

# Smile Survey 2020

## The Oral Health of Los Angeles County's Children

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Maritza C. Cabezas, DDS, MPH  
Director, Oral Health Program

## Letter from the Dental Director

A statewide assessment of California children's oral health was conducted in 2005 and concluded with a report published in 2006. We extracted the Los Angeles County (LA County) data from this 14-year-old report in order to compare it to data collected and analyzed in 2020. I am pleased to present to you the findings of the first LA County oral health survey, *Smile Survey 2020*.

*Smile Survey 2020* was designed to determine the prevalence of oral disease and conditions by screening kindergarten and third grade children enrolled in a representative sample of LA County public schools, including charter schools. Oral health assessments were performed during 2018–2019 on over 10,000 children from 72 schools in LA County. Findings highlighted in this report allow us to examine the oral health of LA County children over time and compare with national data.

During the 14 years since the California survey, we have seen substantial improvements in the oral health of LA County children, but there is still much work to be done. While the percentage of third grade children with tooth decay experience is lower today than in previous surveys, 65% of third graders are still affected by dental disease. On any given day, we estimate that about 2,400 kindergarten and 2,100 third grade children in LA County are attending school while suffering from dental infection or pain, which negatively impacts their ability to learn.

This document summarizes the key findings and recommendations from this massive assessment effort. We hope it will provide useful information not only for health professionals, but also for policy makers, educators, parents, and anyone who wants to advocate for children's oral and overall health.

No one individual, organization, or entity working alone can improve community-wide health outcomes. We must look for new collaborations and strategies to improve the oral health of all LA County children. The challenge is to be bold and innovative in our partnerships and to leverage diverse sectors, including private entities, educators, childcare providers, churches, child advocates, and philanthropies. Our goal is to ensure that children and caregivers in LA County are educated about oral health and have access to evidence-based

dental care and oral health information. We believe that the well-being of our children is key to the success of families, communities, and businesses.

This project could not have been completed without the financial support generated by the California Healthcare, Research and Prevention Tobacco Tax Act of 2016 (Proposition 56). These data will guide all aspects of the decision-making process regarding oral health.

I am also grateful for the support of the Los Angeles County Board of Supervisors; Dr. Barbara Ferrer, Los Angeles County Department of Public Health Director; Dr. Jayanth Kumar, California Department of Public Health Dental Director; and the many partners who collaborated on the development of this survey.

We hope that these findings will cause a ripple effect that leads to stronger policies, more robust school and community programs, and collaborative efforts to reduce oral health disparities and the number of children suffering from tooth decay.

Our children depend on us to make a difference.



Maritza C. Cabezas, DDS, MPH  
*Director, Oral Health Program  
Department of Public Health  
Los Angeles County*





# Smile Survey 2020

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## DEFINITIONS

**Decay experience:** Decay experience means that a child has had tooth decay at some point during his or her lifetime. Decay experience can include evidence of past treatment (e.g., fillings, crowns, or teeth that have been extracted because of decay) or evidence of untreated decay at the present time (e.g., untreated cavities).

**Dental sealants:** Dental sealants are plastic-like coatings that are applied to the chewing surfaces of teeth with pits and fissures (grooves). The applied sealant bonds to tooth structure and fills the grooves of teeth to form a protective barrier to decay.

**Socioeconomically disadvantaged (SED):** Children identified as being a migrant, a foster child, or homeless at any time during the academic year; being eligible for the National School Lunch Program at any time during the academic year; or having parents who did not receive a high school diploma.

**Untreated decay:** Untreated decay is defined as evidence of tooth decay (e.g., one or more cavities) that has not received treatment.

**Urgent need for dental care:** The child had a toothache, infection and/or swelling (abscess) at the time of the dental screening.



## Executive Summary

With *Smile Survey 2020*, the Los Angeles County Department of Public Health Oral Health Program takes an in-depth look at the oral health of elementary school children in Los Angeles County (LA County). From October 2018 to November 2019, *Smile Survey 2020* screened 10,489 children (5,897 kindergartners and 4,592 third graders) in a representative sample of 72 public elementary schools. This report highlights five key findings from the survey and calls for concerted strategic actions to further improve the oral health of LA County children and reduce oral health disparities.

In order to assess trends, we compared LA County data from a 2005 statewide oral health survey with *Smile Survey 2020* to answer the question: What progress has LA County made in the intervening years? In the past 14 years, we have made significant progress. The percentage of LA County kindergartners and third graders with evidence of current or previous tooth decay has decreased from 66% to 55%—a relative improvement of 17%. Similarly, the percentage of children with untreated decay decreased from 26% to 20%—a relative improvement of 23%. The proportion of third grade children with at least one protective dental sealant has increased from 21% to 31%—a relative improvement of 48%.

Despite these improvements, tooth decay continues to be a common problem for LA County children, especially for socioeconomically disadvantaged children and for Asian, Black/African American, and Latinx children. Socioeconomically disadvantaged children are almost twice as likely to have tooth decay experience, and are more likely to have untreated decay compared to those who are not socioeconomically disadvantaged. Nearly two out of three Latinx children and more than one out of two Black/African American and Asian children have decay experience, substantially higher rates than for White children (32%). Untreated decay is more common among Black/African American and Latinx children (23% and 21%, respectively) than among White children (14%).

Taken together, these findings demonstrate substantial progress toward improving the oral health of LA County children, but at the same time underscore the need for new strategic targeted initiatives to accelerate future improvements and reduce disparities. Oral health disparities are caused by a variety of underlying societal conditions. To address these disparities, we need to consider changes to systems and policies that will enable families to have access to needed dental care and the opportunity to engage in healthy habits. Key findings from *Smile Survey 2020* will help us identify and prioritize where future efforts and resources should be focused and will serve as benchmarks for assessing the effectiveness of future initiatives.

Several key strategies have been identified to improve the oral health of children in LA County. These strategies are grouped into three general categories: community-based prevention programs, screening and referral services, and restorative dental care. Teeth develop before birth and start to appear in the mouth when a child is about 6 months of age. Therefore, the strategies listed below include efforts to prevent tooth decay starting from the prenatal period and continuing throughout childhood.

### **COMMUNITY-BASED PREVENTION PROGRAMS**

- ☀ Incorporate oral health promotion and preventive services, such as parental education and fluoride varnish, into well-child visits; Women, Infants, Children (WIC); Early Head Start; Head Start; and other early childhood programs geared toward children 0–5 years of age.
- ☀ Expand school-based oral health prevention programs at schools that serve children at greatest risk to include, at a minimum, the placement of dental sealants, the application of topical fluorides, and oral health education.
- ☀ Conduct ongoing and targeted educational campaigns to 1) encourage the first dental visit by age 1; 2) increase oral health literacy and awareness; 3) promote the importance of oral health as part of general health and well-being; and 4) promote the benefits of water fluoridation and other fluorides for the reduction of dental disease.

### **SCREENING AND REFERRAL SERVICES**

- ☀ Expand oral health screening and referral services in programs/schools that serve children at greatest risk to help assure that all children receive their required kindergarten oral health assessment.
- ☀ Expand case management systems that help parents navigate the complex dental care delivery and payment system to assure that children obtain the dental care they need.

### **RESTORATIVE DENTAL CARE**

- ☀ Increase Medi-Cal Dental participation among private dentists by actively assessing enrollment and utilization data.
- ☀ Advocate for the expansion of dental services that target high-risk populations.

## Key Findings

### 1. The oral health of Los Angeles County's children has improved.

Since 2005, the percentage of kindergarten and third grade children who have ever had tooth decay decreased by 17%, while the percentage with untreated tooth decay decreased by 23%.

### 2. Despite improvements in the oral health of Los Angeles County's children, disparities persist.

Tooth decay remains more common in children from socioeconomically disadvantaged households, among children from Spanish speaking households, and among Asian, Black/African American, and Latinx children.

### 3. By the time Los Angeles County's children enter kindergarten, almost half have experienced tooth decay.

To prevent tooth decay, to address disparities, and to help all children, Los Angeles County must expand primary prevention programs targeting pregnant women, infants, toddlers, and preschool children.

### 4. Too few children are protected by dental sealants—a safe, simple, cost effective way to prevent decay in molar teeth.

Less than one out of three Los Angeles County third graders (31%) have sealants compared to the national average of 42%. This suggests that more dental sealant programs targeting elementary school children are needed.

### 5. Some children in Los Angeles County experience severe tooth decay.

The results of *Smile Survey 2020* suggest that on any given day more than 4,500 Los Angeles County kindergarten and third grade children need urgent dental care, which means they may be experiencing mouth pain or a serious infection. This highlights the need for ongoing screening, referral, and case management services in schools that serve children at greatest risk.



**“ Children with poor oral health miss more school and receive lower grades than those with better oral health. ”**



## The Importance of Oral Health and Starting Prevention Early in Life

### IMPACT OF TOOTH DECAY ON ORAL HEALTH, GENERAL HEALTH, AND QUALITY OF LIFE

A recent report from the U.S. Centers for Disease Control and Prevention (CDC) stated:

*Dental caries, or tooth decay, is a common chronic disease that can cause pain, suffering, and diminished quality of life throughout one's lifespan. Left untreated, tooth decay can progress and lead to infection, tooth loss, and more complex and expensive treatments. Untreated tooth decay can affect essential aspects of daily living, including eating, speaking, and performing at home, school, or work. Children with poor oral health miss more school and receive lower grades than those with better oral health, while adults lose more school or work hours for urgent, unplanned dental visits.<sup>1</sup>*

Although tooth decay is a preventable disease, it continues to be the most common chronic disease affecting children in the United States—five times more common than asthma and two times more common than childhood obesity.<sup>2</sup> Nationally, tooth decay affects about two-thirds of all children by the third grade.

