Key messages

- There are many causes of mouth ulcers
- Treatment involves alleviating symptoms and treating the cause, if possible
- Ulcers that are present for two weeks or more need to be referred for medical advice



14.1 What is a mouth ulcer?

Mouth ulcers are 'sores' in the mouth. There are many causes of mouth ulcers. Ulcers usually resolve by themselves within a week or two.

14.2 Causes of mouth ulcers

- **Trauma** – a lost filling, broken tooth or sharp edge on a denture can cause persistent rubbing to the tongue or cheek leading to ulceration. Biting the cheek, tongue or lip can also cause ulceration.
- **Aphthous ulcer** (common recurrent ulcers).
- **Infection** – common with viral infection including herpes, chicken pox and hand foot and mouth disease.
- **Chronic conditions** – anaemia and Crohn's disease.
- **Smoking**
- **Cancer of the mouth**
- **Unknown**



14.3 Signs of a mouth ulcer

Mouth ulcers are commonly white or cream in colour and round or oval in shape with red inflammation around them. They are most common on the cheeks and lips. There may be one ulcer or several all at once. Depending on the cause they can range in size from a couple of millimetres to centimetres.

14.4 Symptoms of a mouth ulcer

Ulcers are generally very sore and painful. Ulcers that are not painful and non-healing (lasting more than two weeks) should be referred for further investigation from a specialist maxillofacial team.



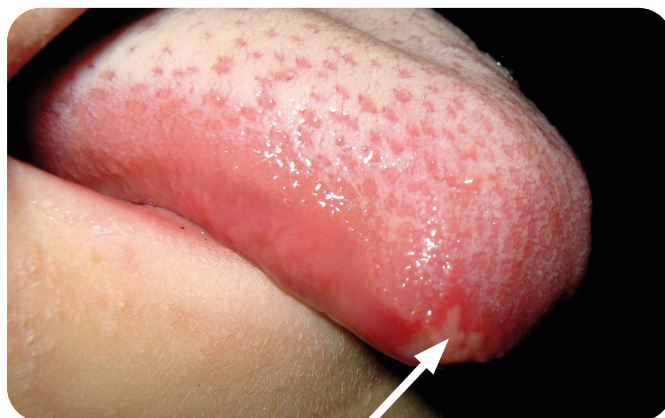
Aphthous mouth ulcer

14.5 Management of mouth ulcers in hospital

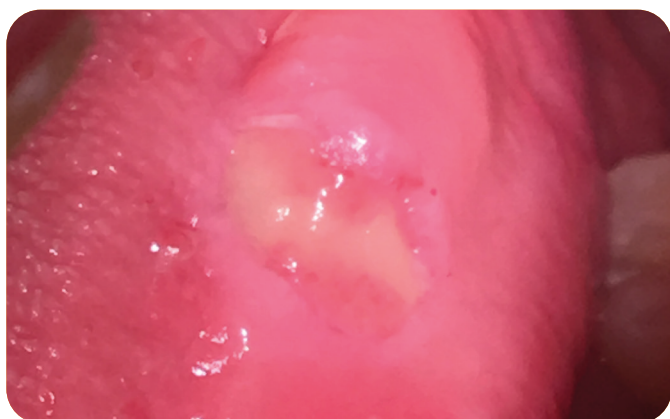
- For traumatic ulcers if possible remove the cause for example seeing if a dentist can smooth a sharp tooth or denture. If there is no dental department, advise the patient to see their dentist on discharge.
- Symptomatic treatment, mouth washes including saline rinse, 0.15 % benzydamine hydrochloride (Difflam), or alcohol free 0.2% chlorhexidine gluconate (see section 19.6).
- Try and brush twice a day to keep the mouth clean to prevent infection of the ulcers.
- Maintain hydration and nutrition for the patient.
- Any patient with an ulcer present for more than two weeks should be referred to the attention of the medical team. These patients may need to be referred for specialist advice from the maxillofacial team.



Ulcer of unknown cause



Traumatic ulcer on tongue



Traumatic mouth ulcer caused by sharp tooth



Ulcer caused by lip biting

Alice, an 80-year-old woman, was admitted to hospital after suffering a fall, she had diabetes and was refusing food. On day 16 of her hospital stay a doctor thought her mouth looked swollen and requested a dental review. A maxillo-facial surgeon found that Alice had full dentures and this had not been identified, so they had not been taken out during her hospital stay. When the dentures were removed a suspicious swollen ulcer was found in her mouth and was clinically diagnosed as late stage oral cancer. The dentures were left out of the mouth to allow the swelling to reduce and the patient was booked to see the head and neck cancer surgeon a week later. When the surgeon reviewed Alice, the ulcer had healed and it was in fact a traumatic ulcer caused by the dentures not being removed for two weeks, not a cancer. The patient's recovery was improved by removing the dentures and the cause of the trauma, she was in less discomfort and could eat again. Her family were pleased and she was discharged that day.

15

Poor saliva management (Excessive drooling)

Key messages

- Excessive drooling is most commonly a result of problems with swallowing or posture
- It is important to keep the face moisturised to prevent inflammation of the skin
- There are treatments that can help with improving saliva control



15.1 Why do some patients drool?

It is often assumed that drooling is a result of excessive saliva production but this is not a common reason. The main cause of drooling is when a person has problems with posture, muscle control, nasal obstruction or difficulty keeping their lips together resulting in saliva not being swallowed and leaking from the mouth. Excessive drooling also occurs with neurodegenerative disorders, such as motor neurone disease, Parkinson's disease and multiple sclerosis. People with low awareness levels including those with a neuro-disability may be unaware of saliva pooling in their mouth and not swallow regularly resulting in drooling.



Excessive drooling

15.2 Signs of drooling

Patients will often have saliva dribbling from the side of their mouths and have wet clothing and bed sheets. The face may appear red and inflamed.

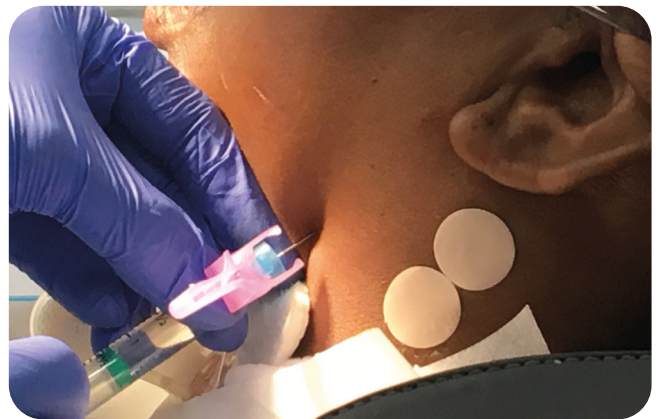
15.3 Symptoms of drooling

The corners of the mouth may become very sore as a result of the continuous wetness and inflammation. Families and carers often find the appearance of drooling upsetting.

15.4 Management of drooling in hospitalised patients

Depending on the severity, drooling may result in persistent wetness of the face. The corners of the mouth are particularly susceptible and may lead to angular cheilitis (see section 13). It is important that the area around the mouth is kept as dry as possible with frequent application of moisturising creams to the face and lip balms to the lips.

Depending on the cause of the drooling some patients may be referred to the speech and language team for swallowing exercises. Treatment of drooling by the medical team may include:



Botulinum Toxin (Botox) injection into salivary gland

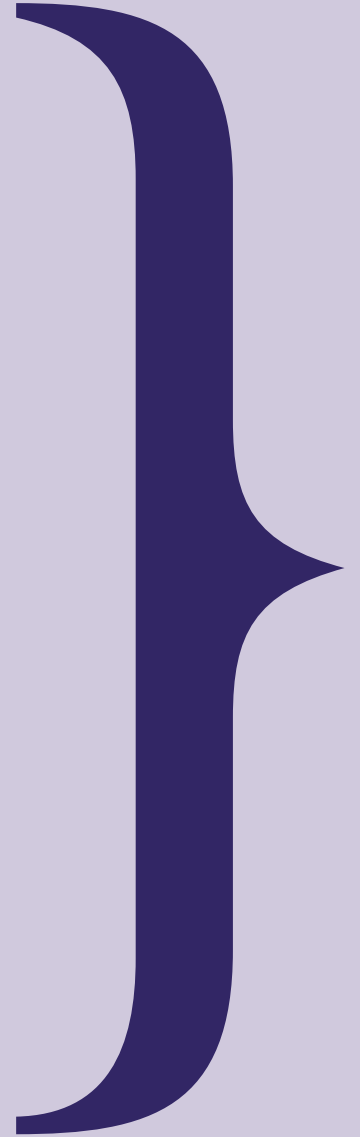
- Hyoscine patches that are placed behind the ear can help reduce saliva production, they can last up to 72 hours.
- Glycopyrronium bromide taken orally can help reduce saliva stimulation. The most common side-effects include vomiting, constipation, flushing and nasal congestion so tolerance of treatment may be limited.
- Botulinum toxin (Botox) injections into the salivary glands have also been found to be useful to reduce saliva production.

16

Mucositis

Key messages

- Mucositis is an extremely painful side effect of chemotherapy and head and neck radiotherapy
- Management involves treatment to alleviate symptoms
- Good oral hygiene is important to prevent secondary infection



16.1 What is mucositis?

Oral mucositis is inflammation and ulceration of the lining of the mouth (mucous membrane). It is a common side effect of cancer treatment with chemotherapy or head and neck radiotherapy. It can lead to problems swallowing and it can affect nutrition.

It is very important for patients to maintain good oral hygiene to reduce the risks of secondary infection (bacterial or fungal) of the lesions in the mouth.

16.2 Signs of mucositis

The mouth may appear shiny, red and inflamed with ulcers and may bleed. The patient may feel they struggle to swallow.

16.3 Symptoms of mucositis

Mucositis is very painful and may affect swallowing and speaking leading to dehydration and nutritional problems. Saliva may become thick and sticky.

16.4 Management of mucositis in hospitalised patients

Mucositis is a debilitating condition that can result in a patient being unable to eat or drink. Treatment involves minimising the symptoms and can include:

- Systemic analgesia
- Cleaning the mouth after eating using a soft toothbrush. Sometimes a baby toothbrush is useful.
- Using an SLS free toothpaste with a mild flavour to minimise irritation
- Holding and swirling ice chips in the mouth (excluding patients with swallowing difficulties)
- A diet of soft, bland, warm food

- Benzydamine hydrochloride 0.15% 15 ml, 2-3 hourly for up to 7 days (mouthwash or spray)
- Saline mouth washes
- Alcohol free chlorhexidine (0.2%) mouth rinse may or may not be tolerated by patients
- Moisturising the mouth regularly with a dry mouth moisturising gel

Gelclair or Mugard are barrier mouth gels that some patients find very effective. It forms a protective film by coating the oral mucosa. Using them an hour before mealtimes can help with making eating more comfortable.

Caphosol is a supersaturated calcium phosphate rinse that can be used to prevent the severity of mucositis but is normally restricted to very high risk patients due to high costs.

Episil is an oral liquid that forms an adhesive film alleviating symptoms and can be used before meals. There are other preparations available.

Visit www.ukomic.co.uk, an excellent website with further information on mucositis.



Mucositis in healing stage

17

Oral cancer

Key messages

- It is important to identify the signs and symptoms of oral cancer
- Patients with suspicious signs and symptoms should be referred for specialist advice
- There are many painful oral side effects of chemotherapy and head and neck radiotherapy and regular mouth care is very important



17.1 What is oral cancer?

There are many different types of cancer in the mouth involving the lips, cheek, tongue, palate, salivary glands, larynx and pharynx.

