Complete Summary

GUIDELINE TITLE

Nursing management of oral hygiene.

BIBLIOGRAPHIC SOURCE(S)

Singapore Ministry of Health. Nursing management of oral hygiene. Singapore: Singapore Ministry of Health; 2004 Dec. 33 p. [29 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
QUALIFYING STATEMENTS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY
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SCOPE

DISEASE/CONDITION(S)

Oral complications, such as gingivitis, halitosis, xerostomia, plaque formation, and dental caries

GUIDELINE CATEGORY

Evaluation
Management
Prevention

CLINICAL SPECIALTY

Dentistry
Nursing

INTENDED USERS

Advanced Practice Nurses
Nurses

GUIDELINE OBJECTIVE(S)

- To specify nursing interventions in providing good oral hygiene care
- To improve patient oral health quality through on-going oral assessment and early interventions

TARGET POPULATION

All patients who require assistance with oral hygiene

The recommendations are not applicable for oral care of neonates and children. They are also not appropriate for patients with underlying oral pathologies, post maxillo-oral surgery, and patients with bleeding tendency.

INTERVENTIONS AND PRACTICES CONSIDERED

Assessment and Management

1. Oral examination and assessment
2. Frequency of interventions
3. Referral to physician

Oral Cleansing Methods

1. Toothbrush use
2. Toothbrush style
3. Use of foam swabs

Oral Cleansing Agents

1. Fluoride toothpaste
2. Sodium bicarbonate solution
3. Hydrogen peroxide (not recommended for daily use)
4. Chlorhexidine mouthwash
5. Saline mouthwash

Denture Care

1. Cleaning of dentures and storage containers
2. Denture cleansing agents
3. Labeling of denture storage containers

Education

1. Patient education

2. Caregiver education

Interventions considered but not recommended included: mouth squares, cotton gauze, glycerine-based products.

MAJOR OUTCOMES CONSIDERED

- Incidence and severity of oral complications
- Side effects of oral hygiene interventions

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The workgroup performed the literature search systematically using the key words "oral hygiene," "oral health," "oral care," and "oral toilet" in the following electronic databases: CINAHL, MEDLINE, and the Cochrane Library. National Guideline Clearinghouse was searched for related guidelines. A systematic review of literature was carried out on the articles found.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Individual Study Validity Ratings

++

All or most of the criteria have been fulfilled. Where they have not been fulfilled the conclusions of the study or review are thought very unlikely to alter.

+

Some of the criteria have been fulfilled. Those criteria that have not been fulfilled or not adequately described are thought unlikely to alter the conclusions.

-

Few or no criteria fulfilled. The conclusions of the study are thought likely or very likely to alter.

Study Design Designation

The study design is designated by a numerical prefix:

"1" for systematic reviews or meta-analyses or randomised controlled trials (RCTs)

"2" for cohort and case-control studies

"3" for case reports/series

"4" for expert opinion/logical arguments/"common" sense

Hierarchy of the Levels of Scientific Evidence

Each study is assigned a level of evidence by combining the design designation (1, 2, 3 or 4) and its validity rating (++, + or -). The meanings of the various "levels of evidence" are given below:

1++

High quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias

1+

Well-conducted meta-analyses, systematic reviews, or RCTs with a low risk of bias

1-

Meta-analyses, systematic reviews, or RCTs with a high risk of bias

2++

High quality systematic reviews of case-control or cohort studies

High quality case-control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal

2+

Well-conducted case-control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal

2-

Case-control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal

3

Non-analytic studies (e.g., case reports, case series)

4

Expert opinion

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The guideline developers adopted the revised Scottish Intercollegiate Guidelines Network (SIGN 2001) procedure which gives clear guidance on evaluating the design of individual studies, grading each study's level of evidence, and assigning a grade to the recommendation after taking into account external validity, result consistency, local constraints, and expert opinion. For areas where available evidence was inconsistent or inconclusive, recommendations were made based on the clinical experience and judgement of the workgroup or expert committee reports.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Categories of the Strength of Evidence Associated with the Recommendations

A

At least one meta-analysis, systematic review, or randomized controlled trial (RCT) rated as 1++, and directly applicable to the target population; or

A body of evidence, consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results

B

A body of evidence, including studies rated as 2++, directly applicable to the target population, and demonstrating overall consistency of results; or

Extrapolated evidence from studies rated as 1++ or 1+

C

A body of evidence including studies rated as 2+, directly applicable to the target population and demonstrating overall consistency of results; or

Extrapolated evidence from studies rated as 2++

D

Evidence level 3 or 4; or

Extrapolated evidence from studies rated as 2+

Interpretation of the D/4 Grading

The grading system emphasises the quality of the experimental support underpinning each recommendation. The grading D/4 was assigned in cases where:

- It would be unreasonable to conduct a RCT because the correct practice is logically obvious
- Recommendations were derived from existing high quality evidence-based guidelines. The guideline developers alert the user to this special case by appending the initials of the source in the original guideline document. e.g., (D/4 - Fantl et al 1996).

