ASSESSMENT AND CARE OF THE MOUTH: AN ESSENTIAL NURSING ACTIVITY, ESPECIALLY FOR DEBILITATED OR DYING INPATIENTS

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Abstract
The purpose of this article is to highlight the importance of oral care for all inpatients, with particular emphasis on people who are debilitated and possibly nearing the end of their lives. Mouth care is an integral part of nursing care but can be seen as an add-on to other duties or a menial task to undertake. Recognising risk factors for poor oral health and understanding the principles associated with providing this care can at best be sporadic, ill-informed and lacking clarity. From a review of the literature, it is clearly shown that attention to mouth care is welcomed by patients and does much to improve their self-esteem and quality of life. The importance of mouth care, oral assessment and some simple oral care methods for treating oral problems will be discussed.

Key words: Mouth care, oral assessment, quality of life, terminally ill patients.

Introduction
There is no argument that attending to oral hygiene is a necessary nursing activity, a notion well supported by the literature (Ohrn, Wahlin & Sjoden, 2000; Malkin, 2009) and should be seen as part of the patient’s overall hygiene routine (Huskinson & Lloyd, 2009). The standard of oral care has been seen as one measure of the standard of nursing care received by patients (Denton, 1999). Rawlins (2001) suggests neglect in attending mouth care can cause great distress to the patient and seriously reduce quality of life. As a member of the multidisciplinary team caring for the patient, nurses are well placed to provide assessment and care of the mouth, with appropriate referral to other members of the team as required.

To do this nurses’ knowledge of the oral structures, possible oral complications and evidence based clinical skills to provide this care are essential. Miller & Kearney (2001) & McGuire (2003) note the relative lack of oral care information in professional curricula. These authors suggest continuing education following initial preparation rather than having reliance on tradition. Inadequate curricular information coupled with inexpert teachers saw Honnor & Law (2002) recommend an urgent need for the dental and nursing professions to liaise in order to remedy this situation.

Peterson & Yamamoto (2005) noted that education for carers of nursing home residents showed an improvement in the caregivers’ knowledge of and attitudes towards oral health care of the elderly. This improvement in the provision of oral care by residential carers working alongside professional dental hygienists was associated with decreased pneumonia, febrile days, death from pneumonia and improved daily living activities and cognitive functions of institutionalised older people.

Already compromised terminally ill patients are especially vulnerable to oral health problems (Gillam & Gillam, 2006) such as pain, fungal and viral infections, poor denture stability, dysphagia and dry mouth (xerostomia) leading to oral dysfunction (Wiseman, 2006). One finding from a small qualitative study interviewing terminally ill patients about the oral problems experienced by them, revealed significant discomfort with xerostomia impacting on sleep patterns, eating habits, swallowing tablets, speech and communication; frustration with feeling too weak to attend to their mouth care or knowing what to do to help themselves (Rohr, Adams & Young, 2010).

Indeed, research has ranked xerostomia in patients with advanced malignancy as the third most distressing symptom (Sweeney & Bagg, 2000; Davies, Broadley & Beighton, 2001). Poor oral hygiene inhibits interaction with others and closeness with family and carers due to halitosis, coated tongue and cracked and dry lips (Malkin, 2009; Rohr et al., 2010). Similarly, literature suggests the presence of oral problems can have the potential to profoundly affect the quality of life of terminally ill patients, causing further complications at end of life (Lee, White, Ball, Smart, McEwan, Chilton & Pickering, 2001; Wiseman, 2006).

Discussion
Towards the end of life common symptoms include weakness, fatigue and lethargy, necessarily impacting on the patients’ energy levels and incentive to self-care with oral hygiene. Care of the mouth for patients in the terminal phase of their illness is vital to maintain comfort and prevent oral infection. Hence timely and ongoing oral assessment to establish patients’ ability to self-care is required. Interestingly the literature (Miller & Kearney, 2001; Rawlins, 2001) indicates assessment and care of the mouth is afforded low priority as part of nursing care and this can be attributed to a lack of assessment and documentation (Ohrn et al., 2000; Gillam & Gillam, 2006) indicate. This was further supported by Rohr et al., (2010), revealing that oral assessment was lacking, as all fourteen participants in the study stated. Whilst participants had made at least one health professional aware of the problems associated with dry, painful or ulcerated mouth, none could recall a thorough assessment of the mouth being done up to the time of interview.

