

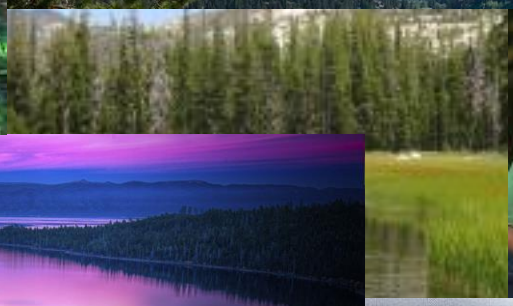



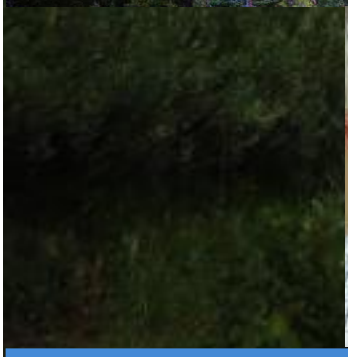


October 2018

El Dorado County
Community Oral Health Needs Assessment

"While most Americans have access to the best oral health care in the world, low-income children suffer disproportionately from oral disease."

— Michael K. Simpson

Comments, questions, and requests for information can be directed to:

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Acknowledgements

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The El Dorado County Health and Human Services Agency would also like to thank the following members of the Oral Health Advisory Committee who oversaw and led this important needs assessment process:

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Executive Summary

Key Findings

Over 185,000 people live in El Dorado County, and while the socioeconomic status of its residents is higher than the median in California, significant disparities exist in oral health and health care depending on one's household income, educational level, native language, and country of origin. This is especially true in children, where 36% of El Dorado County children were certified Medi-Cal eligible in May 2018. Despite having access to dental insurance, only 17% of Medi-Cal certified eligible 1 – 2 year olds and 42% of 3 – 5 year olds had a dental visit (2016), compared with a state average of 24 and 47% respectively.

Many residents are unaware that tooth decay, the most common preventable childhood disease in the US, has long-lasting repercussions, including impacts on one's lifelong physical, psychological, social and economic well-being. Parents with untreated caries do not know that they can pass this infectious disease on to their newborns through their saliva. Many pregnant women believe that dental care during pregnancy is unsafe and they are unaware that a dental visit during pregnancy is actually recommended. Despite this evidence, only 55% of pregnant women in El Dorado County see the dentist during their pregnancy. Income disparities reflect just 40% of pregnant women with incomes 0-200% of the Federal Poverty Guidelines (FPG) see a dentist compared to 66% of those with incomes over 200% FPG. Other key findings are:

- 2% of infants and 1-year-old children in the U.S. (Compared with 1% in El Dorado County) have ever visited a dentist. In contrast, 87% have seen a physician (AAP, Profile of Pediatric Visits, 2010).
- 44% of Transitional Kindergartners/Kindergartners are reported to have received the mandatory school entrance oral health assessment, compared with a state average of 66% (2018).
- Key Informants identified: "The lack of dentists that accept Denti-Cal (especially those that will treat children) and the high cost of paying out of pocket for dental care" as serious issues in El Dorado County.
- The Area Agency on Aging reported: "Dental" at 13%, was identified as the top basic monthly living expense (after paying for housing) that respondents did not have enough money to pay for (2016 survey).

Recommendations

Improving the oral health for all residents in El Dorado County is important. Increasing access and enhancing oral health literacy are steps that can be taken to improve oral health on a community-wide basis. The disparities and suffering from oral health problems are worse among vulnerable and underserved populations throughout the county, especially in children. To address the highest needs identified in this assessment and align with the goals and objectives of the State Oral Health Plan, the priorities for action include:

- Caries prevention among children, especially young children (0-5 years of age).
- Dental visits for pregnant women during pregnancy.
- Integration of Oral Health in Primary Care.
- Dental workforce to serve the Medi-Cal Dental Program and underserved populations.
- Coordination of community programs providing oral health counseling, dental referral assistance, and case management.
- Community oral health messaging.
- Surveillance systems to establish benchmarks and monitor progress.

To improve the oral health of El Dorado County residents, the local oral health program plan should include goals, objectives and strategies in the following program activities related to oral health:

- Oral Health Education
- Disease Prevention
- Linkages to Treatment
- Surveillance Systems
- Case Management Services

Oral Health Education

Oral health is the single greatest unmet need for health services among children in El Dorado County. Although fluoridation of drinking water can reduce dental caries by about 25%, access to appropriate and timely oral health care, especially preventive care, is essential to substantially reducing tooth decay and human suffering. Medical and dental health professionals, as well as community programs, can promote good oral hygiene by teaching and encouraging parents to make wise decisions about their children's food and to regularly floss and brush teeth. Professional evaluation of oral health and referral to a dental home should be part of well child care in the doctor's office, and regular preventive dental care should begin in early childhood by age 1. Facilitating easier access to preventive dental information and services helps families who are facing multiple stressors to meet life's basic needs. Dentists trained in assessing and treating children less than 2 years of age are needed.

Disease Prevention

Prevention is cost-effective. According to the American Academy of Pediatric Dentistry, costs to treat symptoms related to dental disease are up to ten times those of providing preventive dental services. For schools, dental pain results in lost revenue from Average Daily Attendance (ADA) funding. For children, dental pain results in poor nutrition, low self-esteem, sleep difficulties, missed days at school, and poor school performance. Enhancing school-based and community-based preventive dental services by dental hygienists and others including screening, cleaning, application of fluoride varnish and dental sealants, preventive education, and structured referral processes are cost-effective investments.

Linkages to Treatment

Linkages to treatment can be improved when clinical, public health and community sectors work together. One proven strategy for reaching children and adolescents at high risk for oral disease is through programs with linkages to oral health professionals and other health partners in the community. These programs serve as models for improving access to oral health education, prevention, and treatment services for school-age children and adolescents at high risk for oral disease.

Surveillance Systems

There are significant gaps in local oral health data due to the lack of a coordinated effort. This makes it difficult to measure the overall oral health status of the county and any changes over time. Establishing oral health surveillance systems is a strong recommendation for the oral health plan to evaluate the effectiveness of the oral health program.

Case Management Services

Outreach and case management services are vital to enabling vulnerable and high risk populations to access oral health care and effective preventive interventions. Integrating, enhancing, supporting and collaborating oral health case management services in existing programs for children and families (preschools, Head Start, schools, WIC, CHDP, etc.) will help to significantly reduce oral health disparities in the county.

Introduction

"I know I have a lot of cavities, but I can't go to the dentist because it is too expensive and I also don't have insurance. I have a lot of rotten teeth but they are falling out."

Community Survey Respondent

Poor dental health can threaten the health and normal development of young children and compromise the general health and wellbeing of adults. A growing body of research indicates that poor dental health is directly linked to a number of chronic medical conditions including cancer, diabetes and heart disease/stroke. Oral health care is particularly important for the health of infants, young children, new mothers, and women who are pregnant or may become pregnant. Untreated dental problems during pregnancy can contribute to poor birth outcomes and neonatal mortality. It can have devastating effects on the social functioning, self-esteem, productivity and overall quality of life of young and old alike.

The purpose of this oral health needs assessment is to provide a glimpse of the state of oral health in El Dorado County, and to identify oral health needs, risk factors, resources, gaps and priorities, especially in underserved areas and with vulnerable population groups. Oral health surveillance systems in El Dorado County are sparse. Many statewide systems such as the California Health Interview Survey (CHIS) and the Behavioral Risk Factor Surveillance System (BRFSS) either do not include El Dorado County residents, or the data are not statistically significant due to the sample size. This report identifies benchmarks, where available and priorities for the establishment of new surveillance systems.

Funding for this needs assessment, part of a 5-year oral health grant to El Dorado County, came from Proposition 56, the California Healthcare, Research and Prevention Tobacco Tax Act of 2016, which provides $30 million annually to activities that support the state 2018-2022 State Oral Health Plan. El Dorado County received funding to expand the capacity to coordinate public health activities that support oral health education, disease prevention, surveillance, linkages to treatment and case management.

We acknowledge the significant contribution by the members of the El Dorado County Oral Health Advisory Committee and for their commitment and dedication. The findings from this oral health needs assessment will be used to implement strategies that prioritize underserved areas and populations to continue in making progress toward achieving state and local oral health goals and objectives.

Caries (cavities) are the number one chronic disease affecting young children and are five times more common than asthma and seven times more common than hay fever. We can spend a lifetime filling cavities, extracting teeth and conducting expensive restorations (for those with the means) or we can work together to end cavities in young children through a collaborative effort focused on prevention. *We* envision that *El Dorado County is a place where children can eat, sleep, play, learn & grow, free from oral pain due to caries.*

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Part 1: Methodology

"There's a stigma in El Dorado County around poor oral health and missing teeth. There exists a connotation that if you're missing teeth, you belong to a lower socio-economic status or a meth user."

-Key Informant Interviewee

This report summarizes the most current information available on the oral health of residents in El Dorado County. Where local data were not available, we relied on the following report: "Status of Oral Health in California; Oral Disease Burden and Prevention 2017," as well as other sources. Together, these data sources served as our starting point for describing the burden of oral disease in El Dorado County, the accessibility of dental services and the oral health surveillance capacity. Key indicators will be selected to establish baseline data and future targets to meet local objectives. Wherever possible, El Dorado County data was compared to national benchmarks, such as Healthy People 2020.

Several strategies were used to gather qualitative and quantitative for this needs assessment, including:

Quantitative Data Analysis

Quantitative data analysis focused on analyzing data through a numerical or statistical means, including:

- Collection of primary, secondary, and programmatic El Dorado County specific data including internal data not publicly available for analysis and establishment of benchmarks
- Collection of publicly available California-specific and national data to identify, strengths, weaknesses and trends
- To establish an inventory of assets, groups, and resources

Qualitative Data Analysis

Qualitative data analysis focused on the analysis of subjective and non-numerical data, including:

❖ Key Informant Interviews

- Conducted with 15 community stakeholders with specialized knowledge or insight regarding oral health needs
- To inform the needs assessment on systems issues

❖ Focus Groups

- Conducted with oral health providers and consumers
- To validate the mission, vision, and values of the Local Oral Health Plan, and identify oral health needs, assets, and gaps.

❖ Surveys

- Distributed through OHAC member agencies, partnerships and coalitions to stakeholders and community members
- To assess the types and magnitude of need for oral health services.

Refer to the "El Dorado County Oral Health Needs Assessment Data Discovery Plan, July 2018" for further details.

Part 2: Background

Burden of Oral Diseases

Oral health is vital to overall health, well-being, and quality of life throughout the life span. Oral disease can have an impact on physical, psychological, social, and economic health and well-being. Over the past decade, key linkages have been found between oral health and systemic diseases such as diabetes, cardiovascular disease, dementia, kidney disease, leukemia, oral cancer, osteoporosis, pancreatic cancer, respiratory diseases, and rheumatoid arthritis (FIGURE 1).[1] Women with poor dental health have also experienced higher rates of preterm and low-birth-weight children.[2] Poor appearance resulting from dental problems can contribute to social isolation, lower wages, and loss of self-esteem.[3] Evidence strongly supports the importance of oral health. However, high costs, inadequate financing for public programs and gaps in services put even routine dental care out of reach for many people.

FIGURE 1: Burden of Oral Diseases
Source: ORAL HEALTH IN AMERICA: A Report of the Surgeon General, May 2000

Achieving optimal oral health requires a commitment to self-care and preventive behaviors as well as ongoing professional care and use of evidence-based public health approaches. However, this is influenced by socioeconomic determinants of health and the environment in which one lives. Research shows that conditions in the community environment have a far greater effect on health outcomes than access to and quality of health care.

Burden of Oral Diseases in Children

According to Children Now[4], a multi-issue research, policy development, and advocacy organization, California has the second worst rate in the nation when it comes to oral health problems in elementary school-aged children. In addition, California's poor and low-income children often lack needed access to quality oral health care. The American Academy of Pediatrics state that "early childhood caries (cavities) are the number one chronic disease affecting young children and are five times more common than asthma and seven times more common than hay fever."[5]

While there are many factors that influence a child's progress and success in school, one of the most important is their health. In fact, dental problems are the leading reason why children in California miss school. Researchers found that in total, California children reported missing an estimated 874,000 school days in 2007 due to dental problems – at a cost of $29 to $32 million dollars in lost average daily attendance funding.[6]

Even before children enter school, tooth decay is already an issue for many of them. The pain associated with untreated dental caries can impede a child's ability to eat, talk, sleep, learn, and enjoy playtime activities. Lack of optimal oral health can affect every aspect of a child's life. Oral health is crucial for the mental, physical, and social well-being of children.[7]

National Context

Several major reports have been issued in recent decades that highlight the poor state of oral health in the U.S.[8,9,10] that described "a silent epidemic" of poor oral health among the nation's most vulnerable citizens—poor children, the elderly, and many racial/ethnic minority groups. A key theme of these reports was that oral health is essential to general health and well-being, yet barriers hinder some Americans' ability to attain optimal oral health. Health disparities exist across population groups at all ages. Over 108 million children and adults lack dental insurance, which is over 2.5 times the number who lacks medical insurance. It concluded with a framework for action, calling for a national oral health plan to improve quality of life and eliminate oral health disparities.

Despite some improvements in oral health care since these reports were issued, millions of Americans continue to lack access to basic oral health care for a variety of social, economic, and geographic reasons.

Statewide Framework

In 2014, the California State Legislature set forth a vision to assess and improve oral health in the state. The California Department of Public Health (CDPH) Oral Health Program (OHP) was established, with a mission to improve the oral health of all Californians through prevention, education, and organized community efforts. The legislature requested that CDPH assess the burden of oral diseases in California and lead the development of an oral health plan based on the findings of the assessment.

