



# CALIFORNIA CHDP/EPSTD DENTAL TRAINING: Fluoride Varnish Protocol and Standing Order

## INTRODUCTION

Fluoride Varnish (FV) is a thin coating of resin that is applied to the tooth surface to protect it from decay. According to the U.S. Food and Drug Administration (FDA), FV falls under the category of "drugs and devices" that present minimal risk and is subject to the lowest level of regulation. The Child Health and Disability Prevention (CHDP) Program provides training to providers and staff on oral health education, dental referrals, and the application of FV to children at risk for oral disease.

## PURPOSE/RATIONALE

The purpose of applying FV is to retard, arrest, and reverse the process of cavity formation which can be well advanced by the age of three. Tooth decay is the most common disease of childhood (5 times more common than asthma, 7 times more common than hay fever, and 4 times more common than early childhood obesity<sup>1,2</sup>). Not only does tooth decay cause pain and infection, but it can also interfere with learning by distracting a child's focus, or causing frequent absences from school. CHDP providers are in the unique position of having a positive impact on a child's oral health because they see children earlier and more frequently than dentists. This is particularly true for low income populations due to a shortage of referral sources for dental care for these children. The purpose of this protocol is to provide the procedure for FV application for trained medical staff.

**TABLE 1** Summary of Fluoride Modalities for Low and High Risk Patients

Fluoride Modality	Low Caries Risk	High Caries Risk
Toothpaste	Starting at tooth emergence (smear of paste until age 3 y. then pea-sized)	Starting at tooth emergence <sup>3</sup> (smear of paste until age 3 y. then pea-sized)
Fluoride Varnish	Every 3-6 mo starting at tooth emergence	Every 3-6 mo starting at tooth emergence
Over-the-counter mouth rinse	Not applicable	Starting at age 6 y if the child can reliably swish and spit
Community water fluoridation	Yes	Yes
Dietary fluoride supplements	Yes, if drinking water supply is not fluoridated	Yes, if drinking water supply is not fluoridated

Reference: Clark, M., B., & Slayton, R. L. (2014, August 25). Fluoride Use in Caries Prevention in the Primary Care Setting. *Pediatrics*, 134-626. DOI: 10.1542/peds.2014-1699

<sup>1</sup> [Oral Health: The Silent Epidemic](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2821841/) (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2821841/)

<sup>2</sup> [AAPD Childhood Caries](http://www.mychildrensteeth.org/assets/2/7/ECCstats.pdf) (http://www.mychildrensteeth.org/assets/2/7/ECCstats.pdf)

## PROGRAM REQUIREMENTS

It is necessary to complete a training program (in-person or online) in order to apply FV to infants and children ages 6 months to 6 years old.

### Who Can Apply?

FV can be applied by a trained medical provider (MD, NP, PA), or delegated to trained medical personnel (RN, LVN, MA etc.) using a protocol established by the attending physician.

### Who Can Receive FV?

This is a covered benefit for Medi-Cal and for many other insurances for ages 0-6 year olds (up to their 6th birthday). All infants and children who are considered moderate to high risk for caries can also be protected by this preventive treatment.

### Indications/Caries Risk Factors

A child is considered at moderate to high risk for dental caries, and in need of FV if he/she meets any of the following criteria:

- Active or past tooth decay - has a history of caries or has white spot lesions and stained fissures
- Has family members with a history of caries
- Has poor feeding habits:
  - Continues to use the bottle past 1 year of age
  - Prolonged or ad-lib use of a bottle or sippy cup containing liquids other than water (sugary drinks, including milk and juice), or frequent nursing just to pacify (after baby is 6 months old and/or has teeth)
    - while sleeping/napping
    - throughout the day or night
  - Frequent snacking on refined carbohydrates, sweet, and/or acidic foods
- Poor homecare - lack of daily brushing with a fluoride toothpaste
- Lack of fluoride in his/her drinking water and no additional fluoride supplementation
- Children with special health care needs
- Frequent use of high sugar oral medications, or sugar-based chewable vitamins
- Low Socioeconomic Status (SES), and/or enrolled in or eligible for Medi-Cal
- No preventive dental visit within the last year (Note: Even having a recent dental visit does not preclude offering FV to a child with other risk factors.)

## CONTRAINDICATIONS

- Large open carious lesions with pulp exposure (Please be advised it is safe and important to apply FV to adjacent intact teeth.)

**Note:** Refer these children to a dentist.

- Open lesions in the mouth such as:
  - Gingival stomatitis
  - Ulcerative gingivitis
  - Intra-oral inflammation

**Note:** Refer these children to a dentist.

- Known sensitivity to colophony or colophonium or other product ingredients which include:
  - Ethyl alcohol anhydrous USP 38.58%
  - Shellac powder 16.92%
  - Rosin USP 29.61%
  - Copal
  - Sodium Fluoride 4.23%
  - Sodium Saccharin USP 0.04%
  - Flavorings, Cetostearyl Alcohol

### **Schedule and Dosages**

- Trained medical staff will apply the initial FV application as a thin layer of 5% sodium FV to all surfaces of erupted primary teeth.
- Repeat the FV application at scheduled well child visits.
- FV can be applied three times a year in the medical setting.

### **PRE-APPLICATION INSTRUCTIONS**

#### **Advise the parent (or legal guardian):**

- Prior to coming to the office:
  - Give the child something to eat and drink
  - Brush the child's teeth
- At the office:
  - Tell the parent that the child's teeth may become discolored temporarily; varnish can be brushed off the following day.
  - Have the parent review the parent information sheet/brochure.