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Drafts of the guidelines were circulated to healthcare institutions for peer review on validity, reliability, and practicality of the recommendations.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the grades of recommendations (**A, B, C, D**) and the levels of evidence (**1++** to **4**) are provided at the end of the Major Recommendations field.

Assessment

Guideline 1: Oral Assessment Guide

Use Oral Assessment Guide (OAG) (adapted from Eilers, Bergers, & Peterson, 1988; refer to Annex 1 of the original guideline document) on patients identified as requiring assistance with oral hygiene during routine assessment. (**C/2**++)

Guideline 2: Oral Assessment Category

The following eight categories should be assessed daily using the three ratings:

1 = Normal findings

2 = Mild abnormality without compromise of either mucosal integrity or loss of function

3 = Severe abnormality with compromise of either mucosal integrity or loss of function (**B/2**++)

- **Voice**

  Communicate with patient and listen whether

  1. The voice is normal; or
  2. The voice is deep/raspy (hoarse); or
  3. Patient has difficulty talking or experienced pain
- **Swallow Reflex**

  Ask patient to swallow and observe whether

  1. The swallowing is normal; or
  2. Patient experiences some pain on swallowing; or
  3. Patient is unable to swallow
- **Lips**

  Observe lips and assess whether they are

  1. Smooth, pink, moist; or
  2. Dry or cracked; or
  3. Ulcerated or bleeding
- **Tongue**

  Observe the tongue and assess whether it is

  1. Pink, moist, and papillae present; or

2. Coated or there is loss of papillae with a shiny appearance, with or without redness; or
3. Blistered or cracked

- **Saliva**

  Insert a spatula into mouth, touching the centre of the tongue and the floor of the mouth and observe whether

  1. The saliva is watery; or
  2. The saliva is thick; or
  3. There is absence of saliva

- **Mucous Membrane**

  Observe the mucous membrane in the oral cavity and determine if it is

  1. Pink and moist; or
  2. Reddened or coated (increased whiteness) without ulceration; or
  3. Ulcerated with or without bleeding

- **Gingiva (Gums)**

  Gently press the gums with end of spatula and observe whether

  1. They are pink and stippled and firm; or
  2. They are oedematous with or without redness; or
  3. There is spontaneous bleeding or bleeding with pressure

- **Teeth or Denture Bearing Area**

  Observe the appearance of the teeth or denture bearing area and determine whether

  1. They are clean with no debris; or
  2. There are plaque or debris in localized area (between teeth if present); or
  3. There are plaque or debris generalized along gum line or denture bearing area

<u>Guideline 3: Recommended Intervention</u>

Nursing interventions should be based on the rating for each category. (**D/4**)

Rating	Description	Nursing Interventions
1	Normal findings	Continue with routine oral care No treatment
2	Mild abnormality	Continue with routine oral care Close monitoring Inform primary doctor
3	Severe abnormality	Perform oral care with caution Inform primary doctor Perform treatment as ordered

Guideline 4

Institutions should establish the frequency of performing oral assessment for patients that is sensitive and specific to their clinical settings. (**D/4**)

Oral Cleansing Methods

Toothbrushes

Guideline 1

Toothbrushing

Toothbrushing should be the first line of oral cleansing method unless the patient is prone to bleeding, pain, or aspiration. (**C/2**++)

Guideline 2

Frequency of Toothbrushing

Brush teeth at least twice a day, preferably soon after awakening in the morning and before going to bed. (**D/4** - Adair et al., 2001)

Guideline 3

Use soft-bristled, small-ended toothbrush.

