A REPORT TO THE 2025–2026 CALIFORNIA LEGISLATURE

Analysis of California Assembly Bill 350: Fluoride Treatments

APRIL 13, 2025

CHBRP

California Health Benefits Review Program (CHBRP)
University of California, Berkeley

chbrp.org

KEY FINDINGS

Analysis of California Assembly Bill 350 Fluoride Treatments

Summary to the 2025-2026 California State Legislature, April 13, 2025

CHBRP

Summary

The version of California Assembly Bill (AB) 350 analyzed by the California Health Benefits Review Program (CHBRP) would require coverage of fluoride varnish provided in medical settings for enrollees aged 20 and younger. In 2026, 24.1 million Californians (63% of all Californians) enrolled in state-regulated health insurance would have insurance subject to AB 350.

Benefit Coverage

Benefit coverage for fluoride varnish in medical settings would increase from 4.8% at baseline to 100% postmandate. All enrollees have coverage for fluoride varnish when applied to enrollees aged 0 to 5 years in medical settings at baseline. AB 350 would not exceed essential health benefits (EHBs).

Medical Effectiveness

Overall, CHBRP found evidence that fluoride varnish is effective in the prevention of tooth decay and dental caries, primarily in younger children, in both medical and other clinical settings when applied 2 to 4 times per year.

Cost and Health Impacts[1]

In 2026, CHBRP estimates that AB 350 would result in an additional 139,900 Californians aged 6 to 20 years receiving one application of fluoride varnish at their annual well-child visit. Because of existing benefit coverage, utilization would not change among enrollees aged 0 to 5 years.

AB 350 would increase total premiums paid by employers and enrollees for newly covered benefits by $3,242,000. CHBRP assumes cost sharing would not be charged and therefore projects no changes in enrollee expenses. Total net expenditures would increase by the same amount as premiums (approximately 0.002% of total expenditures).

Context

Untreated dental cavities or carious lesions (resulting from dental caries disease) can lead to pain/sensitivity, abscesses, and subsequent tooth loss. Among young children, it can further lead to delayed eruption or malformation of permanent teeth. Dental caries is the most common chronic condition in the pediatric population in the United States.[2]

Fluoride is a mineral that helps to prevent cavities and to heal early cavities. Fluoride varnish is a topical form of fluoride and the average application time is less than 2 minutes to “paint” the tops and sides of teeth using a small brush. Varnish dries quickly and patients can return to school and eat after application but are advised not to brush their teeth that night.

Bill Summary

Broadly speaking, AB 350 would require coverage of fluoride varnish when provided in a primary care setting for enrollees aged 20 and younger. CHBRP assumes primary care setting means primary care **medical setting**. There are existing coverage requirements for commercial/ California Public Employees’ Retirement System (CalPERS) plans and policies, along with Medi-Cal, for fluoride varnish provided in medical settings for enrollees aged 0 to 5 years.

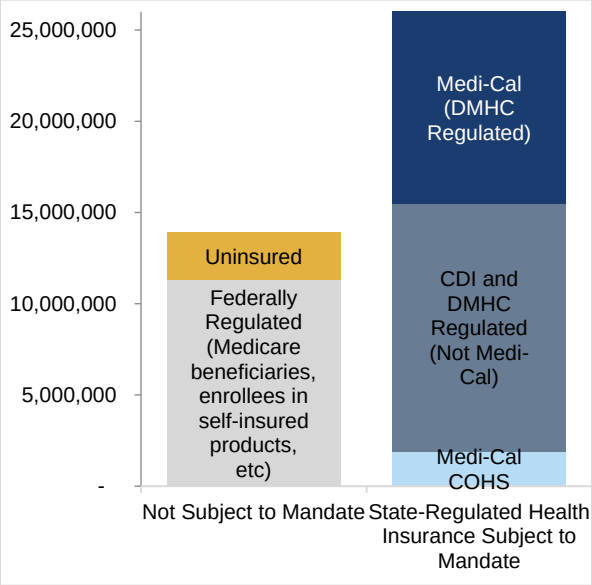
Under existing law, fluoride varnish is a billable service when provided by any person operating under the direction and supervision of a physician or dentist.

Figure A notes how many Californians have health insurance that would be subject to AB 350.

[1] Similar cost and health impacts could be expected for the following year, though possible changes in medical science and other aspects of health make stability of impacts less certain as time goes by.

[2] Refer to CHBRP’s full report for full citations and references.

Figure A. Health Insurance in CA and AB 350



Source: California Health Benefits Review Program, 2025.
Key: CDI = California Department of Insurance; COHS = County Organized Health System; DMHC = Department of Managed Health Care.

How does utilization impact premiums?

Health insurance, by design, distributes risk and expenditures across everyone enrolled in a plan or policy. It does so to help protect each enrollee from the full impact of health care costs that arise from that enrollee's use of prevention, diagnosis, and/or treatment of a covered medical condition, disease, or injury. Changes in utilization among any enrollees in a plan or policy can result in changes to premiums for all enrollees in that plan or policy.

Impacts

Benefit Coverage

CHBRP assumes that 100% of enrollees have coverage for fluoride varnish when applied in a primary care setting for enrollees aged 0 to 5 years in accordance with state and federal law. For fluoride varnish applied to enrollees aged 6 to 20 years in medical settings, approximately 1.5% of enrollees in commercial/CalPERS plans and policies and 17% of Medi-Cal beneficiaries have coverage at baseline. Postmandate, all enrollees would have coverage for fluoride varnish provided in a medical setting for children aged 20 years and younger.

Utilization

CHBRP assumes utilization of fluoride varnish among commercial/CalPERS and Medi-Cal enrollees aged 0 to 5 years would not increase because this service is fully covered at baseline. There are approximately 16,600 applications among commercial/CalPERS enrollees aged 0 to 5 years and 115,500 applications among Medi-Cal beneficiaries aged 0 to 5 years at baseline.

CHBRP assumes enrollees who newly receive fluoride varnish postmandate would receive one application within a plan year during the annual well-child visit.

Commercial/CalPERS: For enrollees aged 6 to 20 years, CHBRP estimates approximately 700 billed applications occur in medical settings at baseline. CHBRP estimates utilization would increase by 27,100 applications for a total of 27,800 being billed postmandate.

Medi-Cal: For beneficiaries aged 6 to 20 years, CHBRP estimates approximately 9,000 applications occur in medical settings at baseline. CHBRP estimates utilization would increase by 112,800 applications for a total of 121,800 applications being billed postmandate.

Expenditures

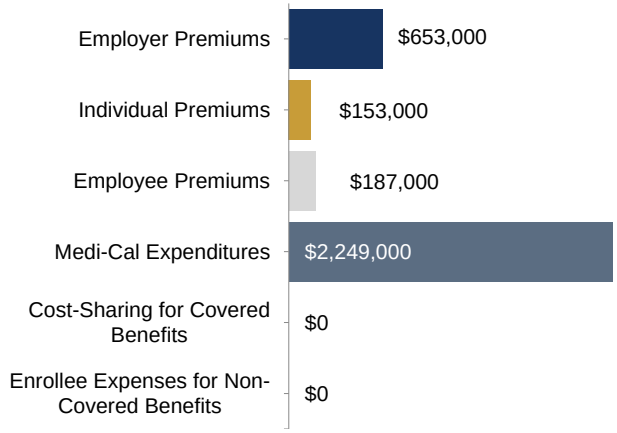
For state-regulated commercial/CalPERS plans and policies and Medi-Cal, AB 350 would increase total premiums paid by employers and enrollees for newly covered benefits by $3,242,000 (Figure B).

Although state and federal preventive services mandates require health plans and policies to cover fluoride varnish provided in a medical setting for enrollees aged 0 to 5 years without cost sharing, there is no corresponding requirement in AB 350 for fluoride varnish provided to enrollees aged 6 to 20 years. CHBRP assumes when fluoride varnish is applied for enrollees aged 6 to 20 years, cost sharing would not be charged because the varnish is applied during a well-child visit.

Therefore, CHBRP projects no changes in enrollee expenses for covered benefits.

Within DMHC-regulated commercial/CalPERS plans and CDI-regulated commercial policies, premiums would increase by $653,000. This would be between 0.0007% and 0.0009% per member per month (PMPM) or between $0.006 and $0.007 PMPM.

Figure B. Expenditure Impacts of AB 350



Source: California Health Benefits Review Program, 2025.

Medi-Cal

For Medi-Cal beneficiaries enrolled in DMHC-regulated plans and County Organized Health Systems (COHS), premiums would increase by $2,249,000. This would be less than 0.01% or $0.02 PMPM.

Number of Uninsured in California

Because the change in average premiums does not exceed 1% for any market segment, CHBRP would expect no measurable change in the number of uninsured persons due to the enactment of AB 350.

Medical Effectiveness

Overall, CHBRP found evidence that fluoride varnish is effective in the prevention of tooth decay and dental caries, primarily in younger children, in both medical and other clinical settings.

In **medical settings**:

- For primary teeth, CHBRP found *strong evidence*[3] that fluoride varnish is effective in improving oral health outcomes such as the prevention of tooth decay and dental caries compared to no fluoride varnish.
- For permanent teeth, there was *not enough research*[4] to determine the effectiveness of fluoride varnish compared to no fluoride varnish on health outcomes. CHBRP notes that absence of evidence is not evidence of no effect.

In **other clinical settings**:

- For primary and permanent teeth, CHBRP found *strong evidence* that fluoride varnish is effective in improving oral health outcomes, such as the prevention of tooth decay and caries, compared to no fluoride varnish, among children younger than 18 years.

Studies identified through this literature review included children younger than 18 years. CHBRP did not identify studies that examined the use of fluoride varnish in medical or other clinical settings for persons aged 18 to 20 years.

Public Health

CHBRP projects a very limited public health impact on the overall incidence of dental caries and loss of tooth enamel due to AB 350 in the first year postmandate. Because 139,900 additional enrollees aged 6 to 20 years would receive one application of fluoride varnish at a well-child visit within the first year (in contrast to the recommended 2 or 4 applications per year), there appears to be no significant impact at the population level during the first year postmandate.

This incremental change in utilization represents about 2% of the 6.32 million enrollees aged 6 to 20 years with state-regulated health insurance. It is unknown whether these children also would receive additional fluoride varnish through other sources such as a dental home or school.

[3] *Strong evidence* indicates that the majority of the studies reviewed are consistent in their findings that treatment is either effective or not effective. Conclusions could be altered with additional strong evidence.

[4] *Not enough research* indicates that there are no studies of the treatment, or the available studies are not of high quality, meaning there is not enough evidence available to know whether or not a treatment is effective. It does not indicate that a treatment is not effective.

The change in utilization is limited by barriers to receiving fluoride varnish beyond insurance coverage, such as clinician knowledge about obtaining and applying fluoride varnish, difficulties integrating oral health screening and fluoride varnish application into the workflow, clinician hesitancy due to perceived harms of the varnish, concerns about inadequate or rejected reimbursement, and inadequate office visit time and parent hesitancy.

Dental cavities generally take 1 to 2 years to develop; therefore, in the first year postmandate, the number of cavities averted would be low.

AB 350's very limited impact at the population level also would result in no change in existing racial/ethnic, income, and geographic disparities in incidence of dental caries.

CHBRP notes that, despite very limited impact in the short term, at the person-level, some children may see a reduction in cavities or tooth loss that would have otherwise occurred, as well as potential reductions in cascading consequences such as pain, lost school days (and lost workdays for caregivers), and additional dental work.

Long-Term Impacts

The long-term public health impact associated with AB 350 (reduction in dental caries, associated health and quality of life impacts, and related disparities) may be greater than the first year postmandate due to the expected time course for fluoride to prevent dental caries as well as potential reductions in clinician barriers. Additionally, other public health changes (i.e., community water fluoridation) may attenuate or increase the impact of AB 350.

Assuming enrollees continue to receive fluoride varnish in a medical setting annually, AB 350 could potentially result in a reduction of 5,800 cavities among the 27,100 new users aged 6 to 20 years with commercial/CalPERS coverage and a reduction of 24,200 cavities among the 112,800 new users aged 6 to 20 years with Medi-Cal. This would potentially result in a reduction in expenditures for commercial dental insurers and enrollees of $660,000 and a reduction in expenditures for the Medi-Cal dental program of $1,508,000 over a 4-year period.

Essential Health Benefits and the Affordable Care Act

AB 350 would not exceed the definition of EHBs in California because AB 350 would expand existing benefit coverage and does not create a new coverage requirement.

About CHBRP

The California Health Benefits Review Program (CHBRP) was established in 2002. As per its authorizing statute, CHBRP provides the California Legislature with independent analysis of the medical, financial, and public health impacts of proposed health insurance benefit–related legislation.

The state funds CHBRP through an annual assessment on health plans and insurers in California.

An analytic staff based at the University of California, Berkeley, supports a task force of faculty and research staff from multiple University of California campuses to complete each CHBRP analysis. A strict conflict-of-interest policy ensures that the analyses are undertaken without bias. A certified, independent actuary helps to estimate the financial impact. Content experts with comprehensive subject-matter expertise are consulted to provide essential background and input on the analytic approach for each report.

More detailed information on CHBRP's analysis methodology, authorizing statute, as well as all CHBRP reports and other publications, are available at chbrp.org.

Suggested citation

California Health Benefits Review Program (CHBRP). (2025). *Analysis of California Assembly Bill 350: Fluoride Treatments.* Berkeley, CA.