Risk factors for oral cancer include smoking tobacco, alcohol, chewing betel quid with tobacco, genetic factors and Human papilloma virus (HPV).

17.2 What are the signs and symptoms of oral cancer?

The following list is not exhaustive but some more common signs and symptoms include:

- A non-healing ulcer that is present in the mouth for more than two weeks
- A white or red patch on the tongue, palate or on the mouth lining
- Swellings in the mouth with no obvious cause
- Unexplained changes in speech and swallowing

17.3 Management of suspected oral cancer in hospital

If there are unexplained signs or symptoms in the mouth, the patient should be referred to a specialist (maxillofacial team) for further investigation.



Squamous cell carcinoma

Treatment of hospitalised patients undergoing cancer treatment

Both chemotherapy and radiation to the head and neck can affect the mouth and make it often too painful to provide good oral hygiene. Good oral hygiene is very important to help prevent fungal and bacterial infection. The following advice may be helpful for a painful mouth:

- Use a soft, small-headed toothbrush to clean the mouth twice daily
- Mild flavoured or non-flavoured toothpaste maybe more readily accepted
- A saline mouthwash after every meal will help to clear the mouth of food debris
- A doctor or dentist may prescribe an alcohol free chlorhexidine mouthwash or benzydamine hydrochloride mouthwash
- A dentist might advise and prescribe a high fluoride toothpaste or mouthwash as teeth can be at greater risk from decay due to the lack of saliva
- See section 16.4 for management of mucositis and 6.7 for dry mouth.

An older female patient was in hospital for ten days following a fall. During her stay she mentioned to her doctor that her denture was rubbing in her mouth. The doctor asked for a dental referral. On examination there was a swelling the size of a golf ball attached to her tongue. A biopsy was arranged and confirmed that the swelling was a late stage squamous cell carcinoma. This was not related to her stay in hospital but highlights the importance of mouth care assessments for all vulnerable patients.

18

Patients with increased oral health risk factors

Key messages

- Patients with cognitive disorders may find it difficult to communicate or cooperate with mouth care in hospital
- Physical disabilities can add barriers and make it more difficult to carry out good oral hygiene
- Patients with systemic diseases are more susceptible to oral problems



18.1 Why are some patients more at risk from mouth care problems?

There are some groups of patients that will be more at risk from developing problems with their mouth whilst in hospital including those with:

1. **Cognitive disorder/disabilities** – making it harder to understand the need for mouth care and cooperating with mouth care.
2. **Medical disabilities** – being more susceptible to dry mouth, ulceration etc.
3. **Physical disabilities** – leading to difficulties in carrying out personal mouth care or mobility problems making it harder to get to a sink.
4. **Personal choice** – some people value their oral health more than others.

- Facial redness or swelling
- Reduced intake of food and/or drink, particularly hard foods and cold things
- Frequent pulling at the face or mouth
- Increased restlessness, moaning or shouting
- Disturbed sleep
- Changes in behaviour including becoming more agitated with mouth care

All patients that are hospitalised for more than 24 hours should have a mouth care risk assessment as part of their general assessment to exclude oral related problems.

The next sections discuss some groups of patient that are more at risk of being susceptible to oral related problems or may require more assistance with mouth care.

18.2 Signs of mouth related problems in hospitalised vulnerable patients

Patients with cognitive impairment such as learning disabilities or dementia may find it difficult to communicate to carers or hospital staff when they are in pain or have problems with their mouth. Patients who are acutely unwell may lack the energy or be able to speak up when they have oral problems. Some patients do not want to disclose to staff that they are having problems with their mouth. Hospital staff should be aware of signs that may suggest that the patient has problems with their mouth:

- Change in behaviour or co-operation with mouth care
- Leaving out previously worn dentures

18.3 Care resistant behaviour

One of the most common barriers reported by nurses when providing mouth care to patients is care resistant behaviour. This can be common in people with a cognitive condition such as dementia, learning disabilities or a neuro-disability.

Care resistant behaviour is when a person opposes the action of a caregiver, in terms of mouth care this can include not opening the mouth, pushing the carer away, or verbally declining mouth care.

There are many reasons why patients in hospital maybe resistant to receiving mouth care. They maybe be confused and disorientated or be in pain and feel unwell. They may perceive the action of tooth brushing and having another

Table showing the types of disabilities/conditions that may affect oral care

Cognitive Disorder/Disabilities	Medical Conditions	Physical Disabilities
Learning disabilities	Diabetes	Frail older patient
Dementia	Xerostomia	Arthritis
Mental health conditions	Oxygen therapy	Stroke
Delirium	Chemotherapy	Cerebral palsy
Depression	Head and neck radiotherapy	Parkinson's disease
Amnesia	Palliative care	Muscular degenerative disease
Neuro-disability	Polypharmacy	Mobility problems

person look in the mouth as a threat to them. Resistance is their way of protecting themselves.

Unfamiliar faces, timings, location and different approaches to mouth care may feel very threatening to an individual.

If the mouth is already dry and sore, mouth care may be more uncomfortable and also contribute to the person resisting mouth care.

All patients are different but there are ways health care professionals can support patients and will be described in the following sections.

An MCM video on care resistant behaviour can be found here <https://www.youtube.com/watch?v=ieQJFSUIOps&feature=youtu.be>

18.4 Dementia and oral health

The incidence of dementia is increasing in the older population. This decline in cognitive function frequently causes behavioural changes that directly affect oral health. The loss of interest and ability to complete everyday tasks such as tooth brushing can cause rapid development of dental caries and periodontal disease. This population group often have heavily treated teeth (lots of fillings, crowns, bridges and even implants that need increasing care to maintain with age). There is also an increased risk of a dry mouth due to polypharmacy and mouth breathing. In turn this may lead to decreased function, such as difficulty eating and drinking, and increased dental pain and infection (Brennan and Strauss, 2014).



Providing dry mouth care to a patient with dementia

18.5 Mouth care for patients with dementia

Patients with dementia can be supported by hospital staff to care for their mouths in a number of ways. Some patients may simply require a reminder to brush their teeth. Others may be dependent on others for their oral care, although patients with mild to late stage dementia may develop reflexes that make tooth brushing difficult such as closing their lips, clenching their teeth, biting and moving their head (ADI, 2013).

All patients are different but tips for delivering oral care include:

- Develop a routine, providing mouth care at the same time each day
- Taking time and being kind and patient
- Try to make sure the patient is sitting up where possible
- Facing the patient so that they can mirror your actions
- Using a mirror so that they can see what is happening
- Asking a carer/family member who is more familiar to the patient to help with providing mouth care
- Use short sentences and simple instructions and use reminders and prompts - sometimes placing a toothbrush in front of a patient or in their hand will be a sufficient reminder
- Use the handle of a second toothbrush to improve access to the whole mouth
- Distraction with singing or by giving the patient something to hold in their hands
- A three-headed toothbrush if co-operation and access to the mouth is limited (see page 69)
- Letting them feel the brush or brushing their hand so that they know it is not going to hurt.
- Hand-over-hand technique (carer's hand over the patient's hand), guiding the patient to brush their teeth
- A non-foaming toothpaste (SLS free) may be useful as it may be more tolerable or using a toothpaste that is familiar to the patient
- Some patients with dementia may be very resistant to mouth care, it is important to stop and record that the patient is not compliant and try again at a different time
- If a patient refuses mouth care on several consecutive attempts, this should be escalated to a senior nurse or their medical team

18.6 Mental Capacity Act

The Mental Capacity Act 2005 covers people in England and Wales who cannot make some or all decisions for themselves. The ability to understand and make a decision when it needs to be made is called 'mental capacity'. People who work with or care for others who lack capacity to make decisions have a legal duty to consider the Code of Practice. This will also include providing mouth care for such patients on the wards; any treatment or care provided should be in the patient's best interests and be the least restrictive on the individual's rights and freedom of action. It is important to make every attempt to support a patient with mouth care, a failure to do means neglecting them of care.

18.7 Learning disabilities and oral health

The oral health of people with moderate to severe learning disabilities has been found to be poorer than that of the general population and they have been found to have higher levels of gum (periodontal) disease as well as:

- greater gingival inflammation
- higher numbers of missing teeth
- increased rates of toothlessness (edentulism)
- higher plaque levels
- greater un-met oral health needs
- poorer access to dental services and less preventative dentistry (<https://www.gov.uk/government/publications/oral-care-and-people-with-learning-disabilities/oral-care-and-people-with-learning-disabilities>).

18.8 Mouth care for patients with learning disabilities

People with mild learning disabilities may need a simple reminder to brush their teeth daily. Those with moderate to severe learning disabilities may require more assistance or be fully dependent on another individual for all mouth care.

Tips for supporting patients with learning disabilities include:

- Taking time, explaining what you are doing and being kind
- Asking family or staff who are more familiar to the patient

- Using toothbrushes and toothpaste that are familiar to the patient
- Using two brushes, one for the patient to bite on and another to brush the teeth,
- Looking in their learning disability passport to learn more about how they are supported with mouth care
- If patients routinely are resistant to mouth care speak to a senior nurse or the medical team.

18.9 Mental health conditions and oral health

Mental health conditions can cause patients to lose motivation for personal hygiene including mouth care. This can cause a rapid development of decay and gum disease and can result in dental infection and pain (Brennan and Strauss, 2014).

It has been found that poor oral health status is significantly associated with depression and a decrease in tooth brushing (Park et al., 2014). In addition to their poor oral hygiene and oral health, Park et al. (2014) found that those with depression are less likely to receive treatment when they experience dental problems.

18.10 Mouth care for people with mental health conditions

People with mental health conditions may require motivation from hospital staff to encourage them to look after their mouths. This may include daily reminders and encouraging patients at different times of the day when they are more receptive.

18.11 Intensive care – ventilated patients and oral health

Ventilated patients are at an increased risk of developing ventilator-assisted pneumonia. Studies have shown that oral plaque can harbour respiratory pathogens (Scannapieco, Stewart and Mylotte, 1992) increasing their risk of ventilator-associated pneumonia. Oral hygiene care for such patients reduces this risk (Shi et al., 2013). There is a wealth of knowledge and clear guidelines for hospitals, intensive care wards and nursing staff to ensure that these critical care patients receive the correct mouth care measures to prevent further impact to their health (Tablan et al., 2004; NICE, 2008). Pneumonia carries a risk of mortality of up to 25%

(cited in Sjögren et al., 2008) and it is therefore important that oral hygiene care is promoted for all hospitalised patients.

In patients that are intubated access to the mouth due to limited space can be challenging. Toothbrushes should have a small head and a long handle (p.71).

The pressure of the endotracheal tubes can lead to the development of traumatic ulceration to the face. The endotracheal tube should also be rotated from side to side daily to avoid pressure-induced ulceration at the lip, face, and cheek. However, the constant re-taping can weaken the stability of the tube and can also result in skin tears in those with fragile skin.

There are 'tube holder' devices such as masks, fasteners and bite blocks on the market that are designed to prevent the use of tape and reduce the risk of ulceration.

18.12 Mouth care for ventilated patients

A Cochrane systematic review has found that oral care for ventilated patients using chlorhexidine mouthwash or gel reduces the risk of ventilated-associated pneumonia by 40% (Shi et al., 2013). A more recent study has concluded that the use of chlorhexidine for cardiac surgery patients can prevent the incidence of ventilator-associated pneumonia (VAP) but not for non-cardiac surgery patients (Klompas et al., 2014). Currently individual hospital trusts are reviewing their policies on the use of chlorhexidine.

