SAN BERNARDINO COUNTY LOCAL ORAL HEALTH PROGRAM

Oral Health Needs Assessment

Local Oral Health
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SAN BERNARDINO COUNTY | Public Health Local Oral Health

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I. Introduction

Oral health is an integral part of an individual's overall health and well-being. Poor oral health can affect individuals at all life stages, from infancy to older adulthood. While dental disease is largely preventable and treatable, children from low-income families, older adults (age 65 and older), racial and ethnic minorities, low-income pregnant women, people with special health care needs, and people living in rural or remote communities struggle to gain access to quality dental care. Untreated tooth decay (dental caries) and periodontal diseases lead to unnecessary pain, infection, and tooth loss. They also contribute to poor quality of life, poor health outcomes, and share common risk factors with other medical conditions such as diabetes, heart disease and poor reproductive/birth outcomes. Improving access to dental care and preventing dental diseases is a Healthy People 2020 goal.

The California Oral Health Plan, 2018-2028 was published in early 2018 under the leadership of the State Dental Director and the Office of Oral Health. This plan is a 10-year framework for addressing oral health disparities in local communities and statewide, built to align with the four focus areas of the California Wellness Plan: healthy communities; optimal health systems linked with community prevention; accessible and usable health information; and prevention sustainability and capacity. The program is spearheaded by the California Department of Public Health, Office of Oral Health with funds generated as results of passage of the California Healthcare, Research and Prevention Tobacco Tax Act of 2016 (Proposition 56 Tobacco Tax).

In January 2018, with funding from the California Department of Public Health guided by the California Oral Health Plan, a Local Oral Health Program was established within the San Bernardino County Department of Public Health (LOHP). The LOHP was tasked to conduct a comprehensive oral health needs assessment and engage stakeholders to develop an oral health strategic plan. To facilitate this process, the LOHP hired the Center for Oral Health (COH), a non-profit organization with a mission to improve oral health, especially of vulnerable populations. The LOHP in collaboration with COH, also established an LOHP Advisory Committee (AC) that comprised of individuals representing various sectors in the County – Universities and dental schools, community-based organizations, San Bernardino Department of Public Health (SBDPH) leadership, other public health and social support programs, community clinics, individual dental and medical providers, hospital systems and managed care plans among several others. The AC has been instrumental in ensuring the needs assessment was conducted in a stakeholder-driven and community participatory manner and provided input on every step of this process.

II. Methodology

Guidelines

The needs assessment was guided by the following:

1. Association of State and Territorial Dental Director; 7-Step Methodology for Community oral Health Needs Assessment.
2. California Office of Oral Health: Status of Oral Health in California Report
3. Healthy People 2020
4. National Oral Health Surveillance System, Centers for Disease Control and Prevention.

Once the advisory committee was established, the committee completed a self-assessment to determine motivation for participating in the advisory committee, their expertise, recommendations for the needs assessment and data support (both primary and secondary) that they or their organizations can provide for the needs assessment.

Selection of Indicators, Population Groups

Following the self-assessment, a comprehensive list of population groups, indicators and core needs assessment questions were developed. These were then prioritized based on the following criteria:

1. Availability of data and feasibility of collection of data in the given time frame.
2. Interpretative strength of the data and type of measure – Process, outcome or impact.
3. Availability of data and feasibility of collection of data to review trends/change over time
4. Potential for implementation of up-stream measures of disease prevention given population.
5. Potential for widespread impact on said population group or indicator that is in our control (keeping funding and policy shortcomings in mind).

The following population groups and indicators were selected during this process.

NOTE: Several population groups which are known to be underserved and marginalized, although not in the list of indicators assessed in the needs assessment, have been identified as data gaps. Any known state of national data on the oral health needs of these population groups were reviewed during the strategic planning process to include some global strategies to address their needs even in the absence of current data.

Populations:

1. Early Childhood (0-5 years)
2. Young children (6-11 years) – K-6 Grade
3. Adolescent and teenage (12-18 years) -- NOTE: 21 years for Medi-Cal eligible children
4. Adults (19-64 years)
5. Older Adults (65 years and older)
6. Pregnant women
7. Individuals with Intellectual and Developmental Disabilities
8. Homeless individuals/ families
9. Individuals living with HIV/ AIDS
10. Individuals with chronic health conditions like diabetes and heart disease
11. Current smokers or individuals who currently use tobacco products
12. Remote, rural or frontier communities

Indicators/ Data Categories:

1. *Oral Health Outcomes*
    - Untreated tooth decay
    - Decay experience
    - Presence of dental sealants
    - Need for treatment
    - Perceived status of oral health
    - Tooth loss
    - Oral and pharyngeal cancer (incidence and mortality)

2. *Access to Care*
    - Dental visit in the past year
    - Preventive dental visit in the past year
    - Receipt of dental sealants (6-9 years and 10-14 years)
    - Avoidable emergency room visits
    - Map of dental providers overlaying population distribution

3. *Risk factors*
    - Demographic characteristics (Race/ ethnicity, income, educational attainment, WIC/ CalFRESH and other enrollment, FRPL eligible school children etc.)
    - Current tobacco users (adolescents and adults)
    - Individuals with IDDs and Special Health Care Needs
    - Chronic conditions – Diabetes, heart disease etc.

4. *Intervention strategies*
    - Access to optimally fluoridated water
    - School-based health centers with/ without a dental unit
    - School-based/ linked oral health programs – preventive services, education, tele-dentistry

5. *Workforce, infrastructure and policies:*
    - Number and profile of dental providers (Dentists and hygienists)
    - Number, profile and capacity of Medi-Cal dental providers
    - Number, competency and scope of work of non-dental professionals – e.g. community health workers

Primary and Secondary Data Sources:

1. *Secondary data:*
    - California Health Interview Survey
    - Behavioral Risk Factor Surveillance System
    - DHCS - Medi-Cal Dental Data Dashboard (addition data requested)
    - Office of Statewide Health Planning and Development
    - Maternal Infant Health Assessment

- American Dental Association
- California Dental Association
- National Survey of Children's Health
- Pre-school services and Early Smiles San Bernardino

2. *Primary Data - Quantitative:*
    - Basic Screening Survey of Kindergarten and 3rd Grade Students in SB County Public Schools – Representative Sample – To be completed in December 2019
    - Census (through telephone survey) of school-based and school-linked oral health programs – All SB County Public Schools
    - Survey of Denti-Cal Providers (through a combination of telephone, electronic and in-person surveys) – All listed providers
    - Survey of Older Adults – Convenience Sample of 775 individuals – Non-institutionalized

3. *Primary Data – Qualitative*

    - Key-informant Interviews (Table 1)
    - Focus Groups (Table 2)

Table 1: Key-informant Interviews Conducted

Organization	Job Title	Population Represented
San Bernardino County Public Health Department	Program Supervisor, Perinatal Services Coordinator	Family Health
Department of Aging and Adult Services, SB County	Deputy Director	Older Adults
Department of Aging and Adult Services, SB County	Supervisor of the In-Home Support Services Program	Older Adults
Loma Linda University	Assistant Professor, Director of Education and Assessment for the School of Dentistry	General Population, Dentists
Inland Empire Health Plan	Independent Living and Diversity Services Manager	General Population, Medi-Cal Managed Care Plan
Women, Infants and Children Program	Program Manager	Women, Infants, Children
Preschool Services Department	Program Manager	Head Start/Early Head Start Program participants
Preschool Services Department	Program Supervisor	Head Start/Early Head Start Program participants
Tri-County Dental Society	Executive Director	General Population
Inland Regional Center	Dental Coordinator	Individuals with Developmental Disabilities

Organization	Job Title	Population Represented
Inland Regional Center	Executive Director	Individuals with Developmental Disabilities
Inland Regional Center	Associate Executive Director	Individuals with Developmental Disabilities
Loma Linda University	Director	General Population
Loma Linda University	Senior Health Policy Analyst	General Population
Community Health Association Inland Sothern Region	Project Manager	General Population
Kaiser Foundation Hospital	Community Health Manager	General Population
SBC Homeless Partnership	Consultant	Homeless
Parktree Health Centers	Chief Dental Officer	General Population
SAC	Dental Director	General Population
SAC	RDH	General Population
First 5 Riverside	Program Director	Children 0-5 years of age
Black Infant Health	Program Manager	Pregnant and Mothering African American Women

Table 2: Focus Groups Conducted

Coordinating Organization	Population Represented	Number of Attendees
Yucca Valley Senior Center	Older Adults	7
Crest Forest Senior Citizens Club	Older Adults	7
5th Street Senior Center	Older Adults	5
Victor Community Support Services	Transitional Age Youth	8
Indian Health Center	General Population	4
Autism Society, State Council on Developmental Disabilities, San Bernardino	Children with Developmental Disabilities	8
Autism Society, State Council on Developmental Disabilities, San Bernardino	Adults with Developmental Disabilities	4

Organization of this Report

Findings from the needs assessment have been presented in this report first by indicator category and within each category, by population group wherever relevant. Wherever available, relevant qualitative and quantitative findings have been aggregated in further detail. All findings have been synthesized into key findings in the section titled 'Summary of Oral Health Needs in San Bernardino County'.

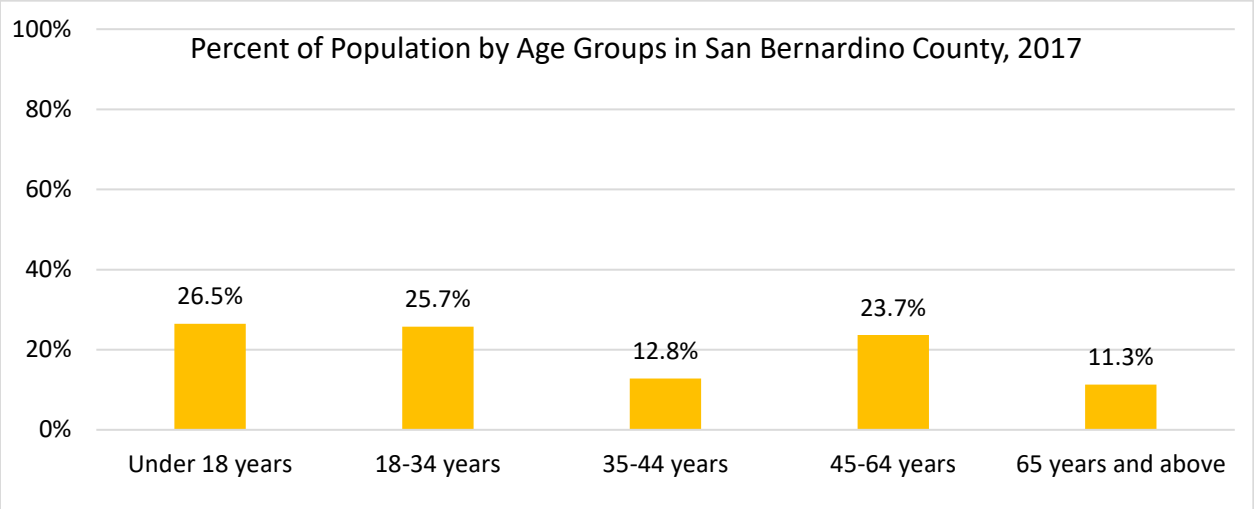
III. San Bernardino County Demographics

San Bernardino County had an estimated total population of 2,157,404 in 2017[1]. The estimated growth between 2020 and 2045 is expected to be 28%[2].

Age

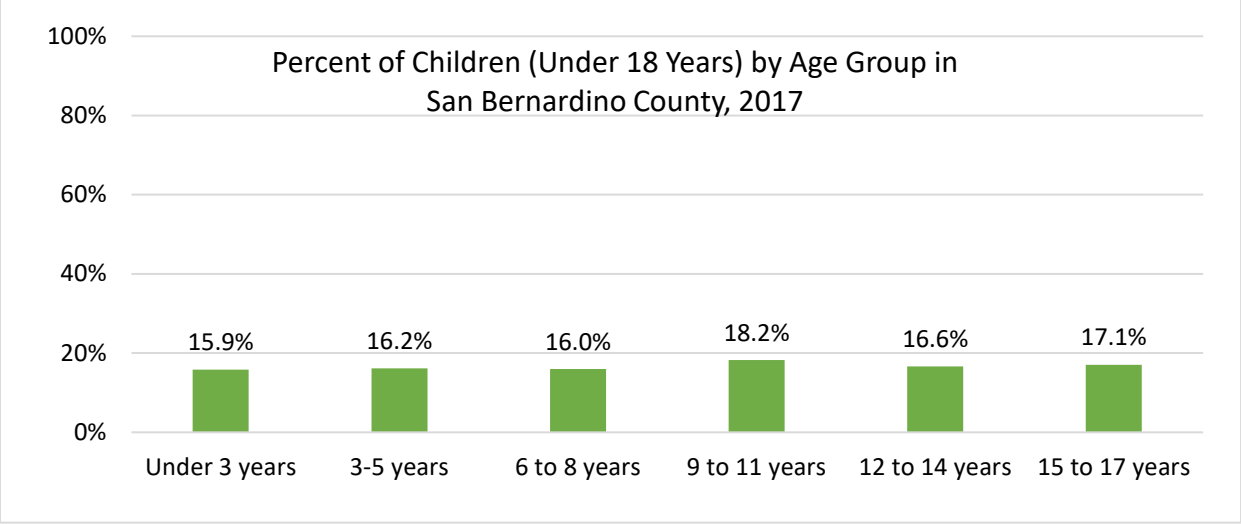
San Bernardino County's population is composed of approximately equal age groups; under 18 years (26.5%), 18-34 years (25.7%), 45-64 years (23.7%) make up a quarter of the population each, while older adults 65 years and above are the smallest population group (11.3%) (Figure 1). The age groups among children under 18 are equally distributed as well, with the largest group of children being 9-11 years with 104,108 (18.2%) (Figure 2).

Figure 1



U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

Figure 2

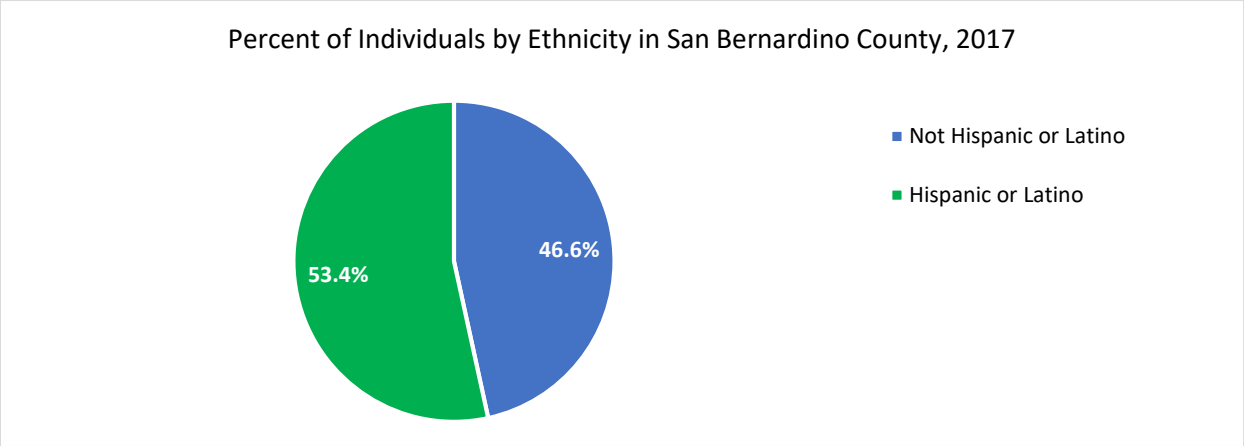


U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

Race/Ethnicity

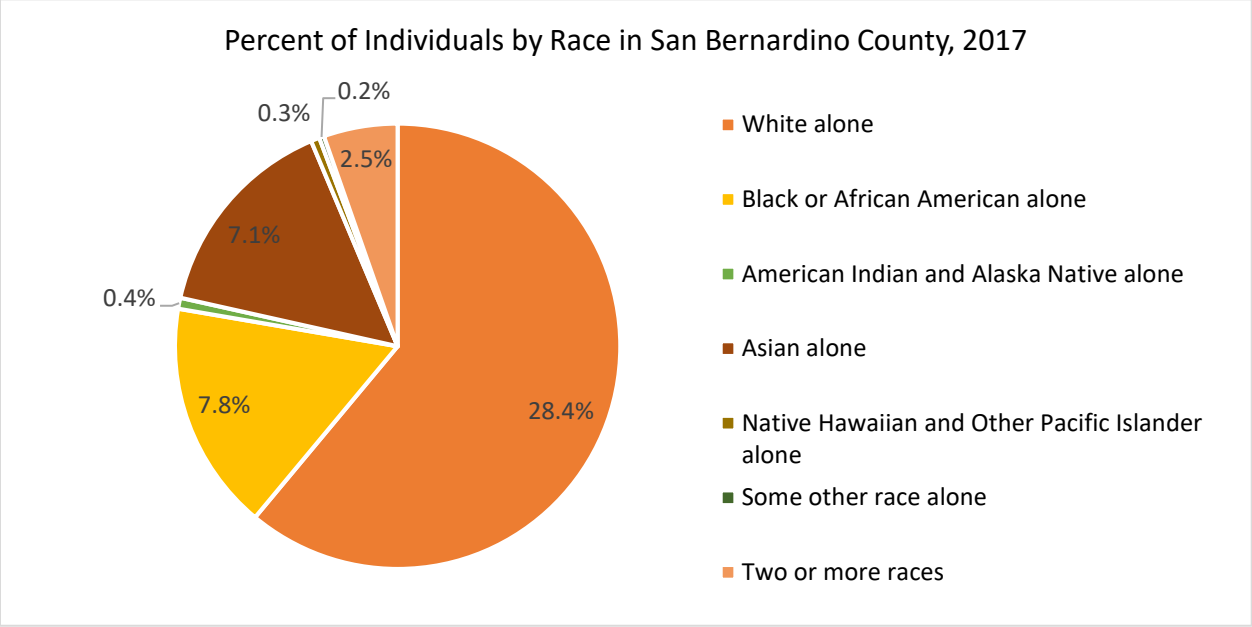
Figure 3 shows that 53.4% of San Bernardino County Residents identify as Hispanic or Latino. By 2045, the total Hispanic population is expected to increase to 64%[2]. Individuals who identified as White alone make up 28.44% of the population and Black alone making up 7.8% (Figure 4). While White alone is expected to decrease by 10%, the remaining race or ethnic groups are expected to remain the same[2].

Figure 3



U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

Figure 4

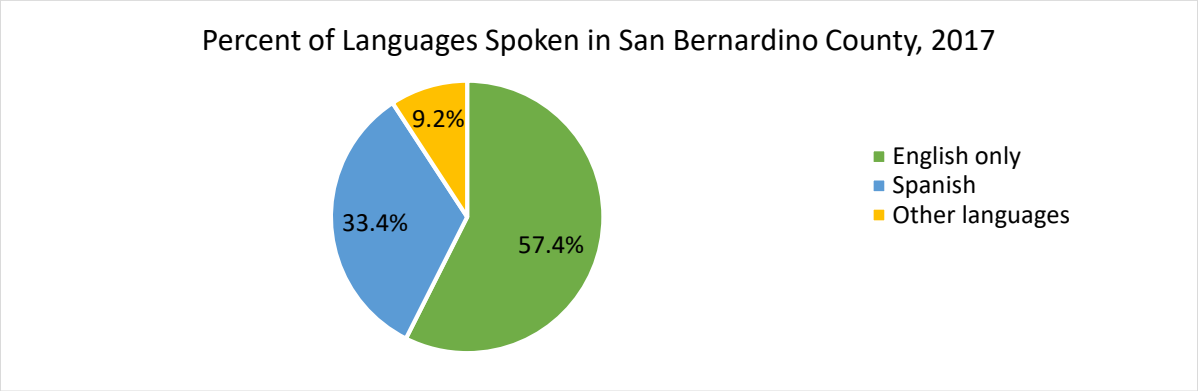


U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

Language

57.4% of households speak English only, while 33.4% speak Spanish and 9.2% speak other languages (Figure 5). Of households that speak Spanish, 13% are a limited English-speaking household, and 22.6% of Other language households are limited English-speaking[1].