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Lists of Tables and Figures

Acronyms and Abbreviations

AAP – American Academy of Pediatrics
AAPD – American Academy of Pediatric Dentistry
AB – Assembly Bill
ACA – Affordable Care Act
ADA – American Dental Association
CA – California
CalPERS – California Public Employees' Retirement System
CDI – California Department of Insurance
CDPH – California Department of Public Health
CHBRP – California Health Benefits Review Program
CHIS – California Health Interview Survey
CHSD – Consolidated Health Cost Guidelines Sources Database
COHS – County Organized Health System
DHCS – Department of Health Care Services
DFT – decayed or filled teeth
DFS – decayed or filled surfaces
DMFT – decayed, missing, or filled teeth
DMHC – Department of Managed Health Care
EHB – essential health benefits
EPSDT – Early and Periodic Screening, Detection, and Treatment
FQHC – federally qualified health center
HRSA – Health Resources and Services Administration
IEHP – Inland Empire Health Program
PMPM – per member per month
RCT – Randomized Controlled Trial
USPSTF – United States Preventive Services Task Force

Introduction

The California Assembly Committee on Health requested that the California Health Benefits Review Program (CHBRP)[5] conduct an evidence-based assessment of the medical, financial, and public health impacts of Assembly Bill (AB) 350, Fluoride Treatments.

AB 350 Fluoride Treatments Bill Language

Broadly speaking, AB 350 would require coverage of fluoride varnish when provided in a primary care setting for enrollees aged 20 and younger. As discussed in the *Analytic Approach and Assumptions section*, CHBRP assumes primary care setting means primary care **medical setting** (see more information there as well). There are existing coverage requirements for commercial/California Public Employees' Retirement System (CalPERS) plans and policies, along with Medi-Cal. Below provides additional information about existing law and how AB 350 would expand coverage.

State-Regulated Commercial and CalPERS plans and policies

AB 350 would expand existing coverage requirements for the application of fluoride varnish in the medical setting from enrollees through age 5 to enrollees aged 20 and younger.

Under existing law (see more information about existing coverage requirements in the *Policy Context* section), coverage of fluoride varnish applied in medical settings for children age 5 years and younger is required because the American Academy of Pediatrics (AAP) recommends fluoride varnish be applied during well-child visits for children *through* age 5 years and the United States Preventive Services Task Force (USPSTF) provides a Grade B recommendation that primary care clinicians apply fluoride varnish to the primary teeth of all infants and children starting at the age of primary tooth eruption. AB 350 includes language that this bill would "not diminish a [plan or policy's] responsibility under the Affordable Care Act (ACA) to cover services that are assigned either a grade of A or B by the USPSTF for all populations subject to that recommendation."

Medi-Cal

AB 350 would expand upon an existing requirement for coverage of the application of fluoride or other appropriate fluoride treatment and other prophylaxis treatment for beneficiaries younger than 18 years to beneficiaries aged 20 and younger. AB 350 states that this requirement includes the application of fluoride varnish in primary care settings.

AB 350 would also require the Department of Health Care Services (DHCS) to establish a billing policy that allows Medi-Cal enrolled providers who are authorized to apply and bill for the application of fluoride varnish to be reimbursed for that service, if the fluoride varnish is physically applied by a person who is both (1) employed by the Medi-Cal enrolled provider or working in a contractual relationship with the Medi-Cal provider; and (2) otherwise authorized under law, including Section 104762 or 104830 of the Health and Safety Code, to apply fluoride varnish (see the *Policy Context* section for more information about these Sections).

See the full text of AB 350 in Appendix A.

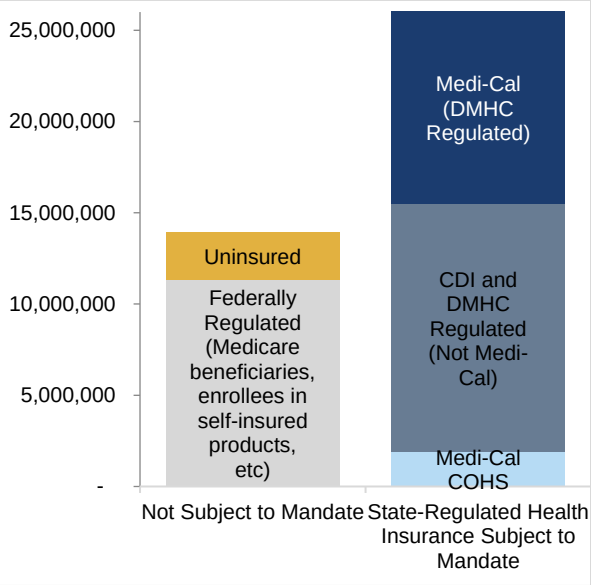
[5] See CHBRP's authorizing statute.

If enacted, AB 350 would apply to the health insurance of approximately 24,116,000 enrollees (63% of all Californians) (see Figure 1).

- **Includes:** enrollees in commercial or CalPERS health insurance regulated by the Department of Managed Health Care (DMHC) and the California Department of Insurance (CDI), and Medi-Cal beneficiaries enrolled in DMHC-regulated plans or county organized health systems (COHS).

See the following *Analytic Approach and Key Assumptions* section for additional information.

Figure 1. Health Insurance in CA and AB 350



Source: California Health Benefits Review Program, 2025.
Key: CDI = California Department of Insurance; COHS = County Organized Health System; DMHC = Department of Managed Health Care.

What Are Dental Caries and Fluoride Treatment?

Dental cavities or carious lesions (resulting from dental caries disease) is tooth decay. Untreated dental caries can lead to pain/sensitivity, abscesses, and subsequent tooth loss. Among young children, it can further lead to delayed eruption or malformation of permanent teeth. Other serious effects include dysfunctional speech patterns, diminished self-image, and reduction in school and work productivity (APHA, 2010). Dental caries is the most common chronic condition in the pediatric population in the United States (Clark et al., 2020). A 2018 survey by the California Department of Public Health (CDPH) found that 61% of California children in third grade experienced dental caries (Darsie et al., 2021).

Fluoride is a mineral that helps to prevent cavities and to heal early cavities (ADA, 2023). Fluoride varnish is a topical form of fluoride. The average application time is less than 2 minutes to “paint” the tops and sides of teeth using a small brush. Varnish dries quickly and patients can return to school and eat after application but are advised not to brush their teeth that night (Weyant et al., 2013).

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Policy Context

Health benefit mandates may interact and align with the following state and federal mandates, programs, and policies.

California Law and Regulations

Preventive Services

Existing California law requires coverage for the following preventive services without cost sharing or prior authorization for enrollees in grandfathered and nongrandfathered plans and policies:[6,7]

- The United States Preventive Services Task Force (USPSTF) A and B recommendations; and
- The Health Resources and Services Administration (HRSA)–supported comprehensive guidelines for infants, children, and adolescents, which include the Bright Futures Recommendations for Pediatric Preventive Health Care.

These requirements mostly align with the federal preventive services listed under the Affordable Care Act, which only applies to nongrandfathered plans and policies.[8]

As mentioned in the *Introduction*, the USPSTF provides a Grade B recommendation that primary care clinicians apply fluoride varnish to the primary teeth of all infants and children *younger than* 5 years, starting at the age of primary tooth eruption. This recommendation was updated in 2021; the previous recommendation applied to children *through* age 5 years (USPSTF, 2014). Additionally, the Bright Futures program, which creates and shares clinical national guidelines for pediatric well-child visits, funds the guidelines through a cooperative agreement with the American Academy of Pediatrics (AAP; HRSA, 2024). The AAP recommends fluoride varnish be applied during well-child visits for children *through* age 5 years (AAP, 2025b). As a result, fluoride varnish provided in a primary care setting for enrollees *through* age 5 years is a covered benefit for those enrolled in state-regulated commercial or CalPERS health insurance.

Medi-Cal

Medi-Cal provides preventive services benefits in accordance with USPSTF A and B recommendations and the Bright Futures/AAP Periodicity Schedule (DHCS, 2025). Therefore, Medi-Cal covers the application of fluoride varnish when provided in a medical setting for Medi-Cal beneficiaries aged 0 to 5 years (DHCS, 2019).

Existing California Law

In 2009, Governor Schwarzenegger signed into law AB 667 Topical Fluoride Application, which amended Section 104762 of the California Health and Safety Code to permit any person working in a public health setting or a public health program that is created or administered by a federal, state, or local governmental entity to apply fluoride varnish or other topical fluoride to a person being served in that setting or program, in accordance with a prescription and protocol established by a dentist or physician. As a result of AB 667, all dental and medical professionals, as well as nonhealthcare individuals such as teachers, parents, promotoras, and community health workers are permitted to apply varnish.

Section 104830 of the California Health and Safety Code states that pupils of public and private elementary and secondary schools, except pupils of community colleges, shall be provided the opportunity to receive within the school

[6] Health and Safety Code 1367.002; Insurance Code 10112.2.
[7] More information about the state and federal requirements to cover specified preventive services is included in CHBRP's resource *Federal Recommendations and the California and Federal Preventive Services Benefit Mandates*.
[8] As of the published date of this report, the federal preventive services mandate was being challenged in court. Due to the alignment between California and federal law regarding coverage, cost sharing, and utilization management of certain preventive services, the court case will not impact DMHC-regulated health plans or CDI-regulated health policies. For more information, see CHBRP's resource *Federal Recommendations and the California and Federal Preventative Services Benefit Mandates*.

year the topical application of fluoride, including fluoride varnish, or other decay-inhibiting agent to the teeth in the manner approved by DMHC. The program of topical application shall be under the general direction of a dentist licensed in the state. Topical application of fluoride may include, according to the prescription and protocol established by the dentist, self-application or application by another person.

Interaction with Dental Insurance

In California, many enrollees with commercial or CalPERS health insurance receive dental benefits through employer-sponsored or individually purchased dental plans. Most Medi-Cal beneficiaries receive dental benefits through the Medi-Cal Dental Program, also formerly called Denti-Cal. Fluoride varnish is a covered preventive service within both Medi-Cal Dental and commercial dental insurance.

Other Relevant California Programs

Medi-Cal

Dental coverage for fluoride varnish

"Other fluoride treatments and other prophylaxis treatments" are covered under the Medi-Cal Dental Program for enrollees aged 20 and younger when provided by dental professionals. **As a result, AB 350 would not result in a change in benefit coverage for Medi-Cal beneficiaries aged 18 to 20 years for dental services provided in a dental setting.** As discussed in the *Introduction*, existing law requires coverage of fluoride treatments and other prophylaxis treatments for Medi-Cal beneficiaries through age 17.

The Medi-Cal Dental Transformation Initiative (DHCS, nd), which concluded in 2021, aimed to increase the use of preventive dental services for children, prevent and treat more early childhood caries, and increase continuity of care for children. Dental Transformation Initiative incentives included payments to dentists for performing pre-identified treatment plans for children aged 6 and younger, where treatment plans include fluoride varnish application (among other services).

There is a national benchmark, which DHCS has also adopted, that establishes minimum performance target levels for fluoride varnish for Medicaid beneficiaries. The benchmark is for 19.3% of Medi-Cal beneficiaries aged 1 to 20 years to receive at least two topical fluoride applications annually (DHCS, 2025). In 2022, approximately 16.17% of Medi-Cal beneficiaries received at least two applications of fluoride varnish annually, including varnish applied by dental professionals and billed to the Medi-Cal Dental program.

Other provider coverage for fluoride varnish

Some health insurers also have specific incentive programs to increase application of fluoride varnish in various settings. For example, in 2024, the Inland Empire Health Program (IEHP) introduced the Topical Fluoride for Children and Adolescents FQHC Incentive Program. The program encourages Federally Qualified Health Clinics (FQHCs), Rural Health Clinics, and Indian Health Facilities to support IEHP's goals of ensuring members aged 1 to 20 years receive topical fluoride services and exceed minimum performance level targets established by DHCS. Participating Provider Clinics are offered a financial incentive by the plans for improving their topical fluoride for children and adolescents performance rate for the 2024 measurement year.

School-Based Dental Programs and Other Clinics

Fluoride varnish may also be applied to children through school-based dental programs. These programs are typically organized by county health departments and are funded through the county health departments, grants, or donations. For example, Alameda County's Office of Dental Health provides free preventive dental services including fluoride varnish to all third grade students enrolled in select elementary schools. The application of fluoride varnish is typically not billed to

Medi-Cal because that would require collecting health insurance eligibility information from students and submitting claims to the appropriate insurer/department.[9]

Similarly, health or dental fairs may also offer fluoride varnish to attendees, and these services may also be provided without billing an attendee's insurance.

Similar Legislation in Other States

Minnesota law requires the application of fluoride varnish at all "child and teen checkup visits" starting at the eruption of the first tooth or no later than 12 months of age and continuing through 5 years of age (MDH, 2024). Fluoride varnish can be applied as often as four times per year in the clinic setting. "Child and teen checkups" is Minnesota's Early and Periodic Screening, Detection, and Treatment (EPSDT) program and sets requirements for services provided at medical and dental visits. This requirement to apply fluoride varnish at all checkups is applicable to services provided in a medical setting.

The Massachusetts Medicaid program MassHealth reimburses trained healthcare professionals for applying fluoride varnish on the teeth of children with a moderate- to high-risk for tooth decay (Massachusetts Department of Public Health, 2017). Physicians and qualified personnel, including nurse practitioners, registered nurses, licensed practical nurses, physician assistants, and medical assistants seeking to apply fluoride varnish to MassHealth-enrolled children aged 20 and younger are required to complete a MassHealth-approved training program.