Tooth decay continues to be a problem for children partly because of the all-too-common perception that tooth decay is an insignificant occurrence, especially with respect to young children's primary (baby) teeth. This perception ignores the fact that tooth decay in early childhood is the best predictor of future tooth decay as a child grows older and into adulthood. Failure to prevent tooth decay in young children results in lower quality of life and greater need for expensive dental treatment later in life.

## Importance of Oral Health and Prevention (continued)

If left untreated, tooth decay has significant consequences for children, their families, and society including:<sup>3</sup>

- ☀ **Pain:** Tooth decay can cause acute or chronic pain. Many children are not aware that teeth are not supposed to hurt.
- ☀ **Infection:** Infected teeth are reservoirs of bacteria that flood the rest of the body, leaving children prone to many other childhood infections, such as ear and sinus infections. Development of secondary infections, in more severe cases, may require emergency care or hospitalization.
- ☀ **Nutrition Problems:** Chronically painful and infected teeth make chewing and swallowing uncomfortable and difficult. Children with dental disease may not get the nutrition they need to grow.
- ☀ **Tooth and Space Loss:** Chronic childhood tooth decay often results in the early loss of “baby” teeth. This can result in space loss due to movement of remaining teeth, leaving insufficient room for the adult teeth to come into the mouth.
- ☀ **Attention Problems:** Children with infected and painful teeth have a hard time relaxing, sitting still, and paying attention in class.
- ☀ **Missed School Days:** Children with infected and painful teeth miss more school days than other children, disrupting their educational and social experiences. In Los Angeles County, a study of children from schools in lower-income communities found that students with a toothache in the past six months were more than five times more likely to miss school compared to students without toothaches.<sup>4</sup>
- ☀ **Increased Cost of Dental Care:** As tooth destruction progresses, the treatment costs for families and the public increase considerably.

Tooth decay in children destroys more than just a smile. Untreated decay compromises the child's ability to eat well, sleep well, and function well at home and at school. In addition, the unpleasant appearance of untreated decay can compromise a child's self-esteem and social development. Untreated tooth decay in children can be painful and without appropriate treatment can lead to infection of the teeth and gums. Although rare, infections due to untreated tooth decay can lead to severe illness and even death.

## PREVENTING TOOTH DECAY USING CURRENT EVIDENCE AND NEW STRATEGIES

Most tooth decay is preventable. A broad body of scientific evidence has documented the positive effects of many strategies in reducing the onset, progression, and severity of tooth decay. Evidence-based strategies for preventing tooth decay in children include:

- ☀️ **Brushing with Fluoride Toothpaste:** Brushing with fluoride toothpaste twice a day as soon as teeth appear in the mouth helps prevent tooth decay. Children less than 8 years old generally need be supervised or have their teeth brushed by a parent or caregiver.
- ☀️ **Fluoride Varnish:** Application of fluoride varnish twice a year to the teeth of all infants and children, and more frequently for children at higher risk for dental decay, starting when the first tooth comes into the mouth at about 6 months of age, has been shown to prevent tooth decay. Fluoride varnish can be applied at medical and dental clinics and in community settings, such as schools or in Head Start and WIC programs.
- ☀️ **Community Water Fluoridation:** Water fluoridation has been shown to be a safe, cost effective way to prevent tooth decay in both children and adults. Many, though not all, areas of Los Angeles County receive tap water that contains fluoride.
- ☀️ **Good Eating Habits:** Limiting food and drinks with added sugars will help prevent tooth decay and other chronic diseases and conditions, such as obesity and diabetes.
- ☀️ **Early and Regular Dental Visits:** All children should have their first dental visit between 6 months of age, when their first teeth usually come in, and their first birthday to establish a dental home. Following that initial visit, most children should have a dental examination at least once a year; some high-risk children may need more frequent examinations.
- ☀️ **Dental Sealants:** Dental sealants are placed to protect the chewing surfaces of permanent molars soon after they come into the mouth around age 6 (first molars) and age 12 (second molars).
- ☀️ **Improved Family Oral Health:** Decreasing dental disease among a child's caregivers benefits the oral health of the child and other family members. Routine oral health care and early education regarding infant oral health for pregnant women can help reduce dental disease in both mothers and children.

**““ Early dental visits can  
reduce the need for,  
and cost of,  
future dental care. ””**



## Importance of Oral Health and Prevention (continued)

Preventing tooth decay keeps a child from having costly dental care, which means that avoiding cavities saves money for both the family and society. Annual spending on dental care in the U.S. is well over \$100 billion, accounting for almost 20% of children's overall health spending.<sup>5</sup> Medicaid-enrolled children who received their first preventive dental visit by age 1 had 40% lower dental care costs over five years than children who received their first preventive visit at a later age.<sup>6</sup> This highlights the fact that early dental visits can reduce the need for, and cost of, future dental care.

Like many other diseases that start in childhood, such as diabetes and obesity, tooth decay is a chronic disease. Approaches to preventing or managing chronic diseases rely on strategies that focus on healthy habits—eating healthy foods, limiting sugar-containing foods and drinks, and in the case of tooth decay, daily brushing with fluoride toothpaste. Because of this, community programs that regularly engage with high-risk children and families (e.g., Head Start, WIC, schools, etc.) play a vital role in addressing chronic diseases, including tooth decay, by addressing the underlying conditions that cause disparities and helping children get off to a healthy start in life.

Health literacy is another critical factor in strategies to improve the health of children. More must be done to educate children and parents about the causes of tooth decay and ways to reduce its negative impacts. Culturally sensitive health education campaigns, which have been shown to be effective in improving health literacy and reducing levels of chronic diseases, could help reduce tooth decay in those who are at greatest risk.

In summary, early dental care plus regular and consistent prevention are key to improving the oral health and overall health of children in Los Angeles County. There is no better investment in the future than supporting the health and well-being of our children.



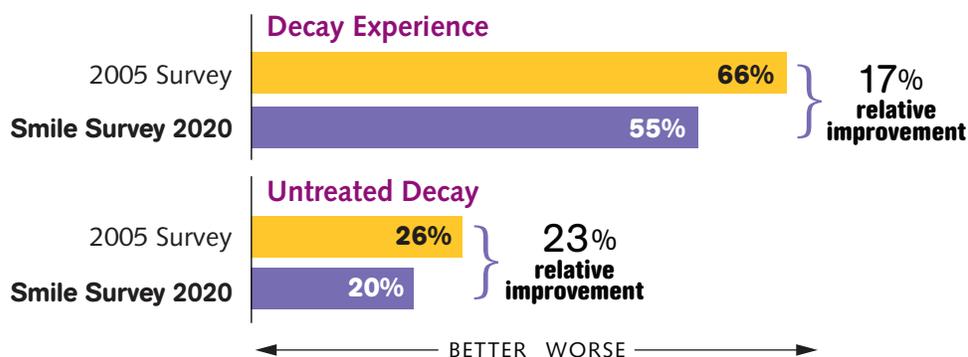


## Key Finding 1

### The oral health of Los Angeles County's children has improved.

Since 2005, the percentage of kindergarten and third grade children who have ever had tooth decay decreased by 17%, while the percentage with untreated tooth decay decreased by 23%.

**FIGURE 1:** Percentage of LA County's Kindergarten and 3rd Grade Children with Decay Experience and Untreated Decay by Survey, 2005 Survey and Smile Survey 2020



In 2005, the California Department of Public Health collaborated with the Dental Health Foundation to conduct a statewide oral health assessment of kindergarten and third grade children. The 2005 statewide assessment included 7,708 children screened at 62 public schools in Los Angeles County (LA County). Since 2005, there has been significant progress in reducing decay experience and untreated decay in both kindergarten and third grade children. As shown in Figure 1, the percentage of kindergartners and third graders combined with evidence of ever having tooth decay (decay experience) declined from 66% to 55%, which represents a relative reduction of 17%. Untreated tooth decay in kindergartners and third graders combined declined from 26% to 20%, a 23% relative reduction in untreated decay. Additional findings can be found in the Data Tables section of this report.

The reductions in decay experience noted in this report are important because they signal progress in reducing the proportion of LA County children affected by tooth decay. Less tooth decay experience means fewer children need fillings, crowns, or tooth extractions; fewer trips to the dentist; lower dental costs; and fewer missed school days. Less untreated decay means fewer children have cavities that can cause pain, infection, loss of teeth, and

## Key Finding 1 (continued)

related problems, such as difficulty eating or lowered self-esteem. During the last 14 years, several programs were implemented that may account for the reductions in decay experience and untreated decay including, but not limited to, expansion of community water fluoridation, Medi-Cal expansion that increased the number of children with dental insurance, and implementation of school-based prevention programs, such as fluoride varnish and dental sealant programs.

Although we have seen significant improvements, over half of LA County's kindergarten and third grade children still have tooth decay experience. To continue the downward trend, we must help children, families, and caregivers understand what causes tooth decay and what they can do to prevent it. In addition, we must ensure that families have access to the resources needed for optimal oral health, such as healthy foods and affordable dental care. Proven strategies for reducing tooth decay include drinking fluoridated water, daily brushing with fluoride toothpaste, fluoride varnish applications, a healthy diet, and dental sealants. Efforts to prevent tooth decay need to begin early in life. Guidelines from dental, medical, and public health organizations recommend that children have their first dental visit by age one and get regular dental check-ups throughout childhood.

