ADDRESSING DENTAL DISEASE IN EARLY CHILDHOOD PROGRAMS

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Presented by:
Anne Varcasio  RDH, MA, Public Health Specialist,  NYSDOH Bureau of Dental Health
Jenn O’Connor, Senior Policy Associate, Schuyler Center for Analysis and Advocacy

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Early Childhood Caries ECC….
Is this the same as Baby Bottle Decay?

This presentation will help to:
• Redefine ECC and Severe ECC
• Review tooth development
• Clarify the tooth decay process
• Provide prevention strategies
• Highlight available resources
Definition of Caries

Caries is a biofilm (plaque)-induced acid demineralization of enamel or dentin, mediated by saliva.

Or...Caries is the formation of a bacterial film on teeth that produces an acid which removes minerals from the surface of teeth. Saliva is the mechanism responsible for this process.

Early Childhood Caries (ECC)

The disease of ECC is the presence of 1 or more decayed, missing (due to caries), or filled tooth surfaces in any primary tooth in a child under age 6.

Or...One or more baby teeth with decay, missing due to decay or any sign of treatment as a result of tooth decay under age 6.

Dental Caries on back teeth
“Severe Early Childhood Caries”

Under age 3
any sign of
tooth decay

Age 3-5 signs of treatment

Development of Baby Teeth

Healthy teeth
Tooth anatomy

- Enamel
- Dentin
- Pulp Chamber
- Root Canal
Teeth of 9 Month Old Child

- **Permanent 1st permanent molar** beginning to develop
- **2nd baby molar** Age 2
- **1st baby molar** Age 1

University of Illinois at Chicago: College of Dentistry
http://www.uic.edu/classes/orla/orla312/correlated_images_skulls.htm
When do primary (baby) teeth usually appear?

- Central incisors: 6-10 months
- Lateral incisors: 10-16 months
- Cuspids (Canines): 8-13 months
- Second molars: 6-8 years
- First molars: 16-23 months
- Third molars: 23-33 months

When do permanent teeth usually appear?

- Central incisors: 6-8 years
- Lateral incisors: 7-9 years
- Cuspids (Canines): 11-13 years
- Bicuspsids (Premolars): 9-12 years
- Second molars: 17-21 years
- First molars: 11-13 years
- Third molars: 17-21 years
Tooth Decay Process 101

Bacteria + Sugar = Enamel
What happens when acid is formed?

Minerals are lost, and tooth enamel is weakened during the exposure to acid.
Healthy baby tooth

Following exposure to acid biofilm

Signs of tooth decay
How Teeth Develop Decay

- Food (with sugar)
- Bacteria
- Tooth

DECAY
"Dental Caries is an infectious and transmissible disease."

"The mother is the most common donor transmitting the bacteria to babies."

It is common for pregnant women to have food cravings, infants and toddlers to eat often and young children to enjoy snacks.

A perfect match for tooth decay....
When is a tooth at risk of developing tooth decay?

**Diet and Dental Caries**

- Regular Meals (M)
- Regular Meals (M) plus Sweet Snacks (S)
- Plaque Level Acids

*TIME FACTOR*

*Adapted from Graph, 1967*
It is common for pregnant women to have food cravings, infants and toddlers to eat often and young children to enjoy snacks.

A perfect match for tooth decay....
Key Risk Factors

- Infants with special health care needs
- Infants of mothers with a high rate of tooth decay
- Infants with demonstrable tooth decay, plaque, demineralization, and/or staining
- Infants who sleep with a bottle
- Late-order offspring
- Infants from families of low socioeconomic status

http://www.mchoralhealth.org/PDFs/BFOHPocketGuide.pdf
Prevention of Early Childhood Caries

- Over all consideration is given to cultural norms.
- Numerous prevention strategies provide an appropriate selection to choose from.
- Resources will provide numerous tools to select from.
Strategies for Prevention

Prevention of ECC begins during pregnancy
Women considering pregnancy or who are pregnant should continue to see their dentist and dental hygienist for check-ups.
In New York State, Medicaid covers dental services for pregnant women, as long as they are income eligible for Medicaid.

Pregnant women with incomes between 100% and 200% of the FPL are eligible for dental services under a special Medicaid Program. They can get dental services through to the end of the month that their baby turns 2 months of age.

### 2009 Poverty Guidelines for the 48 contiguous States and the District of Columbia

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For families with more than 8 persons, add $3,740 for each additional person.

Prevent transmitting saliva from mother to baby.