Federal Policy Landscape

Affordable Care Act

A number of Affordable Care Act (ACA) provisions have the potential to or do interact with state benefit mandates. Below is an analysis of how AB 350 may interact with requirements of the ACA as presently exist in federal law, including the requirement for certain health insurance to cover essential health benefits (EHBs).[10,11]

Essential health benefits

In California, nongrandfathered[12] individual and small-group health insurance is generally required to cover EHBs.[13] In 2026, approximately 11% of all Californians will be enrolled in a plan or policy that must cover EHBs.[14]

AB 350 would not exceed the definition of EHBs in California because AB 350 would expand existing benefit coverage and does not create a new coverage requirement.

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[9] Personal communication with CHBRP's content experts, March 7, 2025.
[10] The ACA requires nongrandfathered small-group and individual market health insurance — including but not limited to qualified health plans sold in Covered California — to cover 10 specified categories of EHBs. Policy and issue briefs on EHBs and other ACA impacts are available on the CHBRP website.
[11] Although many provisions of the ACA have been codified in California law, the ACA was established by the federal government, and therefore, CHBRP generally discusses the ACA as a federal law.
[12] A grandfathered health plan is "a group health plan that was created – or an individual health insurance policy that was purchased – on or before March 23, 2010. Plans or policies may lose their 'grandfathered' status if they make certain significant changes that reduce benefits or increase costs to consumers."
[13] For more detail, see CHBRP's issue brief *Essential Health Benefits: An Overview of Benefits, Benchmark Plan Options, and EHBs in California*.
[14] See CHBRP's resource *Sources of Health Insurance in California*.

Analytic Approach and Key Assumptions

CHBRP assumes "primary care setting" includes **medical settings** such a pediatrician's or family physician's office, a school-based clinic, or a federally qualified health center (FQHC) where comprehensive medical care is delivered. CHBRP uses "medical settings" throughout the report to distinguish fluoride varnish applied in these settings as compared with dental settings, which can also be identified as primary care settings. Additionally, FQHCs may also have dental services available and fluoride varnish can be billed using dental procedure codes instead of the medical procedure codes. When FQHCs do not have dental services available, they would be included in CHBRP's definition of "medical settings."

As AB 350 does not specify the frequency of fluoride varnish application to be covered by plans and policies, CHBRP assumes that health plans and policies would be required to cover a frequency of fluoride varnish treatment for eligible enrollees following the American Dental Association (ADA)'s Evidence-Based Clinical Recommendations for the Use of Topical Fluoride Agents. The ADA recommends the application of fluoride varnish every 3 to 6 months for patients at elevated risk of dental caries. See more information about this recommendation in the *Background* section.

As discussed in the *Policy Context* section, the application of fluoride (or other appropriate fluoride treatment and other prophylaxis treatment) for Medi-Cal beneficiaries aged 20 and younger is currently covered under the Medi-Cal dental program when provided by dental professionals. Because these services are covered at baseline and AB 350 would not result in a change in coverage, CHBRP does not discuss other fluoride services, such as silver diamine fluoride, provided by dental professionals.

Under existing law, fluoride varnish is a billable service when provided by any person operating under the direction and supervision of a physician or dentist.

Existing benefit coverage for fluoride varnish is as follows in Table 1 below.

Table 1. Existing Coverage of Fluoride Varnish, by Setting and Age Group

Age Group	Medical Setting	Dental Setting
Commercial/CalPERS Enrollees		
Aged 0–5 years	Covered	Covered
Aged 6–20 years	Not broadly covered	Covered
Medi-Cal Beneficiaries		
Aged 0–5 years	Covered	Covered
Aged 6–20 years	Not broadly covered	Covered

Source: California Health Benefits Review Program, 2025.
Note: For federally qualified health centers that provide dental care, fluoride varnish can be applied and billed to the Medi-Cal Dental program, under the supervision of a dentist.
Key: CalPERS = California Public Employees' Retirement System.

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Background on Pediatric Dental Caries and Fluoride Varnish

AB 350 would require all state-regulated plans and policies to cover the application of fluoride varnish in medical settings for children aged 20 years and younger.

What Is Dental Caries?

Dental caries is the oral disease that causes carious lesions (early stage), which can lead to cavities in teeth (NIH, 2021). The tooth structure includes enamel, dentin, pulp, and root. Enamel is the outermost covering of the tooth that protects the teeth from wear and tear and cavities. Tooth enamel naturally cycles through a demineralization and remineralization process. The demineralization process occurs when bacteria in the mouth produce lactic acid from fermenting carbohydrates (sucrose, fructose, and glucose) and dissolves the tooth's mineral content resulting in a carious lesion (soft spots) or cavity (hole in the enamel or beyond) (Clark et al., 2020). Remineralization of the tooth occurs through saliva production as well as foods and water that contain minerals like fluoride, phosphate, and calcium (Cleveland Clinic, 2023).

Figure 2. Tooth Anatomy

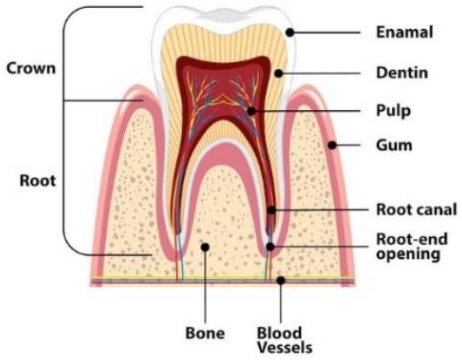

Photo credit: Freepik

Unchecked demineralization can lead to dental caries which, if left untreated, can lead to tooth loss. This can have significant health impacts such as pain/sensitivity, abscesses, tooth loss, and damage to unerupted permanent teeth (NIH, 2021). More serious effects include dysfunctional speech patterns, diminished self-image, and reduction in school and work productivity (APHA, 2010).

What Are Fluoride and Fluoride Varnish?

Fluoride is a mineral that helps prevent and reverse early-stage dental caries by strengthening the tooth enamel. Fluoride helps to prevent cavities and to heal early cavities (ADA, 2023).

Fluoride is available in many formulations that are used topically most commonly, but also may be used systemically. Systemically, prescription fluoride tablets or drops are swallowed and absorbed into the blood stream where fluoride is delivered through the blood vessels in the teeth and then to the tooth surface. Community water fluoridation programs provide topical and systemic-based fluoride through the contact with teeth when drinking fluoridated water as well as absorption through the digestive process (ADA, 2005; Aoun et al., 2018). Topical fluoride formulations may be prescription-based (higher concentrations of fluoride for children with a higher risk of caries), but are most commonly delivered through over-the-counter toothpastes and mouthwashes, which have lower fluoride concentrations than varnish (ADA, 2023). Other topical fluoride treatments administered by dentists include fluoride foams and gels, as well as silver diamine fluoride that is used to stop caries from further progression. Adverse effects of silver

Key Terms

Primary dentition: 20 temporary teeth erupt between ages 6 months and 6 years. All primary teeth are lost by age 14. The primary tooth enamel is thinner than enamel for permanent teeth. Premature tooth loss can affect the health and proper positioning of the permanent tooth below.

Permanent dentition: 32 permanent teeth are established generally between ages 6 and 21 years. Enamel is more substantial in permanent dentition than in primary teeth.

Dental fluorosis: Hypomineralization of the teeth manifests as white or brown spots or streaks on teeth due to excessive ingestion of fluoride. Moderate to severe fluorosis is uncommon the United States.

Sources: Aliuddin, 2016; Clark et al., 2020; Nowak and Warren, 2025.

diamine fluoride may include staining the treatment site black, having a metallic taste, and irritating mouth surfaces (ADA, 2023).

Fluoride Varnish

Fluoride varnish is the only type of fluoride addressed by AB 350. This topical fluoride is made of an adhesive that contains 5% sodium fluoride or 2.25% fluoride ion and is used to maintain high fluoride contact with the tooth for approximately 12 hours (usually overnight) before being brushed off (APHA, 2010; Moss and Zero, 2021). The application, which requires minimal training, averages less than 2 minutes to "paint" the tops and sides of teeth using a small brush. Varnish dries quickly and patients can return to school and eat after but are advised not to brush their teeth that night (Weyant et al., 2013).

Varnish dries more quickly than other topical fluoride gels and foams, which reduces potential for swallowing the fluoride and prevents adverse events like nausea and vomiting from swallowing (Weyant et al., 2013). Fluoride varnish has not been associated with dental fluorosis.

Figure 3. Fluoride Varnish Kit

Photo credit: Casey Hein, 2025

Fluoride Varnish Clinical Practice Guidelines and Recommendations

The American Dental Association (ADA), the American Academy of Pediatric Dentists (AAPD), the American Academy of Pediatrics (AAP), and the United States Preventive Services Task Force (USPSTF) generally recommend the use of fluoride varnish but offer some nuanced differences.

Figure 4. Applying Fluoride Varnish

Photo credit: Casey Hein, 2025

- **ADA:** Based on its review of evidence and expert opinion, the ADA issued its recommendation that fluoride varnish be applied by practitioners every 3 to 6 months for patients who are at elevated risk of dental caries (including adults). The ADA states that patients at low risk of dental caries "may not need additional topical fluoride other than over-the-counter fluoridated toothpaste and fluoridated water" (Weyant et al., 2013).
- **AAPD:** Similar to the ADA, the AAPD encourages professionally applied fluoride treatments for all individuals at risk for dental caries. It also "supports the delegation of topical fluoride application to auxiliary dental personnel or other trained allied health professionals by prescription or order of a dentist after a comprehensive oral examination and caries-risk assessment or by a physician after a dental screening and caries-risk assessment have been performed" (AAPD, 2023).
- **AAP:** The AAP recommends that primary care clinicians apply fluoride varnish every 3 months (for high caries risk) and 6 months (for low caries risk) from the age of primary tooth eruption through age 5 years (AAP, 2025b). The AAP recommends clinicians use the AAP Oral Health Risk Assessment Tool to assess risk of dental caries for patients aged 0 to 5 years. A child is considered at high risk for caries for any positive risk factors such as frequent snacking in sugary foods, no established dental home, not brushing teeth twice daily, special health care needs, or no fluoridated water intake (AAP, 2023).
- **USPSTF:** The USPSTF provided a B grade recommendation in 2021 that primary care clinicians apply fluoride varnish to pediatric patients beginning at primary tooth eruption and up to age 5 years (the previous 2014 USPSTF recommendation was *through* age 5 years.) (Moyer and USPSTF, 2014; USPSTF, 2021). For children aged 5 to 17 years, the USPSTF found insufficient evidence to assess the effectiveness of oral prevention interventions performed by primary care clinicians (USPSTF, 2023). See the *Medical Effectiveness* section for more information.

Dental Visits Among California Children

The ADA and AAPD recommend establishing a dental home for children by their first birthday (AAPD, 2007). Rates of visits to a dental care professional vary among California children with different types of insurance coverage. The California Department of Health Care Services (DHCS) reports that, in 2023, almost 40% of *Medi-Cal beneficiaries* aged 20 years and younger had at least one *preventive* dental visit in the last year (DHCS, 2025).

CHBRP found no source for the frequency of *preventive* dental visits among children with commercial insurance. However, the 2024 California Health Interview Survey (CHIS) estimates that among children with employment-based insurance,[15] 1.4% had no dental visits to a dentist, hygienist, or orthodontist in the last year; 87% had one or two visits; and 9% had three or more visits. Among teens with employment-based insurance, 2.3% had no dental visits in the last year, 78% had one or two visits, and 20% had three or more dental visits (CHIS, 2025b). The CHIS estimates include *any* dental visit rather than only preventive dental visits as reported by DHCS.

CHIS also reports that of those children who did not see the dentist in the last year, 21% with Medi-Cal and 31% with employment-based insurance did not go because they were not old enough, as perceived by their parent respondents (CHIS, 2025c).

Schedule of Pediatric Well-Child and Other Visits Where Fluoride Varnish May Be Applied

In cases where a dental home is not established, children can obtain fluoride varnish through several avenues (described in the *Policy Context* section) including the medical setting. Well-child visits are the most common type of visit in a medical setting where fluoride varnish is applied. The AAP recommends the following well-child visit schedule (AAP, 2025a):

- Seven pediatric visits during the first year of life (primary teeth begin to erupt around age 6 months),
- Three pediatric visits in the second year of life, and
- Annual visits between age 3 and 21 years.

In theory, during their second year of life, children may have up to three fluoride varnish applications in single year, while children older than age 3 would have one application of fluoride varnish. Children will also see medical clinicians for acute care visits as needed (such as for flu-like symptoms or injuries) and for chronic condition visits if needed (such as for asthma or diabetes). Fluoride varnish could also be applied at these visits, although it is highly unlikely.

Pediatric Dental Caries Prevalence and Impact in California

Prevalence of Dental Caries

Dental caries is the most common chronic condition in children and adolescents in the United States (Clark et al., 2020). The CDPH *Oral Health Status of Children: Results of the 2018–2019 California Third Grade Smile Survey* is the most recent data CHBRP could find regarding prevalence and potential rates of disparities in dental caries. The survey sample is a representative distribution of California public schools based on the percentage of children eligible for free or reduced-price meals within each region (12,322 third grade students from 194 schools) and administered by registered dental hygienists (Darsie et al., 2021). The Smile Survey estimated **that 61% of California children in third grade had experienced dental caries. This is higher than the national median of 53% among all states** (Darsie et al., 2021). The rate of pediatric dental caries in California has declined over the last 20 years due to several prevention strategies, including the promotion of fluoride varnish (Darsie et al., 2021).

[15] Employment-based insurance could include other types of insurance not subject to state regulation.

Lost Productivity Due to Dental Caries

Among children with Medi-Cal, 7% reported missing 2 or more school days in the last year due to dental caries; 5% of children with employment-based insurance reported missing 2 or more school days in the last year due to dental caries (CHIS, 2025a). Note that lost productivity among caregivers of those children missing school may also occur (APHA, 2010).

