

Oral Health in the Palliative Care Patient: Throughout the Continuum of Illness

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Objectives

- To identify oral health issues in palliative care patients throughout the continuum of care.
- To discuss the challenges to optimal oral care in various care settings.
- To develop a team-based plan for managing the oral health of patients with complex chronic illness.

Our Patient: Mrs. Thompson



- 77 yr old woman with PMH of HTN, COPD, OA, & Dementia
- Lives at home with her elderly sister
- Meds: HCTZ, Arthrotec, Aricept, Namenda, Tiotropium, Albuterol
- Wears partial dentures
- Uses oxygen prn

“You are not healthy without good oral health”

David Satcher, 16th Surgeon General



- Surgeon General's Report on Oral Health
 - Dental care is the most common unmet health need
 - Oral disease can severely affect systemic health
 - Much oral disease is preventable or at least controllable
 - Profound disparities in oral health and access to care exist for all ages

(www.smilesforlifeoralhealth.org)

Growing Oral Health Needs

- 50% of elders perceive their dental health as poor or very poor
- Prevalence of oral disease in elders:
 - Caries 32%
 - Severe periodontal disease: 23%
- Complete tooth loss has declined from 50% to 18% in the past 60 years
 - Water fluoridation
 - Improved dental care
 - Increased emphasis on prevention
- Elders have increasingly complicated dental needs as they retain more of their teeth yet still have high levels of disease

(www.smilesforlifeoralhealth.org)

What Puts the Elderly at Risk
For
Oral Health Issues?

Oral Health Issues for Mrs. Thompson



- Has not been to a dentist in 2 years
- Takes medications affecting oral cavity
- Demonstrates some self care deficits
- Experiences financial issues

Dental Disease Basics 101

Two main types:

- Gum Disease (periodontitis)
 - Plaque (food debris & bacteria) build up and lead to gum disease
 - Causes inflamed gums, halitosis, bleeding, recession, root exposure, loose teeth
- Tooth Decay (caries)
 - Caries occur when “sufficient bacteria are exposed to a diet rich in refined carbohydrates and left undisturbed for a prolonged period of time.”

(Wholihan, 2012; Johnson, 2012)

What Risk Factors may impact
Mrs. Thompson's Oral Health?

Oral Health Issues in the Setting of Chronic Illness

Mrs. Thompson:

- COPD

- Osteoarthritis

- Dementia

Oral Health and COPD

- Dental plaque provides a reservoir of bacteria to cause respiratory infection
- In pts with COPD, missing teeth & plaque associated with lower QOL

al, 2011)

(Zhou, et

Inhalation Therapy & Oral Health

- Beta 2 Agonists
 - Increase caries
 - Increase GERD
 - Decrease Salivary pH
 - Decrease saliva production & secretion
- Glucocorticoids
 - Local deposition of medication in the oral cavity
 - increases candidiasis & gingivitis
- All agents
 - Alter taste perception leading to xerostomia

(Godara, 2011)

Oral Care Issues in the Patient with Dementia

Early Stage 1-3 yrs	May lose dentures; forget appointments Most able to maintain reasonable oral care Dental care focus: restorative care may still be carried out.
Middle Stage 3-6 yrs	Varying levels of resistance to oral care Some psychiatric symptoms Dental care focus changes from restorative to prevention of further dental disease.
Late Stage	Overwhelming brain injury Compromised feeding Requires passive oral care to prevent oral infection Dental care goal: maintain oral comfort and prevent complications.

General Strategies to Optimize Oral Health in Elders

- **Smiles for Life**



Smiles for Life
A national oral health curriculum

www.smilesforlifeoralhealth.org

- A National Oral Health Curriculum created by
The Society of Teachers of Family Medicine
- Free CE Modules
- Geriatric Oral Health Component

(Wholihan, 2012)

Hospital Admission for Mrs. Thompson

- Admitted to local community hospital with increased SOB, cough, and increased confusion
- Developed respiratory distress in the ER and was admitted to the ICU
- Intubated and treated for PNA with improvement and eventual extubation



Oral Health Issues in Various Care Settings

- ICU
- Hospital (General Medical Floor)
- Skilled Nursing Facility

Oral Issues in the Critically Ill Older Adult

- Oral care needs of ventilated patients
- Increased confusion; sedation
- Self care deficits



Oral Care in the ICU

Strategies for oral care in the ICU:

- CDC Guidelines for prevention of VAP
- Intervention bundles including oral care
- Tooth brushing
- Chlorhexadine



(CDC, 2004; IHI, 2010; Chan, 2007)

