

Maryland's Mouths Matter: Fluoride Varnish and Oral Health Screening Program for Kids—Training for EPSDT Medical Providers in Maryland

Welcome to **Maryland's Mouths Matter: Fluoride Varnish and Oral Health Screening Program for Kids—Training for EPSDT Medical Providers in Maryland**. This series of four modules is designed to provide [Early and Periodic Screening, Diagnosis, and Treatment \(EPSDT\)](#) medical providers and other health providers with knowledge needed to reduce the incidence of dental caries among children ages 3 and under and to contribute to the establishment of a dental home.

- Module 1: The Role of Medical Providers
- Module 2: Dental Caries Process
- Module 3: Caries Risk Assessment
- Module 4: Anticipatory Guidance, Fluoride Varnish, and Referral

Post-Tests

- **EPSDT medical providers** (i.e., physicians, nurse practitioners) in Maryland must complete the curriculum post-tests to become eligible to seek reimbursement for the application of fluoride varnish for children ages 9 months up to 36 months through the Maryland Medicaid Program.
- **Dentists and dental clinics** enrolled as providers in the Maryland Medicaid Program are able to seek reimbursement for the application of fluoride varnish for children ages 9 months up to 36 months without having to complete the curriculum.
- **All other medical and dental providers** practicing in and outside of Maryland may take the curriculum post-tests for self-assessment.

Cost

The curriculum is free.

Course Development

The curriculum was developed by a multidisciplinary team of experts. [Click here](#) for a list of authors and reviewers. Development of the curriculum was supported by the Maternal and Child Health Bureau (grant number H47MC08649), Health Resources and Services Administration, U.S. Department of Health and Human Services; the Office of Oral Health, Maryland Department of Health and Mental Hygiene; and the University of Maryland Dental School.

After completing the curriculum, please take a moment to fill out the evaluation. Your feedback will help improve the curriculum.

Note: Returning users who have registered but have not finished the post-tests will be directed to the login page to complete the post-tests.

Module 1 The Role of Medical Providers

Overview

Module 1 discusses the important role that medical providers and staff can play in children's oral health. The module also describes the Maryland's Mouths Matter: Fluoride Varnish and Oral Health Screening Program for Kids medical provider-eligibility requirements.

Learning Objectives

- Describe the role that medical providers and staff can play in children's oral health.
- Explain the American Academy of Pediatrics' policy statement regarding oral health risk assessments.
- List the eligibility requirements for medical providers who can be reimbursed for the application of fluoride varnish under the Maryland's Mouths Matter: Fluoride Varnish and Oral Health Screening Program for Kids.
- Explain what medical extenders are, and list the oral health services they can provide under the Maryland's Mouths Matter: Fluoride Varnish and Oral Health Screening Program for Kids.
- Explain the certification process for the Maryland's Mouths Matter: Fluoride Varnish and Oral Health Screening Program for Kids.

Integrating Oral Health and General Health

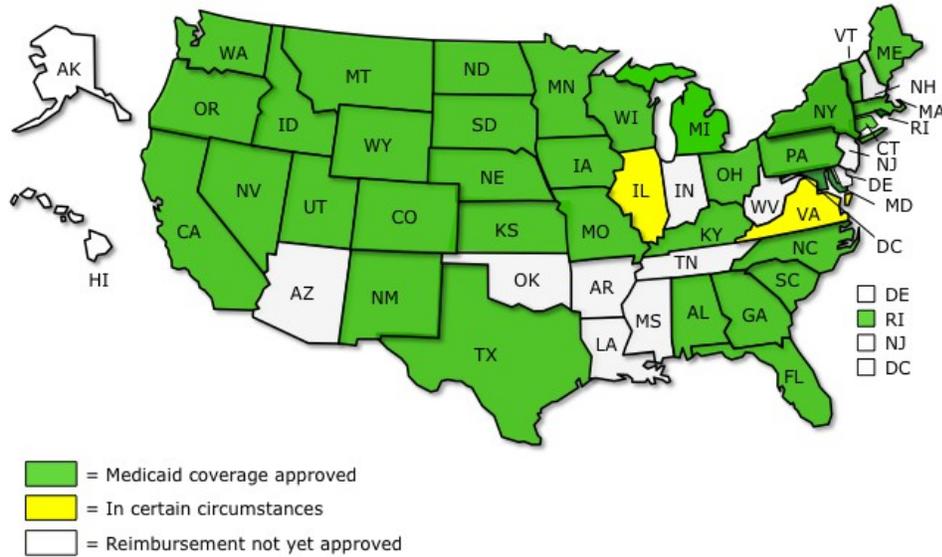
Medical providers and their staff, who see young children earlier and more frequently than oral health providers, play a key role in helping to ensure that oral disease, including dental caries, is prevented, or, if it already exists, that it is treated. Medical providers can have a major impact on young children's oral health outcomes.

The incorporation of oral health into well-child visits takes little time and involves the following activities:

- Assessing the child's risk for developing dental caries
- Recognizing abnormal findings in the oral cavity
- Providing anticipatory guidance to parents
- Applying fluoride varnish
- Making referrals to dentists

Realizing the important role that medical providers can play in children's oral health, the American Academy of Pediatrics developed a policy statement recommending that by age 6 months every child should receive an oral health risk assessment conducted by a qualified pediatrician or a qualified pediatric health professional.¹ The American Academy of Pediatric Dentistry supports this recommendation.²

Map showing states that reimburse medical providers to apply fluoride varnish



Cantrell C. 2009. [Engaging Primary Care Medical Providers in Children's Oral Health](#). Portland, ME: National Academy for State Health Policy. (Updated 5/2010)

Throughout the United States, there is a growing trend toward training medical providers to conduct oral health risk assessment and apply fluoride varnish. Currently, more than 65 percent of state Medicaid programs, including the Maryland Medicaid Program, reimburse medical providers for the application of fluoride varnish.

1.2 Provider Eligibility and Training

The program, [Maryland's Mouths Matter: Fluoride Varnish and Oral Health Screening Program for Kids](#), established July 1, 2009, provides Medicaid reimbursement to Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) medical providers for applying fluoride varnish to the teeth of children ages 9 months up to 36 months.

EPSDT Medical Providers

To be eligible for reimbursement for fluoride application, a provider must meet the following criteria:

- Be an EPSDT-certified physician or nurse practitioner licensed to practice in Maryland.
- Participate in the Maryland Medicaid Program, and provide services in accordance with the rules and regulations of the program.
- Successfully complete the fluoride varnish curriculum post-tests with at least 80 percent

Materials for Health Providers
 The [Maryland Department of Health and Mental Hygiene's Office of Oral Health](#) provides information and support for health providers participating in [Maryland's Mouths Matter: Fluoride Varnish and Oral Health Screening Program for Kids](#). Materials include a manual on procedures, policies, and protocols; Medicaid billing and reimbursement information; sample forms; and consumer brochures.

accuracy.

Medical Extenders

Designated EPSDT medical “extenders” also may apply fluoride varnish. In Maryland, a designated EPSDT medical extender is defined as anyone who meets both of the following conditions:

- Is working under the supervision of an EPSDT-certified physician or nurse practitioner licensed to practice in Maryland.
- Is legally allowed to administer medical immunizations in Maryland (e.g., physician assistants, registered nurses, licensed practical nurses, and other medical personnel).

