Early Childhood Oral Health

Primary Care Providers: What You Need to Know About Fluoride Varnish and How You Can Promote Early Childhood Oral Health

Help prevent or stop tooth decay
Dear Colleague,

I am writing to advise you that Medicaid reimbursement is available for the application of fluoride varnish to children’s teeth by pediatric primary care providers (PCPs) in New York State. This simple procedure can be integrated into regular office examinations and will help prevent early childhood caries.¹

Oral health is integral to general health: oral diseases and disorders affect health and well-being throughout life.² Dental caries — the #1 chronic disease affecting young children — is largely preventable and may be reversible if found early.¹ Dental caries progresses rapidly and often goes untreated.³

Fluoride plays an important role in preventing dental caries. New York City water is fluoridated, but additional topical applications of fluoride have proven to be effective in further reducing the onset of caries, especially in young children.

Because infants and younger children are more likely to see their physician than a dentist, PCPs are uniquely positioned to monitor and promote good oral health.³,⁴ All PCPs should conduct periodic oral health examinations as part of routine pediatric visits. Children should be referred to a dental home by age 1, and PCPs can partner with their patients’ dentists to coordinate preventive oral health care.¹

I encourage you to obtain training in pediatric oral health risk assessment and fluoride varnish application. Online training in the application of fluoride varnish and resources for pediatric oral health care providers are available at the New York State Department of Health website at [health.ny.gov/prevention/dental/child_oral_health_fluoride_varnish_for_hcp.htm](http://health.ny.gov/prevention/dental/child_oral_health_fluoride_varnish_for_hcp.htm)

Thank you for your commitment to promoting children’s oral health.

Sincerely,

Mary T. Bassett, MD, MPH
Commissioner
Early Childhood Oral Health

Promoting Early Childhood Oral Health

Early childhood caries is a severe, rapidly progressing form of tooth decay that affects primary teeth, which erupt first and are least protected by saliva. Caries in a young child can lead to pain, early tooth loss, infection and increased risk of adult tooth decay. You can prevent or stop the progression of early childhood caries by:

1. Applying fluoride varnish (5% sodium fluoride in a resin) two to four times a year, depending on the child’s risk for caries
2. Counseling parents about the importance of good oral hygiene and brushing twice daily with a fluoride toothpaste, starting with the eruption of the first tooth
3. Promoting healthy eating behaviors and limited consumption of juices and sugar-sweetened beverages and foods
4. Discouraging putting the infant to bed with a bottle, and encouraging only water if necessary to aid in getting the infant to sleep
5. Encouraging wiping the child’s teeth, or gums for children who do not have teeth yet, after each feeding
6. Discussing nutritive (breast, bottle) versus nonnutritive (pacifier, fingers or bottle nipple if not breastfeeding) sucking and its effect on dentofacial development
7. Referring to a dentist by the time a child is 1 year old

The Oral Health Examination

For infants and children under 3 years of age:

- Establish a knee-to-knee position with the caregiver. The child’s head should be in your lap and the child’s legs should be around caregiver’s waist. The caregiver can help by holding the child’s hands on top of the navel.

For children 3 years of age and older:

- Have the child either lie flat on an examination table or sit in front of the caregiver, while both are facing you, so that the caregiver can help position and steady the child.

Lift the lip to inspect soft tissue and teeth for:

- Inadequate oral hygiene such as plaque and debris on the teeth
- Whether tooth eruption and loss are proceeding according to schedule (Fig. 1), and dental crowding
- Signs of tooth decay, including white spots along the gum line, brown spots and holes or cavitations (Fig. 2)
- Swelling, redness and irregularities such as lesions, bumps or ulcers in the mouth

Figure 1. Eruption and shedding patterns of primary teeth.

Used with permission of the American Academy of Pediatrics.

<table>
<thead>
<tr>
<th>Upper Teeth</th>
<th>Erupt</th>
<th>Shed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central incisor</td>
<td>8–12 months</td>
<td>6–7 years</td>
</tr>
<tr>
<td>Lateral incisor</td>
<td>9–13 months</td>
<td>7–8 years</td>
</tr>
<tr>
<td>Canine (cuspid)</td>
<td>16–22 months</td>
<td>10–12 years</td>
</tr>
<tr>
<td>First molar</td>
<td>13–19 months</td>
<td>9–11 years</td>
</tr>
<tr>
<td>Second molar</td>
<td>25–33 months</td>
<td>10–12 years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower Teeth</th>
<th>Erupt</th>
<th>Shed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second molar</td>
<td>23–31 months</td>
<td>10–12 years</td>
</tr>
<tr>
<td>First molar</td>
<td>14–18 months</td>
<td>9–11 years</td>
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</table>
Assessing Caries Risk

During the visit

• Ask the parent about their own caries experience and if they currently have active decay. If there are other children in the household, ask about their caries experience.