Inconsistent or absent oral assessment is considered a barrier to good standards of oral care (McGuire, 2003) along with other factors such as gaps in knowledge, reliance on tradition, diverse oral care regimens and practices, lack of accepted or universal standard for oral care and lack of interdisciplinary collaboration. This leads to needless distress and discomfort and may result in pain, longer hospital stays and in some situations serious clinical consequences such as sepsis. An individualized oral care regimen is required to establish the frequency and type of care required in order to limit the occurrence of oral complications and reduce the risk of both dental and systemic disease (McGuire, 2003).

Assessment of the Oral Cavity
Assessment of the mouth is necessary to identify potential problems, initiate interventions and evaluate progress. Ohrn et al. (2000) state that for proper assessment of the mouth and provision of needed care it is important to have knowledge about how to perform oral examination. Ideally a mouth care assessment tool would guide examination of the mouth and provide a format for consistent documentation. Hanson (2004) suggests a mouth care assessment tool for systematic assessment with evidenced based interventions.
An oral assessment requires a visual examination of the oral cavity with the patient’s consent. It is the responsibility of the clinician caring for the patient to examine the teeth, tongue, oral mucosa, gums and lips (Huskinson & Lloyd, 2009). For thorough assessment of the mouth, it is necessary to remove dentures when present and with personal protection equipment in place use pen torch, tongue depressor and dental mirror (if available) to examine the mouth. Dentures are cleaned with a soft toothbrush and when required, placed in a labelled denture container.

At times patients may believe that any problems with the mouth are inevitable or see them as minor in relation to overall diagnosis and prognosis and do not spontaneously make them known to nurses (Sweeney & Bagg, 2000; Hanson, 2004; Rohr et al., 2010). Therefore a comprehensive oral assessment needs to include questions about any problems experienced such as dry mouth, pain, ulceration, ill-fitting dentures, loss of taste, any odour, changes in voice and any difficulty or pain on swallowing.

Establishing the patient’s usual oral hygiene routine is part of the assessment (Huskinson & Lloyd, 2009). The initial and ongoing oral assessments will reveal the possible need for referral to appropriate disciplines depending on the findings (Milligan, McGill, Sweeney & Malarkey, 2001). Huskinson & Lloyd (2009) suggest the involvement of dental hygienists to offer regular input, advice and support to ward staff. Documentation about the mouth should be reviewed daily as part of reflective practice, noting the effectiveness of interventions.

An effective standard of mouth care is possible if nurses have knowledge and understanding of the normal anatomy and physiology of the oral cavity, thus recognising when an abnormality or problem occurs (Rawlins & Truman, 2001). Important features of the oral cavity are noted in Table 1.

### Table 1

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<th>Oral Pathophysiology</th>
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<tr>
<td>- Oral mucosa is made up of a layer of rapidly dividing mucosal cells lining the mouth from the junction of the lip to the oropharynx.</td>
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<td>- Healthy gingiva is usually coral pink, surrounds the teeth providing a firm seal around them, acting as a line of defense against infection such as Candidiasis (Thrush).</td>
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<td>- Increased redness, swollen and spongy gingiva has a tendency to bleed, suggesting an inflammation due to accumulation of bacterial plaque</td>
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<td>- Factors to look for in a healthy mouth include moist and pink mucosa, clean teeth, pink tongue, fresh breath, healthy gums, smooth moist lips and well-fitting dentures.</td>
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*(Honnor & Law, 2002; Dahlin, 2004)*

### Risk Factors

Older persons with multi-medication therapies, those with impaired mobility, social factors such as a low socio-economic situation, or those suffering with chronic diseases such as cardiovascular disease, chronic breathing disorders, hypertension, cancer and diabetes are at risk of poor oral health (Peterson & Yamamoto, 2005). Several hundred drugs are recognised to induce xerostomia (Walsh, 2000), including drugs such as opioids, diuretics, steroids, antidepressants and antihistamines, and oxygen therapy.

Since polypharmacy is common amongst elderly chronically or acutely ill patients it is prudent to be aware how this factor may adversely affect the mouth (Walsh, 2000; Honnor & Law, 2002). It is worth noting denture wearers have an increased risk of infection, with the incidence of candidiasis in palliative care patients being estimated to be 70% to 85% (Wiseman, 2006). Other risk factors for oral complications with debilitated or terminally ill patients include weakness and fatigue, nausea and vomiting, inability to eat and drink, artificial means of feeding, confusion and depression with some individuals enduring many of these factors (Hanson, 2004).

### Caring for the Mouth

Saliva is an important component of the oral cavity and often not seen as important until it is absent, hence the function of saliva (Table 2) may not be fully appreciated (Walsh, 2000). Therefore reduction in the quantity or absence of saliva is responsible for a host of related oral and dental problems such as gingivitis, dental caries and periodontal disease which impact directly on quality of life. (Walsh, 2000; Peterson & Yamamoto, 2005).

