

CHILDREN'S ORAL HEALTH

RECENT RESEARCH
& BEST PRACTICE
RECOMMENDATIONS

brought to
you by:


**Children's
Oral Health**
Action Team

February 2015

ABOUT COHAT:

This toolkit is brought to you by the Children's Oral Health Action Team (COHAT), created in 2009 by the Ohio Department of Health Director's Task Force on Oral Health and Access to Dental Care. We are a team of more than 30 member organizations with expertise in the area of children's oral health policy and a key stake in improving children's oral health in Ohio. COHAT members include providers such as dentists, dental hygienists, pediatricians, school nurses, school-based health centers and children's hospitals; as well as advocates, insurance providers, state officials and representatives from the early childhood, school-age and children's disability communities.

What We Do

The Children's Oral Health Action Team was created to make sure Ohio Children have healthy teeth and gums. The best way to do this is to make good, comprehensive oral care available to all children in our state regardless of family income or location. COHAT works to educate the public and health care professionals about the need for preventive care. COHAT also advocates and educates by convening committed partners, identifying a shared agenda and mobilizing to achieve our goals:

- **GOAL 1:** Grow partnerships to advocate for children's oral health policy.
- **GOAL 2:** Advance oral health awareness, education and literacy for all Ohioans.
- **GOAL 3:** Change health care practices to improve children's oral health.

Contributors

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IN OHIO, ORAL HEALTH CARE IS THE
**NUMBER ONE UNMET HEALTH CARE
NEED FOR CHILDREN.**

CONTENTS:

INTRODUCTION	5
STARTING EARLY	7
GOALS FOR 2020	8
LEADING EVIDENCE-BASED INTERVENTIONS.....	9
Dental Sealants	9
Community Water Flouridation ...	10
Flouride Varnish	11
POLICY RECOMMENDATIONS.....	12
CONCLUSION	13
SOURCES.....	14

INTRODUCTION



Tooth decay affects more than
1 in 4 U.S. children age 2 to 5.¹



Tooth decay affects
1 in 2 U.S. adolescents age 12 to 15.²



44% of U.S. children will have
at least one cavity by kindergarten.
Children with cavities in their primary
(baby) teeth are three times more likely
to develop cavities in their adult teeth.³

GOOD ORAL HEALTH IMPROVES THE ABILITY TO SPEAK, SMILE, SMELL, TASTE, TOUCH, CHEW, SWALLOW, AND USE FACIAL EXPRESSIONS TO SHOW EMOTIONS.

It is widely known that oral health is essential to overall health. Poor oral health can have a harmful effect on children's quality of life, their school performance, and ability to succeed in their adult years.⁴ Despite this widespread understanding, tooth decay continues to be one of the most predominant chronic conditions among children nationally. In Ohio, oral health care is the number one unmet health care need for children.

The daily reality for millions of children is a life of enduring persistent dental pain, dental abscesses, an inability to chew foods well, and embarrassment about discolored, damaged and missing teeth. All of these things create a distraction from play and learning, and can significantly impact a child's self-esteem.⁵

Chronic conditions and poor oral health outcomes for children are preventable, and could be avoided by implementing simple policy changes in Ohio. The following brief summarizes recent research and best practice recommendations to improve children's oral health outcomes. The brief then outlines several public policy recommendations set forth by COHAT to help guide policy makers as they consider ways to improve the oral health outcomes of Ohio's children

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GOOD ORAL HEALTH STARTS EARLY.

Focusing on oral health early is important because cavity-causing bacteria can be established in an infant's mouth by the time his/her first tooth erupts. For children at high risk of oral disease, this infection—known as Early Childhood Caries (ECC)—can quickly progress into rampant decay that can destroy a child's primary teeth soon after they emerge. ECC causes discomfort for a large population of children, and can impede the growth of the body—resulting in adverse effects on body height and weight, and can result in failure to thrive.⁶ Oral bacteria can persist in the mouth as permanent teeth grow in, decay in primary teeth is a predictor of continuing decay throughout life.