Disparities[16] in Rates of Dental Caries

Disparities are noticeable and preventable or modifiable differences between groups of people. Health insurance benefit mandates or related legislation may impact disparities. Where intersections between health insurance benefit mandates and social determinants or systemic factors exist, CHBRP describes relevant literature.

Race or Ethnicity

The *Smile Survey* estimated *disparities in rates of dental caries* by socioeconomic level and race. Third grade Latino children had experienced the highest rate of dental caries (72%), followed by Black (59%), and Asian (50%) and other races (50%). White California children in third grade had the lowest rate of dental caries among all races/ethnicities (40%) (Darsie et al., 2021).

Income

There is a documented connection between income and rate of dental caries with children from lower-income families experiencing higher rates of dental caries than their counterparts from higher-income families (CDC, 2024b). In California, the Smile Survey estimated that children in lower-income households had almost two times greater prevalence of tooth decay than their counterparts from higher-income households (72% vs. 41%, respectively) (Darsie et al., 2021).

Geography

Geographic variation in dental caries was estimated through the Smile Survey with the highest prevalence occurring in the San Joaquin Valley, Los Angeles County, and Central Coast (76%, 65%, and 64%, respectively) and the lowest prevalence in the Sacramento and Bay Area regions (46% and 45%, respectively) (Darsie et al., 2021).

Barriers to Accessing Fluoride Varnish in Medical Settings

Barriers to providing fluoride varnish in a medical setting include lack of clinician oral health training, inadequate office visit time, difficulties integrating oral health screening and fluoride varnish application into the workflow, knowing where to obtain supplies, inadequate or rejected reimbursement, and parent hesitancy (Dooley et al., 2016; Goff et al., 2023; Gracner et al., 2023; Kram et al., 2022).

One quality improvement study in Contra Costa County found that even with concentrated support for implementing fluoride varnish program in the clinic, significant training of primary care practitioners and clinic workflow revisions were required for successful implementation (Dooley et al., 2016). There were seven major hurdles that needed to be addressed:

1. Self-identified lack of knowledge by primary care team regarding frequency, safety, and contraindications of fluoride varnish;
2. Lack of application skills;
3. Primary care visits overburdened with existing care requirements;

[16] Several competing definitions of "health disparities" exist. CHBRP relies on the following definition: Health disparity is defined as the differences, whether unjust or not, in health status or outcomes within a population (Wyatt et al., 2016).

4. Lack of patient familiarity with fluoride varnish;
5. Incomplete/inconsistent adoption at the health system–level;
6. Cost of fluoride varnish (reimbursement/billing); and
7. Incomplete monitoring of program implementation and feedback.

Ultimately, these challenges were addressed through training and workflow innovations, resulting in 95% of children receiving fluoride varnish sustained over the 2-year follow-up period. In the interim stage, clinics within the system varied in their adoption rates significantly; those with lower adoption rates received targeted education.

Another study in 2018 reported that, of 683 AAP pediatricians surveyed, 19% of respondents (or their staff) applied fluoride varnish at least once to their patients younger than 3 years (an increase from 3% in 2012). About half of the respondents reported one or more aforementioned barriers despite their professional organization's recommendations to apply fluoride varnish.

Finally, provider misunderstanding of eligible populations is another type of knowledge barrier where clinicians may assume children with private insurance are less likely to need fluoride varnish than those with public insurance due to public insurance coverage of the varnish prior to the Affordable Care Act and nuanced differences among practice guidelines and recommendations (Goff et al., 2023; Gracner et al., 2023).

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Medical Effectiveness

As discussed in the *Introduction* section, AB 350 would require state-regulated health insurance to cover the application of fluoride varnish in the medical setting for children aged 20 years and younger. Additional information on fluoride varnish is included in the *Background* section. This medical effectiveness review summarizes findings from evidence[17] on the effectiveness of fluoride varnish and effectiveness by setting application (medical care and other settings, including dental clinics and school settings), on oral health outcomes.

Research Approach and Methods

The search was limited to studies published from 2013 to the present. CHBRP relied on a systematic review for the American Dental Association for findings on the efficacy of topical fluorides, including varnish (Weyant et al., 2013; 6 RCTs, 2 non-RCTs) and a systematic review published in 2022 for findings from studies published prior to 2021.[18]

A total of 37 studies were included in the medical effectiveness review for this report. The other articles were eliminated because they did not focus on fluoride varnish for children aged 20 years and younger, or focused on other preventive dental interventions such as sealants, fluoride mouthwash, at-home fluoride treatments, or fluoridated water. Other studies were excluded if they were of poor quality, did not include a comparison group, or did not report findings from clinical research studies (e.g., evaluation studies). Since fluoride varnish is also applied in nonmedical settings (e.g., schools or dental clinics) and the bill's focus is on medical settings, a key research question differentiates between medical settings and other types of clinical settings. Due to the limited studies on fluoride varnish in the United States after prior systematic reviews, CHBRP has included studies conducted in other countries.

A more thorough description of the methods used to conduct the medical effectiveness review and the process used to grade the evidence for each outcome measure is presented in CHBRP's Medical Effectiveness Analysis and Research Approach document.

The conclusions below are based on the best available evidence from peer-reviewed and grey literature including the United States Preventive Services Task Force (USPSTF).[19] Unpublished studies are not reviewed because the results of such studies, if they exist, cannot be obtained within the 60-day timeframe for CHBRP reports.

Key Questions

1. What is the effectiveness of fluoride varnish compared to no varnish on oral health outcomes?
2. For patients aged 20 years and younger, does the effectiveness of fluoride varnish vary by setting (i.e., medical setting or other setting, including dental and school setting) compared to no fluoride varnish on oral health outcomes?
3. What are the associated harms with fluoride varnish?

Methodological Considerations

Many of the randomized controlled trials (RCTs) included in the meta-analyses and systematic reviews that CHBRP assessed regarding fluoride varnish are of good quality; however, some had methodological limitations such as high attrition rates, unclear randomization methods, or uncertain applicability to the U.S. population. It is also important to note

[17] Much of the discussion in this section is focused on reviews of available literature. However, as noted in the section on Implementing the Hierarchy of Evidence in the Medical Effectiveness Analysis and Research Approach document, in the absence of fully applicable to the analysis peer-reviewed literature on well-designed randomized controlled trials (RCTs), CHBRP's hierarchy of evidence allows for the inclusion of other evidence.
[18] Studies of the effects of fluoride varnish were identified through searches of PubMed, Web of Science Core Collection, Cochrane Database of Systematic Reviews and Embase. Websites maintained by the following organizations were also searched: , The search was limited to abstracts of studies published in English.
[19] Grey literature consists of material that is not published commercially or indexed systematically in bibliographic databases. See CHBRP's website for more information.

that this medical effectiveness section does not evaluate the impact of tooth brushing or flossing, food insecurity and refined sugar intake, or other factors that may affect oral health or are performed outside of the medical, dental, or other clinical setting. For each research question, CHBRP differentiates between primary (baby) teeth and permanent (adult) teeth. Another important consideration is that some trials were conducted in other countries and settings in which oral health care and behaviors may differ substantially from typical U.S. medical care settings, potentially reducing the generalizability of the studies included in this report.

Outcomes Assessed

The studies CHBRP used to evaluate the effectiveness of fluoride varnish treatments examined various measurements of dental caries outcomes.

A **DMFT index**[20] (decayed, missing, or filled teeth) is a widely used measure in dentistry to assess the overall oral health status of an individual that is calculated by counting the number of teeth that are decayed, missing due to caries, and filled in their permanent dentition; essentially providing a score representing the overall dental health in a person.

Outcomes include measurements of **caries increment**, defined as the number of new cavities or teeth or surfaces with carious lesions, occurring in an individual within a stated period of time (Slade and Caplan, 2000). Other studies examined **incident caries**, defined as the number of carious teeth or surfaces among a defined population during a specific period of time. Studies also measure **primary caries prevention**, defined as the prevention of changes in caries increment and secondary prevention of caries, when lesions do not progress from initial classification. Another outcome, the **prevented fraction**, is a calculation used to assess how effective fluoride varnish is at preventing tooth decay. It is calculated by comparing the average rate of caries in a group that received treatment to the average rate in a group that didn't receive treatment.

Study Findings

The following section summarizes CHBRP's findings regarding the effectiveness of fluoride varnish treatment and the effectiveness of fluoride varnish treatment by setting for children aged 0 to 20 years, as addressed by AB 350.

Each section is accompanied by a corresponding figure. The title of the figure indicates the test, treatment, or service for which evidence is summarized. The statement in the box above the figure presents CHBRP's conclusion regarding the strength of evidence about the effect of a particular test, treatment, or service based on a specific relevant outcome and the number of studies on which CHBRP's conclusion is based. Definitions of CHBRP's grading scale terms are included in the box below.

The following terms are used to characterize the body of evidence regarding an outcome:

Very strong evidence indicates that there are multiple studies of a treatment and the large majority of studies are of high quality and consistently find that the treatment is either effective or not effective. Conclusions are unlikely to be altered by additional evidence.

Strong evidence indicates that the majority of the studies reviewed are consistent in their findings that treatment is either effective or not effective. Conclusions could be altered with additional strong evidence.

[20] This is typically measured as decayed, missing, or filled teeth/decayed or filled teeth (DMFT/DFT for permanent teeth, dmft for primary teeth) or decayed, missing, or filled surfaces/decayed or filled surfaces (DMFS/DFS for permanent teeth, dmfs for primary teeth). Other studies examine increment, which refers to the change from baseline to follow-up in the DMFT/DFT/dmft or DMFS/DFS/dmfs index (number of affected teeth or surfaces) (WHO, n.d.).

Some evidence indicates that a small number of studies have limited generalizability to the population of interest and/or the studies have a serious methodological concern in research design or implementation. Conclusions could be altered with additional evidence.

Conflicting evidence indicates that a similar number of studies of equal quality suggest the treatment is effective as suggest the treatment is not effective.

Not enough research indicates that there are no studies of the treatment, or the available studies are not of high quality, meaning there is not enough evidence available to know whether or not a treatment is effective. It does not indicate that a treatment is not effective.

Effectiveness of Fluoride Varnish

Numerous systematic reviews and meta-analyses have been published, particularly focusing on young children, on the effectiveness of fluoride varnish in preventing dental caries. While there is consensus on the benefits of fluoride varnish application, evidence varies due to heterogeneity of studies and recommendations vary by individual characteristics (e.g., high-risk groups, tooth type, age, availability of other fluoride sources).

Findings for primary teeth

In a systematic review of the efficacy of topical fluorides, including varnish, for caries prevention compared to no varnish, placebo, or oral health counseling, the American Dental Association (Weyant et al., 2013; 6 RCTs, 2 non-RCTs) reported that there is a moderate level of certainty that children aged 0 through 5 years (primary teeth) benefit from 2.26% fluoride varnish twice a year. For 0.1% fluoride varnish, the panel found no evidence of the benefits for children aged 0 through 5 years (moderate certainty). In these studies, varnish was applied professionally every 3 to 12 months; in most of the studies, the varnish was applied every 6 months. The authors noted that study limitations included older studies, studies conducted in different countries, and the inability to categorize study populations by caries risk, therefore reducing the generalizability of the study findings.

In a more recent systematic review of topical fluorides including fluoride varnish, Chou et al. (2021;15 trials total,[21] n=9,541) reported that topical fluoride applied every 6 months over 2 years (in all trials except for one) was associated with significantly decreased caries increment and significantly reduced likelihood of incident caries in primary teeth compared to placebo or no varnish. The majority of the trials were conducted in higher-risk (e.g., low socioeconomic status, high caries burden) populations or settings. The authors found that topical fluoride was consistently favored when stratifying by a variety of factors (e.g., adequate community fluoridation, baseline caries).

Findings for permanent teeth

The American Dental Association systematic review (Weyant et al., 2013; 11 RCTs, 2 non-RCTs) reported that children aged 6 through 18 years benefit from fluoride varnish applied twice a year, for permanent teeth. For adults, there was a low level of certainty that fluoride varnish was beneficial in preventing coronal[22] and root caries[23] because there were no studies found on coronal caries prevention and the recommendation was extrapolated from the 6-to-18-year-old age group.

A more recent systematic review of topical fluorides including fluoride varnish (Chou et al., 2023; 14 trials, n=6,965) reported that fluoride varnish administered by dental professionals in school settings to children aged 5 to 17 years was associated with decreased dental cavity burden at 1 to 4.5 years. In this review, Chou et al. systematic reviewed the

[21] 15 trials total including 5 trials (n=2,616) from prior USPSTF review and 10 new trials (n=6,925).
[22] Coronal cavities are the most common type occurring in both children and adults, coronal cavities usually are located on chewing surfaces or between the teeth.
[23] Root cavities occur as people age when the gums recede, leaving parts of the tooth root exposed. Since there is no enamel covering tooth roots, these exposed areas easily decay.

effectiveness of fluoride varnish in adults (18 years and older) and found that there was insufficient evidence with conflicting results (2 trials; n=336). Additionally, the two studies reported focused on older adults.

Summary of findings regarding the effectiveness of fluoride varnish compared to no fluoride varnish on oral health outcomes for primary and permanent teeth: There is *strong evidence* that repeated fluoride varnish is effective based on three large systematic reviews that examined fluoride varnish.

Figure 5. Evidence of Effectiveness of Fluoride Varnish Compared to No Fluoride Varnish on Oral Health Outcomes for Primary and Permanent Teeth

Medical Settings

One large systematic review and one recent retrospective longitudinal study reported findings on the effectiveness of fluoride varnish compared to no fluoride varnish on health outcomes applied in a medical setting (Chou et al., 2021; Tuan et al., 2023).