Medical extenders must receive training on fluoride varnish application and be employed by an EPSDT medical provider who has met the criteria for participating in the program. Medical extenders can be trained directly by their EPSDT medical provider or may complete this course. In public health clinics, medical extenders can apply fluoride varnish with standing orders from their EPSDT medical provider. Medical extenders cannot seek reimbursement for the provision of this service under the Maryland Medicaid Program.

Dentists and Dental Hygienists

Maryland’s state dental practice act includes an oral health screening and application of fluoride varnish as approved functions for licensed dentists and dental hygienists. Additional training is not required to perform these functions or to seek reimbursement for the application of fluoride varnish if a dentist or dental clinic is enrolled as a provider in the Maryland Medicaid Program. Dentists and dental hygienists, however, may find the course a helpful review and it may offer new strategies for working with children.

1.2 Provider Eligibility and Training

Certification of Training Completion

When an EPSDT medical provider successfully completes this course, Maryland’s [Department of Health and Mental Hygiene, Office of Oral Health](#), will notify the Maryland Medicaid Program and [DentaQuest](#) (formerly Doral Dental Services), the state’s Medicaid dental third-party administrator, that the provider has completed the course. The Office of Oral Health will maintain a list of all EPSDT medical providers who have successfully completed the course. Certification of successful completion of the course will be provided after all of the post-tests are completed. Each provider is responsible for keeping the certificate of training completion. The certificate must be presented upon request of the Maryland Medicaid Program.

After the Maryland Medicaid Program has verified the provider’s EPSDT certification and confirmed that all group or individual personal identifiers are active and accurate, DentaQuest will send the medical provider a welcome letter describing the reimbursement process. The welcome letter will provide a unique username and password, which will allow the medical provider to submit claims online for reimbursement.

Key Points

- Medical providers and staff see young children earlier and more frequently than oral health providers and play a key role in establishing optimal oral health.
- The American Academy of Pediatrics recommends that by age 6 months every child should receive an oral health risk assessment conducted by a qualified pediatrician or a qualified pediatric health professional.
- To receive reimbursement for a fluoride varnish application, providers must (1) be EPSDT-certified physicians or nurse practitioners licensed to practice in Maryland; (2) participate in the Maryland Medicaid Program, and provide services in accordance with the rules and regulations of the program; and (3) successfully complete the fluoride varnish curriculum post-tests with at least 80 percent accuracy.
- Medical extenders may apply fluoride varnish if they are (1) working under the supervision of an EPSDT-certified physician or nurse practitioner licensed to practice in Maryland and (2) legally allowed to administer medical immunizations in Maryland.
- Medical extenders are not eligible to seek reimbursement for the application of fluoride varnish under Maryland's Medicaid Program; only their EPSDT-certified physician or nurse practitioner employer can bill under this program.
- When an EPSDT medical provider successfully completes this course, Maryland's Department of Health and Mental Hygiene, Office of Oral Health, will notify the Maryland Medicaid Program and DentaQuest that the provider has completed the course.

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Module 2 Dental Caries Process

Overview

Module 2 defines dental caries and early childhood caries and discusses factors that influence the development of tooth decay. It also addresses factors that are protective against dental caries. Finally, the module explains caries balance.

Learning Objectives

- Explain the dental caries process.
- Define and describe dental caries and early childhood caries.
- List three factors that influence the dental caries process.
- Indicate what types of foods and beverages are major contributors to dental caries.
- List four primary structures of a tooth.
- Explain what happens if dental plaque is not removed from teeth with regular toothbrushing.
- List three factors that protect against dental caries.

2.1 Dental Caries

Dental caries (tooth decay) is the process whereby bacteria on teeth consume sugar to produce an acid that dissolves tooth mineral (demineralization). Tooth decay (cavitation) is the end result of the demineralization process. Demineralization is not necessarily an ongoing process. There can be periods of activity and periods of inactivity, depending upon which contributing and protective factors are present.

In 2000, the Surgeon General described dental caries as a silent epidemic, identifying it as the most common childhood illness in the United States.¹ It is five times more common than asthma and seven times more common than hay fever. Dental caries is on the rise among children ages 2 to 5; among this age group, prevalence of the disease increased by 4 percent between 1988–1994 and 1999–2004. Over one-quarter of children ages 2 to 4 have had dental caries. Of these children, approximately 20 percent have untreated decay in primary teeth.²

The impact of untreated tooth decay was brought to national attention by the tragic death of 12-year-old Deamonte Driver, who lived in Prince Georges County, Maryland, and died from a brain infection caused by untreated tooth decay.³

Results of a statewide survey of children attending Head Start programs in Maryland found that:⁴

- Forty-six percent of 3-year-olds and 64 percent of 4-year-olds had tooth decay.
- Seventeen percent of the children with tooth decay had complained of a toothache, and nine percent had cried because of a toothache.
- Fifty-two percent of the children with tooth decay had untreated decay, and only 16 percent of these children's parents were aware that their child had untreated decay.

In Maryland, the use of preventive oral health care among young children (ages 1–5) is much less common than among older children (ages 6 and older). Among young children living in Maryland, the proportion of those who have had a dental visit for preventive care rises with age. Furthermore, children from families with low incomes are less likely to receive preventive oral

health care than are children from families with higher incomes.⁵

2.1 Dental Caries

Early Childhood Caries

The presence of one or more decayed (i.e., with cavitated or non-cavitated lesions), missing, or filled tooth surfaces occurring in children under age 6 is called early childhood caries (ECC). In children younger than age 3, any sign of smooth-surface caries is severe ECC (S-ECC).⁶ ECC initially affects the teeth that erupt first and are least protected by saliva (i.e., cheek side of the upper front teeth). Parents of children with S-ECC often describe their child's teeth as melting or chipping away.

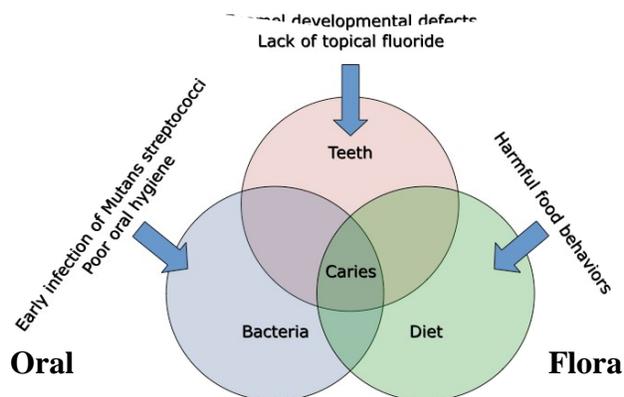
If ECC or S-ECC are left untreated and other contributing factors remain unchanged, the bacteria that cause dental caries can spread to adjacent teeth and create new decay.⁷ Treatment is expensive, often requiring extensive restorations under general anesthesia in a hospital operating room. Other possible consequences of untreated ECC and S-ECC are:⁸

- Severe pain
- Spread of infection, sometimes with cellulitis
- Difficulty chewing and poor weight gain
- High risk for developing dental caries in permanent teeth
- Malocclusion
- Missed school days
- Impaired language development
- Inability to concentrate
- Low self-esteem
- Systemic illness

2.2 Dental Caries Formation

Figure 1 illustrates the basic factors needed for dental caries formation. The circles represent the elements bacteria, diet, and teeth, all of which must be present for dental caries to form. A number of factors including oral flora, feeding and eating practices, and tooth anatomy (e.g., enamel defects, deep pits and fissures) influence the caries process.