• Ask about caries symptoms such as sensitivity to heat/cold, pain, difficulty chewing, poor weight gain, infections, abscesses or difficulty sleeping.

• Ask about other risk factors for caries, such as sleeping with bottles, being fed through the night or if the child has special health care needs (see Table 1).

• Assess the child’s exposure to fluoride (New York City fluoridated tap water versus bottled water).

• Use the AAPD Caries-Risk Assessment Tool to evaluate the child’s risk for caries (Table 1).

For further information on the oral health risk assessment, go to app.org and search for "oral health risk assessment."

Table 1. Caries Risk Assessment Tool.

<table>
<thead>
<tr>
<th>Caries Risk Indicators</th>
<th>Low Risk</th>
<th>Moderate Risk</th>
<th>High Risk</th>
</tr>
</thead>
</table>
| Clinical Conditions    | • No carious teeth in past 24 months  
• No enamel caries “white spot lesion”  
• No visible plaque; no gingivitis | • Carious teeth in the past 24 months  
• One area of enamel caries “white-spot lesion”  
• Gingivitis | • Carious teeth in the past 12 months  
• More than one area of enamel caries “white spot lesions”  
• Visible plaque on front teeth  
• Radiographic enamel caries  
• High titers of mutans streptococci  
• Wearing dental or orthodontic appliances  
• Enamel hypoplasia |
| Environmental Characteristics | • Optimal systemic and topical fluoride exposure  
• Consumption of simple sugars or foods strongly associated with caries initiation primarily at mealtimes  
• Regular use of dental care in the established dental home | • Suboptimal systemic fluoride exposure with optimal topical exposure  
• Occasional between-meal exposures to simple sugars or foods strongly associated with caries  
• Caregiver of mid-level socioeconomic status (i.e., eligible for school lunch program or SCHIP)  
• Irregular use of dental services | • Suboptimal topical fluoride exposure  
• Frequent (i.e., three or more) between-meal exposures to simple sugars or foods associated strongly with caries  
• Caregiver of lower-level socioeconomic status (i.e., eligible for Medicaid)  
• No usual source of dental care  
• Active caries present in the mother |
| General Health Conditions | • Children with special health care needs*  
• Conditions impairing saliva composition/flow | | |

*Children with special health care needs are those who have a physical, developmental, sensory, behavioral, cognitive, or emotional impairment or limiting condition that requires medical management. Chart based on the American Academy of Pediatric Dentistry Caries Risk Assessment Tool. For more information on using the tool, refer to www.aapd.org/foundation/pdfs/cat.pdf. Used with permission of the American Academy of Pediatrics.
• Provide anticipatory guidance, including oral hygiene instructions.
  - Parents can model good oral hygiene by brushing twice a day with a toothpaste that contains fluoride and flossing daily.
• Refer the child to a dental home by their first birthday\(^1,5\) and establish a collaborative relationship with their dentist to coordinate their preventive and routine care.\(^1\)

**Applying Fluoride Varnish**

Fluoride varnish may be applied two to four times a year and is reimbursable by Medicaid for children until 7 years of age, depending on the child’s risk for caries. Fluoride varnish is easy to apply (Fig. 3) and can prevent, arrest and even reverse early cavity formation.\(^6,7\) It also strengthens teeth, renews high levels of fluoride in superficial enamel and helps slow or reverse demineralization.\(^8\)

The varnish is colorless or caramel colored. It forms a sticky layer on the tooth that hardens on contact with saliva and penetrates the tooth enamel. Allow varnish to remain on the teeth overnight.

Risk of varnish ingestion and toxicity is very low, as only a small amount of varnish per application is required. Do not apply fluoride varnish if ulcerative gingivitis, stomatitis or open soft tissue lesions are present, and do not use in patients with known sensitivity to colophonium (pine resin) or pine nuts. Consult manufacturers’ product instructions for complete safety information.

**Step 1:** Remove excess saliva and plaque from the teeth with a 2x2 sterile gauze sponge.

**Step 2:** Apply fluoride with a disposable applicator on all tooth surfaces. The varnish will harden immediately once it comes in contact with saliva.