In 2015, in collaboration with the Department of Health Care Services, CDPH developed the California Oral Health Plan 2018–2028. The California Oral Health Plan 2018–2028 to improve oral health and achieving oral health equity for all Californians. The Plan provides a roadmap for improvements in oral health over the course of the next ten years in California. Refer to *Attachment 1* for an overview of the five key goals for improving oral health and achieving oral health equity for all Californians identified in the Plan.

Key Facts about Oral Health in California

More recently, additional assessments of oral health in California have been published that point out yet more concerns. A CDPH report, *Status of Oral Health in California: Oral Disease Burden and Prevention 2017*, as well as other sources, provide insight to establish key facts about oral health in California, including:

- Tooth decay is the most common chronic condition experienced by children—far more common than asthma or hay fever. 54% of California kindergarteners and 70% of third graders have experienced dental caries (tooth decay), and nearly one-third of children have untreated tooth decay (2004 data—most recent available).
- In California, Latino children and poor children experience more tooth decay and untreated tooth decay than other children.[11]
- California children miss 874,000 days of school each year due to dental problems.[12]
- Fewer than half of pregnant women in California are receiving dental care during their pregnancies; women whose healthcare providers recommended a dental visit during pregnancy are nearly twice as likely to have dental care as women who did not get this recommendation.[13]

State and National Benchmarks for Oral Health

To best understand rural health disparities, one must first understand that being rural is not merely a smaller version of being urban. Rural America has a specific history and defining characteristics that represent a unique health care delivery environment.

Elizondo AL, Morgan A. History of Rural Public Health in America.

Oral health promotion and disease prevention efforts at the national and state level are guided by Healthy People 2020 (HP 2020), a set of science-based, 10-year national objectives for improving the health of all Americans and includes 17 objectives related to improving oral health as outlined in *Attachment 3*. Released by the U.S. Department of Health and Human Services each decade, Healthy People reflects the idea that setting objectives and benchmarks to track and monitor progress can motivate and focus action.

While the U.S. and California are progressing towards meeting HP2020 objectives, many challenges exist for rural counties, like El Dorado, who struggle with workforce issues, access to care and sufficient surveillance systems to establish benchmarks and monitor progress. One key focus of this assessment is to identify, and align where possible, oral health indicators from HP2020 as identified in Attachment 2.

History of Oral Health Efforts in El Dorado County

Efforts to improve the oral health of El Dorado County residents have been sporadic and isolated. Several local organizations have identified oral health as one of the "needs" or "gaps" in the overall delivery of health care locally. Until now, no attempt had been made to develop an integrated, local oral health program in El Dorado County and this is the first countywide oral health needs assessment conducted in recent times, if ever.

In its 2016 Community Health Needs Assessment, Marshall Medical Center, a nonprofit community healthcare provider located in Placerville, noted the following*: Key informants and focus group participants brought up dental health as a major concern within the Marshall HSA. Participants discussed the lack of dentists that accept Denti-Cal, the lack of comprehensive care and the high cost of paying out of pocket for dental care. One key informant explained, "Dental care is greatly needed especially for the Medi-Cal population, there are very few dentists in the area that will take them." Another service provider explained, "I can tell you that we had significant bottle mouth disease…so on the pediatric side we had a lot of dentition issues."* The assessment also reported that the rate of emergency department visits due to non-traumatic dental issues was 1 ½ times the State of California's overall rate[14].

During a Spring, 2018 South Lake Tahoe catchment area community needs assessment, Barton Health reported that 75% of key informants (N=81) ranked "Oral Health/Dental Care" 5th out of the "Ten Top Health Issues."

In its 2016 – 2021 Strategic Plan, *First 5 El Dorado Children and Families Commission* identified access to oral health care providers as a need. Within this plan, the commission also committed to continue to make investments in the children's health program, to provide parents with information and resources in order to increase regular well‐child exams and oral health exams within the Community Hub model.

The Area Agency on Aging, in its Area Plan for 2016 – 2020, reports that respondents (n=522) to a community needs assessment were asked if, after paying for housing, they still had enough money to pay for other expenses. In those that did not, "Dental" at 12.45%, was identified as the top basic monthly living expense that respondents did not have enough money to pay for, followed by food, eyeglasses and utilities, each at 9.34%.

Part 3: Findings

County Profile - Demographics

El Dorado County is located in the Sierra Nevada foothills and mountains, bordered by Amador, Alpine, Placer and Sacramento counties in California and by Douglas County in Nevada. The population of El Dorado County has grown as the Greater Sacramento area has expanded into the region.

A total of 186,428 people live in the 1,707 square miles in El Dorado County (Claritas, 2018). The population density for this area, estimated at 109.2 persons per square mile, is less than the population density of California, which is estimated at 242.50 persons per square mile.

82% of El Dorado County's population resides in unincorporated areas of the County. The cities of Placerville and South Lake Tahoe are the only two incorporated cities within the County.

Population Overview

Nearly 35% of El Dorado County is considered rural, with approximately 33% of the County's population residing toward the western border of the County in the El Dorado Hills and Cameron Park communities, which are considered to be suburbs of Sacramento. The Tahoe Basin, on the eastern border of the County, is the second most populated center in the County. Vast areas of residential and agricultural rural land and National Forest are found between these two population centers. The rural nature of the County can often times result in challenges to obtaining oral health services (e.g. transportation to services, scarcity of providers, and public awareness relative to available services).

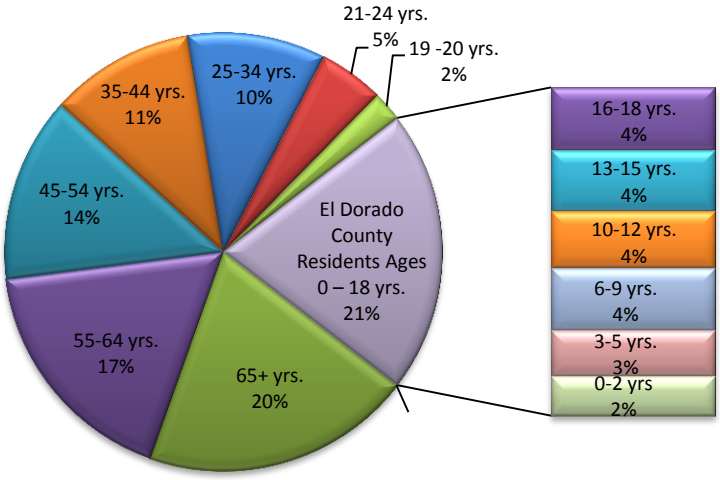


FIGURE 2: El Dorado County Population by Age

Source: WellDorado.org, 2018

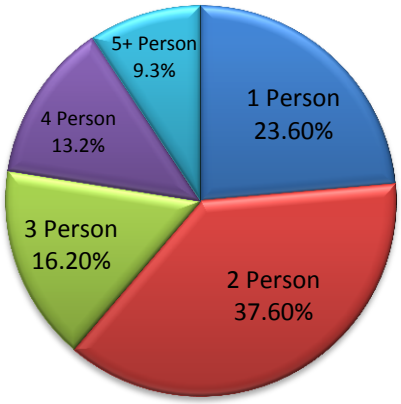


FIGURE 3: Household (HH) % by Household Size

Source: WellDorado, 2018

The population of El Dorado County is older, on average, than most counties in the State of California (FIGURE 2). El Dorado County has a median age of 45.9 years, approximately ten years older than the median age of residents in California (Claritas, 2018). The largest (estimated) age group in El Dorado County in 2018 was the 55 to 64 year olds, at nearly 18% of the population. Although its overall population growth has been relatively modest, El Dorado County's older adult population has grown at a faster rate than the State's. Compared to other California counties, El Dorado County has proportionally fewer adults of prime working age. Household size was smaller than average, with one or two-person households comprising more than 60% of households in the County (FIGURE 3).

Race and Ethnicity

El Dorado County's racial and ethnic minority populations are proportionately small compared to California overall.[1] The majority (87%) of residents self-reported their ethnicity as Not Hispanic/Latino while 13% identified as Hispanic or Latino. Race demographics also present similar make-ups with a predominant number of residents self-reporting as White (TABLE 1). El Dorado County experienced a 2.42% growth rate from 2010 to 2016; racial demographics, however, have remained relatively unchanged.

TABLE 1:

Population by Race, EL DORADO COUNTY, 2016

Race	Individuals	Percentage
White	157,942	85%
Black/African American	1,642	0.9%
American Indian/Alaska Native	2,020	1%
Asian	7,552	4%
Native Hawaiian/Pacific Islander	332	0.2%
Some Other Race	7,907	4%
2+ Races	8,046	4%
Totals	**185,441**	**100%**

Population by Ethnicity, EL DORADO COUNTY, 2016

Ethnicity	Individuals	Percentage
Hispanic/Latino	23,834	13%
Not-Hispanic/Latino	161,607	87%

Education, Income & Employment

Residents of El Dorado County tend to have more years of formal education when compared to residents in the rest of California (FIGURE 4). Education is an important indicator to health because it is closely linked with occupation and income.

Income is the most common measure of socioeconomic status and a strong predictor of the health of an individual or community. The lower an income, the less likely it is a person will follow a healthy diet or participate in regular physical activity and more likely they will use tobacco products. This leads to a greater likelihood of chronic conditions such as depression, obesity, asthma, diabetes, heart disease, stroke and premature death.

While approximately 8.5% of individuals residing in El Dorado County are living in households with income below the Federal Poverty Level (FPL), several race categories outperform the State when looking at Household Income (FIGURE 5). As a point of comparison, 14.39% of Californians live in a household with income below the FPL.

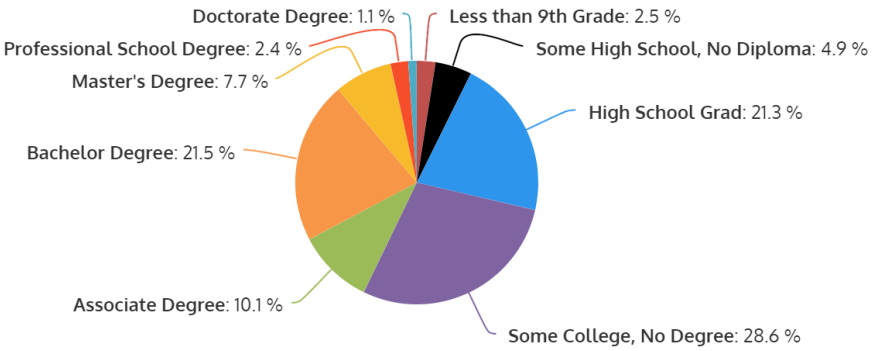


FIGURE 4: Educational Achievement as % of Population
WELLDORADO, EL DORADO COUNTY, 2016

[1] In this format, respondents are first offered two categories for ethnicity (Hispanic/Latino or Not Hispanic/Latino) and then offered seven categories for race identification (White, Black/African American, American Indian/Alaska Native, Asian, Native Hawaiian/Pacific Islander, Some Other Race, 2+ Races.

El Dorado County's March, 2018 unemployment rate was 3.8% compared to 4.3% in California, however there are disparities among communities within the County that range from 4.0% in El Dorado Hills to 9.8% in Georgetown. The unemployment rate is a key indicator of the local economy, as a high rate of unemployment has personal and societal effects. During periods of unemployment, individuals are more likely to feel severe economic strain and mental stress. Unemployment is also related to access to health care, as many individuals receive health insurance benefits through their employer.

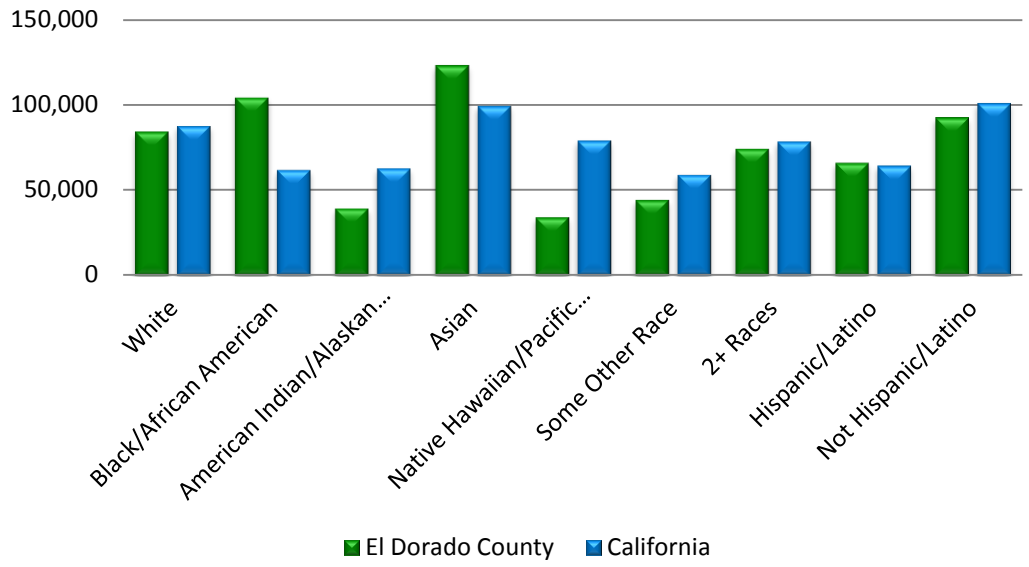


FIGURE 5: Average Household Income by Race and Ethnicity, EL DORADO COUNTY
Source: WellDorado, 2016

School Enrollment Characteristics

There are 16 school districts operating 65 public schools in El Dorado County, serving 27,875 students. The school population has declined 5% since 2012 (N=29,354). Highlighted demographics include:

In 2017:

- 33% of students (N=9,659) were participating in the free and reduced-price meal program.
- 7% of students (N=1,978) were classified as English Learners, with Spanish as the predominate language at 5.9% (N=1,634).
- 255 students met the definition of foster youth.
- The Ethnic Diversity Index across all schools in El Dorado County was 35, with Hispanic or Latino designation at 20.8% of the student population.
- 4,377 Children were living in poverty.
- 918 Children were Homeless.
- 91% High School Graduation Rate (compared to 84% California).