Figure 1: Dental Caries Formation



Mutans Streptococcus

This photograph shows a culture obtained from a young child at high risk for dental caries. The sample was taken from the dorsal surface of the tongue with a tongue depressor and transferred to an agar that supports Mutans streptococci growth. The results show the high burden of Mutans streptococci in the child's mouth

The oral cavity is home to billions of bacteria, including [Mutans streptococci](#), which are the bacteria most often implicated in dental caries. A high burden of Mutans streptococci increases the risk for developing dental caries.

Transmission

The bacteria that cause dental caries are typically transmitted from the mother or caregiver to the child. The initial transmission usually occurs after the eruption of an infant’s first tooth. Research indicates that the genetic signatures of the bacteria in the infant’s mouth frequently match those in the mother’s mouth.^{9–13} Mutans streptococci are usually acquired somewhere between ages 6 and 31 months, although these bacteria have been found living on the dorsum of the tongue in infants as young as 3 months old.¹⁴

Because Mutans streptococci are frequently transmitted from the mother or caregiver to the child, the following saliva-sharing practices should be avoided:¹⁵

- The mother or caregiver places a child’s pacifier in her mouth to clean it.
- The mother or caregiver shares food and utensils with the child (e.g., puts the child’s food in her mouth before feeding the child, to test the temperature).
- The mother or caregiver places the child’s hand in her mouth.

The earlier a child’s mouth is colonized with Mutans streptococci, the greater the risk that caries will develop.

Feeding and Eating Practices

Feeding and eating practices play a crucial role in the caries process. Foods and beverages that contain sugar are major contributors to dental caries. When checking for sugar, parents need to look beyond the sugar bowl and candy dish. Foods and beverages can contain one or more types of sugar, and all types of sugars can promote dental caries.

Frequent consumption of foods that contain sugar, such as candy, cookies, cake, and sugary beverages (e.g., fruit drinks, pop or soda), and fruit juice increases the risk for caries. Limiting the frequency with which children consume foods and beverages that contain sugar can significantly reduce their risk for dental caries. If served, fruit juice and other foods with sugar should be given as part of a meal or snack, rather than between meals and snacks. In addition, foods that easily adhere to the tooth surface, such as dried fruit, fruit roll-ups, and candy, increase the risk for caries.

Each time a food or beverage is consumed, the pH level of the plaque on the teeth decreases for approximately 20–40 minutes. During this time the teeth are exposed to acid, initiating the demineralization process. If a child is allowed to consume foods and beverages containing sugar throughout the day, the pH level will stay in the danger zone for long periods of time, increasing the risk for dental caries (see figure 2).

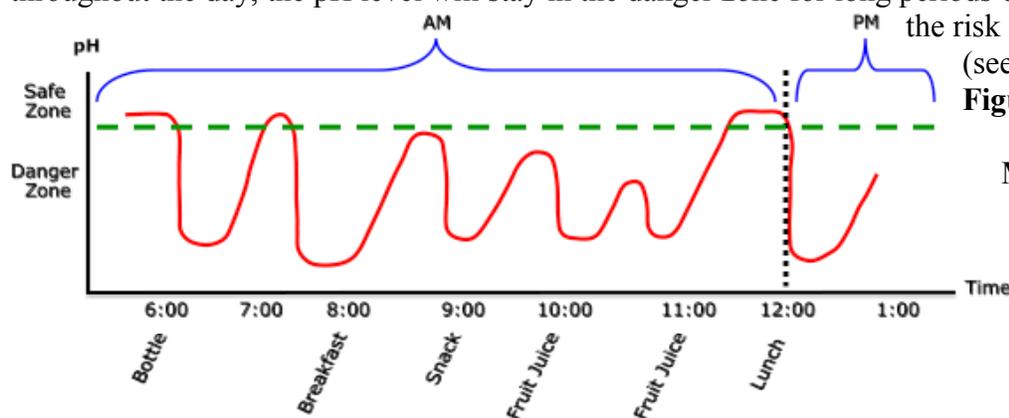


Figure 2: Eating Frequently Matters Chart

Adapted with permission from Joanna Douglass, B.D.S., D.D.S., University of Connecticut School of Dental Medicine.

2.3 Dental Caries Progression

To understand the caries process, it is important to have a basic understanding of the tooth and its structure. A tooth is composed of the crown and the root. The crown is visible in the oral cavity, and the root is below the gumline and anchors the tooth to the surrounding bone (see figure 3). Structures of the tooth include:



Figure 3:
Structures of the Tooth

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InteliHealth. [Simple Steps To Better
Dental Health.](#)

- **Enamel.** Enamel is white in color and covers the crown of the tooth. It is the hardest substance in the body. The enamel layer in primary teeth is much thinner than the enamel layer in permanent teeth.
- **Dentin.** Dentin is the underlying material that supports the enamel. It is a yellow bone-like material that is softer than enamel. Dentin also carries nerve fibers that are made up only of pain receptors.
- **Pulp.** The pulp contains blood, lymph vessels, and nerve fibers, which nourish the tooth and transmit pain.
- **Cementum.** Cementum is a bone-like layer that covers the root of the tooth. It serves to attach the tooth to the bone surrounding the tooth.

For dental caries to occur, a biofilm (also known as dental plaque) containing cariogenic bacteria (Mutans streptococci) adheres to the tooth surface. This biofilm organizes into a thick layer if it is not removed from teeth via regular toothbrushing with fluoridated toothpaste. Nourished by foods and beverages containing sugar, Mutans streptococci produce acid that initiates the tooth-demineralization process.

The caries process begins when acids produced by Mutans streptococci in the presence of sugar demineralize the outer surface of the tooth. This process is called decalcification. On observation, decalcification appears as a white spot lesion (also known as an incipient lesion) and is not cavitated (see figure 4). If a caries lesion is not treated,



Figure 4:
Non-Cavitated
White Spot
Lesion

demineralization can progress through various stages. Each stage indicates a different level of severity in the demineralization process. The process results in a cavitated lesion (see figure 5), which can ultimately infect the pulp of the tooth and create an abscess (see figure 6). Abscesses present as redness and swelling or a fistula in the gum tissue (see figure 6).¹⁶

Photo: Used with permission from Joanna Douglass, B.D.S., D.D.S.,
University of Connecticut School of Dental Medicine.



Figure 5:
Cavitated
Lesion

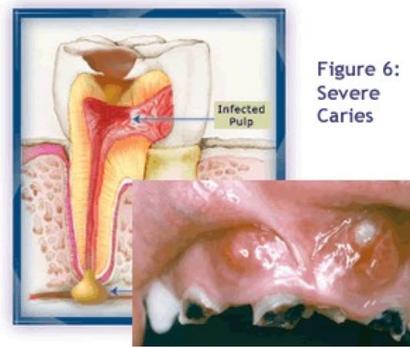


Figure 6:
Severe
Caries

Photo: Used with permission from American Academy of Pediatrics. 2008. [Oral Health Risk Assessment: Training for Pediatricians and Other Child Health Professionals](#). Elk Grove Village, IL: American Academy of Pediatrics.