Advise the caregiver:
- Child should not brush until the next morning.

**Figure 3. Applying fluoride varnish.**
Used with the permission of the American Academy of Pediatrics.

- The child should avoid hot, hard or sticky foods, and hot drinks, for the rest of the day.
- If caramel-colored fluoride varnish is used, the child’s teeth may be temporarily yellow and/or caramel colored, but the discoloration will go away once the teeth are brushed the next day.
- An instructional fact sheet for parents can be ordered by calling 311 (Resources).

**Reimbursement**

In New York State, a maximum of four (4) fluoride varnish applications per year will be covered for children from birth until 7 years of age.

- **Medicaid fee-for-service:** Providers will be reimbursed up to $30.00 per application. Prior approval is NOT required under Medicaid fee-for-service.
- **Medicaid managed care:** Reimbursement will be in accordance with provider agreements. Contact the Provider Relations office of your participating plan(s) for information.

CPT code 99188 should be used by medical providers. The ICD-10 code is z29.3.

For questions about billing, contact the New York State Department of Health Division of Provider Relations and Utilization Management, Dental Bureau at 800-342-3005, option 2.

For questions about Medicaid managed care, contact the New York State Department of Health Managed Care at 518-473-0122.
Ordering Fluoride Varnish

Fluoride varnish is available both in tubes for multiple applications (individual disposable applicator brushes must be purchased separately) and in prepackaged single-unit doses that include a disposable applicator brush.

Many companies supply fluoride varnish, including:

- Cavity Shield, in single-dose units with built-in applicators (Omni Products at 800-634-2249)
- Duraphat (Colgate Oral Pharmaceuticals at 800-225-3756, 800-226-5428, or 800-2-COLGATE)
- VarnishAmerica (Medical Products Laboratories at 800-523-0191, or mplusa.com)

Additional lists of fluoride varnish products and dental supply companies can be found on the American Academy of Pediatrics website: visit aap.org and search "Fluoride Varnish manufacturers."

*a* Use of product names is for informational purposes only and does not imply endorsement by the New York City Department of Health and Mental Hygiene.

Resources

Fluoride Varnish Information:

- American Dental Association Evidence-Based Dentistry: visit ebd.ada.org and search "clinical practice guidelines."

- New York State Department of Health, Oral Health: visit health.ny.gov and search "oral health."

Training in Oral Health Assessment:

- Other AAP Oral Health Initiative Oral Health Trainings & Videos (free and low cost): visit aap.org and search for "oral health education."
- Bright Futures in Practice: Oral Health Pocket Guide: visit mchoralhealth.org and search "oral health pocket guide."

General:

- American Academy of Pediatrics – Oral Health: aap.org


**Acknowledgments**

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References


Call 311 to order Fluoride Varnish Fact Sheets for Parents

Fluoride Varnish: Frequently Asked Questions

What is fluoride varnish?
Fluoride varnish is a protective coating that is applied to teeth to help prevent cavities.

Why is fluoride varnish recommended?
Cavities can cause pain and infections, which can lead to problems eating, speaking, playing and learning. Fluoride varnish makes teeth stronger, stops cavities from getting worse and helps to prevent new cavities from forming.

Is fluoride varnish safe?
Yes. Fluoride varnish is safe for any age. It can even be used on babies when their first teeth come in. If you have questions or concerns about using fluoride varnish, talk to your doctor or dentist. Children should see a dentist starting by age 1.

How is fluoride varnish applied?
Fluoride varnish is painted on teeth with a brush by a trained dentist, dental hygienist, doctor or nurse. It is a quick and easy process, and there is no pain or bad taste. The varnish sticks to the teeth and may temporarily make teeth look yellowish or less shiny. These changes are normal and will go away when the teeth are brushed the next day.

How long does fluoride varnish last?
Fluoride varnish keeps protecting teeth for several months. It works best if it is reapplied every three to six months.

Can I eat, drink or brush my teeth normally after fluoride varnish is applied?
Wait until the next day to brush teeth. Avoid hot, hard or sticky foods, and hot drinks, for the rest of the day. Hard or chewy foods might chip the varnish off.

Is fluoride varnish covered by insurance?
Most dental insurance providers, including Medicaid and Child Health Plus, cover fluoride varnish application. Call 311 for more information about signing up for public health insurance or to find a low-cost dental provider near you.

A child receiving an application of fluoride varnish

For more information about oral health, visit nyc.gov and search “teeth.”