

More Than Just a Simple Swish and Spit: Implementation of Oral Care Best Practice in Clinical Neurosciences

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Abstract

Suboptimal oral care is well documented in the literature and is linked to increased nosocomial pneumonia rates and prolonged hospitalization, negatively affecting patients' quality of life (Terezakis et al. 2011). A standardized approach to oral care can change these adverse outcomes. This project used best practice guidelines and evidence in the literature to guide the development of oral care best practice within an acute care inpatient unit. Based on the work of the interprofessional Clinical Neurological Sciences (CNS) Continuous Quality Improvement (CQI) Council at London Health Sciences Centre – University Hospital (LHSC-UH), an oral care policy and bedside assessment tool were implemented in line with Stroke Best Practice Recommendations (Heart and Stroke Foundation of Canada 2010). A validated, reliable and feasible oral health assessment tool (OHAT) was selected for implementation, and is now completed on every patient within 24 hours of admission to the CNS inpatient unit. Favourable outcomes to date include improved accessibility of oral health supplies, including regular and suction toothbrushes, toothpaste and bite blocks. Post-implementation audits indicate increased frequency and quality of oral care. This review provides a synopsis of how oral care best practice was implemented in an acute care neurology/neurosurgery setting.

Introduction

Oral care is defined as the care and cleaning of the mouth (teeth, tongue, palate, cheeks and lips), using appropriate products and equipment to promote oral hygiene and maintain patients' health and quality of life (Canadian Dental Association 2013). Traditionally, oral care has focused on patient comfort, for example, dipping a swab into mouthwash to freshen the patient's oral cavity. Oral care procedures were not necessarily evidence-based but rather were passed along from one nurse or provider to the next because that is "the way it has always been done." Formal education programs devote little, if any, time to oral health theory and practice, and this is reflected in the care provided in acute care settings. Policy development, implementation of a valid, reliable and feasible oral health assessment tool and standardized education to all interprofessional groups are all necessary for ensuring evidence-based best practice in oral care.

Background

Oral care is a basic component of daily patient care within the hospital setting. However, anecdotal reports from staff on our neurology and neurosurgery units indicated that oral care provision varied from patient to patient. Stroke patients make up a large proportion of CNS inpatients, and depending on location and severity of cerebral ischaemia, a consequence of stroke can be facial, lingual or pharyngeal weakness, or some combination of these, often making oral care provision even more of a challenge. Concern over laryngeal aspiration is greater in this population, particularly in those individuals with difficulties in oral and pharyngeal secretion management post-stroke (Gordon et al. 1987).

The literature reveals that most bacterial nosocomial pneumonias occur by aspiration of bacteria colonizing the oropharynx (Terezakis et al. 2011). That is, the biggest risk for aspiration pneumonia comes from the bacteria growing in patients' mouths. Therefore, proper cleansing of the oral cavity substantially reduces the risk for aspiration pneumonia. The Canadian Best Practice Recommendations for Stroke Care 2010 recommends the following regarding oral care:

4.2.6 Oral care

- i. Upon or soon after admission, all stroke patients should have an oral/dental assessment, including screening for signs of dental disease, level of oral care, and appliances [Evidence Level C]. ...

- iii. An appropriate oral care protocol should be used for every patient with stroke, including those who use dentures [Evidence Level C]. The oral care protocol should be consistent with the Canadian Dental Association recommendations [Evidence Level B], and should address areas such as frequency of oral care (twice per day or more); types of oral care products (toothpaste, floss, and mouth-wash); and management for patients with dysphagia. (Heart and Stroke Foundation of Canada 2010: 90)

Despite an extensive search, an oral care hospital-based guideline or policy could not be found at LHSC. As such, it was decided that the group would create a standardized oral care approach focusing on patients who had suffered a stroke. In the end, however, the entire neurology and neurosurgery patient population was included in the implementation of this oral care best practice initiative.

