BARBARA AVED
ASSOCIATES

INCREASING ACCESS TO DENTAL SERVICES FOR CHILDREN AND ADULTS ON THE CENTRAL COAST

April 2016

The report *Increasing Access to Dental Services for Children and Adults on the Central Coast* would not be possible without underwriting by The Stanley and Audrey Goldstein Foundation, who have a deep understanding of the need for oral healthcare for all. Dientes Community Dental Care, which commissioned this oral health needs assessment, is profoundly grateful for their support.

Table of Contents

EXECUTIVE SUMMARY 3

INTRODUCTION 7

Purpose of the Assessment 8
Acknowledgements 8

METHODS 9

FINDINGS 10

I. Emerging Trends and Conditions in Dental Care 10

II. Regional Profile 13

Demographic Profile 13
Socioeconomic Factors 17
Other Related Community Characteristics 29

III. Extent of Dental Disease among Children and Adults 31

IV. Overview of the Medi-Cal Dental Program 33

Required Benefits 33
Administration of the Dental Program 34
Medi-Cal Dental Services Reimbursement 35
Statewide Provider Participation in Denti-Cal 36
Utilization Measurement and Monitoring in Medi-Cal 37
Improvements Planned for Denti-Cal 37
Changes in Covered California 38

V. Access Factors 39

Common Barriers to Getting Oral Health Services 39
Local Dentist Supply and Denti-Cal Provider Ratios 42
Local Dentists' Opinions and Experience with Denti-Cal 42
Other Dental Insurance Programs Available to Low-Income Persons 51
Available Safety Net Dental Services 51
Other Supportive Community Resources 57
Access Barriers to Hospital and Surgery Center-Based Dental Procedures 59
Extent of Emergency Department Use for Preventable Dental Conditions 61

VI. Dental Services Utilization 67

Population-Based Utilization 67
Denti-Cal Utilization 70
Healthy Kids Utilization 74
Head Start Utilization 75

CONCLUSIONS AND RECOMMENDATIONS 76

APPENDICES 85

EXECUTIVE SUMMARY

"Nothing hurts in my kid's mouth. Why does he need to see a dentist?"
— Parent respondent to the Denti-Cal member survey

Good oral health is increasingly recognized for its importance to overall health, as well as its influence on how people appear, work, enjoy life, succeed in school, speak, chew and socialize. While most children and adults living in Santa Cruz and Monterey Counties enjoy good oral health and report being able to get the dental care they need, many of them do not.

This report presents findings and recommendations from an oral health needs assessment commissioned by Dientes Community Dental Care to benefit Santa Cruz and Monterey Counties. Its goal was to use the assessment information for developing a multi-stakeholder approach to serving more of the dental need in these two counties. The study was carried out by Barbara Aved Associates and addressed the needs, barriers, resources, and access and utilization issues commonly examined in an environmental scan. The scope of the assessment included children and adults under age 65 not living in nursing or other facilities.

Existing research, data retrieval and analysis, key informant interviews, and surveys were the primary sources of information for the study. The findings provide an opportunity to address gaps where continuing collaboration among the stakeholders will be essential for implementing the recommended strategies.

Key Findings[1]

Regional Profile Factors

- While the unemployment rate has improved since the recent recession, rates in both counties were higher than the statewide average in November 2015: 7.1% unemployment in Santa Cruz and 7.5% in Monterey compared to 5.7% statewide.
- Educational attainment (high school diploma or higher) is lower in Monterey County than statewide, 71% vs. 81%. (Santa Cruz is 85%.) Education level has important implications because higher educational attainment is positively associated with health-protective factors like receiving regular dental care.
- Santa Cruz and Monterey Counties are home to a larger share of agricultural workers than other counties in California, important because farmworkers of all ages have a level of oral health that is worse than what is found in the general population. While they value dental services, agricultural workers face unique barriers to accessing it.

Emerging Dental Care Trends

[1] To streamline the Executive Summary, references and other citations are only included in the full report.

- Increased access to oral health services for children over the past decade and a half is expected to lead to an adult population with reduced dental disease and less need for restorative dental care.

- The percentage of adults who visit a dentist has been declining for the past decade among all income groups as have adult dental benefits; there will likely be continued erosion of dental benefits for many groups of adults.

- Medi-Cal represents one of the few market segments with expanding demand for dental care.

Prevalence of Oral Disease

- 24% of the children in Santa Cruz County and 15.5% in Monterey County showed evidence of untreated dental decay according to recent screening results of reporting school districts.

- 12,634 low-income adults in Santa Cruz County are estimated to have some level of oral disease, and 2,392 have severe periodontitis, the more advanced form of periodontal disease.

Medi-Cal Dental Program (Denti-Cal) Factors

- Denti-Cal is the major source of public insurance for the area's low-income children and adults, covering 28.2% of the Santa Cruz population and 34.7% in Monterey County. Denti-Cal policies, procedures and reimbursement rates strongly influence access and utilization on the local level.

- California's Denti-Cal reimbursement rates are among the lowest in the nation and account for the top reason most dentists aren't willing to participate in the program.

- The State has said the dental program is a priority, but new dental strategies of the recently-approved Medi-Cal Waiver do not benefit adults. This is troubling given their great need for care and the narrow scope of adult dental benefits.

- The Central California Alliance for Health is the local contractor for Medi-Cal patients but the responsibility for providing direct dental services is not under its contractual obligations (it is a "carved out" service). Nevertheless, the Alliance has an important role to play in ensuring dental access for its Medi-Cal members.

Current Access Issues

- The overall supply of licensed dentists is ample in both counties but 82% report not taking patients with Denti-Cal. Those who do don't take enough.

- Denti-Cal utilization rates for children and adults vary widely by zip code in both counties. Even though numbers are small in some areas, very low utilization suggests an access problem.

- Santa Cruz County dental clinics are at full capacity. Salud Para la Gente receives about 10 calls a week for new adult patients looking for a dentist it cannot accommodate. Dientes receives twice that number each day that has to be referred elsewhere or experience a long wait for an appointment.

- Close to half (47.3%) of surveyed Central Coast dentists said a rate increase of 70%-80% would be necessary for them to see patients with Denti-Cal in their practice.

- Only 29.5% of surveyed dentists who serve children start seeing them by the recommended first tooth/first birthday.

- 72.5% of the emergency department visits for a dental condition by Santa Cruz County residents in 2014 were considered *preventable*; the proportion by Monterey County residents was 95.1%. The 6 EDs in Santa Cruz and Monterey Counties reported 2,392 ED visits for a preventable dental condition. Public programs (Medi-Cal, primarily) picked up the tab for the greatest majority of these visits.

- Access problems related to dental anesthesia services are attributable to provider and facility availability, not to the pre-authorization process. Resource options are limited for publicly insured (or Medi-Cal) children and adults in Santa Cruz County; capacity to serve children is only available in Monterey County.

- For people on Medicare (including adults over age 65), dental services are not a covered benefit.

Dental Services Utilization

- Monterey and Santa Cruz were 2nd and 3rd best in the state in children's Denti-Cal utilization in 2014, 64.4% and 58.6%, respectively; the state average was 52%.

- Utilization in Healthy Kids mirrors Denti-Cal rates. The jump in utilization for age 0-3 between 2013-14 and 2014-2015 was significant (a percentage increase of 71%). The increase in utilization for children age 2-6 was also notable (a 32% increase).

- Use of Denti-Cal benefits by adults age 21-64 in both counties is extremely small—17.6% in Santa Cruz and 18.3% in Monterey.

- 66.5% of Santa Cruz County Community Assessment Project (CAP) survey respondents at all income levels reported getting dental care in 2015, lower than 85.8% reported in 2013. Whites reported receiving it at a higher percentage than Latinos did (74% vs. 59%).