Findings for primary teeth

In a large systematic review for the USPSTF, Chou et al. (2021; 15 trials total,[24] n=9,541) reported that topical fluoride applied every 6 months over 2 years (in all trials except for one) was associated with significantly decreased cavity increment in primary teeth among children younger than 5 years (13 trials, n=5,733;−0.94 mean difference). This is approximately one less surface tooth decay over a 2-year period for the fluoride varnish versus placebo. The study also showed a significantly decreased likelihood of incident cavities (12 trials; n=8,177; absolute risk difference -7% and risk ratio 0.80), compared to placebo or no varnish in children younger than 5 years.[25] Only 1 trial took place in the United States (6 in Europe, 2 in China, 2 in Iran, 1 in Australia, 1 in Brazil, 1 in Canada, and 1 in Chile). Ten trials were conducted in clinical settings and five in preschool/daycare settings.

A recent retrospective longitudinal study used electronic health record data (Tuan et al., 2023; n=10,836) to assess the utilization of fluoride varnish and the presence of dental caries over a 2-year period among children 6 months to 6 years old who had a primary care provider in a large Pennsylvania academic medical center. About 18% of the study population was treated at least once with fluoride varnish. The study found a significant association between use of fluoride varnish and reduction in dental caries: children who received fluoride varnish were 52% less likely to develop dental caries compared to no treatment (adjusted odds ratio=0.48; 95% confidence interval, 0.321–0.721, P<0.001). The study did not differentiate between primary or permanent teeth, but considering the age range, CHBRP assumes the majority were occurrences in primary teeth.

Summary of findings regarding the effectiveness of fluoride varnish applied in medical settings compared to no fluoride varnish on oral health outcomes for primary teeth: There is *strong evidence* that repeated fluoride varnish is effective based on 16 studies that examined fluoride varnish applied in a medical setting. For young children, studies suggest that fluoride varnish applied in medical settings is effective in improving oral health outcomes such as the prevention of dental caries, and loss of tooth enamel compared to no fluoride varnish for primary teeth.

[24] 15 trials total including 5 trials (n=2,616) from prior USPSTF review and 10 new trials (n=6,925).
[25] He et al., 2023, included the same studies as Chou et al.'s systematic review for the USPSTF and reported a similar finding. Fluoride varnish significantly prevented caries incidence compared to control groups (odds ratio 0.63, 95% confidence interval: 0.48, 0.81; 5 studies) but did not significantly reduce caries increment, compared to control (5 studies).

Figure 6. Evidence of Effectiveness of Fluoride Varnish Applied in Medical Settings Compared to No Fluoride Varnish on Oral Health Outcomes for Primary Teeth

Findings for permanent teeth

In a systematic review for the USPSTF, Chou et al., 2023, reviewed 14 trials (n=6,965) that studied the effectiveness of 5% sodium fluoride varnish (22,600 parts per million [ppm]) in preventing oral health issues among older children's teeth (5–17 years old). None of the 14 trials evaluated the effectiveness of fluoride varnish in medical settings; varnish was applied at school or in dental clinics. CHBRP also did not find studies focused on medical settings among older children.

CHBRP found no trials that specifically examined evidence of effectiveness of fluoride varnish for young adults (18–20 years old).

Summary of findings regarding the effectiveness of fluoride varnish applied in medical settings compared to no fluoride varnish on oral health outcomes for permanent teeth: There was *not enough research* to evaluate the effectiveness of fluoride varnish applied in medical settings compared to no fluoride varnish on oral health outcomes for permanent teeth.

Figure 7. Evidence of Effectiveness of Fluoride Varnish Applied in Medical Settings Compared to No Fluoride Varnish on Oral Health Outcomes for Permanent Teeth

Other Clinical Settings

Twenty-eight studies have examined the effectiveness of fluoride varnish applied in other clinical settings (including schools) on caries increment and caries incidence, compared to no fluoride varnish on health outcomes. These trials were conducted in other countries and settings in which oral health care and behaviors may differ substantially from typical US medical settings, potentially reducing the generalizability of the studies included in this report.

Findings for primary teeth

An RCT (Turska-Szybka et al., 2021; 180 children, 3–6 years old)[26] comparing two types of fluoride varnish interventions to a professional tooth-cleaning control in a public day care setting in Warsaw, Poland, reported that children developed significantly fewer new caries and significantly less tooth decay in their primary teeth for both fluoride treatment groups ($P<0.05$), compared to control at 12 months follow-up.

In a cluster RCT in a preschool with a public health center collaboration in India, Agarwal et al. (2022; 256 children aged 3–4 years old) reported that at both 12 and 36 months follow-up, those who received fluoride varnish (three applications at

[26] 1.5% ammonium fluoride varnish (Fluor Protector S) and 5% NaF varnish (Duraphat) every third month.

6-month intervals) had significantly lower net caries increment compared to controls (teeth painted with plain water for blinding).

Two trials reported no difference in the caries development between children who had or had not received fluoride varnish. A prospective cluster-RCT of children in Sweden compared those who received fluoride varnish in a dental clinic every 6 months to those who did not. The fluoride interventions occurred when the children were between 1 and 3 years of age. Children were followed from age 1 through age 7 years; at age 7, there was no difference in caries development in permanent teeth[27] between children who had or had not received fluoride varnish (Anderson et al., 2021; n=2,400). One RCT (Sirivichayakul et al., 2023; n=190) of children in a school setting in Thailand[28] reported no significant difference between cavities in primary teeth between fluoride varnish or placebo applied by a dentist at 18 months. These studies reported that other factors significantly affected caries development more than fluoride. Immigrant background was the strongest predictor of dental caries in one study (Anderson et al., 2021); tooth type and the extent of caries lesion at baseline were significant factors for caries development in the other study (Sirivichayakul et al., 2023; $P<0.05$).

For children aged 6 to 8 years, Chou et al. (2023; 3 trials, n=1,551, part of a larger 14-trial systematic report mentioned in Findings for Permanent Teeth) reported that in two trials, fluoride varnish was associated with significantly reduced caries burden in primary teeth and one trial reported no difference in reduced caries burden and or likelihood of developing one or more carious lesions in primary teeth with the use of fluoride varnish.

Findings for permanent teeth

In a systematic review for the USPSTF, Chou et al., 2023 (14 trials, n=6,965; 1 RCT, n= 5,397), assessed the effectiveness of fluoride varnish among children aged 5 to 17 years. Fluoride varnish was most commonly administered as 5% sodium fluoride varnish (22,600 ppm) every 6 months and applied by dental professionals in school or dental clinics. Chou et al. (2023) reported that fluoride varnish was associated with significantly decreased caries burden[29] at 1 to 4.5 years follow-up compared to placebo or no fluoride varnish (14 trials; n=6,965), significantly reduced caries[30] at 1 to 3 years follow-up (5 trials; n=3,902), and no significant difference in developing one or more caries (5 trials, n= 3,253) at 1 to 3 years follow-up. None of the trials were conducted in the United States (4 in Sweden, 2 in Brazil, 2 in India, 2 in the United Kingdom, and 1 each in Canada, China, Germany, and Spain). An additional stratified cluster RCT of children aged 6 to 7 years old from three low-fluoridated county-level cities in China (Wang et al., 2021; n=5,397) reported that, at 36 months follow-up, children who received fluoride varnish in school every 6 months had significantly lower mean decayed and filled surfaces scores than children in the control group ($P=0.05$),

In a meta-analysis of studies that examined fluoride varnish in children aged 6 to 12 in countries other than the United States (5 studies; 1,179 fluoride varnish,1,223 controls), Jafarzadeh et al., 2022, reported that, compared to no intervention or placebo, children that received fluoride varnish in various public health dental programs had a significantly lower mean DMFT index[31] ($P<0.001$).

A more recent stratified cluster RCT of children aged 6 to 7 years old from three low-fluoridated county-level cities in China (Wang et al., 2022) reported that at 24 months follow-up, children who received fluoride varnish in school every 6 months had significantly lower mean decay[32] of the first permanent molars ($P=0.001$), significantly lower incidence of caries of the first permanent molars in the fluoride group (17.0% vs. 23.7%), and a lower odds of caries incidence[33] for children in the topical fluoride group than the control group ($P<0.001$) (n=2,657 fluoride group/2,740 control group).

[27] The differences in proportion of caries between the two groups measured as number of decayed, extracted, filled surfaces in primary teeth and decayed, filled surfaces in permanent teeth.
[28] In dentistry, the approximal surfaces are those surfaces that form points of contact between adjacent teeth.
[29] Based on DMFS/DFS.
[30] based on DFMT/DFT.
[31] Measured as decayed, missing, or filled teeth/decayed or filled teeth.
[32] Surface-level DFS increment.
[33] 1.23 times higher odds ratio for children in the control group versus fluoride varnish group.

A school-based cluster RCT in Iraq (Ghasemi et al., 2024; n=372; 8–10 year olds) with a parallel study group reported that children in the fluoride varnish group (a single dose of 5% sodium fluoride varnish for all teeth surfaces), were significantly less likely to develop new caries than the control group (odds ratio 4.20; *P*<0.001).

CHBRP found no trials that specifically examined evidence on fluoride varnish for young adults (18-20 years old).

Summary of findings regarding the effectiveness of fluoride varnish applied in other clinical settings (including schools), compared to no fluoride varnish on oral health outcomes:

There is *strong evidence* based on 29 studies that fluoride varnish is effective in improving oral health outcomes such as the prevention of tooth decay and caries in other clinical settings, compared to no fluoride varnish for primary and permanent teeth among children younger than 18 years. It is important to note that many of the studies have been conducted in other countries and therefore may have limited generalizability. Two trials reported no difference in the caries development between children who had or had not received fluoride varnish as toddlers.

Figure 8. Evidence of Effectiveness of Fluoride Varnish Applied in Other Clinical Settings Compared to No Fluoride Varnish on Oral Health Outcomes in Children Aged 17 Years and Younger

Summary of findings regarding the effectiveness of fluoride varnish applied in other clinical settings (including schools), compared to no fluoride varnish on oral health outcomes for aged 18 to 20 years:

CHBRP did not find any evidence to evaluate the effectiveness of fluoride varnish applied in other clinical settings for young adults aged 18 to 20 years of age.

Figure 9. Evidence of Effectiveness of Fluoride Varnish Applied in Other Clinical Settings Compared to No Fluoride Varnish on Health Outcomes in Young Adults aged 18 to 20 Years

Findings on the Harms of Fluoride Varnish

When administered at recommended doses, fluoride varnish is safe and effective. Because very little fluoride is systemically ingested when fluoride varnish is applied, studies have reported that fluoride varnish is a safe prevention intervention for caries in young children. In the North Carolina program, “Into the Mouths of Babes,” primary medical care providers treated more than 250,000 children aged 0 to 3 years with no reports of fluoride varnish–related adverse events (Quiñonez et al., 2006; Rozier et al., 2003).

In the USPSTF review, Chou et al., 2021, reported that systematic exposure to fluoride is low after varnish application and this review (4 trials; n = 4,141) reported no significant differences between fluoride varnish versus placebo or no varnish in the risk of fluorosis or the likelihood of any adverse event in children younger than 5 years. Among children aged 5 to 17 years, Chou et al., 2023, reported that the evidence of harm is limited — four trials (n=1,704) in a good systematic review report no adverse events and one trial (n=2,967) in the review reported adverse events (the most common being nausea)

in 12 out of 1,473 treatment group participants; a subsequent trial reported no adverse events (n=5,397). A large systematic review (Wong et al., 2024) that examined dental fluorosis (white spots or streaks on teeth due to high fluoride levels) from topical fluoride reported low- to very-low–certainty evidence on the risk of developing fluorosis in permanent teeth associated with a history of pediatric applications of fluoride varnish to primary (baby) teeth. In this review, one RCT (123 children) reported little to no difference between a fluoride varnish application before 4 years of age, versus no application, and the development of fluorosis and two low certainty cross-sectional surveys (982 children) reported that the application of topical fluoride varnish before 4 years of age may be associated with the development of fluorosis in children (odd ratio 2.18).

To evaluate adverse events related to fluoride varnish, Mascarenhas et al., 2021, used the U.S. Food and Drug Administration's Manufacturer and User Facility Device Experience database. The authors concluded that during the 10-year study period,[34] 65 adverse events were reported for fluoride varnish products. The most common events were swelling (33.8%); burning, itching, or soreness (23.1%); and rash (16.9%). The authors concluded that because the number of adverse events is extremely low, fluoride varnish can be considered a safe dental product.

Summary of Findings

Overall, CHBRP found evidence that fluoride varnish is effective in the prevention of tooth decay and dental caries, primarily in younger children, in both medical and other settings, with minimal harms.

In medical settings, for primary teeth, CHBRP found *strong evidence* that fluoride varnish, applied in medical settings is effective in improving oral health outcomes such as the prevention of tooth decay and dental caries compared to no fluoride varnish based on 16 studies. For permanent teeth, there was *not enough research* to determine effectiveness of fluoride varnish applied in medical settings compared to no fluoride varnish on health outcomes. CHBRP notes that absence of evidence is not evidence of no effect.

In other clinical settings, for children younger than 18 years, CHBRP found *strong evidence* based on 21 studies that fluoride varnish is effective in improving oral health outcomes, such as the prevention of tooth decay and caries, compared to no fluoride varnish. For children aged 18 to 20 years, CHBRP did not find any evidence regarding the effectiveness of fluoride varnish applied in other clinical settings, again noting that absence of evidence is not evidence of no effect.