Financial Barriers - Access to Public & Private Dental Insurance

Medi-Cal Dental Program

Medi-Cal is California's public health care (Medicaid) program. Medi-Cal offers free or low-cost health care for eligible California residents, serving both Adults and Children. Medi-Cal dental benefits are provided through the Medi-Cal Dental Program, formerly known as Denti-Cal. Effective May, 2018, nearly 38,000 El Dorado County residents were *certified eligible* for Medi-Cal. Of those certified eligible, 11% were dual eligible (Medicare and Medi-Cal) and 33% were certified eligible 19 to 64 year old adults, enrolled in the Affordable Care Act (ACA) expansion program (FIGURE 6).

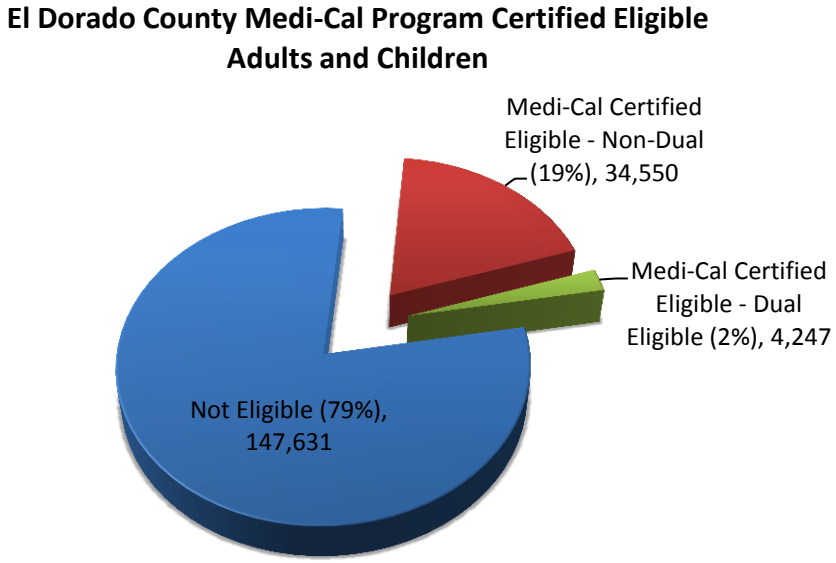


FIGURE 6: El Dorado County Medi-Cal Certified Eligible (N=38,797) as a Percent of Estimated Total Population

Source: California Department of Health Care Services, El Dorado County, January 2018

Adults

In 2014 Medi-Cal partially restored adult dental benefits which had been eliminated in 2009, and in 2018 benefits were fully restored. Full Adult benefits in the Medi-Cal Dental Program include basic preventive, diagnostic, restorative, anterior tooth endodontic treatment, complete dentures and complete denture reline/repair services. However, despite increased coverage for many individuals with limited resources, there exists a significant barrier to obtaining timely preventive care due to availability of dentists accepting Medi-Cal. Additionally, there is a continued lack of awareness regarding eligibility for dental services and how to obtain those services.

Children

The Medi-Cal Dental Program provides Early and Periodic Screening, Diagnostic and Treatment (EPSDT) dental services for beneficiaries under age 21 via fee-for-service in El Dorado County. As required by the EPSDT benefit, the Medi-Cal Dental Program provides all medically necessary dental services for all Medi-Cal beneficiaries (under 21 years of age) in accordance with a periodicity schedule recommended by the American Academy of Pediatric Dentistry (AAPD). AAPD recommendations include, but are not limited to, routine cleanings, oral examinations to assess growth and development and caries risk, radiographic assessments, fluoride treatments (Prophylaxis, topical, and supplementation), counseling (anticipatory, oral hygiene, dietary, injury prevention, non-nutritive habits, speech/language development), assessments for treatment of developing malocclusions, pit and fissure sealants, removal of third molars, and transition to adult dental care when necessary.[15]

Child Health and Disability Prevention Program (CHDP)

The Child Health and Disability Prevention Program (CHDP) is a public program that oversees the screening and follow-up components of the EPSDT program for Medi-Cal eligible children and youth. The CHDP program provides complete health assessments for the early detection and prevention of disease and disabilities for low-income children and youth. A health assessment contains many facets including an oral health component for risk assessment, anticipatory guidance and dental home referrals.

California's Children's Health Insurance Program (CHIP)

California's Children's Health Insurance Program (CHIP) is a federal and state partnership designed to provide low-income children under age 19 years with health insurance coverage. As of May 2018, 4,095 El Dorado County Children age 0 to 18 were Medi-Cal Certified Eligible for CHIP out of 38,711 Children, or 10.6%. CHIP is administered through a Medi-Cal Expansion and the Managed Risk Medical Insurance Board (MRMIB).

CHIP covers dental services for all child enrollees as part of EPSDT benefits. Benefits include coverage of dental services necessary to prevent disease and promote oral health, restore oral structures to health and function, and treat emergency conditions.

Covered California

Under the Affordable Care Act, about 1% of the population of El Dorado County (2,150 persons) enrolled in Covered California, the state run health insurance exchange as of February 2018. Dental coverage for adults and children is available separately through family dental plans. Adults with and without children can enroll in family dental plans, but they must purchase health plans through Covered California to be eligible. Dental coverage for children is considered an essential health benefit, so all health plans purchased through Covered California include dental coverage for members under age 19 years of age.

Private Insurance

Financial barriers are an important reason for not being able to see a dentist. One study reported that one out of five individuals reported being unable to afford needed dental care.[16] A study focusing on the oral health of adults 18 to 64 years old found that in 2008, among seven given reasons that one may forgo a dental visit for an oral health problem, the main reason was "could not afford/no insurance."[17] It was also shown that financial barriers in the dental sector remain high relative to other parts of the healthcare sector.[18]

The majority of Californians with private dental insurance (78%) have employment-based coverage.[19] While about 56% of California employers offer health insurance, only about 34% offer dental benefits.[20] An estimated 5% of Californians have privately purchased dental insurance.[21] Individual policies often vary greatly in provider acceptance, scope of benefits and restrictions. Dental insurance benefits can have significant cost-sharing requirements and annual caps, which may lead to unaffordable out-of-pocket expenditures.[22]

Dental insurance plans are divided into Dental Health Maintenance Organization (DHMO), Preferred Provider Organization (PPO) and traditional indemnity plans. Discount and referral plans, as well as reimbursement plans also have a presence in the El Dorado County Market. The primary participating dental carriers in El Dorado County are Access Dental Plan, Anthem Blue Cross, California Dental Network, Delta Dental of California, Dental Health Services, Liberty Dental Plan and Premier Access.

Uninsured

People without dental insurance typically seek dental care less often and may suffer poor oral health as a consequence[23]. Those without dental insurance coverage bear the entire cost of their dental services, competing with health care, food, rent and other necessities. A significant portion of Californians (39%) have no dental insurance coverage, above the national average of 35%. Two non-profit entities within the county offer Sliding Fee Scale (SFS) discounts for self-pay patients based on federal poverty guidelines for family size and income, El Dorado Community Health Centers and Shingle Springs Health & Wellness Center. Both of these organizations are located on the western slope of El Dorado County, approximately 75 miles from the population in South Lake Tahoe. El Dorado Community Health Centers report 30% of patients receiving dental services at their facility are uninsured and receive discounts under their Sliding Fee Scale (SFS) program.

Oral Disease and Accompanying Burden

Children and Adolescents

Dental Caries in California Children

Dental caries, commonly known as tooth decay, represent serious chronic, infectious disease process that involves the breakdown of tooth enamel. Tooth decay is caused by bacteria in the mouth using sugar from foods and drinks to produce acids that dissolve and damage the teeth. If left untreated, teeth can be destroyed and the nerves of the teeth can be affected, leading to pain, infection and rarely death. Tooth decay is a preventable disease, yet it remains the most common chronic disease of children aged 6 to 11 years and adolescents aged 12 to 19 years[24].

Children with untreated tooth decay can experience unnecessary pain, difficulty chewing, and difficulty speaking. This can impair a child's intellectual and social development and cause missed days of school. The AAPD describes childhood dental caries as a public health problem that threatens the overall health and development of young children.[25]

In California, in 2006 nearly 54% of kindergarten children and over 70% of third graders have histories of tooth decay, reported as dental caries "experience or treated tooth decay" (FIGURE 7)[26]. This compares unfavorably with the US baseline prevalence of 33.3% for children aged 3–5 years, and 54.4% for children aged 6–9 years and has been well above the targets set by HP 2020.

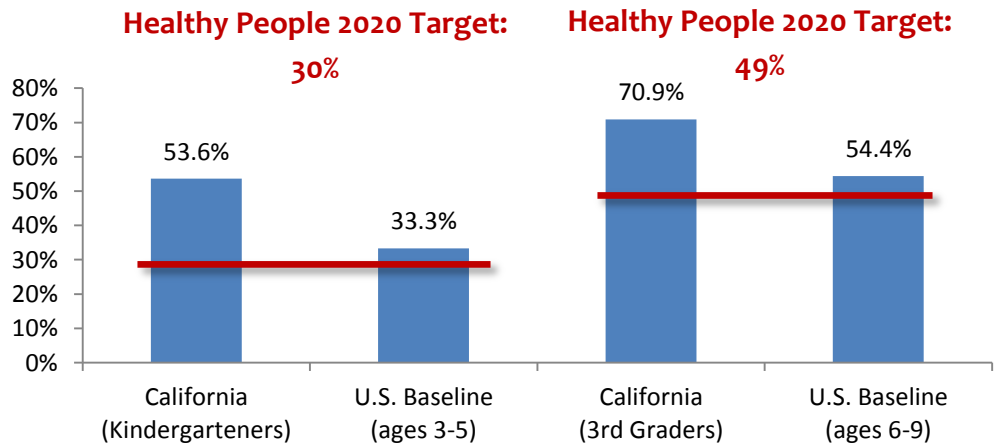


FIGURE 7: Dental Caries Experience in Children: California vs. *Healthy People* 2020.
Source: California Smile Survey (2006), Healthy People 2020

Many California children with dental caries are not being treated, which is likely to result in more extensive and serious oral health issues. If caries are not treated, children can develop infections severe enough to require emergency room treatment and their adult teeth may be permanently damaged. In California, 28% of kindergarteners and 29% of third graders had untreated tooth decay, reported as untreated "dental decay" (FIGURE 8). While third graders are comparable to the national baseline established by HP 2020, kindergarteners are lagging, and both measures fall short of the national targets of 21% (children aged 3–5 years) and 25% (children aged 6–9 years).

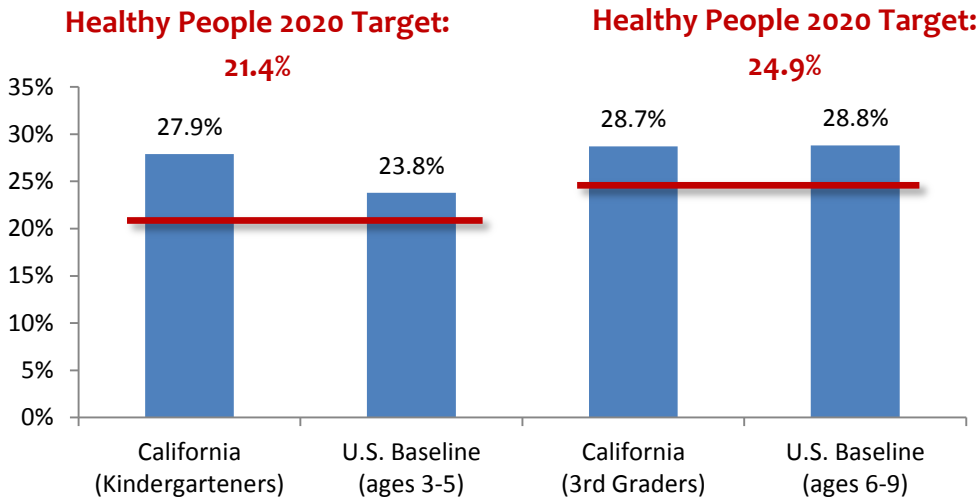


FIGURE 8: Untreated Dental Decay in Children: California vs. *Healthy People 2020*.
Source: California Smile Survey (2006), Healthy People 2020

Dental Caries in El Dorado County Children

Little is known about the rates of treated and untreated caries in Children living in El Dorado County. El Dorado Community Health Centers reports a sampling of Children age 3-5 (N=60) and age 6-9 (N=100) treated in their new teledentistry component of "El Dorado Smiles", a school-based mobile dental program. While initial results (FIGURE 9) for treated caries seem promising at 13 and 31% of 3-5 year olds and 6-9 year olds, once compared to untreated caries at 40 and 61% respectively, it is apparent that at least with this sampling, access to dental care may be an issue.