Taking this evidence into consideration, mouth care for ventilated patients should include:

- Tooth brushing twice daily ideally with a non-foaming - Sodium Lauryl Sulphate (SLS free) toothpaste to remove bacterial plaque
- The use of a small-headed toothbrush and suction or a suction toothbrush
- Dry mouth care with regular application of dry mouth gel to the mouth and balms to the lips (if required)
- Minimising traumatic ulceration caused by endotracheal tubes by either regular repositioning or using a tube holder
- Discuss with ITU team protocol for VAP prevention
- If using chlorhexidine mouthwash, this is not to be used at the same time as tooth brushing as it interacts with the toothpaste.

18.13 Head and neck cancer treatment and oral health

Head and neck cancer patients present a unique group of patients whose oral care requires particular attention. Such cancers are often treated with radiotherapy directed at the tumour site, sometimes alongside the use of chemotherapy. Both of these treatment modalities greatly impact on the oral health of patients. It is reported that 40% of chemotherapy patients will experience oral mucositis (inflammation of the oral tissues) and many patients rate this as the most distressing aspect of their cancer treatment (UKOMiC, 2012).

18.14 Mouth care for head and neck cancer patients

Patients who have received radiation to the head and neck are also likely to have a dry mouth due to reduced salivary gland function. Dry mouth care, good oral health and a reduced sugar diet are important for these patients to minimise their risk of decay. Patients with mucositis may find that their mouth is too painful to brush their teeth; a soft toothbrush to clean the teeth and mouth along with application of dry mouth gel may help. See section 16.4 for other ways to help manage the symptoms of mucositis. Many patients who have had head and neck radiotherapy will have trismus (limited mouth opening) that will impact on their ability to clean their mouth and wear dentures.

18.15 Stroke, dysphagia and oral health

Patients who have had a stroke are likely to have some physical disability, which could impact their oral care. More than a third of stroke patients reported difficulty with tooth brushing; the degree of physical disability following stroke strongly relates to the degree of difficulty with tooth cleaning (Hunter et al., 2006). Furthermore, the physical weakness, lack of coordination and the cognitive problems that can accompany a stroke may prevent a person from maintaining good mouth care on their own (Brady et al, 2007).

Dysphagia (difficulty in swallowing) has numerous causes, including stroke, and is most frequently seen in older patients. The reduced oral clearance (removing food from the mouth) in such patients negatively impacts their oral health and a study by Poisson et al. (2014) found that dysphagia was related to oral thrush, reduced saliva and dependency on others for oral care. When cleaning the mouth of a patient at risk of dysphagia, extra care should be taken to reduce the risk of a patient aspirating toothpaste or any debris that may be present in the mouth.

18.16 Mouth care for patients who have had a stroke

Tips for oral care for these patients may include:

- Patient may need vary levels of support from carers and nursing staff
- If possible, sit the patient in an upright or semi- upright position for tooth brushing
- If the patient is able to spit out following mouth care this should be encouraged
- Oral suctioning or suction toothbrushes can be used in patients with a poor swallow.
- Allow the patient breaks so that they can rest and swallow
- For patients with physical disabilities sometimes placing their toothbrush in their hand and then using your hand to guide the brushing will promote independence
- Regular dry mouth care is important to maintain a moist and comfortable mouth
- Use the handle of a second toothbrush to improve access to the whole mouth. A mouth prop/rest or finger prop may also be useful
- Consider adaptations to the toothbrush handle (occupational therapists can help with this) or an electric toothbrush, which has a larger handle and is easier to use
- Use suction in the mouth if you are trained to do so

*Nursing staff should be aware and follow any special guidance from the speech and language therapy team relating to oral care for very high-risk patients.

18.17 Physical disability and oral health

Physical disability can be caused by a wide variety of diseases and illnesses and may impact on oral health in a number of ways. Physical disability that affects the hands and arms such as arthritis and paralysis, will inevitably affect an individual's ability to complete oral hygiene tasks (Avcu et al., 2005), which will in turn negatively impact their oral health status. Mobility problems can also mean that patients have difficulty accessing a sink area and prevent them from carrying out tooth brushing or denture care.

18.18 Mouth care for patients with physical disability

The level of assistance for mouth care will vary for patients and tips include:

- Ensuring that patients have access to a bowl and mouth care products (toothbrush etc.)
- Assisting patients who are unable to brush their own teeth or dentures
- Consider adaptations to the toothbrush handle (occupational therapists can help with this) or an electric toothbrush, which has a larger handle and is easier to use

18.19 End of life care and oral health

The oral health of end of life and palliative care patients is crucial but is an area that has often been overlooked.

End of life patients are susceptible to a range of problems with their mouths including dysphagia, dry mouth, thick mucus secretions, nutritional and taste problems, mucositis, and denture related problems. Poor oral health can have a big impact on the function and quality of life for these patients. Maintaining a comfortable mouth is not only reassuring for the patient but also their family.

18.20 Mouth care for end of life patients

Mouth care for palliative care patients should seek to make the patient as comfortable as possible in the least invasive way:


- For patients with dry mouths use dry mouth gels or hydrate the mouth with a soft toothbrush dipped in water or with a fine water spray
- Dipping a toothbrush in the patients favourite drink and then placing in the mouth can be really comforting
- Twice daily brushing of teeth and gums using a fluoridated toothpaste and toothbrush
- Clean dentures at least once daily and remove and store in a denture container overnight that is labelled with the patients name
- Prescription of topical pain relief for example Difflam (benzydamine hydrochloride) spray or mouth wash

- Regular removal of oral/dried secretions with gentle suctioning or a toothbrush/mouthEze cleanser
- Families can be shown how to give dry mouth care as some will want to be involved in their care
- Check the mouth regularly for sign of thrush

MCM fact sheets on mouth care and neuro-disability can be found here <https://mouthcarematters.hee.nhs.uk/links-resources/neuro-disability-resources/>

18.21 References

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A member of the Mouth Care Team saw a palliative care patient who had an extremely dry mouth, cracked lips and was in an emotionally distressed state. On assessing the patient's mouth there was a total absence of saliva, crusted mucous attached to the cheeks and palate and thick tenacious plaque on the patient's teeth.

The patient's mouth care consisted of the use of a pink foam swab and some pink coloured water to moisten the mouth (but this was not being recorded so it was uncertain how frequently this was being done). No tooth brushing was being carried out as nursing staff said that they were worried that the patient would not be able to tolerate this very well.

With the help of nursing staff, to help calm the patient, dry mouth gel was massaged into the patient's lips, cheeks and palate. The patient's mouth was also cleared of debris (using a MouthEze cleanser) and tooth brushing (using a toothbrush) was carried out.

Nursing staff were advised to apply dry mouth gel to the patient's lips and intra orally every 2 to 3 hours and were reminded of the importance of regular tooth brushing. A mouth care assessment was completed and nursing staff were reminded of the importance of recording all mouth care on a daily basis.

On review, the patient was receiving the appropriate dry mouth treatment every 2 hours. Tooth brushing was being carried out daily and this was being appropriately recorded. Nursing staff reported that the patient now appeared to be more comfortable and was very welcoming of mouth care when given.

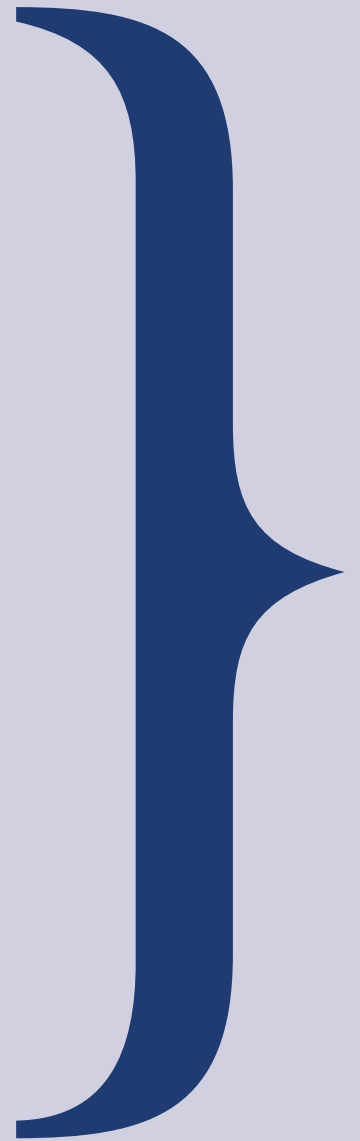


19

Having the 'right tools' for mouth care on the wards

Key messages

- Patients/staff must be able to access the appropriate tools for effective mouth care
- A manual toothbrush with a small head and soft bristles is recommended for hospitalised patients
- Access to dry mouth products can help as dry mouth is a very common issue in hospitals



Recommended mouth care products on the wards for all care staff:

- Pen torch/light source (for nursing staff)
- Small-headed toothbrush
- Sodium Lauryl Sulphate (SLS) free toothpaste
- Dry mouth moisturising gels
- MouthEze cleanser
- Denture pot with a lid that is labelled with the name of the patient
- Suitable container to store mouth care products

One of the barriers that prevents hospitalised patients from receiving good effective mouth care is a lack of 'tools', or unsuitable products, for example, a soft bristled small-headed toothbrush is more appropriate than a large headed hard bristled toothbrush for a palliative care patient with a sore mouth and limited mouth opening.

The following section describes recommendations for mouth care products based on experiences of the Mouth Care Matters team. The team have found for consistency and compliance it is better to limit the number of products (for example one type of toothpaste) but make sure the products available are most appropriate for hospitalised patients.

We recommend that where possible, patients should be encouraged to bring in their own mouth care products into hospital or ask a family member or carer to do this for them.

19.1 Pen torches/light source

Rationale

It is essential to be able to see clearly into a patient's mouth. Without a light source it is impossible to fully assess the mouth and many conditions especially at the back of the mouth will be missed.

19.2 Toothbrushes

Rationale

A toothbrush used properly is the only tool that will remove bacterial plaque from the teeth and the mouth.

Manual small headed

MCM recommends that hospitals stock small-headed toothbrushes for hospital patients. A small head is more effective at reaching all parts of the mouth. A soft toothbrush can be used for patients with very sore mouths, or those suffering from acute ulceration or mucositis. There are several companies that market small-headed toothbrushes for hospitalised/intensive care patients. An alternative is a children's toothbrush.

Adaptations can be made to toothbrushes to aid grip for people with poor manual dexterity; a small flannel can be wrapped around a toothbrush, for example. Some hospital occupational therapists will also be able to make adaptations to toothbrush handles for those with poor grip such as patients with arthritis or after suffering a stroke.

Three-headed toothbrush

A three-headed toothbrush (see page 71) can be used for patients whose co-operation with tooth brushing is limited. These toothbrushes simplify the tooth brushing technique by brushing multiple surfaces of a tooth at the same time, and therefore can be completed in less time. However, they are not as effective at removing dental plaque as normal manual or electric toothbrushes and should only be used as a last resort.

Three-headed toothbrushes should be used with toothpaste and placed over the teeth. A forward-backwards motion is used to mechanically remove plaque from the teeth.

Aspirating (suction) toothbrush

An aspirating toothbrush is one that can be connected to the suction tubes; this will help to remove excess saliva or water from the mouth during tooth brushing. This may be particularly useful in unconscious or intubated patients who are at risk of aspirating. They should be used in the same way as a manual toothbrush using circular motions to clean all tooth surfaces. However, if a non-foaming toothpaste is used the need for aspiration toothbrushes is less.

Electric toothbrush

Electric or powered toothbrushes have many benefits and can be used if supplied by the patient. They often have small heads, which are ideal for cleaning all areas of the mouth.

If the toothbrush has a rotating action, circular motions are not required and the toothbrush can be simply placed on the tooth surface with the bristles directed towards the gum margin and held there before moving onto the next tooth.