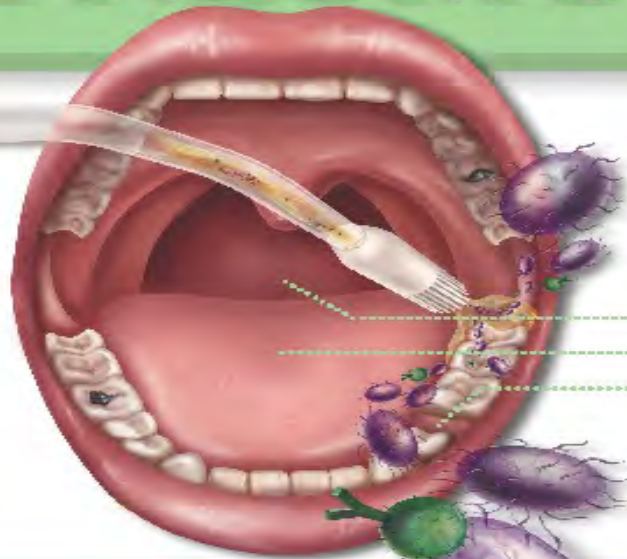
Aspiration Pneumonia

- Aspiration of oral bacteria is associated with pneumonia particularly in bedridden and hospitalized patients
- 83% of patients who develop nosocomial pneumonias are mechanically ventilated
- Oral care protocol interventions (often with bundled care) led to an 89.7% reduction in ventilator associated pneumonia (12.6 to 1.3 cases/1000 vent days)

(www.smilesforlifeoralhealth.org)

Significant indicators for:

ASPIRATION PNEUMONIA



Dysphagia, in and of itself, is not adequate to develop aspiration pneumonia.*

TOP THREE PREDICTORS:

- Dependency for *feeding*
- Dependency for *oral care*
- Number of *missing teeth*



CLEAN

Brushing and suctioning with an antiseptic agent kills* and mechanically removes bacterial biofilms (dental plaque) from teeth and oral tissues.



DEBRIDE

Swabbing and suctioning with Perox-A-Min® solution helps remove dead, loosened biofilms.*

2122 © 2009 Sage Products Inc.

Who's at Risk?

“Any condition that increases the volume of bacterial burden of oropharyngeal secretions in a person with impaired defense mechanisms may lead to aspiration pneumonia.”

ADDITIONAL DEVELOPMENTAL FACTORS:***

- COPD
- Dementia
- Stroke
- Renal Disease
- Malignancy
- Neurologic Dysphagia
- Liver Disease
- Enteral Feeding
- Suppressed Immune System
- Emergency Room Admission

References: 1. Laugrove et al Dysphagia 1998; 13:60-81 2. Mark PE, N Engl J Med. 2001;344(9):665-71 3. Kadow JH, et al., Crit Care Med. 2003;31(7):193-4. Oral Health Care Drug Products for Over-the-Counter Human Use; Antiseptic/Antiplaque Drug Products: Establishment of a Monographic Federal Register, 68(10):32232-37, 5, 18. Oral Health Care Drug Products for Over-the-Counter Human Use; Testative Final Monographic Federal Register, 33(17): 2436-61.



Predominant cultivable flora from various sites of the oral cavity

Group	Predominant genus or family	Total viable count (mean percent)			
		Tongue	Saliva	Gingival crevice	Dental plaque
Anaerobes (1011 CFU/g)*					
Gram + cocci	Peptostreptococcus	4.2	13.0	7.4	13.0
Gram - cocci, Gram + rods	Veillonella	16.0	15.9	10.7	6.0
	Actinomyces, Eubacterium, Lactobacillus, Leptotrichia	7.4	4.8	20.2	18.0
Gram - rods	Fusobacterium, Bacteroides, Prevotella, Porphyromonas	8.2	4.8	16.1	10.0
Aerobes (1010 CFU/g)*					
Gram + cocci	Streptococcus	44.8	46.2	28.8	28.0
Gram - cocci	Moraxella	3.4	1.2	0.4	0.4
Gram + rods	Lactobacillus, Corynebacterium	13.0	11.8	15.3	24.0
Gram - rods	Enterobacteriaceae	3.2	2.3	1.2	Not done

* Total viable colony-forming units per g net weight.
 Modified from Chow, AW, Roser, SM, Brady, FA, *Ann Intern Med* 1978; 88:392.