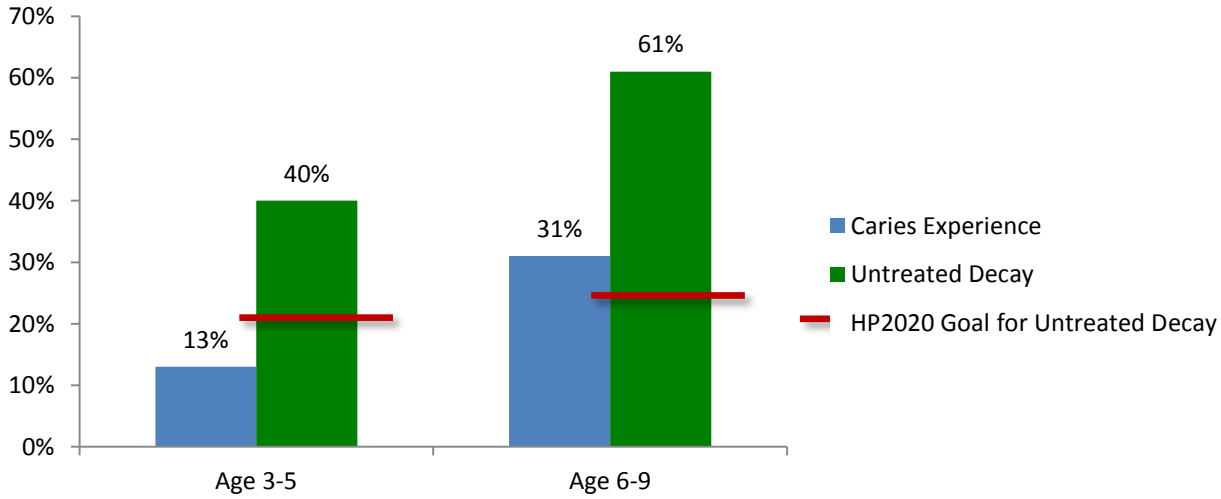


FIGURE 9: Treated & Untreated Dental Decay in a Subset of Children in El Dorado County.
El Source: El Dorado Community Health Centers – *El Dorado Smiles* Teledentistry, 2017-18

Adults and Older Adults

Dental Caries

People are susceptible to dental caries throughout their lifetimes. Like children and adolescents, adults can experience new decay on the crown portion of the tooth. But adults can also develop decay on the root surfaces of teeth when those surfaces become exposed to bacteria and carbohydrates as a result of gum recession. Although dental caries are largely preventable, they are still extremely common in the U.S. More than 90% of adults have experienced dental caries, and more than 25% are currently suffering from untreated caries[27]. Medically compromised adults often take numerous medications that reduce salivary flow, or contain sugar which increases the risk of dental caries. No California or El Dorado County-specific data on the prevalence of dental caries among adults or older adults is available.

Dental Infections

If left treated, dental decay can progress past the enamel and dentin. Once the bacteria reach pulp, infection or "pulpitis" can occur causing swelling, infection and pain; abscesses often appear in the mouth at the site of the infection. These infections can be very dangerous if left untreated due to the proximity of the mouth to the brain and airway. Severe infections can lead to hospitalizations and, in the worse cases, death. No California or El Dorado County-specific data on the prevalence of dental infections among adults or older adults is available.

Periodontal Disease

Periodontal disease is a very widespread, yet largely preventable, condition which negatively affects people's overall well-being and quality of life. It is defined as an inflammatory disease that affects tooth-supporting gums and bones. Like dental caries, periodontal disease is caused by bacteria. Bacteria present in the mouth reside in plaque that develops on teeth. If plaque is not removed by tooth brushing and flossing, it will harden into calculus (tartar), which can cause inflammation. Chronic inflammation of the gums (gingivitis) is an early sign of periodontal disease. In some cases, gingivitis may progress to periodontitis, a serious condition that destroys tooth-supporting tissues and bone, and then to severe periodontitis, which leads to rapid tooth loss.[28] In 2009-2012, nearly half of U.S. adults age 30 and older, and 70% of adults age 65 and older, had some form of periodontal disease.[29] No California or El Dorado County-specific data on the prevalence of periodontal disease among adults are available.

Impact of Poor Dental Care on the Health of Older Adults

Older adults often experience challenges with access to care, mobility, and health complexities, any of which can contribute to poor oral health, yet little attention has been paid to the status of oral health in older adults. Nationally, for example approximately 50% of nursing home residents are unable to perform three or more of the "Activities of Daily Living,"[30] one of which is personal hygiene that includes oral care.

According to a recent study by the Center for Oral Health, untreated tooth decay is highly prevalent in older adults, which is leading to a high degree of tooth loss. Tooth loss and lack of functional contact makes it hard to chew, which impacts nutrition and overall well-being. Many older adults need treatment for gum disease or tooth decay, and the oral health problems are even more pronounced in older adults residing in rural areas compared to urban areas. Key findings from this study are shown below.[31]

- **Large numbers of older adults suffer from untreated tooth decay** - including half the older adults residing in California's skilled nursing homes (SNHs), and more than one in three community-dwelling older adults.
- **Untreated tooth decay leads to high prevalence of tooth loss** - one in three older adults in SNHs, and 18% of the community dwelling older adults screened, have lost all their natural teeth.

- **Many older adults in California suffer from inability to chew due to poor contact between teeth** - Nearly 40% of SNH residents and nearly 18% of community dwelling older adults cannot chew because they do not have a functional contact between their upper and lower back teeth on either side of their mouth.
- **Majority of older adults need treatment for tooth decay and/ or gum diseases** – 65% of older adults residing in SNHs and 46% of older adults residing in community-dwelling facilities need treatment for tooth decay and/or periodontal (gum) disease.

Tooth Loss

The most common reasons for tooth loss in adults are tooth decay and periodontal disease. Tooth loss combined with poor muscle tone/ability to chew can also increase a senior's susceptibility to choking on food.

Data for California on the percentage of adults who have had permanent teeth extracted because of tooth decay or gum disease are presented in FIGURE 10. No El Dorado County-specific data on the prevalence of tooth loss among adults are available.

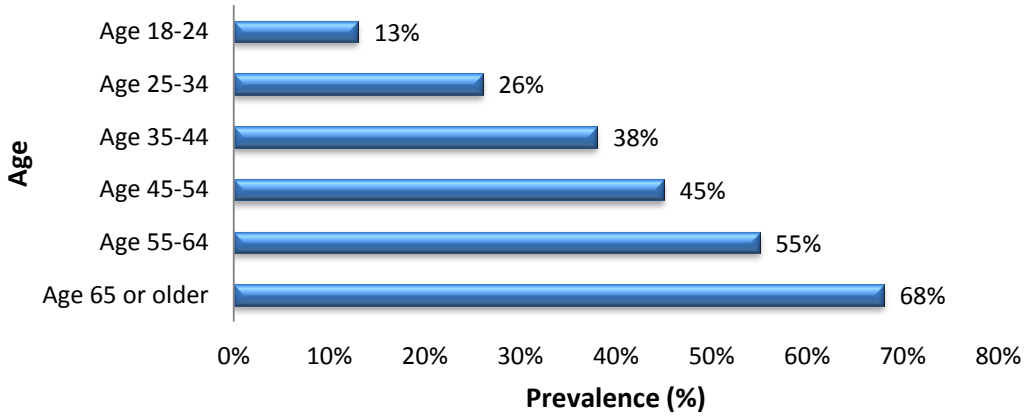


FIGURE 10: Prevalence of (History of) Permanent Tooth Extraction Due to Tooth Decay or Gum Disease among Adults in California by Age

Source: Behavioral Risk Factor Surveillance System, California 2012.

Oral & Pharyngeal Cancers

"Oral cancer" refers to cancers that form in the tissues of the oral cavity (mouth) or the oropharynx (the back of the throat). Alcohol, tobacco (including smokeless tobacco), poor diet, and infection with Human Papilloma Virus (HPV) are known risk factors for oral cancer.[32] An estimated 51,540 new cases of oral and pharyngeal cancer will be diagnosed in the US in 2018, with an estimated 10,030 deaths attributed to the disease. Men are affected twice as often as women, particularly men older than 40 years of age. The long-term decline in death rates for cancers of the oral cavity and pharynx has stalled in recent years, with rates stable from 2006 to 2015. [33]

Around 75% of oral cancers are linked to modifiable behaviors such as tobacco use and excessive alcohol consumption. Other factors include poor oral hygiene, irritation caused by ill-fitting dentures and other rough surfaces on the teeth, poor nutrition, and some chronic infections. In El Dorado County, overall oral and pharyngeal cancer incidence rates were 12.8 per 100,000 persons in 2011-2015, compared with California rates of 10.3 per 100,000 during the same time period.[34]

Special Populations

Young Children (Age 0-6 Years)

A population of special interest the El Dorado County Oral Health Advisory Committee is young children. Early childhood caries (ECC) is a severe form of dental caries in children under the age of six. It is defined as the presence of one or more decayed, missing (due to caries), or filled tooth surfaces in any primary (baby) tooth. Locally, El Dorado Community Health Centers report over 40% of 3-5 year old children in their teledentistry program have untreated caries (refer to Page 20). Additionally, only 44% of kindergartners in El Dorado County are receiving mandatory oral health screenings, as compared with a state average of 61% (refer to Page 26, Kindergarten Oral Health Requirement).

ECC in young children is of concern because the long-term consequences include higher risks for additional cavities in both primary and permanent teeth, hospitalizations and emergency room visits, increased dental treatment costs, and delayed physical development.[35] Public health programs historically have attempted to improve the oral health of young children from low-income families by offering topical fluoride varnish services in Head Start and women, infants and children (WIC) programs. Dental sealant programs are also common in schools with a high percentage of children on free and reduced lunch programs.[36]

Pregnant Women

Oral health during pregnancy is important because pregnant women have higher rates of certain oral health conditions than non-pregnant women,[37] and some studies have found associations between oral disease during pregnancy and poor infant outcomes.[38] Pregnancy is characterized by complex physiological changes, which may adversely affect oral health. Many changes occur in the oral cavity that can be linked to periodontal disease, which includes gingivitis and periodontitis. Studies have indicated that there is a connection between "increased plasma levels of pregnancy hormones and a decline in periodontal health status."[39]

For the prenatal population, dental care is especially important as preventing potential dental issues affects two lives. Although more than half of women in California have dental problems during pregnancy, the majority of them do not access dental care. Unfortunately, many pregnant women believe that dental care during pregnancy is unsafe, are unaware that a dental visit during pregnancy is recommended or that they have insurance for dental services. According to California perinatal oral health guidelines,[40] pregnant women should receive at least one dental visit during pregnancy. In addition, maternal oral health correlates with the oral health status of the woman's children.[41]

According to the 2015-2016 Maternal and Infant Health Assessment (MIHA) Survey, 55% of pregnant women in El Dorado County see the dentist during their pregnancy which is higher than the overall state rate of 43%. However, differences appear within the county's population depending on ethnicity with 48% of Latina women receiving dental care during pregnancy. Another disparity in care is related to family income. Just 40% of pregnant women with incomes 0-200% of the Federal Poverty Guidelines (FPG) see a dentist compared to 66% of those with incomes over 200% FPG.

Access to Care

Dental Utilization

Medi-Cal Dental Program Annual Dental Visit (ADV) - Children

Tooth decay, gum infections, and tooth loss can be prevented in part with regular visits to the dentist. The proportion of children who visited the dentist in the past year is one of the Leading Health Indicators (LHIs), a smaller set of Healthy People 2020 objectives. LHIs were selected to communicate high-priority health issues and actions that can be taken to address them. In 2016, out of 7,656 eligible beneficiaries, 40% of El Dorado County children age 1 to 9 (N=3,105) and 42% of children age 10 to 18 (N=2,995) had any dental procedure during the measurement year, compared with a state average of 41% and a HP2020 goal of 49% (FIGURE 11). [2]

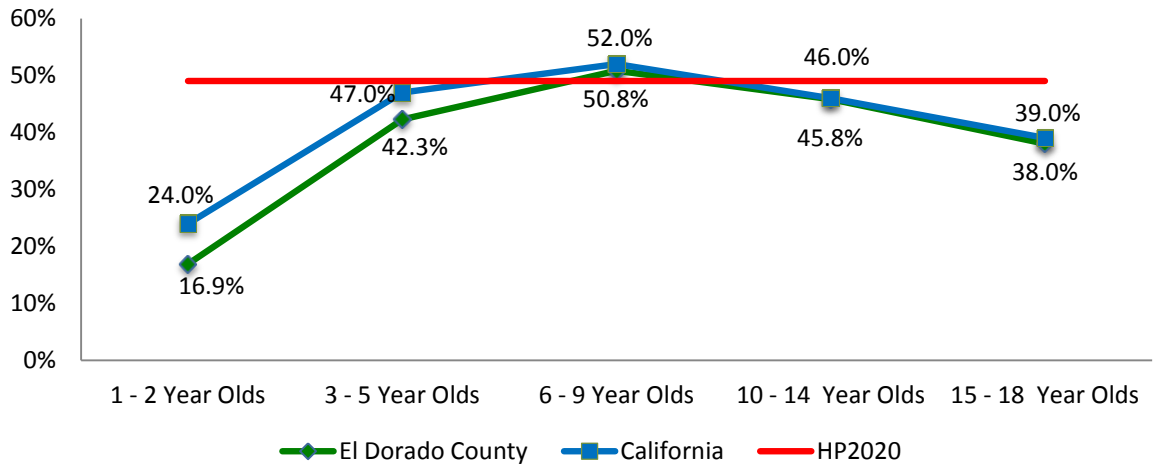


FIGURE 11: El Dorado County Medi-Cal Utilization Data: Children's Annual Dental Visits.
Source: Department of Health Care Services for El Dorado County, 2016

Medi-Cal Dental Program Annual Dental Visit (ADV) - Adults

During the calendar year 2016, of the 26,342 eligible beneficiaries, 18% of adults age 21 and older (N=4,771) received an ADV during the measurement year, compared with a state average of 21% (FIGURE 12).

[2] The Numerator includes El Dorado County Medi-Cal Dental Program beneficiaries with at least 90 days continuous enrollment in the same plan within the measurement year who received any dental procedure (D0100-D9999) or dental encounter at a Safety Net Clinic (SNC) (e.g., Federally Qualified Health Centers (FQHCs); Rural Health Clinics (RHCs); and Indian Health Services/Memorandum of Agreement Clinics (community health centers) during the period. The Denominator includes the number of beneficiaries with at least 90 days continuous enrollment in the same plan within the measurement year.