- The percent of CAP respondents with dental insurance decreased to 58% in 2013 from 72% a decade ago.

Conclusions and Recommendations

In addition to the robust FQHC safety net, many other local organizations play vital roles in supporting oral health services via collaboration, training, promotion, assessments, and financial support. Santa Cruz County is fortunate to have forward-thinking dental health leadership and advocates. The recommendations on the next page, which are driven by the assessment findings and fully explained in the report, are intended to improve oral health as well as suggest certain areas for growth. There is no particular significance to their order.

1. Expand access to care in high-need communities by adding new clinical capacity.
2. Expand the use of mobile clinic resources to extend care.
3. Consider FQHC contracting with private dentists.

4. Implement a “First Tooth/First Birthday” campaign countywide.
5. Design and implement an oral health promotion program specific to pregnant women.
6. Increase opportunities to promote oral health education and access for Medi-Cal managed care members.
7. Improve access for patients requiring sedation dental services.
8. Encourage schools to continue the AB 1433 pre-Kindergarten dental visit requirement to ensure children are accessing care by the age of 6, and to participate in the centralized online reporting of student oral health data.
9. Implement more models of medical-dental integration.
10. Reduce use of the emergency department (ED) for preventable dental conditions.
11. Continue to support and improve the United Way Community Assessment Project.
12. Advocate for higher Medi-Cal dental reimbursement rates.
13. Work toward supporting full-scope dental care (up to the Denti-Cal benefit) at all FQHCs.
14. Increase the proportion of communities with fluoridated community water systems.
15. Share the needs assessment information with decision makers, policymakers, and stakeholders through oral and written briefings.

INTRODUCTION

"Adults [on Medi-Cal] have such extensive needs that they take up a lot of service capacity. Kids are easier to see."- Community Dental Provider

There is an increasing recognition of the importance of oral health to overall health, and what signals of health disorders the mouth can provide. Over the past decade, evidence has been building of a relationship between oral disease and diabetes[2] as well as cardiovascular disease and its complications, including stroke.[3] Evidence has also been accumulating of an association between periodontal disease and adverse birth outcomes.[4] Recent research has found significant annual cost savings are possible with individuals with certain chronic diseases or who were pregnant, and who received dental treatment for their gum disease.[5] There is also a growing appreciation for the psychosocial impact of oral health influencing how people appear, work, enjoy life, speak, chew and socialize.[6]

Early childhood caries—the most prevalent unmet health care need for children nationwide[7]—is especially troubling because it is preventable. Untreated tooth decay can cause pain and infections that may lead to problems with learning;[8] children with poorer oral health miss more school days,[9] for example. Importantly, oral diseases are progressive and cumulative and become more complex over time. Access to early preventive care and necessary dental treatment, particularly for the populations at highest risk, is the key.

While access to oral health services in Santa Cruz and Monterey Counties has improved as a result of community leadership and commitment, opportunities exist for strengthening it, as this needs assessment will show.

Many factors need to be examined in considering the need for expanded services and the existing or potential opportunities to address gaps. In addition to basic socio-demographics, these include an understanding of the population's oral health status; existing resources and capacity; patient and delivery system barriers; current and potential utilization; existing and forthcoming Medi-Cal dental policies; current and potential community partners; and stakeholder, provider and consumer attitudes and opinions.

Purpose of the Assessment

[2] Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.
[3] Joshipura K, Jung H, Rimm E et al. Periodontal disease, tooth loss and incidence of ischemic stroke. Stroke. 2003;34:47-54.
[4] Association of State and Territorial Dental Directors. Best Practices Approaches. Perinatal Oral Health. Available at http://www.astdd.org/perinatal-oral-health/#six.
[5] Jeffcoat M, Jeffcoat R, Gladowski P et al. Impact of periodontal therapy on general health: Evidence from insurance data for five systemic conditions. American Journal of Preventive Medicine. 2014;47(2): 166-174.
[6] Locker D. Concepts of oral health, disease and the quality of life. In: Slade GD, ed. Measuring oral health and quality of life. Chapel Hill: University of North Carolina, *Dental Ecology*; 1997:11-23.
[7] Benjamin RM. Oral Health: the Silent Epidemic. *Public Health Rep.* 2010 Mar-Apr; 125(2):158–159.
[8] Blumenshine SL, Vann WF, Gizlice A, Lee JY. Children's school performance: impact of general and oral health. J Pub Health Dent 2008;68(2):82-87.
[9] Pourat N, Nicholson G. Unaffordable Dental Care is Linked to Frequent School Absences. UCLA Health Policy Research Brief. November 2009. https://escholarship.org/uc/item/14g1w8s7#page-1

The report was prepared by Barbara Aved Associates, a Sacramento-based health consulting firm, at the invitation of Dientes Community Dental Care. Its purpose is to benefit providers, policy makers, and advocates in Santa Cruz and Monterey by bringing together data in a way that can help inform and support priority setting, capacity building and policy decisions to improve oral health.

Specifically, the aim of the study was to:

- Provide an overview of relevant demographic and socioeconomic characteristics of the region and emerging market and dental care trends.
- Provide information about the Medi-Cal Dental Program because of its extensive coverage for the low-income population.
- Estimate the dental needs of the population with commonly used indicators.
- Describe the barriers to reaching the target populations most in need.
- Identify the challenges and opportunities to provide optimum access to oral health.
- Inventory existing resources.
- Identify opportunities (recommendations) for improving access and utilization.

Acknowledgements

We are indebted to Laura Marcus and Sheree Storm of Dientes Community Dental Care for their leadership and foresight in commissioning this study on behalf of the community health stakeholders and other advocates, for patiently answering many questions and for steering us to local key informants who could also inform this assessment. We appreciate the time and help of these individuals in providing a picture of oral health issues in Santa Cruz and Monterey. In particular, we would like to acknowledge Dori Rose Inda and her staff of Salud Para la Gente for graciously responding to multiple email requests for information over the course of the study.

The consultant team for the assessment was led by Barbara M. Aved, RN, PhD, MBA, and included Mechele Small-Haggard, MBA; Larry S. Meyers, PhD; Elita Burmas, MA; Gary L. Schmidt; and Michael Funakoshi.

METHODS

"The need is neither the present nor the future state; it is the gap between them."
- Anonymous

Data Sources and Methods

We used a literature scan researching existing published and unpublished documents, articles and reports; data retrieval and analysis; key informant interviews; and surveys to conduct this needs assessment.

Data Retrieval and Analysis

Data on Denti-Cal utilization came from the Department of Health Care Services (DHCS) Medi-Cal Dental program. We looked at several years of data from the Santa Cruz Community Assessment Project (CAP); the Central California Alliance for Health procured Healthy Kids data for us; and the Office of Statewide Health Planning and Development provided the data on emergency department visits for dental conditions. We retrieved population-based data from the 2014 California Health Interview Survey (CHIS)—the largest state health survey in the U.S.—to examine dental service utilization among the overall Santa Cruz and Monterey populations. We also pulled applicable findings from recent dental studies we conducted with relevance to the current assessment.

Interviews

Nineteen key informants were interviewed as part of the assessment process. (Additional individuals contributed to interviews for specific information.) The key informants included local and state opinion leaders, policy makers, dental experts, providers, community-based organization representatives, funders and advocates. Their views and knowledge reflected a wide range of experience and served as a key asset to the study. In addition to extensive interviews with safety net provider staff, a number of follow-up emails helped us learn more about clinic services, capacity, and perspectives on need. (Attachment 1 contains a list of these individuals.)