Figure 5

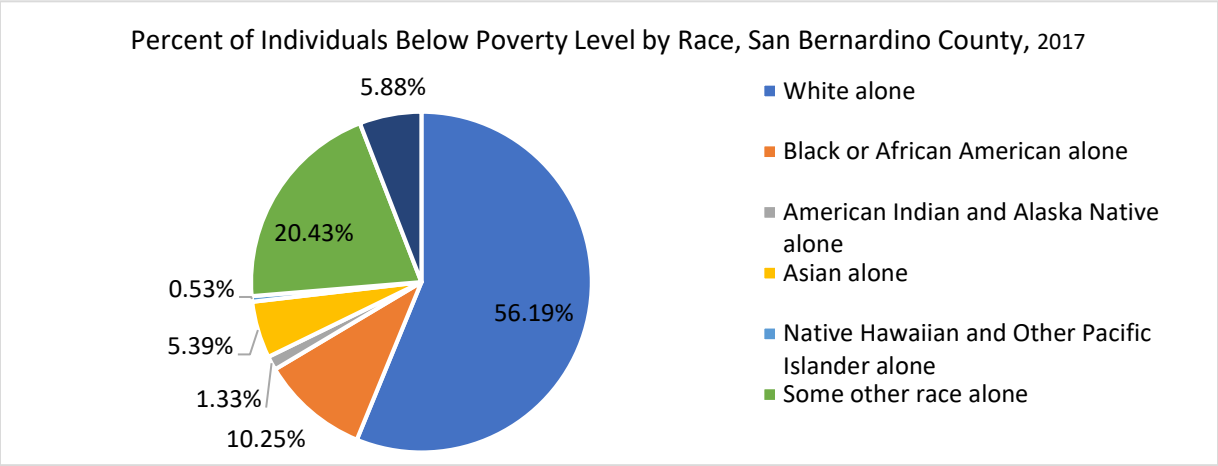


U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

Poverty

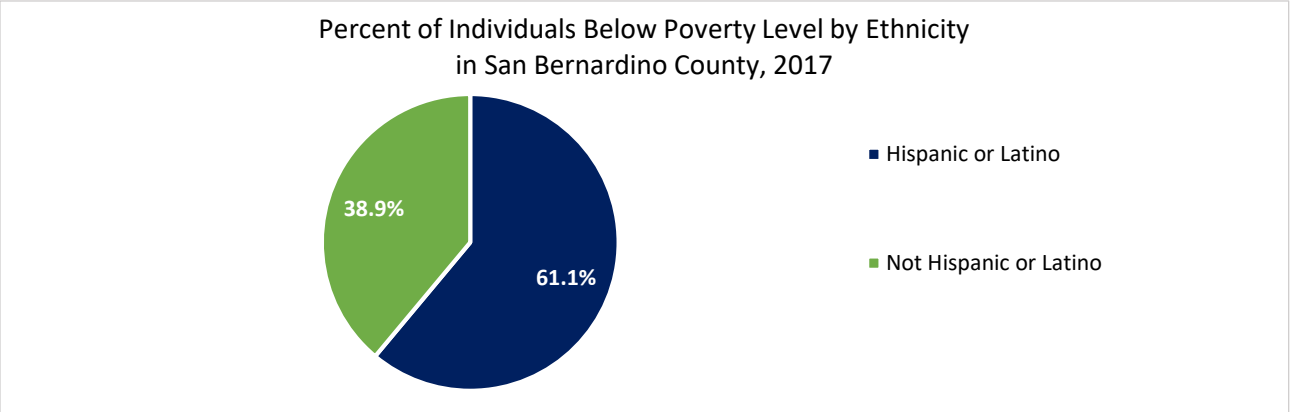
San Bernardino County has 16.2% persons in poverty and 12.8% of families living in poverty[2]. Compared to 2008, however, this is still an increase in a 10-year timeframe, 14.6% and 11.8% respectively[3]. Among those living below the poverty level, 56.19% are White alone (Figure 6). Other race and ethnic groups range from 0.53% to 20.4% lower than White alone. Among those living below poverty level, 61.1% identify as Hispanic or Latino origin (Figure 7). There are 490,798 individuals with income below the 125 percent of poverty level, 23.4% of the population in San Bernardino County; almost double, 825,125 (39.4%) have income below the 200 percent of poverty level (Figure 8). The distribution of families living below the poverty level varies across the county. Rancho Cucamonga has the lowest percentage at 5.3%, whereas families in San Bernardino City and Apple Valley had the highest rate of families in poverty, each at 17.7% (Figure 9).

Figure 6



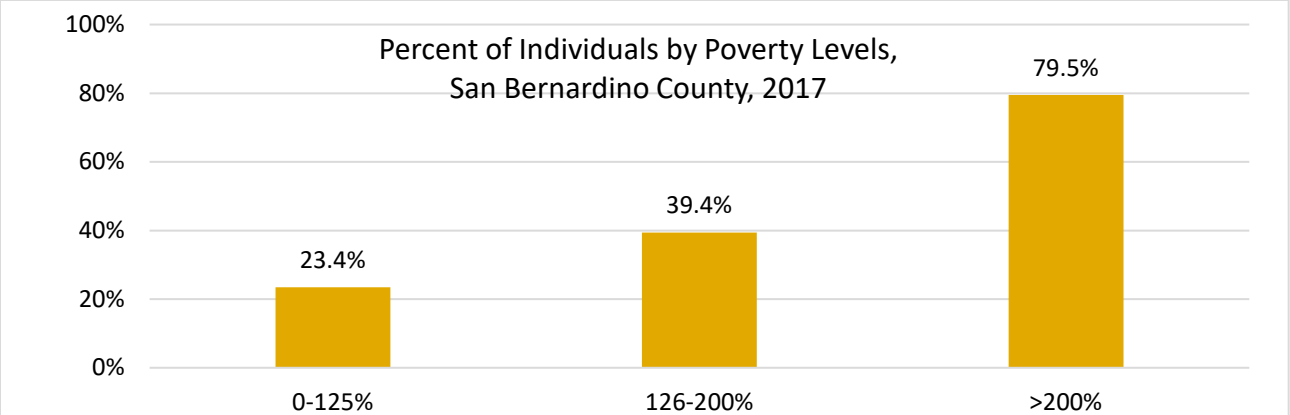
U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

Figure 7



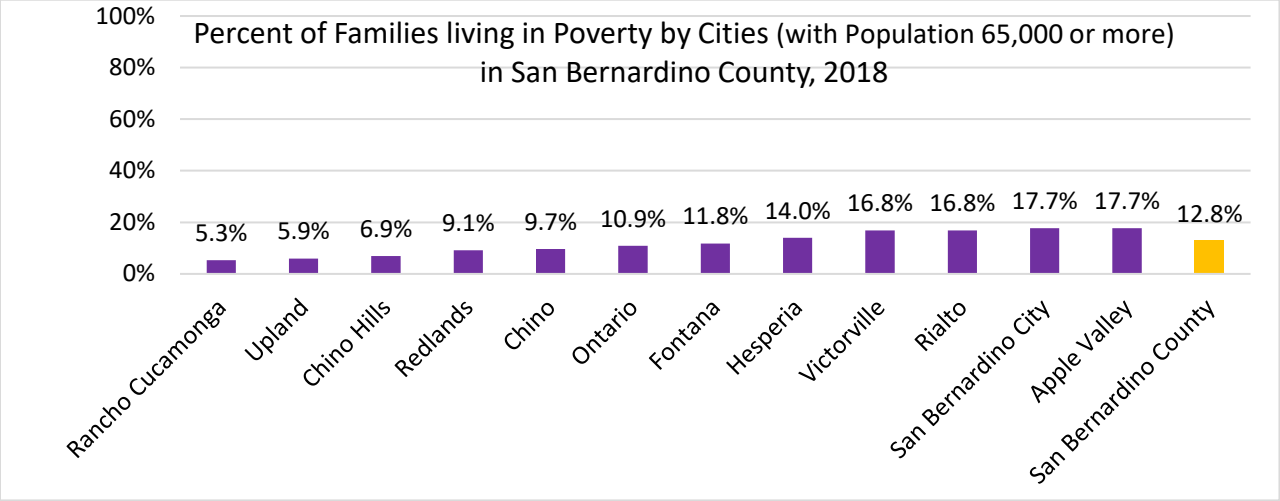
U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

Figure 8



U.S. Census Bureau, 2017 American Community Survey 1-Year Estimate

Figure 9

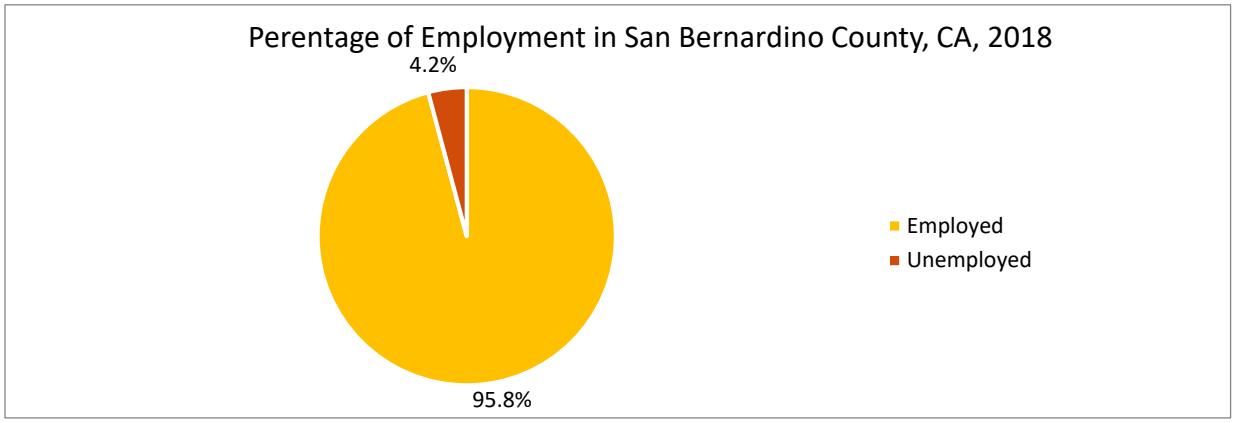


U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

Employment

Of individuals in the labor force, 95.8% are employed as of 2018 (Figure 10). However, only 957,400 (44.01%) of residents in San Bernardino County were in the civilian labor force, defined as 16 years or older, not members of the Armed Services, and not in institutions such as prisons, mental hospitals, or nursing homes[2]. The unemployment rate in San Bernardino County was at 4.17%, a steady decrease since a high of 13.5% in 2010[1]. San Bernardino County had a lower unemployment rate compared to the state (4.3%)[2].

Figure 10

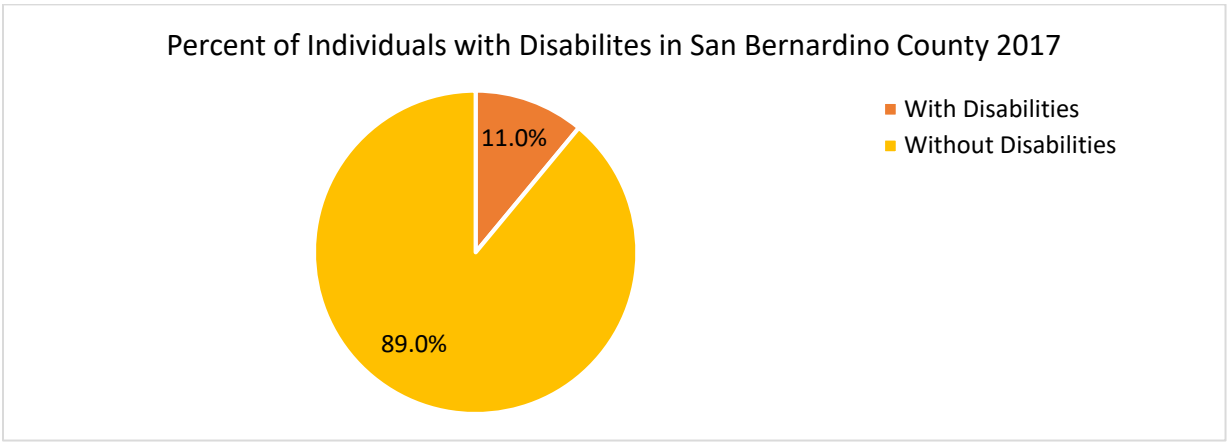


U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

Individuals with Intellectual and Developmental Disabilities

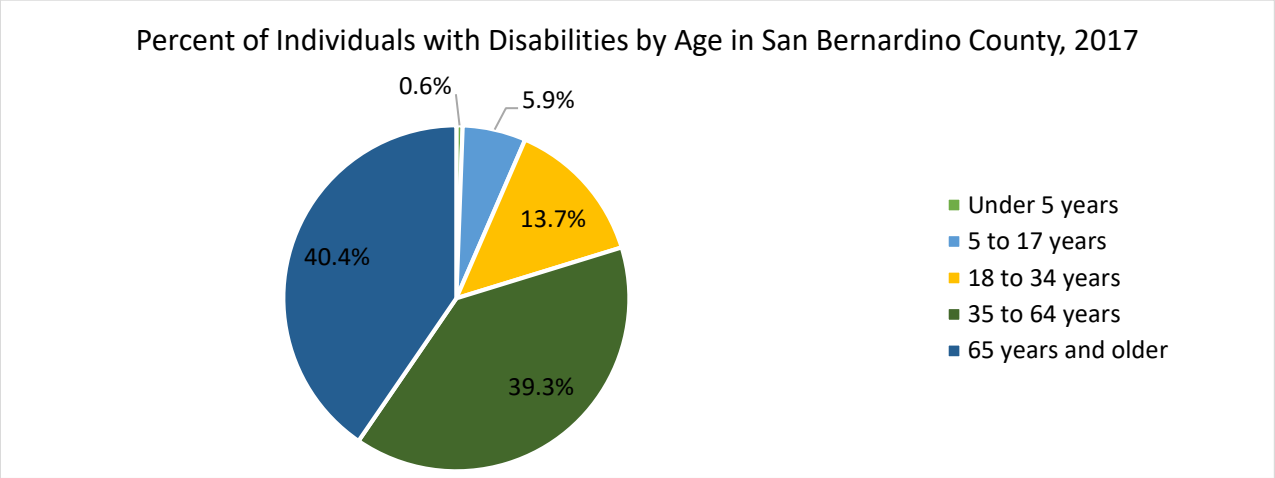
In 2017, San Bernardino County had 228,087 (11.0% of the population) people living with a disability[4] (Figure 11). Most individuals with a disability were 18 years or older, with older adults making up 40.4% of the distribution[1] (Figure 12).

Figure 11



Disability Statistics & Demographics Rehabilitation Research & Training Center, 2017 State Report for County-Level Data: Prevalence

Figure 12

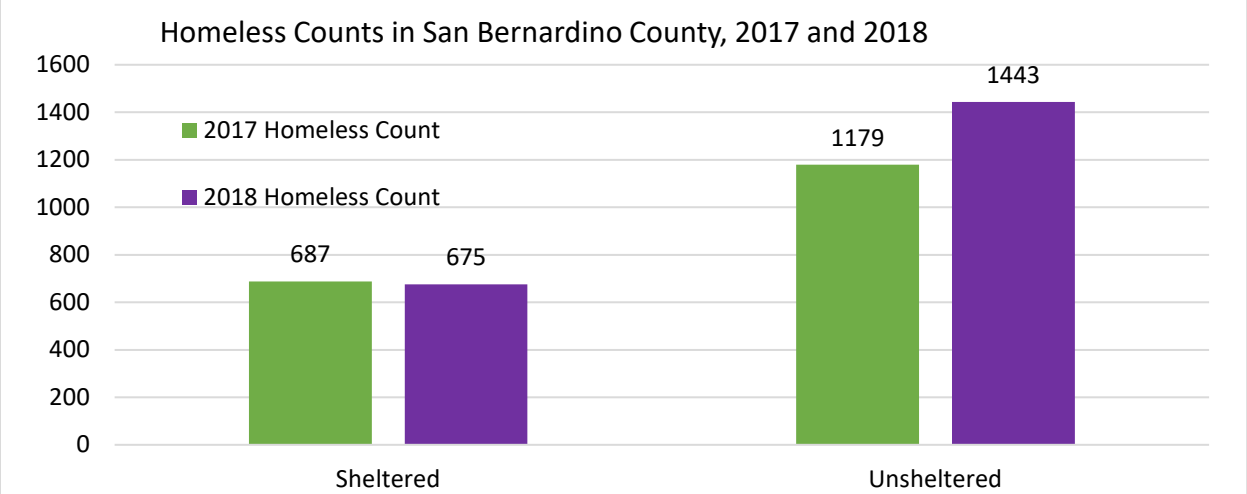


U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

Homelessness

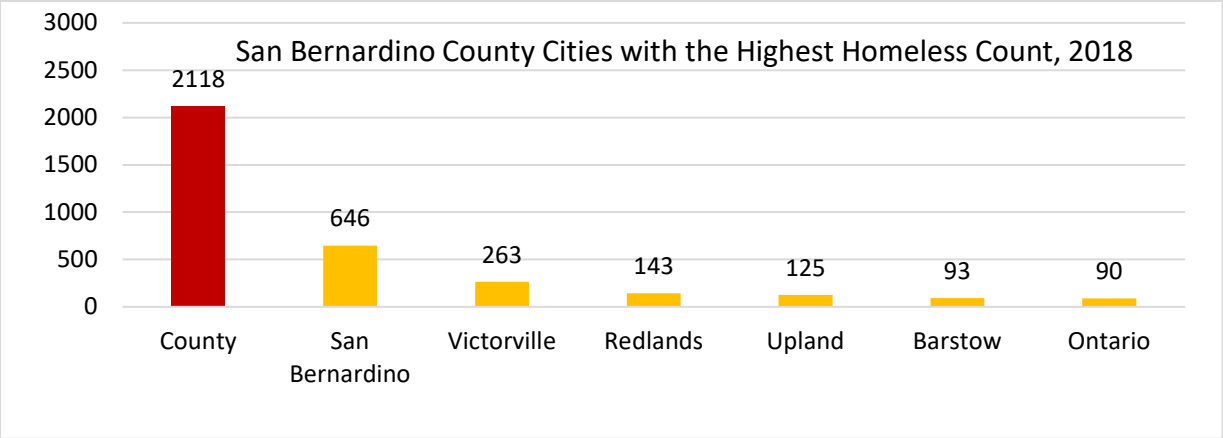
As of January 2018, San Bernardino County had a total of 2,118 homeless individuals, an increase of 13.5% (252 persons) compared to 2017. From 2017 to 2018, there was also a 22.4% increase in unsheltered homeless compared to sheltered homeless. Of the cities with the largest number of homeless persons, San Bernardino City makes up 30.5% (646). Of homeless adults 18 and over (1370), almost half identified as white[5] (49%).

Figure 13



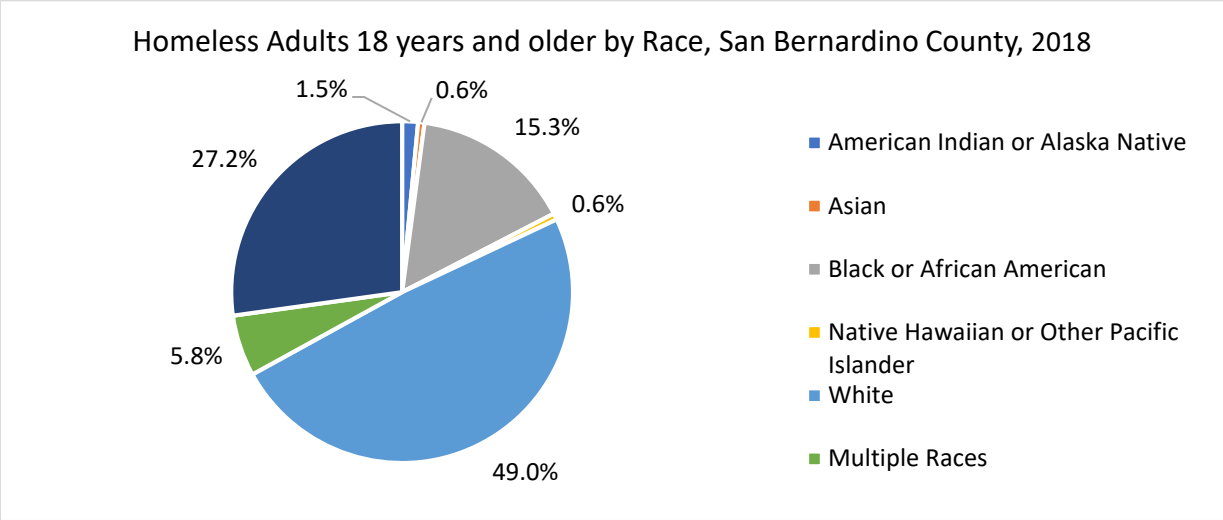
San Bernardino County, 2018 Homeless Count and Subpopulation Survey Final Report