Design and Implementation

In collaboration with the CNS CQI Council, an interprofessional task team was formed, with representation from Nursing, Occupational Therapy (OT), Physio-Therapy (PT), Speech-Language Pathology (S-LP) and the Southwestern Ontario (SWO) Stroke Network.

There were five key components of the oral care project.

1. Acquisition of baseline data

Pre-implementation, medical chart and bedside audits were completed. Examples of information collected included presence of dysphagia, functional and communication impairments, and oral care products/tools at the bedside. Auditors examined the oral cavities of patients following routine oral care. Medical chart and nursing Kardex documentation was reviewed for content such as the frequency of oral care and other relevant details. In order to evaluate oral care knowledge and practice, an online survey comprising 22 questions was distributed to all CNS interprofessional staff (response rate: $n=46$).

2. Identification and selection of a validated oral care assessment tool

After a vigorous literature search, we selected the Oral Health Assessment Tool (OHAT) developed by Chalmers and colleagues (2005). From inception, the OHAT was intended for long-term care use; however, based on its suitability for cognitively impaired patients (RNAO 2008: 67), it was selected for the CNS population. Other selection criteria included minimal time to score with a valid and reliable outcome. It was modified for acute care use with permission from

the original developers (Chalmers et al. 2005). A guideline was developed by our group explaining how to score the OHAT, which assisted in determining the preferred oral care method based on the patient's swallowing status and dependency for oral care completion; this information is included on the back portion of the tool for easy reference. The modified OHAT (see Appendix A at: <http://www.longwoods.com/content/23321>) is now located in the patient's bedside graphic chart, and any relevant findings identified during the oral health assessment are recorded in the patient's medical chart.

3. Development of a CNS oral care policy

Interprofessional collaboration and discussion helped create the policy. The group met regularly over the course of a two-year period. Consultation with pertinent regulatory bodies occurred during times of doubt or ambiguity regarding scope of practice. Prior to any significant decision-making, each interprofessional champion within the task team would in turn relay information to the relevant professional group at LHSC-UH in order to ensure accuracy of perspectives and inclusion in the process. Professional Practice at LHSC was consulted. As well, the CNS management team was kept abreast of the task team's objectives and overall initiative throughout this process.

4. Education for the interprofessional team

Education sessions for the CNS interprofessional team with hands-on learning opportunities were completed over a three-week period. The education sessions were completed by the CNS clinical educator and the regional education coordinator of the SWO Stroke Network, with input from the S-LPs. Every nurse and allied health team member was required to participate in a brief 20-minute education session. Opportunities for hands-on training were built into the education session for practice with the recommended oral care tools and products.

5. Identification of supports to facilitate implementation into practice

As part of CQI, strategies were put in place to further support ongoing implementation. Examples include incorporating oral care education into CNS new staff unit orientation, ensuring that oral care is a standing agenda item at patient care rounds, and reporting progress and issues at the CNS CQI Council meetings. Further work will entail the development of bedside reminders (e.g., visual prompts) and identification of oral care champions within each scheduled shift to act as a resource for staff. We believe that these latter supports are key to ensuring the sustainability of this initiative.

Objectives

The objectives of the oral care initiative were as follows:

1. An oral health assessment will be completed on every inpatient admitted to the CNS inpatient unit at University Hospital within 24 hours of admission by the admitting Registered Nurse.
2. A valid, reliable and feasible oral health assessment tool will be utilized to help guide appropriate oral health interventions for patients.
3. Every interprofessional team member who has been consulted for a patient will contribute to the oral care plan.
4. Every interprofessional working on the CNS unit will receive education regarding oral care best practice.
5. Appropriate oral care tools will be selected for each patient based on interprofessional team input.
6. Every patient will have the proper oral care tools at his or her bedside within 24 hours of admission and receive oral care at a minimum twice daily.
7. An improvement in overall oral health status of the CNS inpatient population will be achieved following implementation of oral care best practices.