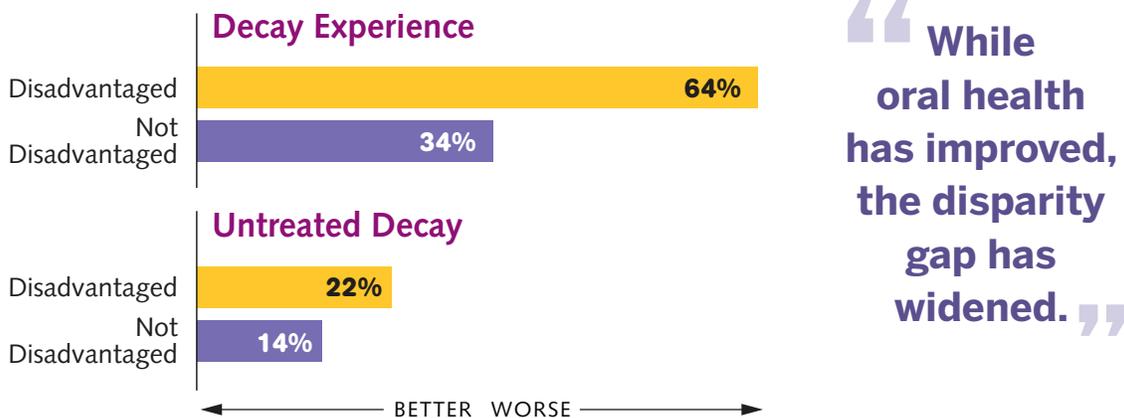


## Key Finding 2

**Despite improvements in the oral health of Los Angeles County's children, disparities persist.**

Tooth decay remains more common in children from socioeconomically disadvantaged households, among children from Spanish speaking households, and among Asian, Black/African American, and Latinx children.

**FIGURE 2:** Percentage of LA County's Kindergarten and 3rd Grade Children with Decay Experience and Untreated Decay by Socioeconomic Status, *Smile Survey 2020*



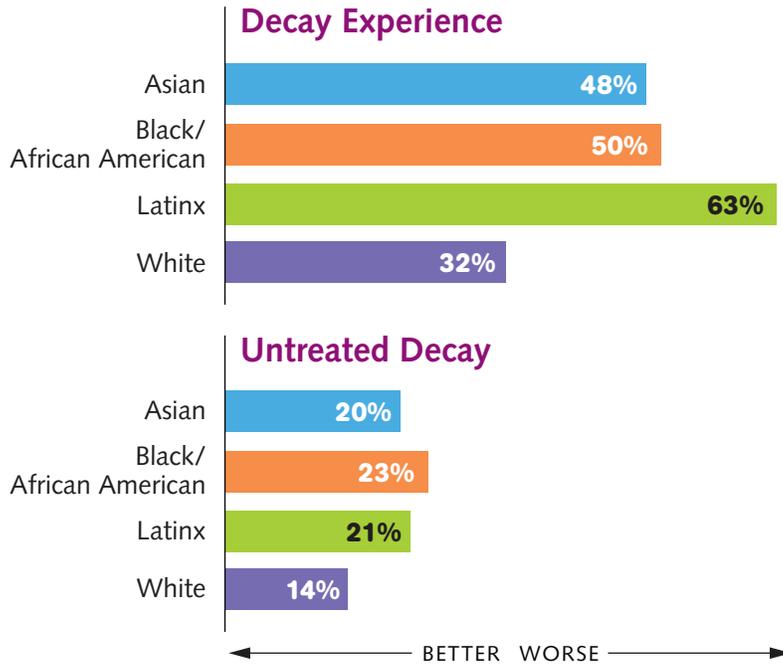
### Socioeconomic Disparities

In Los Angeles County (LA County), as in the United States, socioeconomically disadvantaged (SED) children, when compared to their non-disadvantaged peers, are significantly more likely to have decay experience and untreated decay. Among SED kindergarten and third grade children in LA County, more than six out of ten have experienced tooth decay and more than two out of ten have untreated decay.

### Racial/Ethnic Disparities

The percentage of kindergarten and third grade children with decay experience and untreated decay by race/ethnicity is displayed in Figure 3. Compared to White children, children from racial and ethnic minority groups have a significantly higher prevalence of both decay experience and untreated decay. Latinx children have the highest prevalence of decay experience, while Black/African American children have the highest prevalence of

**FIGURE 3:** Percentage of LA County's Kindergarten and 3rd Grade Children with Decay Experience and Untreated Decay by Race/Ethnicity, *Smile Survey 2020*



untreated decay. It should be noted that in LA County, children from racial and ethnic minority groups are substantially more likely to be socioeconomically disadvantaged. Twenty-nine percent (29%) of White children are disadvantaged compared to 38%, 83%, and 84% of Asian, Black/African American, and Latinx children, respectively (Data Table 4). Due to small sample sizes, information on other racial/ethnic groups is not available.

To assess trends in racial/ethnic disparities, we compared data from LA County's 2005 oral health assessment with data from *Smile Survey 2020* (Table 1). Every racial/ethnic group in LA County has seen improvements in both decay experience and untreated decay. For example, the percentage of Latinx children with untreated decay has dropped from 27% to 21%, which represents a relative reduction of 22%.

Although all population groups have seen improvements, the percentage improvements have been largest for White children. This means that while oral health has improved, the disparity gap has widened. In 2005, Latinx children were one and one-half (1.5) times more likely than White children to have decay experience but in *Smile Survey 2020* they are almost two times more likely to have decay experience.

**TABLE 1:** Percentage of LA County's Kindergarten and 3rd Grade Children with Decay Experience and Untreated Decay by Race/Ethnicity, 2005 and *Smile Survey 2020*

Race/ Ethnicity*	PERCENT WITH DECAY EXPERIENCE			PERCENT WITH UNTREATED DECAY		
	2005	<i>Smile Survey 2020</i>	Percent Improvement 2005 to 2020	2005	<i>Smile Survey 2020</i>	Percent Improvement 2005 to 2020
Asian	59%	48%	<b>19%</b>	22%	20%	<b>9%</b>
Black/ African American	59%	50%	<b>15%</b>	28%	23%	<b>18%</b>
Latinx	71%	63%	<b>11%</b>	27%	21%	<b>22%</b>
White	48%	32%	<b>33%</b>	19%	14%	<b>26%</b>

\* In 2005 race/ethnicity was determined by the dental screener while *Smile Survey 2020* obtained parent-reported race/ethnicity from the California Department of Education.

### Language Disparities

Parent's primary language (English, Spanish, Other) was used to assess the impact of language on oral health disparities. Compared to children from households with English as the primary language, children from households with Spanish as the primary language, regardless of race/ethnicity, are significantly more likely to have experienced tooth decay (47% vs. 70%), but the difference in the percentage of children with untreated decay (19% vs. 21%) was not significant (Data Table 4). The oral health of children from households that speak a language other than English or Spanish did not differ significantly from children living in English-speaking households. Among Latinx children, those living in Spanish-speaking households were significantly more likely to have decay experience than their peers from English-speaking households (70% vs. 56%), but there was no difference in the percentage with untreated decay (20% vs. 21%). These results suggest that children from Spanish-speaking households are less likely to access preventive services/behaviors but have similar access to restorative dental care.

## Key Finding 2 (continued)

### Special Education Disparities

There were no differences in the prevalence of decay experience or untreated decay between those children receiving special education services and those not receiving special education services (Data Table 4).

Our findings demonstrate that, despite overall improvements in children's oral health, disparities persist and have increased for large numbers of children. Addressing disparities in oral health is important not only from an equity standpoint, but also for improving overall population health, especially as LA County's population becomes more diverse. To make strides towards better oral health, we must recognize the underlying societal conditions at the core of these disparities, including unequal access to resources such as healthy foods and preventive dental care. By assessing and documenting disparities, we can prioritize strategies and activities for prevention and treatment of dental disease for targeted groups of children.

These findings point to the need for additional targeted strategies to reduce decay experience and untreated decay among socioeconomically disadvantaged children and among racial and ethnic minority populations with special emphasis on children from Spanish-speaking households. Examples include expansion of school-based, school-linked, and preschool oral health programs in areas with high numbers of higher risk families.<sup>7</sup> In addition, efforts should be directed toward gaining a better understanding of the factors underlying disparities and developing culturally informed interventions for reducing disparities. Examples include targeted oral health literacy campaigns with messaging in both Spanish and English and greater use of community health workers.



# Smile Survey 2020

## Key Finding 3

By the time Los Angeles County's children enter kindergarten, almost half have experienced tooth decay.

To prevent tooth decay, to address disparities, and to help all children, Los Angeles County must expand primary prevention programs targeting pregnant women, infants, toddlers, and preschool children.



Early prevention efforts are critical for the eradication of tooth decay in children. By kindergarten, almost five out of ten children (47%) in Los Angeles County (LA County) already have decayed teeth, and the percentage with decay rises dramatically with age—to 65% among third grade children. This is especially problematic for socioeconomically disadvantaged (SED) and Latinx children. SED kindergarten children, compared to non-SED children, are twice as likely to have experienced tooth decay (55% vs. 27%) and Latinx kindergarten children are twice as likely to have decay experience compared to their White peers (53% vs. 26%). To prevent this bacterial disease from occurring and spreading, it is important to **start before the age at which children already have the disease**. This means that prevention efforts must start before children reach kindergarten, especially for disadvantaged and Latinx children.