We also conducted brief telephone interviews with the Western dental and private dental offices in Santa Cruz County that were reported to be accepting new Denti-Cal patients at the time of this study to confirm their participation and inquire about capacity and patient age restrictions.

Surveys

We developed a survey for private dentists that the Monterey Bay Dental Society (MBDS) made available online to its members.[10] Respondents, which included participating as well as non-participating Denti-Cal providers, were asked for their opinions and experience regarding Denti-Cal and what it would take to participate more fully; 157 dentists responded to the survey, generating a 37.1% response rate.

We were also able to include the results from a Member Survey we were conducting for the Medi-Cal dental plans during the course of this study. Findings from surveys of 341 families with children and 508 adults regarding barriers to access and reasons for not fully utilizing dental benefits helped to inform this needs assessment.

[10] The survey had an adequate reach of area dentists, as approximately 80% are members according to the MBDS.

FINDINGS

"The FQHCs have really stepped up to respond to the access problem. They provide great care and a sustainable business model." -Local physician administrator

I. Emerging Trends and Conditions in Dental Care

"People do talk to each other here and have achieved a degree of trust, and address vexing issues that we might not have solved on our own."
— Key Informant commenting on local collaboration for oral health

A brief overview of some of the emerging dental care trends and market conditions prepared for the American Dental Association in 2013,[11] and from other research, help give context and understanding to this oral health environmental scan for Santa Cruz and Monterey Counties.

Population-Related Factors

- Children are the group with the highest likelihood of having dental coverage, primarily due to public coverage which in California includes investments from First 5s.
- Increased access to oral health services for children over the past decade and a half is expected to lead to an adult population with reduced dental disease and less need for restorative dental care. Because a higher proportion of the population is keeping their teeth as they age, there may be an increased need for periodontal care, services generally provided by dental hygienists rather than dentists.
- Hispanics continue to be the fastest growing segment of the population in California. Hispanics are less likely to visit the dentist and have less health literacy about oral hygiene and prevention. They are more likely to rely on community dental clinics for services.
- Looking forward, a combination of factors, including the Affordable Care Act, will lead to an increase in dental benefits coverage for children. However, there will likely be continued erosion of dental benefits for many groups of adults. The decline in private dental benefits among adults is not uniform by age. The most significant declines over time have been among younger adults (19-34 year olds), who have the lowest levels of private dental benefits. For those ages 50-64, there has been very little decline in the percent with private dental benefits.[12]

[11] Diringer J, Phipps K, Carsel B. Critical Trends Affecting the future of Dentistry: Assessing the Shifting Landscape. Prepared for American Dental Association, May 2013. http://www.ada.org/~/media/ADA/Member%20Center/FIles/Escan2013_Diringer_Full.ashx
[12] Vujicic M, Goodell S, Nasseh K. Dental Benefits to Expand for Children, Likely Decrease for Adults in Coming Years. Research Brief. ADA Health Policy Institute. April 2013.

- The percentage of adults who visit a dentist has been declining for the past decade among all income groups. The trends in dental care use among middle- and high-income adults are not expected to reverse in the near term.[13]

- Consumers are becoming more astute purchasers of health care and seeking value for their spending. Baby Boomers may become more price-conscious as they join the ranks of the elderly, with less coverage and more out of pocket costs for their care.

Dental Workforce

- While the dental workforce is increasing[14]—possibly creating a future oversupply of dentists—there is an insufficient supply of providers to meet the demand in the growing publicly insured sectors of the population. Low reimbursement rates are the primary reason.

- Current market conditions could have an influence on some dentists' willingness to open their practices to patients with Denti-Cal. Recent research from the American Dental Association indicates there is additional capacity available in the dental care system due to low dentist busyness levels and shorter wait times for new appointments.[15] Nationally, among general practitioners (GPs), 40% of solo dentists indicated they were not busy enough compared to 18% of non-owner GPs. The decline in GP dentists' earnings (which represents a continuation of a multi-year trend), coupled with a steady decrease in dental care use among adults,[16] could be a trend that creates new opportunities to engage more local dentists in serving the public sectors in Santa Cruz and Monterey Counties.

- New dentists are far more likely to be women. In 2012, 30% of California dentists were women while among newly licensed dentists that same year 46% were women.[17] Female dentists have different practice patterns than male dentists; for example, they work part time and they tend to work as employees or associates rather than business owners.

- Registered Dental Assistants in Extended Function (RDAEF) is a relatively new licensure category in dentistry in California, although it has been established in other states under different names (such as dental health therapist) for some time. RDAEFs are trained to complete many restorative procedures which were previously only done by dentists, which can free up the dentist to see more patients and to deliver more care. The dentist continues to oversee treatment and completes all surgical procedures on the teeth. These oral health professionals play a mid-level provider role similar to the Nurse Practitioner or Physician's assistant in a medical setting allowing for more access and reduced costs.

Other Trends

- Community health centers have been growing their dental practices. In 2013-14, dental care was offered at 66% of the health centers statewide.[18]

---

[13] Vujicic M, Nasseh K. A decade in dental care utilization among adults and children (2001-2010). Health Serv Res. April 2014; 49(2): 460-80.
[14] Solomon ES. The past and future evolution of the dental workforce team. *J Dent Educ* 2012;76(8):1028-1035.
[15] Munson B, Vujicic. General Practitioner Dentist Earnings Down Slightly in 2014. Health Policy Institute. American Dental Association, December 2015. http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1215_1.ashx
[16] Nasseh K, Vujicic M. Dental care utilization rate highest ever among children, continues to decline among working-age adults. Health Policy Institute Research Brief. American Dental Association. October 2014. http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1014_4.ashx
[17] Pourat N, Moonkyung KC. Trends in the Supply of Dentists in California. Health Policy Brief. UCLA Center for Health Policy Research. March 2014.
[18] Pourat N, Martinez, AE, Crall J. Better Together: Co-Location of Dental and Primary Care Provides Opportunities to Improve Oral Health. UCLA Center for Health Policy Research. Health Policy Brief. September 2015.

- Payment for dental services is shifting from commercial dental insurance to public coverage and personal out of pocket payments. Out of pocket payments are increasing for the elderly population.

- Medi-Cal represents one of the few market segments with expanding demand for dental care according to a key finding in a Medicaid dental market study.[19]

- There is a trend for more integration of oral health into primary care practices influencing practice patterns and reimbursement as well as access. For example, Medicaid and children's insurance programs are increasingly reimbursing medical providers for fluoride varnish, oral risk assessment and exam, and parent/caretaker oral health education.

- More experimentation can be expected in the structure of public programs, which have larger populations that are stable over a longer period of time and for which there is great pressure on cost constraint. Although managed care has been slow in coming to dentistry, the use of managed care in Medicaid dental plans is predicted to increase. While the California Department of Health Care Services has indicated it "has no plans to expand dental managed care to other counties in California at this time,"[20] priorities could change as the cost of Medi-Cal continues to rise.

- Several factors are likely to place greater attention on quality measurement and health outcomes in the dental care delivery system (which lags behind the medical care system in addressing quality measurement.) These include the use of evidence-based dentistry; new payment models aligned with improved quality and health outcomes; the use of information technology; and the training of a wider array of health care providers in oral health care. These types of innovations are essential to move the dental care system from "paying for volume" to "paying for value," according to oral health trend watchers.[21]

[19] Yarbrough C, Vujicic M, Nasseh K. Medicaid Market for Dental Care Poised for Major Growth in Many States. Health Policy Brief, American Dental Association, December 2014.
[20] *Sacramento Children and Dental Care: Better Off Than Five Years Ago?* Barbara Aved Associates. Sacramento, CA: www.barbaraavedassociates.com. December 2015.
[21] Quality Improvement in Children's Oral Health: Moving from Volume to Value. National Maternal and Child Oral Health Policy Center, May 2012.