- Do not test the temperature of the bottle with the mouth, or sharing utensils (e.g., spoons).
- Do not orally clean a pacifier or a bottle nipple.
- Do not place an infant to sleep with a bottle or sippy cup.
You can advise... cleaning babies mouth.

- Use a soft cloth to wipe an infant’s gums after feeding and before bedtime.
- Begin cleaning an infant’s teeth with a small tooth brush as soon as the first tooth erupts.

http://www.mchoralhealth.org/pocketguide/if1.html
Promote supervised and assisted tooth brushing.
Promote Dental Screenings at Age One

A dental chair is not needed, and takes 2-3 minutes by a dentist or dental hygienist.
1: NYSDOH
   - Practice Guidelines for Oral Health
   - Useful publications and materials
   - Dental Facility Information

2: Maternal Child Health Oral Health Resource Center
   - Head Start Oral Health Resources
   - Bright Futures Tool Box

3: CDC: My Water’s Fluoride
Practice Guidelines

New York State Department of Health
August 2006 Oral Health Care during Pregnancy and Early Childhood

- Recommendations for
- Prenatal Care Providers
- Oral Health Professionals
- Child Health Professionals

http://www.health.state.ny.us/publications/0824.pdf
Oral Health Publications:
http://www.nyhealth.gov/prevention/dental/publications.htm

Pregnancy and Dental Care: Facts for Mom **Wallet Card**

Pregnancy and Dental Care **Poster** (8X10)

Baby Teeth Are Important **Poster** (8X10)

http://www.nyhealth.gov/prevention/dental/publications.htm
List of Article 28 Dental Health Facilities by County

http://www.health.state.ny.us/prevention/dental/providers
National Resource:

Web site: http://www.mchoralhealth.org
Featured resources:

- **A - Z List** (see Head Start)
- American Academy of Pediatric Dentistry [Head Start Dental Home Initiative](http://www.mchoralhealth.org/HeadStart/presentations.html)
- Curricula at-a-Glance

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**Matthew's Story**: Streaming video from Embracing Our Future

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- National, Region, and State Forums
- Non-English-language materials from our library
- [Open Wide: Oral Health Training for Health Professionals](http://www.mchoralhealth.org/HeadStart/presentations.html)
- Oral Health for Infants, Children, Adolescents, and Pregnant Women: Knowledge Path

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**Presentations**, **See tooth brushing presentation**

- [Head Start 101](http://www.mchoralhealth.org/HeadStart/presentations.html)
- Program Instruction: Oral Health from the Office of Head Start
- Tooth brushing Protocol from the University of Iowa
Bright Futures Toolbox

Health Professional and Human Service Providers

http://www.mchoralhealth.org/Toolbox/professionals.html

- Education and Training
- Screening/Risk Assessment Tools
- Anticipatory Guidance
- Posters
- Public Education

http://www.mchoralhealth.org/pocketguide/if1.html
Avoid frequent and prolonged bottle feedings or use of sippy cups containing beverages high in sugar (e.g., fruit drinks, soda, fruit juice) milk or formula during the day or at night.

Hold the infant while feeding. Never prop a bottle (that is, use pillows or any other objects to hold a bottle in the infant’s mouth).

Not dipping a pacifier in sweetened foods (e.g., sugar, honey, syrup) to encourage sucking.

Drink Fluoridated water

http://www.mchoralhealth.org/pocketguide/if1.html
Bright Futures Toolbox

http://www.mchoralhealth.org/Toolbox/professionals.html

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- Education and Training
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http://www.mchoralhealth.org/pocketguide/if1.html
Resources for children, adolescents and families

- Finding Care Web Sites
- Materials
- Non-English Language Materials

Source: http://www.mchoralhealth.org/Toolbox/families.html
Fluoridation information:
CDC Water Fluoridation information:
http://apps.nccd.cdc.gov/MWF/Index.asp
The New York State Oral Health Coalition recommends a multi-faceted approach to preventing ECC:

http://nysohc.org/ecc.aspx
Facts and Figures

- In 2005, tooth decay increased in preschoolers ages 2-5 from 24% to 28%4.

- Decay rates in Head Start programs range from 30-40% in 3 year-olds and 50-60% in 4 year-olds.

- Access to oral health services is reported to be the number one health issue affecting Head Start programs.
Low-income children in New York had more tooth decay (60%) than those in higher income groups at (48%).

In 2005 about 4,000 3-5 year old children in New York State were operated on in a hospital or ambulatory surgical center for treatment of tooth decay.

On average, national State Medicaid expenditures for restorative dental care delivered under general anesthesia ranges from $1,500 to $2,000 per child.
QUESTIONS?
Thank you