Oral Health for Head Start Children: Best Practices

Just the Facts

Early Childhood Caries (ECC) is the single most common chronic disease of childhood, occurring at least five times more frequently than asthma, the second most common chronic disease of childhood.

American Indian and Alaska Native (AI/AN) children experience dental caries at a higher rate than the general U.S. population. Data from 7,571 children ages 2-5 years documented that 62 percent had experienced dental caries (filled or unfilled decay) and 44 percent had untreated dental caries.

By two years of age, 44 percent of AI/AN children already had cavities, supporting the fact that prevention interventions must be implemented with pregnant women and infants. In order to prevent dental caries in the primary teeth, we must intervene before the first cavity develops, working with both mothers and infants. For children in Head Start, we want to prevent future decay in the erupting permanent teeth.

Dental Caries is an infectious, transmissible disease caused by mutans streptococci, lactobacilli, and other acid-producing bacteria. The bacteria that cause tooth decay are fueled by sweet foods and drinks and other fermentable carbohydrates like white crackers. Over time, the enamel breaks down, resulting first in a chalky white spot that then progresses to a cavity.

Severe ECC causes pain and infection. ECC can also result in poor self-esteem and a reluctance to smile. The primary teeth are important for eating, holding space for the permanent teeth, talking, and smiling.

Severe ECC can cost from $2,000-$8,000 or more per child to treat. Some of these children need to be hospitalized, and treatment may need to be completed under general anesthesia. ECC places a huge financial burden on insurance, Medicaid, Indian Health Service, Tribal programs, and families least able to afford treatment.

Dental treatment does not remove the disease-causing bacteria. Even after treatment, the disease rages on for high-risk children.

No child can be truly healthy if he or she has poor oral health.

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Introduction

Early Childhood Caries (ECC) is a term used to describe tooth decay, including filled or extracted teeth due to decay, in the primary teeth (baby teeth). Other names for this disease are Baby Bottle Tooth Decay (BBTD), nursing mouth, and bottle rot. Severe ECC is characterized by a distinctive pattern of tooth decay in infants and young children, often beginning on the upper front teeth and rapidly progressing to the other primary teeth as they erupt.

ECC is an infectious, transmissible disease caused by mutans streptococci, lactobacilli, and other acid-producing bacteria. While the transmission is primarily vertical between mothers or other primary caregivers and infants, studies have also demonstrated horizontal transmission from infants to infants, as well as from older children to infants. We now know that the organisms that cause dental caries can begin to colonize in the mouth of an infant even before the eruption of teeth. The bacteria that cause tooth decay produce acids from carbohydrates. The bacteria are fueled by sweet foods and drinks and other fermentable carbohydrates. Over time, the enamel demineralizes, resulting first in a chalky white spot that then progresses to a cavity.

It is important to rethink the way we "treat" dental caries. Traditionally, we would wait until a child had a cavity and "treat" the cavity with a filling. In order to prevent ECC, we must intervene before the first cavity develops, working with both mothers and infants.

Problem Statement

American Indian and Alaska Native (AI/AN) children experience dental caries at a higher rate than the general U.S. population. Data from 7,571 children ages 2-5 years documented that 62 percent had experienced dental caries (filled or unfilled decay) and 44 percent had untreated dental caries.* **By two years of age**, 44 percent of AI/AN children already had cavities, supporting the fact that prevention interventions must be implemented with pregnant women and infants.

Severe ECC causes pain and infection. Many of these children learn to live with this pain day in and day out. ECC results in increased missed school days and an inability to concentrate at school. Pain also affects a child's sleep and nutrition, resulting in poor overall health and well being. ECC can also result in poor self-esteem and a reluctance to smile. The primary teeth are important for eating, holding space for the permanent teeth, talking, and smiling. We can no longer ignore this infection until a child is 3-4 years old, any more than we would ignore any other infection that a child might have.

*Phipps KR, Ricks TL, Manz MC, Blahut P, Prevalance and severity of dental caries among American Indian and Alaska Native preschool children, J Public Health Dent. 72:208-15, Summer 2012.

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Best Practices During Pregnancy

COLLABORATE!

Collaborate with the medical, community health, and dental providers to assure that all pregnant women visit the dental clinic during the early months of pregnancy.

EDUCATE!

*Educate the mother about the transmissibility of dental caries and ways to prevent **ECC**.*

Provide education and support to promote breastfeeding.

COUNSEL!