II. Regional Profile

"People do talk to each other here and have achieved a degree of trust, and address vexing issues that we might not have solved on our own."
— Key Informant commenting on local collaboration for oral health

Demographics

Population

Demographic trends help to project potential unmet needs for dental and other healthcare-related services. In July 2015, Santa Cruz County had an estimated population of 271,646 and is projected to grow to 314,875 by 2060, an increase of 15.1%. Monterey County's estimated 2015 population of 425,413 is projected to grow to 533,575 by 2060, an increase of 24.2%. In both counties, the majority of the population growth (on average, about 210%) is estimated to occur in persons over age 65.[22] Table 1 shows the percentage change in population between 2014 and 2015 by county and city. The map that follows displays the location of the Santa Cruz County population.

Table 1. Percent Change In Population Between 2014 And 2015 By County and City

County/City	Total Population		Percent Change
	1/1/2014	1/1/2015	
Santa Cruz	269,322	271,646	0.9
Capitola	10,004	10,052	0.5
Santa Cruz	62,860	63,789	1.5
Scotts Valley	11,800	11,928	1.1
Watsonville	51,874	52,087	0.4
Balance of County	132,784	133,790	0.8
Monterey	424,774	425,413	0.2
Carmel-by-the-Sea	3,747	3,747	0.0
Del Rey Oaks	1,661	1,660	-0.1
Gonzales	8,363	8,357	-0.1
Greenfield	16,879	16,870	-0.1
King City	13,179	13,417	1.8
Marina	20,222	20,872	3.2
Monterey	28,319	28,163	-0.6

Table continues on next page

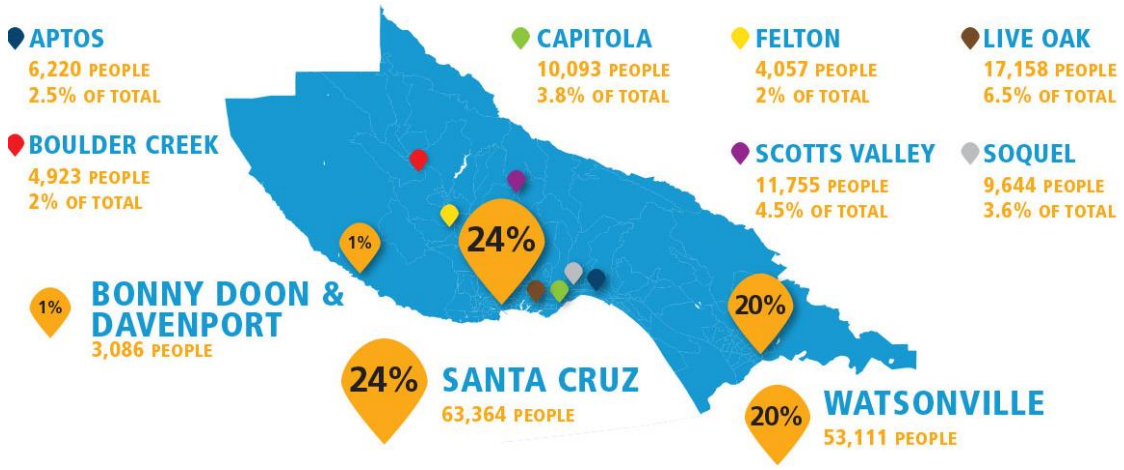
[22] California Department of Finance, Total Population Projections for California and Counties: July 1, 2015 to 2060 in 5-year Increments, December 2014.

(Continued from previous page)

Pacific Grove	15,394	15,388	0.0
Salinas	154,815	154,720	-0.1
Sand City	342	362	5.8
Seaside	33,456	33,672	0.6
Soledad	24,959	24,540	-1.7
Balance of County	103,438	103,645	0.2

Source: California Department of Finance. City/County Population Estimates with Annual Percent Change

Map 1. Location of Santa Cruz Population



Source: Graphic courtesy of Santa Cruz METRO Forward Transit Plan. 2015.

Population by Age

As Table 2 indicates, Monterey County has a slightly younger population than Santa Cruz County—26.6% of residents are age 0-17 while in Santa Cruz the proportion is 21%. While these are not necessarily large differences, they suggest on their own the need for children's dental services may be slightly higher in Monterey than in Santa Cruz County.

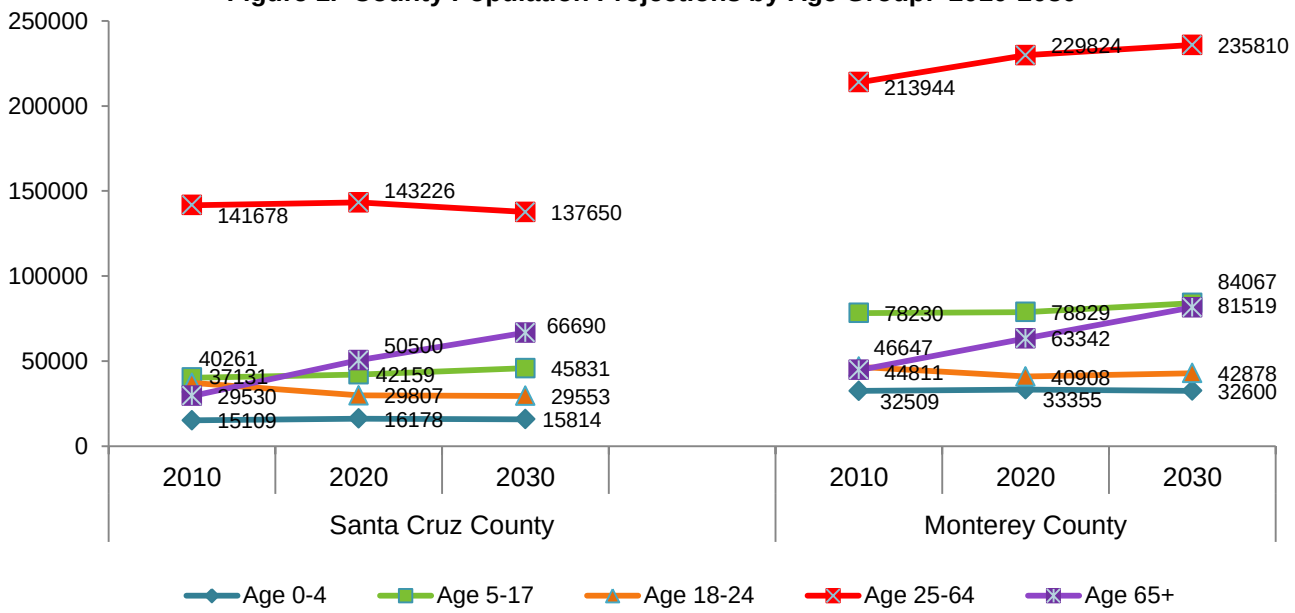
Table 2. Percent of Population by Age

Age	Santa Cruz County	Monterey County
0-4 (Preschool age)	5.7%	7.8%
5-17 (School age)	15.3%	18.8%
18-24 (College age)	14.1%	11.2%
25-64 (Working age	53.7%	51.4%
65+ (Retirement age)	11.2%	10.8%

Source: California Department of Finance County Population Projections, December 2014.

Figure 1 below shows the counties' expected population growth by major age groups from 2010 to 2030. The largest positive change is projected to be in the oldest age group, with implications of this shift in the age structure of the population described earlier.

