

Efficacy of Oral Health Promotion in Primary Care Practice

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- **Disclosure:**
 - Dr. Mattheus has no relevant financial or nonfinancial relationships to disclose.

Objectives

- Recognize the risk factors and various consequences associated with early childhood caries
- Describe the process of integrating oral health promotion into clinical practice
- Discuss the changes in oral health beliefs and behaviors that can occur with implementation of oral health promotion programs

Oral Health

- Oral health is a key component of overall health and well-being children
- Poor oral health has been associated with:
 - Cardiovascular disease
 - Respiratory infections
 - Diabetes mellitus
 - Preterm labor and births

Sources: Jashipura & Douglas, 2000; Kuo, Polson & Kan, 2008; Lee et al., 2007; NIDCR, 2002

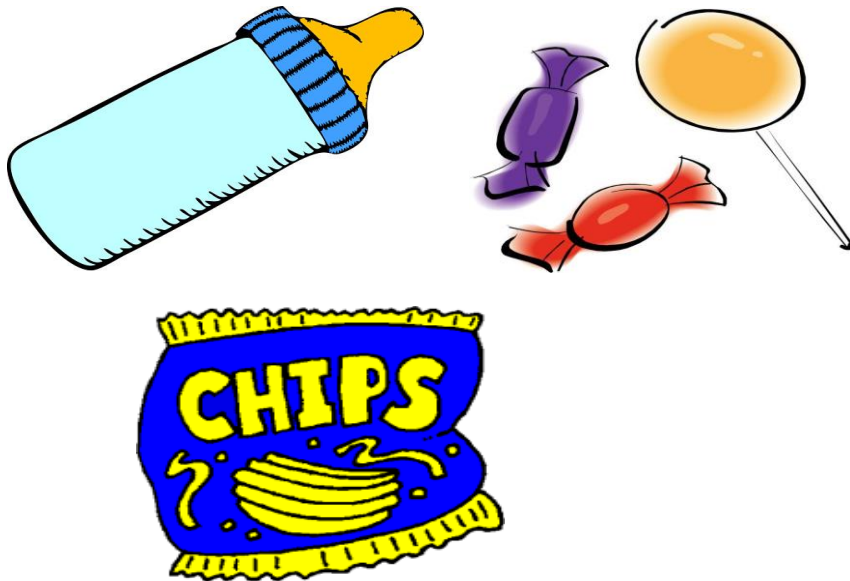
Pediatric Oral Health

- Dental caries are the most common chronic childhood disease
- One in four (28%) preschoolers experience tooth decay
- Highest risk:
 - Low-income
 - Minority
 - Immigrant children



Sources: Beltran-Aguilar et al., 2005; Passel, 2002; USDHHS 2010

ECC Risk Factors



- Lack of fluoridation
- Limited parent education
- Maternal caries
- Poor oral hygiene
- Poor feeding habits
- Previous caries
- Medical conditions

Pediatric Oral Health

- Dental caries rates continue to grow
- Limitations to decreasing childhood caries
 - Shortage in pediatric dental services
 - Shortage in dental providers willing to treat uninsured children or those with state insurances
- Parent's oral health beliefs and behaviors impact oral health outcomes for their children

Sources: AAPD, 2011; Bagramian, et, al., 2009; Crall, 2006; Edelstein, 2002; USDHHS, 2010

Consequences of ECC

- Pain and suffering
- Difficulty eating and drinking
- Difficulty attending school
- Decreased self-esteem
- Decreased social interaction
- Reduced quality of life
- Systemic disease



Ultimate Cost

- Deamonte Driver 12 yrs. old
- Preventable, treatable dental condition leads to death
- Hospital cost \$225,000



ECC are Preventable

- Education
 - Oral health habits
 - Diet and nutrition
 - Oral hygiene
- Prevention
 - Water fluoridation
 - Topical fluoride varnish
 - Dental sealants
 - Regular dental visit by 1 yr.



Pediatric Primary Care Providers

- Pediatric providers have frequent contacts with children and families
- All pediatric visits include obtaining a health history, examination and anticipatory guidance
- Many states reimbursement for oral health services

Sources: AAP, 2000; Cantrell, 2009

Steps in Practice

- Caries risk assessment
- Oral health assessment
- Oral health education
- Fluoride varnish application
- Refer to a dental home