These findings highlight the fact that many children in LA County get tooth decay at an early age. Decay in young children is often considered to be an insignificant occurrence because primary (baby) teeth “fall out anyway.” This ignores the importance of primary

### Key Finding 3 (continued)

prevention of dental disease and studies which show that the best predictor of decay in permanent (adult) teeth is tooth decay in primary teeth. It also ignores the consequences of severe decay in some young children—including pain, infection, and the substantial cost of providing dental care. Due to their young age, treatment of preschool children with decay is often provided in a hospital-based operating room or surgical center under general anesthesia. Because of this, the cost of treatment can be enormous and the risk to the child can be substantial. On average, the total cost of treating a child's dental disease at a surgery center under general anesthesia in 2004–2008 was \$4,800 to \$6,300 per child.<sup>8</sup> Anecdotal information suggests that the current cost of treating a child's dental disease in a hospital or surgery center setting ranges from \$6,000 to \$12,000 per child.

Efforts to increase awareness of the importance of early decay prevention practices need to be developed, especially for families with children who are at high risk for tooth decay. Teaching parents about the importance of daily brushing of young children's teeth with fluoride toothpaste, beginning when teeth first come in, would be extremely beneficial. Greater attention to oral health, including fluoride varnish applications, as part of medical well-child visits in preschoolers (as recommended by the U.S. Preventive Services Task Force) would help reduce decay. Effective health promotion messages focusing on limiting sugar-containing foods and drinks would not only help fight tooth decay, but also help address childhood obesity and diabetes. Early visits to the dentist (starting by age 1) can help create healthier children, better dental experiences for children and families, and lower dental care costs.<sup>9</sup>



## Key Finding 4

**Too few children are protected by dental sealants—a safe, simple, cost effective way to prevent decay in molar teeth.**

Less than one out of three Los Angeles County third graders (31%) have sealants compared to the national average of 42%. This suggests that more dental sealant programs targeting elementary school children are needed.



"Dental Sealants to Protect Your Child's Teeth" by amatani654 is licensed under CC BY 2.0

Dental sealants—thin coatings that are painted on the chewing surface of the back teeth (permanent molars)—can prevent tooth decay for many years. If placed shortly after the permanent molars appear in the mouth, at about 6 years of age, sealants protect the chewing surfaces by covering them with a protective shield that blocks out germs and food. Sealants are generally provided in dental offices or through school-based sealant programs that target high-risk children in second grade. As previously mentioned, school-based sealant programs are especially important for reaching children from families with limited resources who are less likely to have access to private dental care.

Although the percentage of third grade children in Los Angeles County (LA County) with sealants increased from 21% in 2005 to 31% in *Smile Survey 2020*, the percentage with protective sealants is below the national average of 42% for third grade children.<sup>10</sup> In LA County, sealant disparities have been addressed; the prevalence of sealants is similar across socioeconomic and racial/ethnic minority groups (Data Table 5).

#### Key Finding 4 (continued)

Sealants are a highly effective but underutilized method for preventing decay on the chewing surfaces of permanent molars: they are cheaper than fillings and can be done quickly with less equipment than fillings. Protecting permanent molar teeth from decay is a critical goal for children's oral health because these molars must last a lifetime. Permanent molars account for a high percentage of decayed teeth; and sealants can reduce decay in these vulnerable, important teeth by 50%–80%.<sup>11</sup>

In LA County, significantly more disadvantaged children have permanent molar decay compared to non-disadvantaged children (23% vs. 9%), and Latinx third graders have significantly more permanent molar decay than White third grade children (23% vs. 9%). By expanding school-based sealant programs in schools with high numbers of socioeconomically disadvantaged and/or Latinx children, the prevalence of tooth decay among this vulnerable population could be substantially reduced. Efforts to create greater awareness of the importance of the application of sealants as a key preventive measure need to be developed, especially for families of children who are at high risk for tooth decay. In addition, efforts should be made to encourage or incentivize dentists who serve high-risk children to place sealants on permanent molars.



## Key Finding 5

### Some children in Los Angeles County experience severe tooth decay.

The results of *Smile Survey 2020* suggest that on any given day more than 4,500 Los Angeles County kindergarten and third grade children need urgent dental care, which means they may be experiencing mouth pain or a serious infection. This highlights the need for ongoing screening, referral, and case management services in schools that serve children at greatest risk.

About 19% of kindergarten and third grade children in Los Angeles County (LA County) need dental care—with 2% needing urgent dental care because of pain or infection and 17% needing early or non-urgent dental care. In 2019–2020, there were about 229,100 kindergarten and third grade children in LA County’s public schools. If 19% need dental care, this means that more than 43,500 kindergarten and third grade children are in the classroom with a cavity and about 4,500 of them attend school in pain or with an oral infection, both of which can affect their ability to concentrate and learn. *Smile Survey 2020* did not include complete diagnostic dental examinations. Instead, dental screenings were performed. This is a quick look inside the mouth with a dental mirror, without X-rays or more advanced diagnostic tools. Because of this, some problems were likely missed. It is reasonable to assume that these findings underestimate the number of children needing dental care.

Children with untreated decay miss school at relatively high rates. In LA County, a study of children from lower-income schools found that students with a toothache in the past six months were five times more likely to miss school compared to students without toothaches.<sup>4</sup> In addition to the numerous negative impacts to children’s health and well-being, there are additional consequences, such as difficulty in enunciating words, lack of self-confidence, and financial consequences for families and schools.

More effective prevention, targeted to those at greatest risk for tooth decay, combined with more robust programs for connecting high-risk children with ongoing sources of dental care (dental homes)—on-site at schools or through referrals to community dentists or clinics—should be among the county’s highest priorities going forward.

**43,500**

kindergartners and  
3rd graders with cavities

**4,500**

in enough pain to influence  
their learning.





# Smile Survey 2020

## Strategic Priorities to Improve Oral Health

Improving oral health in an area as large and diverse as Los Angeles County (LA County) requires strategic planning, engagement of a broad array of community stakeholders, and resources to organize and expand model programs. In 2019, the Los Angeles County Department of Public Health Oral Health Program released its first community oral health strategic plan, also known as the Community Oral Health Improvement Plan (COHIP). The Oral Health Program brought together over 60 local oral health stakeholders who, over the course of a year, spent over 2,000 hours of work to produce the COHIP. With consensus, they laid out a roadmap to improve the oral health of LA County residents. This five-year plan includes six objectives, with associated strategies and activities, to address the oral health needs of LA County's residents.<sup>12</sup>

The COHIP provides a framework for action over the next five years. It considers the social determinants of health, current existing data in dental access to care, and the experiences of community organizations and stakeholders. It envisions a healthier LA County in which more residents establish a dental home, fewer young children experience tooth decay, and children and their families can access quality care in their communities. The COHIP also provides strategies and calls on community partners to provide more oral health resources in a linguistic and culturally sensitive and competent manner.

The Oral Health Program (OHP) created six workgroups, one for each COHIP objective. Each workgroup is comprised of OHP staff and community stakeholders, working together to implement the activities outlined in the report. The OHP also executed a competitive contract for the Oral Health Collaborative Consortium with the UCLA Center for Health Policy Research to implement many of the activities highlighted by the COHIP.

The COHIP has six objectives which address the five key findings of *Smile Survey 2020*:

- ☀ **Awareness and Health Literacy:** Increase awareness of the importance and contribution of optimal oral health and well-being across the lifespan
- ☀ **Improved Access to Care:** Improve access to oral health care by increasing providers' cultural and technical capacities, fostering trust between patients and providers, and reducing logistical barriers to care
- ☀ **Coordination of Care:** Strengthen systems of care by effectively integrating and coordinating oral health with other health and social services
- ☀ **Workforce Development and Capacity:** Increase the number of oral health sector workers to meet the needs of LA County's economically and culturally diverse communities

## Strategic Priorities (continued)

- ☀️ **Policy Leadership:** Develop and influence federal, state, and local policies and resources that will promote equitable access to oral health services
- ☀️ **Surveillance, Transparency, and Accountability:** Track oral health determinants and outcomes in LA County. Data collected will be made available for research and analysis, policy development and implementation, and public dissemination

Through collaborative efforts with oral health stakeholders, we anticipate that by the next oral health assessment we will see a further reduction in the prevalence of tooth decay and untreated tooth decay in kindergarten and third grade children. We will work toward increasing the percentage of children who provide proof of a dental assessment in accordance with the California Kindergarten Oral Health Assessment (KOHA) mandate. The results from *Smile Survey 2020* indicate that KOHA is a great opportunity to gauge the oral health status of a child in the kindergarten age group and to link a child to a dental home. Organizations that routinely work with young children and families can incorporate KOHA as part of their care package. We also look to work with policy advocates in eliminating the opt-out option of this assessment. By eliminating the opt-out choice, we can reach all kindergartners in LA County that are in need of oral health treatment and prevention, further resulting in earlier intervention, and ultimately moving toward a decrease in dental decay among this age group.

One of our goals is to increase the percentage of third grade children with sealants. It is essential that school-based clinics or organizations include this activity in their scope of work. Only then will we see an increase in the application of this easy, preventive treatment aimed to decrease decay of the permanent teeth.