Figure 1. County Population Projections by Age Group: 2010-2030

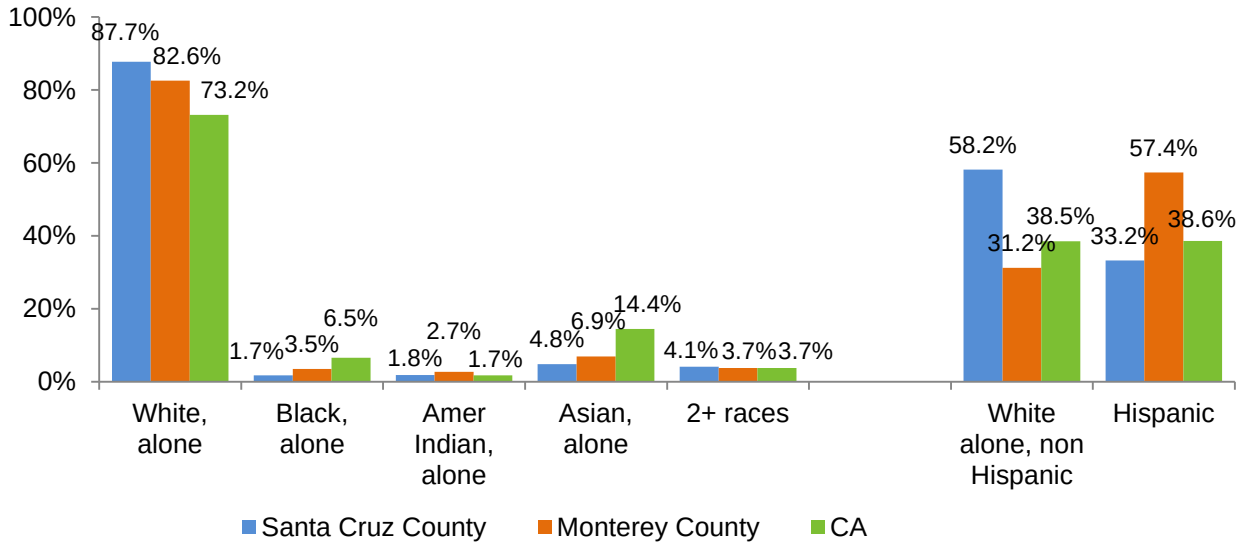


Source: California Department of Finance, Report State and County Population Projections by Major Age Groups, December 2014.

Population by Race/Ethnicity

Figure 2 shows the race/ethnicity distribution in 2014 of Santa Cruz and Monterey Counties and California. In comparison to Monterey, Santa Cruz has a higher proportion of Whites and a lower proportion of African Americans. Both counties have similar percentages of the population who report as 2 or more races. The proportion of Hispanic or Latino population is significantly higher in Monterey than either Santa Cruz or the state.

Figure 2. Race/Ethnicity of Santa Cruz, Monterey and California, 2014.



Source U.S. Census Bureau: State and County QuickFacts

Population by Zip Code

Age groups by zip code for Santa Cruz County are displayed in Table 3, data that are useful for prioritizing locations and population categories for focusing services.

Table 3. Age Groups by Zip Code, Santa Cruz County, 2014.

	Under 5		5-19		20-64		65 And Over		
	Number	%	Number	%	Number	%	Number	%	Row Total
95003	896	3.7%	4,443	18.2%	14,705	60.3%	4,339	17.8%	24,383
95005	342	5.2%	1,127	17.0%	4,462	67.5%	684	10.3%	6,615
95006	476	5.2%	1,145	12.5%	6,275	68.5%	1,266	13.8%	9,162
95007	40	5.9%	145	21.4%	441	65.2%	50	7.4%	676
95010	363	3.9%	1,674	17.9%	5,762	61.5%	1,568	16.7%	9,367
95017	7	1.1%	116	17.7%	433	66.2%	98	15.0%	654
95018	483	6.3%	1,463	19.1%	4,798	62.6%	916	12.0%	7,660
95019	635	8.6%	2,014	27.3%	3,998	54.2%	727	9.9%	7,374
95033	549	5.7%	1,574	16.3%	6,011	62.4%	1,494	15.5%	9,628
95041	0	0.0%	39	26.7%	107	73.3%	0	0.0%	146
95060	1,611	3.4%	6,803	14.4%	33,539	71.1%	5,195	11.0%	47,184
95062	2,166	6.0%	5,351	14.7%	24,659	67.8%	4,182	11.5%	36,358
95064	93	1.1%	5,458	64.8%	2,856	33.9%	18	0.2%	8,425
95065	467	5.6%	1,387	16.6%	5,041	60.5%	1,436	17.2%	8,331
95066	837	5.5%	3,188	21.1%	9,083	60.2%	1,987	13.2%	15,095
95073	594	5.5%	1,624	15.0%	7,023	64.7%	1,608	14.8%	10,849
95076	7,303	8.6%	19,468	23.0%	49,169	58.1%	8,647	10.2%	84,587
Column Total/Avg	16,862	5.9%	57,019	19.9%	178,362	62.3%	34,215	11.9%	286,494

Source: http://www.usa.com/santa-cruz-county-ca.htm

Special Populations

Santa Cruz and Monterey Counties are home to a larger share of agricultural workers than other counties in California. More than 18% of jobs in Santa Cruz County are reported for this sector, compared to 2.4% statewide.[23] Population estimates based on Bureau of Labor statistics as of October 2015[24] suggest that 13.6% of the Santa Cruz population (approximately 37,000 persons) and 17.6% in Monterey County (approximately 76,000 persons) are farmworkers.

Numerous studies of the oral health of farmworker children and adults consistently show farmworkers of all ages to have a level of oral health that is worse than what is found in the general population. A lack of dental insurance, long travel times to dental care, and linguistic barriers are

[23] Santa Cruz County Comprehensive Economic Development Strategy (CEDS), 5-Year Plan, May 2015. http://www.santacruzhumanservices.org/Portals/0/wib/reports/2015-CEDS-5-Year-Plan.pdf

[24] http://www.bls.gov/regions/west/ca_santacruz_msa.htm#eag_ca_santacruz_msa.f.1 and http://www.bls.gov/regions/west/ca_salinas_msa.htm

key obstacles to care for this population.[25] What is evident from the local-level studies from other areas analyzed by the Migrant Health Center[26] is that farmworkers do not choose to forego dental care. When affordable care was made available during hours when families could attend, in locations they could reach, and with providers with whom they could communicate, they would seek it. According to the analysis, visits for dental services accounted for a third of all reported visits by agricultural worker patients.

Socioeconomic Factors

While this study does not consider the impact of changes in the general economy on the demand for dental care (the demand for dental services is sensitive to changes in the general economy), it is useful to review socioeconomic determinants that have been shown to affect overall health as well as oral health status and outcomes. The information includes poverty and income (median household income), percent of the population that is Medi-Cal eligible, population in poverty, homelessness, employment and education.

Population in Poverty

"Persons living in poverty," as federally defined, although an ambiguous term, is a common measure of economic insufficiency in health services planning. In 2015, an individual living at the federal poverty level (100% FPL) earned $11,770; a family of 4 living at 100% FPL earned $24,250.[27]

The effects of poverty on access to and use of health services, as well as health and well-being, are well documented. In Santa Cruz County, an estimated 16.1% of the total population was living in poverty in 2014, while for children under age 18 the proportion was 19.1%. In Monterey County in 2014, the figures were 17.0% and 25.2%, respectively (Table 4).[28]

Table 4. Percent of the Population Living in Poverty, 2014

	Total Population	Children Age <18
Santa Cruz County	16.1%	19.1%
Monterey County	17.0%	25.2%

Source: United States Census Bureau. Small Area Income and Poverty Estimates.