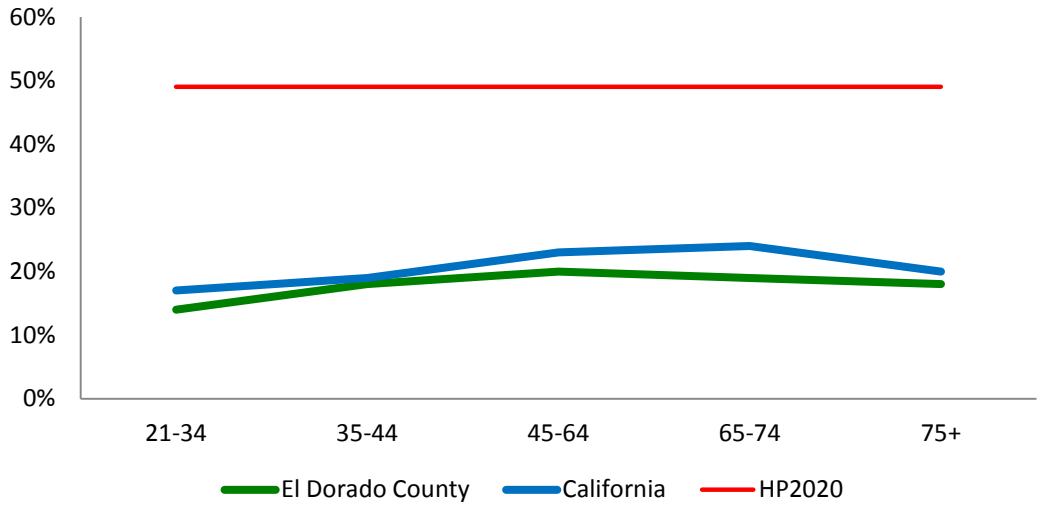


FIGURE 12: Medi-Cal Dental Program Annual Dental Visit (ADV) Adult Utilization Data, 2016
Source: Department of Health Care Services for El Dorado County, 2016

School-based Dental Visits

In 2017, El Dorado Community Health Centers began operation of a mobile dental clinic van, *El Dorado Smiles*. *El Dorado Smiles* is operated in partnership with El Dorado County Library Services Department, Health and Human Services Agency, El Dorado Community Health Centers, El Dorado County Office of Education, and the First 5 El Dorado Children and Families Commission and specifically serves school-aged youth. EDCHC dental providers with *El Dorado Smiles* offer exams, x-rays, cleanings, fluoride treatments, fillings, and emergency dental care. The mobile dental clinic van meets youth throughout the county at their respective schools on the Western and Eastern slopes of the county. During the 2017-18 school year, *El Dorado Smiles* provided dental services for 579 children, or 2.1% of the total El Dorado County public school population.

Emergency Department Visits for Non-Traumatic Dental Conditions

Recent studies have documented an increase in emergency department (ED) visits due to non-traumatic dental conditions across the U.S.[42] This increase reflects a larger share of dental visits taking place in EDs rather than dental offices, especially among young adults 21 to 34 years old.[43] Most dental ED visits were shown to be for non-traumatic dental conditions, and in most cases, patients received prescriptions for pain or antibiotics for infections.[44] Results concluded that patients who present at EDs with non-traumatic dental conditions would be better served in dental office settings due to the availability of definitive care and the likelihood of continuity of care.[45]

In 2012, El Dorado County ranked 33rd in preventable dental emergency department (ED) visits among California's 58 counties.[46] From 2012 – 2016, El Dorado County averaged 563 Non-Traumatic Dental Conditions (NTDC) related Emergency Department (ED) Visits per 100,000, compared with the State of California at 353.

First 5 El Dorado Family Survey (FS), 2017-18

Families that participate in First 5 El Dorado sponsored programs were asked by service providers to voluntarily complete a family survey that collects demographic information, parent experiences and survey questions regarding the presence of protective factors within family units. Family Surveys were completed by families of children ages zero through five years of age, who attended the Ready to Read at Your Local Library, the Together We Grow, or the Child Health programs. Surveys were available in both English and Spanish. A total of 490 family surveys were collected during the 2017-2018 fiscal year. The oral health question asked was: *"How long has it been since your child's last visit to a dentist or dental clinic for preventive care?"* (FIGURE 13).

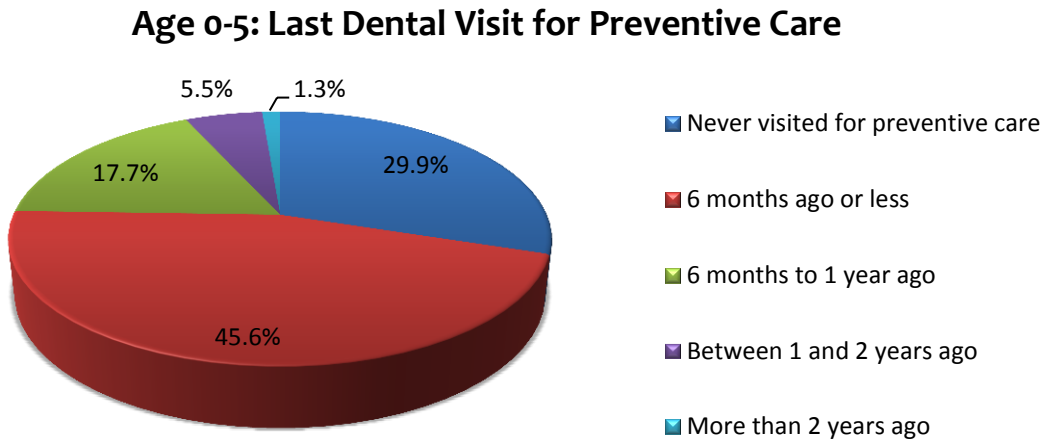


FIGURE 13: Last Dental Visit for Preventative Care Survey (N=458)
Source: First 5 El Dorado, 2017 – 18

Kindergarten Oral Health Requirement

Lack of access to dental care is a problem for many El Dorado County Children. Dental disease, the most common chronic childhood disease, contributes to school absenteeism, difficulty learning, and diminished nutritional status, self-esteem and overall wellbeing[47]. California's Kindergarten Dental Check-up law (AB 1433), requires that children have a dental checkup by May 31 of their first year in public school, at kindergarten or first grade. Enacted in 2006, (Emmerson/Laird) helps identify children with unmet oral health needs and provides schools with essential information to ensure their students are healthy and ready to learn. The ultimate goal of this program is to establish regular sources of dental care for every child. The program also identifies children who need further examination and dental treatment, and identifies barriers to receiving care. The assessment, or evaluation, can be met in many ways. It can be a complete examination and treatment plan performed by a dentist, or it can be a more basic oral health evaluation, such as a screening, which can be performed by a dentist, hygienist or a registered dental assistant with supervision.

The law directs schools to distribute oral health education materials and the assessment-waiver forms to parents who are registering their children in public school for the first time. Schools collect the assessment-waiver document by May 31 of the school year, and are responsible to aggregate the data contained on the form and report it, by district, to the County Office of Education by December 31 of each year. In 2018, the law was updated to provide the state dental director with more oversight for the program, including data collection. The oral health grant awarded to local health jurisdictions, including El Dorado County, encourages coordination and reporting on the kindergarten oral health assessment. El Dorado County has experienced low compliance with AB 1433, with only 44% of El Dorado County kindergarteners received the required oral health assessments in 2017, compared with California average of 61% (TABLE 2).

TABLE 2: El Dorado County Kindergarten Oral Health Assessments, 2017*.

School District	Total Eligible**	Total Assessed	% Assessed
Black Oak Mine Unified	87	60	69.0%
Buckeye Union Elementary	464	284	61.2%
Camino Union Elementary	52	23	44.2%
El Dorado County Office of Education	33	11	33.3%
Gold Oak Union Elementary	46	21	45.7%
Gold Trail Union Elementary	66	46	69.7%
Indian Diggings Elementary	1	NR***	0%
Lake Tahoe Unified	274	91	33.2%
Latrobe	20	12	60.0%
Mother Lode Union Elementary	150	NR***	0.0%
Pioneer Union Elementary	38	NR***	0.0%
Placerville Union Elementary	159	56	35.2%
Pollock Pines Elementary	70	NR***	0.0%
Rescue Union Elementary	416	225	54.1%
Silver Fork Elementary	1	1	100%
El Dorado County Total	**1,877**	**830**	**44.2%**
State of California Total	**206,840**	**126,359**	**61.1%**

* As reported to the El Dorado County Office of Education

** Number of children registering in public school for the first time (at kindergarten or first grade)

*** Not Reported (NR)

In El Dorado County

73.3% of school districts reported **kindergarten oral health** assessment data in 2017.

44.2% of eligible kindergartners had an **oral health assessment** compared with 61% of California kindergartners, overall.

13.1% of those assessed showed signs of **untreated decay**.

First 5 El Dorado Pre-K Observation Forms

First 5 El Dorado and the El Dorado County Office of Education assessed the school readiness of incoming transitional kindergartners (TK) and kindergartners (Kinder) at the beginning of the 2017-18 school year using pre-kindergarten (Pre-K) Observation Forms. Parents and families of incoming TK and Kinder students were asked to voluntarily complete Pre-K Observation Forms at student enrollment, sharing information about health practices, reading to children, and other circumstances and experiences to evaluate the school readiness profile of the students. Preventative dental care was assessed through the following question: "Has your child received preventative dental care within the last 12 months?" Findings represented a parent-reported snapshot in time and may or may not characterize a comprehensive assessment of school readiness.

One thousand eight hundred and fifty-two (1,852) TK and Kinder (incoming) students were enrolled in 28 school sites in El Dorado County at the time of the survey. Pre-K Observation Forms were completed manually and then submitted to First 5 El Dorado for entry into an electronic data management tool (SurveyMonkey). Nine hundred and forty-one (941) forms were collected from 24 schools, for a school participation rate of 86%. Based on the findings, 51% of parents and families of incoming TK and Kinder students completed Pre-K Observation Forms. Of the total incoming (TK and Kinder) enrollment, 43% (N=798) were reported to have had a preventative dental visit within the past 12 month (FIGURE 14). This compares with 48% (N=884) reported to have had a well-child visit within the same time period (past 12 month). Health problems and service expansion opportunities identified within this report include:

- **Risk of Dental Disease:** Children are at an increased risk of dental disease due to low utilization of preventive services. This is due to a lower than average supply of dental providers, an inadequate understanding by families about the importance of preventive services, and the distance required to access care. The results of these conditions often lead to visits to the emergency room for dental care.
- **Mobile Dental Services:** The Community Outreach Plan identified an increased risk of dental disease in the county. The assessments attributed this risk to limited access to dental services due to geography and limited provider capacity. Mobile dental services hosted at the Community Hubs may help to decrease this risk.

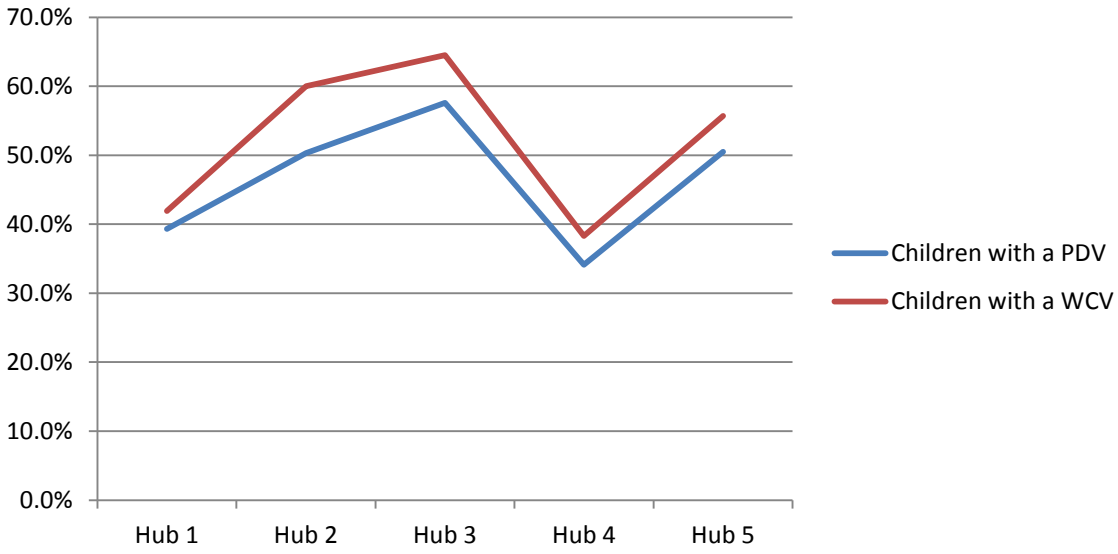


FIGURE 14: Incoming Transitional Kindergartners & Kindergartners with (Reported) Preventative Dental Visits and Well Child Visits
Source: First 5 El Dorado, 2018

Head Start – Oral Health Program Information Report (PIR), 2018

Head Start is a federally funded parent participation program that promotes school readiness for children in low-income families by offering educational, nutritional, health, social, and other services. The Head Start program includes Head Start services to preschool children ages 3 to 5 years old; Early Head Start services to infants and toddlers age 0 to 3 years old; pregnant women; services to families by American Indian and Alaska Native (AIAN) programs; and services to families by Migrant and Seasonal Head Start(MSHS) programs. In 2017, Head Start El Dorado provided services to 310 Head Start children at 12 centers located throughout El Dorado County; 140 Early Head Start infants and toddlers; and, 14 pregnant women.

The Program Information Report (PIR) provides comprehensive data on El Dorado County Early Head Start and Head Start program services. Topics covered in the PIR include health insurance coverage; immunizations; and health services, such as oral health services, for pregnant women and children. All Head Start programs are required to submit PIR data each year to the Office of Head Start. El Dorado County lags behind both the region and California as a whole in most indicators measured (TABLE 3).