A bolder goal is to increase the number of LA County residents receiving optimally-fluoridated water. It is essential to partner with community oral health leaders and promoters to educate community residents on the benefits of fluoride use. We want to empower Angelenos to understand the oral health benefits of fluoridated water and to advocate for optimally-fluoridated water to achieve the best oral health for themselves and their families.

Findings from *Smile Survey 2020* will guide the OHP, oral health stakeholders, and community partners to make informed decisions on the areas of most oral health need and where we should focus activities and program development. We recognize that it is essential for organizations to work together if we are to implement all six objectives and their associated strategies and activities. We need partnerships with non-profit organizations, private businesses, schools, primary care providers, and more. Through these partnerships, we aim to see improvements in our outcomes and to move LA County toward better oral health for the children of our communities.

OBJECTIVE	STRATEGY	ACTION PLANS
<b>Awareness and Health Literacy</b>	Increase the amount of high-quality oral health awareness activities provided to students from pre-k to high school in LA County schools	Provide resources to LA County school administrators for improving front office and health staff's capacity to promote oral health awareness, provide accurate and effective referrals, and improve reporting, including resources that support implementation of the Kindergarten Oral Health Assessment Mandate (AB 1433)
<b>Improved Access to Care</b>	Develop new and innovative oral health service access points to better reach underserved populations	Identify opportunities to increase the availability of preventive oral health services and community clinic linkages in convenient and accessible community locations, such as storefronts and pharmacies
<b>Coordination of Care</b>	Implement best practices to promote collaboration among providers of oral health care and other health and social services to improve the oral health of Angelenos	Promote the integration of oral health assessments, education, preventive, and referral services into well-child exams
<b>Workforce Development and Capacity</b>	Promote expanding the volume and variety of oral health services provided by non-dentist professionals in accordance with their credentials	Expand and promote the use of dental hygienists in settings such as senior facilities, adult day care centers, and early education settings
<b>Policy Leadership</b>	Serve as a voice for health equity in LA County	Engage in, and lend an oral health-specific perspective to, efforts to address health inequities in LA County
<b>Surveillance, Transparency, and Accountability</b>	Collect, report, and disseminate valid, actionable, and purposeful data regarding oral health in LA County	Conduct a county-wide Children's Oral Health Needs Assessment every five years



BUSINESSMEN ARE LIBERAL AND IF THEY GIVE TO ALL WHO ASK  
THEY WANT THAT ALL WHO SERVE THEM FAITHFULLY



# Smile Survey 2020

## Survey Methods

*Smile Survey 2020* screened kindergarten and third grade children at a representative sample of public elementary schools in Los Angeles County (LA County). The sampling frame included all in-person public and public charter schools with at least 25 children in third grade. Because of unique circumstances associated with working with the Los Angeles Unified School District (LAUSD), the sampling frame was ordered by LAUSD (no/yes), then by geographic location (service planning area) and, finally, by percent of students eligible for the National School Lunch Program (NSLP). A systematic probability proportional to size sampling scheme was used to select 70 schools with third grade. Of the selected schools, two did not have kindergarten students so the appropriate kindergarten feeder schools were added to the sample, resulting in 72 schools representing 70 sampling intervals. The selected schools included 33 schools (31 sampling intervals) in LAUSD and 39 schools (39 sampling intervals) in districts other than LAUSD. If a school declined to participate, a replacement school from the same sampling interval was selected. A systematic sampling process with implicit stratification by school district (LAUSD vs. non-LAUSD), geographic region, and NSLP participation helped to ensure that the sample was representative of the County in terms of geographic location and socioeconomic status.

The Los Angeles County Department of Public Health contracted with the UCLA School of Dentistry to complete the screenings and conduct the statistical analyses. Screenings were completed during the 2018–2019 and 2019–2020 school years (October 2018 to November 2019). A combination of active and passive consent was used. Active consent was used by two school districts (LAUSD and one non-LAUSD district) while all other districts used passive consent. Among schools using active consent, the response rate was 62%, while the response rate among schools using passive consent was 84%, resulting in an overall response rate of 74%. Trained dental examiners completed the screenings using gloves, penlights, and disposable mouth mirrors. The training consisted of a two-hour didactic session followed by a two-hour clinical training session. Inter- and intra-rater reliability were not determined. The diagnostic criteria outlined in the Association of State and Territorial Dental Director's publication *Basic Screening Surveys: An Approach to Monitoring Community Oral Health* were used.<sup>13</sup> The oral health measures collected included number of teeth with untreated decay, number of teeth with treated decay, status of each permanent first molar (decayed, filled, sealed, sound, unerupted) and urgency of need for dental care (none, early, urgent). In addition to the oral health indicators, we also measured a child's height and weight. Information obtained using the height/weight measures will be presented in a subsequent one-page summary report.

## Survey Methods (continued)

Child level information on sex (female, male, unknown), parent-reported race/ethnicity (Asian, Black/African American, Hispanic/Latinx, White, other, unknown), socioeconomic status (socioeconomically disadvantaged, not socioeconomically disadvantaged), parent's primary language (English, Spanish, other, unknown), and special education status (no, yes, unknown) was obtained from the California Department of Education (CDE) through a memorandum of understanding and data use agreement with the California Department of Public Health. CDE considers a child to be socioeconomically disadvantaged if they are identified as being a migrant, a foster child, or homeless at any time during the academic year; being eligible for the National School Lunch Program at any time during the academic year; or having parents who did not receive a high school diploma. CDE obtains information on parent's primary language, also known as "native language," from the Home Language Survey. All unique identifiers were removed from the dataset so that anonymity was maintained.

Raking<sup>14</sup>, a model-based approach using known population totals, was used to generate weights to ensure that the survey totals matched the known population totals in terms of geographic location (SPA), race/ethnicity, and socioeconomic status. Raking weights were created using R (R Foundation for Statistical Computing, Vienna, Austria). All statistical analyses were performed using SAS complex survey procedures (Version 9.4; SAS Institute Inc., Cary, NC). A total of 10,489 children received a dental screening; however, due to missing demographic data needed to calculate weights, 97 children were excluded from all the analyses. All analyses are limited to the 10,392 children with demographic data.

2005 Survey Methods: The sampling frame for the 2005 California oral health assessment included public schools with at least 25 children in kindergarten and/or third grade. A systematic probability proportional to size sampling scheme with implicit stratification by geographic region and percent of students eligible for the National School Lunch Program was used to select 204 schools throughout California including 54 schools in LA County. To ensure that results were representative of populations served by the three health jurisdictions in LA County, an additional eight schools were added to the state sample. A total of 7,708 kindergarten and third grade children in 62 LA County schools were screened during the 2004–2005 school year. The 2005 survey used the same diagnostic criteria as *Smile Survey 2020*. In 2005, race/ethnicity was determined by the dental screener.



# Smile Survey 2020

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## RESULTS-AT-A-GLANCE

GRADE/INDICATOR	SMILE SURVEY 2020 FINDINGS	NATIONAL AVERAGE <sup>10</sup>
<b>Kindergarten</b>	<b>Among kindergarten children surveyed in 2018–2019:</b>	
Decay experience	■ 47% have experienced tooth decay compared to 56% of those screened in 2005 (16% improvement)	42%
Untreated decay	■ 19% have untreated decay compared to 25% of those screened in 2005 (24% improvement)	22%
Need for urgent dental care	■ 2% need urgent dental care because of pain or infection compared to 4% of those screened in 2005 (50% improvement)	NA
Dental sealants	■ Not applicable; kindergarten children do not have permanent molars	NA
<b>Third grade</b>	<b>Among 3<sup>rd</sup> grade children surveyed in 2018–2019:</b>	
Decay experience	■ 65% have experienced tooth decay compared to 74% of those screened in 2005 (12% improvement)	62%
Untreated decay	■ 21% have untreated decay compared to 27% of those screened in 2005 (22% improvement)	22%
Need for urgent dental care	■ 2% need urgent dental care because of pain or infection compared to 4% of those screened in 2005 (50% improvement)	NA
Dental sealants	■ 31% have protective dental sealants on a permanent molar compared to 21% of those screened in 2005 (48% improvement)	42%
<b>Kindergarten &amp; 3<sup>rd</sup> grade combined</b>	<b>Among kindergarten &amp; 3<sup>rd</sup> grade children surveyed in 2018–2019:</b>	
Decay experience	■ 55% have experienced tooth decay compared to 66% of those screened in 2005 (17% improvement)	NA
Untreated decay	■ 20% have untreated decay compared to 26% of those screened in 2005 (23% improvement)	NA
Need for urgent dental care	■ 2% need urgent dental care because of pain or infection compared to 4% of those screened in 2005 (50% improvement)	NA
Dental sealants	■ Not applicable – kindergarten children do not have permanent molars	NA

NA = Not Available

GRADE/INDICATOR	SMILE SURVEY 2020 FINDINGS	NATIONAL AVERAGE <sup>10</sup>
<b>Disparities</b>	<b>Among kindergarten &amp; 3<sup>rd</sup> grade children surveyed in 2018–2019:</b>	
Socioeconomic status	<ul style="list-style-type: none"> <li>■ 64% of disadvantaged children have experienced tooth decay compared to 34% of non-disadvantaged children</li> <li>■ 22% of disadvantaged children have untreated decay compared to 14% of non-disadvantaged children</li> </ul>	NA
Parent's primary language	<ul style="list-style-type: none"> <li>■ 70% of children from Spanish-speaking households have experienced tooth decay compared to 47% of children from English-speaking households</li> <li>■ There is no difference in the percentage of children with untreated decay in Spanish- vs. English-speaking households (21% and 19%, respectively)</li> </ul>	NA
Race/ethnicity	<ul style="list-style-type: none"> <li>■ 48% of Asian, 50% of Black/African American, and 63% of Latinx, children have experienced tooth decay compared to 32% of White children</li> <li>■ 20% of Asian, 23% of Black/African American, and 21% of Latinx children have untreated decay compared to 14% of White children</li> </ul>	NA