Also, there is a direct link between children's oral health and the ability to learn. Nationwide, an estimated 51 million school hours per year are lost because of oral health problems. Children from families with low incomes have nearly twelve times as many restricted-activity days (e.g., days of missed school) because of oral health problems, as do children from families with higher incomes.⁷ When children's acute oral health problems are treated and they are not experiencing pain, their learning and school attendance records improve.

The Ostrow School of Dentistry in Southern California examined 1,500 socioeconomically disadvantaged children and found that on average, elementary children missed a total of 6 days per year, and high school children missed 2.6 days. For elementary students, 2.1 days of missed school were due to dental problems, and high school students missed 2.3 days due to dental issues. That shows oral health problems are a very significant factor in school absences. Also, parents missed an average of 2.5 days of work per year to care for children with dental problems.⁸

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ORAL HEALTH GOALS FOR 2020

ESTABLISHED BY THE U.S.
DEPARTMENT OF HEALTH
AND HUMAN SERVICES:

1. *Reduce the proportion of children with dental caries experience in their primary and permanent teeth.*
2. *Reduce the proportion of children and adolescents with untreated dental decay.⁹*

LEADING EVIDENCE-BASED INTERVENTIONS

Sealants • Fluoridation • Varnish

Research shows that early interventions are the most impactful for success. Fluoride varnish applied every 3-6 months after a tooth first erupts can alleviate many oral health complications for children. School-based dental sealant programs and community water fluoridation are the two leading evidence-based interventions to prevent tooth decay.¹⁰ Pulling all three of these interventions together can elevate a child's chance at having healthy teeth.

Dental Sealants:

Sealants are thin plastic coatings applied to tiny grooves on the chewing surfaces of the back teeth. Because the back teeth do most of the chewing, this is where most tooth decay in children and teens occurs. Sealants protect the chewing surfaces from decay by keeping germs and pieces of food out. Sealants are affordable and can reduce tooth decay in school-aged children by more than 70 percent.¹¹

Recent studies show only 50 percent of schoolchildren in Ohio have one or more sealants on their permanent teeth.¹² School-based sealant programs are especially important for reaching children from low-income families who are less likely to receive private dental care. Programs generally target schools for participation by using the percentage of children eligible for federal free or reduced-cost lunch programs.¹³

Following an assessment by a dentist, teams of dental hygienists and dental assistants place sealants on children's teeth. Children are checked for other dental problems as well, and parents are notified that follow-up care is needed. Sometimes, school staff help families find follow-up dental care. Students are rescreened the next school year to make sure that the sealants previously placed are intact and to place sealants on newly erupted teeth.¹⁴

*Utilizing
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interventions
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Leading Evidence-based Interventions

Community Water Fluoridation:

At the turn of the twentieth century, most Americans could expect to lose their teeth by middle age. That situation began to change with the discovery of the properties of fluoride, and the observation that people who lived in communities with naturally fluoridated drinking water had far less dental caries (tooth decay) than people in comparable communities without fluoride in their water supply. Community water fluoridation remains one of the great achievements of public health in the twentieth century—an inexpensive means of improving oral health that benefits all residents of a community—young and old, rich and poor alike.¹⁵

Fluoride is a naturally occurring mineral that is proven to protect against tooth decay. The health benefits of fluoridation include fewer and less severe cavities, less need for fillings and tooth extractions, and less pain and suffering associated with tooth decay.¹⁶

Fluoride works by stopping or even reversing the tooth decay process, which is caused by certain bacteria in the mouth. It keeps tooth enamel strong and solid. When a person eats sugar and other refined carbohydrates, these bacteria produce acid that removes minerals from the surface of the tooth. Fluoride helps to remineralize tooth surfaces and prevents cavities from continuing to form.¹⁷

Almost all water contains some naturally occurring fluoride, but usually at levels too low to prevent tooth decay. Many communities choose to adjust the fluoride concentration in the water supply to a level beneficial to reduce tooth decay and promote good oral health. This practice is known as community water fluoridation.¹⁸ Studies show that community water fluoridation prevents tooth decay by 18 to 40 percent.¹⁹