PIR Oral Health Performance Indicators:

C.17:	Number of children with continuous, accessible dental care ("dental home") provided by a dentist, at enrollment and at the end of enrollment year
C.18:	Number of children who received preventive care (e.g., cleanings, fluoride varnish applications, dental sealant application) since last year's PIR
C.19:	Number of children, including those enrolled in Medicaid or CHIP, who have completed a professional dental examination since last year's PIR
	C.19.a: Of these, number of children diagnosed as needing dental treatment
	C.19.a.1: Of these, number of children who have received or are receiving dental treatment
	C.19.b: Specify the primary reason that children who needed dental treatment did not receive it (e.g., no dental care available in local area, Medicaid not accepted by dentist, no transportation)
C.20:	Number of children (infant/toddlers) who are up to date on a schedule of age-appropriate preventive and primary oral health care according to the relevant state's EPSDT schedule
C.21:	Number of pregnant women who received a professional dental examination(s) and/or treatment since last year

Results:

TABLE 3:PIR Dental Services Report, 2018	*Dental Home*	*Preschool Preventive Care*	*Preschool Completed Dental Exam*	*Preschool Needed Treatment*	*Preschool Received Treatment*	*0-2 Up-to-Date on Dental EPSDT Schedule*	*Pregnant Women Completed Dental Exam*
El Dorado County Head Start	64.46%	64.46%	64.46%	4.27%	100%		
El Dorado County Early Head Start	53.31%					53.31%	58.62%
Region 9	93.21%	83.16%	83.44%	24.06%	80.4%	70.54%	28.93%
California	93.62%	83.59%	83.32%	24.85%	79.67%	71.23%	29.79%

Women, Infants and Children Program

The Women, Infants and Children (WIC) Program is a federally-funded health and nutrition program that provides assistance to pregnant women, new mothers, infants and children under age five. WIC helps California families by providing food vouchers to individual participants based on their nutritional need and risk assessment. The food vouchers can be used to purchase healthy supplemental foods from over 4,000 WIC authorized vendor stores throughout the State. WIC also provides nutritional and oral health education, breastfeeding support, healthcare and dental care referrals and other community services. Participants must meet income guidelines and other criteria.

In El Dorado County in 2018, about 1,750 WIC participants received monthly services. The number of participants has declined since 2012 (Figure 15).

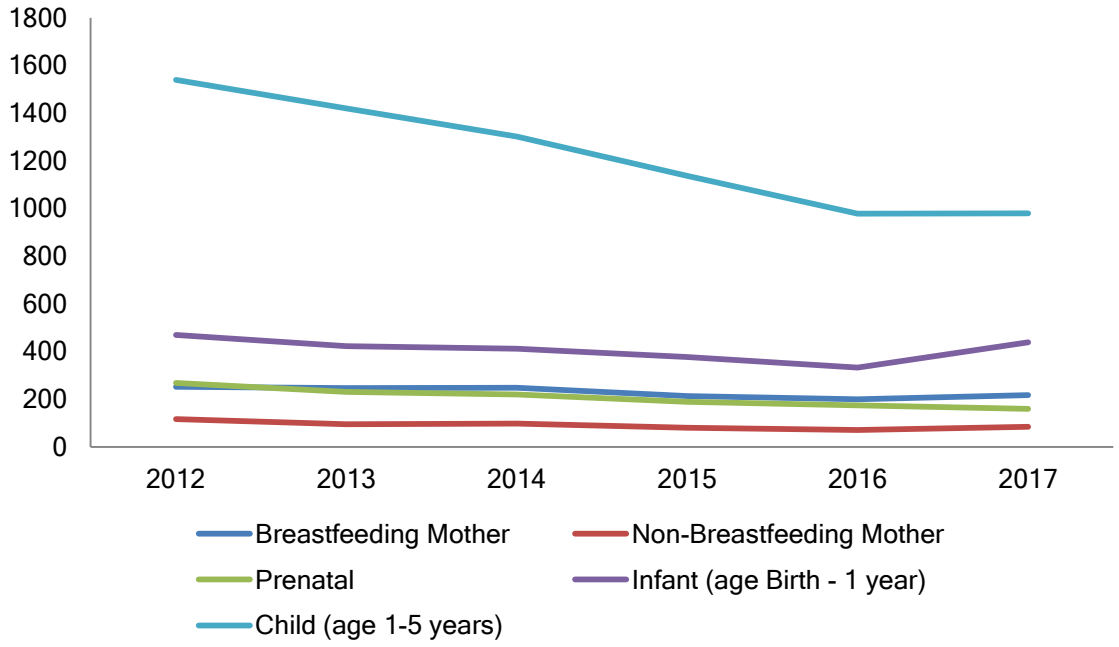


FIGURE 15: Women, Infants and Children participating in El Dorado County WIC Program, 2012 - 2017
Source: Data Analysis, Research and Evaluation Section. Women, Infants and Children (WIC) Division, California Department of Public Health, 2017. WIC-Redemption-by-County-by-Participant-Category-Data.csv.

Risk and Protective Factors for Oral Disease

Risk Factors for Oral Disease

Tobacco Use

All of the major forms of tobacco used in the U.S. have oral health consequences.[48] Cigarette smoking can lead to a variety of adverse oral effects, including gingival recession, impaired healing following periodontal therapy, oral cancer, mucosal lesions (e.g., oral leukoplakia, nicotine stomatitis), periodontal disease, and tooth staining.

Use of smokeless tobacco is associated with increased risks of oral cancer and oral mucosal lesions (e.g., oral leukoplakia). Smokeless tobacco use also causes oral conditions such as gingival keratosis, tooth discoloration, halitosis, enamel erosion, gingival recession, alveolar bone damage, periodontal disease, coronal or root-surface dental caries due to sugars added to the product, and tooth loss.[49]

Electronic cigarettes are often marketed as a safer alternative to conventional cigarettes. When it comes to oral health, however, new research suggests vaping may be just as harmful as smoking. While e-cigarette liquids do not contain tobacco - a highly harmful component of conventional cigarettes - they do contain nicotine and other chemicals, including flavoring agents. While many e-liquids contain 1.2% nicotine (equivalent to 12 milligrams of nicotine per milliliter, or the same amount as an average cigarette), e-liquid and flavor cartridges are also available in 1.8% and 2.4% nicotine.

Nearly 9 out of 10 U.S. cigarette smokers start before the age of 18, while 23% of El Dorado County high school students reported current use of some type of tobacco product (compared to 14% statewide). E-cigarettes are the most common products used by El Dorado County youth at 16%. According to the Institute for Health Metrics and Evaluation (IHME), El Dorado County has a smoking prevalence rate of 17% as compared to a state rate of 15%.[50]

Sugary-Drink Consumption

While no data is available specific to El Dorado County, sugar-sweetened beverages (SSBs) or sugary drinks are leading sources of added sugars in the American diet. SSBs such as soda, energy drinks, and sports drinks, are the largest source of added sugar in the diets of both children and adults in the U.S.[51] Consuming beverages that have added caloric sweeteners (e.g., sucrose or high fructose corn syrup) is associated with overweight and obesity, increased risk of type 2 diabetes, metabolic syndrome, liver disease, and dental decay, as well as with decreased consumption of more nutritious foods such as milk, fruits, and vegetables.[52] Among youth, SSB intake is higher among boys, adolescents, non-Hispanic blacks, or youth living in low-income family.[53]

In California, nearly one in three children ages 2-11 (31%) consumed one or more sugary beverages per day in 2013-14.[54] This percentage is higher than the percentages of children who consumed sugary beverages every day in 2009 or in 2011-12. Between 2003 and 2009, the proportion of children consuming at least one sugary drink per day decreased from 49% to 26%. However, since 2009, this number has increased to 31%. Although consumption levels are still not as high as they were in 2003, this trend is troubling because it suggests that the reductions in consumption observed among children may be reversing.

Alcohol Consumption

More than half of adults in the United States drink alcohol.[55] The prevalence of heavy drinking[3] in El Dorado County in 2012 was 10% among females and 13% among males, compared to California with 8% and 9% respectively. According to a recent study, when compared with nondrinkers, men and women who had one or more alcoholic drinks per day had an overabundance of oral bacteria linked to gum disease and oral cancers. By contrast, drinkers had fewer bacteria known to check the growth of other, harmful bacteria.[56] Moderate to heavy alcohol consumption is associated with higher risks of certain head and neck cancers. Moderate drinkers have 1.8-fold higher risks of oral cavity (excluding the lips) and pharynx (throat) cancers and 1.4-fold higher risks of larynx (voice box) cancers than non-drinkers, and heavy drinkers have 5-fold higher risks of oral cavity and pharynx cancers and 2.6-fold higher risks of larynx cancers.[57] Moreover, the risks of these cancers are substantially higher among persons who consume this amount of alcohol and also use tobacco.[58]

Aside from gum disease and oral cancers, alcohol consumption may also cause the erosion of tooth enamel due to its high acid and sugar content, leading to tooth decay and tooth loss. Additionally, according to the American Dental Association, alcohol consumption may lead to a decrease in saliva flow due to its dehydration effects, increasing the risk of tooth decay and gum disease.

Transportation

According to the U.S. Census Bureau, the County of El Dorado has a total area of 1,786 square miles. The communities within the county are a combination of two incorporated cities (Placerville and South Lake Tahoe); 12 Census Designated Places; 21 other unincorporated communities; and, one federally recognized tribe of Maidu and Miwok people, the Shingle Springs Band of Miwok Indians.

Of the 36 designated incorporated and unincorporated communities in El Dorado County, there are approximately 116 other populated places scattered throughout the Sierra Nevada, from the western foothills to the High Sierra in the east. Providing transportation in this vast area is a challenge and the communities that are located furthest from U.S. Route 50 are the most isolated and have the least access to public transportation. Aside from Lyft and Uber, the only transportation in El Dorado County is provided by the following public entities:

- El Dorado Transit –Local service in Placerville and surrounding areas (El Dorado Hills, Cameron Park, Shingle Springs, El Dorado, Diamond Springs, Placerville and Pollock Pines). Commuter service into Sacramento and express services to Folsom are also provided.
- BlueGo - The transit operator for the South Lake Tahoe area. Connecting service also runs into the state of Nevada.
- Dial-a-Ride – Operated by El Dorado Transit, Dial-a-Ride provides shared-ride transportation available daily for senior and disabled passengers.

[3] The Centers for Disease Control and Prevention (CDC) defines heavy drinking as exceeding an average of one drink per day for women and two drinks per day for men over the past month.

Preventive Factors

Topical Fluoride and Supplements

Dental caries remains the most common chronic disease of childhood in the United States. Caries is a largely preventable condition, and fluoride has proven effective in the prevention of caries. Fluoride helps reduce the loss of minerals from tooth enamel (demineralization) and promotes the replacement of minerals (remineralization) in tooth enamel that has been damaged by acids produced by bacteria in plaque. Fluoride prevents caries through a combination of its topical contact with enamel and its antibacterial actions.[59] The mechanisms of fluoride are both topical (varnish) and systemic (supplements), but the topical effect is the most important, especially over the life span[60]. Fluoride varnish is a concentrated topical fluoride that is applied to the teeth by using a small brush. Advantages of this modality are that it is well tolerated by infants and young children, has a prolonged therapeutic effect, and can be applied by both dental and non-dental health professionals in a variety of settings.[61] The Medical Expenditure Panel Survey demonstrated that 89% of infants and 1-year-olds have office-based physician visits annually, compared with only 1.5% who have dental visits.[62]

While the AAP and AADP both recommend the application of topical fluoride varnish, minimal data are available on the use of topical fluoride in El Dorado County. Documented topical fluoride use has included:

- From August 1, 2017 through July 31, 2018, El Dorado Community Health Centers saw 933 unique (unduplicated) children and adolescents from 0 to 18 years of age for one or more visits for restorative of preventative dental services by a dental professional. Seven hundred and fifty-five, or 81%, received one or more topical fluoride varnish preventative services. One hundred and forty-one, or 15%, received two or more topical fluoride varnish preventative services during the 12 month period.
- Barton Community Health Center, a Rural Health Clinic (RHC) in South Lake Tahoe, pediatricians follow the American Academy of Pediatrics *Bright Futures Guidelines* periodicity schedule recommendations for preventative pediatric health care for oral health, including the application of topical fluoride varnish every 3 – 6 months once teeth are present. Data are not available regarding the number of Children or the frequency of application.

Data are not available for the number of dentists, pediatricians or family medicine providers in El Dorado County that prescribe dietary fluoride supplements.

Dental Sealants

According to the Centers for Disease Control and Prevention, dental sealants—plastic coatings placed on the chewing surfaces of teeth—can reduce decay by 80% during the two years after placement, and continue to be effective for nearly five years.[63] Research finds that sealants are safe and protect the tooth surface from bacteria that can cause decay.[64] In 2008, the American Dental Association's Council on Scientific Affairs recommended placing sealants on the teeth of children and adults to lower decay rates.[65] Sealants are most effective if placed shortly after the permanent first and second molars come in, which is usually by ages 5-7 and 11-14 years of age, respectively.[66]

Dental sealants, at one-third the cost of fillings, are a cost-effective solution.[67] Sealant programs based in schools can be effective ways to reach children—especially low-income children who have trouble accessing dental care. Yet despite compelling evidence, a national survey conducted between 2011 and 2012 found that only four out of ten 6 to 19 year olds had even one sealant present.[68]

In 2015, the Pew Charitable Trusts released the report, "States Stalled on Dental Sealant Programs" evaluating all 50 states and the District of Columbia's performance in sealing the teeth of low-income children.[69] In this report, California received a "C" Grade in both 2012 and 2014, primarily for not meeting the Healthy People 2010 objective pertaining to sealants (at least 50% of third-graders have their permanent molars sealed). While thirteen states reported achieving this objective, up from 11 in 2012, California reported <25% in both 2012 and 2014.

Local data regarding dental sealants are limited to utilization data from the Medi-Cal Dental Program and two safety-net clinics, El Dorado Community Health Centers and the Shingle Springs Health & Wellness Center. In 2016, Medi-Cal utilization data show the use of Medi-Cal dental benefits by El Dorado County Medi-Cal beneficiaries for dental sealants (CDT code D1351) as 11.5% of 6 to 9 year olds and 5.5% of 10 to 14 year olds receiving one or more dental sealants on one or more permanent molar teeth. This compares with California average of 17% of 6 to 9 year olds and 9% of 10 to 14 year old. The HP2020 goal for sealants in Children aged 6 to 9 year olds is 28.1% and 21.9% for children aged 10 to 14.