How to store a toothbrush

Ideally toothbrushes need to be stored so that the head can be air-dried following use. In hospitals, due to the number of spores in the air this is not feasible.

Cross infection team advises that toothbrushes should be covered. Ideally this would be in a covered container for air circulation rather than a plastic bag.

Barriers to mouth care:

75 year old Ranj was admitted to hospital and brought his powered toothbrush. He had problems with grip and could only clean his teeth adequately with this powered toothbrush. However there was nowhere for him to charge his toothbrush. A member of the mouth care team discovered this and was able to find a place on the ward where the toothbrush could be charged every few days.



Product box used for storing products. Some trusts use a disposable plastic box that can be used for short hospital stays. More recently the team have been sourcing boxes that can be recycled.

Small-headed toothbrush



Aspirating toothbrush



Three-headed toothbrush



19.3 Toothpastes

Rationale

To clean teeth and a source of topical fluoride to help strengthen teeth.

It is important that fluoridated toothpaste is used twice daily to help protect teeth against tooth decay. For adults, toothpaste should contain at least 1350ppm fluoride (or 1.1% sodium fluoride). A pea-sized amount should be used and it is important to “spit not rinse” (spit out excess toothpaste but do not rinse out the mouth with water) to ensure that a film of toothpaste is left in contact with the teeth, allowing it to be absorbed. Patients should be advised not to eat and drink for at least 30 minutes after tooth brushing.

High fluoride toothpaste (e.g. Duraphat) with 2800ppm or 5000ppm fluoride may be prescribed by a doctor or dentist for patients who are at a high risk of dental decay. These toothpastes should be used in the same way as any other toothpaste.

Sodium Lauryl Sulphate (SLS) is the ingredient added to many toothpastes that makes them foam. This can have a drying effect on the oral tissues and therefore should be avoided in patients who already have a dry mouth. Similarly, for those patients at risk of aspirating, such as intubated patients, a SLS free toothpaste would also be beneficial so as to reduce this risk as far as possible.

We recommend that the hospital provides non-foaming toothpastes (Sodium Lauryl Sulphate (SLS) free) for patients with a dry mouth or patients who are at risk of aspirating. The table top right, details toothpastes that are SLS free. It is important to note that some toothpastes such as Oralieve contain proteins extracted from milk and therefore, will not be suitable for patients with a confirmed allergy to milk or vegans and this should be checked.

Patients who are edentulous (have no teeth) still need their mouths cleaned with a toothbrush.

Brands of non-foaming (SLS free) toothpaste and the fluoride content

Sensodyne daily care gel	1450ppm
Sensodyne daily care	1450ppm
Oranurse unflavoured toothpaste	1450ppm
Sensodyne pronamel	1450ppm
Retardex toothpaste	1000ppm
Aquafresh children’s little teeth	1400ppm
Oralieve moisturising toothpaste	1450ppm
BioXtra toothpaste	1450ppm
Biotene toothpaste	1000ppm

19.4 Foam swabs and patient safety

Mouth Care Matters advises not to use foam ended products for mouth care.

In 2012 the Medicines and Healthcare Regulations Agency (MHRA) published a medical device alert on the safety of oral swabs with a foam head and the risk of choking. The problem raised was that the foam heads could detach during use. In Wales a foam head had become detached when a carer was carrying out mouth care for an older patient. The foam head could not be retrieved and the patient subsequently died. Reports from the MHRA show that there continues to be regular reporting of foam head detachment. The alert advised not to use the swabs in patients who were likely to bite down and not to soak them before use.

19.5 Are foam swabs needed for oral care?

Research shows that oral foam swabs are not an effective means to remove dental plaque and should not be used as an alternative to tooth brushing (Pearson, 2002). They tend to be used in patients with dry mouths to re-hydrate the mouth with water. They are also sometimes used for patients with excess secretions to help clear the mouth to reduce the aspiration risk.

Top Tip!

When placing a pea-sized amount of toothpaste (smear on the brush head for patients with dysphagia) on a toothbrush, press the paste into the bristles so it is less likely to fall off the brush.

19.6 Mouth Care Matters' findings

A survey carried out on nursing staff at East Surrey Hospital showed that foam swabs were used by 60% of staff. Observations by the mouth care team have seen on several occasions foam swabs being soaked in a variety of liquids on the wards, including fruit juice. Several nurses have reported at mouth care training sessions that part or all the foam heads have become detached while using them. Since 2012, the MHRA has received 78 reports concerning foam swabs. The most commonly reported issue is the detachment of the foam head from the stick. Focus groups with nursing staff in Kent, Surrey and Sussex found that there was a general lack of awareness of the risks associated with the use of foam swabs for mouth care. In line with what is recommended in Wales, MCM advises that, for safety, foam swabs should not be used.

Alternatives to foam swabs

There is no like for like replacement for a foam swab, a small headed toothbrush is the best tool to clean the teeth, gums and tongue and can also be dipped in water to provide moisture to the mouth.

Foam swab



MouthEze cleanser



MouthEze cleansers or toothbrushes can be used to apply dry mouth gels. They can also be used to clean the soft tissues of the mouth and remove food debris and tenacious dried saliva. They are gentle enough to use on patients with sore mouths and yet strong enough, with a hard plastic handle, to reduce the choking hazard.

Top Tip!

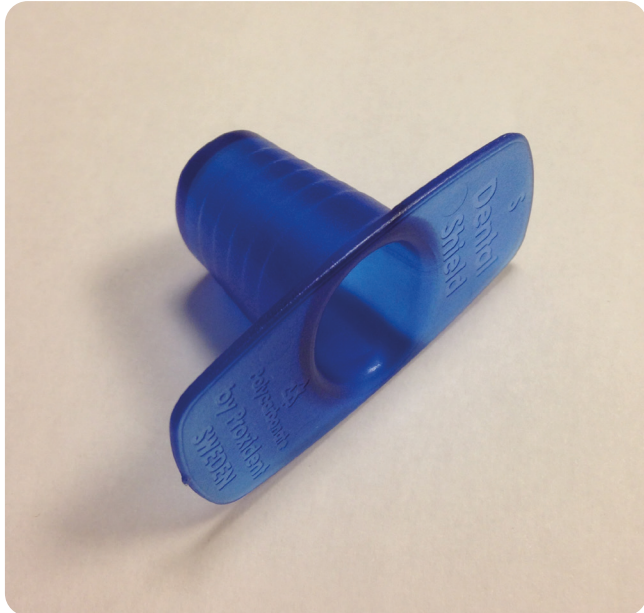
Some patients such as those with a severe brain injury or dementia will have a strong bite reflex. Care must be taken with a toothbrush/MouthEze cleanser. Patients must be supervised unless they have been assessed as being able to use independently.

19.7 How to use a MouthEze cleanser

Start by checking the integrity of the MouthEze by tugging at the head. Hold the handle between your thumb and forefinger and roll between your fingers to create a rotating motion. They can also be used to apply dry mouth gels. For patients with excess saliva, MouthEze can be used along with suction. Manufacturers recommend that MouthEze cleansers should be changed every twelve hours. They should NOT be used to clean the teeth, a toothbrush is the most effective means of removing bacterial plaque.

Dry mouth gel





Finger guard

19.8 Dry mouth moisturising products

Rationale

To provide long lasting relief for a severe dry mouth and can be used to soften dried secretions so that they can be removed more readily.

There are different products available including gels, sprays and mouth rinses (see section 6.8).

Dry mouth moisturising gels can be massaged into all areas of the mouth (cheeks, palate, tongue) using a finger, toothbrush or MouthEze cleanser before meals to help with eating or before tooth brushing for very sore mouths. Dry mouth gels can be mixed with a couple of drops of water to make it more palatable and less sticky for the patients. It is very important to rub gels into the tissues otherwise they will form a sticky layer around the mouth.



360 toothbrush

360 Toothbrush

The 360 brush is a safe alternative to a foam sponge. This brush was originally designed as a toothbrush however it can be used for more than brushing teeth, it has a soft 360 fiber head which holds a small amount of fluid, it also can be used to massage dry mouth gel into the mouth as well as clean teeth with toothpaste. As the name suggests the 360 toothbrush has bristles on all sides and is very soft, making it useful for cleaning patients with a very sore mouth.

19.9 Finger guard/mouth rest

Rationale

These can be used to gently keep the mouth open when providing mouth care and stop patients accidentally biting down on fingers.

Bite blocks such as the open wide prop can also be used but take care with patients with very strong bite reflexes who may bite down very hard on them and be reluctant to open..

A finger guard is a solid plastic guard that can be used by carers to aid tooth brushing for those patients who lack compliance or those who find it difficult to keep their mouths open. It is placed between the patient's teeth, which will help with access for tooth brushing, and will also help to protect the fingers of the person assisting brushing. It is important to hold the lip of the finger guard when in the mouth.



Open wide - foam mouth rest

If advised to use chlorhexidine mouthwash, gel or spray do not use at the same time as brushing with toothpaste. Leave an interval of 30 minutes.

19.10 Prescribed/on the advice of a dentist/doctor

Chlorhexidine gluconate

Chlorhexidine can be prescribed but is also available over the counter as 'Corsodyl' mouthwash, gel or spray. Chlorhexidine is often used by patients with gum disease or following oral surgery as it has anti-bacterial properties. It is not suitable for routine use and should only be used on the advice of a dentist or doctor as long-term use can lead to staining of the teeth.

Despite its antibacterial activity, it does not penetrate dental plaque and therefore is no substitute for brushing the teeth twice daily with a toothbrush and toothpaste; the plaque that builds up on teeth daily needs to be removed mechanically with a toothbrush.

The alcohol free chlorhexidine should be used for patients with dry mouths or sore mouths. Chlorhexidine comes as a mouthwash, a gel or a spray. Up to 12 sprays can be given and should target the gum margin where the gum meets the teeth.

The action of chlorhexidine can be neutralised by ingredients in toothpaste and therefore they should not be used together.

Benzydamine hydrochloride

Also known as 'Difflam', Benzydamine hydrochloride may be prescribed to patients with a sore mouth to help ease their symptoms. It does not have an antibacterial effect like Chlorhexidine but an anti-inflammatory effect and is very useful for sore painful mouths. Benzydamine hydrochloride comes as a mouth rinse or a spray. Benzydamine hydrochloride can be prescribed or bought over the counter.

19.11 References

NSPA 2012- pink foam swabs Medicines and Healthcare Products Regulatory Agency (2008) 017

A controlled trial to compare the ability of foam swabs and toothbrushes to remove dental plaque. Pearsons LS, Hutton JL. J Adv Nurs. 2002 Sep;39(5):480-9. PMID: 12175357

20

Recording mouth care for hospitalised patients – The Mouth Care Assessment and Recording Form

Key messages

- Every adult hospitalised for more than 24 hours should have a mouth care risk assessment completed to identify high risk patients
- Low risk patients should have their mouth re-assessed every 7 days
- Mouth care should be recorded on a daily basis

Inconsistencies in recording mouth care

100 members of nursing staff at East Surrey Hospital were asked where mouth care should be recorded in the hospital notes. Responses varied including: skin bundle, hydration sheet, drug chart, and oral health risk assessment (however there was uncertainty as to where to find it). This was echoed in the 2014 East Surrey hospital CQC inspection, that recommended 'a review of mouth care is undertaken so that staff are clear where this should be recorded in the patient's care record'

have incorporated the form into their existing nursing paperwork, some have used it electronically and others have it as a stand-alone assessment and recording form.

