



## 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**

## Background

While there has been a decline in the prevalence and severity of dental caries (tooth decay) in the U.S. population overall, dental caries continues to be the most common chronic childhood disease—five times more common than asthma in children ages 5–17 years.<sup>1</sup> Among young children, the prevalence of early childhood caries (ECC) has increased. Recent national survey data show that among all 2- to 5-year-old U.S. children, 28 percent exhibited evidence of dental caries (tooth decay), an increase from 24 percent 10 years earlier.<sup>2</sup> Despite increased prevalence rates, dental caries is largely preventable.

The use of fluoride administered both systemically and topically has been shown to be effective in preventing and controlling dental caries. Community water fluoridation is considered an important factor in the reduction of dental caries and contributes to reduced caries experience among children who live in optimally fluoridated communities.<sup>3,4</sup> 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. Research shows that 33 percent of children experience 75 percent of the dental caries burden.<sup>5</sup> The highest disease burden is among low-income children and children from racial- and ethnic-minority groups, in particular American Indian/Alaska Native (AI/AN), African-American, and Latino.<sup>6,7,8,9</sup> In fact, AI/AN children experience the highest dental caries rates, with 68 percent of AI/AN preschool children having decay in their primary teeth.<sup>10</sup>

Children most affected by oral health disparities could benefit from additional fluoride exposure beyond water fluoridation. A growing body of evidence supports the benefit of frequent exposure to topical fluorides and concentrated forms of topical fluoride (e.g., fluoride varnish).<sup>11,12</sup> 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 high-risk children as to the recommended use of topical fluoride, weighing the caries-preventive benefits of fluoride with the potential risk of fluorosis.

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 (Appendix A) on topical fluoride use for high-risk children. This report presents a summary of the process undertaken to develop the matrix and the expert panel's recommendations.

## Expert Panel

This meeting is one of a series of meetings convened by MCHB over the past several years to address cutting-edge maternal and child oral health issues. Members of the expert panel were identified by MCHB as national experts and leaders in the areas of fluoridation, pediatric dentistry, nutrition, pediatric medicine, dental public health, primary care, oral health education, and health promotion. Additionally, these individuals brought extensive experience conducting research and working with low-income and high-risk populations, including Medicaid enrollees, migrant and seasonal farmworkers, children with special health care needs (CSHCN), and AI/ANs in a range of clinical, community, and academic settings (participant list in Appendix B).

The expert panel was tasked with:

- Reviewing the current knowledge base and professional dental guidelines regarding topical fluoride use with high-risk children
- Reviewing the concept of risk and defining high-risk children
- Identifying risk factors and settings using fluoride interventions with high-risk children
- Developing a decision support matrix to assist nondental health professionals in designing appropriate fluoride interventions for high-risk children

Members of the expert panel participated in facilitated discussions during the 2-day meeting to reach consensus on several key areas for the purpose of informing the content of the decision support matrix (agenda in Appendix C). Discussions addressed the definition of high risk, which children meet this definition, and what fluoride modalities are appropriate by age. The underlying assumption that guided discussions was that recommendations would focus on those children considered to be at high risk, with the goal of providing substantial dental caries prevention while minimizing risk of dental fluorosis. More specifically, these discussions were guided by the following questions, presented below and presented throughout the report as “guiding questions”:

- Who is the target audience for these recommendations?
- What are the informational needs of programs, such as Head Start and WIC programs that should be considered in developing our recommendations?
- Do we support population-based risk assessment for children in group settings?
- What groups of children should be considered high risk?
- How many categories of risk should we consider?
- Is it important to leave a “moderate-risk” category?
- How do we balance caries prevention with the risk of fluorosis for high-risk children?
- What are the areas of agreement among the existing professional guidelines?
- How do we stratify these guidelines by age group?

Prior to the meeting, the panel was provided with a draft decision support matrix and a background paper prepared specifically for this meeting, which provided a summary of the current knowledge base on topical fluoride and professional guidelines. In addition to a summary of the current knowledge base, the background paper also presented preliminary recommendations. It should be noted that the expert panel did not conduct a comprehensive and systematic review of available scientific evidence and instead based its recommendations on existing evidence-based clinical and expert guidelines.