Shingle Springs Health & Wellness Center (SSHWC), an Indian Health Services (IHS) clinic, submits utilization data to Government Performance and Results Act (GPRA). The GPRA objective estimates the coverage or prevalence of dental sealants in American Indian and Alaska Native (AIAN) patients ages 2 through 15 years of age. The numerator consists of two factors: (1) the number of patient's ages 2 through 15 who receive at least one sealant during the current GPRA year, and (2) the number of patients in this age group who are examined and found to have at least one intact sealant and need no further teeth sealed. This latter criterion confers three years of "credit." The denominator is the total SSHWC AIAN patient population aged 2 to 15 years of age. Of SSHWC AIAN children aged 2 to 15 years old who previously received dental sealants, almost 23% (n=62) had intact dental sealants, compared with 17% (n=3,829) at reporting California IHS clinics and approximately 15% of AIAN children across all IHS areas in the U.S.

In their 2017 Uniform Data System (UDS) report to Health Resources & Services Administration (HRSA), El Dorado Community Health Centers report 50% of Children 6 to 9 years of age received one or more dental sealants on one or more permanent molar teeth. This compares to 44% in 2016 and 13% in 2015 (FIGURE 15).

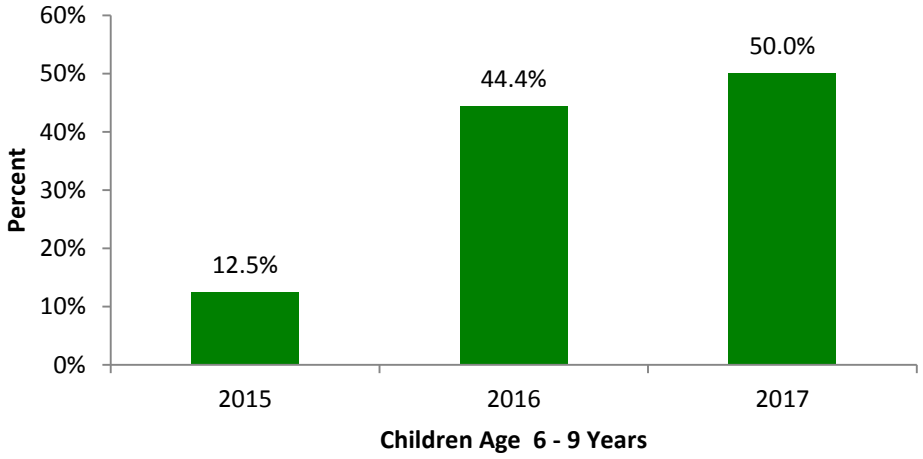


FIGURE 16: Children Age 6-9 Years Receiving One or More Dental Sealants
Source: El Dorado Community Health Centers, 2017 – 18

Oral Health Education

Findings from a community survey, focus groups and key informant interviews indicated that El Dorado County residents are generally unaware that tooth decay is an infectious disease that often is transmitted from mothers to their infants. There have been limited means for oral health education to be conducted outside the dentists' office before now. El Dorado County has not previously had a coordinated oral health education program to date. The WIC, CHDP, Head Start/Early Head Start, and First 5 programs provide limited oral health education to the extent possible. Oral health education is an identified need, especially amount children and pregnant women.

Community Water Fluoridation

Children's oral health can be improved and their need for professional care reduced through a variety of public health approaches. Fluoridation of drinking water can be a very cost-effective way to reduce dental caries.[70] In California, 64% of the population receives fluoridated water from their community drinking water systems, far short of the HP 2020 target of 79.6%, whereas two-thirds of the U.S. population is served by water systems that include fluoridation.

El Dorado Irrigation District (EID) is a multi-service, water-based public utility serving about 118,000 people in El Dorado County. The District holds water rights to approximately 75,000 acre-feet of water from various lakes and reservoirs in the Sierra Nevada foothills. The District relies on surface water to meet its entire drinking water demand. The remainder of the rural county relies on water wells or private reservoirs for drinking water. None of the water systems in El Dorado County are fluoridated.

Nutrition and Oral Health

Poor nutrition and unhealthy habits "can affect the development and integrity of the oral cavity as well as the progression of oral diseases."[71] Vitamins, minerals, and other nutrients are vital to the growth, development, maintenance, and repair of healthy dentition and oral tissues as well as the body systems in general. Dentists may play an important role in educating patients on the importance of good nutrition to oral health. The Institute of Medicine's "Improving Access to Oral Health Care for Vulnerable and Underserved Populations" report highlighted the importance of education and training of health professionals to "integrate oral health information with diet and lifestyle counseling." Dietary carbohydrates, sugar-rich foods and drinks, and carbonated beverages all are implicated in the formation of dental caries. Additionally, fruits and vegetable consumption may protect against oral cancer. Improving food choices, along with encouraging good health behaviors such as exercise for weight management and maintaining good oral hygiene for tooth decay prevention, have been shown to have positive effects, especially in children. [72]

Early Detection of Oral Cancer

The American Cancer Society estimates that in 2018 about 51,540 people will get oral cavity or oropharyngeal cancer, and an estimated 10,030 people will die of these cancers. In recent years, the overall rate of new cases of human papillomavirus (HPV)-negative oral cavity and oropharyngeal cancers has been dropping. But there's been an ongoing rise in cases of oropharyngeal cancer linked to HPV infection in both men and women.[73]

Oral cancers usually involve the tongue, lips, floor of the mouth, soft palate, tonsils, salivary glands, or back of the throat. Although these sites are accessible for self-inspection or during medical and dental exams, oral cancers are often confused with more common benign lesions. As a result, the majority of oral pharyngeal cancers are diagnosed after the disease has spread, when the prognosis for both survival and quality of life are poor. Since 1990, the percentage of oropharyngeal cancer cases diagnosed at an advanced stage has increased throughout California; in 2013 it was 65.7%-68.4%. In the most recent fifteen years, the Los Angeles-Orange, San Francisco Bay Area, Central Valley, San Diego-Imperial, and Sacramento regions had significantly increasing trends of advanced stage diagnoses. [74]

Oral Health Systems in El Dorado County

The majority of dental care in El Dorado County is provided by small teams of professionals (dentists, dental hygienists, and dental assistants) in private practices and clinics. El Dorado County's dental safety-net serves as the other primary source of care. The two largest providers within the county are community health centers and Indian Health Services (IHS) clinics. Emergency departments and hospitals are the provider of last resort.

Safety-Net Clinics

Safety-net dental services in El Dorado County are offered by SSHWC, a tribal health clinic located in Shingle Springs, and EDCHC, a Federally Qualified Health Center (FQHC) with clinics located in Placerville and Cameron Park. Both organizations see patients regardless of their ability to pay.

SSHWC is owned and operated by the Shingle Springs Band of Miwok Indians, a federally recognized Tribe on the Shingle Springs Rancheria. SSHWC opened its new facility in October 2011 with 18 dental operatories that provide both general dentistry and orthodontia. They are open from 8-5 pm, Monday through Friday. Services are available to both Native and non-Native individuals, with non-Natives representing about 80% of their patient population.

(EDCHC added dental services in October 2015, with 3 dental operatories at their Cameron Park location. They currently provide general dentistry services for established medical patients only. EDCHC is open Monday through Friday from 8-6 pm and Saturday from 9-12 p.m. Approximately 30% of EDCHC's dental patients are uninsured and participate in the sliding fee scale program.

Both Barton Health and Marshall Medical Center provide primary care and pediatric outpatient services through their non-profit community health centers. While they are both designated Rural Health Clinics (RHCs), neither of these organizations provides dental services.

Teledentistry – Virtual Dental Home

El Dorado Community Health Centers provides virtual dental home (VDH) services through teledentistry to improve access to dental care for school-age children. This service is available through their *El Dorado Smiles* mobile dental school-based program. Through teledentistry, EDCHC and contract dentists can review x-rays and other dental record information from their office, providing dental treatment plans without requiring dentists to be onsite. Dental Hygienists and Registered Dental Assistants can then perform preventative services including dental prophylaxis (cleaning), topical fluoride varnish and sealant application. Follow-up appointments or referrals are then made by the VDH dentist for any needed restorative services identified by the visit.

Private Dental Provider Network

According to recent findings from the Health Resources and Services Administration, an uneven distribution of dental care providers is making it difficult for certain communities, especially those in rural areas, to access the dental care they need.[75] When a community population to general practice dentist ratio reaches 5,000:1 (or 4,000:1 with population features demonstrating "unusually high need"), an area may be eligible for a Dental Health Professional Shortage Area (HPSA) designation. Other requirements for a community to receive a HPSA designation include a lack of access to dental care in surrounding areas because of distance, overutilization, or access barriers.

With a reported 147 licensed dentists (dentist ratio of 1263:1), El Dorado County as a whole is considered to have an adequate supply. However, because the federal Dental HPSA designation is recognized by sub-city and sub-county geographical units know as Medical Service Study Areas (MSSAs), three sub-county areas have been designated as "low-income" Dental HPSAs in El Dorado County: South Lake Tahoe (MSSA-24), Placerville (MSSA 23.3) and Camino/Pollock Pines (MSSA 23.2).

Although statically El Dorado County has an adequate supply of general practitioner dentists, very few in the county accept the Medi-Cal Dental Program, previously known as "Denti-Cal", primarily because of low reimbursement rates (approximately 50% of what private insurance will pay). Of those dentists that do, Medi-Cal typically represents only a small portion of the provider's panel.

Of the 7 private general practitioners listed on the California Department of Health Care Services Medi-Cal Dental Program website, 4 are currently accepting new patients (TABLE 4). These practices are located in Placerville, Diamond Springs, El Dorado Hills and South Lake Tahoe.

TABLE 4. El Dorado County Dental Office's Accepting Medi-Cal Dental Program Patients

Dental Practice	Specialty	Location	Accepts Medi-Cal Dental Program	Accepting New Patients
Albik Dental, Inc.	General Practitioner	El Dorado Hills	Yes	No
Rodney J. Bughao, DDS	General Practitioner	El Dorado Hills	Yes	No
Mitchell Goodis, DDS	General Practitioner	Diamond Springs	Yes	Yes
Injoo Han, DDS, Inc.	General Practitioner	Placerville	Yes	Yes
Hoybjerg, Christian, DDS	Certified Orthodontist	Placerville	Yes	Yes
Phoung-Lien T Ngo, DDS	General Practitioner	Placerville	Yes	Yes
April Westfall, DDS	General Practitioner	South Lake Tahoe	Yes	Yes
Ziese, Siri DDS Inc.	General Practitioner	El Dorado	Yes	No

Source: California Department of Health Care Services Denti-Cal as of October 2018. Verification telephone calls to dentist offices October 26, 2018.

Across California, even where the number of dentists is adequate to serve the population, children, especially those on Medi-Cal, have a hard time obtaining dental care. A 2012 report supported by Liberty Dental Plan and Health Net found that over half of California dentists do not accept children as patients until they are at least 3 years old, and 90% of general dentists report that it is somewhat or very difficult to refer Medi-Cal children to pediatric dentists. This study found that only about one-quarter of dentists in California participate in Medi-Cal, and most of them limit Medi-Cal enrollees to a small (5-15%) proportion of their practice. [76]

Part 4: Community Input

Key Informant Interviews

Purpose

Key informant interviews were conducted as a mechanism to gather insight on the strengths and challenges related to the existing dental service system in El Dorado County. Key informants' impressions, experiences, and opinions were collected. Results were used to inform this document and the Community Oral Health Improvement Plan.

Methodology

Between June 20th and August 7th, 2018, 15 external interviews were conducted with individuals identified by the OHAC as having specialized knowledge about the systems that provide oral health services to El Dorado County residents.

Findings

Results of the key informant interviews indicate that there five specific areas of opportunity that if addressed, could improve oral health outcomes for the people in El Dorado County. These opportunities are presented in the graphic below. For a full analysis of the Key Informant Interviews, please refer to the Key Informant Interviews Report, August 2018.

Oral Health Needs of El Dorado County Residents

Key informants were asked to describe what people need most in regards to their oral health care. The top ten issues identified by key informants were:

1. Access to timely oral health services is an issue, such as emergency dental services or long wait lists to see a provider. (7)
2. There is a lack of an adequate supply of providers, including those who accept Medi-Cal and Denti-Cal in El Dorado County. (8)
3. Prevention and oral health hygiene education that targets the community does not occur regularly or often enough. (7)
4. The lack of transportation to and from a provider's office prevents people from accessing oral health care. (7)
5. The community lacks access to fluoride in the form of fluoridated water and varnishes (5)
6. Older adults, including home-bound seniors, lack access to oral health care. (4)
7. Members of the community lack access to insurance that includes dental coverage. (3)
8. Low reimbursement rates for Medi-Cal and Denti-Cal affect a provider's ability to keep their practice open. (2)
9. There is a culture in some parts of El Dorado County where the community does not want to follow a prescribed lifestyle, such as following a vaccination schedule, using fluoride, or seeing a provider for oral hygiene. (2)
10. There is a lack of providers who are able to sedate patients with complex oral health needs, including patients who are children. (2)

Oral Health System Strengths

Interviewees were asked to identify what works well in El Dorado County when people try to get the oral health services they need. Seven of the 15 interviewees identified the Community Health Center's (CHC) dental van as a "strength" because it is able to serve children who would otherwise go without oral health care. Five informants identified providers who accept Medi-Cal and Denti-Cal patients as a "strength." The Community Hubs, Tribal Health Centers, and CHC were also listed as strengths by four informants. The school district, Office of Education, and school nurses were also listed as strengths (4). Providers who occasionally do pro bono work were identified (2) as were medical providers who prescribe fluoride and provide oral health education during well checks (2).