For every \$1 invested in water fluoridation, \$38 are saved in future dental treatments.²⁰

On January 7, 2011, the U.S. Department of Health and Human Services (HHS) proposed new recommendations for the level of fluoride in community water systems. Nationally, the recommended optimum level of fluoride in drinking water has been a range, 0.7 to 1.2 parts fluoride per million parts water (ppm). In Ohio, the recommended range has been 0.8 to 1.3 ppm. The optimum level was expressed as a range to account for differences in the amount of fluids that people drink.²¹

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Leading Evidence-based Interventions

HHS is now proposing that the new recommended optimum level can be set at the lowest level in the current range (0.7 ppm). This lower level is meant to ensure that children receive the best protection against tooth decay, while reducing the possibility of receiving too much fluoride. Today, fluoride is available in many dental products such as toothpaste, mouth rinses and fluoride applied by dental professionals.

The federal government is not recommending that communities stop adding fluoride to drinking water, only that the concentration of fluoride be reduced. On the contrary, health officials and dental professionals reaffirm that community water fluoridation is safe and effective, and improves the oral health of people of all ages. It remains one of the nation's ten most effective public health achievements of the 20th century.

Fluoride Varnish:

Children as young as 12 to 18 months can get cavities. Cavities in baby teeth can cause pain and even prevent children from being able to eat, sleep and learn properly. Fluoride varnish is a topical fluoride that is painted on the teeth to help stop cavities that have already started, and to prevent new cavities from forming. Small amounts of fluoride are applied and the varnish sets immediately upon contact with saliva. The flavored compound is well tolerated by infants and toddlers and can result in 25 percent to 45 percent reduction in tooth decay with applications every 3-6 months after the first tooth erupts.

Fluoride varnish can help to prevent cavities from forming and since most children do not lose all of their baby teeth until they are about 11 or 12 years old, it is important that their primary teeth are well taken care of.²²

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COHAT POLICY RECOMMENDATIONS

Restore Ohio's Dental Sealant Program and maximize the number of Ohio's children that can take advantage of the program.

In 2010, Ohio met the national benchmark of 50 percent of children with one or more sealants.²³ However, there has been a reduction to the Ohio Department of Health's Grant from Health Resources and Services Administration (HRSA), which will result in a 30 percent cut to the school based sealant program. COHAT is working to identify opportunities to restore this funding and calculate how much funding would be needed to fully fund this important program for so many children. With the possibility of reducing decay by almost 70 percent, this is an affordable option of targeting children in low-income families who are less likely to receive proper dental care.

Update Ohio's water fluoridation levels to mirror the recommendations by the U.S. Department of Health and Human Services.

Community water fluoridation is the only oral health intervention that benefits everyone regardless of age or income level. This valuable intervention is affordable and has proven results. Two published studies conducted by CDC reaffirm the benefits of community water fluoridation. Together, the studies continue to show that widespread community water fluoridation prevents cavities and saves money, both for families and the health care system. In fact, the economic analysis found that for larger communities of more than 20,000 people where it costs about 50 cents per person to fluoridate the water, every \$1 invested in this preventive measure yields approximately \$38 savings in dental treatment costs.²⁴

Increase providers' reimbursement for fluoride varnish for up to age 40 months.

Although any child can receive fluoride varnish, Medicaid will reimburse only from the time of tooth eruption until the 3rd birthday. Most children do not receive dental services until after their third birthday, which is also when most three-year well child checkups occur. Medicaid claims data shows that 43percent of children are ages 37 to 39 months at their three-year well child checkup. COHAT supports reimbursing fluoride varnish in a time frame that would allow for fluoride varnish to be applied during the three-year well child checkup.



CONCLUSION

With tooth decay being one of the most common preventable diseases seen in children, promoting good oral health care at a young age encourages children to start practicing good oral hygiene on their baby teeth, which will help them transition this care to their permanent teeth. Dental sealants, community water fluoridation, and fluoride varnish are not very costly, but can have a huge impact for many of Ohio's families.

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READ MORE AT:

www.RaiseYourVoiceForKids.org/COHAT

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