The expert panel did acknowledge the challenge of translating existing guidelines into a document that can provide clear guidance for a primarily nondental audience. The panel also acknowledged that there is no one-size-fits-all approach and that while this document is intended to provide guidance, programs must balance these recommendations with specific professional guidance provided by dental partners and practitioners.

# Development of Decision Support Matrix

There is greater interest in using fluoride interventions as programs and practitioners increasingly focus on prevention and the evidence for the efficacy of fluoride strengthens. As programs expand their use of fluoride, questions have arisen about the recommended usage with young children in nondental settings. In response to questions from the field, MCHB identified a need for a straightforward document that could provide guidance and elected to develop a decision support matrix that could inform programs when making decisions about a range of fluoride modalities.

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. As such, the target audience for the decision support matrix—programs, health professionals, and paraprofessionals working with high-risk populations—was an important consideration during the 2-day meeting. The expert panel concluded that an ideal prevention model targeting high-risk children would include population-based fluoride interventions combined with individual risk assessments conducted during dental and medical appointments.

## Intended Audiences and Their Role in Prevention

### Guiding Questions

- *Who is the target audience for these recommendations?*
- *What are the informational needs of programs such as Head Start and WIC that should be considered in developing our recommendations?*

This matrix was developed primarily for a nondental audience—programs, paraprofessionals, and professionals without formal dental education working in public health settings (e.g., childcare centers, Head Start programs, WIC programs, primary care and pediatric clinics)—but can also be beneficial to parents. The expert panel assessed that, unlike dental professionals with the knowledge and expertise to determine appropriate use of topical fluoride based on training and existing clinically-based risk assessment tools, nondental professionals could benefit from additional guidance specific to topical fluoride that could be applied

in group settings. Increased attention on the disease burden of ECC has engaged health professionals and programs working with young high-risk children to expand oral health promotion and disease prevention efforts. The expert panel recognized the important role of these individuals in primary and secondary prevention among higher-risk populations because of their ability to reach these children at younger ages. While these individuals can play an important role in dental caries prevention, they may be reluctant to incorporate fluoride in their preventive efforts because of their concerns about fluorosis. Dental fluorosis, a discoloration of the teeth, caused when children receive excessive fluoride intake during the formation of tooth enamel, is regarded by most researchers as cosmetic in nature.<sup>13</sup> The expert panel concluded that higher-risk children could benefit from an aggressive preventive approach because their risk of developing ECC outweighs their risk of mostly mild fluorosis. The guiding principle is that preventive efforts should be maximized for those at greatest risk.

The decision support matrix is intended for use by individuals working with groups of high-risk children to support the implementation of a fluoride intervention (e.g., tooth-brushing routine using fluoride toothpaste, fluoride varnish program) that is complemented by other important oral health promotion and disease prevention activities, including conducting education, providing anticipatory guidance, making dental referrals, and promoting the establishment of the dental home by the age of 1.

It is considered appropriate for programs to consult with local dental providers in the development of an oral health program using topical fluoride; to adapt these recommendations based on this consultation and individual risk assessment information; or to be in accordance with program and State guidelines.

## Conceptualizing Risk Assessment

### Guiding Questions

- *Do we support population-based risk assessment for children in group settings?*
- *What groups of children should be considered high risk?*

Considering the expert panel was convened to specifically address guidelines for high-risk children, participants spent a significant amount of time discussing the concept of risk and how best to categorize and assess dental caries risk relative to young children. The panel discussed a range of individual risk criteria as well as individual risk assessment tools developed by professional medical and dental organizations, primarily for use by clinicians. These tools were described as beneficial, but most panel members felt that additional work was necessary to expand the utility of such tools

to broader settings. And while an individual risk assessment was recommended, members of the panel did identify some limitations of relying solely on such a process:

- Existing risk assessment instruments and models may be too complex for a nondental audience.
- In some settings, it may not be practical or cost-effective to conduct individual risk assessments.
- In some settings, individual risk assessments may be less useful when all or most of children served can be categorized as high risk.