### **APPLICATION PROCEDURE**

#### **Supplies**

- Tongue depressor or mouth mirror
- Non-latex disposable gloves
- Toothbrush (optional)
- Gauze (2 x 2)
- Single unit dose FV (0.25ml)
- Paper towels or disposable bibs to place under the child's head (optional)
- Good lighting or flashlight
- Post procedure information (*Fluoride Varnish Helping Smiles Stay Strong* brochure or manufacturer's post-FV application information sheet)
- List of dentists/dental referral sheet

**Caution:** Store varnish in a safe location at room temperature and out of the reach of children.

#### **FV Application Assessment Guidelines**

- Observe tooth surfaces and assess for:
  - **Pulp** exposure or tissue lesions; do not apply in these areas.
  - Minor caries or white discolorations which may be an early sign of caries; apply the varnish.
- Tooth surfaces need to be free of heavy plaque, food and debris.
  - Brush the teeth prior to application or wipe off food with gauze, if necessary.

- Use a 2x2 gauze to dry the teeth.
  - Removing excess saliva with gauze can greatly enhance assessment and application.

### **Positioning the Child for the Assessment and Application**

(Before positioning the child, have all the supplies ready, gloves on, gauze & brush in position, and give verbal explanation/instructions to the parent on what to expect during the application.)

- For an infant:
  - Providers should position themselves “knee-to-knee” with the parent.
  - Child sits on parent's lap facing the parent. Straddle each of the child's legs around the parent's waist. Parent should lower the child's head onto the provider's knees, and secure child's arms and legs.
  - Or, infant can be placed on an exam table and provider can work from behind the head.
  - As experience is gained, position the child in what works best.
- For a young child:
  - Place the child in a sitting position and work from above the head.
  - Or, adapt a method that works best.



### **The Application**

- Use gentle finger pressure to open the child's mouth.
- Remove excess saliva with a 2x2 gauze. (You do not need to completely dry the teeth as some saliva helps FV adhere to the tooth surface.)
- Use your finger and gauze to isolate the dry teeth and keep them dry. You will usually be able to isolate a section of teeth at a time, but may have to work with fewer teeth in some children.
- It is helpful to begin applying on upper molars to prevent child from tasting the varnish. (Some children may not like the taste.)
- Apply a thin layer of the varnish to all surfaces of the teeth. (Avoid applying varnish on large open cavities where there may be pulp involvement.)
- Once the varnish is applied, you need not worry about moisture (saliva) contamination. The varnish sets quickly.

### **Post-Application Instructions**

To keep the varnish on the teeth for as long as possible, inform parent:

- To provide only a soft, non-abrasive diet for the rest of the day
- To avoid serving hot foods for 4-6 hours
- Child can drink water immediately following the FV application
- Not to brush or floss child's teeth until the next morning
- Not to give additional fluoride (i.e., fluoride vitamins or supplements) for 2 days
- It is normal for the teeth to appear dull or yellow until they are brushed the next day
- FV does NOT take the place of a dental appointment
- A dental home is necessary (give them a dental referral list if family has no dental home)
- To call primary medical provider if child experiences any adverse outcome or parent has any concerns.

## **Adverse Reactions**

In **extremely rare** instances edematous swellings have been reported especially after application to extensive surfaces. Dyspnea, although extremely rare, has occurred in asthmatic people. Nausea has been reported when extensive applications have been made to patients with sensitive stomachs. If required, varnish is easily removed with thorough tooth brushing and rinsing. Advise family to call 911 for any **serious** side effect, if medical provider is not available.

## **Remember**

- Even though the child may fuss, the varnish application is quick and painless.
- Infants are easy as they have fewer teeth. (If they cry, their mouths open and the application is done quickly.)
- The varnish should be applied at a minimum twice a year in the medical setting, but can be applied up to 3 times. (This is in addition to any fluoride being applied at the dental office.)
- Remind parents: FV at the medical office does NOT take the place of routine dental visits. (Usually every six months with dentist.)

## **Educate**

Parent/caregiver education is crucial for establishing good oral health for their children.

## **5 Easy Steps to Good Oral Health:**

1. Brush teeth with fluoride toothpaste twice a day
2. Floss
3. Drink fluoridated tap water (or take fluoride supplements in non-fluoridated areas)
4. Eat healthy snacks
5. Start biannual dental visits by age 1

## **Follow Up**

Prescribing physician or NP will:

- Assess for need of repeat applications, and prescribe for additional FV at next visit, or more often according to the caries risk of the child.
  - Children with multiple risk factors for dental caries should be prioritized to be appointed for additional FV applications.<sup>3</sup>
- FV can be reimbursed by Medi-Cal, up to 3 times each year.
- Assess if child has a dental home and refer if needed.

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<sup>3</sup> AAP Oral Health Risk Assessment Tool 2011 [https://www.aap.org/en-us/Documents/oralhealth\\_RiskAssessmentTool.pdf](https://www.aap.org/en-us/Documents/oralhealth_RiskAssessmentTool.pdf)

# California CHDP/EPSDT Program Fluoride Varnish Standing Order

\_\_\_\_\_ authorizes the applications of Fluoride Varnish  
(Name of Medical Provider, Degree)

(FV) to all children ages 6 months up to their 6th birthday for a one year period of time

from: \_\_\_\_\_ at \_\_\_\_\_  
(Month/Day/Year to Month/Date/Year) (Name of Clinic)

This standing order will be reviewed on an annual basis.

Prescription FV include: \_\_\_\_\_  
(List any FV agents approved by the FDA that your clinic will be ordering to apply on patients)

Clinic Name: \_\_\_\_\_

Clinic Representative (Name and Title): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_