Poverty rates in Santa Cruz County have generally been below the statewide poverty rate, but the rate for those 18 to 64 years of age increased by over 50% (54%) from 2007 to 2013, going from 10% to 15.4%. This was higher than the statewide increase of 30% (11% to 15.6%) for that same age group over the same period.[29]

[25] Lombardi GR. Dental/Oral Health Services. Migrant Health Issues Monograph Series, No. 1., National Center for Farmworker Health, 2001.
[26] Oral Health. National Center for Farmworker Health, 2011. http://www.ncfh.org/uploads/3/8/6/8/38685499/fs-oral_health_fact_sheet.pdf
[27] *Federal Register*, Vol. 80, No. 15, January 22, 2015. See also http://aspe.hhs.gov/poverty.
[28] United States Census Bureau. Small Area Income and Poverty Estimates. http://www.census.gov/did/www/saipe/data/statecounty/data/2014.html
[29] Santa Cruz County Comprehensive Economic Development Strategy (CEDS), 5-Year Plan, May 2015. http://www.santacruzhumanservices.org/Portals/0/wib/reports/2015-CEDS-5-Year-Plan.pdf

Poverty estimates for Santa Cruz County zip codes, where data were available, are shown in Table 5. The "total population in poverty" column in the table is listed in rank order. The geographic area that includes the west side of Santa Cruz to Bonny Doon (zip code 95060), for example, illustrates that 25.8% of the 11,970 population, the second highest proportion in the county, was living in poverty in 2014.

Table 5. Number and Percent of the Population Living in Poverty by Zip Code, Santa Cruz County, 2014

	Population in Poverty[1]		Family in Poverty	
	Number	%	Number	%
95064	267	27.0%	44	20.6%
95060	11,970	25.8%	900	10.1%
95019	1,755	23.8%	342	21.3%
95007	133	18.3%	0	0.0%
95076	14,946	17.9%	2,666	14.4%
95062	5,247	14.6%	607	8.1%
95003	2,476	10.2%	366	5.7%
95005	663	10.2%	106	6.1%
95073	984	9.1%	160	6.0%
95006	820	9.0%	112	4.6%
95065	719	8.7%	74	3.7%
95017	50	7.8%	8	5.0%
95010	689	7.5%	94	4.2%
95066	904	6.1%	90	2.3%
95033	486	5.1%	93	3.5%
95018	321	4.2%	31	1.6%
Total	42,430	16.5%	5,693	9.6%

Source: http://www.usa.com/santa-cruz-county-ca.htm
[1]Zip codes are shown in rank order by "percent of population in poverty" (column 3).

Eligibility for Free or Reduced-Price Meals

The percent of students eligible for free and reduced-price meals is one of the markers of community poverty in an environmental assessment. A child's family income must fall below 133% of the federal poverty guidelines ($32,253 for a family of 4 in 2014-2015) to qualify for *free* meals, or below 185% of the federal poverty guidelines ($51,634 for a family of 4 in 2014-2015) to qualify for *reduced-cost* meals. Over half of local children are eligible.

While the proportion of eligible students in Santa Cruz County is somewhat close to that of the state, 54.7% vs. 59.2%, Monterey County student eligibility is greater at 68.8% (Table 6 on the next page).[30]

[30] California Dept. of Education, Free/Reduced Price Meals Program & CalWORKS Data Files (Feb. 2015); U.S. Dept. of Education, NCES Digest of Education Statistics and NCES Online Query System (Feb. 2015).

Table 6. Student Eligibility to Receive Free or Reduced Price School Meals, 2014

Locations	Percent
California	59.2%
Monterey County	68.8%
Santa Cruz County	54.7%

Data Source: as cited on kidsdata.org

Medi-Cal Eligibility

Current Enrollment

Medi-Cal eligibility is another surrogate marker for poverty. In 2014, the most recent full-year period for which enrollment by age group data were available, there were 73,985 individuals enrolled in Medi-Cal in Santa Cruz County. This was 28.2% of the total Santa Cruz population. In Monterey County, 34.7% of the population, or 149,886 individuals, were enrolled in Medi-Cal.[31]

Table 7. Population Enrolled in Medi-Cal, 2014

Age	Number Eligible	
	Santa Cruz County	Monterey County
Ages 0-3	8,120	22,181
Ages 0-5	11,897	32,587
Ages 6-20	24,008	58,084
Ages 21-64	32,793	49,946
Ages 65+	5,287	9,269
Totals	73,985	149,886

Source: California Department of Health Services, Medi-Cal Dental Division.

Currently (January 2016) 69,993 or 25.8% of the population in Santa Cruz and 149,655 or 35.2% in Monterey is enrolled in Medi-Cal.[32]

Projected Changes

There are an estimated 2.6 million immigrants living in California, according to the Migration Policy Institute.[33] The Governor's 2015-16 budget, pursuant to Senate Bill 75, provides funding for the state in May 2016 to begin extending Medi-Cal coverage to about 170,000 undocumented immigrant children under age 19. At this time, the state will begin enrolling new enrollees into full scope Medi-Cal coverage and transition children from restricted to full scope Medi-Cal aid codes. The expansion is projected to cost $40 million in the next fiscal year and about $132 million annually following implementation. (In addition to the Senate Bill 75 legislation, the California Senate also approved SB 4, Lara, that was scaled back to only include children after the cost for

[31] United States Census Bureau (population) California Department of Health Care Services (Medi-Cal).
[32] http://www.dhcs.ca.gov/dataandstats/reports/Documents/MMCD_Enrollment_Reports/MMCEnrollRptJan2016.pdf
[33] Migration Policy Institute (MPI) analysis of U.S. Census Bureau data from the 2013 American Community Survey and other date sources. http://www.migrationpolicy.org/content/deferred-action-childhood-arrivals-daca-profile-california

including adults was projected to be more than $1 billion.[34]) SB 75 affects two populations of children with "unsatisfactory immigration status":

- *transition population* individuals under age 19 who are currently enrolled into restricted scope Medi-Cal;
- *new enrollee population* - individuals under age 19 who are eligible for Medi-Cal and have not yet enrolled.

Counties are grappling with how to estimate the number of undocumented children who will be covered by Medi-Cal in their county. Because being in the U.S. without documents is illegal, it is difficult to determine just how many people are in that category (similar to the challenges of counting homeless persons, although the latter are not actively trying to keep from being identified), so planners and providers are currently tossing various numbers around.[35] The methodology we used to estimate figures for full scope Medi-Cal eligibles for Santa Cruz County, while clearly not perfect is logical, and suggests there will be at least 133 newly eligible undocumented children as a result of this legislation (Table 8). This estimate is conservative because it does not take into account the likelihood that Santa Cruz County may have a disproportionate share of undocumented families due to its agricultural workforce or reflect potential enrollment changes in Healthy Kids.