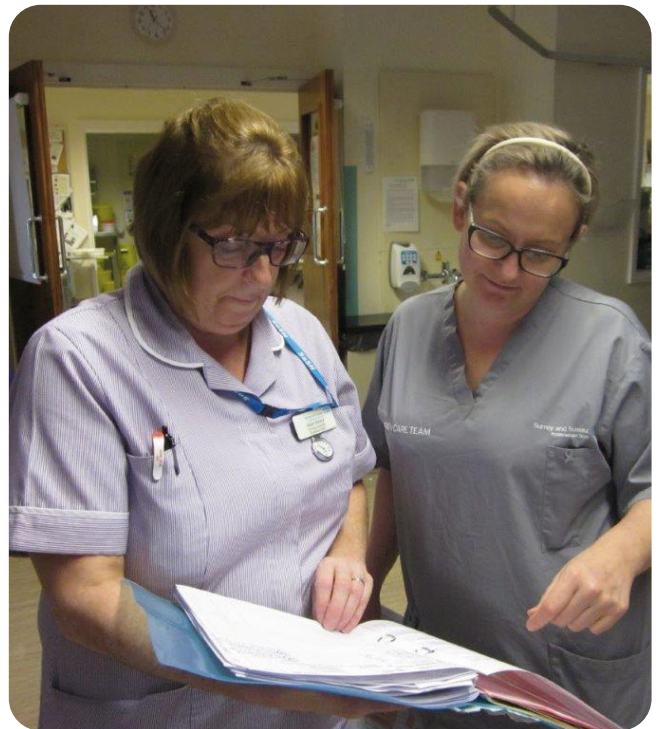
The recording pack consists of three parts:

- **Mouth care screening sheet** (front page - to help identify high risk patients)
- **Mouth care assessment** (inside pages - to plan what support and care is needed)
- **Daily recording sheet** (back page)

20.1 Why do we need to record mouth care?

Recording mouth care is important for several reasons including:

- Identifying patients who are at higher risk of developing problems with their mouth
- Highlighting patients who need support with mouth care
- Compliance with Essence of Care 2010
- Recording daily mouth care and mouth care needs ensures continuity of care between different health care professionals
- As an essential part of general care
- If it is not recorded, it can be assumed it is not being done
- Identifying patients who are refusing mouth care regularly so it can be escalated



20.2 The tool - Mouth Care assessment and recording form

The Mouth Care Assessment and recording form was developed as part of the Mouth Care Matters initiative.

We have found that many trusts do not have a mouth care recording form and supporting patients with mouth care was very poorly documented.

We wanted to develop a tool that was intuitive and straightforward. We have worked closely with nursing staff to make it practical and for it not to be an added burden to their existing workload. Many trusts have used this form or have adapted it for their hospitals. For example, some hospitals

Patient Record Audit

An audit of 692 was carried out in 12 trusts to ascertain if there was any record of mouth care. We found that 5% of patient notes examined in this audit had a record of mouth care.

20.3 Guide for completing the Mouth Care Pack

For patients who are in hospital for 24 hours or less

A Mouth Care Recording Pack does not need to be completed for patients who are in hospital for less than 24 hours.

For patients who are in hospital for 24 hours or more

A mouth care risk assessment should be completed for every patient that is hospitalised for more than 24 hours. The risk assessment will identify whether patients are at low risk or high risk for developing oral problems.

A **low risk patient** is someone identified as being independent with regards to caring for their mouth and not suffering from any condition that would increase their chances of having problems with their mouth. A low risk patient is someone who can access a bathroom unaided and is able to clean their mouth. Low risk patients should have their mouth care risk assessment reviewed every seven days or if their health status changes (for example the patient has surgery).

A **high risk patient** should have a mouth care plan completed and all mouth care recorded on the daily recording sheet.

High risk groups include:

- Chemotherapy
- Delirium
- Dementia
- Dependent on oxygen use
- Dysphagia
- Frail
- Head and neck radiation
- ICU / HDU
- Learning difficulties
- Nil by mouth
- Palliative care
- Refusing food or drink
- Severe mental health issues
- Stroke
- Unable to communicate
- Uncontrolled diabetes

20.4 Completing the mouth care screening sheet

The mouth care risk assessment should be carried out and signed by a registered nurse or a member of staff who feels competent to undertake the assessment.

For patient privacy on a ward the curtains should be drawn.

Explain to the patient and ask permission before carrying out the risk assessment.

The questions on the form are very straightforward, any answers in the red section mean that the patient is high risk and needs to have a mouth care plan completed.

20.5 Notes on the mouth care screening sheet

Toothbrush and toothpaste

Ask the patient (carer if appropriate) whether they have their own toothbrush and toothpaste. Patients/carer/family should always be encouraged to bring in their own toothbrush and toothpaste. If the patient cannot answer, for example they are unconscious/sedated or do not have family/carer then they should be provided with a small-headed toothbrush and non-foaming toothpaste. This should be recorded on the form.

Dentures

Unfortunately, dentures are known to go missing in hospitals and are not always removed from the patient's mouth during long hospital stays so it is important to know if they have dentures on admission. Again, patients should be encouraged to bring their own denture pot, denture cleaning brush and denture cleaning tablets if used. Patients are high risk if dentures are very painful in the mouth or broken. There are some patients who find it difficult to tolerate dentures and do not routinely wear them especially when in hospital and unwell. It is advisable, if possible, for dentures that are not worn to be taken home to a safe place by the patient's carer/family to reduce the chance of them getting lost during a hospital stay. All wards should stock denture pots.

Existing mouth problems

Do they have existing problems with their mouth? The patient should be asked about pain and dry mouth that is having a significant impact on them. For any patient that is unable to answer due to cognitive problems/ degree of sedation they should be deemed high risk and a mouth care plan needs to be completed.

Patient Name:	
D.O.B	
MRN Number	
NHS Number	

Mouth Care Pack

To be completed for every patient **24 hours** after admission

Mouth care screening sheet

Red highlighted box indicates **MOUTH CARE ASSESSMENT** is required

1. Patient has:

Toothbrush	Y <input type="checkbox"/>	N <input type="checkbox"/>	Provided <input type="checkbox"/>
Toothpaste	Y <input type="checkbox"/>	N <input type="checkbox"/>	Provided <input type="checkbox"/>
Upper denture	Y <input type="checkbox"/>	N <input type="checkbox"/>	At home <input type="checkbox"/>
Lower denture	Y <input type="checkbox"/>	N <input type="checkbox"/>	At home <input type="checkbox"/>
Denture pot (named)	Y <input type="checkbox"/>	N <input type="checkbox"/>	Provided <input type="checkbox"/>

If 'Y' to dentures,
place the sunflower
sign at the bedside

Patients with **NO TEETH, NIL BY MOUTH** or **DYSPHAGIA** still require **REGULAR MOUTH CARE**

2. Does the patient have any pain or discomfort in the mouth?

Severe dry mouth	Y <input type="checkbox"/>
Ulcers	Y <input type="checkbox"/>
Painful mouth	Y <input type="checkbox"/>
Painful teeth	Y <input type="checkbox"/>
Sore tongue	Y <input type="checkbox"/>

Other: (Specify)

None of the above Y

3. Patients with any of the below will require a MOUTH CARE ASSESSMENT: Tick appropriate box(es)

<input type="checkbox"/> Chemotherapy	<input type="checkbox"/> Nil by mouth
<input type="checkbox"/> Delirium	<input type="checkbox"/> Palliative care
<input type="checkbox"/> Dementia	<input type="checkbox"/> Refusing food or drink
<input type="checkbox"/> Dependant on oxygen use	<input type="checkbox"/> Severe mental health
<input type="checkbox"/> Dysphagia	<input type="checkbox"/> Stroke
<input type="checkbox"/> Frail	<input type="checkbox"/> Unable to communicate
<input type="checkbox"/> Head & neck radiation	<input type="checkbox"/> Uncontrolled diabetes
<input type="checkbox"/> ICU / HDU	
<input type="checkbox"/> Learning difficulties	<input type="checkbox"/> None of the above

4. LEVEL OF SUPPORT Requires risk assessment Unable to get to a sink / need assistance

Patient is fully dependent on others for mouth care

Mouth care assessment required. Record all mouth care on the daily recording sheet

Patient requires some assistance

Unable to get to a sink or needs help with mouth care. Record all mouth care on the daily recording sheet

The assistance patient requires: (i.e bowl, encouragement, reminder, remove their denture etc)

Please state:

Patient is independent

Able to walk to a sink and needs **NO** help with mouth care

20.6 Level of support

The patients level of assistance if needed from nursing staff for mouth care should be assessed on an individual basis and not assumed. For more information about assessing patient independence, see section 21).

Fully dependent

Patients who are fully dependent on another person for mouth care include people who are unconscious, have severe learning disabilities, late stage dementia etc.

Some assistance

Examples of patients that need some assistance are those with a physical disability that may affect their manual dexterity for example a Parkinson associated tremor or arthritis or those with a mild learning disability that need reminding about tooth brushing.

Independent

Independent patients are able to look after their mouth and dentures on their own. It must be appreciated that some patients think, or do not want to disclose, that they might need some help with care including mouth care. Hospital staff should be sympathetic to these patients. Patients should be assessed as being independent if they can get out of bed, walk to the bathroom and brush their teeth without assistance.

Additional comments

Actions or comments may include relevant information for example the patient's mouth care routine is supported by a named carer, they have an electric toothbrush or they are more co-operative at certain times of the day.

20.7 Mouth care assessment (middle pages of the mouth care pack)

This section needs to be completed once a week or if the patient's situation changes, for example if a patient is admitted to intensive care and intubated they would become high risk.

The form should be completed and signed by a registered nurse or a nursing assistant who has had mouth care training.

For patient privacy on a ward the curtains should be drawn.

It is very difficult to look inside the mouth without adequate lighting. The bedside lamp should not be solely relied on for light. A pen torch can provide sufficient lighting for assessing a patient's mouth.

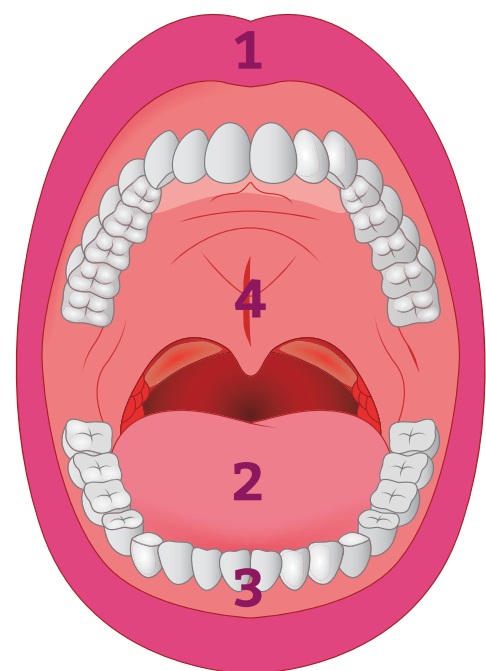
Wear disposable gloves. Although not strictly necessary we have found that some staff prefer to also wear a disposable apron and a mask when carrying out mouth care.

The form assigns a low, medium or high risk to patients, assesses different parts of the mouth (lips, tongue, gums, saliva, visible teeth, dentures and mouth cleanliness) and recommends any actions necessary.

Advice on dry mouth care, ulcer care and denture care is provided on this page.