Figure 14



San Bernardino County 2018 Homeless Count and Subpopulation Survey Final Report

Figure 15

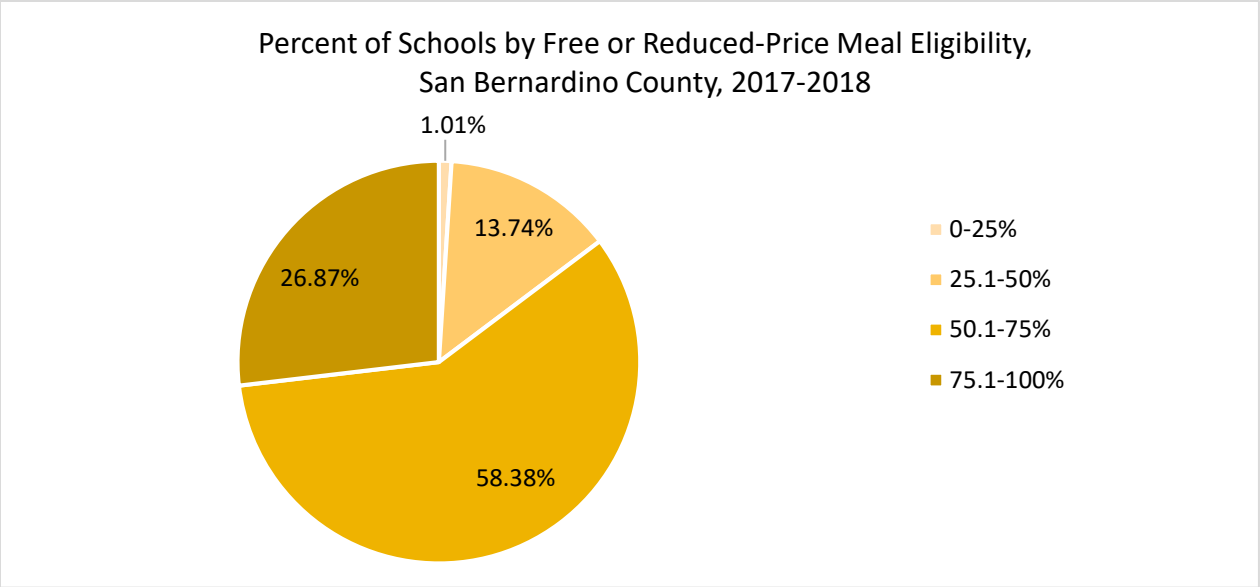


San Bernardino County, 2018 Homeless Count and Subpopulation Survey Final Report

Public Schools

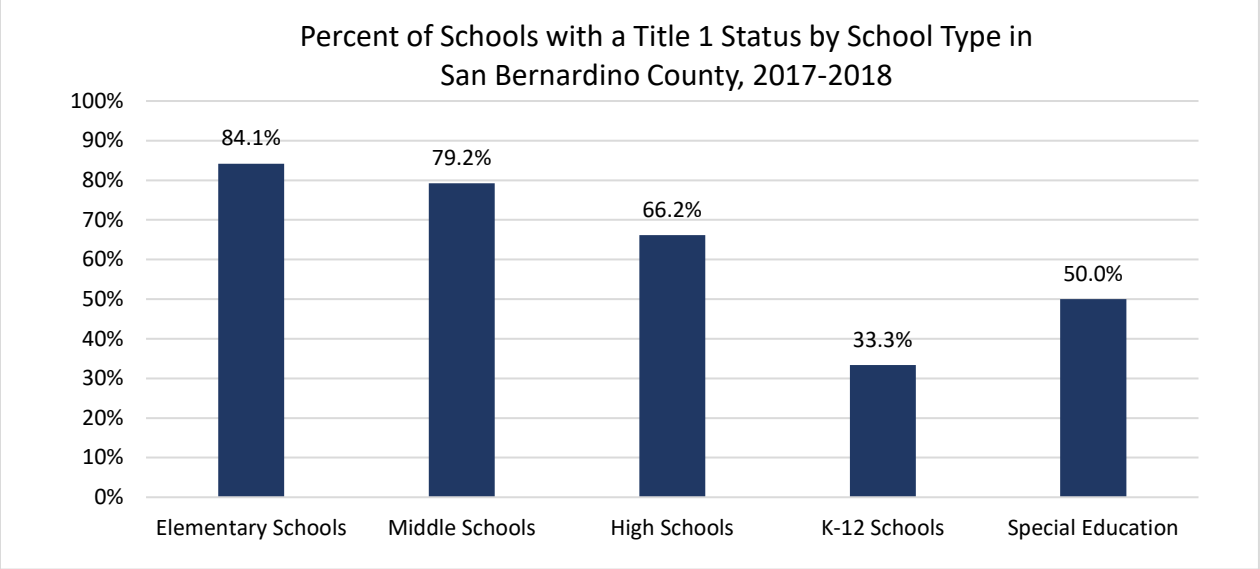
There are 32 school districts and 495 public schools in San Bernardino County. There are 334 elementary schools, 77 intermediate/middle schools, 68 high schools, 15 K-12 Schools, and 4 special education schools that served 427,250 students in 2017[1,6]. 79.2% (392) of public schools are Title I schools, defined as schools that have at least 40% of children from low-income families enrolled[7]. More than half of elementary schools (85.1%), middle schools (79.2%), and high schools (66.2%) are Title 1 schools. 85.3% of public schools have a free or reduced-price meal eligibility (FRPM) of 50% or higher; 26.9% of schools have a FRPM of 75% or higher. Of the 32 districts, 24 have a FRPM of 50% or higher and 10 have a FRPM of 75% or higher[9]. Figure 18 maps the elementary schools with a Title 1 status in 2017-2018 school year, with the District level FRPM. Majority of the tier 1 schools in the county are in districts with FRPM of 75% or higher.

Figure 16



Unduplicated Student Poverty-FRPM Data 2017-18 - Student & School Data Files (CA Dept of Education)

Figure 17

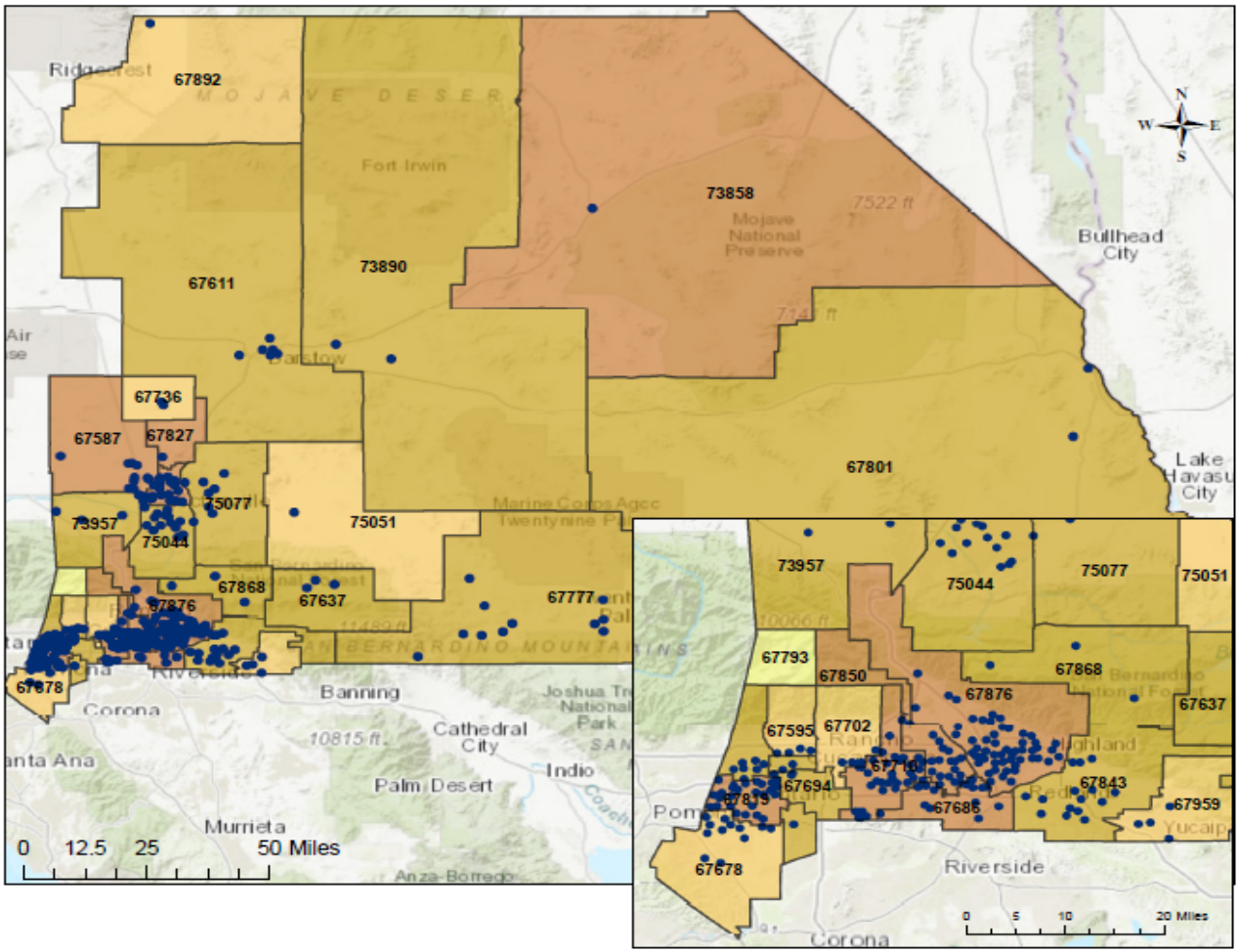


National Center for Education Statistics, CCD Public School Data 2016-2017

Figure 18

Title 1 Schools in San Bernardino County, CA, 2016-2017

District Free or Reduced Price Meal Eligibility Percentage Quartiles



District FRPM %

- 0.00 - 28.70
- 28.71 - 50.00
- 50.01 - 75.00
- 75.01 - 100.00

Title 1 School

10363 - SB County Office of Education
67587 - Adelanto Elementary
67595 - Alta Loma Elementary
67611 - Barstow Unified
67637 - Bear Valley Unified
67645 - Central Elementary
67678 - Chino Valley Unified
67686 - Colton Joint Unified
67694 - Cucamonga Elementary
67702 - Etiwanda Elementary
67710 - Fontana Unified
67736 - Helendale Elementary
67777 - Morongo Unified
67785 - Mountain View Elementary
67793 - Mt. Baldy Joint Elementary
67801 - Needles Unified
67819 - Ontario-Montclair
67827 - Oro Grande Elementary
67843 - Redlands Unified
67850 - Rialto Unified
67868 - Rim of the World
67876 - San Bernardino City Unified
67892 - Trona Joint Unified
67918 - Victor Elementary
67959 - Yucaipa-Calimesa Joint Unfied
73858 - Baker Valley Unified
73890 - Silver Valley Unfied
73957 - Snowline Joint Unified
75044 - Hesperia Unified
75051 - Lucerne Valley Unified
75069 - Upland Unified
75077 - Apple Valley Unified

Source: National Center for Education Statistics, CCD Public School Data 2016-2017
CDE District Level Data for the Year 2017-2018, District Level FRPM

April 2019

San Bernardino County Public Health Local Oral Health

IV. Oral Health Status and Utilization of Dental Services by Population Group

Children (Ages 0 to 20)

Tooth decay is preventable, yet nationally, it is the most common chronic disease of children – 5 times more common than asthma[10]. Left untreated, tooth decay can result in unnecessary complications like pain, infection and swelling, impact school readiness and performance, and negatively affect nutrition, sleep and overall well-being[11,12]. One study concluded that students with a toothache in the last 6 months were four times more likely to have a lower grade point average than their healthier counterparts[12]. In California, one in three children has tooth decay by the time he/she reaches third grade[13]. Recent national data show that although tooth decay has declined significantly among children, disparities by race/ ethnicity persist[14]. Reducing the prevalence of tooth decay in children is a Healthy People 2020 objective. Untreated dental diseases can also result in significant economic burden to individuals, communities and health systems. In California, the estimated cost of emergency room visits for preventable and non-traumatic dental conditions was nearly $55 million in the year 2007[15]. One California study showed that students' absences due to dental problems cost schools districts about $29.7 million annually[16]. With timely access to age-appropriate preventive measures, burden of tooth decay can be minimized.

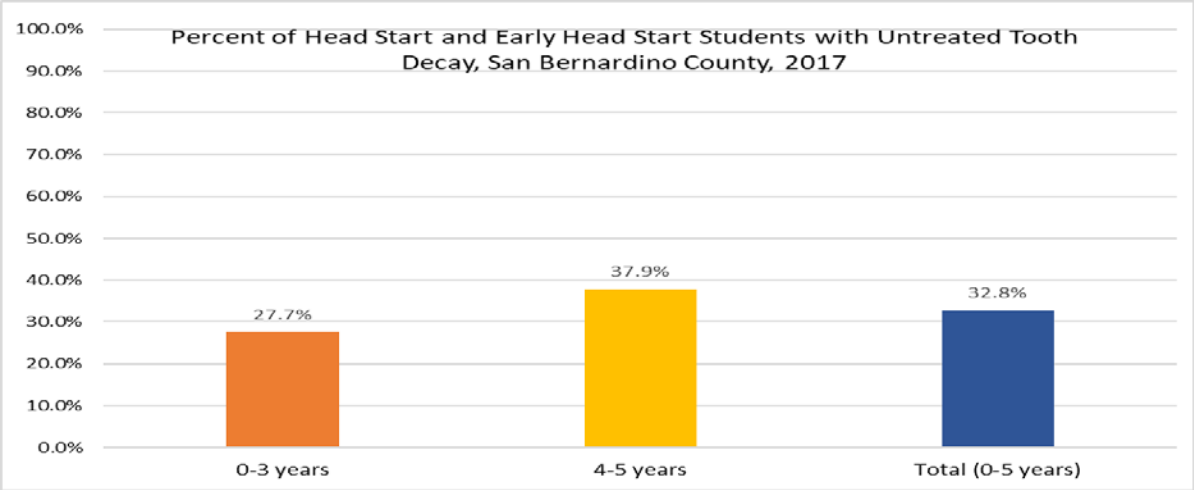
The American Academy of Pediatric Dentistry (AAPD) recommends that parents and other care providers help every child establish a dental home by 12 months of age[17]. The AAPD also recommends that a child should be seen by a dentist every 6 months or according to a schedule recommended by the dentist based on the child's individual needs and risk of disease[17]. Preventive services like risk-informed fluoride supplementation (e.g. Fluoride Varnish) and application of dental sealants on permanent molar teeth are proven methods for preventing tooth decay. Annual dental visits and regular exams also ensure early detection and treatment of tooth decay, which can otherwise go unnoticed until it is too late causing pain and infection. Children insured through Medi-Cal have full dental benefits through the Medi-Cal dental program. Utilization of dental services by Medi-Cal eligible children is a key indicator for assessing oral health needs in San Bernardino County. Increasing the rate of utilization of dental services by children is a Healthy People 2020 objective.

Children (Ages 0-5)

Oral Health Status

Secondary data from a school-based program that serves all Head Start and Early Head Start students (n=4,880) shows that more than one third of the children have untreated tooth decay in San Bernardino County. The prevalence of untreated tooth decay is higher among the older children who are 4-5 years of age (37.9%) as compared to their younger counterparts (27.7%) – (Figure 19).

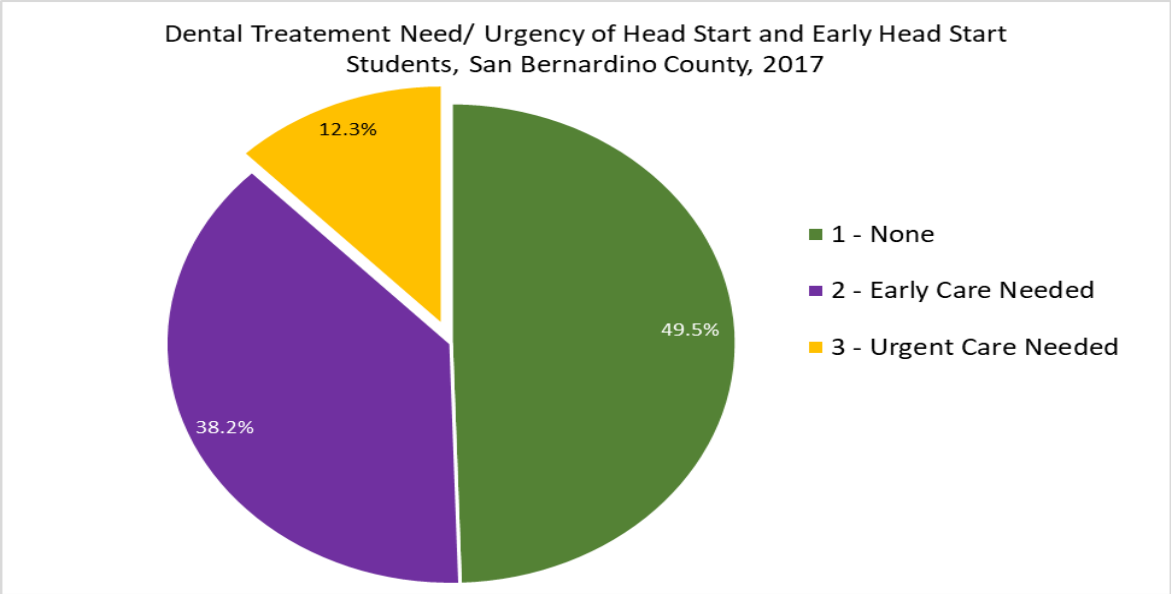
Figure 19



Early Smiles San Bernardino, Program Data, 2017

More than half (50.5%) of the Head Start and Early Head Start students screened had unmet dental care needs, with 38.2% needing early dental care (within 2-4 weeks) and 12.3% needing urgent care (within 24-48 hours) – (Figure 20).

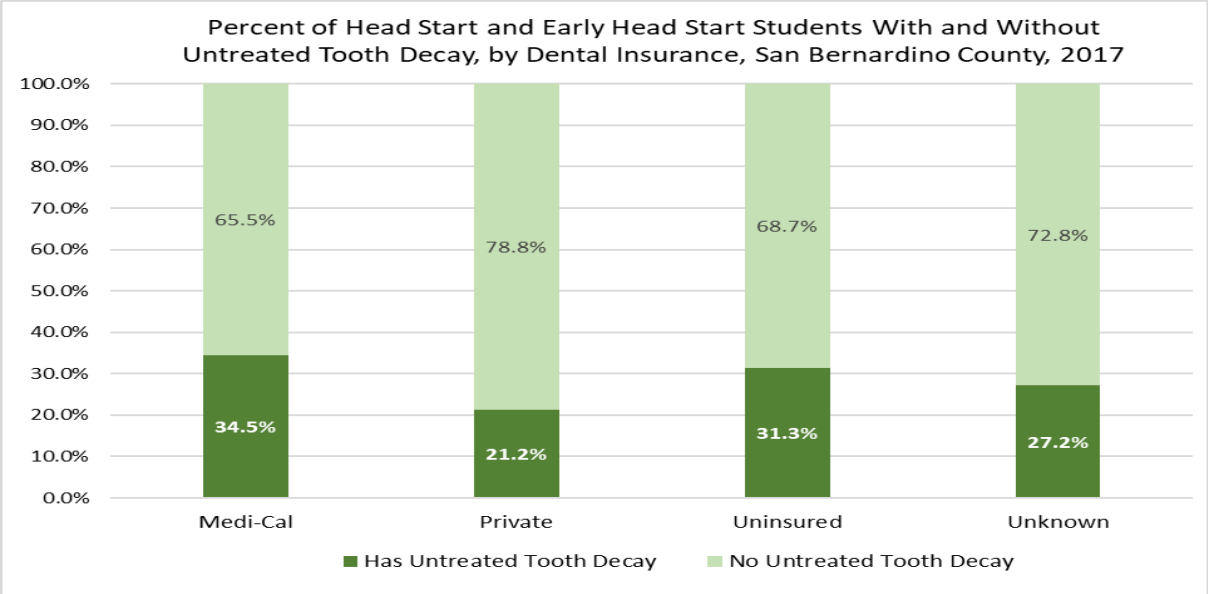
Figure 20



Early Smiles San Bernardino, Program Data, 2017

Untreated tooth decay was highest among Medi-Cal enrolled children (34.5%) followed by those who were uninsured (31.3%). Prevalence of tooth decay in this population was lowest among those who were privately insured (Figure 21).

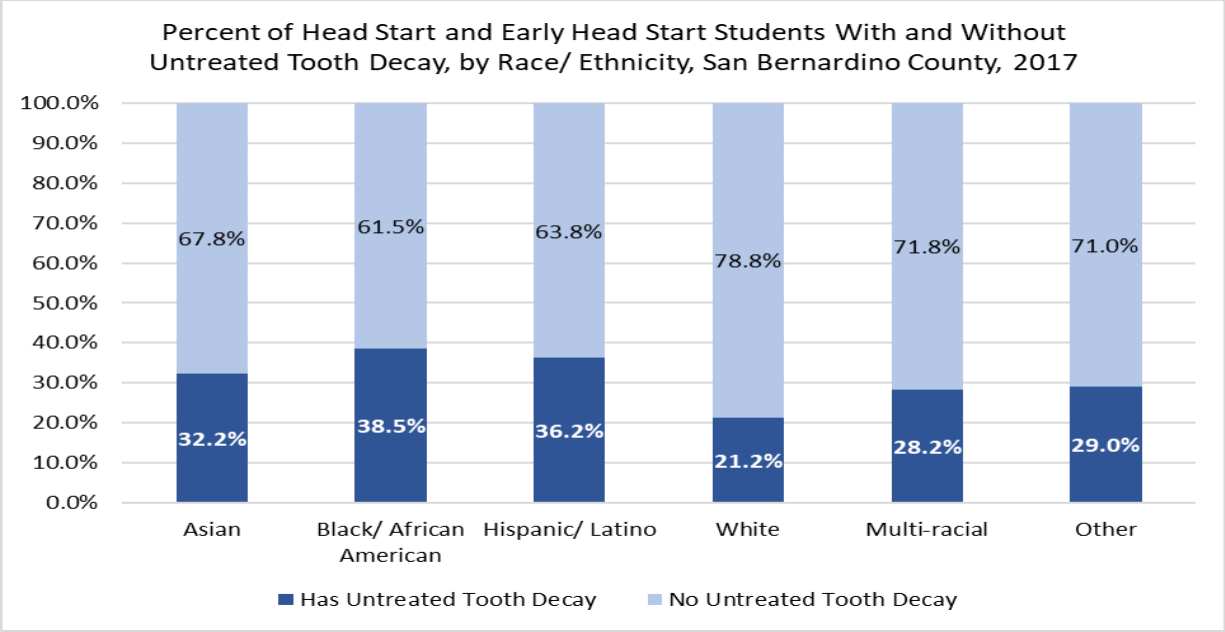
Figure 21



Early Smiles San Bernardino, Program Data, 2017

Disparities in prevalence of untreated tooth decay was evident in San Bernardino County's Head Start and Early Head Start students. Racial/ ethnic minorities had a higher prevalence of untreated tooth decay (38.5% in Black/ African American children, 36.2% among Hispanic/ Latino children and 32.2% among Asian children) as compared to white children (21.2%) - (Figure 22).