Photo: Used with permission from the family of Donald Greiner, D.D.S., M.Sc.

Drawings: Used with permission from Aetna IntelliHealth. [Simple Steps To Better Dental Health](#).

2.4 Protective Factors

Saliva

Saliva provides a washing mechanism that helps return oral pH to the safe range. Saliva contains calcium and phosphate, which help to prevent the dissolution of enamel. A number of specific inorganic ions are also present that inhibit bacterial growth, thereby inhibiting the activity of Mutans streptococci on the tooth surface.

Fluoride Exposure

Fluoride is a safe and effective mechanism for preventing caries. Fluoride has been the major factor in the widespread reduction of dental caries in the United States and other industrialized nations. It combats the caries process in three ways.¹⁷

1. Strengthens sound enamel. Fluoride concentrated in plaque, saliva, and outer layers of the tooth inhibits the demineralization of sound enamel.
2. Promotes tooth remineralization. Fluoride in plaque and in saliva is absorbed into demineralized tooth surfaces and attracts other minerals, including calcium and phosphorous, which results in the formation of new minerals in the tooth. Remineralized tooth structure is harder than the original tooth structure.
3. Inhibits Mutans streptococci's ability to produce acids. Fluoride disrupts Mutans streptococci's ability to metabolize sugars, thereby reducing the production of acids that demineralize teeth.

[Fluoride delivered systemically](#) through fluoridation of community water supplies and dietary supplements (e.g., tablets, drops) is one way to receive fluoride. This approach incorporates fluoride into young children's developing permanent teeth.

For many children, community water fluoridation is their primary source of fluoride. Over 90 percent of community water supplies in Maryland are fluoridated. One way to determine the fluoride concentration of a particular community's water supply or a private well is to contact the local health department.

[Fluoride delivered topically](#) through toothbrushing, mouthrinsing, and professionally applied fluoride varnish strengthens teeth present in the mouth, making them more resistant to dental caries. Topical fluoride is most effective when delivered at very low doses many times a day. Common topical delivery systems include toothpaste or dentifrices, gels, varnishes, and mouth rinses.

Oral Hygiene

Toothbrushing with fluoridated toothpaste is an effective topical fluoride-delivery mechanism. It also disrupts colonization of Mutans streptococci on tooth surfaces. Young children do not have the manual dexterity to brush their teeth on their own until they are able to tie their own shoelaces, usually around age 7 or 8. An adult should brush young children's teeth using fluoridated toothpaste at least twice a day, preferably before bedtime and in the morning.

2.5 Caries Balance

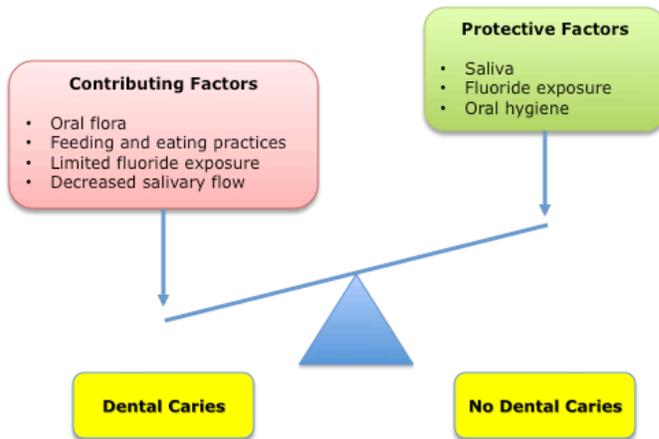
It is important to remember that dental caries is a dynamic process. There is a constant struggle between acids that act to demineralize tooth structure and saliva and fluoride exposure that act to remineralize tooth structure. If the contributing factors (e.g., limited fluoride exposure, poor oral hygiene, poor eating and feeding habits), outweigh the protective factors, caries will progress. Conversely, if protective factors outweigh contributing factors, the caries process can arrest or even reverse. The goal is to keep the contributing and protective factors balanced, or, ideally, for protective factors to outweigh contributing factors in the dental caries equation. (See figure 7.)

Fluoride

Fluoride exists naturally in water sources and is derived from fluorine, the thirteenth most common of earth's elements.

Fluoride combats tooth decay in two ways. It is incorporated into the structure of developing teeth when it is ingested (**systemic uptake**) and also works when it comes in contact with the surface of the teeth (**topical uptake**). Systemic sources include community water fluoridation, supplements, and drops that are added to food or nonfluoridated water. Topical sources include community water fluoridation, toothpaste, mouth rinses, and professional applications (i.e., gels, varnish).

Figure 7: Caries Balance



Adapted, with permission, from Featherstone JBD. 2000. The science and practice of caries prevention. *Journal of the American Dental Association* 131(7):887-899.

Key Points

- Dental caries is the process whereby bacteria on teeth consume sugar to produce an acid that dissolves tooth mineral (demineralization).
- The presence of one or more decayed (i.e., with cavitated or non-cavitated lesions), missing, or filled tooth surfaces occurring in children under age 6 is called early childhood caries.
- A number of factors including oral flora, feeding and eating practices, fluoride exposure, and tooth anatomy influence the caries process.
- Foods and beverages that contain sugar are major contributors to dental caries.
- Tooth structure includes enamel, dentin, pulp, and cementum.
- Fluoride safely and effectively prevents dental caries by (1) strengthening sound enamel; (2) promoting tooth remineralization, which makes teeth more resistant to caries; and (3) inhibiting the ability of the principal caries-producing bacteria—Mutans streptococci—to produce caries-inducing acid.
- If dental plaque is not removed from teeth with regular toothbrushing with fluoridated toothpaste, plaque builds up into a thick layer, which more easily promotes the demineralization process.
- Saliva, fluoride exposure, and oral hygiene are protective factors against dental caries.

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Module 3 Caries Risk Assessment

Overview

Module 3 addresses the question of why certain children are at higher risk than others for dental caries. The module provides guidance on how an [Early and Periodic Screening, Diagnosis, and Treatment \(EPSDT\)](#) medical provider can quickly and effectively conduct a caries risk assessment, including interviewing the child's parents or other primary caregivers and performing an oral health screening. Information about the purpose of caries risk assessment tools is discussed, as well.

Learning Objectives

- List three things that place children at high risk for developing dental caries.
- List three key questions that a medical provider can ask to assess a parent's or other primary caregiver's oral health.
- List three conditions that a medical provider should look for when conducting an oral health screening.
- List three conditions, other than tooth decay, that a medical provider may observe when conducting an oral health screening.
- Describe the purpose of caries risk assessment tools.

3.1 Children at High Risk for Dental Caries

Caries risk assessment is based on the premise that all children are not equally likely to develop dental caries. Children at high risk for dental caries are likely to need more preventive oral health care than their counterparts at lower risk. Caries risk assessment involves the identification of contributing or protective factors that may impact a child's oral health.

Children at high risk for developing dental caries include:

Children with limited exposure to fluoride.

Children who receive suboptimal amounts of fluoride are at increased risk for dental caries.[1,2](#) (For more information about fluoride, see [Fluoride Exposure](#).) It is therefore important for medical providers to determine the level of fluoride exposure in the children they care for.