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[34] Over a 10-year period, 326,874,116 children had a dental visit with the assumption that all these children would have received at least two fluoride varnish applications each year (minimal American Academy of Pediatric Dentistry recommendation); the adverse events are estimated to be 0.099 per million fluoride varnish applications. Second strategy to validate this used private insurance data stating that, of the 32% of children receiving one fluoride varnish application each year, 617.6 million varnish applications were applied over 10 years.

Benefit Coverage, Utilization, and Cost Impacts

As discussed in the *Introduction* section, AB 350 would apply to state-regulated health insurance, including commercial enrollees, enrollees with insurance through CalPERS, and Medi-Cal beneficiaries enrolled in DMHC-regulated plans and COHS. It should be noted that DMHC regulates the plans of approximately 74% of enrollees associated with CalPERS, and 80% of Medi-Cal beneficiaries, in addition to commercial enrollees.[35]

This section reports the potential incremental impacts of AB 350 on estimated baseline benefit coverage, utilization, and overall cost.

Analytic Approach and Key Assumptions

As discussed in the *Policy Context* section, there are existing coverage requirements for fluoride varnish provided in a medical setting to enrollees aged 0 to 5 years in commercial/CalPERS plans and policies and in Medi-Cal. AB 350 would expand coverage requirements for fluoride varnish when provided in a medical setting to enrollees aged 6 to 20 years for state-regulated commercial/CalPERS plans and policies and Medi-Cal**.**

This analysis uses the following methodologic approach and key assumptions:

- CHBRP uses Milliman's 2023-2024 Consolidated Health Cost Guidelines Sources Database (CHSD) California data to baseline determine utilization of fluoride varnish in medical settings and unit cost.
- In the absence of other data, CHBRP uses a study examining utilization of fluoride varnish in medical settings among children in Massachusetts to estimate postmandate utilization changes (Kranz et al., 2024). The analysis compared utilization for commercial and Medicaid enrollees in Massachusetts for enrollees aged 1 to 5 years and 6 to 9 years. Kranz et al. (2024) found that for enrollees aged 6 to 9 years with commercial coverage, utilization was half the utilization for enrollees aged 0 to 5 years in 2018.[36] CHBRP applies this ratio to the commercial/CalPERS population. For Medicaid beneficiaries, utilization for beneficiaries aged 6 to 9 years was approximately one-third of the utilization for beneficiaries aged 1 to 5 years. CHBRP applies this ratio to the Medi-Cal population. This approach could result in an overestimate of postmandate utilization of fluoride varnish among California enrollees aged 10 to 20 years.
- CHBRP assumes enrollees who newly receive fluoride varnish postmandate would receive one application within a plan year during the annual well-child visit. As discussed in the *Background* section, the recommended schedule for children and adolescents includes at least one well-child exam per year (more than one for children aged 2 years and younger, and one annual well-child visit beginning at age 3 years). Although it is possible enrollees would receive fluoride varnish at other medical visits, such as a sick visit or immunization visit, applications of fluoride varnish at these types of visits has been rare.[37]
- AB 350 does not specify a prohibition of cost sharing for the application of fluoride varnish in the medical setting for commercial and CalPERS enrollees aged 6 to 20. Although plans and policies would be permitted to implement cost sharing on the use of this service, CHBRP assumes that plans and policies would not charge cost sharing when fluoride varnish is applied during an annual well-child visit.

For further details on the underlying data sources and methods used in this analysis, please see Appendix B.

Baseline and Postmandate Benefit Coverage

CHBRP estimates that at baseline, of 24,116,000 Californians with state-regulated insurance subject to the mandate, 95.2% are enrolled in plans or policies out of compliance with AB 350, and 4.8% are enrolled in plans or policies that are

[35] For more detail, see CHBRP's resource *Sources of Health Insurance in California*.
[36] The authors provided CHBRP with data to confirm these ratios, personal communication with A Kranz, March 14, 2025.
[37] This assumption is supported by Kranz and coauthors (2024). Their examination of visit type found fluoride varnish was applied at well-child visits and application at other types of visits was rare.

compliant. As mentioned above, 100% of enrollees have coverage for fluoride varnish when applied in a primary care setting for enrollees aged 0 to 5 years in accordance with state and federal law. For fluoride varnish applied to enrollees aged 6 to 20 years in medical settings, approximately 1.5% of enrollees in commercial/CalPERS plans and policies and 17% of Medi-Cal beneficiaries have coverage at baseline. Postmandate, all enrollees would have coverage for fluoride varnish provided in a medical setting for children aged 20 years and younger.

Below, Table 2 provides estimates of how many Californians have health insurance that would have to comply with AB 350 in terms of benefit coverage.

Table 2. Impacts of AB 350 on Benefit Coverage, 2026

	Baseline	Postmandate	Increase/Decrease	Percentage Change
Total enrollees with health insurance subject to state benefit mandates (a)	24,116,000	24,116,000	0	0.00%
Total enrollees with health insurance subject to AB 350	24,116,000	24,116,000	0	0.00%
Percentage of enrollees with coverage for fluoride varnish in accordance with AB 350	4.8%	100%	95%	1,972%
Number of enrollees with coverage for fluoride varnish in accordance with AB 350	1,164,000	24,116,000	22,952,000	1,972%

Source: California Health Benefits Review Program, 2025.
Notes: (a) Enrollees in plans and policies regulated by DMHC or CDI and Medi-Cal beneficiaries. Includes those associated with Covered California, CalPERS, or Medi-Cal.[38]
Key: CalPERS = California Public Employees' Retirement System; CDI = California Department of Insurance; DMHC = Department of Managed Health Care.

Baseline and Postmandate Utilization and Unit Cost

Below, Table 3 provides estimates of the impacts of AB 350 on utilization and unit cost of fluoride varnish provided in medical settings.

Commercial/CalPERS Insurance Utilization

In commercial/CalPERS plans and policies, there are approximately 771,000 enrollees aged 0 to 5 years and 2,577,000 enrollees aged 6 to 20 years. At baseline, there were approximately 16,600 billed applications of fluoride varnish among enrollees aged 0 to 5 years and 700 billed applications of fluoride varnish among enrollees aged 6 to 20 (see Table 3). Postmandate, CHBRP assumes utilization of fluoride varnish among enrollees aged 0 to 5 years would not increase because this service is fully covered at baseline. For enrollees aged 6 to 20 years, CHBRP estimates there would be approximately 27,800 billed applications of fluoride varnish in the medical setting in the first year postmandate.

Medi-Cal Utilization

Among Medi-Cal beneficiaries, approximately 1,063,000 are aged 0 to 5 years and 3,738,000 are aged 6 to 20 years. At baseline, there are approximately 115,500 billed applications of fluoride varnish among enrollees aged 0 to 5 years and 9,000 billed applications of fluoride varnish among enrollees aged 6 to 20 in medical settings (see Table 3). Postmandate, CHBRP assumes utilization of fluoride varnish among enrollees aged 0 to 5 years would not increase because this

[38] For more detail, see CHBRP's resource *Sources of Health Insurance in California*.

service is fully covered at baseline; for enrollees aged 6 to 20 years, CHBRP estimates utilization would increase by 112,800 applications for a total of 121,800 applications being billed in the first year postmandate.

Unit Cost

The average unit cost of fluoride varnish application is $33.77 in commercial/CalPERS plans and policies and $18.55 in Medi-Cal. This average unit cost would not be expected to change as a result of AB 350.

Unbilled Applications of Fluoride Varnish in Medical Settings

There are some instances when fluoride varnish is being applied in medical settings but is not being billed. For example, medical primary care offices may apply fluoride varnish and may not submit a claim for the service, although the application may be noted within the patient's notes.

There could be a shift from unbilled applications of fluoride varnish occurring in medical settings to billed applications of fluoride varnish. However, CHBRP is unable to estimate the extent to which unbilled applications are happening at baseline.

Table 3. Impacts of AB 350 on Utilization and Unit Cost in Medical Settings, 2026

	Baseline (2026)	Postmandate Year 1 (2026)	Increase/ Decrease	Percentage Change
Commercial/CalPERS				
Number of enrollees aged 0–5 years	771,000	771,000	0	0.00%
Number of enrollees aged 6–20 years	2,577,000	2,577,000	0	0.00%
Billed fluoride varnish utilization in a medical setting, enrollees aged 0–5 years	16,600	16,600	0	0.00%
Billed fluoride varnish utilization in a medical setting, enrollees aged 6–20 years	700	27,800	27,100	3,871.43%
Fluoride varnish average cost per utilization	**$33.77**	**$33.77**	**$0.00**	**0.00%**
Medi-Cal				
Number of enrollees aged 0–5 years	1,063,000	1,063,000	0	0.00%
Number of enrollees aged 6–20 years	3,738,000	3,738,000	0	0.00%
Billed fluoride varnish utilization in a medical setting, enrollees aged 0–5 years	115,500	115,500	0	0.00%
Billed fluoride varnish utilization a medical setting, enrollees aged 6–20 years	9,000	121,800	112,800	1,253.33%
Fluoride varnish average cost per utilization	**$18.55**	**$18.55**	**$0.00**	**0.00%**

Source: California Health Benefits Review Program, 2025.
Key: CalPERS = California Public Employees' Retirement System.

Reduction in Dental Caries As a Result of Increased Fluoride Varnish Utilization

As described in the *Medical Effectiveness* section, there is *strong evidence* that fluoride varnish reduces the number of dental cavities. Chou et al. (2023) found a reduction of 0.43 dental cavities[39] among children with primary teeth who received four applications of fluoride varnish over a 2-year period. Weintraub et al. (2008) found that when patients received two applications of fluoride varnish over a 2-year period, the impact on the reduction in dental caries was approximately half the impact compared with four applications over a 2-year period. Therefore, there is likely to be a reduction of dental cavities among enrollees newly utilizing fluoride varnish in a medical setting, but these impacts would likely not occur within the first year postmandate. See the *Long-Term Impacts* section for additional discussion.

Baseline and Postmandate Expenditures

For state-regulated commercial/CalPERS plans and policies and Medi-Cal, AB 350 would increase total premiums paid by employers and enrollees for newly covered benefits.

Below, Table 4 provides estimates of the impacts of AB 350 on expenditures, which include premiums, enrollee cost sharing, and enrollee expenses for noncovered benefits.

Table 4. Impacts of AB 350 on Expenditures, 2026

	Baseline	Postmandate	Increase/ Decrease	Percentage Change
Premiums				
Employer-sponsored (a)	$68,752,638,000	$68,753,235,000	$597,000	0.00%
CalPERS employer (b)	$7,881,873,000	$7,881,929,000	$56,000	0.00%
Medi-Cal (includes COHS) (c)	$38,851,964,000	$38,854,213,000	$2,249,000	0.01%
Enrollee premiums				
Enrollees, individually purchased insurance	$21,757,790,000	$21,757,943,000	$153,000	0.00%
Outside Covered California	$6,011,399,000	$6,011,443,000	$44,000	0.00%
Through Covered California	$15,746,391,000	$15,746,500,000	$109,000	0.00%
Enrollees, group insurance (d)	$21,712,866,000	$21,713,053,000	$187,000	0.00%
Enrollee out-of-pocket expenses				
Cost sharing for covered benefits (deductibles, copays, etc.)	$18,992,422,000	$18,992,422,000	$0	0.00%
Expenses for noncovered benefits (e)	$0	$0	$0	0.00%
Total expenditures	$177,949,553,000	$177,952,795,000	$3,242,000	0.002%

Source: California Health Benefits Review Program, 2025.
Notes: (a) In some cases, a union or other organization. Excludes CalPERS.
(b) Includes only CalPERS enrollees in DMHC-regulated plans. Approximately 54% are state retirees, state employees, or their dependents.
(c) Includes only Medi-Cal beneficiaries enrolled in DMHC-regulated plans and COHS.

[39] Reported in Chou, et al. 2023 as the prevented DMFS/DFS fraction 0.43, 95% confidence interval 0.30 to 0.57.

(d) Enrollee premium expenditures include contributions by enrollees to health insurance sponsored by employer (or union or other organization), health insurance purchased through Covered California, and any contributions to enrollment through Medi-Cal to a DMHC-regulated plan.
(e) Includes only expenses paid directly by enrollees (or other sources) to providers for services related to the mandated benefit that are not covered by insurance at baseline. This only includes those expenses that will be newly covered postmandate. Other components of expenditures in this table include all health care services covered by insurance.
Key: CalPERS = California Public Employees' Retirement System; COHS = County Organized Health Systems; DMHC = Department of Managed Health Care.

Premiums

At the end of this section, Table 5 and Table 6 present baseline and postmandate expenditures by market segment for DMHC-regulated plans and CDI-regulated policies. The tables present per member per month (PMPM) premiums, enrollee expenses for both covered and noncovered benefits, and total expenditures (premiums as well as enrollee expenses).

Changes in premiums as a result of AB 350 would vary by market segment. Note that such changes are related to the number of enrollees (see Table 2, Table 5, and Table 6), with health insurance that would be subject to AB 350.

Commercial and CalPERS

Within DMHC-regulated commercial/CalPERS plans and CDI-regulated commercial policies, premiums would increase between 0.0007% and 0.0009% or between $0.006 PMPM and $0.007 PMPM.

Medi-Cal

For Medi-Cal beneficiaries enrolled in DMHC-regulated plans and COHS, premiums would increase by less than 0.01% or $0.02 PMPM.