Although studies have indicated that a successful dental caries risk assessment approach should consider a range of factors—social, behavioral, microbiologic, environmental, and clinical—the expert panel concluded that there is a need for a population-based approach to risk assessment although this approach is not well-defined in the literature. The expert panel considered various criteria, including access to dental care, income, special health care needs, and fluoride exposures, that could be considered when assessing a child’s risk status. They also drew from research, which has cited prior dental caries experience, parental education, and socioeconomic status as the best predictors of decay in primary teeth.<sup>14</sup> Of these, members of the panel agreed that low socioeconomic status, and specifically income, can be applied most easily to group settings, such as Head Start and WIC programs where eligibility is largely income-based (e.g., family income relative to the Federal poverty income guidelines). Several participants noted that additional definitive studies with very young high-risk children are needed.

During the discussion session, the expert panel considered populations of children that experience higher levels of disease. Beyond low income status, the expert panel debated the inclusion of other groups including the category of 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.<sup>15</sup>*

While the expert panel recognized that the MCHB definition of CSHCN is broad and encompasses a group of children with a range of diagnoses and functional abilities, there was agreement that specific conditions can significantly compromise oral health and increase the likelihood of developing oral disease. For example, a fact sheet produced by the National Maternal and Child Oral Health Resource Center identified the following conditions that increase risk:

- Children and adolescents with compromised immunity or certain cardiac conditions may be especially vulnerable to the effects of oral diseases.
- Children and adolescents with mental, developmental, or physical impairments who do not have the ability to understand and assume responsibility for or cooperate with preventive oral health practices may be vulnerable as well.
- Malocclusion and crowding of the teeth occur frequently in children with atypical development. Over 80 craniofacial syndromes exist that can affect oral development.
- Medications, special diets, and oral motor habits can cause oral health problems for many children and adolescents with special health care needs (e.g., tooth decay—promoting the effect of medicines with high sugar content, excessive tooth grinding with self-stimulating behaviors.)<sup>16</sup>

Even though the group of CSHCN is more difficult to define and not all children who meet the MCHB definition are at increased risk of developing dental caries, the expert panel agreed that enough children are more vulnerable to the effects of oral disease, that CSHCN could benefit from fluoride interventions and should be included in the high-risk category.

### Guiding Questions

- *How many categories of risk should we consider?*
- *Is it important to leave a “moderate-risk” category?*

In defining the category of high-risk children, the group questioned whether the high-risk category was in the context of a two-tier system or a three-tier system. It was mentioned that most risk assessment models are based on a tiered system that include either two or three risk categories. For example, both the American Academy of Pediatric Dentistry (AAPD) and the American Dental Association (ADA) have developed three-tiered risk categories (low risk, moderate risk, high risk) specific to children.<sup>17,18</sup> Considering the target audience for the decision support matrix, some members of the expert panel felt that a three-tiered system is overly confusing

and lacking consistent epidemiological findings to support the implementation of such a system. The panel also believed that it was unclear what would constitute moderate risk on a population-based level and ultimately decided to adopt a more liberal two-tiered model (high risk and low risk) and focus this guidance on the high-risk group.

## Translating Professional Dental Guidelines into Recommendations

### Guiding Questions

- *How do we balance caries prevention with the risk of fluorosis for high-risk children?*
- *What are the areas of agreement among the existing professional guidelines?*
- *How do we stratify these guidelines by age group?*

The expert panel was provided with a draft of the decision support matrix and a background paper prepared for this meeting by Jim Crall, Director of the National Oral Health Policy Center. This background paper provided a summary of professional guidelines issued by the Centers for Disease Control and Prevention (CDC),<sup>19</sup> the AAPD,<sup>20,21</sup> and the ADA.<sup>22,23</sup> In addition to a summary of the current knowledge base, the background paper presented preliminary recommendations. During the meeting, members of the expert panel were led through a review and discussion of guidelines specific to each fluoride modality in the

context of high-risk children until consensus was reached. Lastly, although dietary fluoride supplements can have a topical effect, the expert panel chose not to address fluoride supplements in the matrix.

While addressing each modality, there was discussion about the age range of children that would be covered by the recommendations. Because of the focus on prevention and early intervention, the panel felt strongly about including recommendations targeting early childhood through school age, approximately age 6. There was some debate about whether this age group was too broad and should be broken down further. Throughout the discussion, most agreed that recommendations would differ by age and should distinguish very young children from other young children. The group debated whether to stratify recommendations at age 2 or 3 and felt that there was no strong evidence supporting either age as the most appropriate. Upon reflecting on other recommendations for children, the expert panel decided to be consistent with organizations, such as CDC, and develop recommendations for two groups—children under 2 years and children aged 2–6 years.