Children with special health care needs (CSHCN).

Oral health care is the most common unmet health need for CSHCN.[3](#) The impact of oral health problems is larger in CSHCN because of underlying health conditions.[4](#) Asthma and allergy medications can decrease salivary flow,[1,2](#) and the rates of enamel defects are higher among children who are born preterm or at low birthweight.[5](#) In addition, demanding and resistant behavior by some CSHCN can interfere with the delivery of oral health care,[6](#) placing them at greater risk for the onset and progression of dental caries. Coupled with these issues, many families with CSHCN report difficulty in finding and accessing needed oral health care services.[3](#)

Children from families with low incomes.

Prevalence and severity of dental caries is linked to socioeconomic status. Children from families with low incomes experience more dental caries compared to their more affluent counterparts. Lack of dental insurance and access to care results in disease that is more likely to go untreated.[1,2](#)

Children whose parents or siblings have dental caries.

Because dental caries is an infectious disease, parents or siblings with high burdens of Mutans streptococci, who have ever had dental caries, or who have active disease can transmit Mutans streptococci to children. The likelihood that the infection will spread from person to person is greatest during the first 2 years of life. If colonization occurs after age 2, the risk of developing dental caries declines.[1,7](#)

Children with visible plaque, white spot lesions, or dental caries.

The presence of plaque indicates that Mutans streptococci are attached to the tooth surface and that the child frequently consumes foods and beverages containing sugar. Demineralization may occur, leading to white spot lesions, the first sign of dental caries. If left untreated, white spot lesions will cavitate, and dental caries will spread to unaffected teeth.[1,2](#)

Children who are immigrants.

Children who are immigrants are three times as likely to have poor or fair health and almost four times as likely to lack a usual source of health care, compared to non-immigrant children. It is reasonable to assume that these children's oral health and access to oral health care are similarly compromised. Limited financial resources and differences in language and culture contribute to immigrant families' difficulty accessing oral health care and may also affect their knowledge and attitudes regarding oral health.[8](#)

Children with frequent consumption of foods and beverages containing sugar.

Frequent consumption of foods and beverages containing sugar lowers the pH level in the oral cavity into the danger zone for long periods of time, leading to initiation of the caries process. Frequent and prolonged bottle feeding, being put to bed with a bottle, and unstructured use of bottles or sippy cups with beverages containing sugar are problematic.[1,2,9](#)

3.2 Caries Risk Assessment

Caries risk assessment for children takes into account the clinical, environmental, and general health factors that affect caries development. This information is gathered by (1) interviewing the child's parent or other primary caregiver to obtain the child's dental history and an assessment of the parent's or other primary caregiver's oral health and (2) making clinical observations through an oral health screening. A caries risk assessment takes little time to conduct and can be easily incorporated into the well child visit.

Parent or Other Primary Caregiver Interview

The caries risk assessment should begin with a dental history of the child and an assessment of the parent's or other primary caregiver's oral health.

The child's dental history can be obtained by asking questions, such as

- Do you clean your child's teeth every day?
- Do you use fluoridated toothpaste to brush your child's teeth?
- How often does your child snack during the day?
- What kind of snacks does your child eat?
- Have your child's teeth ever been examined by a dentist?

An assessment of the parent's or other primary caregiver's oral health does not require an oral examination but can be conducted by asking a few key questions, such as

- How are your teeth?
- Have you had a lot of cavities?
- Do you have a regular dentist?
- When was your last visit to the dentist?
- Have you ever had a tooth filled?
- Have you had a lot of dental work done?

Oral Health Screening

To conduct an oral health screening, a medical provider needs adequate lighting, gloves (preferably non-latex), and a tongue depressor or mouth mirror. A dental chair is not needed. For children ages 3 and under, knee-to-knee positioning is preferred for conducting the oral health screening. Use the following procedure.

- Explain to parents the process and their role.
- Position the child in a parent's lap so that the child is facing the parent.
- Sit opposite the parent so that your knees are touching the parent's knees.
- Lower the child's head onto your lap.
- If necessary, have the parent hold the child's arms.



[Video: Oral Health Screening](#)

This video shows the positioning of a child for an oral health screening using knee-to-knee positioning. Joanna Douglass, B.D.S., D.D.S., describes what to look for when conducting the screening and shows how to perform the lift-the-lip technique.

Another approach for positioning the child is to lay the child on the examination table on his or her back and ask the parent to hold the child's hands. It is important to approach the child from behind the head to ensure a clear view into the oral cavity. When facing a child who is sitting on a parent's lap, it is difficult to get a complete view of the oral cavity.

Oral Health Screening

Once the child is in position to be screened, lift the lip and look for the following:

Eruption of Primary Teeth

Teeth typically follow a [pattern](#) when they erupt. The central and lateral incisors usually erupt first, followed by the first primary molars, then the cuspids (canines), and ending with the second primary molars. On average, all of the primary teeth erupt by age 28 months, but timing of tooth eruption varies widely.

Healthy Primary Teeth and Gums

Healthy primary teeth are white and have smooth surfaces, except for the occlusal surfaces (chewing surfaces) of the posterior teeth. Occlusal surfaces are grooved, and there may be wide spaces between the anterior teeth.

Healthy gum tissue is pink or pigmented, depending on the child's race and ethnicity, and tight to the tooth, with knife-like edges. Stippling, characterized by very small elevations and depressions in the gum tissue (similar to the surface of an unpeeled orange), may also be present.

Dental Plaque

Dental plaque is a biofilm that attaches itself to tooth surfaces. It is composed primarily of Mutans streptococci and other bacteria. Failure to remove plaque through regular toothbrushing allows it to build up in a thick layer. Nourished by foods and beverages high in sugar, Mutans streptococci produces acid that initiates the tooth demineralization process.

Non-Cavitated White Spot Lesions

White spots are non-cavitated carious lesions in enamel. These are commonly referred to as incipient lesions. In young children, white spot lesions are often found along the gumline of the upper front teeth. White spot lesions may be actively demineralizing, remineralizing, or arrested.

Cavitated Lesions

If demineralization continues, white spot lesions can progress through the enamel into the dentin. The appearance changes to a soft brown or black as cavitation occurs.

Severe Decay

Once in dentin, dental caries progresses more rapidly, eventually reaching the pulp of the tooth. Formation of an abscess, an infection at the apex of the root of the tooth, may occur. In some cases the abscess forms a fistula near the site of the infection. The factors that promote caries development will likely involve most if not all of the teeth.

Other Common Oral Health Conditions

When conducting an oral health screening, a provider may observe conditions other than tooth decay, such as the following:

Developmental Defects

Disorders or disruptions in the process by which teeth form can result in a variety of structural defects. These defects may include abnormally shaped teeth, abnormal tooth color, and abnormal tooth enamel. Developmental defects often place teeth at high risk for dental caries. All children who present with one or more teeth with developmental defects should be referred to a dentist.

Neonatal Teeth

Neonatal teeth erupt within the first 30 days of life. As many as 85 percent of these are a part of the normal primary dentition and are not supernumerary (extra teeth). Often, these teeth are hypermobile, and aspiration is a concern. A referral should be made to a dentist for treatment.

