Keywords Mouth Care Matters/Foam swabs/Toothbrushes/Dentures

This article has been double-blind peer reviewed

In this article...

- Why it is important to maintain good oral health in patients who are hospitalised
- The Mouth Care Matters initiative and training programme
- How to choose the right products for mouth care in hospital

Selecting the right tools for mouth care delivery in hospitals

Key points

Many hospitals in England do not provide oral health training and are not equipped with mouth care products

The Mouth Care Matters initiative aims to improve mouth care for inpatients through training and awareness

For safety reasons, Mouth Care Matters recommends that foam swabs are not used for mouth care

Essential products for good mouth care in hospital include small-headed toothbrushes, non-foaming toothpaste, denture pots, storage pots, dry-mouth products and finger guards

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Abstract Helping people in hospital with mouth care is an important part of personal care. The Mouth Care Matters initiative is helping to raise awareness of the importance of mouth care as an integral part of general care for the rehabilitation of patients who are hospitalised. To provide good and effective oral care, staff need access to training as well as to appropriate mouth care products. This article discusses the types of mouth care products that should be available on a hospital ward and the indications for their use.

Citation Otukoya R, Doshi M (2018) Selecting the right tools for mouth care delivery in hospitals. *Nursing Times* [online]; 114: 11, 18-21.

Many hospitals do not provide oral health training, which directly affects staff's ability to deliver oral care (Binks et al, 2017). Additionally, wards are often not equipped with the products needed to provide good mouth care (Locker et al, 2002). This, combined with the fact that many patients are admitted to hospital in an emergency, means that patients are left without essential personal mouth care products such as a toothbrush, toothpaste and denture pot (Stout et al, 2009).

This article discusses the products that should be available in hospitals so that staff can help patients to maintain good oral health.

Why wards need to stock mouth care products

Hospital inpatients are at an increased risk of developing oral conditions such as severe dry mouth, ulceration and fungal infections (Avcu et al, 2005). A study in a palliative care setting found that 62% of patients had dry mouth (Goldstein and Morrison, 2013). Poor oral health can, in turn, compound difficulties with eating and drinking, impede communication, and increase the risk of infections, including hospital-acquired pneumonia (Pace and McCullough, 2010).

In many hospitals, patients and staff do not have access to effective, safe mouth care products, which are critical for good oral health (Binks et al, 2017). Elective patients are advised to bring their own personal care products or ask a relative or friend to do so, while many hospitals have an on-site chemist or shop that stocks mouth care products.

In cases of emergency admissions however – which represent around 65% of hospital bed days in England (Purdy, 2010) – patients will not have had the opportunity to prepare for their hospital stay. Once they are in hospital, it may take a while before a relative or friend can bring in their personal care products, or they may not have anyone who can do that for them. It is therefore important that wards stock suitable items, including products that relieve dry mouth and help to remove dried secretions.

Mouth Care Matters

Mouth Care Matters (MCM), an initiative funded by Health Education England, was launched in 2015 to improve the oral health of patients who are hospitalised. In 2014 the MCM programme was piloted in 12 acute trusts in Kent, Surrey and Sussex, then rolled out in a further 29 trusts across England. Its aim is to upskill nurses and other health professionals, and to provide them with the right tools to deliver good oral care.

As part of the MCM pilot, focus groups were held with nursing staff and patients in the 12 trusts in Kent, Surrey and Sussex (Doshi, 2017). One of the findings was that wards often did not have supplies of mouth care products or that the products available were not safe or suitable. One patient said:

"I really wanted to clean my teeth, but all I was given was a pink sponge stick."

A staff nurse said:

"We have no toothbrushes on the ward, so I often use gauze to clean the front teeth but not the back, as I am worried I will get bitten."

As part of the MCM pilot, the 12 trusts in Kent, Surrey and Sussex received funding to recruit an MCM lead. The lead worked with staff to ensure wards stocked suitable mouth care products for inpatients who may:

- Be frail;
- Be unable to open their mouths much;
- Have difficulty swallowing;
- Have severely dry and sore mouths.

The suggested essential products are listed in Box 1.

Choosing mouth care products

Foam swabs

A frequent debate in hospitals is whether pink foam swabs should be banned. For years they have been used in hospitals as alternatives to toothbrushes. They have now been banned in Wales following an incident in which a patient died after choking on a foam head that had become detached from the stick. In England, they are banned in some trusts but are still used in many hospitals and other care facilities.

There are two main issues in relation to foam swabs:

- They are often used instead of toothbrushes to clean people's teeth, but studies have questioned the efficacy of this – Marino et al's (2016) trial with patients on ventilation found that foam swabs did not remove plaque from the surface of teeth as effectively as toothbrushing;
- There is a risk of aspiration and choking as the foam can become detached or be bitten off, especially if it is left soaking in liquid, even for a few minutes.