Looking in the patient's mouth

Start with the lips and look in the mouth in a systematic way:



1

2

3

4

5

Lips: Pink & moist

Tongue: Pink & moist

Teeth & Gums: Clean, teeth are not broken or loose

Cheeks, palate, under the tongue: Clean, saliva present, looks healthy

Dentures: Clean & comfortable



Mouth care assessment

Complete **WEEKLY** if the patient has a red box ticked on the front page/or if their condition deteriorates

Patient Name:	
D.O.B	
MRN Number	
NHS Number	

Look in the patient's mouth using a LIGHT SOURCE and carry out a WEEKLY mouth care assessment. Mark as L, M or H in the white box under today's date and sign.				DATE:	DATE:	DATE:	DATE:	DATE:
	LOW RISK (L)	MEDIUM RISK (M)	HIGH RISK (H)*					
Lips	• Pink & moist	• Dry/cracked • Difficulty opening the mouth	• Swollen • Ulcerated					
Action	None	Dry mouth care	Refer to DOCTOR					
Tongue	• Pink & moist	• Dry/fissured/shiny	• Looks abnormal • White coating • Very sore/ulcerated					
Action	None	Dry mouth care	Refer to DOCTOR					
Teeth & gums	• Clean • Teeth not broken • Teeth not loose	• Unclean • Broken teeth (no pain) • Bleeding/inflamed gums	• Severe pain • Facial swelling					
Action	2 x daily toothbrushing	Daily toothbrushing and clean the mouth	Refer to DOCTOR or dental team	Advise the patient to visit their dentist on discharge if there are any problems with their teeth that do not require urgent treatment in hospital				
Cheeks/ palate & under tongue	• Clean • Saliva present • Looks healthy	• Mouth dry • Sticky secretions • Food debris • Ulcer <10 days	• Very dry/painful • Ulcer >10 days • Widespread ulceration • Looks abnormal					
Action	None	Clean the mouth/dry mouth care/ulcer care	Refer to DOCTOR	An ulcer present for more than 2 weeks must be referred to the doctor				
Dentures	• Clean • Comfortable	• Unclean • Loose • Patient will not remove	• Lost • Broken and unable to wear					
Action	Clean daily	• Denture care • Dental fixative • Encourage removal	DATIX if lost or refer to dental team if broken	Remember to place the denture sunflower at the patient's bedside. Advise the patient to visit their dentist on discharge if the denture is loose				

*For patients who are unable to communicate or cooperate with a mouth care assessment, signs of mouth related problems may include not eating/drinking, facial swelling & behavioural changes

Signature:

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<p>Dry mouth care</p> <p>Frequent sips of water unless nil by mouth</p> <p>Moisturise dry mouth gel onto the tongue, cheeks and palate</p> <p>Hydrate with a moist toothbrush</p> <p>Apply lip balm to dry lips</p> <p>Keep mouth clean</p>	<p>Ulcer care</p> <p>Rinse mouth with saline</p> <p>Anti-inflammatory mouth spray – discuss with doctor</p> <p>ULCER PRESENT FOR MORE THAN 2 WEEKS; REFER TO DOCTOR</p>	<p>Denture care</p> <p>Advise the patient to leave denture out at night in a named denture pot with a lid</p> <p>If the patient has oral thrush, soak in chlorhexidine (0.2%) mouthwash for 15 minutes twice a day, rinse thoroughly and encourage the patient to leave the denture out whilst the mouth heals</p>
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20.8 Daily recording sheet

This sheet is for staff to record any mouth care procedures carried out by hospital staff, for example dry mouth care, tooth brushing and denture hygiene. It also enables staff to record whether patients have not had daily mouth care/assessment carried out for reasons including poor compliance, having another procedure carried out or being asleep. This section of the pack should be completed as many times as necessary during the day. For instance some patients will require two-hourly dry mouth care while others may only need assistance with cleaning their dentures once a day.

If you refer a patient for mouth related problems, mark as medical referral (R) on the daily recording sheet. It is important to record a patient's refusal (PR) for mouth care, if it becomes consistent, medical advice should be sought and a mouth care assessment carried out.

A video on mouth care recording and the forms can be found on the MCM website in the resources section.

20.9 References

Department of Health (2010) Essence of Care 2010: benchmarks for the fundamental aspects of care. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216691/dh_119978.pdf (Accessed 21st August 2015).

A member of the mouth care team saw a 101-year-old lady who had been an in-patient at the hospital for six days. The patient did not have dementia and was not confused but she did need assistance with her oral care because she was very frail, had limited mobility and was at risk of falling. The patient complained of a sore palate and a sore dry tongue. The patient was wearing an upper denture and still had her own lower teeth. The patient reported that since she had been admitted to the hospital nobody had helped her clean her teeth or her denture and that she had not removed her denture since being admitted. The patient said that when she is at home she brushes her teeth and denture once daily and removes her denture at night and soaks them in water. There was no toothbrush, toothpaste or denture pot present in the patient's room and the patient said that nobody had asked her about her oral care since she had been admitted to the hospital. The patient was asked if she had requested help with oral care and she said that she didn't like to trouble the nurses because she knew that they were very busy.

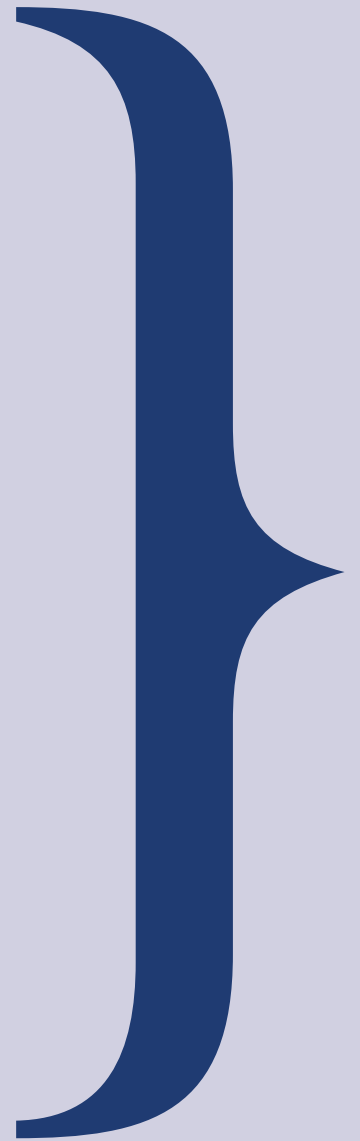
The patient was asked if she would like help with cleaning her teeth and denture and she was very grateful. She was provided with a toothbrush, toothpaste and named denture pot. The patient's denture, which was very dirty, was removed and cleaned using a toothbrush and some liquid soap. The patient's teeth were cleaned and a mouth care risk assessment and Mouth Care Recording Pack were completed. The patient was identified as having a dry mouth and dry mouth gel was applied to the patient's tongue and palate. The patient was advised to remove her denture at night and that this should be placed into a denture pot to allow her palate a chance to recover.

21

Assisting patients with mouth care

Key messages

- Hospitalised patients will require different levels of assistance with their oral care
- A patient's independence and ability to perform everyday tasks may change throughout their hospital stay
- It is not always obvious that some patients need help



21.1 How to distinguish between independent and dependent patients?

Patients should be assessed as to their level of independence in terms of providing self-care, including tooth brushing. Hospitalised patients are often less independent than they would be at home, usually as a result of their illness; they may feel too unwell and lack the energy and desire to clean their teeth; or they may have reduced mobility and are unable to get to the bathroom to clean their teeth. It is therefore important to ask and not assume that a hospitalised patient is able to brush their teeth. Often, simply bringing the patient a bowl will allow them to carry out their normal oral hygiene routine at bedside.

It is important to assess the patient's ability to grip, hold and use a toothbrush. Electric toothbrushes that have a larger handle may be more beneficial for patients who have difficulties with their grip; adaptations can also be made to manual toothbrushes, which can increase the patient's independence in carrying out daily tasks. If necessary, seek help and advice from an occupational therapist or a dental professional.

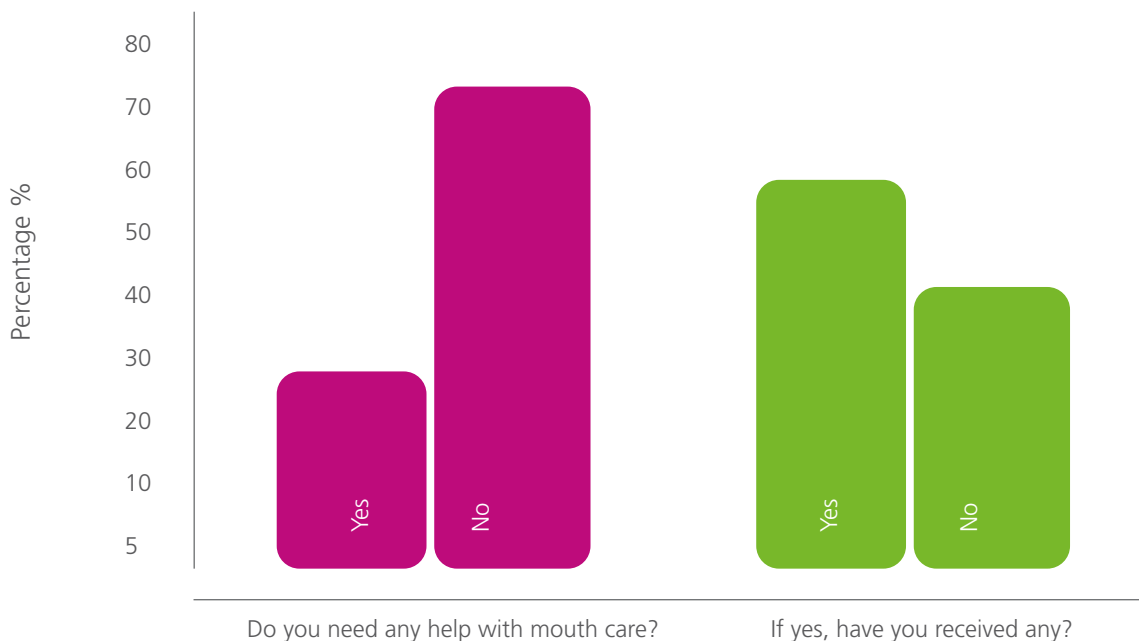
21.2 Different types of assistance

Patients may require different levels of assistance; it could be as simple as prompting and reminding them to brush their teeth or using the hand-over-hand technique as discussed (see section 18). It is important to assist patients with their mouth care in a way that maintains their independence as it provides them with a sense of achievement and worth. This in turn impacts on a patient's sense of well-being and life satisfaction. Helping a person to remain independent also ensures patient dignity in care.

For some patients, particularly those who lack co-operation with mouth care or those with learning disabilities, assistance from visiting family members or carers may help to gain compliance with oral hygiene. It may be necessary to find out how mouth care is ordinarily provided for the patient, this information maybe in their learning disability passport.

We asked 348 patients on the wards about their oral care and oral health whilst in hospital and found that:

- 20% were currently experiencing problems with their mouths
- 12% did not have a toothbrush and toothpaste with them in hospital
- Almost 1 in 3 required help with their oral care (see below)
- Some common themes from the comments included 'the nurses are so busy, I don't want to ask' and 'I was given a pink foam swab which doesn't help'



21.3 Cross infection control

Personal Protective Equipment (PPE) should be worn by nursing staff/healthcare assistants when providing or supporting a patient with mouth care.

Hand hygiene should be carried out and the following PPE used:

Plastic apron

Disposable gloves

Face mask and protective glasses (if desired)

21.4 Key 'how to' messages in steps

Dry mouth care (section 6.7)

- Regular hydration with frequent sips of plain water (unless patient is nil by mouth or on fluid restriction).
- Some patients may benefit from the application of dry mouth moisturising gels. These can be applied as necessary and every two hours for severe dry mouths.