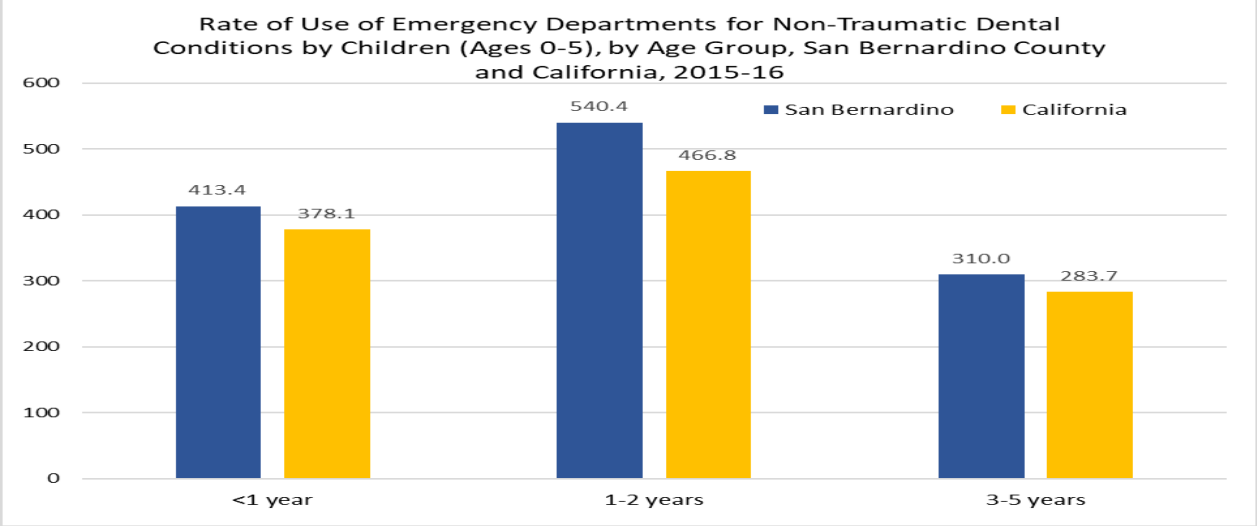
Figure 22



Early Smiles San Bernardino, Program Data, 2017

Emergency departments (EDs) are not a favorable source of care for non-traumatic dental conditions (NTDCs) due to several reasons – e.g. cost of care and lack of definitive treatment for these conditions at EDs. When tooth decay among other preventable dental conditions are left untreated and individuals do not have timely access to dental care, it can result in the use of emergency rooms. Rate of use of EDs for NTDCs is a measure of both prevalence of dental disease and poor access to dental care. In San Bernardino County, rate of non-traumatic dental visits among children 0-5 years old was higher than California average. In this age group, the highest rate of utilization of EDs for NTDCs was among 1-2 year old children (540.4 visits per 100,000 persons) – (Figure 23).

Figure 23



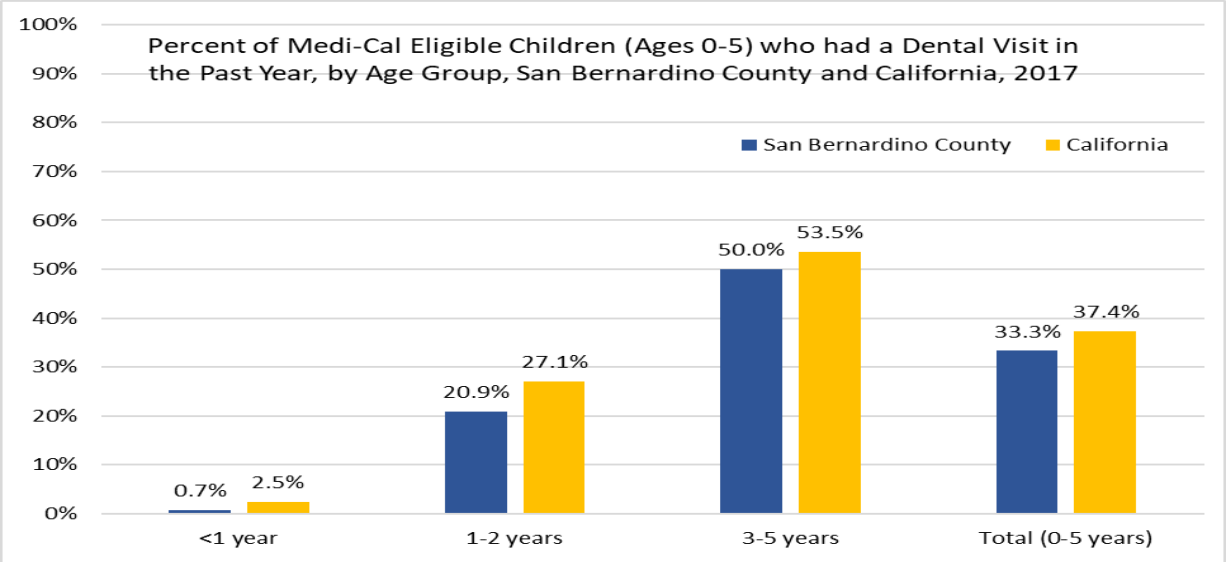
California Department of Public Health – Office of Oral Health's analysis of data from the Office of Statewide Health Planning and Development, 2012-2016.

Utilization of dental services

It is recommended that a child establish dental care by his/ her first birthday or soon after the appearance of the first tooth, whichever comes first. Early establishment of dental care and receipt of preventive services during early childhood like risk-based fluoride supplementation can significantly minimize the risk of future dental decay.

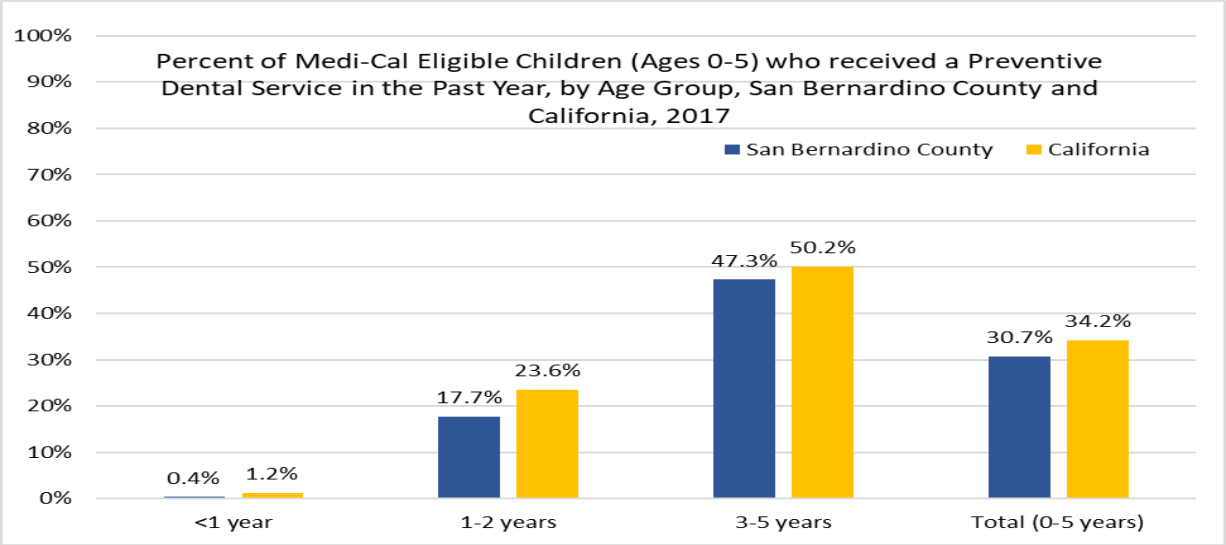
Yet, only a little over 1 in 3 Medi-Cal eligible children ages 0-5 in San Bernardino County had received a dental service in the past year, according to 2017 data. Furthermore, the rate of utilization of services in the County is lower than the California average. Children ages 3 to 5 have the highest rate of utilization of dental services (50.0%), which is also higher than the San Bernardino average for 0-5 year old children (Figure 24). Utilization rates and trends were similar for preventive services. Overall, 30.7% of Medi-Cal eligible children received a preventive dental service in the past year with the 3-5 year old children having a significantly higher rate of utilization than San Bernardino average (47.3%) – (Figure 25).

Figure 24



California Department of Health Care Services, Open Data Portal, 2017

Figure 25



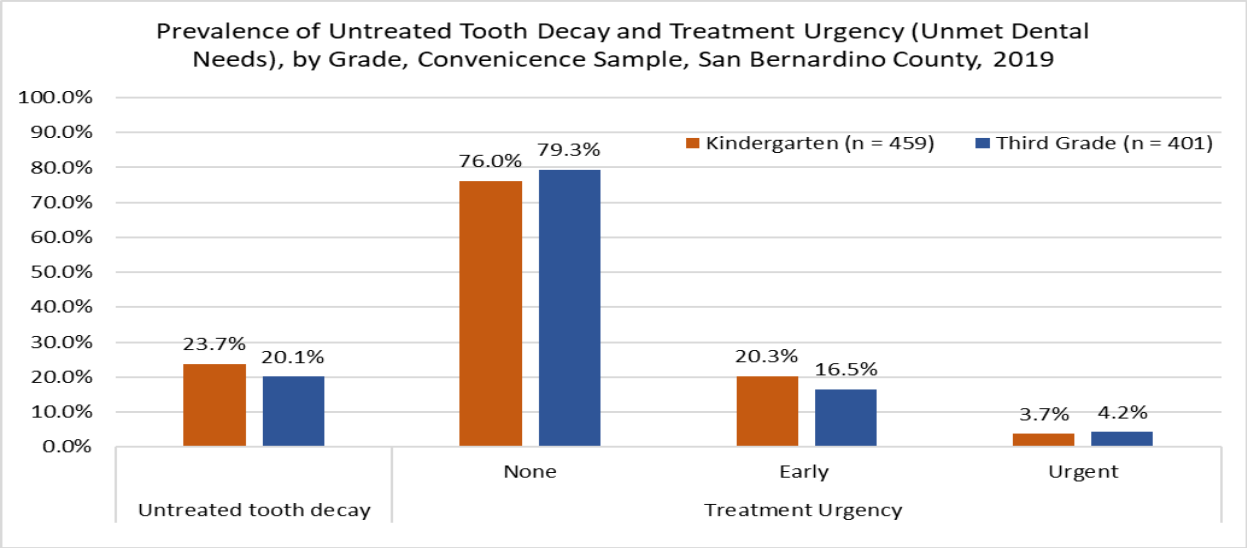
California Department of Health Care Services, Open Data Portal, 2017

Children (Ages 6-20)

Oral Health Status

Most recent preliminary data from a convenience sample of students in San Bernardino County Public Schools shows that 23.7% kindergarteners and 20.1% third graders suffer from untreated tooth decay (Figure 26). Although these data are still preliminary and there are no relevant standards for comparison to statewide prevalence, it is apparent that there is a high level of unmet dental needs in the County's children. Nearly 24% kindergarteners and 21% third graders have unmet dental treatment needs. These findings show that many children are entering the public school system having experienced some tooth decay.

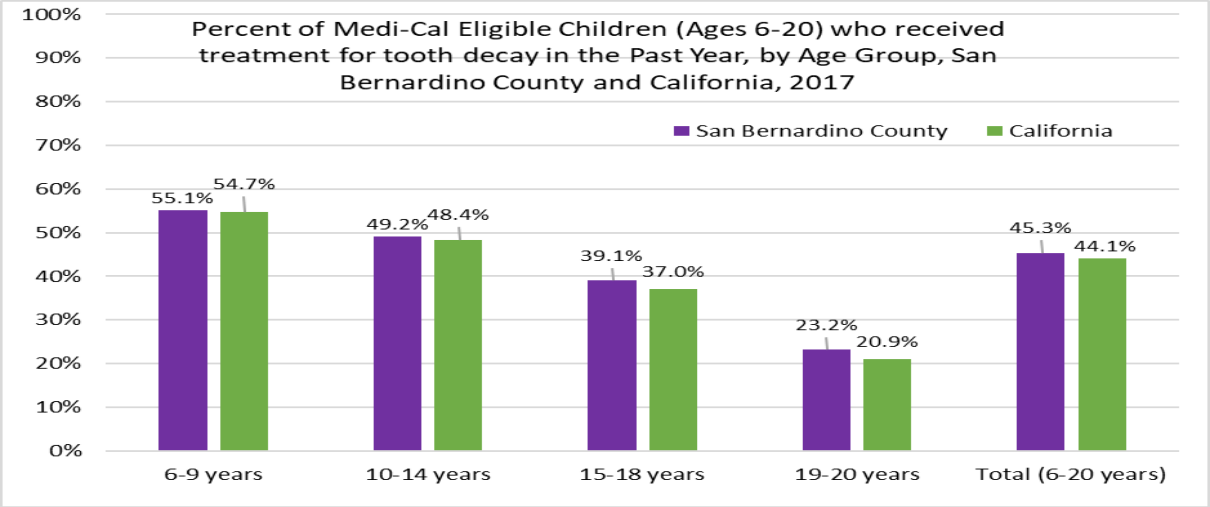
Figure 26



San Bernardino County Oral Health Needs Assessment, Basic Screening Survey, 2019

Although tooth decay is 99% preventable, several children continue to suffer from it. Among the Medi-Cal eligible children (ages 6-20), more than half (55.1%) received treatment for tooth decay in one or more teeth in 2016 (Figure 27). While this indicator is a measure of prevalence of tooth decay and access to dental care, it provides a conservative estimate of the burden of dental disease among the County's Medi-Cal eligible children. Adolescents and transitional age youth received treatment services for tooth decay at a lower rate than their younger counterparts. It is important to note though, that a lower rate of receipt of dental treatment among older children does not necessarily equate fully to a lower burden of untreated dental disease (Figure 27).

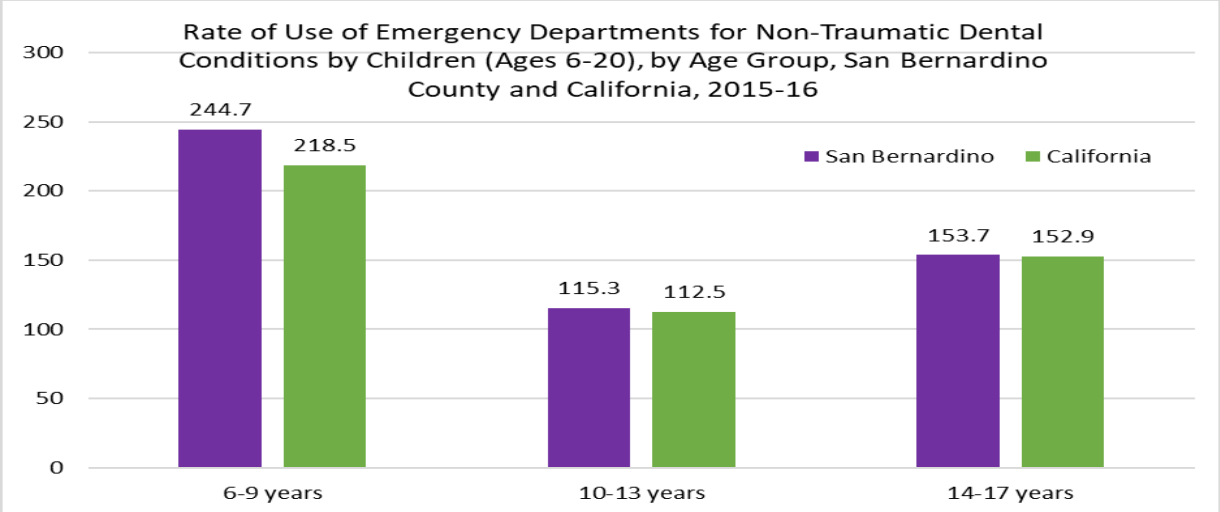
Figure 27



California Department of Health Care Services, Open Data Portal, 2017

In San Bernardino County, rate of non-traumatic dental visits (244.7 visits per 100,000 children) was higher than California average (218.5 visits per 100,000 children) for 6-9 year old children. Of all children (0 to 18 years) residing in San Bernardino County, utilization of emergency departments for NTDCs was highest among 6-9 year old children. This trend was also observed statewide. Among 6-20 year old children, lowest rate of ED visits for NTDCs was among those 10-13 years of age (Figure 28).

Figure 28



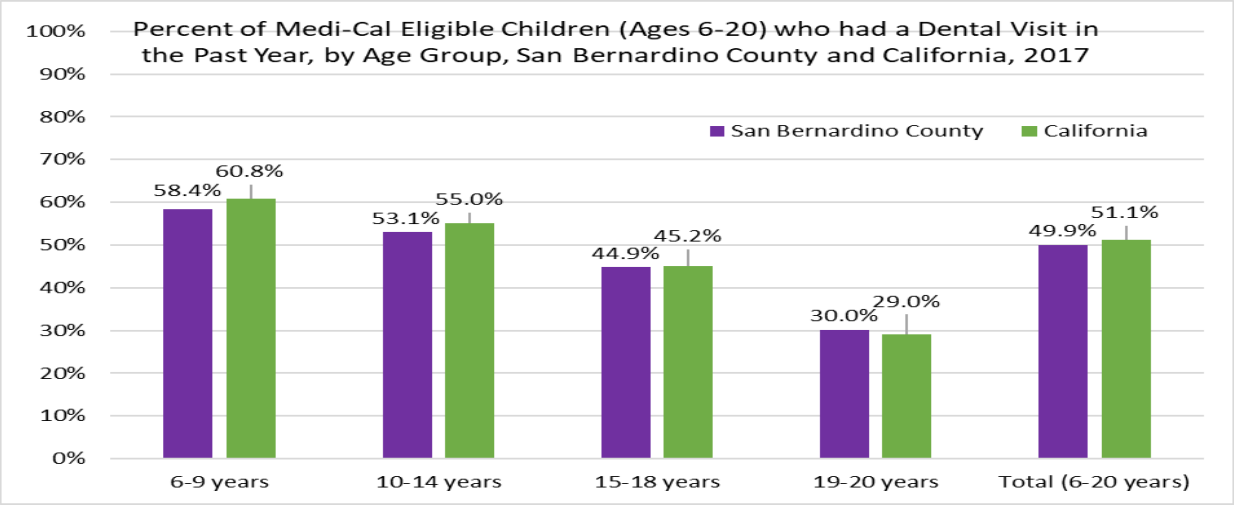
California Department of Public Health; Office of Oral Health's analysis of data from the Office of Statewide Planning and Development, 2015-16.

Utilization of dental services

Only one in two Medi-Cal eligible children (49.9%) had a dental visit during the past year per 2017 data, although annual visits are recommended for all children (Figure 29). Utilization rates for annual dental visits (at least one visit during the past year for any eligible service) were highest (and higher than average) among 6-9 year old children (58.4%) followed by 10-14 year (53.1%). Utilization of dental

services was lowest among the County's oldest Medi-Cal eligible children (30.0% for 19-20 year olds). Utilization rates across all age groups (Figure 29) were 1 to 3% higher or lower than California average.

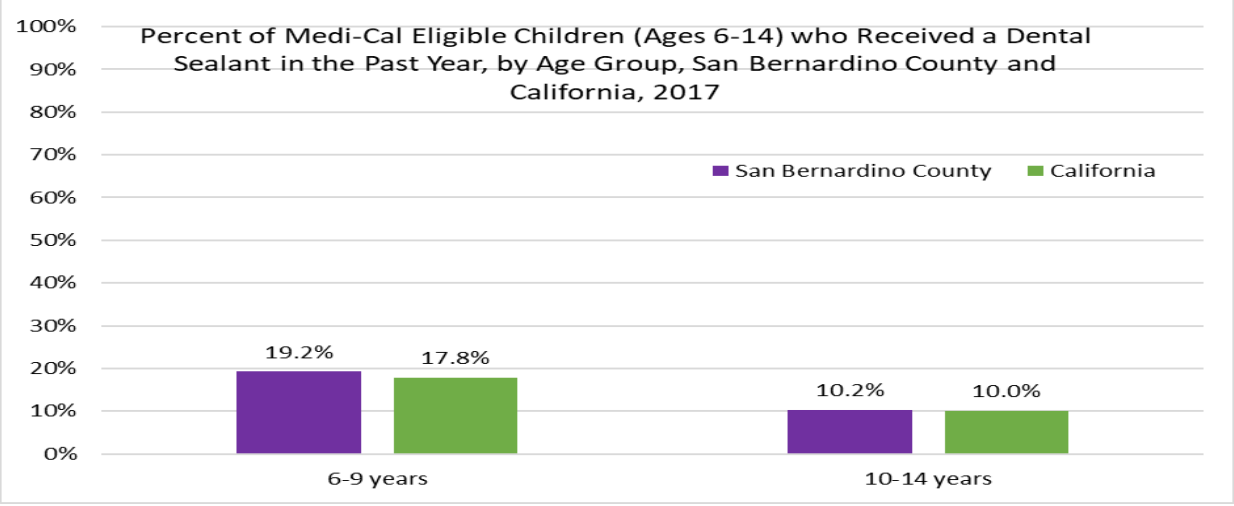
Figure 29



California Department of Health Care Services, Open Data Portal, 2017

Receipt of dental sealants by Medi-Cal eligible children in San Bernardino County was comparable or slightly higher than California average in 2016 (Figure 30). Yet, utilization rates for sealants (a proven intervention for preventing tooth decay) are as low as 19.2% among 6-9 year old children and 10.2% among those 10-14 years of age.