Caries Risk Assessment Tool

- Includes risk factors identified by history and clinical assessment

Caries Risk Assessment Form (Ages 0-6)					
Patient Name:		Score:			
Birth Date:		Date:			
Age:		Initials:			
		Low Risk (0)	Moderate Risk (1)	High Risk (10)	Patient Risk
Contributing Conditions					
I.	Fluoride Exposure (through drinking water, supplements, professional applications, toothpaste)	Yes	No		
II.	Sugary Foods or Drinks (including juice, carbonated or non-carbonated soft drinks, energy drinks, medicinal syrups)	Primarily at mealtimes	Frequent or prolonged between meal exposures/day	Bottle or sippy cup with anything other than water at bed time	
III.	Eligible for Government Programs (WIC, Head Start, Medicaid or SCHIP)	No		Yes	
IV.	Caries Experience of Mother, Caregiver and/or Other Siblings	No carious lesions in last 24 months	Carious lesions in last 7-23 months	Carious lesions in last 6 months	
V.	Dental Home: established patient of record in a dental office	Yes	No		
General Health Conditions					
I.	Special Health Care Needs*	No		Yes	
Clinical Conditions					
I.	Visual or Radiographically Evident Restorations/Cavitated Carious Lesions	No carious lesions or restorations in last 24 months		Carious lesions or restorations in last 24 months	
II.	Non-cavitated (incipient) Carious Lesions	No new lesions in last 24 months		New lesions in last 24 months	
III.	Teeth Missing Due to Caries	No		Yes	
IV.	Visible Plaque	No	Yes		
V.	Dental /Orthodontic Appliances Present (fixed or removable)	No	Yes		
VI.	Salivary Flow	Visually adequate		Visually inadequate	
TOTAL:					
Instructions for Caregiver:					
<p>*Patients with developmental, physical, medical or mental disabilities that prevent or limit performance of adequate oral health care by themselves or caregivers.</p> <p>© American Dental Association, 2009, 2011. All rights reserved.</p> <p>ADA American Dental Association*</p>					

Clinical Assessment

- What do you need?
 - Good light sources
 - Ability to visualize
 - Tongue depressor
- Proper positioning
 - Knee to knee



Clinical Findings

- What to look for:
 - Teeth
 - Plaque
 - White spots
 - Brown cavitation
 - Gums
 - Inflammation
 - Abscesses
 - Masses



Oral Health Education

- Infants (0-12 months)
 - Importance of primary care teeth
 - Reduce bacteria spread
 - No sharing utensils
 - No cleaning pacifiers with adult mouth
 - No bottles in the bed
 - No bottles by one year



Infants (0-12 MONTHS)



- Reducing sweet drinks and foods
- Oral hygiene
 - Cleaning the mouth before teeth emerge
 - First tooth start brushing
 - Smear of fluoride toothpaste

Toddlers and Young Children

- Brushing twice a day
- Fluoride toothpaste
 - Smear 1-3 years
 - Pea size amount 3-8 years
- Healthy eating
 - Limit sugary drinks and foods
- Visit the dentist



Fluoride Varnish

- Fluoride varnish
 - Easy to use
 - Effective delivery of fluoride
 - Safe for infants and toddler
 - Inexpensive for the practice



Source: Milgrom, Zero & Tanzer, 2009

Study Objective

- To test the impact of oral health promotion visits in a primary care practice on parental oral health beliefs and behaviors for their children ages 6 to 15 months.

Study Sample

- 100 subjects
 - Parents or guardians of children 6 to 9 months of age
 - Receive primary care at NFP
 - Enrolled in Florida Medicaid
 - English speaking

Measurement of Variables

- Early childhood oral health (ECOH) questionnaire
 - Demographics
 - Feeding behaviors
 - Oral health beliefs
 - Oral health behaviors

Methodology

- Standard oral health
 - Screening exam, caries risk assessment, fluoride varnish application, anticipatory guidance and attempt to refer to a dental practice or a dental home. Toothbrush provided.

Methodology

- Enhanced oral health
 - Oral health history with caries risk assessment, oral health examination
 - Picture of ECC
 - Educational handout – family specific
 - Tooth brush demonstration
 - Dental clinic information is provided toothbrush and toothpaste first visit
 - Sippy cup second visit

Results

- Positive changes in oral health beliefs
 - Parents' perceptions of the importance of oral care for their children compared to general health ($p < .05$)
 - Parents' confidence in oral care/brushing ($p < .05$)
- Positive changes in oral health behaviors
 - Parents' initiation of tooth brushing ($p < .0001$)
 - Frequency of brushing ($p < .0001$)

Benefits

- Child
 - Decrease incidence of ECC
 - Reinforces proper oral care early in life
 - Performed by a known provider
- Family
 - Easy access
 - No additional time or cost expended
 - Improve parent's and sibling's oral health outcomes

Benefits

- Practice
 - Ease of implementation
 - Limited training required
 - Limited cost
 - State reimbursement
 - Impacts patient's health



Implications for Practice

- Oral health is a major health issue
- Oral health promotion programs in primary care practice
 - Positively impacts parent's oral health beliefs and behaviors
 - Easily integrated into well child care visits
 - Benefits child, family and practice
- Primary care nurse practitioners play a critical role

Implications for Practice

- Program development
 - Important to consider child, family and community factors
 - Simplify education
 - Include incentives
- Increase implementation among providers
 - Document results of oral health promotion program

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