NA = Not Available

## DATA TABLES

**Data Table 1:** Demographic characteristics of **kindergarten and 3<sup>rd</sup> grade children** participating in *Smile Survey 2020* (n=10,392)

Characteristic	Unweighted Number	Weighted Percent	95% Confidence Interval
<b>Grade</b>			
Kindergarten	5,829	54.4	53.7 - 55.2
3rd	4,563	45.6	44.8 - 46.3
<b>Sex</b>			
Female	5,121	49.4	48.4 - 50.5
Male	5,239	50.3	49.2 - 51.3
Missing/Unknown	32	0.3	0.1 - 0.5
<b>Race/Ethnicity</b>			
Asian	1,393	9.7	6.3 - 13.1
Black/African American	783	7.3	4.6 - 10.0
Latinx	6,682	65.7	59.1 - 72.4
White	1,132	14.1	9.1 - 19.1
Other	402	3.2	2.2 - 4.1
<b>Parent's Primary Language</b>			
English	6,033	59.8	55.2 - 64.4
Spanish	3,236	32.3	27.3 - 37.3
Other*	1,087	7.6	5.1 - 10.2
Missing/Unknown	36	0.3	0.2 - 0.4
<b>Socioeconomically Disadvantaged</b>			
No	3,101	29.6	22.8 - 36.4
Yes	7,291	70.4	63.6 - 77.2
<b>Special Education</b>			
No	9,306	89.0	87.7 - 90.3
Yes	1,022	10.3	9.1 - 11.6
Missing/Unknown	64	0.6	0.4 - 0.9
<b>Service Planning Area (SPA)</b>			
SPA 1	824	5.3	0.2 - 10.4
SPA 2	1,874	20.7	11.1 - 30.4
SPA 3	1,499	16.7	8.4 - 25.0
SPA 4	614	9.0	2.3 - 15.7
SPA 5	513	4.4	0.0 - 9.3
SPA 6	1,299	13.5	5.6 - 21.4
SPA 7	1,464	14.9	6.2 - 23.7
SPA 8	2,305	15.5	6.9 - 24.1

\*Includes 50 other languages ranging from Albanian to Vietnamese

**Data Table 2:** Percentage of LA County's **kindergarten children** with decay experience in primary or permanent teeth; untreated decay in primary or permanent teeth; needing urgent medical care; and socioeconomically disadvantaged; by selected characteristics (n=5,829)

Characteristic	Decay Experience in Primary or Permanent Teeth PERCENT (95% CI)	Untreated Decay in Primary or Permanent Teeth PERCENT (95% CI)	Needs Urgent Care PERCENT (95% CI)	Socioeconomically Disadvantaged PERCENT (95% CI)
<b>All kindergarten children</b>	<b>46.8 (42.9 - 50.8)</b>	<b>18.8 (17.0 - 20.7)</b>	<b>1.7 (1.2 - 2.2)</b>	<b>70.9 (64.3 - 77.6)</b>
<b>Sex</b>				
Male	48.2 (43.9 - 52.4)	19.4 (17.4 - 21.5)	1.9 (1.3 - 2.6)	69.8 (63.1 - 76.6)
Female	45.5 (41.3 - 49.7)	18.3 (16.0 - 20.6)	1.5 (0.9 - 2.1)	72.0 (65.4 - 78.7)
<b>Race/Ethnicity</b>				
Asian	42.4 (35.9 - 48.9)	20.2 (15.6 - 24.8)	2.1 (0.6 - 3.6)	41.8 (32.7 - 50.9)
Black/African American	42.6 (35.6 - 49.6)	21.4 (16.6 - 26.3)	0.8 (0.0 - 1.7)	87.3 (81.9 - 92.7)
Latinx	53.1 (50.0 - 56.2)	19.7 (17.7 - 21.7)	1.9 (1.3 - 2.6)	84.2 (81.0 - 87.4)
White	25.9 (20.7 - 31.1)	13.2 (10.0 - 16.4)	0.9 (0.2 - 1.6)	29.0 (19.6 - 38.3)
Other	31.1 (23.2 - 39.0)	15.8 (11.3 - 20.3)	2.1 (0.1 - 4.2)	35.5 (24.0 - 47.0)
<b>Parent's Primary Language</b>				
English	40.1 (35.8 - 44.4)	18.2 (15.8 - 20.6)	1.6 (0.9 - 2.2)	62.7 (55.0 - 70.4)
Spanish	60.0 (56.6 - 63.5)	18.9 (16.6 - 21.2)	1.8 (1.0 - 2.7)	92.8 (90.8 - 94.8)
Other*	51.4 (44.9 - 57.8)	23.4 (18.3 - 28.6)	2.7 (1.2 - 4.2)	56.7 (44.8 - 68.7)
<b>Socioeconomically Disadvantaged</b>				
No	27.3 (23.6 - 31.1)	12.5 (10.3 - 14.8)	1.3 (0.7 - 2.0)	--
Yes	54.8 (52.1 - 57.5)	21.4 (19.6 - 23.2)	1.9 (1.3 - 2.5)	--
<b>Special Education</b>				
No	46.7 (42.8 - 50.7)	18.9 (17.0 - 20.7)	1.8 (1.2 - 2.3)	70.4 (63.6 - 77.2)
Yes	49.7 (43.7 - 55.8)	19.1 (14.9 - 23.3)	1.4 (0.4 - 2.4)	77.9 (72.3 - 83.4)
<b>Service Planning Area (SPA)<sup>†</sup></b>				
SPA 1	54.2 (47.1 - 61.3)	19.4 (15.7 - 23.1)	2.2 (0.3 - 4.2)	83.3 (67.6 - 99.0)
SPA 2	36.7 (29.1 - 44.2)	14.5 (12.4 - 16.7)	0.8 (0.2 - 1.3)	58.8 (42.1 - 75.5)
SPA 3	49.7 (42.2 - 57.2)	21.0 (16.9 - 25.0)	1.3 (0.5 - 2.1)	72.0 (59.2 - 84.9)
SPA 4	49.8 (36.9 - 62.8)	15.7 (12.3 - 19.1)	1.4 (0.0 - 3.0)	78.7 (66.5 - 90.8)
SPA 5	22.2 (8.1 - 36.3)	10.0 (4.3 - 15.7)	1.2 (0.0 - 2.5)	26.3 (0.0 - 53.6)
SPA 6	57.0 (51.5 - 62.5)	21.3 (16.1 - 26.6)	1.6 (0.3 - 2.8)	94.9 (92.4 - 97.4)
SPA 7	56.7 (49.9 - 63.6)	26.9 (23.1 - 30.6)	3.1 (1.2 - 5.0)	78.3 (69.3 - 87.2)
SPA 8	41.7 (31.7 - 51.6)	16.7 (11.7 - 21.7)	2.6 (1.4 - 3.8)	61.7 (42.6 - 80.9)

\* Includes 50 other languages ranging from Albanian to Vietnamese

† Data not presented in text, refer to Appendix for a Service Planning Area map

CI=Confidence Interval

## DATA TABLES (continued)

**Data Table 3:** Percentage of LA County's 3<sup>rd</sup> grade children with decay experience in primary or permanent teeth; untreated decay in primary or permanent teeth; needing urgent medical care; and socioeconomically disadvantaged; by selected characteristics (n=4,563)