Figure 30



California Department of Health Care Services, Open Data Portal, 2017

Adults (< 65 years)

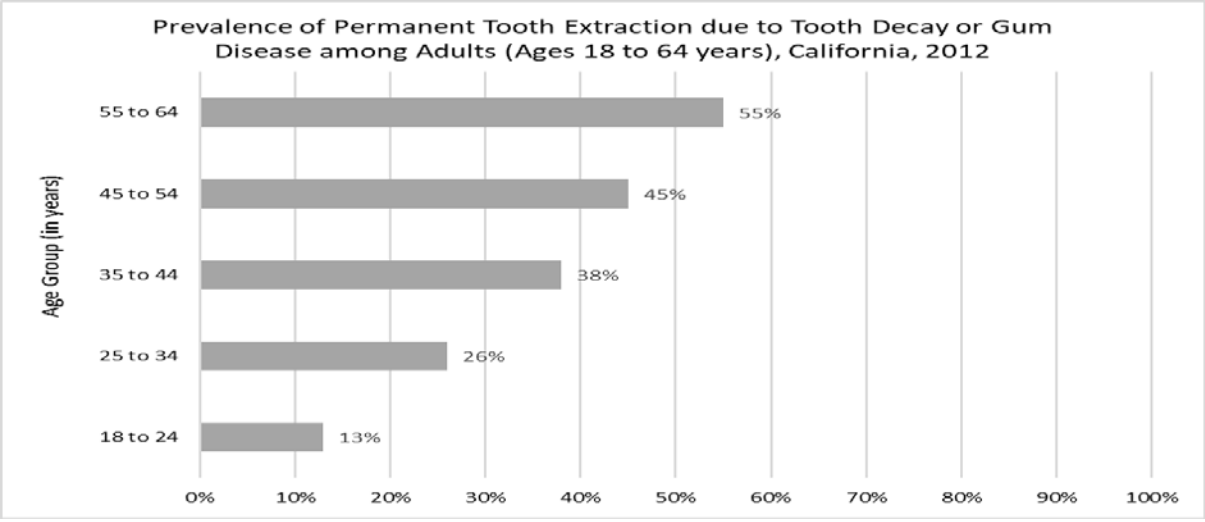
More than 1 in 4 (27%) U.S. adults have untreated tooth decay, nearly half (46%) of adults 30 years and older have gum disease[18,19]. Dental disease can affect individuals across the life span. Early prevention coupled with ongoing care and maintenance through adulthood is integral to good health and well-being. Individuals are also at an elevated risk of dental problems like gum (and periodontal) disease and oral/pharyngeal cancer during adulthood. Good oral health in adulthood can also support optimal oral health as one ages and enters older adulthood. National data show that dental disease among adults often goes untreated[18]. It is important to ensure that adults have the resources needed to utilize dental services in a timely manner and are aware of good oral health practices. Increasing the rate of utilization of dental services by adults is also a Healthy People 2020 objective.

Oral Health Status

In California, 36% of adults 18 to 64 years of age reported having a history of tooth loss resulting from tooth decay and/ or periodontal disease. This rate was the same as U.S. average. Statewide, the prevalence of tooth loss due to preventable dental diseases like tooth decay and gum disease was higher among older age groups. Prevalence was 13% among 18 to 24 year olds and 55.0% among 55 to 64 year olds (Figure 31). More recent data by the American Dental Association shows that adults in California face a significant burden of unmet dental needs. (Figure 32)

Both at the State and County-level, data on prevalence of tooth decay in adults 18 to 64 years of age is not available. As part of this needs assessment, this data gap has been identified and will be addressed over the coming years.

Figure 31



California Department of Public Health, Status of Oral Health in California: Oral Disease Burden and Prevention, 2017

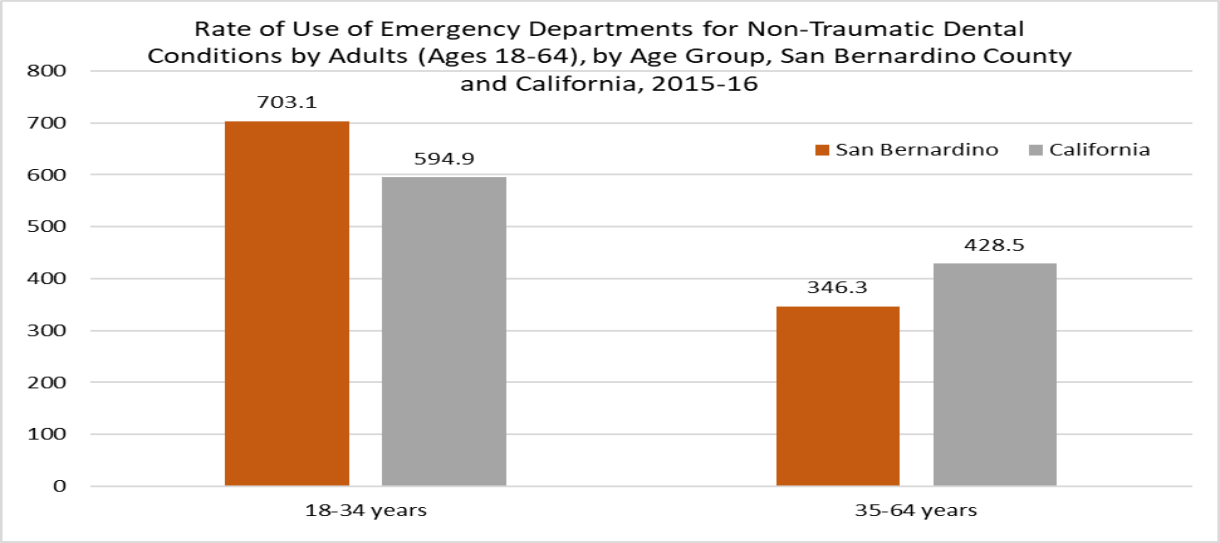
Figure 32

Unmet Dental Need Among Adults in California, 2017

American Dental Association, 2017

A proxy for unmet dental care needs and poor access to care is the rate of utilization of emergency departments for preventable and non-traumatic dental conditions. Adults 18 to 34 years of age had the highest rate of utilization of emergency departments for non-traumatic dental conditions compared to all other age groups in both San Bernardino County (703.1 visits per 100,000 persons) and California (346.3 visits per 100,000 persons). The rate of use of emergency departments for non-traumatic dental conditions by adults (18 years and older) was significantly higher in San Bernardino County compared to California average (Figure 33).

Figure 33

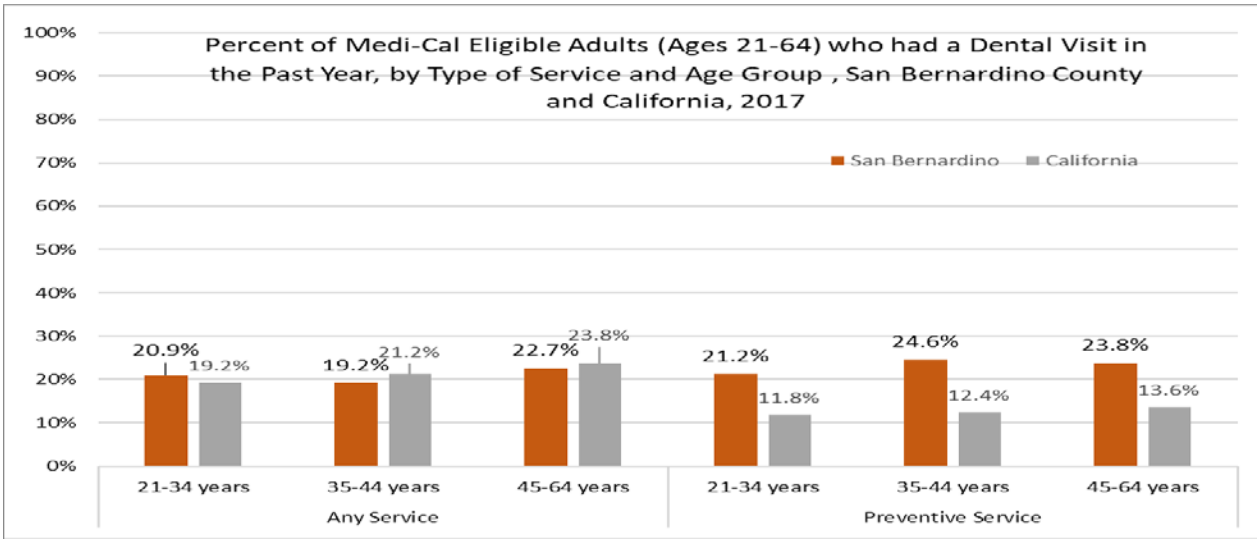


California Department of Public Health – Office of Oral Health's analysis of data from the Office of Statewide Health Planning and Development, 2015-16

Utilization of dental services

Low-income adults who are eligible for Medi-Cal have had dental benefits sporadically. After a complete cut-down of dental benefits for adults in Medi-Cal in 2009, benefits were partially restored in 2013 and fully restored in 2018. Data show that utilization of services by adults increased significantly following partial restoration of adult dental benefits in 2013. With full restoration of benefits, utilization is expected to further increase.

Figure 34



California Department of Health Care Services, Open Data Portal, 2017

Data from 2017 shows that only a little over 1 in 5 adults (Ages 21-64) have had at least one dental visit during the past year. Rate of utilization of any dental service by adults is comparable to California average (Figure 34).

Medi-Cal eligible adults in San Bernardino County utilize preventive dental services at a higher rate (nearly double) than the California average. Age group does not appear to be a strong determinant of utilization of dental services among Medi-Cal eligible adults (Ages 21-64) - (Figure 34).

Older Adults (65 years and above)

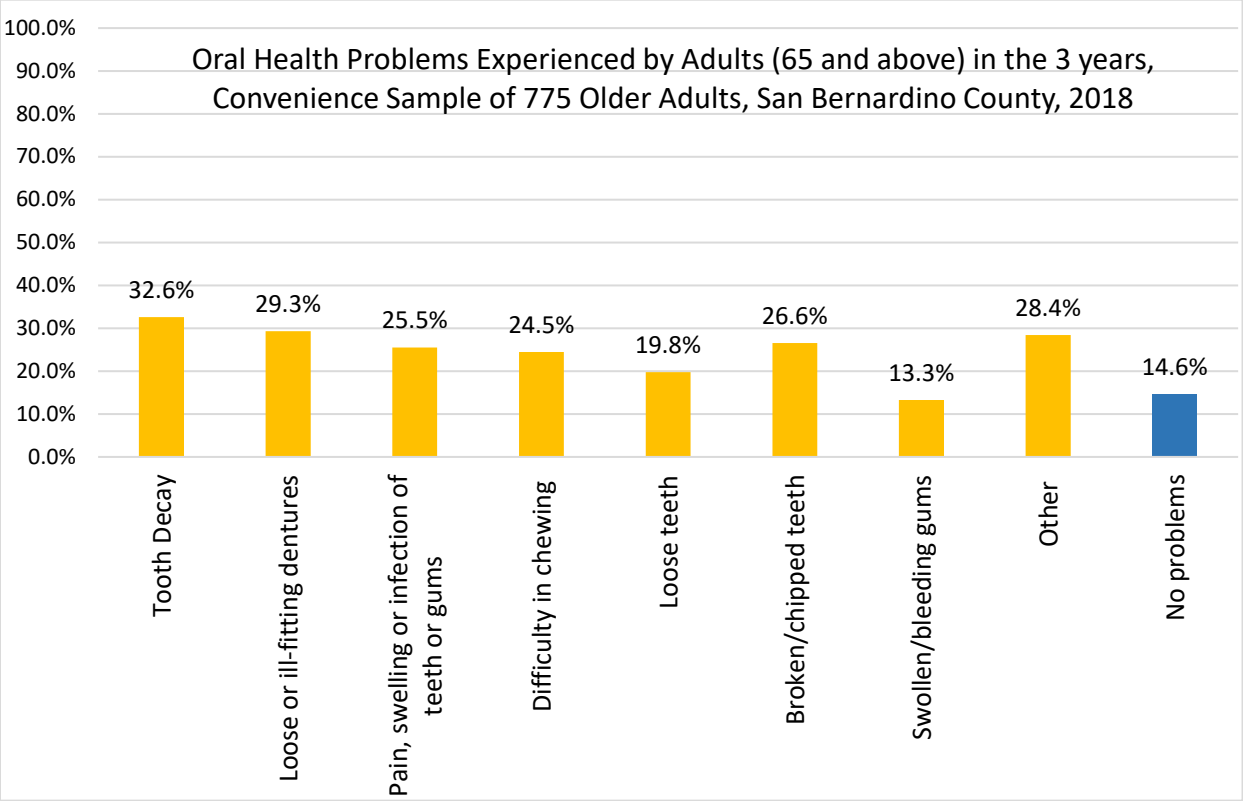
Older adults have unique oral health care needs and face a myriad of barriers in accessing care and maintaining good oral health[20]. Nationally, approximately 50% of nursing home residents are unable to perform three or more of the "Activities of Daily Living," one of which is personal hygiene that includes oral care[21]. Poor oral health of older adults is also fueled and exacerbated by natural changes associated with aging and other chronic health conditions[21]. These conditions can negatively impact overall health by making it difficult to chew or speak, undermining nutrition, leading to infection, exacerbating chronic conditions like hypertension and diabetes, impacting self-esteem, and lowering quality of life[20-24]. A recent study showed that older adults who had 20 or more natural teeth retained in their mouth had a significantly lower 5-year mortality rate than their counterparts who had 19 or fewer natural teeth[25]. In California, recent data show that nearly one in two older adults residing in Skilled Nursing Facilities and

one in three community dwelling seniors has untreated tooth decay[26]. Decreasing the percent of older adults with tooth loss due to tooth decay or gum disease is also a Healthy People 2020 objective.

Oral Health Status

With support from the San Bernardino County Department of Aging and Adult Services, a short survey (referred to as 'Older Adults Survey' in future sections) was fielded to older adults (ages 65 years and above) who were served at select congregate meal sites and senior centers. A total of 775 survey responses (convenience-sampled) were received and analyzed to understand the oral health needs of older adults in San Bernardino County. In a survey of 775 non-institutionalized older adults in San Bernardino County, nearly 85% of the older adults reported having one or more dental problems in the past 3 years. The most frequently reported dental problem was untreated tooth decay (32.6%) followed by loose or ill-fitting dentures (29.3%) and broken or chipped teeth (26.6%) – (Figure 35)

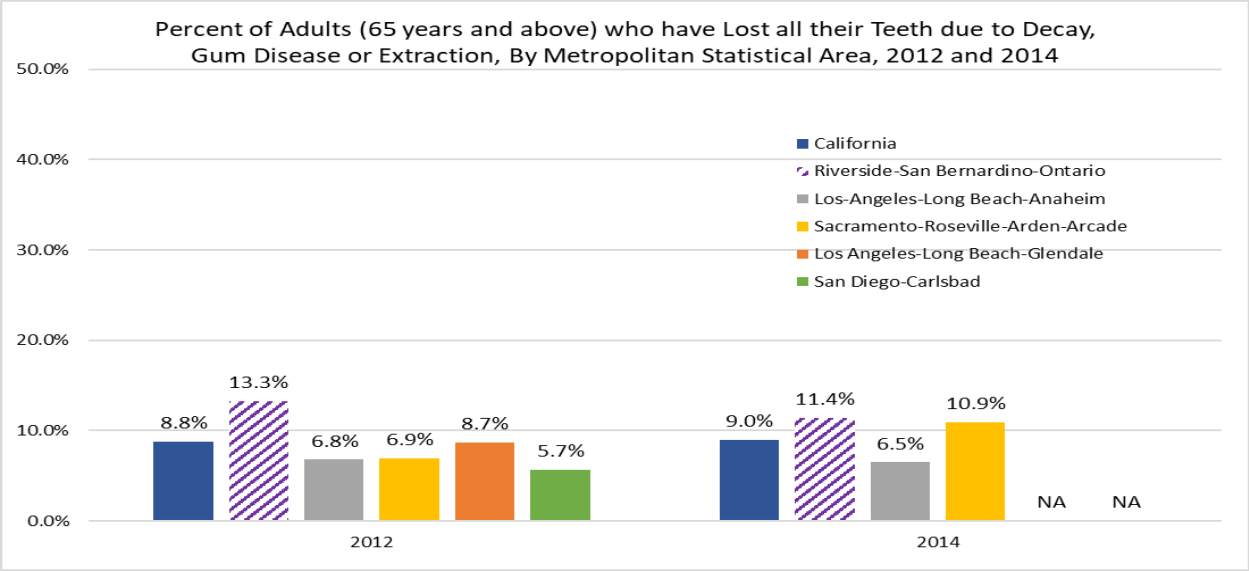
Figure 35



San Bernardino County Oral Health Needs Assessment, Older Adult Survey, 2018

According to 2014 data from the Behavioral Risk Factor Surveillance System, in 2014, nearly 11.4% of all non-institutionalized older adults in the Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSSA) reported having lost all their teeth to decay, gum disease or extraction. The Riverside-San Bernardino-Ontario metro area has the highest percentage of older adults with complete tooth loss compared to other MSSAs assessed in this survey (Figure 36).

Figure 36

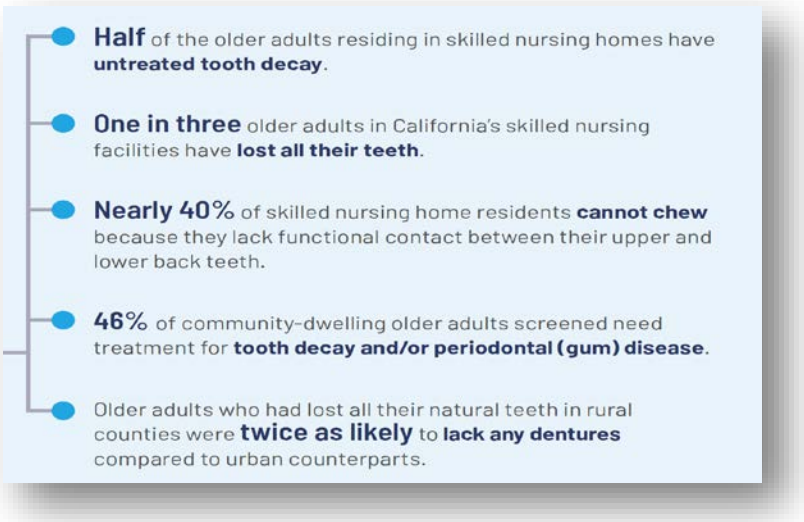


Behavioral Risk Factor Surveillance System, SMART City Data, 2012 and 2014

Older adults who are institutionalized and reside in skilled nursing homes have a higher rate of dental disease, partly exacerbated by their complex health condition and co-morbidities. While there is no data on the oral health status of older adults residing in skilled nursing homes, recent State-level data shows that there is significant unmet need.

Recently published statewide data show that older adults residing in both institutional and community settings have a high rate of dental disease and have significant unmet oral health care needs. Older adults in institutional settings have an especially high burden of disease and disparities by rurality of residence are apparent (Figure 37).

Figure 37

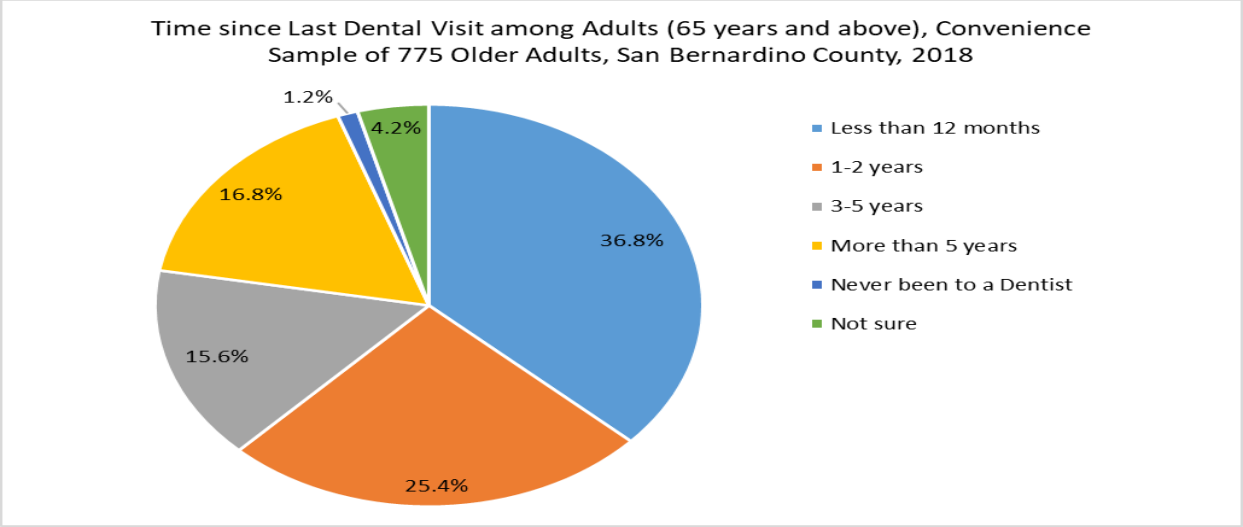


Center for Oral Health, A Health Smiles Never Gets Old: A Report on the Oral Health of Older Adults

Utilization of dental services

Nearly 61% of older adults surveyed from a convenience sample in San Bernardino County reported that they had not had a dental visit in more than 12 months. Nearly 40% of those older adults had not had a dental visit in more than 3 years. (Figure 38).