Mouth Care Assessment & Documentation

- Form created by Linda Greene for Rochester General Health System, Rochester, NY
- Includes assessment of teeth, tongue, lips and mucous membranes
- Each area is scored from 1-4
- Total Score
 - 8 or below: mouth care q 4h
 - 9 or above: mouth care q 2h

Assessment	Scale 1-4	Comments
<u>Teeth</u>	<ul style="list-style-type: none"> -Clean: 1 -Plaque/debris in localized area: 2 -Plaque/debris along gum line: 3 -Ill fitting dentures: 4 	
<u>Tongue</u>	<ul style="list-style-type: none"> -Pink & Moist: 1 -Coated: 2 -Shiny/red: 3 -Blistered/Cracked: 4 	
<u>Lips</u>	<ul style="list-style-type: none"> -Smooth/moist: 1 -Dry/cracked: 2 -Bleeding: 3 -Ulcerated: 4 	
<u>Mucous Membranes</u>	<ul style="list-style-type: none"> -Pink & moist: 1 -Reddened/coated: 2 -White areas: 3 -Ulcerated/bleeding: 4 	

Mrs. Thompson: Transferred to the Medical Floor

- Treated with steroids, nebulizers, and IV antibiotics
- Improvement in respiratory status, but decline in functional status:
 - residual confusion and de-conditioning



Oral Care in the Hospitalized Patient

- Sample Hospital Policy & Procedure: ORAL CARE
 - RN's, LPN's, CNA's, will assemble equipment at patient's bedside.
 - Curtains drawn to ensure privacy.
 - Based on their level of function, patient will be offered mouth care and given necessary supplies to perform same (i.e., toothbrush, paste, mouthwash, efferdent).
 - The nursing staff will perform oral care on all patients unable to do so for themselves. If the patient has dentures, dentures will be removed, cleaned with toothpaste and reinserted after mouth care is done using Peroximent mouth swabs.
 - Oral care will be done at a minimum of two times per day (prior to breakfast and bedtime).
 - Patients will be offered efferdent tablets and denture cup at bedtime for over night cleaning of dentures or partials.

Potential Oral Health Issues for the Elderly Patient

- Xerostomia related to oxygen therapy and medications
- Taste alteration
- Oral candidiasis
- Halitosis
- Denture care

(Wholihan, 2012)

Iatrogenic Treatment Effects

- Xerostomia
 - Decreased saliva flow results in dry mouth which promotes caries and periodontal disease
 - Many commonly prescribed medications produce xerostomia including:
 - Steroids, antihistamines, diuretics, antihypertensives, anticholinergics, antidepressants and opioids
 - Many additional classes of medications can have adverse intraoral effects
 - Phenytoin, Calcium Channel Blockers, IV Bisphosphonates, Cancer Chemotherapy/Radiation, Immunosuppressives

(www.smilesforlifeoralhealth.org)

Xerostomia

42

Sensation of dry mouth due to decreased salivary flow

- Common in the elderly
- Medications are typical cause
- Common in rheumatic disease and after radiation therapy
- Sjorgren's syndrome typically presents with xerostomia and xerophthalmia
- Saliva is the most important protection against caries
- Xerostomia significantly increases risk for caries and periodontal disease



Dry Mucosa

Photo: Robert Henry, DMD, MPH



Smiles for Life

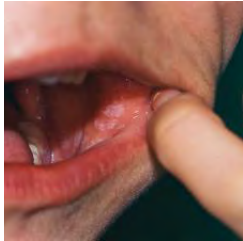
A national oral health curriculum

Taste Alteration

- Taste alteration (dysgeusia) is associated with over 200 drugs
 - Major impact on quality of life
 - Often overlooked by clinicians
 - Can lead to weight loss and depression
 - Taste can be decreased, altered, or made unpleasant
 - Compensation with sugared foods can lead to caries

(www.smilesforlifeoralhealth.org)

Strategies to Prevent Candida



Regular oral assessment



Inhalers: -Use of spacers

-Rinsing mouth after use



Denture Care :-Removal at night

-Disinfection

Halitosis

- Variable causes: lungs, stomach, oropharynx, sinuses, mouth
- Most common: anaerobic bacteria from the dorsum of the tongue or food impaction between teeth.
- Cochrane Reviews (weak evidence):
 - Tongue scrapers (2 trials) slightly more effective than brushes. (effect short-lived)
 - Mouth rinses (5 trials) (chlorhexadine/zinc) may reduce or neutralize odor.

(Outhouse, et al, 2006; Fedorowicz, 2008)

Denture Care

- Plaque can build up on dentures and influence level of decay in remaining teeth.
- Denture loss can be catastrophic to patients with dementia
 - Increase loss during transition
 - Inability for pt to cooperate or adapt
 - Financial constraints
- Denture marking



(Wholihan, 2012)

Denture Care: What's the Evidence?

(Cochrane Review: De Souza, 2009)



Mechanical Care (brushing)

VS.