Nonvital Tooth

It is not unusual for a young child to fall on a tooth, traumatizing its pulp. Over time, the pulp undergoes necrosis, which changes the color of the tooth from white to grey or pink. In some cases, a nonvital tooth can be retained until it exfoliates naturally without adversely affecting its corresponding permanent tooth. If swelling or a “gum boil” appears in the gum tissue adjacent to the tooth, infection is likely, and the child should be referred to a dentist.

Dental Trauma

Dental trauma is common, especially among children. One-third of 5-year-olds have suffered injury to their primary teeth.¹⁰ All children with dental trauma should be referred to a dentist.

While dental trauma among young children is frequently the result of falls or other accidents, injuries to the teeth and oral cavity may be a consequence of physical abuse, sexual abuse or neglect.¹¹ Maryland’s State Board of Dental Examiners requires licensed oral health providers to complete a board-approved course on the orofacial aspects of child abuse and neglect once every 4 years.¹²

All health providers in Maryland are mandated to report suspected cases of child abuse and neglect.¹³ If child abuse or neglect is suspected, contact your [local department of social services](#) of the Maryland Department of Human Resources. The [Mid-Atlantic PANDA](#) (Prevent Abuse and Neglect Through Dental Awareness) offers resources and training to help oral health providers and other health providers recognize and respond to signs of abuse and neglect.

3.3 Caries Risk Assessment Tools

Numerous caries risk assessment tools are available for use by health providers. These tools provide a means for taking the information gathered in the parent or other primary caregiver interview and the oral health screening to classify a child’s dental caries risk at a single point in time. In primary health care settings, they can be used to determine when a referral to a dentist is indicated. When used periodically (e.g., at each well child visit), such tools can be used to assess changes in caries risk status over time.

American Academy of Pediatric Dentistry Caries-Risk Assessment Tool

Risk Factors to Consider	Risk Indicators		
(For each item below, circle the most accurate response found to the right under "Risk Indicators")	High	Moderate	Low
Part 1-History (determined by interviewing the parent/primary caregiver)			
Child has special health care needs, especially any that impact motor coordination or cooperation	Yes		No
Child has condition that impairs saliva (dry mouth)	Yes		No

Risk Factors to Consider	Risk Indicators		
(For each item below, circle the most accurate response found to the right under "Risk Indicators")	High	Moderate	Low
Child's use of dental home (frequency of routine dental visits)	None	Irregular	Regular
Child has decay	yes		No
Time lapsed since child's last cavity	<12 months	12-24 months	>24 months
Child wears braces or orthodontic/oral appliances	Yes		No
Child's parent and/or sibling(s) have decay	Yes		No
Socioeconomic status of child's parent	Low	Mid-level	High
Daily between-meal exposures to sugars/cavity-producing foods (including on demand use of bottle/sippy cup containing liquid other than water; consumption of juice, carbonated beverages, or sports drinks; use of sweetened medications)	>3	1-2	Mealtime only
Child's exposure to fluoride	Does not use fluoridated toothpaste; drinking water is not fluoridated and is not taking fluoride supplements	Uses fluoridated toothpaste; usually does not drink fluoridated water and does not take fluoride supplements	Uses fluoridated toothpaste; drinks fluoridated water or takes fluoride supplements
Times per day that child's teeth/gums are brushed	<1	1	2-3
Part 2-Clinical evaluation (determined by examining the child's mouth)			
Visible plaque (white, sticky buildup)	Present		Absent
Gingivitis (red, puffy gums)	Present		Absent
Areas of enamel demineralization (chalky white-spots on teeth)	>1	1	None
Enamel defects, deep pits/fissures	Present		Absent
Part 3-Supplemental professional assessment (Optional)			
Radiographic enamel caries	Present		Absent
Levels of mutans streptococci or lactobacilli	High	Moderate	Low
<i>Each child's overall assessed risk for developing decay is based on the highest level of risk indicator circled above (i.e., a single risk indicator in any area of the "high risk" category classifies a child as being "high risk").</i>			

Used with permission from American Academy of Pediatric Dentistry. 2006. Policy on the use of a caries-risk assessment tool (CAT) for infants, children, and adolescents. **Journal of Pediatric Dentistry** 30(7):29–33.

[Download the American Academy of Pediatric Dentistry Caries-Risk Assessment Tool](#)

Key Points

- Caries risk assessment is based on the premise that all children are not equally likely to develop oral health problems.
- Children at high risk for dental caries include those (1) with limited exposure to fluoride; (2) with special health care needs; (3) from families with low incomes; (4) whose parents or siblings have dental caries; (5) with visible white spot lesions, dental caries, or plaque; (6) who are immigrants; and (7) who frequently consume foods or beverages containing sugar.
- The caries risk assessment should begin with a dental history of the child and an assessment of the parent's or other primary caregiver's oral health.
- To conduct an oral health screening, providers need adequate lighting, gloves (preferably non-latex), a tongue depressor or mouth mirror, and a risk assessment tool. A dental chair is not needed.
- When conducting an oral health screening, a medical provider should look for the following: (1) eruption of primary teeth, (2) healthy teeth and gums, (3) dental plaque, (4) non-cavitated white spot lesions, (5) cavitated lesions, and (6) severe decay.
- When conducting an oral health screening, a medical provider may observe conditions other than tooth decay, such as developmental defects, neonatal teeth, a nonvital tooth, or dental trauma.
- Caries risk assessment tools provide a means for classifying dental caries risk at a single point in time.

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Module 4 Anticipatory Guidance, Fluoride Varnish, and Referral

Overview

Module 4 explains the purpose of anticipatory guidance and highlights key issues that should be discussed with parents to promote children’s oral health. A description of fluoride varnish is provided, and its efficacy in preventing dental caries is discussed. The module includes step-by-step instructions for applying fluoride varnish, with a video demonstrating the process. The module also discusses referral to a dentist and the concept of the dental home. Finally, a fluoride varnish periodicity schedule is provided, and fluoride varnish reimbursement is covered.

Learning Objectives

- Explain the purpose of anticipatory guidance.
- List the three most frequently discussed anticipatory guidance topics.
- Explain the purpose of fluoride varnish.
- List three things required to apply fluoride varnish.
- Explain the meaning of “dental home.”
- List three reasons to refer a child to a dentist immediately.
- Explain what Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) medical providers in Maryland should do in situations where it is difficult or impossible to identify a dentist that accepts children enrolled in Medicaid.

4.1 Anticipatory Guidance

Anticipatory guidance helps parents understand what to expect during their child’s current and approaching stages of development. EPSDT medical providers can provide parents with anticipatory guidance to promote children’s oral health. With this information, parents can help prevent or reduce dental caries in their children.

The provision of anticipatory guidance is based on information gathered while the EPSDT medical provider is conducting the caries risk assessment. Often, the medical provider can offer anticipatory guidance while conducting the oral health screening, during which existing issues can be addressed. (For more information about caries risk assessment, see [module 3](#).)

Anticipatory guidance topics include oral development, tooth eruption, oral hygiene, fluoride use, Mutans streptococci infectivity, and feeding and eating practices. The three most frequently discussed topics are as follows:

Infection

A large percentage of parents are not aware that dental caries is an infectious disease and that many common practices and behaviors transmit Mutans streptococci to children. Parents must be educated about modes of transmission and the impact of [Mutans streptococci](#) transmission on the oral health of children. Encourage parents to model positive oral health behaviors.