*Provide nutrition counseling to reinforce the importance of a healthy diet during the **perinatal** period.*

MAKE RECOMMENDATIONS!

Recommend that pregnant women stop using tobacco.

SET AN APPOINTMENT!

*The dental staff can provide an exam, **prophylaxis**, recommendations for completing any needed dental treatment, caries control, and appropriate recall.*

The dental staff can assess the mother's caries risk and make appropriate prevention recommendations.

Why?

Pregnant women should get their teeth cleaned and checked early in their pregnancy. Gum disease has been linked to premature low birth-weight babies.

The caries risk assessment gives you the opportunity to assess whether the baby will be at high risk for future dental caries and also provides an opportunity to educate the mother about ways to prevent ECC.

How?

Collaborate between the medical, community health, and dental providers to assure that all pregnant women visit the dental clinic during the early months of pregnancy. Head Start, WIC, and other tribal health programs that serve pregnant women can also participate as partners to encourage pregnant women to visit the dentist. The following list of recommendations for education should be reinforced by the various medical providers, dental staff, community health workers, and other partners as identified in each community.

- Refer all pregnant women to the dental clinic during the early months of pregnancy.
- Educate the mother about the transmissibility of dental caries and ways to prevent ECC.
- Reinforce the importance of a healthy diet and limited snacking on pop, sweets, and starchy snacks like potato chips and white crackers because. It is also important to get plenty of calcium for baby's teeth and bones. It is found in milk, cheese, dried beans, and leafy green vegetables.
- Support breastfeeding at every opportunity.
- Educate the mother about gum disease as it relates to the health of her baby. Recommend and demonstrate daily brushing with fluoride toothpaste and flossing or other methods to clean in between the teeth and gums.

Recommend that pregnant women stop using tobacco. It is unhealthy for both baby and mother and it also is a contributing factor in gum disease.

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Best Practices During Pregnancy

Glossary

ECC: Early Childhood Caries, previously called Baby Bottle Tooth Decay. This term refers to dental decay on the primary, or baby teeth.

Primary Teeth: Baby Teeth

Dental Caries: The disease process that leads to cavities, or tooth decay.

Prophylaxis: Procedures to clean the teeth of plaque, calculus, and stain.

Perinatal: As used in this document, it refers to the period of time during pregnancy and one year after birth.

Note:
Education alone is not a best practice. Effective health education includes motivational interviewing, demonstrations, and reinforcement.

The dental staff can provide an oral exam, periodontal disease screening, prophylaxis, recommendations for completing any needed dental treatment, caries control, and appropriate recall.

The dental staff can assess the woman's caries risk and work with the mother to establish an effective and appropriate caries control program.

The New York State Department of Health has developed a manual "Oral Health Care During Pregnancy and Early Childhood: Practice Guidelines" It is located at http://www.health.state.ny.us/publications/0824.pdf

Supporting Articles:

Xiong X, et al Periodontal disease and adverse pregnancy outcomes: a systematic review, International J of Obstetrics and Gynecology, Oct 2005.

Kanellis MJ. Caries risk assessment and prevention: strategies for Head Start, Early Head Start and WIC. J Public Health Dent. 60(3):210-17, discussion 218-20, 2000

Oral Health for Head Start Children: Best Practices

Best Practices: Birth Through Two Years

RECOMMENDATIONS:

ASSESS!

Provide an oral health assessment soon after the first tooth erupts or by 12 months of age.

PREVENT!

Provide topical fluoride varnish treatments 4 or more times during the period from 9-24 months of age.

EDUCATE FAMILIES!

Educate families about..,

- the importance of never putting baby in bed with a bottle, using a cup by 6 months, and weaning off the bottle at 12-14 months of age.
- the protective qualities of fluoride Ideally, every child should be drinking fluoridated water and have their teeth cleaned daily with a small smear of fluoride toothpaste.
- How to lift the lip and look for chalky white or brown spots, telling them that if they see any signs of dental decay, they should see the dentist.

Why?

By two years of age, most AI/AN children already have decay in their baby teeth. To prevent this disease, we must intervene soon after the first tooth erupts. An infant oral health assessment is recommended by the American Dental Association, American Association of Pediatric Dentists, American Public Health Association, and the American Academy of Pediatrics.

Fluoride varnish is a safe, effective method to provide topical fluoride treatments to infants and toddlers. Fluoride works by inhibiting demineralization, enhancing remineralization, and inhibiting plaque bacteria.

How?