Table 8. Santa Cruz County Estimate of Undocumented Children Eligible for full-Scope Medi-Cal in 2016

Step	Calculation	Estimate
Step 1	Population of age 0-18 in Santa Cruz County in 2014 @ 20.1% of the total county population of 271,804[1]	54,633
Step 2	Population of age 0-18 in CA in 2014 @ 23.6% of the total state population of 38,802,500[2]	9,157,390
Step 3	Santa Cruz County age 0-18 of CA age 0-18 (divide 54,633 by 9,157,390).	0.6%
Step 4	170,000 immigrant children 0-18 estimated to become eligible for Medi-Cal in May 2016[3,4]	170,000
Step 5	Santa Cruz County's portion of the 170,000 is 0.6%, or 1,020 children	1,020
Step 6	In 2013, 13% of CA's K–12 schoolchildren were estimated to have an undocumented immigrant parent.[4] (.13 x 1,020)	133

[1]California Quick Facts, 2014.
[2]California Quick Facts, 2014.
[3,]4Caifornia Department of Health Care Services; Migration Policy Institute. 114,981 are currently enrolled in restricted scope Medi-Cal coverage; 50% of the 55,019 remaining currently eligible but not enrolled are estimated to take up coverage over 12 months.
[4]Public Policy Institute of California. http://www.ppic.org/main/publication_show.asp?i=818

The Health Alliance has also made estimates with data provided by the Migrant Policy Institute. Its estimates, which are acknowledged to be on the high side, are for total eligibles (as opposed to expected enrollment) and they would not be eligible for full scope Medi-Cal.[36] Note that

[34] While Lara removed from the bill language seeking a federal waiver to enable undocumented immigrant adults to purchase coverage through Covered California, he said he will pursue separate legislation (SB 10) to extend health coverage to all immigrants, regardless of status, next year.
[35] Conversations with Will Forest, epidemiologist, Santa Cruz County, and Olivia Byron-Cooper, epidemiologist, El Dorado County, September 2015. Ms. Byron-Cooper vetted our methodology.
[36] Personal communication with Alan McKay, Executive Director, Central CA Alliance for Health, February 22, 2016.

undocumented residents are sometimes eligible for limited scope Medi-Cal (typically emergency and pregnancy related services) based on medical need.

- Santa Cruz: 1,700-2,550 potentially eligible under age 19
- Monterey: 6,000-9,000 potentially eligible under age 19

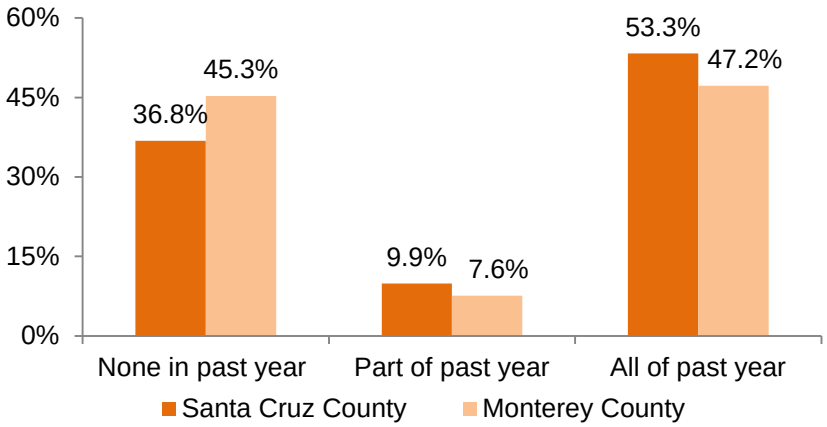
Dental Insurance

A primary indicator of access to dental care is having dental insurance. Data from the 2008 National Health Interview Survey suggest among adults age 65 or younger with private insurance, approximately 73% have some type of dental insurance, while 27% have no coverage.[37] Other more recent estimates (2010) found the percent of non-elderly adults without any dental benefits to be 34.3%.[38] The scale-back of Medicaid dental benefits during this time by many states, including California, likely accounted for part of the decline in coverage. Applying the average of these estimates to the local counties suggests that about 30% of non-elderly adults would have no dental insurance, or approximately 50,026 in Santa Cruz County and 75,347 in Monterey County. (Lack of dental insurance coverage is much more prevalent than lack of medical insurance.)

The California Health Interview Survey (CHIS), a representative household survey at all income levels across the state, last asked adults about dental insurance status in 2007.[39] At that time, before adult Medi-Cal benefits were scaled back, 36.8% of Santa Cruz residents and 45.3% of Monterey residents reported having no dental insurance in the past year (Figure 3 on the next page). The CHIS figures are higher than the estimate above from applying national averages, but come close to what the 2014 Santa Cruz County's Community Assessment Project (CAP) reported: 42% of adults had no dental coverage in 2013, down from 72% in 2003, (though 86% reported being able to get the dental care they needed in the past year).[40]

[37] Bloom B, Cohen RA. Dental Insurance for Persons Under Age 65 Years with Private Health Insurance: United States, 2008. NCHS Data Brief. No. 40, June 2010.
[38] Vujicic M, Goodell S, Nasseh K. Dental Benefits to Expand for Children, Likely Decrease for Adults in Coming Years. Research Brief. ADA Health Policy Institute. April 2013.
[39] UCLA Center for Health Policy Research. http://ask.chis.ucla.edu/AskCHIS/tools/_layouts/AskChisTool/home.aspx#/geography. CHIS sources and level of funding each year determines what questions can be included in the survey. Over the years, the number and type of dental questions have been greatly reduced.
[40] http://static1.squarespace.com/static/5176dcd7e4b0e5c0dba41ee0/t/563a84b1e4b0330ccadca6fa/1446675633287/CAP%2B20%2BComplete%2BReport.pdf

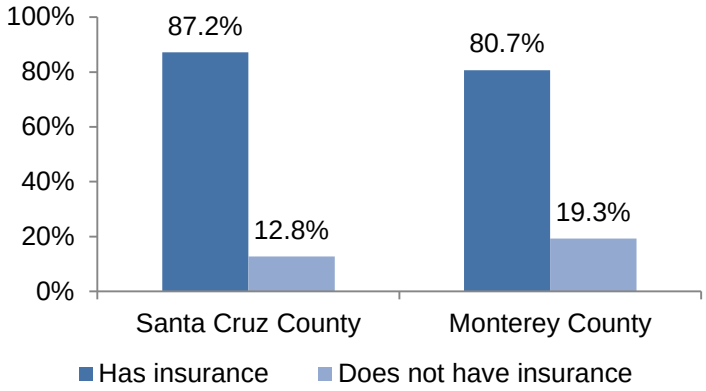
Figure 3. Percent of Adults with Dental Insurance in the Past Year, 2007



Source: California Health Interview Survey.
The question asked was, "For how many months of the past 12 months did you have any kind of dental insurance that pays for some or all of your routine dental care?"

The CHIS also last queried for children's dental insurance in 2007, asking about *current* coverage. As Figure 4 below shows, 80.7% of children were reported as covered in Monterey and 87.2% in Santa Cruz.

Figure 4. Percent of Children with Current Dental Insurance, 2007

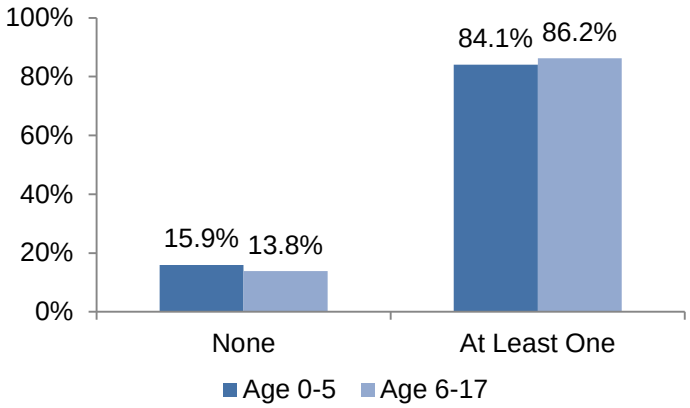


Source: California Health Interview Survey.

Although surveyed 4 years later than the CHIS, respondents to the CAP household survey for 2011 reported similar levels of dental coverage for their children—84%-86% for at least one child in the family (Figure 5).[41]

[41] http://static1.squarespace.com/static/5176dcd7e4b0e5c0dba41ee0/t/53e945f8e4b00d85593e0448/1407796728504/CAP+18.pdf

Figure 5. Percent of Children with Current Dental Insurance, 2011



Source: Applied Survey Research, Santa Cruz County CAP, 2012.
The question asked, "How many of your children have dental insurance?"