**Drinking Water.** Although the decision support matrix does focus on topical fluoride, members of the expert panel considered it very important to note that community water fluoridation is a part of a comprehensive population-based strategy to prevent or control dental caries in communities.<sup>24</sup>

**Fluoride Toothpaste.** Panel members were definitive in their recommendation that all high-risk children use fluoride toothpaste and felt that the professional community has communicated inconsistent recommendations. The panel felt that it was important to communicate that high-risk children would benefit from brushing twice daily. Panel members recommended a “smear” of toothpaste for children under 2 years and a “pea-size” amount of toothpaste for children 2–6 years and suggested that photographs would be helpful in differentiating these amounts. Members spent a considerable amount of time crafting the language in this recommendation and felt that it was important to include these statements:

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

The panel chose to emphasize the role of adults, particularly parents, in supervising or assisting children with tooth brushing and encouraged programs to provide parents and caregivers with education on proper toothpaste use.

**Fluoride Varnish.** The panel quickly agreed that fluoride varnish should be recommended for high-risk children but debated the issue of frequency. There was discussion about existing periodicity schedules and guidelines, including the ADA recommendation that fluoride varnish be applied at 3- to 6-month intervals for higher-risk children. 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 ADA recommendation that fluoride varnish be applied every 3–6 months.

**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 younger than 6 years of age can inadvertently ingest excess fluoride.<sup>25</sup>

## Conclusion And Next Steps

MCHB plans to develop a dissemination strategy to share the decision support matrix effectively with programs and practitioners and other important target audiences. The panel discussed several next steps, which included sharing the decision support matrix with association members from organizations such as the American Academy of Pediatrics, the ADA, the AAPD, and the Association of State and Territorial Dental Directors, by including a description of the matrix in association newsletters, presenting at professional conferences, and/or submitting articles to relevant peer-reviewed journals. There was also discussion about soliciting feedback on the matrix from relevant professional dental and medical organizations and possibly pursuing formal endorsements from these organizations.



Appendix A: Decision Support Matrix  
Topical Fluoride Recommendations

# 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

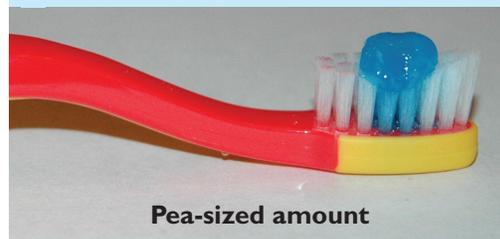
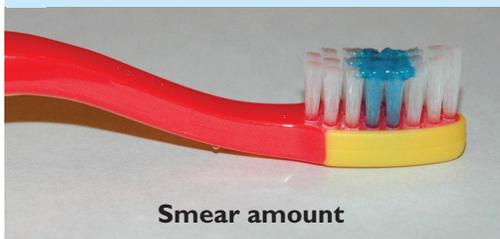
Children 2-6 Years

**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><b>1.</b> 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"> <li>Children with special health care needs</li> </ul>			
Age	Children Under 2 Years	Children 2-6 Years	
Fluoride Modality	<p><b>2.</b> Toothpaste</p>  <ul style="list-style-type: none"> <li>Encourage parents and caregivers to take an active role in brushing their children's teeth once the first tooth erupts</li> <li>Educate parents and caregivers on proper fluoride toothpaste use</li> <li>Brush children's teeth with fluoride toothpaste twice daily</li> <li>Use a smear of fluoride toothpaste</li> </ul>  <p>Smear amount</p> <ul style="list-style-type: none"> <li>Do not rinse after brushing</li> </ul>	 <ul style="list-style-type: none"> <li>Encourage parents and caregivers to take an active role in brushing their children's teeth</li> <li>Educate parents and caregivers on proper fluoride toothpaste use</li> <li>Brush children's teeth with fluoride toothpaste, or assist children with toothbrushing, twice a day</li> <li>Use no more than a pea-sized amount of fluoride toothpaste</li> </ul>  <p>Pea-sized amount</p> <ul style="list-style-type: none"> <li>Children should spit out excess toothpaste</li> <li>Do not rinse after brushing</li> </ul>	
	<b>3.</b> Varnish	<ul style="list-style-type: none"> <li>Apply every 3-6 months</li> </ul>	<ul style="list-style-type: none"> <li>Apply every 3-6 months</li> </ul>
	<b>4.</b> Mouth rinses, gel, or foam	<ul style="list-style-type: none"> <li>Not recommended</li> </ul>	<ul style="list-style-type: none"> <li>Not recommended</li> </ul>
	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.*<sup>26</sup>