Collaborate with medical, dental, community health, Head Start, daycare centers, WIC, and other tribal organizations who serve infants and their families. Train medical, dental, and other community health workers to provide an oral health assessment and fluoride varnish treatments for infants and young children.

Provide a fluoride varnish treatment during the first oral health assessment and aim to provide 4 or more treatments during the period from 9-24 months of age. Given the high prevalence of dental caries in AI/AN children, most children will be classified at high risk and therefore, some programs may choose to follow a fluoride varnish protocol for all infants and toddlers. Other programs may choose to assess individual risk and apply fluoride varnish only for children determined to be at high risk for dental caries. High risk is determined if any white or brown spot lesions are observed, if the baby is on the bottle past one year of age, or if any siblings had ECC.

Refer to a dentist if chalky white spots, brown spots or other signs of dental decay are observed. Chalky white spot lesions can be remineralized with fluoride varnish. Dental sealants can be applied to the primary molar teeth, often using a glass ionomer product. If lesions have already progressed into the dentin, it is possible that they can be treated with Interim Therapeutic Restorations (ITR) where the decay is scooped out and a fluoride-releasing material (glass ionomer) is placed in the lesion. No anesthesia or drills are used in this technique. The dental program will recall the child as appropriate, based on caries risk.

Note: While our overall goal is the prevention of ECC, early screening and the use of fluoride varnish, sealants, and ITRs

	screening and the use of fluoride varnish, sealants, and ITRs have the potential to manage ECC in AI/AN children, avoiding expensive referrals to pediatric dentists and extensive treatment under general anesthesia.
ENCOURAGE! Encourage healthy snacks and limited exposure to sweets, refined starches like chips and crackers, and sweetened drinks. Reinforce to families that pop does not belong in a preschooler's diet. ***RESULTS!*** As part of the Early Head Start program requirements, infants and toddlers will have their teeth cleaned daily with a small smear of fluoride toothpaste. **Note:** ***Education alone is not a best practice. Effective health education includes motivational interviewing, demonstrations, and reinforcement.***	The following list of recommendations for education should be reinforced by the various medical providers, dental staff, community health workers, Early Head Start, and other partners as identified in each community. • Teach families to lift the lip and look for chalky white or brown spots, telling them that if they see any signs of dental decay, they should see the dentist. • Educate families about the protective qualities of fluoride. Ideally, every child should be drinking fluoridated water and have their teeth brushed daily with a small smear of fluoride toothpaste • Educate and demonstrate to families, Early Head Start staff, and daycare staff how to clean infants' and toddlers' mouths. For infants, a clean wipe, gauze, or other infant cleaning tool is used to wipe the gums and any erupting teeth. Once a few teeth have erupted, a baby or child size toothbrush can be used to brush the teeth. • Educate families about the importance of never putting baby in bed with a bottle, using a cup by 6 months, and weaning at 12-14 months of age. Encourage healthy snacks and limited exposure to sweets, refined starches like chips and crackers, and sweetened drinks. Reinforce to families that pop does not belong in a preschooler's diet.

Supporting Articles

Holve S. Fluoride Varnish Applied at Well Child Care Visits Can Reduce Early Childhood Caries. IHS Primary Care Provider, October 2006.
http://www.ihs.gov/PublicInfo/Publications/HealthProvider/issues/PROV1006.pdf

Topical Fluoride Recommendations for High-Risk Children. Development of Decision Support Matrix: Recommendations from MCHB Expert Panel, October 22–23, 2007 Altarum Institute, Washington, DC.

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Best Practices: Three Through Five Years

RECOMMENDATIONS:

ASSESS!

Provide a yearly dental exam and assure that every child has a dental home.

PREVENT!

Provide topical fluoride varnish treatments during the first oral health assessment and provide repeated treatments every 3-4 months for children at high risk for dental caries.

COLLABORATE!

Collaborate with families and the dental provider to get any needed dental sealants and dental treatment completed.

EDUCATE!

Educate families about the protective qualities of fluoride. Ideally, every child should be drinking fluoridated water and have their teeth brushed daily with a pea-sized amount of fluoride toothpaste.

Why?

Most AI/AN children will either have ECC or not by this age. The focus now is on stopping the caries process in children with ECC and preventing future caries in the permanent teeth. Any child with dental decay or white spot lesions in his/her primary teeth should be considered at high risk for future dental caries.