In 2012, the Medicines and Healthcare products Regulatory Agency issued a medical device alert regarding foam swabs (MHRA, 2012). In response, some companies have produced foam swabs with a lower risk of foam detachment – even so, there is still a risk that some patients might bite off the foam.

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. The 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 (Howells, 2013).

When foam swabs were first banned in Wales and some trusts in England, staff raised concerns about what to use to hydrate patients' mouths and apply medication (such as chlorhexidine mouthwash, which is often prescribed in intensive care units). A suitable alternative is to use a soft small-headed toothbrush that can be dipped in liquid and which patients can suck for hydration. These brushes can also be used to gently apply small amounts of chlorhexidine mouthwash or gel around the mouth for patients who have swallowing difficulties.

Toothbrushes

The MCM leads observed that many hospitals in Kent, Surrey and Sussex supplied toothbrushes with very large heads and hard bristles, which were unsuitable for patients who were frail and had sore mouths (Binks et al, 2017). Many inpatients have limited mouth opening, so using a small-headed toothbrush with a relatively long handle improves access to posterior teeth and gums. In addition, there are suction toothbrushes that can be attached to the bedside suction unit. They are useful for patients who have swallowing difficulties or hypersalivation, and those who are intubated. Staff may also find these brushes helpful, as it can be difficult for them to carry out mouth care while also holding a light source to see inside of the patient's mouth. There is limited research on suction toothbrushes, but staff feedback gained from the focus groups has been very positive.

An alternative for patients with swallowing difficulties is to use oral suctioning alongside tooth brushing (Lecomte et al, 2017). In some trusts, however, nursing assistants are unable perform oral suctioning, which has proved to be a barrier to providing mouth care for people with swallowing difficulties.

Some patients – for example those with reduced consciousness – can only tolerate toothbrushing for a short time. A triple-headed toothbrush, which enables staff to simultaneously clean all surfaces of teeth with a simple backwards and forwards action is a useful alternative. The soft outer bristles are angled to gently clean along the gum margin, while the inner bristles clean and polish the tooth surface (Fig 1).

If patients bring in their own electric toothbrush, staff should make sure they can be charged on the ward.

Toothpaste

Using toothpaste on the toothbrush is essential to remove tartar; it should contain a high amount of fluoride (Public Health England, 2017).

Box 1. Essential products for mouth care

- Small-headed toothbrush
- Non-foaming toothpaste
- Denture pot
- Storage put for mouth care products
- Dry-mouth products
- Finger guards or bite block

Fig 1. Triple-headed toothbrush

Box 2. **SLS-free toothpastes**

- Sensodyne Daily Care Gel
- Oranurse unflavoured
- Retardex
- Biotène
- Oralieve

SLS = sodium lauryl sulfate

Fig 2. **Mc3 oral cleanser**

Box 3. **Dry-mouth products**

The following are examples of some dry-mouth products:

- Oralieve mouth moisturising gel (developed to supplement the natural enzymes and proteins found in saliva)
- Bioxtra gel/spray and toothpaste
- Biotène products
- Saliva Orthana spray
- Aquoral spray
- Xeroxin spray
- Glandosane spray (acidic)
- Saliveze oral spray
- Mc3 oral cleanser

Sodium lauryl sulfate (SLS) is a detergent found in many hygiene products, including soaps, shampoos and toothpastes; it can cause irritation to the lining of the mouth. Shim et al (2012) conducted a study looking at the effects of SLS on mouth ulcers and found that, although SLS-free toothpaste did not reduce the number of ulcers and episodes, it had a positive effect on the ulcer healing process and reduced pain. A number of SLS-free toothpastes are available (listed in Box 2); these do not have a foaming action but still provide all the benefits of regular toothpaste.

Dry-mouth products

Dry mouth is a very common problem in patients who are hospitalised. To provide symptom relief, dry-mouth gels and moisturisers can be applied topically.

Some medications, such as pilocarpine drops, can increase salivary flow, thereby alleviating dry mouth, but their side-effects – for example, excessive sweating, vomiting and diarrhoea – may outweigh their benefits. An alternative is chewing sugar-free gum, which stimulates saliva flow without increasing risk of tooth decay. However, this may not be suitable for older adults who are frail, wear dentures or do not have back teeth with which to chew.

Mouth-moisturising gels help keep the mouth moisturised longer than water alone. They do not cure a dry mouth (that is, produce more saliva), but provide symptomatic relief. Mouth-moisturising gels need to be massaged into the tissue of the mouth as, otherwise, they will leave a thick, sticky layer. This can be done before cleaning the mouth or before mealtimes, as it may make the mouth more comfortable (Corcoran, 2013). Some patients, especially those who are independent, prefer using a mouth-moisturising spray that delivers moisture to a specific area.

Patient and staff feedback from the focus groups regarding dry-mouth products is that they are very useful for patients who are nil by mouth and those requiring end-of-life care; they help soften and remove dried secretions, thereby minimising discomfort. Some products may contain traces of milk or egg proteins, so ingredients should always be checked in case patients have food allergies or intolerances.