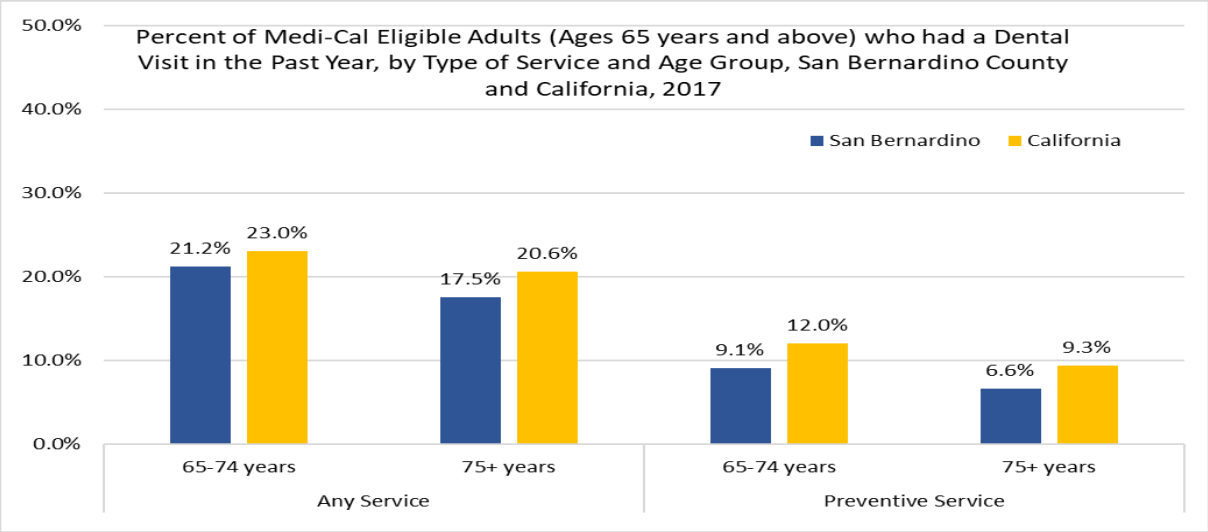
Figure 38



San Bernardino County Oral Health Needs Assessment, Older Adult Survey, 2018

Among older adults who can utilize their Medi-Cal coverage to access covered dental services, only a little over 1 in 5 older adults ages 65-74 utilized any dental services and less than 1 in 10 utilized preventive dental services. Utilization of services was much lower among older adults ages 75 and above (17.5% for any service and 6.6% for a preventive service). Utilization of services by Medi-Cal eligible older adults in San Bernardino was 2-4% lower than the California average depending on the specific age group and type of service (Figure 39).

Figure 39



California Department of Health Care Services, Open Data Portal, 2017

Pregnant Women

Pregnancy is characterized by unique and complex physiological changes, which may also adversely affect oral health. Poor maternal oral health has also been shown to elevate the risk of pregnancy complications and adverse birth outcomes like pre-eclampsia, pre-term birth, and low birth-weight infants[27]. Professionally delivered dental services are safe throughout pregnancy and benefits outweigh risks by a wide margin. In 2013, The American College of Obstetricians and Gynecologists (ACOG) concluded that "ample evidence shows that oral health care during pregnancy is safe and should be recommended to improve the oral and general health of the woman"[28, 29]. Yet, more than half the women do not visit a dentist during pregnancy in California. Oral health care during pregnancy not only protects the mother but also extends to her child and family. Research has shown that woman's oral health status during pregnancy is a good predictor of her future child's risk for developing dental caries[30]. Pregnancy is an opportune time to not only address a woman's oral health but also promote good oral health practices for her newborn child.

Oral Health Status

State-level data from 2012 showed that more than half (53%) of pregnant women reported having a dental problem during pregnancy. Women with specific socio-demographic characteristics – having incomes below 100% of the federal poverty level, being Black/ African-American, having only a high school education and being insured through Medi-Cal, had a higher prevalence of dental problems during pregnancy than the statewide average[31].

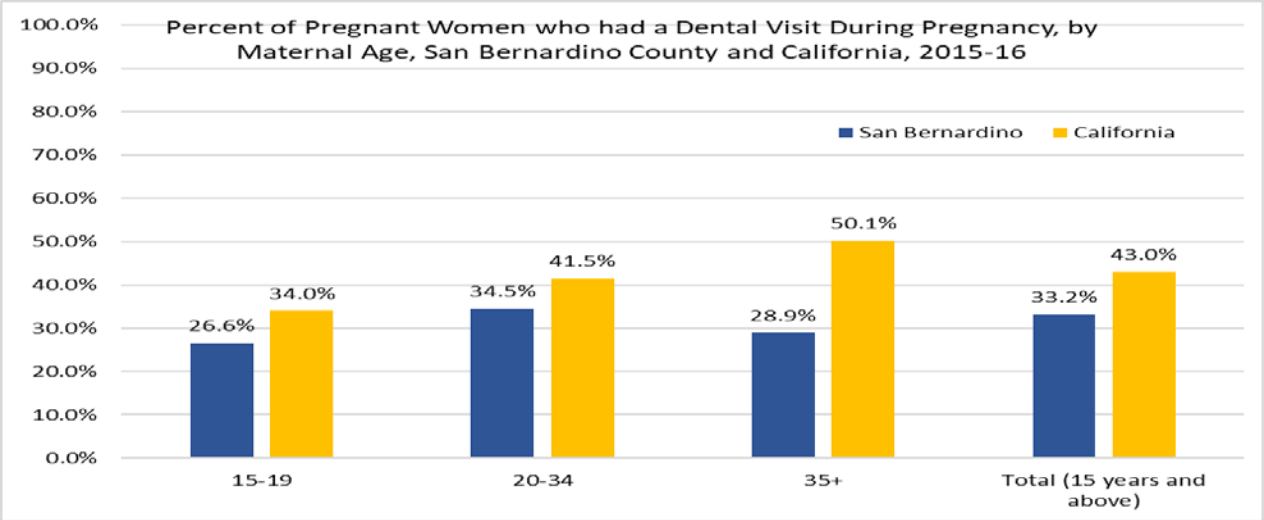
Data on status of oral health is unavailable at the County-level and was not collected as part of this needs assessment. This has been identified as a data gap to be addressed.

Utilization of dental services

Only a little over 1/3rd (33.2%) of pregnant women in San Bernardino County reported receiving any dental care during pregnancy. Furthermore, rate of utilization of dental services by pregnant women in San Bernardino County is significantly lower than California average (43.0%) – (Figure 40).

Maternal age is an important predictor of utilization of dental services by women during pregnancy. In San Bernardino County, like the trend statewide, older women (maternal ages 20 years and older) were more likely to have a dental visit during pregnancy compared to their younger counterparts. Nearly 35.4% of women ages 20-34 and 28.9% of women 35 years and older reported having a dental visit during pregnancy, and there was no statistically significant difference between these two maternal age groups (Figure 40).

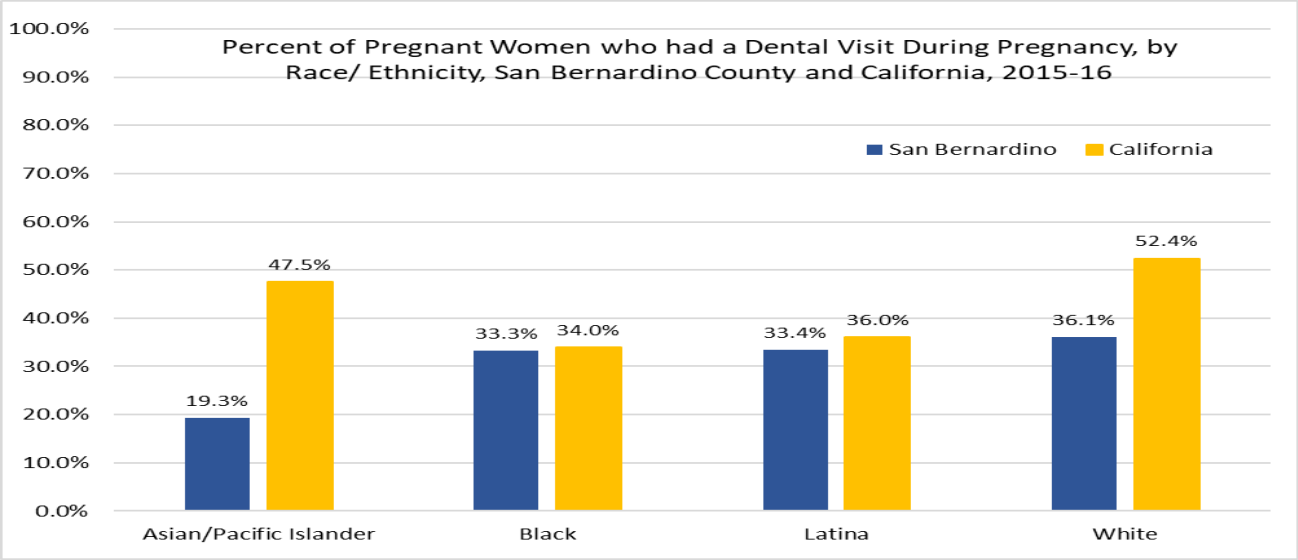
Figure 40



Maternal Infant Health Assessment, 2015-16

Disparities by race and ethnicity in access to and utilization of dental care by pregnant women are evident. Asian/ Pacific Islander women had the lowest utilization rates (19.3%) followed by Black and Latina women (33.3% and 33.4% respectively). All non-White groups of women utilized dental services at a lower rate during pregnancy than White women (36.1%) in San Bernardino County. It is important to note that although white women fare better than racial/ ethnic minorities in San Bernardino County, they have a significantly lower rate of utilization of dental services than California average (SB: 36.1% and CA: 52.4%) – (Figure 41).

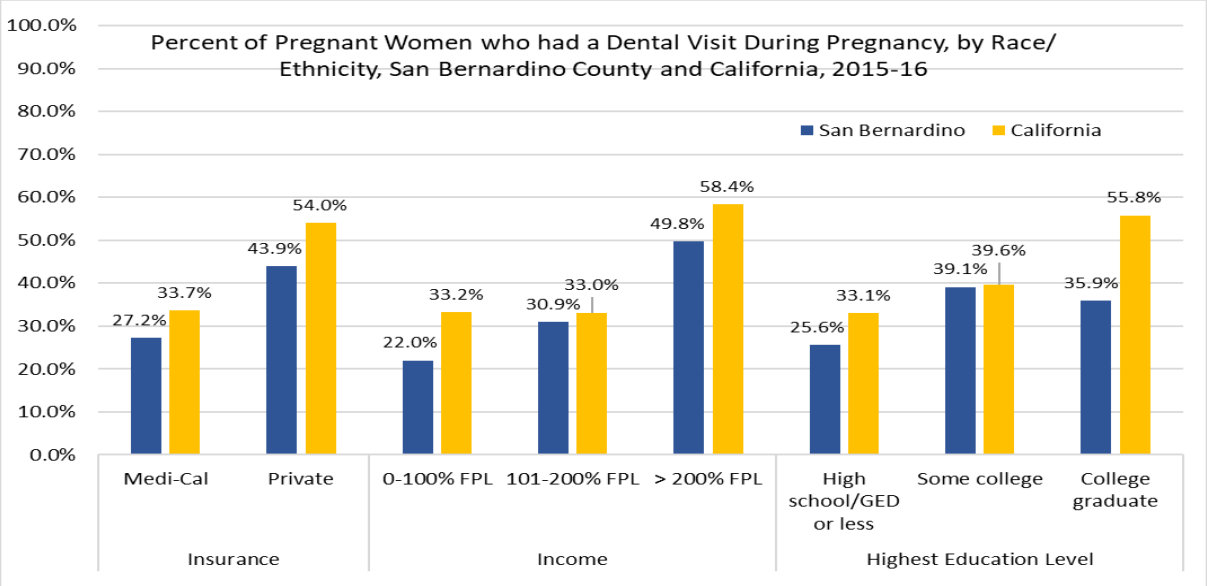
Figure 41



Maternal Infant Health Assessment, 2015-16

Women with private insurance (43.9%) were significantly more likely to utilize dental services during pregnancy than those with Medi-Cal (27.2%). Family income/ poverty was a strong predictor of a pregnant woman's likelihood of having a dental visit during pregnancy. Women with the highest family income (> 200% of Federal Poverty Guideline) were twice as likely to have a dental visit during pregnancy as those with the lowest family income (0-100% of Federal Poverty Guideline). Women with a High school/ GED or less were less likely to have had a dental visit during pregnancy (25.6%) (Figure 42).

Figure 42



Maternal Infant Health Assessment, 2015-16

Individuals with Intellectual and Developmental Disabilities

Individuals with intellectual and developmental disabilities (IDDs), and special health care needs (e.g. autism, Down syndrome, and cerebral palsy) in the United States have poorer oral health and encounter more barriers attempting to access dental services than the general population[32, 33]. They are at an elevated risk for tooth decay, gum disease and associated exacerbation of existing health issues[32, 33]. They also face unique challenges in maintaining oral health hygiene and accessing dental services. Additionally, there is a lack of research and surveillance that documents their oral health status and oral health care needs and challenges at national, state, and local levels. As a result, this population continues to remain underserved and, consequently, suffer from poor oral health which can significantly impact their overall health, wellbeing, and quality of life.

In 2010, 56.7 million people, about 19% of the U.S. population, reported having a disability[34]. Compared to the general population, individuals with IDDs are less likely to be employed, more likely to live in poverty, and more likely to rely on government assistance than their healthier counterparts[34]. Nationally, 1 in 10 people with disabilities live in poverty and 1 in 4 cannot make ends meet (200% at FPL)[34]. This suggests that individuals with IDDs are more financially vulnerable and, thus, less likely able to afford much needed dental services, leaving them at risk for poorer oral health and coinciding health risks. For those with IDDs, dental care is often reported as a top medical need following mental health services and medication. One study found that among 4,732 adults with IDDs about 88% of the

participants had caries, 32.3% had untreated dental caries, 80.3% were diagnosed with periodontitis, and 10.9% were edentulous[35].

Quantitative data on status of oral health and utilization of dental services is unavailable at the County- and State level and was not collected as part of this needs assessment. This has been identified as a data gap to be addressed.

V. Oral Health Workforce and System of Care

In the oral health care system, there are several types of workforce, service delivery sites and non-traditional access points. To meet the needs of a diverse population in a large geographic area like San Bernardino County, it is critical to assess, build and evaluate capacity and coordinate efforts to ensure that everyone has access to timely and quality dental services, especially the most vulnerable and underserved populations.

The oral health care system is comprised of (not limited to):

1. Dental providers – Including dentists, dental hygienists, dental hygienists in alternative practice and dental assistants.

2. Dental clinics – Individual clinics, group practices, etc. that are often privately owned by the provider or corporately owned by a dental service organization (DSO).

3. Hospital-based dental clinics

4. Community clinics or health centers – Federally qualified Health Centers (FQHC), FQHC lookalikes, community and free clinics.

5. Mobile dental clinics/vans/practices – These may be run by any of the above clinic types and are intended to increase access beyond the brick-and-mortar clinic's geographic reach. This is also a practice of choice for institutional facilities like skilled nursing homes and helps bring services to individuals who are unable to travel to a dental clinic. This also includes the practice of Tele-Dentistry or Virtual Dental Home (VDH).

6. School-based health centers with dental clinics

7. School-based or school-linked dental programs – These are programs focused on increasing access to preventive dental services (like screenings, fluoride varnish application, sealant placements, oral hygiene instruction and care coordination) at schools. Increasing the number of FQHCs with an oral health component is a Healthy People 2020 objective. The oral health care system plays a central role in achieving several other HP 2020 objectives.

San Bernardino County has 1,345 professionally active dentists, 421 dental hygienists (RDH) and 12 registered dental hygienists in alternative practice (RDHAP). In San Bernardino County, there are more dentists per 100,000 residents (89.95 per 100,000) compared to California (76.79 per 100,000). (NOTE: Population estimates were obtained from the data file of Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016 from U.S. Census Bureau, Population Division. A dentist practicing in more than one county is counted in each of the county in which the dentist practices. Hence, dentists may be counted twice, and the total number of dentists calculated by adding the number of dentists in each county may not provide an accurate estimate of dentists in California. SOURCE: American Dental Association Health Policy Institute).

Forty-seven percent (41%) of San Bernardino County dentists are Asian, 41% are white, 13% are Hispanic/Latino and 3% Black/African American. The racial and ethnic distribution of the dental workforce in San Bernardino County is like that of California overall, but not reflective of the racial/ ethnic diversity of the population. Much like the rest of California, there is a shortage of dentists who specialize in pediatric dentistry. Only 3% of all active dentists in San Bernardino County are pediatric dentists. This has been identified by stakeholders as a key barrier as it impacts access to care for very young children (1-3 years of age), children who need general anesthesia to receive dental care, children with intellectual and developmental disabilities and those with other special health care needs.

While San Bernardino County has a large dental workforce, only 1 in 10 (9.5%) dentists accept Denti-Cal (Medi-Cal's dental program) – (Figure 43)

Figure 43

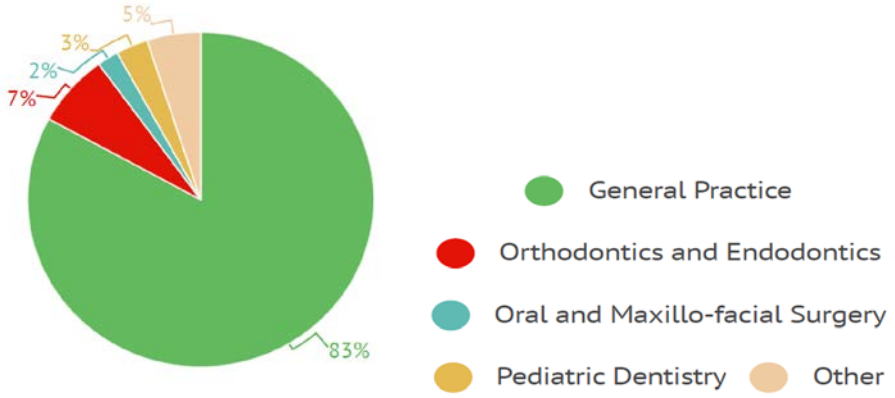
Percent of Professionally Active Dentists who Accept Medi-Cal Insurance, San Bernardino County and California, 2017

American Dental Association, 2017

Several barriers have been identified through qualitative interviews for low dentist participation in Denti-Cal. The most commonly cited reason is the low reimbursement rate for dentists who participate in Denti-Cal. California has the second lowest Medicaid (Denti-Cal) reimbursement rates in the country. It is important to note that several state-level policy changes have resulted in an increase in reimbursement rates since 2017 and more work is being done to address this issue. A survey of Denti-Cal providers in San Bernardino County shows that most threshold languages are spoken at clinics (82.1% Spanish, 9.9% Tagalog, 11.6% Korean and 7.5% Chinese). More than 90% of the clinics reported that they serve children and adults but, only 66% reported that they treat children younger than 3 years of age.

Figure 44

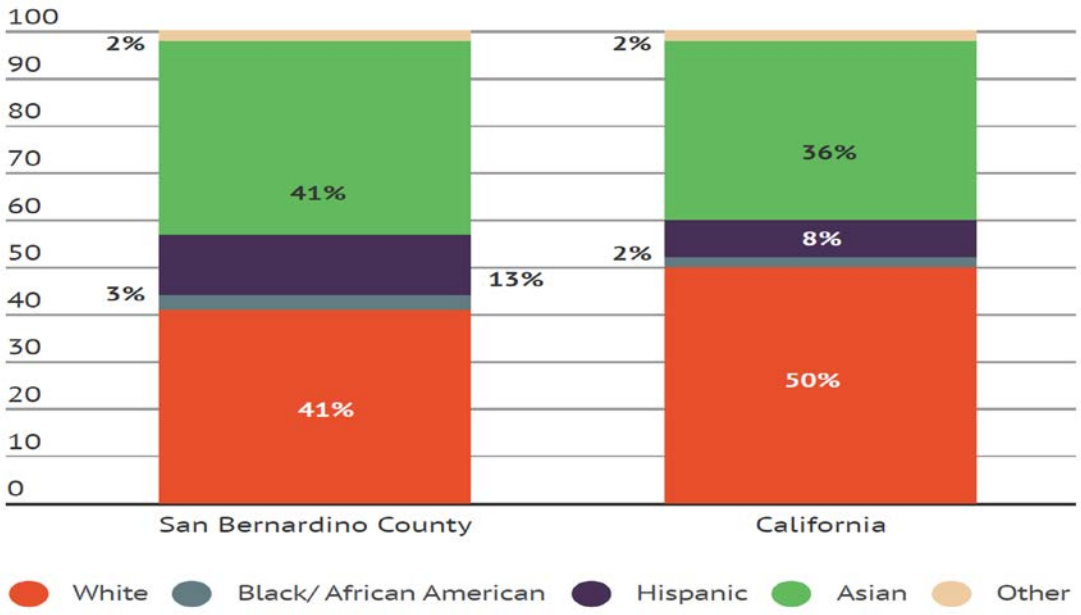
Distribution of Professionally Active Dental Providers by Dental Specialty, San Bernardino County, 2017



American Dental Association, 2017

Figure 45

Distribution of Professionally Active Dentists by Race/ Ethnicity, San Bernardino County, 2017

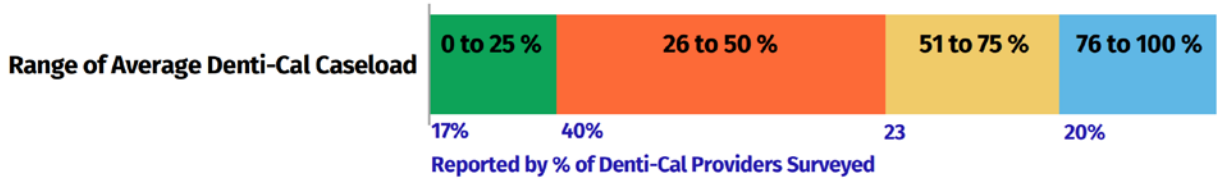


American Dental Association, 2017

One key barrier identified among Denti-Cal providers and clinics is that often, Denti-Cal clients account for small proportion of their patient population. In fact, more than 56% of the Denti-Cal providers surveyed reported that Denti-Cal patients make up less than half of their total caseload.