Chemical Care (soaking)

- Weak evidence in favor of effervescent soaking
- Brushing with paste removes plaque
- 6 RCTs: wide heterogeneity & paucity of data
- Lack of evidence about comparative effectiveness

Mrs. Thompson: Transferred for Long Term Care

- Admission to a skilled nursing facility due to de-conditioning, worsening dementia and inadequate community support



Oral Issues in Long Term Care

Patient Issues

- Lack of perception of oral health needs
- Inability to articulate needs
- Altered nutritional status
 - Ill fitting dentures
 - Social isolation
 - Oral pain
- Altered threat perception due to cognitive impairment



(Wholihan, 2012)

Managing Oral Hygiene Using Threat Reduction (MOUTH)

- Goal: reduction of care-resistant behaviors (CRBs) in persons with moderate to severe dementia during oral hygiene activities
- Identified 15 threat reduction strategies
- Improvement in OHAT scores
- http://www.youtube.com/watch?v=0j6EY95t_Q0

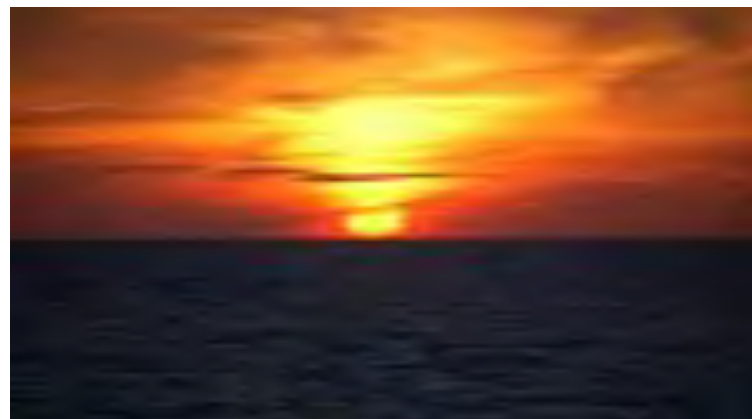
(Jablonski, et.al., 2011)

Oral Issues at the End of Life

- Mrs. Thompson continues to reside in LTC
- Advance Directives completed upon admission:
DNR/DNI, no artificial feeding, no re-hospitalization
- Over time, Mrs. Thompson's dementia worsens:
 - Progressive dysphagia
 - Weight loss
 - Upper respiratory infections
- Hospice consulted

(Wholihan, 2012)

What are the Oral Care issues for patients at End of Life?



Strategies for Oral Care at EOL

- Oral care schedule
- Comfort feeding
- Oral irrigation
- Nystatin swab
- Family education & involvement

The Mouth: An Important Aspect of Quality of Life



- Dignity
- Nutrition
- Comfort
- Communication
- Socialization
- Intimacy
- Ability to talk, laugh, & smile

How to Address Oral Health in the Palliative Care Patient

- “It takes a village”
 - Interprofessional care: everyone is involved in improving care
 - Know the patient in front of you
- Make Oral Health Important and a Priority
 - Educational resources: SMILES FOR LIFE
 - Organizational commitment:
 - Q.I. activity
 - Creation of an oral care committee
 - Policy and Procedure: is it being followed, does it need to be changed?
 - Oral care resources
 - Empowerment of nursing assistants

Oral Hygiene in the Elderly

- Brush at least twice a day with a soft toothbrush
- Focus on the area where the tooth meets the gingiva
- Use a good quality electric toothbrush for best results (?????)
- Floss regularly
- Consider assistive devices and guidance for patients with physical limitations





"O.K., I'm going to demonstrate the proper way to lie to me about flossing."

Surround Toothbrush



How to Use the Open Wide® Mouth Rest



1

Insert the Mouth Rest with the ridges facing left and right.



2

Turn the Mouth Rest up so the BACK teeth are positioned on the ridges.



3

Brush the teeth on the OPPOSITE side of the Mouth Rest. Reverse to brush the other side.



Note that ONLY the BACK teeth should rest on the mouth rest, NOT the front teeth.



If the person clenches, so you cannot get the Mouth Rest into the mouth, try dipping the mouth rest into applesauce or jelly before inserting.

Assessment/Screening Tools

- Kayser-Jones Brief Oral Health Status Examination (BOHSE)
- Oral Health Assessment Tool (OHAT)
- Mouth Care Assessment & Documentation from Rochester General Health System

(Kayser-Jones et al 1995; Chalmers, et al, 2004; Greene, L.R. 2009)

Oral Care Protocols/Guidelines

- Oral Hygiene Care Plan (OHCP)
- Managing Oral Hygiene Using Threat Reduction (MOUTH)
- Oral Hygiene Care for Functionally Dependent and Cognitively Impaired Adults
 - *Full guideline available at
<http://www.nursing.uiowa.edu/Hartford/nurse/ebp.htm>
- Nursing Standard of Practice Protocol: Providing Oral Healthcare to Older Adults

(Johnson, 2012; Chalmers, et al 2004,2005; O'Connor, 2012; Jablowski, et al, 2011)