Mc3 oral cleanser (previously called MouthEze) can be used to remove dry secretions or thick saliva from a patient's mouth and apply moisturising gel. It consists of a stick with soft and well-attached silicone bristles (Fig 2). They are effective at removing debris from difficult-to-reach areas, such as the cheeks or palate.

Box 3 features a list of products that can be used to alleviate dry mouth.

Pen torches

Good visibility is crucial when it comes to assessing and diagnosing oral conditions, as well as identifying whether a patient has a set of dentures on admission. A common finding that has emerged from the MCM pilot is that nursing assistants were not provided with pen torches. With pen torches, nursing staff would be able to carry out oral health assessments more effectively.

Denture pots

Losing dentures is a common problem in hospitals. Seven trusts in Kent, Surrey and Sussex reported having spent £357,672 over six years (from 2010 to 2016) on reimbursing lost dentures. The highest amount for a single denture was £2,200. A total of 695 dentures were reported lost, but it is assumed that many more were lost but not reported (Mann and Doshi, 2017). All trusts should have a stock of denture pots with lids. A denture pot will help reduce the number of dentures wrapped in tissues or left on trays and then mistaken for rubbish and disposed of.

As part of the MCM initiative, some trusts use a sunflower sign/image on patient boards as a visual reminder to staff that the patient wears a denture and so they should be careful when handling tissues and bed linen (Dyer, 2018). Denture-loss awareness can also be raised among patients, relatives and staff through communication tools such as screensavers and posters highlighting the need to safely store dentures to prevent loss.

Storage pots

Having a container to store mouth care products is important for keeping them clean. At East Surrey Hospital, we observed that mouth care products were being kept in a variety of places, often with hair brushes, razors and other personal care items. Our infection prevention and control team advised that we should use a storage pot that:

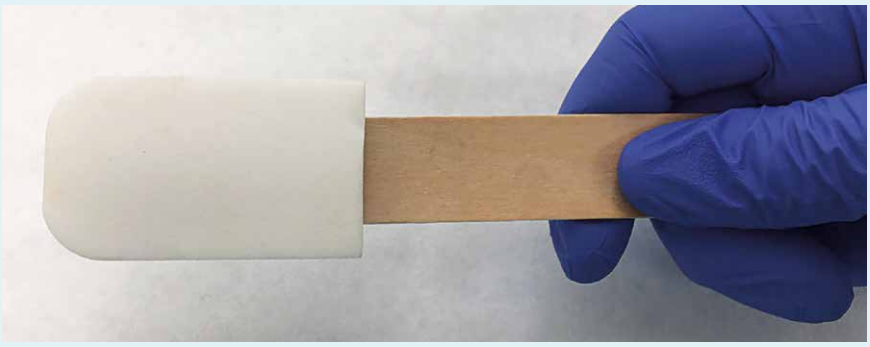
- Has a cover;
- Is wipeable;
- Is not absorbent.

We found that a baguette box used in catering to keep bread fresh can be a good cost-effective option. It is a clear, cheap, wipeable plastic box that is large enough to contain all of a patient's mouth care products – these can then be kept separate from other personal care items.

Finger guards and bite blocks

A barrier to providing mouth care is nursing staff's fear of being unintentionally bitten. Patients with neurodisability, confusion or cognitive issues, for example, may clench their jaws or bite toothbrushes and tools. Finger guards and bite blocks can be helpful, as patients can gently bite them while nursing staff clean their mouths. Finger guards are useful in patients with cognitive problems, reduced consciousness

Fig 3. **Useful tools to prevent staff being unintentionally bitten**



3a. Disposable bite blocks made of hard foam attached to a tongue depressor for the patient to bite

3b. Plastic finger guard so nursing staff can place their fingers in the patient's mouth

3c. Hard-foam prop to keep the patient's mouth open

and reduced mouth opening. There are three main types of tool to prevent staff being bitten. Pictured in Fig 3, these are:

- Disposable bite blocks made of hard foam attached to a tongue depressor for the patient to bite;
- Plastic finger guards so staff can place their fingers into the patient's mouth;
- Hard-foam props to keep the patient's mouth open.

When caring for patients who find it hard to keep their mouth open, an alternative is to use two toothbrushes – one can be used as a prop to gently keep the patient's mouth open, while the other is used to clean their teeth.

Conclusion

Patients who are in hospital can only receive good mouth care if staff have been provided with adequate tools, products and training. MCM is helping to raise awareness of the importance of mouth care as an integral part of general care for the rehabilitation of patients who are hospitalised. **NT**

● In this issue, also read our Practical Procedures article on mouth care on page 22. More resources and information are available from the Mouth Care Matters website: mouthcarematters.hee.nhs.uk. In addition, MCM has published a pictorial guide on how to order suitable mouth care products for inpatients: Bit.ly/MCMProductsOrder

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For more on this topic online

● Standardising the delivery of oral health care practice in hospitals **Bit.ly/NTOralHealth**