Foods and Beverages Containing Sugar

The frequency with which children consume foods and beverages that contain sugar on a daily basis is critical to the dental caries process. (See [Feeding and Eating Practices](#).) Eating regularly

scheduled nutritious meals and snacks (rather than snacking throughout the day) reduces the length of time that teeth are exposed to acids that dissolve tooth structure. Children should never be put to sleep with a bottle or sippy cup or be allowed frequent and prolonged feedings or use of bottles or sippy cups containing beverages with sugar (e.g., fruit drinks, pop (soda), fruit juice), formula, or milk. If a child is accustomed to being put to bed with a bottle, offer a bottle with plain water.

Toothbrushing

Toothbrushing with fluoridated toothpaste helps maintain the health of teeth and gums. Toothbrushing with fluoridated toothpaste serves as a vehicle for applying very small doses of topical fluoride to tooth surfaces. Frequent exposure to small amounts of topical fluoride each day is the best way to reduce the risk for dental caries.¹

Because many brands of toothpaste are flavored, young children tend to swallow toothpaste more readily than do older children and adults. Concern over fluorosis occurring in the permanent teeth has resulted in a number of confusing and contradictory recommendations regarding the use of fluoridated toothpaste. Recognizing fluoride's cariostatic properties, the American Academy of Pediatric Dentistry recommends that all children's teeth be brushed twice daily with fluoridated toothpaste.² Specific guidelines as to the amount of toothpaste dispensed according to the age of the child were developed to reduce the risk of fluorosis. These guidelines are as follows:

Materials for Parents

A variety of brochures are designed to provide parents with information about how to ensure that their child enjoys the best possible oral health. Brochures are available from the Maryland Department of Health and Mental Hygiene's [Office of Oral Health](#) and the [National Maternal and Child Oral Health Resource Center](#).

For infants and children under age 2

- Use a soft toothbrush that is an appropriate size for the infant's or child's age
- Dispense a "smear" of fluoridated toothpaste on the bristles of the toothbrush
- Parents should brush the infant's or child's teeth twice daily

For children ages 2 through 5

- Use a soft toothbrush that is an appropriate size for the infant's or child's age
- Dispense a "pea-size amount" of fluoridated toothpaste on the bristles of the toothbrush
- Parents should brush the child's teeth or supervise brushing twice daily

Encourage parents to begin brushing their child's teeth as soon as the first tooth erupts, usually around age 6 to 10 months. Because brushing requires fine motor control, parents should continue to brush their child's teeth until the child acquires the fine motor skills needed to brush effectively (typically by age 7 or 8 or when the child is able to tie his or her own shoelaces).³ The earlier a child is exposed to toothbrushing, the more compliant the child tends to be. However, it is not uncommon for parents to complain that their child will not let them brush his or her teeth.

A variety of positions can be used to brush a young child's teeth. It is best for the parent to sit

behind the child on a stool, step, or beanbag chair, with the child sitting on the floor with his or her back to the parent. The child then tips his or her head back to rest it on the parent's lap. (See [Positions for Brushing a Young Child's Teeth](#).)

For infants, the parent may sit on a sofa, bed, or bench, with the infant in his or her lap. The parent's arm should support the infant's head and shoulders.

If the child is uncooperative, the parent can gently place his or her legs over the child's arms to keep the child still. Using the knee-to-knee position with another adult or an older sibling can also be an effective approach.

To brush the child's teeth, instruct the parent to place the toothbrush along the junction where gums and teeth meet. The toothbrush should be tipped so that the bristles are angled (approximately 45 degrees) toward the gumline. Gently brush in a circular motion on the front and back of each tooth. The chewing surfaces of the back teeth should also be brushed, using a scrubbing motion. The child should not rinse afterward. The child can spit the remaining toothpaste into a sink, or drool into a cup if he or she is unable to spit. The small amount of fluoride that remains in the mouth will help to prevent tooth decay. (See [Proper Brushing](#).)

4.2 Fluoride Varnish

Most fluoride varnishes are lacquers containing 5 percent sodium fluoride or 0.1 percent difluorosilane. Relatively new in the United States, fluoride varnish has been used widely for over 30 years in Canada and Europe. Fluoride varnish has been found effective in preventing caries in permanent teeth. More recently it has been shown to prevent or reduce caries in primary teeth.⁴

Fluoride varnish has several advantages over other professionally applied fluorides. These include:

- Does not require special dental equipment
- Has a pleasant taste and is well tolerated by infants, young children, and children with special health care needs
- Is easy to apply
- Adheres to tooth surface for several hours
- Penetrates plaque and does not require a professional cleaning beforehand
- Has negligible ingestion with low risk of developing fluorosis in permanent teeth
- Is inexpensive
- Application requires minimal training and takes little time
- Pre-measured single-dose containers ensure dispensing the correct amount

Fluoride varnish works by increasing the concentration of fluoride in the outer tooth surface. Larger amounts of fluoride from the varnish are deposited in demineralized as opposed to sound tooth surfaces to remineralize the demineralized areas. Fluoride varnish hardens on teeth as soon as the varnish contacts saliva, allowing the high concentration of fluoride to be in contact with tooth enamel for an extended period of time (about 1 to 7 days).⁵

Fluoride varnish comes in multi-dose and single-dose containers. Use of single-dose containers is recommended. They come with a disposable brush and a well containing enough fluoride varnish for one application. Multi-dose fluoride varnishes have reusable wells. However, the fluoride ions in multi-dose containers tend to separate from the varnish base, so the tube has to be kneaded before application to remix the ingredients. Infection control is also easier to maintain with single-dose containers. Always follow manufacturer instructions to properly prepare the fluoride varnish for application.

4.3 Fluoride Varnish Application

Fluoride varnish application is simple. Once a medical provider has sufficient practice, application takes approximately 40 to 60 seconds.

Infants and young children typically resist fluoride varnish application. Fortunately, however, most 9-month-olds have eight or fewer teeth, all of which are anterior teeth, so access is easy, especially if the infant is crying. Older children who have had previous fluoride varnish applications may be more cooperative because they know what to expect.

Supplies needed to apply fluoride varnish include:

- Disposable gloves (preferably non-latex)
- Paper towel or disposable bib
- 2" x 2" gauze sponges
- Fluoride varnish (preferably single-dose containers)
- Disposable mouth mirror (optional)

4.3 Fluoride Varnish Application

To apply the fluoride varnish:

1. Place the disposable towel or bib in your lap.
2. Place the infant or child in the [knee-to-knee position](#).
3. Dip the brush into the varnish. (To save time, some medical providers place the varnish on the back of the gloved hand that is not being used to apply the varnish.)
4. Use gentle finger pressure to open the infant's or child's mouth.
5. [Dry a section of the teeth with gauze](#).
6. [Apply a thin layer of varnish](#) to the inside, outside, and chewing surfaces of the dried teeth.
7. [Move to a new section, and repeat steps 3–6](#) until varnish has been applied to all teeth.

Once the varnish has been applied, it is not necessary to keep the teeth dry, since varnish sets up quickly in the presence of saliva. The medical provider may offer the infant or child water immediately after fluoride application.