(**D/4** - Dykewicz et al., 2000; Madeya, 1996; Miller & Kearney, 2001)

Foam Swabs

Guideline 1

Use foam swabs/brushes with chlorhexidine or toothpaste when toothbrushing is not advisable, for example, in the elderly or patients with bleeding tendency. (**D/4** - Griffiths et al., 2000)

Guideline 2

Do not use foam swabs for longer than necessary. (**B/2**++)

Mouth Square

Guideline 1

Do not use mouth square/cotton square/gauze. (**D/4**)

Oral Cleansing Agents

Guideline 1

Fluoride Toothpaste

Brush teeth with fluoride toothpaste twice daily for the prevention and control of dental caries. (**A/1+**)

Guideline 2

Glycerine-Based Products

Avoid glycerine-based oral cleansing agents. (**D/4** – Bruner et al., 1998)

Guideline 3

Glycerine-Based Products With Lemon

Do not use glycerine-based products containing lemon. (**D/4**)

Guideline 4

Sodium Bicarbonate

Use appropriately diluted (according to manufacturer's instruction) sodium bicarbonate for dissolving viscous mucous. (**D/4**)

Guideline 5

Hydrogen Peroxide

Hydrogen peroxide should be used only upon the advice or prescription of the physician or dentist. It is not recommended for daily routine use. (**A/1+**)

Guideline 6

Chlorhexidine Mouthwash

Use chlorhexidine mouthwash twice daily as prescribed to complement oral care procedures. (**B/1+**)

Guideline 7

Normal Saline Mouthwash

Use normal saline mouthwash for patients with oral lesions. (**D/4**)

Frequency of Oral Hygiene

Guideline 1

The frequency of oral hygiene should be determined by patient comfort and the status of the oral cavity. It should be performed at least twice a day. (**D/4**)

Denture Care

Guideline 1

Clean dentures with a denture brush/ toothbrush and soap/ toothpaste at least once daily. Chemical denture-cleansing agents can be used in addition to cleaning with soap and water. Rinse off the cleansing agent before use. (**D/4** - Johnson & Chalmers, 2002)

Guideline 2

Soak dentures in clean water or with commercial denture-cleansing agents at night or when not worn. (**D/4** - Johnson & Chalmers, 2002)

Guideline 3

Clean denture storage container with soap and water or dispose it at least once a week. (**D/4** - Johnson & Chalmers, 2002)

Guideline 4

Date and label patient's name on all denture storage containers. (**D/4** - Johnson & Chalmers, 2002)

Patient Education

Guideline 1

The healthcare worker should involve the patient and his caregiver in the oral hygiene programme. (**D/4**)

Definitions:

Individual Study Validity Ratings

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CLINICAL ALGORITHM(S)

The original guideline document contains a clinical algorithm for the nursing management of oral hygiene in adult patients.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Improved patient oral health quality through ongoing oral assessment and early interventions

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- These guidelines offer recommendations that are based on available scientific evidence and professional judgement. They are not intended as the legal standard of care.
- Users of these guidelines should determine the appropriate and safe patient care practices based on assessment of the circumstances of the particular patient, their own clinical experiences, and their knowledge of the most recent research findings.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

It is expected that these guidelines will be adopted after discussion with healthcare administrators and clinical staff. They may review how these guidelines may complement or be incorporated into their existing institution protocols.

Feedback may be directed to the Ministry of Health for consideration for future review.

Clinical Audit

Healthcare administrators should consider these guidelines in their in-house quality assurance programmes. Nurses should critically review the implications of these guidelines for their routine care delivery, trainee teaching, and patient education needs.

Parameters for Evaluation

In the nursing management of oral hygiene, the quality of care may be evaluated using indicators such as:

- Proportion of dependent* patients with appropriate oral hygiene performed
- Rate of oral infection (amongst the dependent patients) related to ineffective oral hygiene care

*Dependent patients are defined as patients who need assistance in performing oral hygiene.

Closer monitoring can be conducted for further evaluation of the quality of oral care.

Management Role

Healthcare administrators, together with quality assurance teams, should ensure that the targets for the outcome indicators are met. They may benchmark against hospitals or institutions that perform well.

IMPLEMENTATION TOOLS

Audit Criteria/Indicators
Chart Documentation/Checklists/Forms
Clinical Algorithm
Staff Training/Competency Material

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Singapore Ministry of Health. Nursing management of oral hygiene. Singapore: Singapore Ministry of Health; 2004 Dec. 33 p. [29 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2004 Dec

GUIDELINE DEVELOPER(S)

Singapore Ministry of Health - National Government Agency [Non-U.S.]

SOURCE(S) OF FUNDING

Singapore Ministry of Health (MOH)

GUIDELINE COMMITTEE

Workgroup on Nursing Management of Oral Hygiene

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Singapore Ministry of Health Web site.

Print copies: Available from the Singapore Ministry of Health, College of Medicine Building, Mezzanine Floor 16 College Rd, Singapore 169854.

AVAILABILITY OF COMPANION DOCUMENTS

Audit indicators, a continuing medical education (CME) self-assessment, and Oral Assessment Guide are available in the original guideline document.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on July 12, 2005. The information was verified by the guideline developer on August 24, 2005.

COPYRIGHT STATEMENT

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