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),<sup>27</sup> the American Academy of Pediatric Dentistry (AAPD),<sup>28</sup> and American Dental Association (ADA)<sup>29,30</sup> 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.



## Appendix B: Participant List

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## Appendix C: Meeting Agenda



**Meeting Objectives:**

- Review populations at highest risk for dental caries and the process for assessing risk in group settings
- Review professional dental guidelines within the context of high-risk children
- Translate guidelines and recommendations into a decision-support matrix that can provide guidance to practitioners and programs in designing appropriate topical fluoride interventions

**Agenda**  
**Monday, October 22<sup>nd</sup>**

- 8:30 – 9:00     **Continental Breakfast**
  
- 9:00 – 9:30     **Welcome and Introductions**  
Remarks by:
  - Mark Nehring, DMD, MPH, Chief Dental Officer, MCHB
- 9:30 – 10:00   **Meeting Overview**  
Presented by:
  - John Rossetti, DDS, MPH, Lead Oral Health Consultant, MCHB
- 10:00 – 11:00   **Review of Background Paper**  
Presentation by:
  - Jim Crall, DDS, ScD, Director, National Oral Health Policy Center, UCLA
- 11:00 – 12:00   **Participant Questions and Comments**
- 12:00 – 1:30    **Lunch on Your Own (not provided)**
- 1:30 – 2:00     **Defining and Assessing Caries Risk in Group Settings**  
Presentation by:
  - Bonnie Bruerd, DrPH, Region XI Oral Health Consultant
- 2:00 – 3:30     **Defining and Assessing Caries Risk in Group Settings (continued)**  
Facilitated Discussion Led by:
  - Bonnie Bruerd, DrPH, Region XI Oral Health Consultant
- 3:30 – 3:45     **BREAK**
- 3:45 – 5:15     **A Review of Professional Dental Guidelines by Fluoride Modality**  
Facilitated Discussion Led by:
  - Julie Frantsve-Hawley, RDH, PhD, Director, Research Institute and Center for Evidence-based Dentistry Science, American Dental Association
- 5:15 – 5:30     **Preview of Day 2**  
Remarks by:
  - John Rossetti, DDS, MPH, Lead Oral Health Consultant, MCHB



**Agenda**  
**Tuesday, October 23<sup>rd</sup>**

- 8:30 – 9:00      Continental Breakfast**
- 9:00 – 10:00    Review of Preliminary Recommendations from Background Paper**  
Facilitated Discussion Led by:
  - Jim Crall, DDS, ScD, Director, National Oral Health Policy Center, UCLA
- 10:00-11:00    Translating Recommendations Into Decision-Support Matrix**  
Facilitated Discussion Led by:
  - Patti L. Mitchell, MPH, RD, Senior Program Analyst, Supplement Food Programs Division (WIC), Food and Nutrition Service, U.S. Department of Agriculture
  - Jim Crall, DDS, ScD, Director, National Oral Health Policy Center, UCLA
- 11:00 – 11:15    BREAK**
- 11:15 – 12:30    Translating Recommendations Into Decision-Support Matrix (continued)**  
Facilitated Discussion Led by:
  - Patti L. Mitchell, MPH, RD, Senior Program Analyst, Supplement Food Programs Division (WIC), Food and Nutrition Service, U.S. Department of Agriculture
  - Jim Crall, DDS, ScD, Director, National Oral Health Policy Center, UCLA
- 12:30 – 1:00    Final Remarks and Next Steps**  
Closing Remarks by:
  - John Rossetti, DDS, MPH, Lead Oral Health Consultant, MCHB

## Endnotes

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