


Smiles for Life: Ensuring Oral Health Across the Lifespan


**This Chapter Lecture Series is
supported by a grant from the
National Interprofessional
Initiative on Oral Health**



Program Objectives

At the conclusion of the program, participants will be able to:

1. Discuss the importance of oral health care as an integral component of PA practice.
2. Demonstrate knowledge of oral disease and prevention.
3. Discuss routine counseling for dental problems across the lifespan.
4. Discuss interventions that prevent and treat oral disease.
5. Describe reimbursement policies for oral health services.
6. Implement the Smiles for Life curriculum to improve oral health care for patients.



Why Now?



Advancing
Oral Health
in America



Improving Access to
Oral Health Care for
Vulnerable and
Underserved Populations

Institute of
Medicine
Reports
2011



Medical-Dental Collaboration

- Oral health training for medical providers will increase referral to dentists
- Expanded medical knowledge for dental providers will increase referral to medical providers



The Need: Colorado Example

- 9 counties with no dentist
- 24 counties with no dentist accepting Medicaid
- < 12% of CO dentists are Medicaid providers
- No adult Medicaid or Medicare dental benefits (except for Medicaid in pregnancy)
- 2.3 million Colorado adults have no dental insurance
- Only 30% of Medicaid-eligible Colorado children receive any dental services



Misperceptions of the General Public

- "They're just baby teeth"
- "Bring him in when he's 4 years old and can sit still"
- "My 3-year old brushes his own teeth"
- "Fluoride is dangerous"
- "You lose a tooth for each pregnancy"
- "Dentures are just a part of getting old"



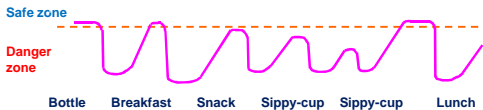
Caries Transmission

- S. mutans* is vertically transmitted from the primary caregiver, often the mother
- Caregivers with high bacteria levels usually have:
 - A high frequency of sugar intake
 - Poor oral hygiene
 - High levels of decay
- Caregivers pass bacteria, dietary habits and oral care habits to the child



Dietary Influences

- Oral bacteria ferment sugars, producing acids that persist for 20-40 minutes after sugar ingestion
- Oral acids demineralize tooth enamel
- Remineralization occurs when acid is buffered
- How often sugars are ingested is more important than how much sugar is ingested





Cariogenicity of Foods

- Highly cariogenic:
 - Sweet sticky foods
- Less or minimally cariogenic: Whole grain or non-carbohydrates (meat, nuts)





Oral-Systemic Connection

- Good evidence for oral/systemic link
 - Infective endocarditis (8% of cases)
 - Prosthetic device infection
 - Diabetes
- Emerging evidence for oral/systemic link
 - Obesity
 - Coronary artery disease
 - Lower respiratory disease
 - Adverse pregnancy outcome
 - Preterm birth and low birth weight
 - Preeclampsia

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Common Oral Diseases Across the Lifespan

- Early childhood caries (ECC)
- Adult caries
- Gingivitis
- Periodontal disease
- Pregnancy complications

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Prevalence of Early Childhood Caries (ECC)

- ECC is a public health crisis!
- Prevalence:
 - 5% of all U.S. children
 - 30-50% of low income children
- 80% of decay occurs in 20% of children
- Most common chronic disease in children
 - 5 times more common than asthma

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Early Childhood Caries (ECC)

- Leads to tooth loss and/or infection
- Can be vertically transmitted
- Sequelae:
 - Pain: Impaired chewing and nutrition; school/work absences
 - Infection
 - Increased caries in permanent dentition
 - Extensive and expensive dental work

Is Preventable!



White Spots: The Early Stage of Caries



Photos: Joanna Douglass BDS DDS



White Spots, then Brown Cavitations



Photos: Joanna Douglass BDS DDS



Advanced Caries



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Photos: Joanna Douglass BDS DDS

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Brushing Techniques (kids need help until age 6)



Lift the lip

Brush behind teeth

Photos: Joanna Douglass BDS DDS

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Fluoride Mechanism of Action

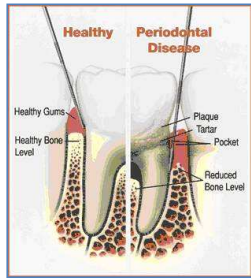
- Topical (greater effect)
 - Inhibits demineralization
 - Promotes remineralization
 - Produces anti-bacterial activity
 - Also effective in older adults
- Systemic (lesser effect)
 - Reduces enamel solubility by incorporation into its structure

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Periodontitis - continued

- Can start in teen years
- Present in 50% of adults
- Smoking is a major risk
- Prevention:
 - good oral hygiene
 - brushing *and* flossing
 - avoid tobacco



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Oral Health in Pregnancy

- Gingivitis is common in pregnancy
- Periodontal disease is associated with adverse pregnancy outcomes
- Treatment during pregnancy is safe, but both medical and dental providers may be reluctant to treat
- The best way to improve infant oral health is to improve maternal oral health:
 - *S. mutans* vertically transmitted
 - Mother's oral health practices and diet influence child practices



PA's Should Know...