Accessibility and Awareness of Resources

Key informants were asked to list resources they know are available for dental care. A number of organizations and agencies were identified:

- Community Health Centers (CHC) (4)
- Tribal Health Centers (2)
- Dental van (3)
- Oral health providers, including Denti-Cal providers (2)
- Community Health Block Grant (CHBG) Oral Health Subcommittee
- Community Health Advisory Committee
- Lake Tahoe Collaborative
- Community health fair
- Teledentistry
- Sacramento Region Dental Society
- Local dental society

Focus Groups

Purpose

Focus Group meetings were conducted as a mechanism to gather insight on the needs and gaps associated with oral health in El Dorado County. This report synthesizes participants' impressions, experiences, and opinions. It will be used by the OHAC in association with a variety of other data sets (both quantitative and qualitative) to finalize the focus of the Community Health Improvement Plan and Action Plan. An unexpected outcome was the enthusiasm towards improving oral health in our communities and the relationships that were formed as a result of this process.

Methodology

Between August 22nd and September 28th, 2018, a total of 9 focus group meetings, four for providers and five for consumers, were conducted throughout El Dorado County. Ninety minute focus group meetings were held in the following communities:

- Cameron Park (Provider & Consumer Focus Groups)
- Georgetown (Provider & Consumer Focus Groups)
- Placerville (Provider & Consumer Focus Groups)
- Somerset (Consumer Focus Group Only)
- South Lake Tahoe (Provider & Consumer Focus Groups)

Thirty-five providers, support staff and organizations participated in four separate focus group meetings throughout El Dorado County. The following section of the report identifies the perception of critical issues El Dorado County residents face related to oral health care. A general observation of note among the provider focus group meetings, we observed a genuine enthusiasm towards the concept of improving the oral health for the residents of El Dorado County. As a result of this interest, we were able to increase the size of our Oral Health Advisory Committee by 30%. Pediatricians and Family Medicine providers represented the largest group of new membership (3).

PROVIDER FOCUS GROUP AFFILIATIONS

- ✓ Dental Providers
- ✓ Family Medicine
- ✓ Pediatricians
- ✓ Public Health Nurses
- ✓ Medical Assistants
- ✓ Dental Assistants
- ✓ Health Centers
- ✓ Tribal Health
- ✓ Office of Education
- ✓ Epidemiology
- ✓ Teachers
- ✓ Homeless Providers
- ✓ Hub Nurses & Health Advocates
- ✓ Family Resource Centers
- ✓ Community Organizations
- ✓ Public Health

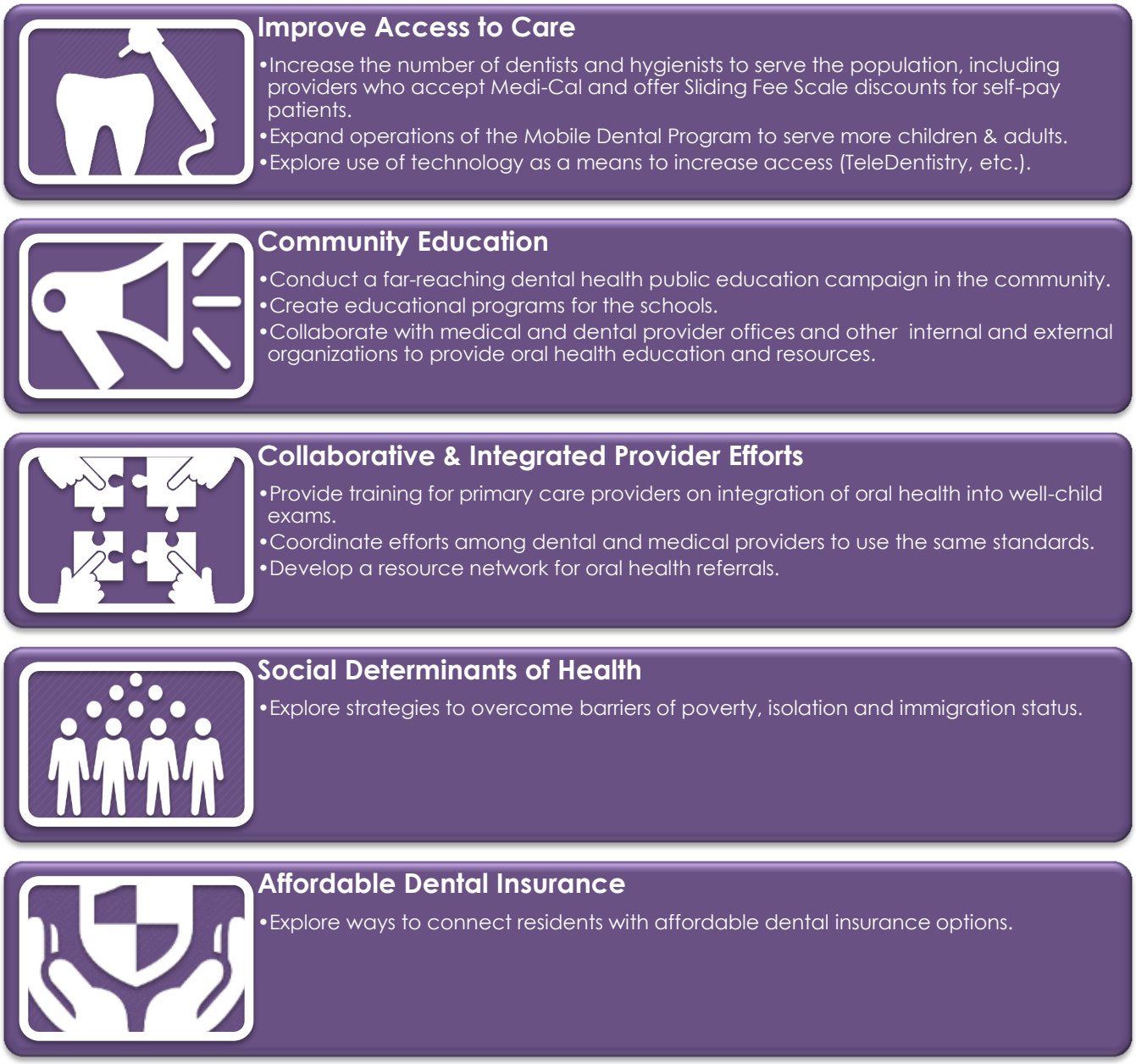
Oral Health Needs of El Dorado County Residents

Provider Focus Group discussions focused on:

1. What residents of El Dorado County need most when it comes to oral health?
2. What are the biggest barriers residents' faces when seeking oral health care?
3. What are key existing oral health resources in El Dorado County?
4. What are the most important issues facing oral health in El Dorado County?
5. What are the priorities for action?

Results

Results of the focus group meetings indicate that there five specific areas of opportunity that if addressed, could improve oral health outcomes for the residents in El Dorado County. These opportunities are presented in the graphic below.



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APPENDICES

Attachment 1: Definitions

Attachment 2: California Oral Health Plan 2018-2028 Five Key Goals

Attachment 3: Healthy People 2020 Oral Health Indicators

Attachment 1

Definitions

ACA (Affordable Care Act): Federal legislation, including the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act of 2010 that expands Medicaid coverage to millions of low-income Americans and makes numerous improvements to both Medicaid and the Children's Health Insurance Program (CHIP).

Case Management: A collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual's and family's comprehensive health needs through communication and available resources to promote quality, cost-effective outcomes.

CHDP: The Child Health and Disability Prevention Program provides complete health assessments for the early detection and prevention of disease and disabilities for children and youth from families with limited resources. The CHDP Program oversees the screening and follow-up components for the federally mandated Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program for Medi-Cal eligible children and youth. The California law requires that a child is referred to a dentist beginning at age 1 for routine dental care.

Dental Caries: Having a tooth appropriately treated for tooth decay or having untreated decay present.

ECC (Early Childhood Caries): Any primary (baby) tooth in a child under 6 years old that is affected by caries.

First 5: Funded by a Tobacco Tax in 1998, First 5 has programs in every county that support families with children 0-5 so that California kids grow up healthy and ready to success in school and in life. It funds programs run by local service providers and health and learning programs that educate parents and caregivers about the critical role they play during a child's first five years.

Fluoride Varnish: A thin coating of fluoride that is applied to tooth surfaces in order to prevent or stop decay. It has been proven effective in infants and children at high risk of decay.

Head Start: A federally funded pre-school program for families with limited resources that promotes school readiness through education, health, nutrition and social services. (www.acf.hhs.gov/programs.ohs/)

Medi-Cal: California's Medicaid program that is jointly funded by the federal and state governments and provides health insurance for approximately 13.5 residents whose income is below 138% of the federal poverty level. Medi-Cal includes dental coverage formerly called Denti-Cal.

PHN: Public Health Nurses integrate community involvement and knowledge about the entire population with personal, clinical understandings of the health and illness experiences of individuals and families within the population.

Sealant: A resin material applied to the chewing surfaces of molars and premolars to prevent caries by forming a protective covering over the depressions and grooves of teeth.

Untreated Dental Caries: Dental cavities (tooth decay) that have not received appropriate treatment.

WIC (Women, Infants & Children): The Special Supplemental Nutrition Program provides Federal grants to states for supplemental foods, health care referrals, and nutrition education for pregnant, breastfeeding, and non-breastfeeding postpartum women who have limited resources, and to infants and children up to age five who are found to be at nutritional risk.

Attachment 2

The California Oral Health Plan 2018–2028 identifies five key goals for improving oral health and achieving oral health equity for all Californians, providing a roadmap for improvements in oral health over the course of the next ten years:

Goal 1:	Goal 2:	Goal 3:	Goal 4:	Goal 5:
Improve the oral health of Californians by addressing determinants of health and promote healthy habits and population-based prevention interventions to attain healthier status	Align the dental health care delivery system, payment systems, and community programs to support and sustain community-clinical linkages for increasing utilization of dental services.	Collaborate with payers, public health programs, health care systems, foundations, professional organizations, and educational institutions to expand infrastructure, capacity, and payment systems for supporting prevention and early treatment services.	Develop and implement communication strategies to inform and educate the public, dental teams, and decision makers about oral health information, programs, and policies.	Develop and implement a surveillance system to measure key indicators of oral health and identify key performance measures for tracking progress.

Five Key Goals for Improving Oral Health & Oral Health Equity in California

Source: CALIFORNIA ORAL HEALTH PLAN 2018-2028: California Department of Public Health, Oral Health Program

Attachment 3

Healthy People 2020 Oral Health Indicators: Target Levels and Current Status for United States and California.

Source: Centers for Disease Control and Prevention (CDC), 2016

Healthy People 2020 Objective		U.S. Target HP 2020 (%)	U.S. Baseline (various years) (%)	California Baseline (various years) (%)
OH-1	Dental caries experience			
	Young children, aged 3–5 (primary teeth)	30	33.3[a]	53.6[k]
	Children, aged 6–9 (primary and permanent teeth)	49	54.4[a]	70.9[l]
	Adolescents, aged 13–15 (permanent teeth)	48.3	53.7[a]	
OH -2	Untreated dental decay in children			
	Young children, aged 3–5 (primary teeth)	21.4	23.8[a]	27.9[k]
	Children, aged 6–9 (primary and permanent teeth)	25.9	28.8[a]	28.7[l]
	Adolescents, aged 13–15 (permanent teeth)	15.3	17[a]	
OH-3	Untreated dental decay in adults			
	Adults aged 35–44 (overall dental decay)	25	27.8[a]	
	Adults aged 65–74 (coronal caries)	15.4	17.1[a]	
	Adults aged 75 and older (root surface)	34.1	37.9[a]	
OH-4	Permanent tooth extraction because of dental caries or periodontal disease			
	Adults aged 45–64	68.8	76.4[a]	49.5[m]
	Adults aged 65–74 (lost all natural teeth)	21.6	24[a]	8.7[m]
OH-5	Moderate or severe periodontitis, adults aged 45–74	11.5	12.8[b]	
OH-6	Oral and pharyngeal cancers detected at the earliest stage	35.8	32.5[c]	23.2[n]
OH-7	Oral health care system use in the past year by children, adolescents, and adults	49	44.5[d]	
OH-8	Low-income children and adolescents who received any preventive dental service during past year	33.2	30.2[d]	
OH-9	School-based health centers (SBHC) with an oral health component			44.0[o]
	Includes dental sealants	26.5	24.1[e]	
	Oral health component that includes dental care	11.1	10.1[e]	
	Includes topical fluoride	32.1	29.2[e]	

Healthy People 2020 Objective		U.S. Target HP 2020 (%)	U.S. Baseline (various years) (%)	California Baseline (various years) (%)
OH-10	Local health departments (LHDs) and Federally Qualified Health Centers (FQHCs) that have an oral health component			
	FQHCs with an oral health component	83	75[f]	
	LHDs with oral health prevention or care programs	28.4	25.8[g]	
OH-11	Patients who receive oral health services at FQHCs each year	33.3	17.5[f]	18.5[p]
OH-12	Dental sealants			
	Children, aged 3–5 (primary molars)	1.5	1.4[a]	
	Children, aged 6–9 (permanent 1st molars)	28.1	25.5[a]	27.6[l]
	Adolescents, aged 13–15 (permanent molars)	21.9	19.9[a]	
OH-13	Population served by optimally fluoridated water systems	79.6	72.4[h]	63.7[q]
OH-14	Adults who receive preventive interventions in dental offices (*developmental*)[r]			
	Tobacco and smoking cessation information in past year	N/A	N/A	
	Oral and pharyngeal cancer screening in past year	N/A	N/A	
OH-15	States with system for recording and referring infants with cleft lip and palate (*developmental*)[r]	N/A	N/A	N/A
OH-16	States with oral and craniofacial health surveillance system	100	62.7[i]	N/A
OH-17	State and local dental programs directed by public health professionals (PHP)			
	Indian Health Service and Tribal dental programs directed by PHP	25.70	23.40[i]	
	Indian Health Service Areas and Tribal health programs with dental public health program directed by a dental professional with public health training	12 programs	11 programs[j]	