Figure 46

Average Denti-Cal Patient Caseload as a Percent of Total Clinic Caseload as Reported by Denti-Cal Providers in San Bernardino County, 2018



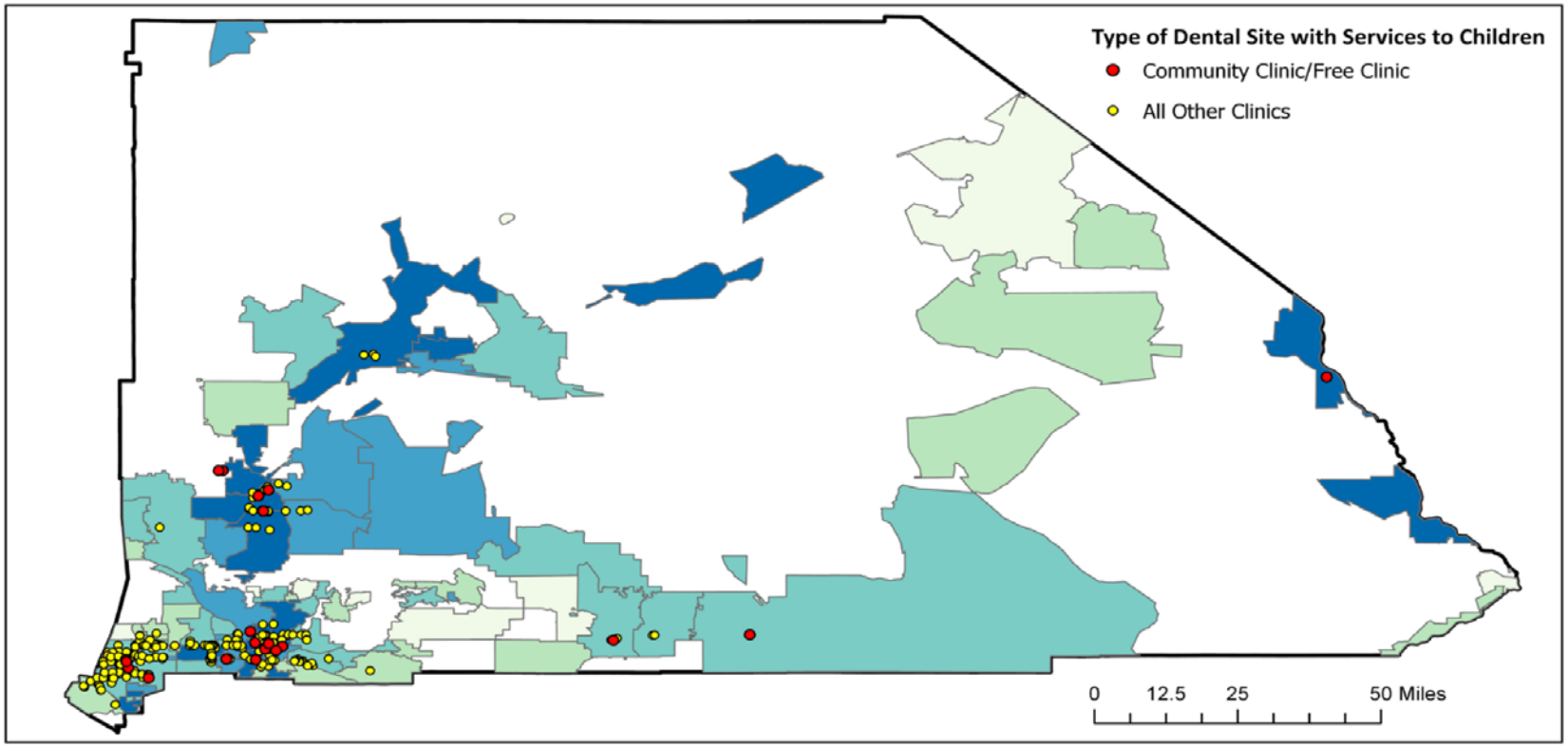
San Bernardino County Oral Health Needs Assessment, Denti-Cal Provider Survey, 2017

Geographic distribution of dentists is also important to note. As shown in the two maps below, certain parts of the County have a shortage of dental providers given the proportion of Denti-Cal eligible residents.

Figure 47

Child Dental Services in San Bernardino County, CA

Percentage of Medi-Cal Eligible Child (Ages 0-20 years) by Zip Code



% Denti-Cal Eligible Children by Zip Code

- ≤5%
- ≤10%
- ≤15%
- ≤20%
- ≤30%

Map excludes 1% of providers with a missing Zip Code.

Source: Denti-Cal Provider Directory, 2019
CA Medi-Cal Eligible Data System (MEDS) Extract, June 2018

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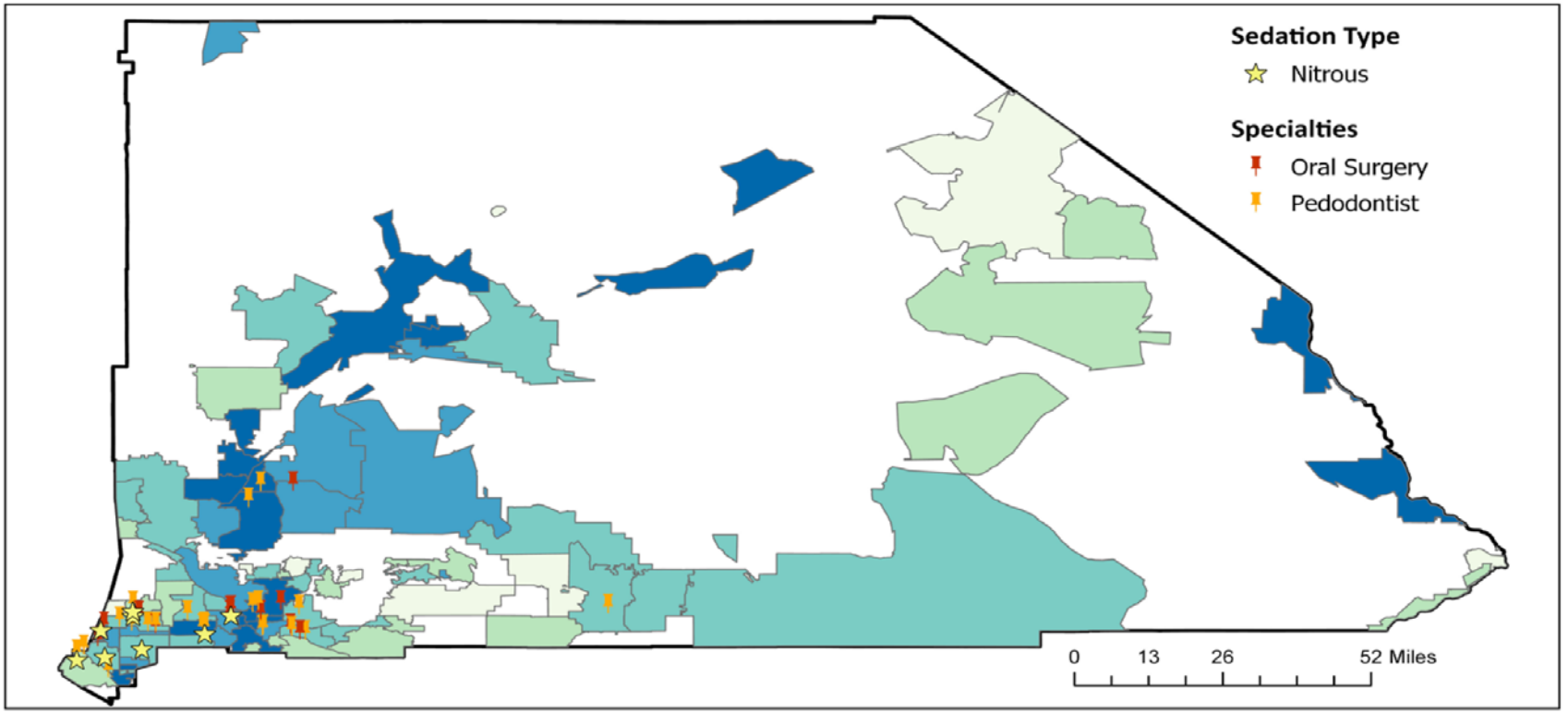
Figure 48

Child Dental Services in San Bernardino County, CA

Percentage of Medi-Cal Eligible Child (Ages 0-20 years) by Zip Code



% Denti-Cal Eligible Children by Zip Code

- ≤5%
- ≤10%
- ≤15%
- ≤20%
- ≤30%

Map excludes 1% of providers with a missing Zip Code.

Source: Denti-Cal Provider Directory, 2019
CA Medi-Cal Eligible Data System (MEDS) Extract, June 2018

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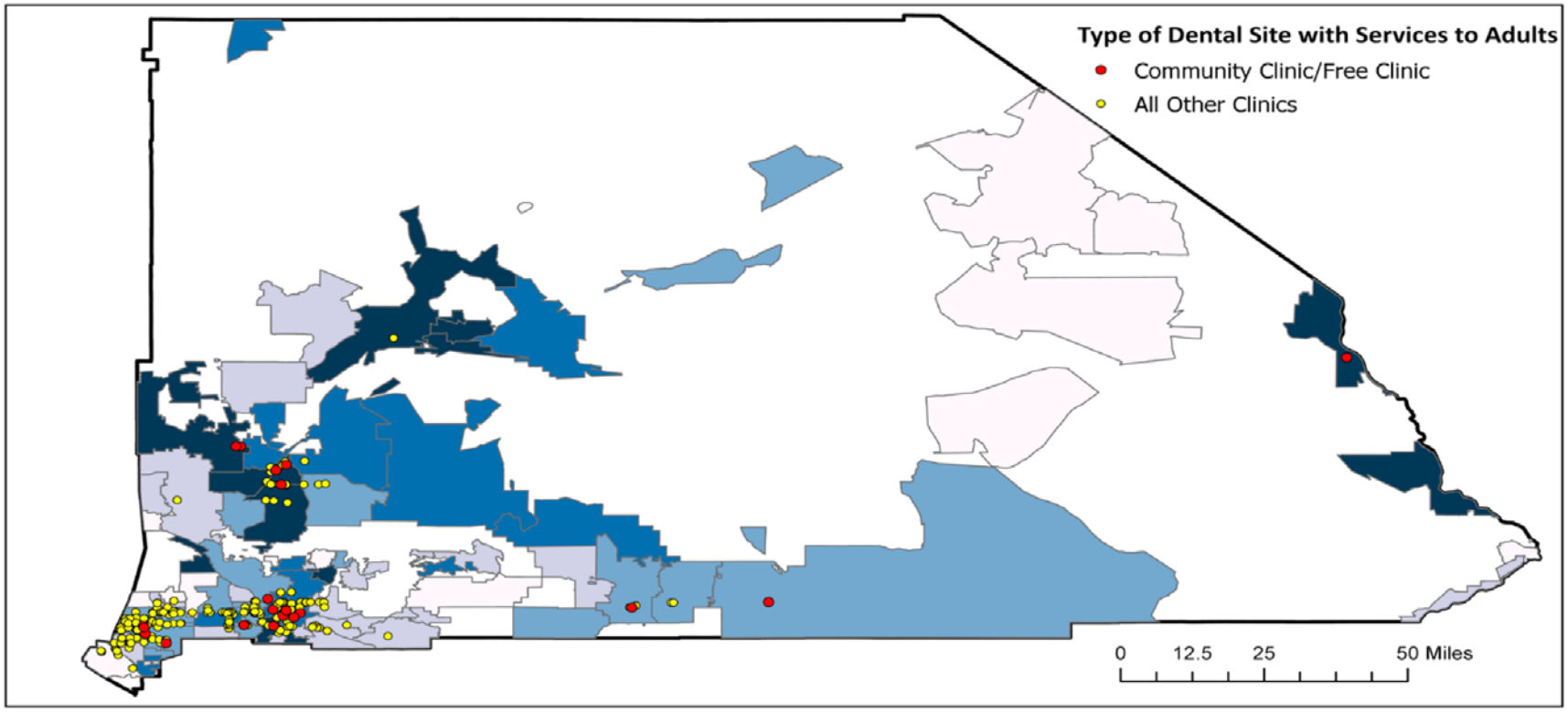
Figure 49

Adult Dental Services in San Bernardino County, CA

Percentage of Medi-Cal Eligible Adults (Ages 21+ years) by Zip Code



% Denti-Cal Eligible Adults (Ages 21+ years) by Zip Code

- ≤10%
- ≤15%
- ≤20%
- ≤25%
- ≤35%

Map excludes 1% of providers with a missing Zip Code.

Source: Denti-Cal Provider Directory, 2019
CA Medi-Cal Eligible Data System (MEDS) Extract, June 2018

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There is a strong and fast expanding network of FQHCs and community/ free clinics that provide dental services in San Bernardino County. Nineteen (19) health centers in San Bernardino County provide dental services at twenty-seven (27) sites/ locations. The County is also home to several FQHC look-alikes and non-profit clinics that are committed to increasing access to dental care. San Bernardino County, in partnership with Riverside County is a recipient of the Dental Transformation Initiative – Local Dental Pilot Project grant from the California Department of Health Care Services. The lead agency is First 5 Riverside. The project (July 2017 to December 2020) aims to increase access to dental care for Medi-Cal eligible children (0-20 years of age) through innovative strategies like tele-dentistry, and development and implementation of an innovative mobile application for oral health risk assessment and care coordination.

VI. Implementation of Evidence-based Practices for Dental Disease Prevention

Community Water Fluoridation

The Centers for Disease Control and Prevention named community water fluoridation (CWF) one of the top ten greatest public health achievements of the 20th century. CWF is an evidence-based approach to preventing tooth decay at the population-level and is recommended by nearly all public health, medical and dental organizations. CDC's recommended optimal level of fluoride in water is 0.7 mg/L and control range of 0.6 ppm to 1.2 ppm.

Drinking optimally fluoridated water can help both children and adults by reducing dental decay by 25%. This also saves money on dental treatments – For every $1 spent on water fluoridation, around $32 are saved on dental treatments. In young children, drinking fluoridated water prevents tooth decay when fluoride enters the bloodstream and strengthens their developing set of adult teeth. Also, during all stages of life, fluoridated water supports optimal oral health by mixing with one's saliva to coat teeth, ultimately, defending them against caries causing bacteria.

According to the Centers for Disease Control and Prevention, 63.7% of Californians served by community water systems have access to fluoridated water in 2014 and ranks 34th among all the states in the U.S. in this indicator[36]. While access to fluoridated water does not equate to consumption of the same, in the absence of data on individuals' consumption of safe fluoridated tap water, it may be used as an indicator to assess the implementation of this evidence-based approach.

According to the California Water Board, none of the public water systems in San Bernardino County are optimally fluoridated.

Fluoride Varnish Application and Fluoride Supplementation by Primary Care Clinicians.

Recommendations are as follows:

- Application of fluoride varnish to the primary teeth of all infants and children at the age of primary tooth eruption in primary care practices.

- Prescription of fluoride supplementation by Primary Care clinicians starting at age six months for children whose water supply is fluoride deficient.

There is no quantitative data on the number or percentage of children younger than 6 years of age who have received a fluoride varnish application or supplementation from their primary care clinicians.

School-based Dental Sealant Delivery Program

Dental sealants are thin plastic coatings applied to the chewing surfaces of the back teeth by trained dental professionals. Sealants protect the chewing surfaces of teeth from tooth decay. It is recommended that dental sealants be placed on permanent molars as soon they come in (1st molars at 5-7 years and 2nd molars at 11-14 years). School based sealants programs are proven to be cost-effective, support oral health of children in areas with high levels of dental care needs, help eliminate known barriers to accessing care and address disparities in use of effective preventive dental services.

A school oral health program census of all schools in San Bernardino County (conducted as part of the needs assessment) showed that 172 out of 346 – nearly half – of the elementary-level public schools had a school-based or school-linked oral health program. Services ranges included a combination of screenings, caries risk assessment, preventive services – fluoride varnish and/ or dental sealant application and treatment.

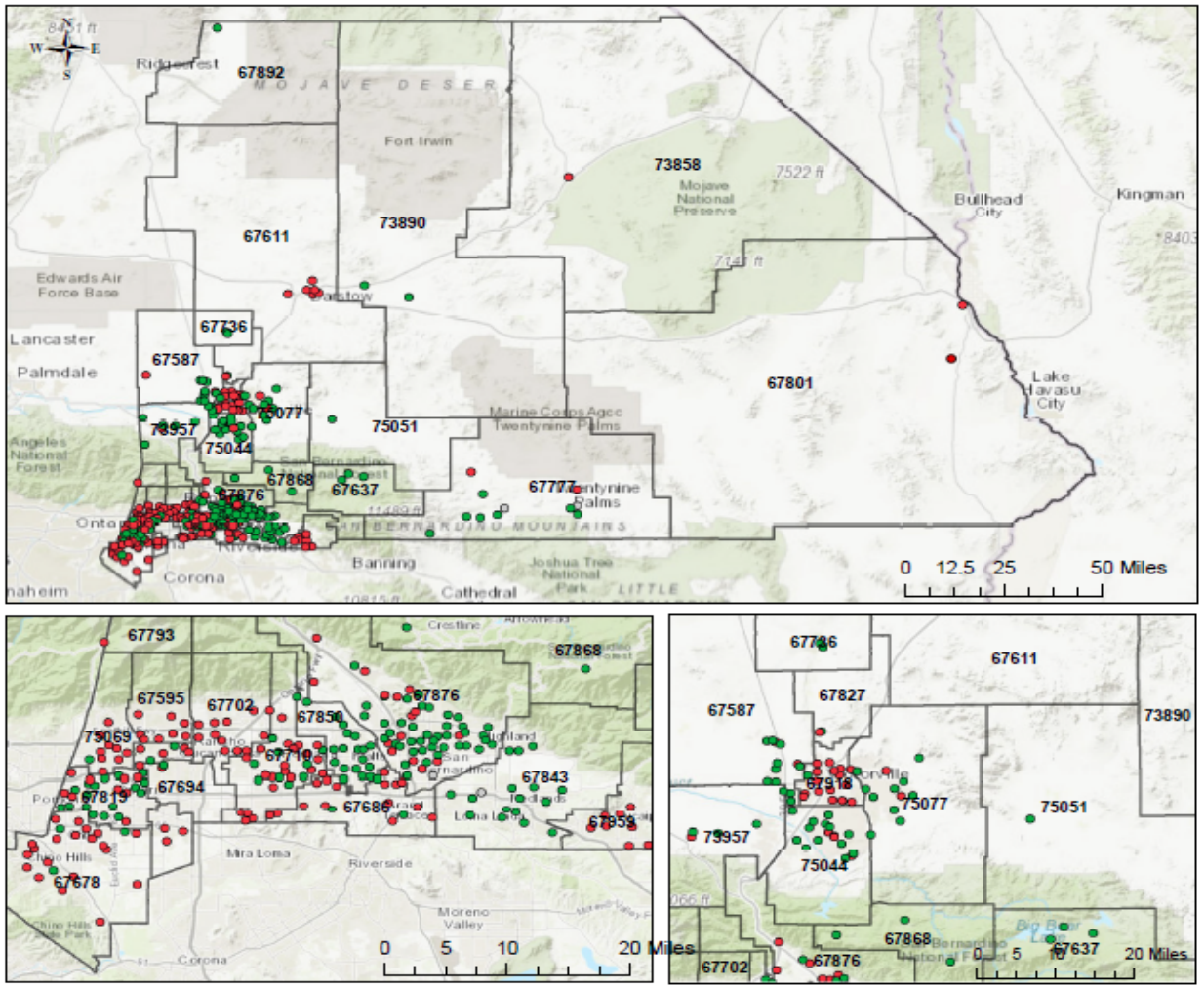
Nearly 30% of all schools and 69% of the schools with an oral health program reported that the program provides preventive services, which may include dental sealant application for eligible students.

The need for school-based or school-linked oral health programming is assessed based on their Title 1 status or the percentage of students eligible for free and/ reduced price meals, which is a proxy for school or district-level poverty status.

In San Bernardino County, nearly 36% of the schools with 50% or more students eligible for free and/ or reduced price meals have no oral health programs.