- The gels can be applied with a gloved finger, toothbrush or MouthEze cleanser to all areas of the mouth including the cheeks, the tongue and the palate.
- When a patient has dried secretions that are difficult to remove the gels can be massaged into the mouth and left for a few minutes to make them easier to remove.
- When dry mouth gels are not massaged into the mouth they can form a further sticky layer making the mouth more uncomfortable. Rubbing the gels into the mouth as you would rub a cream into dry skin is very important.
- Make sure all soft secretions are removed from the mouth before dry mouth gel is applied.
- Some patients do not tolerate the gels.
- Independent patients may prefer to self-administer a dry mouth spray.
- When using sprays these should be sprayed into the cheeks and under the tongue.

Tooth brushing with a patient





Tooth brushing and using a mouthEze cleanser with dry mouth gel

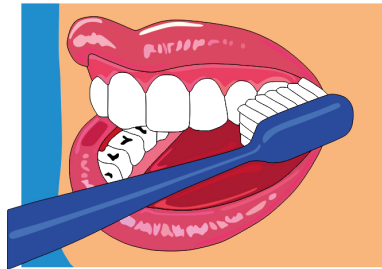


Tooth brushing

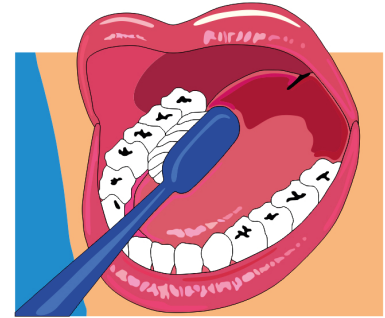
- Where possible patients should be encouraged to sit up.
- Tooth brushing should be carried out twice daily.
- A toothbrush with a small head is recommended for patients in hospital as they are able to reach further in patients with limited mouth opening.
- A pea sized amount of toothpaste should be used for patients with no swallowing problems.
- A smear of non-foaming SLS free toothpaste should be used for patients with swallowing problems (dysphagia) and the paste should be pressed into the bristles of the brush. You do not need to wet the bristles.
- Brush the teeth in small circular, 'round-and-round' motions (not backwards and forwards scrubbing), covering the tooth and the gum.
- Make sure you brush all the surfaces of the teeth. The outside, inside and biting surfaces of all teeth need to be cleaned.
- Brush the top set of teeth for one minute (spend 30 seconds on each side of the mouth). Starting one side and cross over to the other side not to miss any teeth, Repeat this on the bottom set of teeth.
- Patients should be encouraged to spit out and not rinse the mouth out afterwards to maximise the contact of fluoride on teeth.
- Using a mouthwash after brushing teeth is not needed as will rinse away the fluoride from the toothpaste.
- Mouthwashes are best used at another time of the day to brushing teeth or at least 30 minutes after brushing if desired.
- If a chlorhexidine mouthwash/gel has been prescribed this should be used at a different time to toothpaste as it deactivates the fluoride.



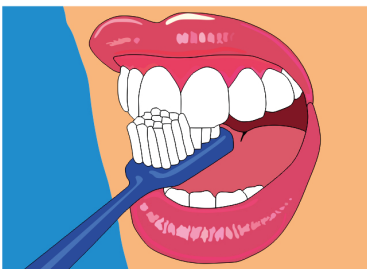
1 Place the brush at a 45° angle to the front tooth surface. Bristles must contact both lines of tooth and gum.



2 Move the brush in a small, jiggling, circular motion.



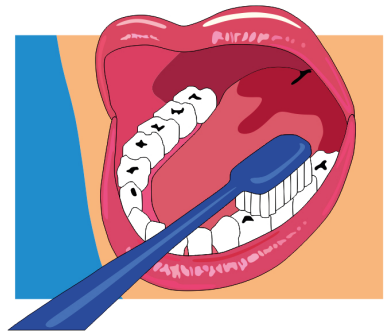
3 Clean the inside surfaces of the back teeth by moving the brush in a small back and forth motion.



4 Clean the inside surfaces of the front upper teeth by tilting the brush vertically using small up and down strokes.



5 Clean the inside surfaces of the front lower teeth by tilting the brush vertically using small up and down strokes.



6 Move the brush in a back and forth motion to clean the biting surfaces.

Remember to also brush the tongue with a small toothbrush to remove food and debris.

Oral Suctioning

- Oral suctioning is necessary for some patients as they may be unable to clear saliva or secretions from their mouth. They may be of risk of aspirating or may be causing obstruction or discomfort.
 - Oral suctioning is performed to remove the secretions from the oral cavity.
 - Its purpose is to maintain oral hygiene and comfort for the patient.
 - Oral 'mouth' suctioning is different from 'deep' suctioning which is used to remove chest secretions.
 - Staff who can carry out oral suctioning will vary in hospitals, in some trusts only registered nurses can provide suctioning, in others there maybe training courses for nursing staff.
 - Only use suction to remove visible secretions from the mouth, do not go deeper in the mouth past the back teeth secretions.
- When providing oral suctioning, care should be taken to ensure the correct technique is used. If incorrectly done, suctioning can cause damage to the inside of the mouth (cheeks, tongue, lips) or teeth. Some people with a neuro-disability have a strong tendency to bite down and may inadvertently clamp down onto the suction tube during suctioning. If the suction tube is pulled while the person is biting down hard onto it there may be damage to the teeth which can make them loose. If an individual does bite down on the suction tube, hold on to the end but do not pull it, wait for the patient to relax - normally they will open their mouth and the tube can be removed. A side-effect of oral suctioning can cause stimulation of a person's gag reflex. Sensitive areas tend to be towards the back on the roof of the mouth and next to the tongue at the back of the mouth. Care should be taken to avoid stimulating these sensitive areas.



Portable suction unit



Yankauer suction

22

Denture care

Key messages

- Dentures should be cleaned at least once daily with a denture brush or toothbrush and soap
- Dentures should be removed at night and stored in a labelled denture pot
- Hospitals should have a pathway to record denture loss



22.1 Changes in denture demographics

The oral health of the nation has greatly improved over the last 50 years and as a result, we are keeping our teeth for longer. This means that dentures are far less common than they used to be, with only 6% of the population having no teeth at all (edentulous) in 2012 compared to 37% in 1968 (ADHS, 2009). It is far more common now to see patients who have some natural teeth with missing teeth replaced with a partial denture.

22.2 Types of dentures

There are two main types of dentures:

Complete/full or partial

Acrylic/plastic or metal

A complete denture is one that replaces all the teeth in one arch as there are no teeth remaining. A partial denture is made when only some of the teeth are missing and the patient still has some natural teeth remaining.

Full acrylic denture



Partial acrylic denture



Partial metal denture



Some dentures may be retained in the mouth via implants that are placed in the jaw bone (see picture below). These implants will need to be cleaned in the same way that teeth are cleaned and the dentures will need to be removed and cleaned in the same way as any other denture.



22.3 Importance of denture hygiene

Denture hygiene is important to ensure good oral health. Food debris and plaque can easily accumulate on dentures and needs to be removed daily. In the case of partial dentures, plaque left on dentures can lead to an increased risk of decay in the remaining teeth. Dentures, in particular acrylic dentures, can harbour microorganisms such as candida, which can cause oral thrush that is commonly referred to as denture stomatitis when under a denture.

Denture stomatitis



22.4 Denture fixative

Denture fixative is often used to help increase the retention and comfort of dentures. It is available to buy over the counter and should be removed daily from both the denture as well as the patient's mouth using a denture brush and toothbrush respectively.



22.5 Removing and replacing dentures in the mouth

Dentures should be removed at night, cleaned and stored in a labelled denture pot. Not all patients will be willing to follow this advice and it is important to respect the patient's decision if this is the case. Keeping the denture out overnight will help to reduce the patient's risk of oral candida.

Patients are often able to remove their own dentures - just ask. For a patient who needs help removing a denture:

- Wash hands and put on gloves
- For an upper denture, slip finger by side of denture to break the seal and lift the denture out of the mouth.
- DO the same for a lower denture
- If there are clasps on a denture push then up for a lower denture and down for an upper denture



Removing an upper denture

22.6 Lost dentures

Dentures can unfortunately get lost during a patient's hospital stay, often whilst a patient is in transit between wards. They may also be left on dinner trays or thrown away as patients sometimes wrap them in tissue, which can be easily mistaken for rubbish. To keep dentures safe, patients sometimes keep them under their pillow or in their pyjamas and they can accidentally be disposed of when the linen is changed. For this reason, it is important that patients are encouraged to use their denture pots to store their dentures when they are not in their mouth.

Dentures take approximately 6-8 weeks to make with the patient needing to attend the dentist for five appointments. An NHS denture costs the patient £269 (2019 price) and private dentures can cost considerably more. A lost denture can be devastating to a patient impacting on them in a number of different ways, including their ability to eat, speak and socialise. If patients are not wearing dentures in hospitals staff should ask family or carers to take them home for safety.

Pathway denture loss

We found that there was no protocol for reporting denture loss in 13 trusts in Kent, Surrey and Sussex which meant denture loss was under-reported. A care pathway for denture loss would require first confirming the patient had their denture in hospital to start with, by checking the notes to see if dentures were recorded on admission. The area surrounding the patient's bed should be checked as well as laundry and lost property. If not found the nurse in charge and ward manager should be informed and a Datix form (incident recording form) completed. Staff should explain to patients and their relatives if appropriate how to claim for reimbursement. It should be determined how the patient will obtain a replacement - whether while in hospital, if possible, or from their own dentist. Finally, staff should review what impact this loss may have on the patient's care, such as a change in the consistency of their meals.

Labelling dentures

Ideally dentures should be labelled when they are made, however this is infrequently done. There are kits that are available to label dentures and this might be useful for care homes. In hospitals the tendency is for dentures to be lost but not found again.



Mouldy denture

22.7 Cleaning dentures

An older male patient was recovering from pneumonia in hospital. He had a lower denture with clips, that replaced his back teeth. He was very frail and was unable to remove his denture during his stay. This had not been identified by the nursing staff. He was reviewed by the mouth care team as he had a sore mouth. When the denture was removed it was covered in food debris and mould. The denture was cleaned and the staff were shown how to assist the patient remove, clean and replace the denture on a daily basis. The denture was quite tricky to remove and this highlighted the importance of ward based training for hospital staff.

Dentures should be cleaned at least once daily but ideally after every meal. If the patient is unable to do this themselves, care staff should complete denture cleaning as follows:

- Carry out hand hygiene and use patient protective equipment (PPE) including disposable gloves and apron
- Fill a disposable bowl with water
- Remove the dentures from the patient's mouth
- Use a denture brush or a soft toothbrush. If the patient has natural teeth, a different brush should be used to clean the denture, this should not be the patient's same toothbrush
- Use a specially formulated denture cleaning paste or a fragrance-free liquid soap applied to the brush to remove plaque and food debris, ensuring to brush all surfaces of the denture and paying particular attention to any clasps.
- Toothpaste should not be used as this can be abrasive and can wear the denture away.
- If a patient used denture sterilising tablets these should only be used as long as the manufacturers guidelines, usually 3-6 minutes, and then disposed of, the solution should not be used to soak dentures in overnight.
- Rinse the denture well with cold water.
- Either return to the patient or store overnight in a labelled denture pot with no water.
- Remove PPE and carry out hand hygiene.

If the patient has partial dentures, they will also have their own natural teeth that will need to be cleaned twice daily.

If the patient has both upper and lower complete dentures, the patient should be encouraged to rinse out their mouth

with either water or mouthwash to remove any remaining food debris after meals.

