



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

Topical Fluoride Recommendations For High-Risk Children Under Age 6 Years

Decision Support Matrix

Population-Based Risk Factors

- Low-income children (e.g., enrolled in Head Start, WIC, free/reduced lunch program, Medicaid or SCHIP eligible, or other programs serving low-income children)
- Children with special health care needs

Fluoride Modality

Age

Children Under 2 Years

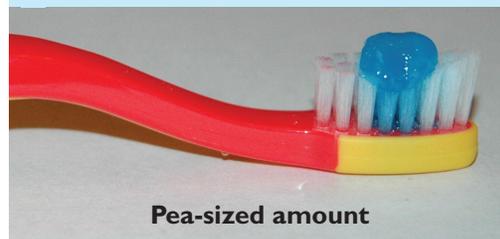
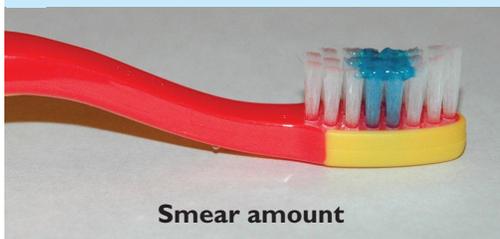
Children 2-6 Years

Toothpaste



- Encourage parents and caregivers to take an active role in brushing their children's teeth once the first tooth erupts
- Educate parents and caregivers on proper fluoride toothpaste use
- Brush children's teeth with fluoride toothpaste twice daily
- Use a smear of fluoride toothpaste

- Encourage parents and caregivers to take an active role in brushing their children's teeth
- Educate parents and caregivers on proper fluoride toothpaste use
- Brush children's teeth with fluoride toothpaste, or assist children with toothbrushing, twice a day
- Use no more than a pea-sized amount of fluoride toothpaste



- Do not rinse after brushing

- Children should spit out excess toothpaste
- Do not rinse after brushing

Varnish

- Apply every 3-6 months

- Apply every 3-6 months

Mouth rinses, gel, or foam

- Not recommended

- Not recommended

Introduction

Although community water fluoridation is considered the foundation for sound dental caries prevention programs, there are populations of children that experience higher rates of dental caries (tooth decay) and could benefit from additional fluoride exposure. Although the use of fluoride in dental caries prevention is considered safe and effective, there are questions among health professionals and programs working with young children at high risk of developing dental caries, as to the recommended use of topical fluoride. In an effort to address these questions the Maternal and Child Health Bureau (MCHB) convened an expert panel on October 22–23, 2007 to develop a decision support matrix on topical fluoride use for high-risk children. This matrix was developed primarily for a nondental audience—programs, paraprofessionals, and professionals without formal dental education working with higher-risk children in public health settings (e.g., childcare centers, Head Start programs, WIC programs, primary care clinics) but could also be useful to parents and caregivers.

The expert panel set out to develop a simplified decisionmaking tool for use in group settings that is straightforward, believing that the ease of use would facilitate oral health interventions. This matrix provides recommendations on the use of topical fluoride for higher-risk children aged 6 years and younger. This matrix focuses on topical fluoride—toothpaste, varnish, mouth rinses, gel, and foam. Lastly, although dietary fluoride supplements can have a topical effect, the expert panel chose not to address fluoride supplements in the matrix.

While this matrix is targeted at group interventions, the expert panel agreed that an ideal prevention model targeting high-risk children would include population-based fluoride interventions and individual risk assessments conducted during dental and medical appointments.

Topical Fluoride Recommendations For High-Risk Children Under Age 6 Years			
Decision Support Matrix			
Population-Based Risk Factors			
<p>1. Low-income children (e.g., enrolled in Head Start, WIC, free/reduced lunch program, Medicaid or SCHIP eligible, or other programs serving low-income children)</p> <ul style="list-style-type: none"> Children with special health care needs 			
Age	Children Under 2 Years	Children 2-6 Years	
Fluoride Modality	<p>2. Toothpaste</p>  <ul style="list-style-type: none"> Encourage parents and caregivers to take an active role in brushing their children's teeth once the first tooth erupts Educate parents and caregivers on proper fluoride toothpaste use Brush children's teeth with fluoride toothpaste twice daily Use a smear of fluoride toothpaste  <p>Smear amount</p> <ul style="list-style-type: none"> Do not rinse after brushing 	 <ul style="list-style-type: none"> Encourage parents and caregivers to take an active role in brushing their children's teeth Educate parents and caregivers on proper fluoride toothpaste use Brush children's teeth with fluoride toothpaste, or assist children with toothbrushing, twice a day Use no more than a pea-sized amount of fluoride toothpaste  <p>Pea-sized amount</p> <ul style="list-style-type: none"> Children should spit out excess toothpaste Do not rinse after brushing 	
	3. Varnish	<ul style="list-style-type: none"> Apply every 3-6 months 	<ul style="list-style-type: none"> Apply every 3-6 months
	4. Mouth rinses, gel, or foam	<ul style="list-style-type: none"> Not recommended 	<ul style="list-style-type: none"> Not recommended
	Decision Support Matrix developed by MCHB Expert Panel on Topical Fluoride, October 2007		

I. Definition of High-Risk Children

There were two groups of children identified by the expert panel as high-risk populations. These groups are described below:

Low-Income Children

This category includes children that are enrolled in programs where they must meet income eligibility requirements. This category includes children enrolled in Early Head Start, Head Start, WIC, National School Lunch Program, Medicaid, and the State Children's Health Insurance Program (SCHIP).

Children with Special Health Care Needs (CSHCN)

MCHB defines CSHCN as children and adolescents: *who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who require health and related services of a type or amount beyond that required by children generally.*²⁶

The expert panel acknowledged that some CSHCN experience higher rates of disease due to specific conditions that can significantly compromise their oral health and increase the likelihood of developing oral disease.

Description of Fluoride Recommendations By Modality

Members of the expert panel reviewed existing professional dental guidelines on fluoride issued by the Centers for Disease Control and Prevention (CDC),²⁷ the American Academy of Pediatric Dentistry (AAPD),²⁸ and American Dental Association (ADA)^{29,30} to develop the recommendations that follow.

2. Toothpaste. Unless otherwise instructed by a health professional, the expert panel recommended that all children at high risk should use fluoride toothpaste and provided specific guidance to accompany this recommendation. The panel recommended that children under 2 years of age use a “smear” of toothpaste while children aged 2–6 years use a slightly larger “pea-sized” amount of toothpaste. The recommendation differed by age because children under 2 years are not able to spit out excess toothpaste and are more likely to inadvertently swallow toothpaste. Children should not rinse after brushing. The panel also emphasized the role of adults and parents because tooth brushing is more effective when young children are supervised or assisted by an adult.

3. Fluoride Varnish. The expert panel was in agreement that fluoride varnish is an effective preventive measure with higher risk populations. The consensus among panel members was that fluoride varnish should be applied *at least* every 6 months, but some members preferred to specify at 3- to 4-month intervals. After some debate, the group decided to adopt the recommendation that fluoride varnish be applied every 3–6 months.

4. Mouth Rinses, Gel, or Foam. The group reached quick consensus that rinses, gels, or foams not be recommended for children under 6 years, because the ability to control the swallowing reflex is not fully developed in preschool-aged children, increasing the likelihood that children under 6 years of age inadvertently ingest excess fluoride.

The complete report can be viewed at:

<http://www.mchoralhealth.org/PDFs/TopicalFluorideRpt.pdf>