<table>
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<th>Functions of Saliva</th>
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<tr>
<td>- Lubrication</td>
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<td>- Assisting taste and mastication</td>
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<td>- Clearing of material from the oral cavity</td>
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<td>- Buffering of acids from dental plaque and foodstuffs</td>
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<td>- Serving as a reservoir for ions such as calcium, phosphorus and fluoride</td>
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<td>- Control of oral microflora</td>
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*(Walsh, 2000)*

Water is a natural remedy and has for many years been advocated as the best and safest agent for oral care as it causes minimal disruption to the oral ecosystem (Miller & Kearney, 2001; Milligan et al., 2001). Water was highly regarded as the preferred option by palliative care patients for moisturising the mouth, required to be used consistently during the day and night to ‘stop sticking, get the mouth moving and allow swallowing’ (Rohr et al., 2010). Whilst xerostomia is a difficult symptom to manage, consistent regular care and attention will reassure the patient and promote a sense of comfort (Huskinson & Lloyd, 2009).

Salivary substitutes in the form of a spray or oral gel such as Oral Balance Gel sparingly coated over the tongue and oral mucosa, are advocated for dry mouth, though do not provide the antibacterial properties of natural saliva (Sweeney & Bagg, 2000). The use of a non-petroleum lip balm to ensure clean, moist lips is an important intervention averting the possibility of infection (angular cheilitsis) and improving patient self-esteem (Huskinson & Lloyd, 2009).

Regular (at least twice daily) oral cleansing with a toothbrush featuring a compact head and soft bristles and a pea-sized amount of fluoridated toothpaste to remove plaque and debris from the surface and crevices of teeth is recommended. It is the most effective tool for oral cleansing (Coleman, 2002). Huskinson & Lloyd (2009) suggest a foam brush may at times be required, but should not be seen as a substitute for a toothbrush, as studies have shown with the foam brush plaque is compressed against the teeth rather than being removed. Normal saline as a mouth rinse or sodium bicarbonate mouthwash may be required to remove debris and release crustiness from the teeth, tongue and oral mucosa, but are ineffective in plaque removal (Hanson, 2004). Walsh (2000) suggests sodium bicarbonate can be used to
increase salivary pH and buffer capacity, suppress the overgrowth of micro-organisms, improve or normalise taste and neutralise acids and prevent erosion.

Mucosal irritation may result from the use of commercial mouth products containing alcohol or strong flavours and should be avoided (Walsh, 2000). Attention to partial or complete dentures and mouth cleansing, especially if the patient is bedbound and frail will require nursing involvement. All patients need to be provided with the opportunity to attend to oral care and be assessed daily on the need for assistance.

It is essential for nurses to be aware that oral health is more than cleaning teeth: there is a need for awareness of the issues that surround mouth care and reflection on best clinical practice. Attention may be drawn to the use of lemon and glycerine swabs which historically were recommended as saliva substitutes. Lemon and glycerine, whilst initially stimulating saliva production, cause reflex exhaustion and should not be used for oral care. Also lemon is acidic and causes irritation and decalcification of teeth (Miller & Kearney, 2001). Coleman (2002) supports this notion, stating that despite lemon and glycerine swabs being used by nurses for over 60 years, they are ineffective cleansers and moisturisers. Lemon reduces the pH to 2-4, below the normal level (6-7) and glycerine absorbs water and dehydrates the oral tissues. Coleman (2002) suggests lemon and glycerine swabs are not only ineffective but are harmful and should not be used. The combination of lemon and glycerine actually acts to dry the mouth (Miller & Kearney, 2001; Milligan et al., 2001).

**Conclusion**

If promoted and established as a nursing priority, the accomplishment of the goals of oral care will ensure comfort and a sense of wellbeing for vulnerable patients. The frequency of oral care is the important determinant and the key to maintaining oral health and comfort. Debilitated and terminally ill patients are highly dependent on health professionals, mainly nurses, to provide this care, a central activity requiring prioritisation in the overall care of the patient.

The delivery of effective mouth care is a skilled nursing activity requiring essential elements of thoughtful clinical practice: assessment, goal setting, and delivery of care, documentation and evaluation. Further, research may be required to determine whether current nursing practice demonstrates efficacy of oral care and whether there is sufficient nursing knowledge about oral care and evidenced based standards to support excellent care of the mouth, especially when patients are weak, vulnerable or nearing the end of their lives.

**References**