Regardless of whether the patient has partial or complete dentures the rest of the mouth needs to be cleaned twice daily with a small-headed toothbrush.

For patients with oral thrush under a denture (denture stomatitis) the denture should be soaked in chlorhexidine 0.2% for 15 minutes and rinsed thoroughly before being placed in a named denture pot or put back in the mouth.

Care must be taken if using denture tablets of cleansing solutions, there have been cases where people have accidentally ingested the tablets of drunk the solution. This can happen especially when patients have visual impairments or have cognitive issues. This is one of the reasons why we advise not storing dentures in water any more. There is also a risk if dentures are stored in water that the water will not be changed daily, especially if patients are not wearing their dentures.

22.8 Denture video

The following MCM training video was made to help staff with denture care.

<https://www.youtube.com/watch?v=iLxOU-tGYI&list=PLrVQaAxyJE3eYeayCLSUFpxtkMxWmRo7L&t=0s&index=2>

22.9 References

Mann, J & Doshi, M. (2017). An investigation into denture loss in hospitals in Kent, Surrey and Sussex. British Dental Journal. 223. 10.1038/sj.bdj.2017.728.

22.9.1 Cleaning dentures flow diagram



22.10 The denture sunflower



The denture sunflower

To try and reduce the number of dentures being lost in hospital, Mouth Care Matters have tried to introduce a simple solution. When a patient is hospitalised and has a denture(s), the nursing staff asks them if a sunflower sign can be placed above their bed. This symbolises to staff, without affecting the patient's dignity, that they have a denture. The symbol will act as a visual aid for nursing and hostess staff to check for dentures wrapped up in tissues on a meal tray or hidden in bed linen to reduce the risk of them being accidentally disposed of. Please be aware that if implementing the denture sunflower in your trust, check to see if the sunflower is already being used as a symbol for another condition.

23

Dental referrals

Key messages

- Hospitals ideally should have a pathway for urgent dental referrals for inpatients
- Patients with non-urgent problems that are not impacting on their everyday life should be advised to see a dentist on discharge
- If a patient does not have a dentist they (or their carer) should be advised on how to find a dentist



23.1 Urgent and non-urgent referrals

During a hospital stay it may be necessary for a patient to be referred for dental advice/treatment.

Referrals will either be urgent (needs to be treated whilst in hospital) or non urgent (should be advised to see a dentist on discharge).

It is important that all hospitals have a pathway for patients that require urgent advice/treatment that might impact on their overall condition and hospital stay.

An urgent referral for a hospitalised patient includes:

- Severe dental pain affecting sleep, eating and drinking
- Dental infection (facial swellings, pus adjacent to teeth)
- Trauma to teeth (might be after a fall)
- Teeth that are so mobile they may be an aspiration risk
- Broken/lost dentures
- Ulcers caused by trauma from broken teeth/dentures

Lost dentures – most hospitals will not be able to remake dentures but the patient/family should be advised on how to find a dentist. A lost denture can be very distressing for a patient.

A non-urgent problem that does not need a referral includes:

- Broken teeth/filling/dentures that are not painful. For some groups of patients such as people with severe dementia or severe learning disabilities, it may not be possible to know if they are in pain and they should be referred to appropriate services such as special care dental service on discharge from hospital
- Loose dentures
- Cosmetic dentistry

Patients with non-urgent problems should be advised to see their dentist on discharge.

23.2 Finding a dentist

NHS website

NHS dentists can be found via the NHS website

<https://www.nhs.uk/using-the-nhs/nhs-services/dentists/how-to-find-an-nhs-dentist/>

Patients can search for a dentist based on their location

<https://www.nhs.uk/Service-Search/Dentists/LocationSearch/3>

Urgent care

Patients/carers should be advised to contact their dentist, if they do not have a dentist they can call 111 who can advise on services offering urgent dental appointments.

Special Care Dental Services/Salaried dental services

This dental service provides care for people who cannot be treated by a high street dentist including those with or a combination of the following:

- Learning disabilities (moderate/severe)
- Physical disabilities (moderate/severe)
- Dementia (moderate/advanced)
- Severe anxiety/phobia
- Mental health problems (severe)
- Complex medical conditions
- Domiciliary care required
- Bariatric (severely overweight)
- Homeless people, substance misuse

Treatment in some cases can be carried out under sedation or general anaesthesia. NHS charges still apply.

In most cases you need to be referred to the special care dental service by either a dentist or general medical practitioner.

Using the concept on Making Every Contact Count (MECC), hospital staff have the opportunity to raise awareness of the importance of oral health for inpatients and signpost to appropriate services.

23.3 Dental pathways

Some hospitals will have on site dental or maxillofacial units that may be able to provide urgent treatment/advice for inpatients. Some hospitals may have arrangements with local dentists who will visit the hospital to see patients with urgent dental needs. Others will not but it is the responsibility of the trust to ensure all the health needs of inpatients are met during their stay including dental health. There should be a pathway in place to get dental advice on the phone or for domiciliary care in hospital.



Domiciliary dental visit on a ward.

Examples of good practice

Out of 13 trusts in Kent, Surrey and Sussex only one had a dedicated pathway for urgent dental conditions. East Surrey Hospital is fortunate to have an onsite dental surgery. After introducing the Mouth Care Matters training there was an increase in the number of referrals for urgent dental care or advice. A pathway was established that was managed by the dental core trainee (dentist in training) who would triage the referrals and seek advice if necessary from senior members of the team. The most common treatment provided was urgent extractions, for many patient this positively impacted on their recovery as it resolved their ongoing pain.

24

Drugs that
can cause a
dry mouth
(xerostomia)



Analgesic

Morphine

Antianxiety

Doxepin

Hydroxyzine

Antidepressant / Anxiolytic

Amitriptyline

Citalopram

Clomipramine

Doxepin

Fluvoxamine

Fluoxetine

Imipramine

Mirtazapine

Nortriptyline

Paroxetine

Sertraline

Trazodone

Trimipramine

Venlafaxine

Antidiarrheal

Co-phenotrope

Loperamide

Antiemetics

Cyclizine

Prochlorperazine

Hyoscine

Antiepileptics

Carbamazepine

Gabapentin

Lamotrigine

Antihistamine

Cetirizine

Chlorphenamine

Clemastine

Cyproheptadine

Diphenhydramine

Hydroxyzine

Loratadine

Promethazine

Triprolidine with pseudoephedrine

Antipsychotic

Chlorpromazine

Clozapine

Fluphenazine

Haloperidol

Lithium

Olanzapine

Perphenazine

Pimozide

Prochlorperazine

Trifluoperazine

Antispasmodic

Flavoxate

Hyoscine

Oxybutynin

Propantheline

Tolterodine

Bronchodilator

Ipratropium

Ipratropium/Salbutamol

Cardiovascular

Amlodipine

Atenolol

Captopril

Carvedilol

Doxazosin

Enalapril

Fosinopril

Lisinopril

Methyldopa

Metoprolol

Moexipril

Nadolol

Perindopril

Prazosin

Quinapril

Ramipril

Terazosin

Trandolapril

Decongestant

Pseudoephedrine

Antiparkinsonian

Amantadine

Bromocriptine

Co-careldopa

Entacapone

Orphenadrine

Procyclidine

Selegiline

Tolcapone

Trihexyphenidyl

Muscle Relaxant

Baclofen

Proton Pump Inhibitor

Omeprazole

Lansoprazole

Smoking Control

Bupropion

Diuretic

Amiloride

Indapamide

Triamterene

Hypnotic/Sedative

Temazepam

*There are over 400 drugs that can cause a dry mouth

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MOUTHS



Key messages

- An acronym designed to help remember the 6 key points for carrying out good mouth care

25.1 What is MOUTHS?

The MOUTHS acronym is a good reminder to incorporate daily mouth care into the routine for inpatients. Their overall dignity and wellbeing will be greatly improved.



Mouth Care Pack after 24 hours
of admission



Oral assessment



Unhealthy mouth & the impact on
nutrition, hydration & dignity



Tools & products



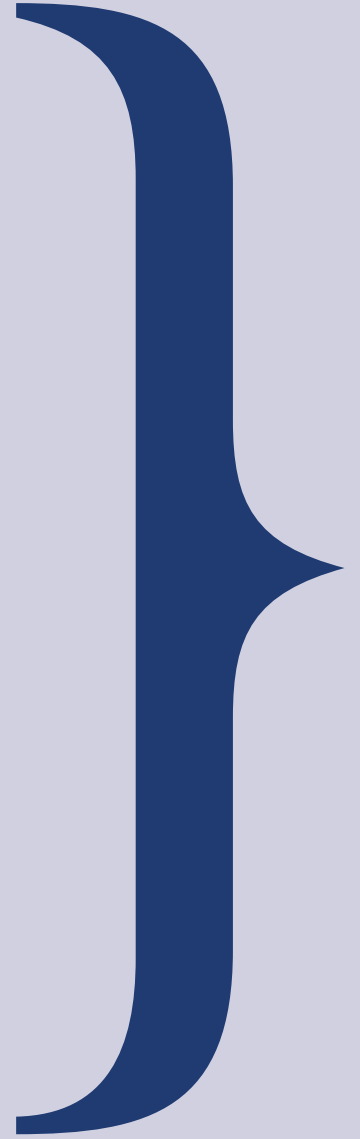
Help & level of support



Safe denture care (can include the
sunflower symbol)

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Contact



Contact

Email: mouthcarematters.lase@hee.nhs.uk
Twitter: @MCM_HEKSS #mouthcarematters

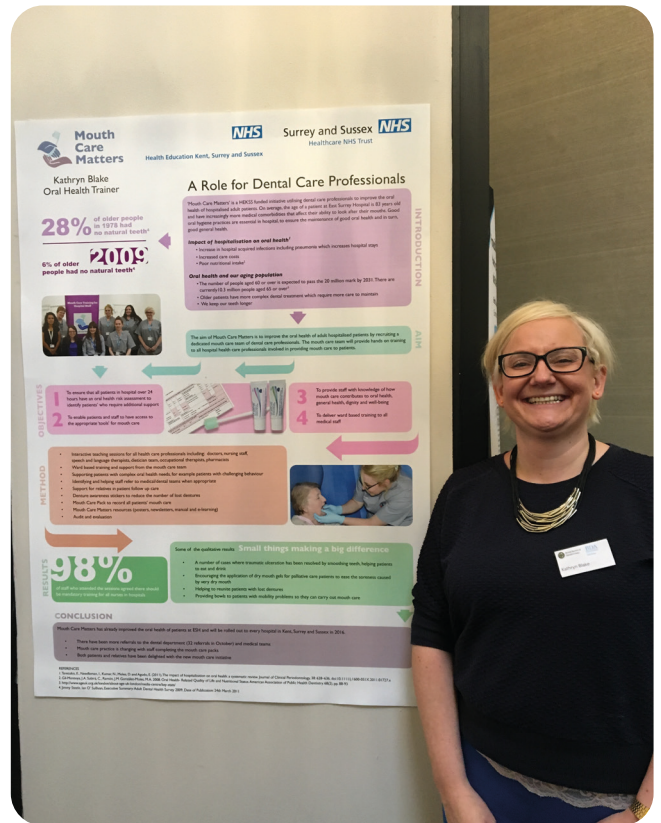
Surrey and Sussex Healthcare NHS Trust
www.surreyandsussex.nhs.uk

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www.mouthcarematters.hee.nhs.uk

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This guide is dedicated to the memory of Katie Blake (1978-2018) who was a dental nurse/graphic designer and member of the original mouth care team at East Surrey Hospital. Katie was extremely passionate about improving mouth care in hospitals and was also designed many of the MCM resources that are used in hospitals all over England today.





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