Positive Outcomes

Prior to implementation there was a 30% response rate to our oral care survey. Respondents included nurses (80%), OT, PT and S-LP staff members in the neurology and neurosurgery units at LHSC-UH. Survey results revealed three main knowledge gaps. The first related to uncertainty regarding frequency of oral care provision, where responses varied from: once daily (8.7%), twice daily (45.7%) and after each meal (45.7%). Incorrect product usage was also identified as a knowledge gap; responses included use of Vaseline® versus lubricating jelly for dry, cracked lips, and mouth swabs soaked in mouthwash for oral care, all of which are considered substandard care according to the recommendations cited above. There was also uncertainty as to the timing and frequency of an oral health assessment. Responses included: within the first week (0%), within the first hour of admission (39.1%); within 24 hours of admission (47.8%); within 48 hours (4.3%) and unsure (8.7%). Concomitantly, 28 bedside audits were completed, revealing some common themes – including incorrect oral care products at the bedside (e.g., 32% of patients had their oral care completed with mouth swabs dipped in water or mouthwash and 42% of patients did not have a toothbrush). Patients with dysphagia, cognitive–communication barriers or both were more likely to have received less frequent or no oral care.

Preliminary post-implementation data indicate that oral health assessments are being completed within 24 hours of patient admission. A recent bedside audit showed 96.4% compliance in using the OHAT within 24 hours of patient admission. Recommended oral care products are now properly stocked and located at the bedside. For example, our unit has toothbrushes and toothpaste available for all patients. Bite blocks are now available for patients who have facial weakness or impairment in overall jaw mobility. Suction toothbrushes for patients deemed at higher risk for aspiration are now available. Interprofessional collaboration regarding patient-specific oral care needs occurs daily on the CNS units and recommendations are being documented in the patient's medical chart. Oral care plans for patients with dysphagia are now clearly communicated, with interprofessional documentation in the medical charts affirming this practice.

Challenges and Recommendations

Generally speaking, changes in healthcare practices are a challenge for all healthcare professionals, particularly those who have been practising for many years. We found that the acceptance of this new practice and its transition were facilitated by one-on-one conversations using evidence-based facts rather than through didactic modes of instruction. For newer clinicians, hands-on training at the bedside with an actual patient was by far more effective and meaningful than the education sessions. The standardization of these guidelines into practice was notably enhanced after introducing various teaching modalities that aimed at meeting the individual learning needs of staff. In addition, having oral care champions available on call for challenging oral care situations was crucial, particularly for those newer clinicians who required more support in the initial implementation of this best practice.

Given that the CNS CQI Council at LHSC-UH have now developed and implemented a policy and an oral health assessment tool, it would be our recommendation that other units and healthcare settings adopt our guidelines for use in best practice. Our future aim is to continue to measure outcomes related to high-quality oral care best practice, including nosocomial infection rates, aspiration pneumonia rates, satisfaction and patient/family perception of care, as well as continued surveys and bedside audits to ensure compliance with the initiative.

Conclusion

The frequency and quality of oral care has significantly improved on the CNS inpatient unit. In line with stroke best practice recommendations, an oral health assessment with a reliable, valid and feasible tool is now being completed on every patient admitted within 24 hours. There have been marked improve-

ments not only in the stocking of appropriate oral care tools, but also in the correct selection and frequency and use of these products. Ultimately, our goal is to reduce nosocomial pneumonia rates within the CNS inpatient population, particularly patients experiencing cognitive and functional deficits, including those suffering from stroke and other neurological impairments.

Acknowledgements

We would like to thank the following people for their assistance with this study: Dalia Abromaitis, Occupational Therapist, Reg. (Ontario), LHSC–UH; Kelly Dadurka, BScPT, Physiotherapy, Clinical Nurse Sciences, LHSC–UH; Courtney McCallum, MSc, Speech-Language Pathologist, Reg. CASLPO, LHSC–UH; and Minakshi Sharma, BEd, MEd, Clinical Librarian, LHSC–UH.

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