Enrollee Expenses

Although state and federal preventive services mandates require health plans and policies to cover fluoride varnish provided in a medical setting for enrollees aged 0 to 5 years without cost sharing, there is no corresponding requirement in AB 350 for fluoride varnish provided to enrollees aged 6 to 20 years. CHBRP assumes when fluoride varnish is applied for enrollees aged 6 to 20 years, cost sharing would not be charged because the varnish is applied during a well-child visit. However, *should* a plan or policy not elect to cover fluoride varnish provided to enrollees aged 6 to 20 years without cost sharing, standard cost sharing rules would apply. This *could* result in enrollee cost sharing increasing by about $53,000 total. The average cost sharing for enrollees would be about $2 per application. Medi-Cal beneficiaries would not experience an increase in cost sharing because cost sharing is not applied to covered services.

It is possible that some enrollees incurred expenses related to fluoride varnish for which coverage was denied, but CHBRP cannot estimate the frequency with which such situations occur and so cannot offer a calculation of impact.

Postmandate Administrative and Other Expenses

CHBRP estimates that the increase in administrative costs of state-regulated health insurance will remain proportional to the increase in premiums. CHBRP assumes that if health care costs increase as a result of increased utilization or changes in unit costs, there is a corresponding proportional increase in administrative costs. CHBRP assumes that the administrative cost portion of premiums is unchanged. All health plans and insurers include a component for administration and profit in their premiums.

Other Considerations for Policymakers

In addition to the impacts a bill may have on benefit coverage, utilization, and cost, related considerations for policymakers are discussed below.

Postmandate Changes in the Number of Uninsured Persons

Because the change in average premiums does not exceed 1% for any market segment (see Table 4, Table 5, and Table 6), CHBRP would expect no measurable change in the number of uninsured persons due to the enactment of AB 350.

Changes in Public Program Enrollment

CHBRP estimates that the mandate would produce no measurable impact on enrollment in publicly funded insurance programs due to the enactment of AB 350.

How Lack of Benefit Coverage Results in Cost Shifts to Other Payers

As discussed in *Policy Context* section, fluoride varnish is currently covered by commercial dental insurers and Medi-Cal dental benefits. Enrollees without dental insurance or who do not have a regular source of dental care are unlikely to pay out of pocket for the service, although it is possible some children receive fluoride varnish in school settings or from dental fairs. There is unlikely to be a reduction in fluoride varnish applied to enrollees in the dental setting as a result of the increased benefit coverage due to AB 350 (Kranz et al., 2020).

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Table 5. Baseline Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2026

	DMHC-Regulated						CDI-Regulated			Total
	Commercial Plans (by Market) (a)			Publicly Funded Plans			Commercial Policies (by Market) (a)			
	Large Group	*Small Group*	*Individual*	*CalPERS (b)*	*Medi-Cal (Includes COHS) (c)*		*Large Group*	*Small Group*	*Individual*	
					Under 65	*65+*				
Enrollee counts										
Total enrollees in plans/policies subject to state mandates (d)	8,034,000	2,076,000	2,181,000	914,000	9,508,000	1,038,000	264,000	65,000	36,000	24,116,000
Total enrollees in plans/policies subject to AB 350	8,034,000	2,076,000	2,181,000	914,000	9,508,000	1,038,000	264,000	65,000	36,000	24,116,000
Premiums										
Average portion of premium paid by employer (e)	$557.33	$507.76	$0.00	$718.62	$276.79	$583.72	$609.11	$567.83	$0.00	$115,486,475,000
Average portion of premium paid by enrollee	$145.58	$212.63	$818.51	$139.09	$0.00	$0.00	$224.25	$185.49	$777.47	$43,470,656,000
Total premium	**$702.91**	**$720.39**	**$818.51**	**$857.71**	**$276.79**	**$583.72**	**$833.35**	**$753.32**	**$777.47**	**$158,957,131,000**
Enrollee expenses										
Cost sharing for covered benefits (deductibles, copays, etc.)	$64.42	$164.36	$272.54	$81.59	$0.00	$0.00	$122.99	$249.30	$173.93	$18,992,422,000
Expenses for noncovered benefits (f)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0
Total expenditures	**$767.33**	**$884.75**	**$1,091.05**	**$939.30**	**$276.79**	**$583.72**	**$956.34**	**$1,002.63**	**$951.40**	**$177,949,553,000**

Source: California Health Benefits Review Program, 2025.
Notes: (a) Includes enrollees with grandfathered and nongrandfathered health insurance acquired outside or through Covered California (the state's health insurance marketplace).
(b) Includes only CalPERS enrollees in DMHC-regulated plans. Approximately 51.6% are state retirees, state employees, or their dependents.
(c) Includes Medi-Cal beneficiaries enrolled in DMHC-regulated plans and COHS. Includes those who are also Medicare beneficiaries.
(d) Enrollees in plans and policies regulated by DMHC or CDI, as well as beneficiaries in DMHC-regulated Medi-Cal managed care plans and COHS. Includes those associated with Covered California, CalPERS.[40]
(e) In some cases, a union or other organization, or Medi-Cal for its beneficiaries.
(f) Includes only those expenses that are paid directly by enrollees (or other sources) to providers for services related to the mandated benefit that are not covered by insurance at baseline. This only includes those expenses that will be newly covered, postmandate. Other components of expenditures in this table include all health care services covered by insurance.
Key: CalPERS = California Public Employees' Retirement System; CDI = California Department of Insurance; COHS = County Organized Health Systems; DMHC = Department of Managed Health Care.

[40] For more detail, see CHBRP's resource *Sources of Health Insurance in California*.

Table 6. Postmandate Change in Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2026

	DMHC-Regulated						CDI-Regulated			
	Commercial Plans (by Market) (a)			Publicly Funded Plans			Commercial Policies (by Market) (a)			
	Large Group	*Small Group*	*Individual*	*CalPERS (b)*	*Medi-Cal (Includes COHS) (c)*		*Large Group*	*Small Group*	*Individual*	Total
					Under 65	*65+*				
Enrollee counts										
Total enrollees in plans/policies subject to state mandates (d)	8,034,000	2,076,000	2,181,000	914,000	9,508,000	1,038,000	264,000	65,000	36,000	24,116,000
Total enrollees in plans/policies subject to AB 350	8,034,000	2,076,000	2,181,000	914,000	9,508,000	1,038,000	264,000	65,000	36,000	24,116,000
Premiums										
Average portion of premium paid by employer (e)	$0.0048	$0.0045	$0.0000	$0.0051	$0.0178	$0.0178	$0.0047	$0.0052	$0.0000	$2,903,000
Average portion of premium paid by enrollee	$0.0013	$0.0019	$0.0057	$0.0010	$0.0000	$0.0000	$0.0017	$0.0017	$0.0070	$340,000
Total premium	$0.0061	$0.0064	$0.0057	$0.0061	$0.0178	$0.0178	$0.0064	$0.0069	$0.0070	**$3,243,000**
Enrollee expenses										
Cost sharing for covered benefits (deductibles, copays, etc.)	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0
Expenses for noncovered benefits (f)	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0
Total expenditures	$0.0061	$0.0064	$0.0057	$0.0061	$0.0178	$0.0178	$0.0064	$0.0069	$0.0070	**$3,242,000**
Percent change										
Premiums	0.0009%	0.0009%	0.0007%	0.0007%	0.0064%	0.0030%	0.0008%	0.0009%	0.0009%	0.002%
Total expenditures	0.0008%	0.0007%	0.0005%	0.0007%	0.0064%	0.0030%	0.0007%	0.0007%	0.0007%	0.002%

Source: California Health Benefits Review Program, 2025.
Notes: (a) Includes enrollees with grandfathered and nongrandfathered health insurance acquired outside or through Covered California (the state's health insurance marketplace).
(b) Includes only CalPERS enrollees in DMHC-regulated plans. Approximately 51.6% are state retirees, state employees, or their dependents.
(c) Includes Medi-Cal beneficiaries enrolled in DMHC-regulated plans and COHS. Includes those who are also Medicare beneficiaries.
(d) Enrollees in plans and policies regulated by DMHC or CDI, as well as beneficiaries in DMHC-regulated Medi-Cal managed care plans and COHS. Includes those associated with Covered California, CalPERS.[41]
(e) In some cases, a union or other organization, or Medi-Cal for its beneficiaries.
(f) Includes only those expenses that are paid directly by enrollees (or other sources) to providers for services related to the mandated benefit that are not covered by insurance at baseline. This only includes those expenses that will be newly covered, postmandate. Other components of expenditures in this table include all health care services covered by insurance.
Key: CalPERS = California Public Employees' Retirement System; CDI = California Department of Insurance; COHS = County Organized Health Systems; DMHC = Department of Managed Health Care.

[41] For more detail, see CHBRP's resource *Sources of Health Insurance in California*.

Public Health Impacts

As discussed in the *Policy Context* section, AB 350 would require coverage of fluoride varnish applied in medical settings for enrollees aged 20 years and younger who have health insurance subject to state regulation. Additional information on fluoride varnish and dental caries is included in the *Background* section.

Estimated Public Health Outcomes

The public health impact analysis includes estimated impacts in the short term (within 12 months of implementation) and in the long term (beyond the first 12 months postmandate). This section estimates the short-term impact[42] of AB 350 on dental caries, potential treatment harms, and potential disparities. See *Long-Term Impacts* for estimates of potential changes in dental caries incidence and lost productivity beyond the first year postmandate.

As presented in the *Medical Effectiveness* section, for children younger than 6 years with teeth, there is *strong evidence* that fluoride varnish applied by primary care clinicians every 3 to 6 months reduces tooth decay, cavities, and loss of tooth enamel as compared with no fluoride varnish. There is also evidence that a single annual application may also prevent dental lesions and cavities, but less effectively than the recommended 2 to 4 times per year. There was *not enough research* to determine the effectiveness of fluoride varnish applied by primary care clinicians for those aged 6 to 20 years; however, there was *strong evidence* that fluoride varnish reduced dental caries for this age group when applied in other settings (i.e., public health dental clinics and schools).

As presented in the *Benefit Coverage, Utilization, and Cost Impacts* section, CHBRP estimates that AB 350 would provide an additional 139,900 Californians aged 6 to 20 years with one application of fluoride varnish at their annual well-child visit (27,100 commercially insured aged 6 to 20 years and 112,800 Medi-Cal beneficiaries aged 6 to 20 years). This incremental change represents about 2% of the 6.32 million enrollees aged 6 to 20 years with state-regulated health insurance (139,900/6,315,000). It is unknown whether these children would receive additional fluoride varnish through other sources such as a dental home or school.

There are several factors that contribute to CHBRP's finding of a very limited public health impact for AB 350 in the first year postmandate:

- CHBRP projects a change in coverage only for children aged 6 to 20 years (because children 0 to 5 years have existing coverage). CHBRP assumes the fluoride varnish is applied during well-child visits, which occur annually at most for children in this age range. Less frequent applications reduce but do not negate the effectiveness of fluoride varnish.
- The change in coverage results in a change in utilization; however the change in utilization is limited by barriers to receiving fluoride varnish beyond insurance coverage, such as clinician knowledge about obtaining and applying fluoride varnish, difficulties integrating oral health screening and fluoride varnish application into the work flow, clinician hesitancy due to perceived harms of the varnish, concerns about inadequate or rejected reimbursement, and inadequate office visit time and parent hesitancy (see *Background* section).
- Dental cavities take 1 to 2 years to develop; therefore, in the first year postmandate, the number of averted dental cavities would be low.

CHBRP projects AB 350 would have a very limited public health impact on the incidence of dental caries in the first year postmandate. Because 139,900 additional children aged 6 to 20 years would receive one application of fluoride varnish at a well-child visit within the first year (in contrast to the recommended 2 or 4 applications per year) and the preventive

[42] CHBRP defines short-term impacts as changes occurring within 12 months of bill implementation.

benefit of fluoride varnish is cumulative, there appears to be no significant impact at the population level during the first year, postmandate. See the *Long-Term Impacts* section for additional estimates.

AB 350's very limited impact at the population level also would result in no change in existing racial/ethnic, income and geographic disparities in incidence of dental caries.

CHBRP notes that, despite very limited impact in the short term, at the person-level, some children may see a reduction in cavities or tooth loss that would have otherwise occurred, as well as potential reductions in cascading consequences such as pain, lost school days (and lost workdays for caregivers), and additional dental work.

Potential Harms from AB 350

Adverse reactions from fluoride varnish application, such as swelling and itching, are rare (see *Medical Effectiveness* section); research demonstrates that the benefits of fluoride varnish outweigh the risk of these rare events.

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Long-Term Impacts

In this section, CHBRP estimates the long-term impact of AB 350, which CHBRP defines as impacts occurring beyond the first 12 months after implementation. CHBRP does not provide quantitative estimates of long-term impacts because of unknown improvements in clinical care, changes in prices, implementation of other complementary or conflicting policies, and other unexpected factors.

Long-Term Utilization, Cost, and Public Health Impacts

Coverage from AB 350 for fluoride varnish for children aged 6 to 20 years may mimic similar utilization rates as the first year postmandate projection, or lead to a modest increase in utilization rates if barriers to application are reduced. For example, primary care clinician behavior may change over time due to greater awareness of opportunity for reimbursement for fluoride varnish application (Krantz, 2024). Obtaining successful reimbursement for fluoride varnish claim submissions could motivate the adoption of a standardized workflow that incorporates oral health assessments at well-child visits (which is an American Academy of Pediatrics recommendation) among more medical offices/clinics. To the extent use of fluoride varnish increases over time, health care expenditures for the fluoride varnish application would also increase over time. Increased use of fluoride varnish may reduce dental caries and subsequent expenditures from averted dental care, but these impacts would be limited due to the number of times enrollees receive additional fluoride varnish during well-child visits.