Figure 50

School-Based Oral Health Programs in San Bernardino County, CA K-6 Schools, 2018-2019



Source: SB County Oral Health Needs Assessment, 2018-2019

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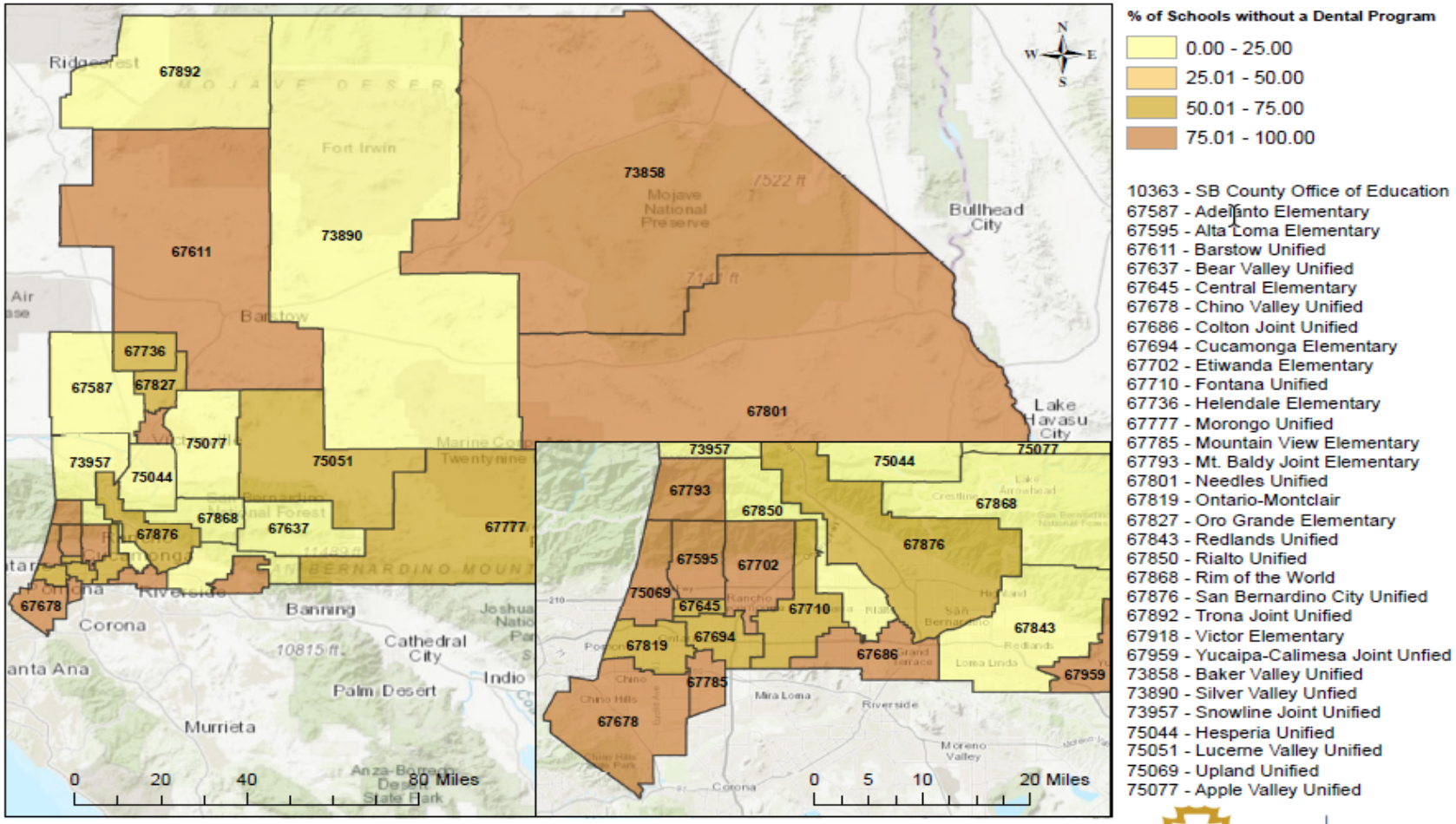
Figure 51

Percent of Schools in San Bernardino County, CA without a School-Based Oral Health Program by District, 2018 - 2019



Source: SB County Oral Health Needs Assessment, School-Based Oral Health Programs Census, 2018 - 2019

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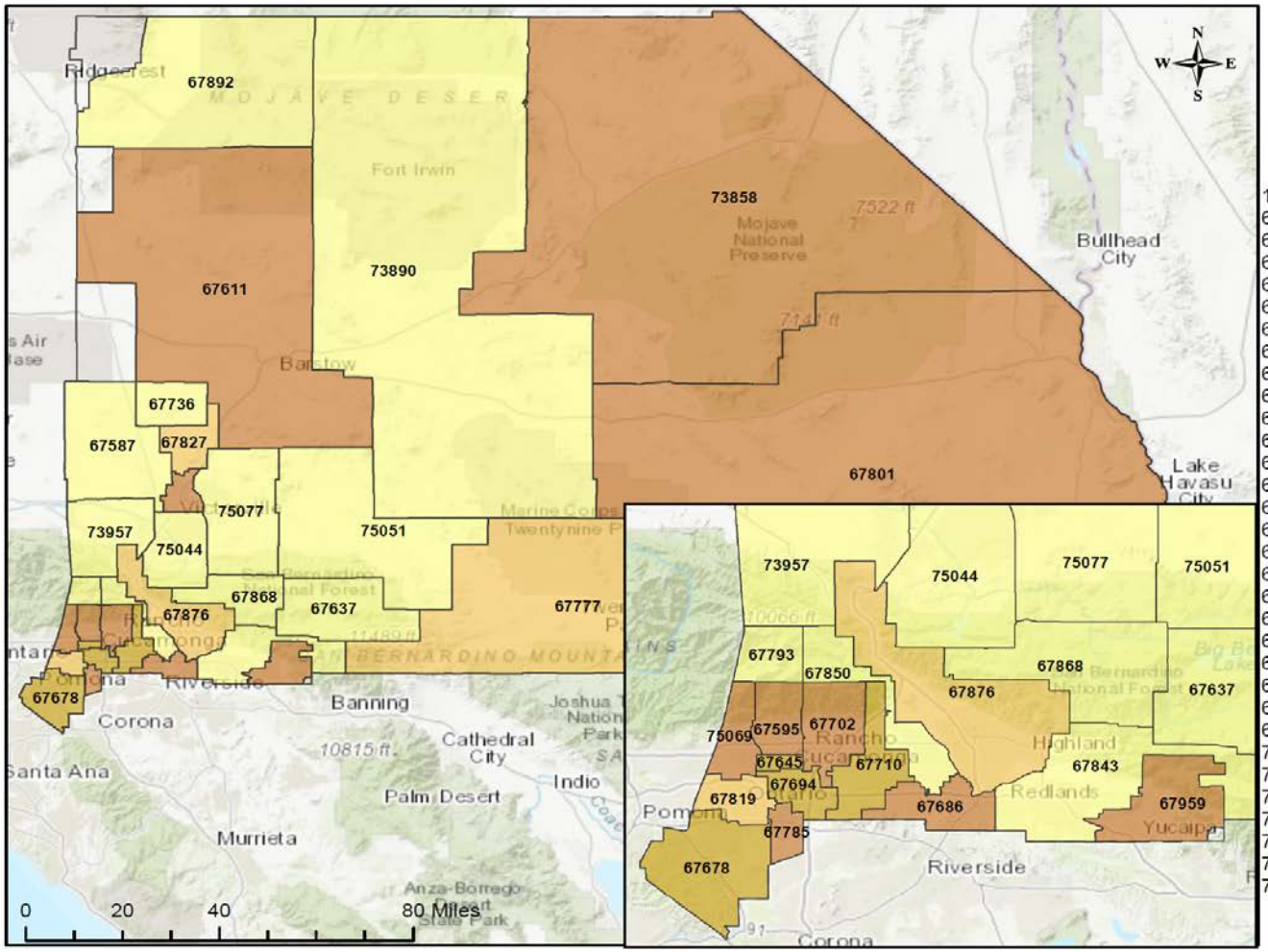
Figure 52

Percent of High Need Schools (Defined as Free or Reduced Price Meal Elibility of 50%+) in San Bernardino County, CA without a School-Based Oral Health Program by District, 2018 - 2019



% of Schools without a Dental Program

- District
- 0.00 - 25.00
- 25.01 - 50.00
- 50.01 - 75.00
- 75.01 - 100.00

10363 - SB County Office of Education
67587 - Adelanto Elementary
67595 - Alta Loma Elementary
67611 - Barstow Unified
67637 - Bear Valley Unified
67645 - Central Elementary
67678 - Chino Valley Unified
67686 - Colton Joint Unified
67694 - Cucamonga Elementary
67702 - Etiwanda Elementary
67710 - Fontana Unified
67736 - Helendale Elementary
67777 - Morongo Unified
67785 - Mountain View Elementary
67793 - Mt. Baldy Joint Elementary
67801 - Needles Unified
67819 - Ontario-Montclair
67827 - Oro Grande Elementary
67843 - Redlands Unified
67850 - Rialto Unified
67868 - Rim of the World
67876 - San Bernardino City Unified
67892 - Trona Joint Unified
67918 - Victor Elementary
67959 - Yucaipa-Calimesa Joint Unfied
73858 - Baker Valley Unified
73890 - Silver Valley Unfied
73957 - Snowline Joint Unified
75044 - Hesperia Unified
75051 - Lucerne Valley Unified
75069 - Upland Unified
75077 - Apple Valley Unified

Source: SB County Oral Health Needs Assessment, School-Based Oral Health Programs Census, 2018 - 2019

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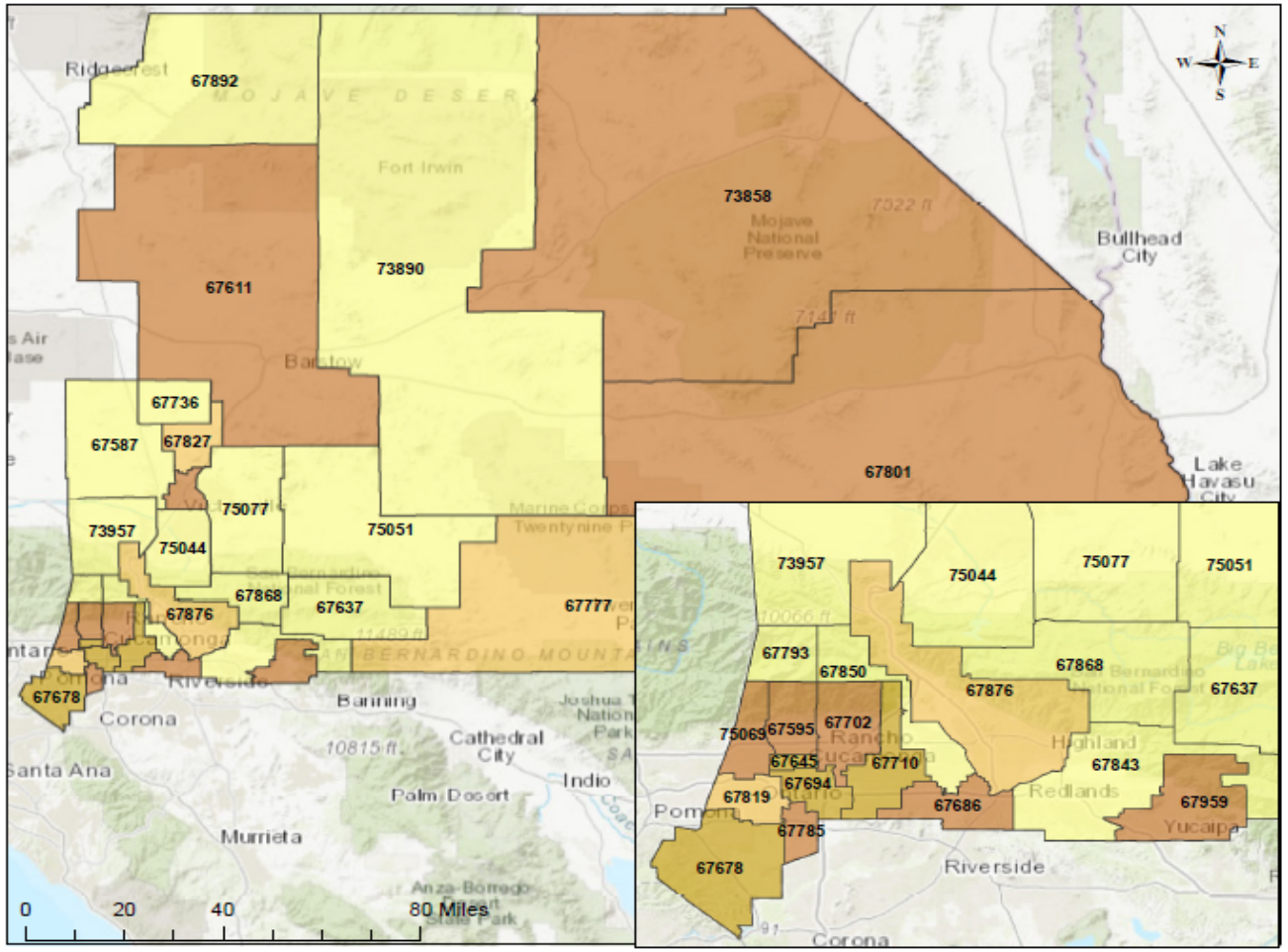
Figure 53

Percent of High Need Schools (Defined as Free or Reduced Price Meal Elibility of 50%+) in San Bernardino County, CA Without a School-Based Oral Health Program by District, 2018 - 2019



% of Schools without a Dental Program

- 0.00 - 25.00
- 25.01 - 50.00
- 50.01 - 75.00
- 75.01 - 100.00

10363 - SB County Office of Education
67587 - Adelanto Elementary
67595 - Alta Loma Elementary
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73858 - Baker Valley Unified
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75044 - Hesperia Unified
75051 - Lucerne Valley Unified
75069 - Upland Unified
75077 - Apple Valley Unified

Source: SB County Oral Health Needs Assessment, School-Based Oral Health Programs Census, 2018 - 2019

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Kindergarten Oral Health Assessments

In California, AB1433 (Kindergarten Dental Check-up law) was enacted in 2006. This law enabled identification of prevalent dental disease among children entering the public school system, helps establish a dental home and enables good oral health over the years to come. The assessment currently allows for waivers. Participating schools collect data and submit it through the System of California Oral Health Reporting (SCHOR) annually. One of the objectives of the California Oral Health Plan and the Local Oral Health Program Work Plan is to increase the percentage of schools (and students within each school) that collects and report kindergarten oral health assessment data.

The following school districts reported KOHA data for 2017:

Table 3: Proof of Oral Health Assessment by School Districts, 2017.

District	Total Eligible*	Proof of Assessment	Assessment Rate (%)
Adelanto Elementary	1241	549	44.2%
Apple Valley Unified	2026	1829	90.3%
Barstow Unified	632	219	34.7%
Bear Valley Unified	240	173	72.1%
Central Elementary	501	175	34.9%
Colton Joint Unified	1851	959	51.8%
Cucamonga Elementary	357	252	70.6%
Fontana Unified	2761	1685	61.0%
Hesperia Unified	1655	1064	64.3%
Lucerne Valley Unified	190	84	44.2%
Morongo Unified	728	454	62.4%
Mountain View Elementary	333	205	61.6%
Rim of the World Unified	254	188	74.0%
San Bernardino City Unified	3927	1458	37.1%
San Bernardino County Office of Education	133	36	27.1%
Silver Valley Unified	204	168	82.4%
Snowline Joint Unified	620	551	88.9%
Upland Unified	809	333	41.2%
Victor Elementary	1583	506	32.0%
Yucaipa-Calimesa Joint Unified	762	232	30.4%

California Dental Association; Accessed at https://www.cda.org/public-resources/community-resources/kindergarten-oral-health-requirement/ab1433-results

*Defined by students enrolled in kindergarten in a public school, or while enrolled in first grade in a public school if the pupil was not previously enrolled in kindergarten in a public school.

The following school districts did not report KOHA data in 2017:

Table 4: School Districts not Reporting to SCOHR, 2017.

Alta Loma Elementary
Baker Valley Unified
Chino Valley Unified
Etiwanda Elementary
Helendale Elementary
Mt. Baldy Joint Elementary
Needles Unified
Ontario-Montclair Elementary
Oro Grande Elementary
Redlands Unified
Rialto Unified
Trona Joint Unified

California Dental Association; Accessed at https://www.cda.org/public-resources/community-resources/kindergarten-oral-health-requirement/ab1433-results

VII. Key findings from key-informant interviews and focus groups

In order to understand more about oral health in San Bernardino County, key-informant interviews with community leaders and professionals were conducted, as well as focus groups with community members. Key-informants were asked to provide insight on the current issues residents are faced with and their recommendations. Focus groups included community residents, older adults, and caretakers of children/ adults with intellectual and developmental disabilities, participants were asked about their previous experience receiving and accessing dental care.

Table 5: Findings from Key-informant Interviews

Key theme/ finding	Representative Quote
Stakeholders and dental providers stated low perceived levels of oral health literacy and knowledge among community members	"I would say my impression is that probably, dental care is not the highest priority for them (clients). Many also do not know the importance of dental health and how to maintain it."
Community members were aware of the oral-systemic link and importance of oral health, yet did not/ were unable to prioritize oral care or services	"I know I have to start taking care (of my teeth) because I know it can make my diabetes worse. I have been more focused on medical issues that have to be dealt with rather than (dental) which then gets puts on the back burner."
Preventive dental visits were not a priority; Community members seek dental care when in pain or discomfort	"With our population (high-risk, Medi-Cal), usually, people don't go for the prevention. It is only for treatment when they are hurting."

Key theme/ finding	Representative Quote
Emergency departments serve as a safety net and community members wish that EDs were better equipped to handle dental emergencies including diagnosis, treatment and triage.	"A lot of us don't have dental insurance and I think that is mostly why we go to the hospital because I, I mean, I don't, I don't know where else to go when I am in pain."
Cost of dental services is high (especially out-of-pocket expenses for services not covered by insurance) and Medi-Cal eligible individuals are not aware of available dental coverage	"In talking with them and listening to them in a group, a lot of our clients were not aware that they had dental (insurance through Medi-Cal). I'm sure that they got letters, but a lot of times, what happens is the participants don't follow through on their end."
Appointment times are often inconvenient to working families and appointment wait times can be long (especially for self-pay and Medi-Cal insured families)	"My challenge would be, um, time, because I work regular hours and we don't have any dental (clinics) that stays open later. I have children and it's difficult for me to get them to see the dentist. I would have to take a day off. So that is more stress."
There is a shortage of dental providers, especially in remote neighborhoods of San Bernardino County. Travel times can be long and inconvenient without access to timely transportation assistance.	"There are a lot (of dentists) in town now. But, a lot of the times they won't accept our Medi-Cal insurance." "In our County, transportation is probably one of the biggest barriers - getting where they need to go to receive needed services."
Individuals with special health care needs and I/DDs, very young children (0-3 years of age), older adults and other special population groups face more significant challenges in accessing timely dental care.	"Every individual with special needs is different and there will always be a unique experience or a unique need that we may not realize is so important. So, I think that generally, we are very scanty on resources."
Community members find it challenging to navigate a complex dental care system to access needed services in a timely manner.	"(We would like) to have (a) reliable and comprehensive list of dental providers that actually accept Denti-Cal and treat young children, for example. Right now, we just provide numbers to providers but when they start calling, they (dentists) say "no, we don't see children"."
There is a lack of access to accurate and consistent information about oral health and several myths are still persistent.	"So, in listening to the women in group, a lot of times our women are not really aware that they can go to the dentist when they're pregnant, you know. I think a lot of the impression is because when they go to the dentist, you know, you get your shot to numb you up and they think it's going to hurt the baby and so they just don't go."

VIII. Summary of Oral Health Needs in San Bernardino County

- Dental disease is prevalent in San Bernardino County's children. More than 30% of the high-risk children ages 0-5 years suffer from untreated tooth decay. Several children ages 0 to 18 use the Emergency Department for non-traumatic dental conditions, with the rate of visits being highest among 6-9 year old children.

- While data on utilization of dental services by the general population is scarce (identified as a data gap), utilization of services by Medi-Cal eligible children is lower than California average. While there has been a steady increase in the percentage of children ages 0-20 who visit the dentist at least once a year or receive preventive dental services, more than half the children did not have a dental visit in 2016.

- Rate of utilization of any dental service by adults is comparable to California average. Medi-Cal eligible adults in San Bernardino County utilize preventive dental services at a higher rate (nearly double) than California average.

- Pregnant women in San Bernardino utilize dental services during pregnancy at a significantly lower rate than California average. Younger women, those with lower family incomes and education attainment, and those insured by Medi-Cal have lower than average rate of use of dental services during pregnancy.

- Older adults ages 65 and above have unique oral health care needs and more than 40% of older adults surveyed in a convenience sample reported not visiting the dentist in over 12 months. Statewide data shows that older adults, especially those residing in skilled nursing homes have a significant level of unmet dental needs. The key barrier faced by older adults to accessing timely and needed dental care is the inability to pay or lack of appropriate insurance coverage.

- While key informants reported that lack of awareness and knowledge were driving the community's poor oral health, focus group participants reported otherwise. Several focus group participants reported that they were aware of the recommended oral hygiene routines, need to visit a dentist annually and the connection between oral and overall health. But oral health was not a priority for many who had other more pressing issues to be dealt with including social determinants like employment and poverty. Lack of knowledge was most commonly reported for the following recommendations:

    - A child's first visit should be by his/ her first birthday or when the first tooth comes, whichever happens first.
    - Several preventive oral health services can be safely provided in schools and community settings.
    - Medi-Cal insurance comes with coverage for dental care (Medi-Cal Dental Services).

    - It is safe and important to have a dental cleaning and assessment at least once during pregnancy.
    - A primary care clinician can perform a caries risk assessment, apply fluoride varnish and prescribe fluoride supplementation if needed for children during their well-child visits.

- Qualitative data also revealed the need for:
    - A unified message on the importance of oral health and the preventive nature of most dental diseases.
    - Better, more accessible and periodically updated oral health resources for different populations.
    - A simple, user-friendly and accessible referral system for dental care.
    - Guides for advocating for one's own or a family members' oral health, especially for individuals with I/DDs and older adults.

- While San Bernardino County has several professionally active dental providers, there is a significant need to build capacity for pediatric dentists, providers who accept Medi-Cal, and providers willing and able to serve children and adults with I/DDs and very young children (0-3 years).

- Nearly 30% of all schools and 69% of the schools with an oral health program reported that the program provides preventive services, which may include dental sealant application for eligible students. Therefore, there is not only an opportunity to involve more schools in oral health programs, but additional opportunity to increase the number of participating schools that provide preventive services

- There is great potential for better integration of dental services into medical, social and community services. Several key informants and focus group participants noted poor integration of dental and medical care or social services and siloed approaches to dental service delivery as a barrier.

- San Bernardino County has several strong programs, providers and organizations who are very engaged and committed to improving population oral health. The County is also one of few that works closely with surrounding counties, implemented projects in consortia, has a regional oral health coalition and focuses on collaboration for collective impact. The potential for improvements across all factors of oral health is significant because of these regional strengths.

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