- Many women neglect oral health during pregnancy
- Many patients take medications that may affect oral health
- Patients with ill fitting dentures & poor dental hygiene can suffer from a lack of food intake, poor nutrition, and weight loss



Geriatric Considerations

- The geriatric population is growing and has increasing oral health needs
- 70% of seniors lack dental insurance
- Dental health is often neglected
- Oral health behaviors are associated with longevity
- Mortality increases linearly with tooth loss
- Medications may have negative oral consequences which should be monitored and minimized whenever possible
- Quality of life and chronic disease management of elders are improved with attention to their oral health



Changes of Normal Aging

- Plaque and gingivitis develop more rapidly in older adults than younger cohorts
- Common medical conditions may interfere with ability to cleanse teeth and oral cavity
 - Dementia
 - Osteoarthritis
 - Visual impairment
 - Stroke
- Tendency to xerostomia even without medications



Iatrogenic Xerostomia

- Decreased saliva promotes periodontal disease
- Many medications reduce salivary flow:
 - steroids
 - antihistamines
 - diuretics
 - antihypertensives
 - anticholinergics
 - antidepressants



Dentures

- Good fit essential but may be difficult to achieve and maintain.
- Monitor for damage to plates and rough areas
- Should be removed for oral cavity exam at least 1/yr or when dental problems suspected
- Must be removed, brushed with denture cleanser (not toothpaste) and placed in water overnight.



Oral Health Balance

Protective Factors

Diet
Brushing/flossing
Salivary flow
Fluoride

Pathologic Factors

mutans strep
Carbohydrates
Reduced salivary flow
Plaque
Meds: xerostomia
Tobacco

No caries,
Healthy gums
Cancer-free



Caries
Periodontal Dz
Oral cancer



The Opportunity

- Most children have access to primary care
 - 89% of poor children have a usual source of medical care
 - Primary Care Providers have regular, consistent contact with children for checkups and immunizations
- Adults with many chronic diseases see medical providers frequently
- Principles of risk assessment, screening and behavior change counseling are fundamental to primary care clinicians



Medical Setting Opportunities

	Infants & Children	Pregnancy	Adults
Risk Assessment	Diet Oral hygiene Family oral health	Diet Oral hygiene	Diet Oral hygiene Tobacco EtOH / Drugs
Screening and counseling	Caries Parental care	Periodontal Dz Self-care	Periodontal Dz Oral cancer Medications Self -care
Treatment and referral	Fluoride Dental visit	Rinses Xylitol Dental visit	Rinses Xylitol Biopsy Dental visit



Oral Health Provider Education

- Awareness of the oral-systemic connection
- Importance of anticipatory guidance re: diet and oral hygiene
- Risk assessment
 - Diet
 - Oral hygiene
 - Oral cancer
 - *S. mutans*
 - Xerostomia



Education - continued

- Identification of periodontal disease and referral
- Identification of oral cancers including sites often neglected by medical providers
- Identification of acute problem/trauma
- Identification of need for referral



www.Smilesforlifeoralhealth.org

Modules

- Each designed to take about 45 minutes
- Can be completed online and followed by a test
- Certificate of completion issued
- Free CME
- Can also be downloaded
- Speaker notes

Other Resources

- Videos
 - Knee-to-knee exam
 - Fluoride varnish
 - Brushing a child's teeth
- Posters
- Pocket cards
- Learning objectives
- Curriculum implementation guide
- Test questions



Take Home Points

- Early childhood caries is an infectious, vertically-transmitted, preventable disease.
- Oral health and systemic health are related across the lifespan.
- Primary care providers are well-positioned to help patients improve their oral health through guidance, screening and referral.
- The Smiles for Life National Oral Health Curriculum can improve knowledge and skills in oral health.



NIIOH.org

National *Interprofessional Initiative* on Oral Health



Mission

Engage primary care clinicians to be:

Alert to their patient's oral health needs

Ready and willing to deliver oral health preventive services

Effective at partnering with dental specialists and other primary care providers to promote oral health through patient-centered collaborative care

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