As discussed in the *Benefit Coverage, Utilization, and Cost Impacts* section, there is evidence that a reduction in dental caries occurs when fluoride varnish is applied twice over a 2-year period. CHBRP assumes enrollees continue to receive at least one fluoride varnish application in a medical setting annually. A 2016 study that evaluated implementation of routine fluoride varnish application in a medical setting found 97% of patients received repeat applications in subsequent well-child visits (Dooley et al., 2016) Over a four year period, AB 350 could potentially result in the prevention of 5,800 dental cavities among the 27,100 new users aged 6 to 20 years with commercial/CalPERS coverage and prevention of 24,200 dental cavities among the 112,800 new users aged 6 to 20 years with Medi-Cal.[43] Prevention of cavities would potentially result in a reduction in expenditures for commercial dental insurers and enrollees of $660,000[44] and a reduction in expenditures for the Medi-Cal dental program of $1,508,000[45] over a multi-year period, assuming one cavity prevented per enrollee. These estimates are contingent upon whether fluoride varnish is applied annually and whether or not supplemental varnish applications occur through other settings (e.g., schools, dental offices, dental fairs). Other evaluations of the impact of fluoride varnish applied in medical settings have also found a resulting reduction in expenditures in the long term (Scherer and Naavaal, 2019).

CHBRP notes that the long-term impact of AB 350 also could be affected by the availability of community water fluoridation, which is an established public health strategy for improving population oral health. Across California's 3,056 water districts, 415 districts implemented a fluoridation program which serves about 22.8 million Californians. The remaining districts serve about 17 million Californians (CDC, 2024c). Should some water districts rescind their community water fluoridation program in the future, CHBRP would expect that the public health impact of AB 350 might increase as individual prevention efforts (fluoride varnish, using fluoride toothpaste) become the primary prevention tool against dental caries rather than these individual efforts coupled with fluoridated water. Likewise, should more water districts adopt community water fluoridation, the public health impact of AB 350 might be diminished somewhat by implementing this large-scale population health strategy in those communities.

[43] Chou et al. (2023) found a reduction of 0.43 dental cavities among children with primary teeth who received four applications of fluoride varnish over a 2-year period. Weintraub et al. (2008) found that when patients received two applications of fluoride varnish over a 2-year period, the impact on the reduction in dental caries was approximately half the impact compared with four applications over a 2-year period.
[44] CHBRP assumes an average commercial dental restoration rate of $113.20 per dental cavity. The analysis underlying these estimates involves use of Current Dental Terminology 2025 (CDT-25) codes, which are © 2025 American Dental Association, all rights reserved.
[45] CHBRP assumes an average Medi-Cal dental rate for restoration services of $62.17 per dental cavity. The analysis underlying these estimates involves use of Current Dental Terminology 2025 (CDT-25) codes, which are © 2025 American Dental Association, all rights reserved.

The long-term public health impact associated with AB 350 (reduction in dental caries, associated consequences [pain, tooth loss, damage to unerupted permanent teeth], and related disparities) may be greater than the first year postmandate due to the cumulative prevention benefits from fluoride varnish to prevent dental caries as well as potential reductions in clinician barriers. Additionally, other public health changes (e.g., community water fluoridation) may attenuate or increase the impact of AB 350.

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Appendix A. Text of Bill Analyzed

On February 12, 2025, the California Assembly Committee on Health requested that CHBRP analyze AB 350, as introduced on January 29, 2025.

Below is the bill language, as it was introduced on January 29, 2025.

CALIFORNIA LEGISLATURE— 2025–2026 REGULAR SESSION

ASSEMBLY BILL

NO. 350

Introduced by Assembly Member Bonta

January 29, 2025

An act to add Section 1367.73 to the Health and Safety Code, to add Section 10120.45 to the Insurance Code, and to amend Section 14132 of the Welfare and Institutions Code, relating to health care coverage.

AB 350, as introduced, Bonta. Health care coverage: fluoride treatments.

Existing law, the Knox-Keene Health Care Service Plan Act of 1975, provides for the licensure and regulation of health care service plans by the Department of Managed Health Care and makes a willful violation of the act's requirements a crime. Existing law provides for the regulation of health insurers by the Department of Insurance. Existing law sets forth specified coverage requirements for health care service plan contracts and health insurance policies.

Existing law provides for the Medi-Cal program, administered by the State Department of Health Care Services and under which health care services are provided to low-income individuals. The Medi-Cal program is, in part, governed and funded by federal Medicaid program provisions. Existing law establishes a schedule of benefits under the Medi-Cal program and provides for various services, including certain dental services, that are rendered by Medi-Cal enrolled providers. Under existing law, silver diamine fluoride treatments are a covered benefit for eligible children 0 to 6 years of age, inclusive, as specified, and application of fluoride or other appropriate fluoride treatment is covered for children 17 years of age and under.

This bill would require a health care service plan contract or health insurance policy issued, amended, or renewed on or after January 1, 2026, to provide coverage for the application of fluoride varnish in the primary care setting for children under 21 years of age. Because a willful violation of this provision by a health care service plan would be a crime, the bill would impose a state-mandated local program.

This bill would make the application of fluoride or other appropriate fluoride treatment, including fluoride varnish, a covered benefit under the Medi-Cal program for children under 21 years of age. The bill would require the State Department of Health Care Services to establish and promulgate a policy governing billing and reimbursement for the application of fluoride varnish, as specified.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

DIGEST KEY

Vote: majority Appropriation: no Fiscal Committee: yes Local Program: yes

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BILL TEXT

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 1367.73 is added to the Health and Safety Code, to read:

1367.73. (a) A health care service plan contract issued, amended, or renewed on or after January 1, 2026, shall provide coverage for the application of fluoride varnish in the primary care setting for children under 21 years of age.

(b) Subdivision (a) does not diminish a plan's responsibility under the federal Patient Protection and Affordable Care Act (Public Law 111-148) to cover services that are assigned either a grade of A or a grade of B by the United States Preventive Services Task Force for all populations subject to that recommendation.

SEC. 2. Section 10120.45 is added to the Insurance Code, to read:

10120.45. (a) A health insurance policy issued, amended, or renewed on or after January 1, 2026, shall provide coverage for the application of fluoride varnish in the primary care setting for children under 21 years of age.

(b) Subdivision (a) does not diminish an insurer's responsibility under the federal Patient Protection and Affordable Care Act (Public Law 111-148) to cover services that are assigned either a grade of A or a grade of B by the United States Preventive Services Task Force for all populations subject to that recommendation.

SEC. 3. Section 14132 of the Welfare and Institutions Code is amended to read:

14132. The following is the schedule of benefits under this chapter:

[(a) – (p) remain unchanged.]

(q) (1) Application of fluoride, or other appropriate fluoride treatment as defined by the department, and other prophylaxis treatment for children ~~17 years of age and~~under *21 years of age* are covered.

(2) Paragraph (1) includes the application of fluoride varnish in the primary care setting for children under 21 years of age.

(3) The department shall establish and promulgate a billing policy that allows a Medi-Cal enrolled provider who is authorized to apply and bill for the application of fluoride varnish to be reimbursed for that service, if the fluoride varnish is physically applied by a person who is both of the following:

(A) Employed by the Medi-Cal enrolled provider or working in a contractual relationship with the Medi-Cal provider.

(B) Otherwise authorized under law, including under Section 104762 or 104830 of the Health and Safety Code, to apply fluoride varnish.

~~(2)~~

(4) All dental hygiene services provided by a registered dental hygienist, registered dental hygienist in extended functions, and registered dental hygienist in alternative practice licensed pursuant to Sections 1753, 1917, 1918, and 1922 of the Business and Professions Code may be covered as long as they are within the scope of Denti-Cal benefits and they are necessary services provided by a registered dental hygienist, registered dental hygienist in extended functions, or registered dental hygienist in alternative practice.

[(r) - (ag) remain unchanged.]

SEC. 4. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

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Appendix B. Cost Impact Analysis: Data Sources, Caveats, and Assumptions

With the assistance of CHBRP's contracted actuarial firm, Milliman, Inc., the cost analysis presented in this report was prepared by the faculty and researchers connected to CHBRP's Task Force with expertise in health economics.[46] Information on the generally used data sources and estimation methods, as well as caveats and assumptions generally applicable to CHBRP's cost impacts analyses, are available on CHBRP's website.[47]

This appendix describes analysis-specific data sources, estimation methods, caveats, and assumptions used in preparing this cost impact analysis.

Analysis-Specific Data Sources

Baseline coverage of fluoride varnish in medical settings for commercial enrollees was determined by a survey of the largest (by enrollment) providers of health insurance in California. Responses to this survey represent 87% of commercial enrollees with health insurance that can be subject to state benefit mandates. In addition, CalPERS, DHCS, and the four largest (by enrollment) DMHC-regulated plans enrolling Medi-Cal beneficiaries were queried regarding related benefit coverage. As necessary, CHBRP extrapolated from responses of similarly situated plans/policies.

For this analysis, CHBRP relied on Current Procedural Terminology (CPT®) codes to identify relevant services: CPT copyright 2025 American Medical Association (AMA). All rights reserved. Fee schedules, relative value units, conversion factors, and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein. CPT is a registered trademark of the AMA.

Consolidated Health Cost Guidelines Sources Database

Milliman maintains benchmarking and analytic databases that include health care claims data for nearly 60 million commercial lives and over 3 million lives of Medicaid managed care data. This dataset is routinely used to evaluate program impacts on cost and other outcomes.

Detailed Cost Notes Regarding Analysis-Specific Caveats and Assumptions

The analytic approach and key assumptions are determined by the subject matter and language of the bill being analyzed. As a result, analytic approaches may differ between topically similar analyses, and therefore the approach and findings may not be directly comparable.

For this analysis, CHBRP identified California-specific medical fluoride varnish claims in the Consolidated Health Cost Guidelines Sources Database (CHSD) using the CPT/HCPCS[48] code 99188. Fluoride varnish services described in the following sections are assumed to be performed in a primary care setting and claimed through medical benefits, not through dental benefits.

[46] CHBRP's authorizing statute requires that CHBRP use a certified actuary or "other person with relevant knowledge and expertise" to determine financial impact.
[47] See CHBRP's Cost Impact Analysis landing page; in particular, see *Cost Impact Analyses: Data Sources, Caveats, and Assumptions*.
[48] CPT copyright 2025 American Medical Association. All rights reserved. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein. CPT is a registered trademark of the American Medical Association

Federal care guidelines for children require the coverage of fluoride varnish in a primary care setting for children aged 0 to 5 years.

Methodology and Assumptions for Baseline and Postmandate Cost and Cost Sharing

- The allowed cost of fluoride varnish for commercial enrollees was summarized from the CHSD and trended to 2026 at a 1% annual cost trend.
- The allowed cost of fluoride varnish for Medi-Cal enrollees was trended from Medi-Cal's 2023 provider fee schedule to 2026 using a 1% annual cost trend.
- Medi-Cal and commercial enrollees were assumed to not have cost sharing for fluoride varnish.
- The 2026 cost of fluoride varnish was assumed to not change from baseline to postmandate.

Methodology and Assumptions for Baseline Utilization

- CHBRP assumed coverage of fluoride varnish in the baseline for enrollees aged 20 years and younger was equal to coverage levels in California in the CHSD.
- Baseline fluoride varnish utilization per 1,000 enrollees was summarized from the CHSD and trended to 2026 using a 1% annual utilization trend.

Methodology and Assumptions for Postmandate Utilization

- The postmandate utilization of fluoride varnish for enrollees aged 0 to 5 was assumed to not change from baseline for both commercial and Medi-Cal enrollees.
- The postmandate utilization of fluoride varnish for enrollees aged 6 to 20 was assumed to be 50% or 30% (commercial or Medicaid) of the postmandate utilization of enrollees aged 0 to 5 based on data from a 2024 paper measuring the effects of fluoride varnish mandates in the ACA (Kranz et al., 2024).

Considerations and Limitations

- There may be some schools or providers who currently provide fluoride varnish to enrollees aged 6 to 20 without charge; under AB 350, these providers would be eligible to bill for their services in 2026. These potential claims, if they do exist, were not included in this analysis.
- Dental utilization for fluoride varnish, fluoride treatment, and restoration could be affected by AB 350, which would in turn affect dental premiums. However, dental plans are outside the scope of CHBRP analyses and the effects of AB 350 on those plans were not included in this analysis.

Determining Public Demand for the Proposed Mandate

CHBRP reviews public demand for benefits by comparing the benefits provided by self-insured health plans or policies (which are not regulated by the DMHC or CDI and therefore not subject to state-level mandates) with the benefits that are provided by plans or policies that would be subject to the mandate.

Among publicly funded self-insured health insurance policies, the preferred provider organization (PPO) plans offered by CalPERS have the largest number of enrollees. The CalPERS PPOs currently provide benefit coverage similar to what is available through group health insurance plans and policies that would be subject to the mandate.

To further investigate public demand, CHBRP used the bill-specific coverage survey to ask plans and insurers who act as third-party administrators for (non-CalPERS) self-insured group health insurance programs whether the relevant benefit coverage differed from what is offered in group market plans or policies that would be subject to the mandate. The responses indicated that there were no substantive differences.

Second-Year Impacts on Benefit Coverage, Utilization, and Cost

CHBRP has considered whether continued implementation during the second year of the benefit coverage requirements of AB 350 would have a substantially different impact on utilization of either the tests, treatments, or services for which coverage was directly addressed, the utilization of any indirectly affected utilization, or both. CHBRP reviewed the literature and consulted content experts about the possibility of varied second-year impacts and determined the second year's impacts of AB 350 would be substantially the same as the impacts in the first year. Minor changes to utilization and expenditures are due to population changes between the first year postmandate and the second year postmandate.

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CHBRP assumes full responsibility for the report and the accuracy of its contents. All CHBRP bill analyses and other publications are available at chbrp.org.

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