Characteristic	Decay Experience in Primary or Permanent Teeth PERCENT (95% CI)	Untreated Decay in Primary or Permanent Teeth PERCENT (95% CI)	Needs Urgent Care PERCENT (95% CI)	Socioeconomically Disadvantaged PERCENT (95% CI)
<b>All 3<sup>rd</sup> grade children</b>	<b>64.7 (60.1 - 69.4)</b>	<b>20.7 (18.2 - 23.2)</b>	<b>2.1 (1.5 - 2.7)</b>	<b>69.7 (62.5 - 77.0)</b>
<b>Sex</b>				
Male	63.5 (58.6 - 68.5)	19.5 (16.8 - 22.1)	2.1 (1.5 - 2.8)	69.1 (61.5 - 76.7)
Female	65.9 (61.0 - 70.8)	21.9 (18.8 - 25.0)	2.0 (1.3 - 2.8)	70.5 (63.4 - 77.7)
<b>Race/Ethnicity</b>				
Asian	55.1 (49.7 - 60.5)	18.9 (14.0 - 23.8)	0.9 (0.0 - 1.8)	33.3 (24.0 - 42.7)
Black/African American	58.5 (52.9 - 64.1)	24.6 (19.6 - 29.6)	2.5 (1.1 - 3.9)	77.9 (72.7 - 83.1)
Latinx	73.8 (70.5 - 77.0)	22.1 (19.4 - 24.9)	2.6 (1.8 - 3.3)	84.7 (80.8 - 88.6)
White	38.0 (29.0 - 47.0)	15.0 (10.5 - 19.5)	0.6 (0.0 - 1.4)	28.4 (18.7 - 38.1)
Other	41.4 (31.0 - 51.9)	12.9 (7.1 - 18.8)	0.7 (0.0 - 2.2)	36.6 (24.3 - 48.8)
<b>Parent's Primary Language</b>				
English	57.0 (51.4 - 62.5)	20.1 (17.3 - 22.9)	1.9 (1.3 - 2.6)	58.5 (50.2 - 66.8)
Spanish	78.7 (75.7 - 81.7)	21.9 (18.7 - 25.2)	2.2 (1.2 - 3.3)	91.9 (89.1 - 94.8)
Other*	55.9 (48.7 - 63.0)	19.6 (13.8 - 25.4)	2.1 (0.2 - 4.0)	45.7 (33.6 - 57.9)
<b>Socioeconomically Disadvantaged</b>				
No	41.8 (35.7 - 48.0)	16.1 (12.3 - 19.9)	1.1 (0.4 - 1.8)	--
Yes	74.6 (72.2 - 77.1)	22.7 (20.1 - 25.3)	2.5 (1.8 - 3.2)	--
<b>Special Education</b>				
No	64.3 (59.6 - 69.1)	20.7 (18.1 - 23.4)	2.0 (1.4 - 2.6)	69.4 (62.1 - 76.8)
Yes	68.3 (62.0 - 74.6)	20.1 (16.0 - 24.3)	2.7 (1.2 - 4.1)	73.9 (65.6 - 82.1)
<b>Service Planning Area (SPA)<sup>†</sup></b>				
SPA 1	64.6 (57.5 - 71.7)	17.4 (12.1 - 22.7)	1.2 (0.0 - 2.7)	80.4 (66.0 - 94.9)
SPA 2	53.0 (43.5 - 62.6)	16.9 (12.4 - 21.4)	1.3 (0.1 - 2.5)	55.4 (38.6 - 72.2)
SPA 3	69.1 (60.3 - 78.0)	25.4 (19.7 - 31.1)	3.0 (1.4 - 4.6)	73.9 (60.4 - 87.4)
SPA 4	66.9 (54.9 - 78.8)	16.6 (12.7 - 20.5)	2.9 (1.1 - 4.6)	78.2 (58.9 - 97.5)
SPA 5	39.7 (20.4 - 59.1)	13.5 (12.4 - 14.6)	0.8 (0.0 - 2.0)	23.2 (0.0 - 48.4)
SPA 6	78.3 (74.2 - 82.3)	23.7 (17.5 - 29.8)	2.6 (0.9 - 4.3)	91.6 (88.8 - 94.4)
SPA 7	77.5 (71.1 - 83.9)	25.6 (18.4 - 32.7)	2.1 (0.5 - 3.7)	79.5 (65.6 - 93.4)
SPA 8	57.3 (44.0 - 70.5)	18.9 (11.7 - 26.1)	1.8 (0.7 - 3.0)	60.7 (40.0 - 81.5)

\* Includes 50 other languages ranging from Albanian to Vietnamese

† Data not presented in text, refer to Appendix for a Service Planning Area map  
CI=Confidence Interval

**Data Table 4:** Percentage of LA County's kindergarten and 3<sup>rd</sup> grade children with decay experience in primary or permanent teeth; untreated decay in primary or permanent teeth; needing urgent medical care; and socioeconomically disadvantaged; by selected characteristics (n=10,392)

Characteristic	Decay Experience in Primary or Permanent Teeth PERCENT (95% CI)	Untreated Decay in Primary or Permanent Teeth PERCENT (95% CI)	Needs Urgent Care PERCENT (95% CI)	Socioeconomically Disadvantaged PERCENT (95% CI)
<b>All children</b>	<b>55.0 (50.9 - 59.0)</b>	<b>19.7 (17.8 - 21.6)</b>	<b>1.9 (1.4 - 2.3)</b>	<b>70.4 (63.6 - 77.2)</b>
<b>Sex</b>				
Male	55.1 (50.9 - 59.3)	19.5 (17.4 - 21.5)	2.0 (1.5 - 2.5)	69.5 (62.5 - 76.5)
Female	54.9 (50.6 - 59.1)	19.9 (17.7 - 22.2)	1.8 (1.2 - 2.3)	71.3 (64.6 - 78.1)
<b>Race/Ethnicity</b>				
Asian	48.1 (42.9 - 53.3)	19.6 (15.3 - 23.9)	1.6 (0.6 - 2.5)	38.0 (29.6 - 46.4)
Black/African American	50.3 (44.8 - 55.7)	22.9 (19.0 - 26.9)	1.6 (0.6 - 2.6)	82.8 (78.2 - 87.3)
Latinx	62.5 (59.6 - 65.3)	20.8 (18.8 - 22.8)	2.2 (1.6 - 2.8)	84.4 (81.1 - 87.8)
White	31.5 (25.7 - 37.4)	14.0 (11.0 - 17.0)	0.8 (0.3 - 1.3)	28.7 (19.8 - 37.6)
Other	35.4 (27.9 - 42.9)	14.6 (11.1 - 18.1)	1.5 (0.2 - 2.9)	35.9 (25.4 - 46.4)
<b>Parent's Primary Language</b>				
English	47.4 (43.0 - 51.8)	19.1 (16.9 - 21.3)	1.7 (1.2 - 2.2)	60.9 (53.1 - 68.7)
Spanish	69.6 (67.0 - 72.2)	20.5 (18.1 - 22.8)	2.0 (1.3 - 2.8)	92.3 (90.2 - 94.5)
Other*	53.2 (47.4 - 59.0)	21.9 (17.0 - 26.8)	2.4 (1.3 - 3.6)	52.3 (41.3 - 63.3)
<b>Socioeconomically Disadvantaged</b>				
No	34.1 (29.7 - 38.4)	14.2 (11.8 - 16.6)	1.2 (0.7 - 1.7)	--
Yes	63.8 (61.4 - 66.1)	22.0 (20.1 - 23.9)	2.2 (1.6 - 2.7)	--
<b>Special Education</b>				
No	54.6 (50.5 - 58.7)	19.7 (17.8 - 21.6)	1.9 (1.4 - 2.3)	70.0 (63.0 - 76.9)
Yes	59.8 (54.7 - 64.8)	19.7 (16.5 - 22.8)	2.1 (1.2 - 3.0)	75.7 (69.3 - 82.2)
<b>Service Planning Area (SPA)<sup>†</sup></b>				
SPA 1	59.1 (52.8 - 65.4)	18.5 (14.0 - 22.9)	1.8 (0.1 - 3.5)	82.0 (66.9 - 97.1)
SPA 2	44.1 (36.4 - 51.7)	15.6 (13.0 - 18.2)	1.0 (0.3 - 1.7)	57.2 (40.6 - 73.9)
SPA 3	58.6 (51.2 - 66.1)	23.0 (18.6 - 27.3)	2.0 (1.0 - 3.1)	72.9 (60.1 - 85.7)
SPA 4	57.3 (45.1 - 69.4)	16.1 (12.7 - 19.5)	2.0 (0.9 - 3.1)	78.5 (63.3 - 93.7)
SPA 5	30.1 (14.0 - 46.2)	11.6 (8.2 - 15.0)	1.0 (0.5 - 1.5)	24.9 (0.0 - 51.3)
SPA 6	66.5 (62.1 - 71.0)	22.4 (17.3 - 27.5)	2.0 (0.8 - 3.2)	93.4 (91.4 - 95.4)
SPA 7	66.3 (60.2 - 72.4)	26.3 (21.6 - 30.9)	2.6 (1.0 - 4.3)	78.8 (68.0 - 89.6)
SPA 8	48.9 (38.0 - 59.8)	17.7 (12.1 - 23.4)	2.2 (1.2 - 3.3)	61.3 (41.5 - 81.0)

\* Includes 50 other languages ranging from Albanian to Vietnamese

† Data not presented in text, refer to Appendix for a Service Planning Area map  
CI=Confidence Interval

## DATA TABLES (continued)

**Data Table 5:** Percentage of LA County's 3<sup>rd</sup> grade children with decay experience; untreated decay; and dental sealants in permanent molars; by selected characteristics (limited to the 4,523 3<sup>rd</sup> grade children with at least one permanent molar)