Fluoride works by inhibiting demineralization, enhancing remineralization, and inhibiting plaque bacteria. Fluoride varnish is a safe, effective method to provide topical fluoride treatments to young children. Scientific studies have documented 15-30 percent reduction in caries with daily use of a fluoride toothpaste. Fluoride is added to about 90% of the toothpaste produced in the US, Canada and other developed countries. Fluoride can stop cavities from forming and can arrest the growth of existing cavities.

The consumption of soft drinks, including carbonated beverages, fruit juices and sports drinks in the US has increased 500% in the past 50 years and shows no sign of leveling off. Soda pop consumption begins early and increases as children age. Sugar-containing soft drinks can cause dental decay and the excess sugar can lead to obesity and type II diabetes in children. Some sodas have as much as 13 teaspoons of sugar. High consumption of soft drinks has also been shown to reduce consumption of milk, an important source of calcium for young children.

How?

Through Head Start, every child should receive a yearly dental exam. Every child at this age should have a dental home identified.

Provide a fluoride varnish treatment during the first oral health assessment and provide repeated treatments every 3-4 months for children at high risk for dental caries. Given the high prevalence of dental caries in AI/AN children, most children will be classified as high-risk. Fluoride varnish treatments can be provided efficiently onsite at the Head Start center or in the dental clinic.

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ENCOURAGE! Encourage healthy snacks and limited exposure to sweets, refined starches like chips and crackers, and sweetened drinks. Reinforce to families that pop does not belong in a preschooler's diet. ***RESULTS!*** As part of the Head Start program requirements, supervised brushing with a pea-sized amount of fluoride toothpaste will occur daily, after a meal. **Note:** ***Education alone is not a best practice. Effective health education includes motivational interviewing, demonstrations, and reinforcement.***	Collaborate with families and the dental provider to get any needed dental sealants and dental treatment completed. Some cavities can be treated with Interim Therapeutic Restorations (ITR) where the decay is scooped out and a fluoride-releasing material (glass ionomer) is placed in the lesion. No anesthesia or drills are used in this technique. The dental program will recall the child as appropriate, based on caries risk. Through Head Start, each child should be brushing daily after meals at school with a pea-sized amount of fluoride toothpaste. Purchase child size soft toothbrushes (these may be available through your local dental clinic) and a fluoride toothpaste with the ADA seal of approval. You can put the pea size dabs of toothpaste on a paper towel. Each child takes his/her own toothbrush and swipes one dab of toothpaste from the paper towel. Children can brush during circle time, using music to time the 3 minutes of recommended brushing. The following recommendations for education should be reinforced by medical providers, dental staff, community health workers, Head Start, and other partners as identified in each community. • Educate families about the protective qualities of fluoride. Ideally, every child should be drinking fluoridated water and have his/her teeth brushed twice daily with a pea-sized amount of fluoride toothpaste. Teach families how to clean a child's teeth. • Educate families about the importance of healthy snacks and limited exposure to sweets, refined starches like chips and crackers, and sweetened drinks. Reinforce to families that pop does not belong in a preschooler's diet.

Supporting Articles

Topical Fluoride Recommendations for High-Risk Children. Development of Decision Support Matrix: Recommendations from MCHB Expert Panel, October 22–23, 2007 Altarum Institute, Washington, DC.

Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States. MMWR, 50(RR-14):1-42, August 17, 2001.

Weintraub JA. Fluoride varnish for caries prevention: Comparisons with other preventive agents and recommendations for a community-based protocol. Special Care in Dentistry. 23(5):180-6, 2003

Supporting Materials

Note: The resources listed below are a combination of online courses and other materials to support oral health for Early Head Start programs and the families they serve.

Fluoride Varnish Initiative: The Fluoride Varnish Initiative is a collaborative effort between the Indian Health Service (HIS) and the IHS Head Start Program. The goal is to reduce dental caries among American Indian and Alaska Native (AI/AN) children by providing 3 to 4 fluoride varnish treatments a year to 80 percent of the AI/AN children ages 9 months through five years of age. For more information on fluoride varnish, go to the IHS Division of Oral Health webpage on Fluoride Varnish. You can also take the online course.

http://www.ihs.gov/doh/index.cfm?fuseaction=ecc.varnish

The National Maternal & Child Oral Health Resource Center provides many educational materials and program descriptions on oral health topics.

www.mchoralhealth.org

American Academy of Pediatric Dentists "Caries Risk Assessment Tool"

http://www.aapd.org/media/Policies_Guidelines/P_CariesRiskAssess.pdf

Be sure to check out the companion document

"IHS Head Start Oral Health Tools and Resources"

for practical ideas and resources

to support this document.