[Video: Fluoride Varnish Application.](#)

This video shows the positioning of a child for the application of fluoride varnish using the knee-to-knee position. Joanna Douglass, B.D.S., D.D.S., provides step-by-step instructions on how to apply varnish to both a young child with only front teeth and an older child with front and back teeth.

After the fluoride varnish has been applied, inform the parent of the following:

- Depending on the brand of fluoride varnish used, the infant's or child's teeth may have a yellowish appearance but will become white and shiny after they are brushed the next day.
- The infant or child should eat soft foods for the rest of the day.
- The infant's or child's teeth should not be brushed until the next morning.

4.4 Fluoride Varnish Periodicity Schedule

Any infant or child ages 9 months up to 36 months who is enrolled in the Maryland Medicaid Program is eligible to receive fluoride varnish application. Under this program, EPSDT medical providers are reimbursed for up to four fluoride varnish applications per year per infant or child.

It is required that fluoride varnish be applied in accordance with the [Maryland schedule of preventive health care](#) (i.e., during well child visits). A fluoride varnish application at age 30 months, which is not on the periodicity schedule for well child visits, will also be reimbursed. The suggested schedule for fluoride varnish application in concert with the Maryland schedule of preventive health care is:

- 9 months
- 12 months
- 15 months
- 18 months
- 24 months
- 30 months (not a scheduled well child visit)
- 36 months

If fluoride varnish is applied after the 36-month age limit, EPSDT medical providers will not be eligible for reimbursement by the Maryland Medicaid Program. **Note:** This policy does not affect the reimbursement of fluoride varnish applied in a dental practice. Dentists and dental clinics enrolled as providers in the Maryland Medicaid Program are eligible to seek reimbursement for the application of fluoride varnish for children up to age 21 enrolled in Medicaid.

4.5 Documentation in Child's Medical Record

Findings from the caries risk assessment, anticipatory guidance provided, and fluoride varnish application must be documented in the child's medical record. A patient label or stamp can be made and placed in the medical record as a reminder about what needs to be documented. Following is a sample patient [label](#) used in Connecticut.

The same information may also be adapted into a template for use in the electronic medical record. [Click here](#) for a sample template used in Massachusetts for the electronic medical record.

Patient Label Template Connecticut Department of Public Health	
Dental caries or defects	Yes / No
High caries risk	Yes / No
Dental visit in last 6 months	Yes / No
Fluoride varnish applied	Yes / No
Systemic fluoride exposure assessed	Yes / No
Oral hygiene instruction	Yes / No
Dental provider: _____	Yes / No

The same information may also be adapted into a template for use in the electronic medical record. [Click here](#) for a sample template used in Massachusetts for the electronic medical record.

4.6 Referral to a Dentist

A medical provider should refer a child to a dentist immediately if

- The medical provider observes non-cavitated white spot lesions or cavitated lesions.
- The child is at moderate or high risk for dental caries, according to the [American Academy of Pediatric Dentists' Caries Risk Assessment Tool](#).
- A dental emergency is evident.

The Maryland Department of Health and Mental Hygiene, Office of Oral Health, has developed a [referral form](#), which EPSDT medical providers can provide to parents to take to their child's dental appointment.

The ultimate goal of making a referral to a dentist is to establish a dental home for children at moderate or high risk for dental caries. A dental home is the ongoing relationship between the dentist and the patient, inclusive of all aspects of oral health delivered in a comprehensive, continuously accessible, coordinated, and family-centered way.⁶

Sometimes it may be difficult to locate a local dental practice, clinic, or federally qualified health center that accepts children enrolled in Medicaid. In situations where it is difficult or impossible for EPSDT medical providers to identify a dentist, parents should be referred to DentaQuest, the contractual agent under the Maryland Medicaid Program, which will help parents locate and access a dentist.

4.7 Fluoride Varnish Reimbursement

[DentaQuest](#) is the contractual agent that reimburses EPSDT medical providers for applying fluoride varnish to the teeth of infants and children ages 9 months up to 36 months who are enrolled in the Maryland Medicaid Program. Once EPSDT medical providers are certified and approved by DentaQuest, they will be instructed to use DentaQuest's electronic or paper claim form and to indicate code D1206 to be reimbursed \$24.92 per fluoride varnish application per infant or child. More information on billing and reimbursement procedures is available on the [Maryland's Mouths Matter: Fluoride Varnish and Oral Health Program for Kids](#) Web site.

4.8 Fluoride Varnish Registry

The Baltimore City Health Department is partnering with the Maryland Department of Health and Mental Hygiene on the Maryland State Fluoride Varnish Registry for enrolled Medicaid dental and medical providers across the state. The registry will store information about fluoride varnish treatments applied in medical and dental practices to the teeth of children ages 9 to 36 months who are enrolled in Medicaid. The function of this new statewide, Web-based application will be to store information about individual treatments that were submitted to Medicaid. It will be a resource for providers to look up treatments that their patients have received. The registry will be secure and will follow protected health information best practices.

Key Points

- Anticipatory guidance helps parents understand what to expect during their child’s current and approaching stages of development. EPSDT medical providers can provide parents with anticipatory guidance to promote children’s oral health.
- The three most frequently discussed anticipatory guidance topics are (1) minimize risk of infection, (2) reduce frequency of foods and beverages containing sugar, and (3) optimize toothbrushing with fluoridated toothpaste.
- Fluoride varnish has been found effective in preventing caries in primary and permanent teeth.
- Fluoride varnish application is simple. Once a provider has sufficient practice, application takes 40 to 60 seconds.
- Supplies needed to apply fluoride varnish include disposable gloves, a paper towel or disposable bib, 2" x 2" gauze sponges, fluoride varnish (preferably single-dose containers), and a disposable mouth mirror (optional).
- A provider should refer a child to a dentist immediately if (1) the provider observes non-cavitated white spot lesions or cavitated lesions, (2) the child is at moderate or high risk for dental caries, or (3) a dental emergency is evident.
- In situations where it is difficult or impossible for EPSDT medical providers to identify a dentist who accepts children enrolled in Medicaid, parents should be referred to DentaQuest, the contractual agent under the Maryland Medicaid Program, which will help parents locate and access a dentist.
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Post-Tests

Post-tests are available in two formats:

- For health providers licensed to practice in Maryland (e.g., physicians, nurse practitioners, nurses, physician assistants).
 - EPSDT medical providers (i.e., physicians, nurse practitioners) in Maryland must complete the curriculum post-tests to become eligible to seek reimbursement for the application of fluoride varnish for children ages 9 months up to 36 months through the Maryland Medicaid Program.
 - Dentists and dental clinics enrolled as providers in the Maryland Medicaid Program are able to seek reimbursement for the application of fluoride varnish for children up to age 21 enrolled in Medicaid.
- For health providers not licensed to practice in Maryland.
 - All health providers not licensed to practice in Maryland may take the curriculum post-tests for self-assessment.

Eligibility Requirements for EPSDT Medical Providers to be Reimbursed for Fluoride Varnish Applications in Maryland

- Must be an EPSDT-certified physician or nurse practitioner licensed to practice in Maryland.
- Must participate in the Maryland Medicaid Program, and provide services in accordance with the rules and regulations of the program.
- Must successfully complete the fluoride varnish curriculum post-tests with at least 80 percent accuracy.