Characteristic	Decay Experience in Permanent Molars PERCENT (95% CI)	Untreated Decay in Permanent Molars PERCENT (95% CI)	Dental Sealants in Permanent Molars PERCENT (95% CI)
<b>All 3<sup>rd</sup> grade children</b>	<b>18.9 (16.3 - 21.4)</b>	<b>5.5 (4.2 - 6.8)</b>	<b>30.5 (27.5 - 33.4)</b>
<b>Sex</b>			
Male	16.5 (13.8 - 19.2)	4.8 (3.4 - 6.2)	30.4 (27.1 - 33.7)
Female	21.2 (18.0 - 24.4)	6.1 (4.6 - 7.6)	30.6 (27.4 - 33.9)
<b>Race/Ethnicity</b>			
Asian	11.3 (7.0 - 15.5)	4.0 (0.8 - 7.3)	28.7 (23.2 - 34.2)
Black/African American	15.6 (11.7 - 19.4)	4.9 (2.6 - 7.2)	30.7 (19.6 - 41.8)
Latinx	22.9 (20.1 - 25.6)	6.4 (5.0 - 7.8)	29.6 (26.7 - 32.6)
White	9.1 (5.8 - 12.5)	3.2 (1.2 - 5.3)	34.1 (27.5 - 40.7)
Other	10.9 (4.7 - 17.2)	2.9 (0.0 - 6.5)	36.3 (26.8 - 45.9)
<b>Parent's Primary Language</b>			
English	14.4 (11.7 - 17.1)	4.3 (3.0 - 5.5)	30.5 (26.8 - 34.2)
Spanish	26.8 (23.7 - 29.9)	7.5 (5.5 - 9.5)	30.2 (26.7 - 33.8)
Other*	13.9 (9.6 - 18.3)	5.0 (1.2 - 8.9)	30.8 (23.8 - 37.8)
<b>Socioeconomically Disadvantaged</b>			
No	9.2 (6.8 - 11.6)	3.6 (1.8 - 5.5)	30.9 (26.3 - 35.6)
Yes	23.0 (20.4 - 25.6)	6.3 (4.9 - 7.7)	30.3 (27.0 - 33.5)
<b>Special Education</b>			
No	18.6 (16.1 - 21.2)	5.6 (4.3 - 6.8)	30.2 (27.3 - 33.2)
Yes	20.7 (15.9 - 25.5)	5.0 (2.8 - 7.3)	31.6 (25.9 - 37.2)
<b>Service Planning Area (SPA)<sup>†</sup></b>			
SPA 1	15.7 (11.0 - 20.3)	3.5 (1.0 - 6.1)	31.2 (21.8 - 40.6)
SPA 2	14.5 (10.2 - 18.8)	3.2 (1.5 - 4.8)	32.8 (27.1 - 38.6)
SPA 3	20.3 (13.7 - 26.8)	7.6 (4.1 - 11.0)	27.0 (21.4 - 32.7)
SPA 4	26.1 (14.4 - 37.8)	6.9 (2.3 - 11.6)	20.9 (17.7 - 24.0)
SPA 5	9.7 (2.6 - 16.8)	5.0 (0.0 - 10.2)	20.8 (1.1 - 40.5)
SPA 6	23.5 (18.7 - 28.2)	6.5 (2.1 - 10.8)	36.1 (24.1 - 48.2)
SPA 7	19.0 (12.4 - 25.7)	6.7 (3.9 - 9.4)	29.5 (23.8 - 35.2)
SPA 8	18.7 (12.0 - 25.3)	4.4 (1.5 - 7.4)	34.9 (28.1 - 41.6)

\* Includes 50 other languages ranging from Albanian to Vietnamese

† Data not presented in text, refer to Appendix for a Service Planning Area map  
CI=Confidence Interval



# Smile Survey 2020

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Yilan Huang, BS  
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## Participating Schools

### LAUSD SCHOOLS

- 135th Street Elementary
- 32nd Street USC Performing Arts Magnet
- 66th Street Elementary School
- Ambassador School of Global Education
- Apperson Street Elementary
- Bassett Elementary
- Braddock Drive Elementary
- Charles W. Barrett Elementary
- Charles White Elementary
- Corona Avenue Elementary
- Dolores Street Elementary
- Eagle Rock Elementary
- El Oro Way Charter for Enriched Studies
- Estrella Elementary
- Euclid Avenue Elementary
- Glenwood Elementary
- John Mack Elementary
- Kittridge Elementary
- Lafayette Park Primary Center
- Lankershim Elementary
- Lassen Elementary
- Manhattan Place Elementary
- Marguerite Poindexter LaMotte Elementary
- Martha Escutia Primary Center
- Montara Elementary
- Morningside Elementary
- Murchison Street Elementary
- Park Avenue Elementary
- Park Western Place Elementary
- Van Ness Avenue Elementary
- Vena Elementary
- Welby Way Charter Elementary & Gifted-High Ability Magnet
- Westwood Charter Elementary

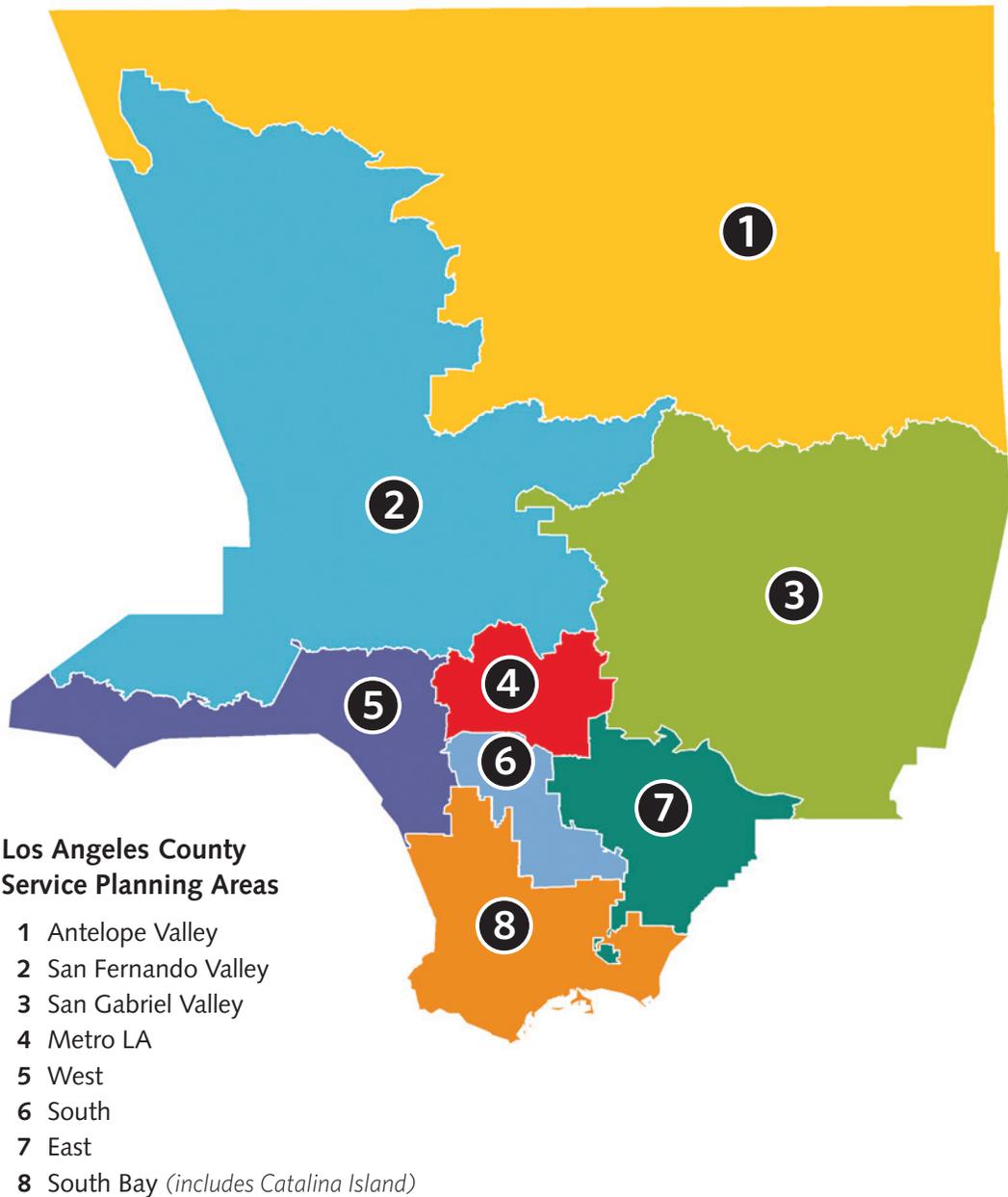
### NON-LAUSD SCHOOLS

- Anaverde Hills School
- Arroyo Elementary
- Auerlia Pennekamp Elementary
- Bandini Elementary
- Bella Vista Elementary
- Bixby Elementary
- Blandford Elementary
- Bragg Elementary
- Cesar Chavez Elementary
- Charles Helmers Elementary
- Cleminson School
- Columbia Elementary
- El Marino Elementary
- Franklin Elementary
- Gompers K-8 School
- Harry Wirtz Elementary
- Henry Elementary
- Hickory Elementary
- Killian Elementary
- La Tijera K-8 Academy of Excellence Charter
- Los Altos Elementary
- Manzanita Elementary
- McKinley Elementary
- Mesquite Elementary
- Mildred B. Janson Elementary
- Mill Elementary
- Pinetree Community Elementary
- Roosevelt Elementary
- Starr King Elementary
- Summerwind Elementary
- Thomas Edison Elementary
- Tibby Elementary
- Valley View Elementary
- Vineland Elementary
- Walnut Elementary
- Ward Elementary
- Washington Elementary
- Wilson Elementary
- Zela Davis Elementary

## APPENDIX: Service Planning Areas (SPAs) Map

### What is a Service Planning Area?

A Service Planning Area, or SPA, is a specific geographic region within Los Angeles County. Due to the large size of LA County (4,300 square miles), it has been divided into eight geographic areas. These distinct regions allow the Department of Public Health to develop and provide more relevant public health and clinical services targeted to the specific health needs of the residents in these different areas.





## Our Vision for Los Angeles County

A community where oral health is recognized as essential for overall health, and where everyone has the opportunity to achieve optimal health and well-being.



**Los Angeles County**  
**Department of Public Health | Oral Health Program**  
3530 Wilshire Blvd., Suite 1010, Los Angeles, CA 90010  
**PHONE:** (213) 351-1270 **FAX:** (213) 387-3045  
**EMAIL:** [oralhealth@ph.lacounty.gov](mailto:oralhealth@ph.lacounty.gov)  
**WEB:** <http://publichealth.lacounty.gov/ohp>