In the 2013 CAP survey, the total respondents who reported they had dental insurance were 58%, a decrease from 72% in 2003.[42]

Homelessness

A one-day homeless count conducted in January 2015 identified 1,964 homeless persons in Santa Cruz County. This count was a 44% decrease from the prior census in 2013; virtually all of the reduction came from unsheltered persons. Nearly one-third was sheltered, while the remainder was unsheltered, and the majority of the unsheltered lived on the streets or in a vehicle. The number of individuals counted in the January 2015 Monterey County Point-in-Time general street count and shelter count was 2,308. Compared to 2013, this was a decrease of 282 individuals, or just under 11%. Approximately 71% of these individuals were unsheltered, a decrease from 76% in 2013. Of the 678 sheltered individuals, 478 persons (71%) were in transitional housing, while 29% were housed in emergency shelter.[43]

Employment

The relationship between unemployment and adverse health outcomes is bidirectional, meaning that unemployment contributes to ill health and ill health contributes to unemployment.[44] In November 2015, an average of 140,900 residents in Santa Cruz County were in the labor force (persons age 16 and older who are able, available, and actively looking for work, not including the jobless who are not seeking work). During that month, 10,000 (7.1%) were not employed, compared to 5.7% statewide. In Monterey County, 16,700 (7.5%) of the estimated 222,300 labor force were not employed.[45]

[42] http://static1.squarespace.com/static/5176dcd7e4b0e5c0dba41ee0/t/563a84b1e4b0330ccadca6fa/1446675633287/CAP%2B20%2BComplete%2BReport.pdf
[43] Applied Survey Research. 2015 Santa Cruz County Homeless Census & Survey. Watsonville, CA. http://www.appliedsurveyresearch.org/homelessness-reports/2014/8/15/santa-cruz-county-homeless-census-and-survey and 2015 Monterey County Point-In-Time Homeless Census & Survey https://csumb.edu/sites/default/files/images/st-block-16-1437601723726-raw-finalmc2015censusreport.pdf
[44] County of Santa Cruz, Health Services Agency, Public Health Division. *HEALTH, Santa Cruz County, 2015*. Santa Cruz County, CA. September 2015. http://www.santacruzhealth.org/Portals/7/Pdfs/2015SCRZHealthReport.pdf
[45] http://www.labormarketinfo.edd.ca.gov/geography/lmi-for-california.html

Unemployment rates are also available at the sub-county level by Census Designated Place (CDP). CDPs are populated areas that lack separate municipal government, but which otherwise physically resemble incorporated places. Table 9 on the next page shows the November 2015 unemployment rates for Santa Cruz and Monterey Counties.

Table 9. Monthly Unemployment Rate for Cities and Census Designated Places, November 2015[1]

Santa Cruz County		Monterey County	
Area Name	Unemployment Rate	Area Name	Unemployment Rate
Twin Lakes	12.2%	San Lucas	24.2%
Day Valley	11.8%	Moss Landing	22.0%
Freedom	9.3%	San Ardo	18.8%
Watsonville city	9.1%	Pajaro	18.5%
Boulder Creek	8.9%	Boronda	16.8%
Ben Lomond	7.9%	Sand City	15.4%
Santa Cruz County	7.1%	King City	15.0%
Aptos	6.9%	Castroville	12.5%
Scotts Valley city	6.4%	Greenfield City	11.4%
Live Oak	6.3%	Las Lomas	10.6%
Santa Cruz city	6.3%	Aromas	10.4%
Capitola city	5.6%	Soledad City	10.4%
Soquel	5.6%	Chualar	7.9%
Corralitos	5.5%	Salinas City	7.9%
Interlaken	5.0%	Seaside City	7.7%
Aptos Hills/Larkin Valley	4.8%	Monterey County	7.5%
Rio del Mar	4.2%	Prunedale	7.3%
Felton	3.6%	Elkhorn	6.8%
		Bradley	6.4%
		Carmel Valley Village	6.3%
		Gonzales City	5.7%
		Del Rey Oaks City	5.6%
		Marina City	5.6%
		Monterey City	5.4%
		Del Monte Forest	5.0%
		Pacific Grove City	4.7%
		Carmel by the Sea City	3.3%
		Spreckels	2.0%

Source: Employment Development Department. Labor Market Information Division. December 18, 2015.
[1]In decreasing order of magnitude.

Income

Income's impact on health is also bidirectional (i.e., poverty breeds ill health, and ill health keeps people poor). Income allows families and individuals to purchase health and dental insurance and receive services.[46] The median household income in 2009-2013 in Santa Cruz County was $66,519 and in Monterey County it was $59,168 compared to $61,094 statewide during that period.[47]

[46] County of Santa Cruz, Health Services Agency, Public Health Division. *HEALTH, Santa Cruz County, 2015*. Santa Cruz County, CA. September 2015. http://www.santacruzhealth.org/Portals/7/Pdfs/2015SCRZHealthReport.pdf
[47] http://quickfacts.census.gov/qfd/states/06/06087.html

Cost of living factors have to be taken into account, however, when comparing local median household incomes. According to the U.S. Commerce Department, Santa Cruz-Watsonville is the 5th most expensive metropolitan area for all goods and services in all of the United States—more expensive than even San Francisco-Oakland-Hayward or Washington, D.C.[48]
Based on the California Poverty Measure, which takes into account variation in the cost of living and, particularly, the high cost of housing in California, the poverty level for a family of 4 in Santa Cruz County in 2012 was a yearly income of $32,884. This yearly income translated into an hourly rate of pay of $15.81 for a full-time, year-round worker.

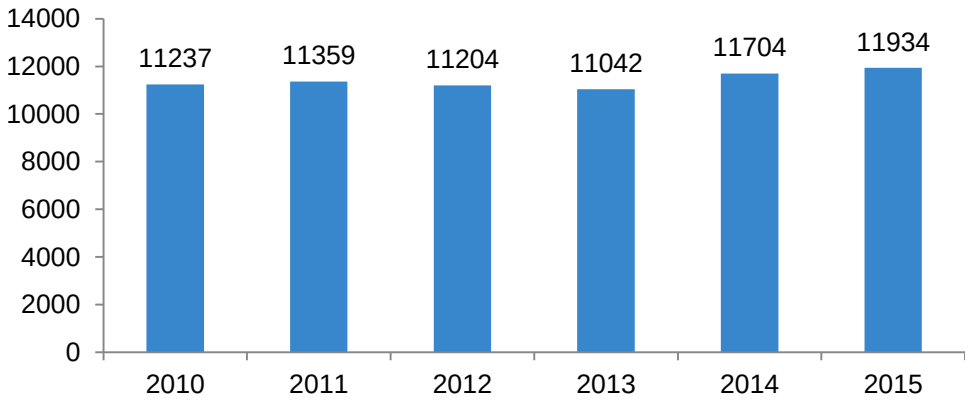
Educational Attainment[49]

There is a positive association between educational attainment and health-protective factors; conversely, lower education levels adversely affect health and increase various risk behaviors.[50]
The U.S. Census Bureau estimated that 85% of Santa Cruz County and 71% of Monterey County residents age 25 and older have obtained at least a high school diploma (or equivalent) in the years 2009 through 2013, compared to 81% statewide.[51]

English Language Learners

Of Santa Cruz County's total 2014-15 K-12 public school enrollment of 40,584, 29.4% of students are reported to be English-Language Learners (Figure 6); in Monterey County, 41.2% of the 75,997 students fall into this classification (Figure 7 on the next page).[52]

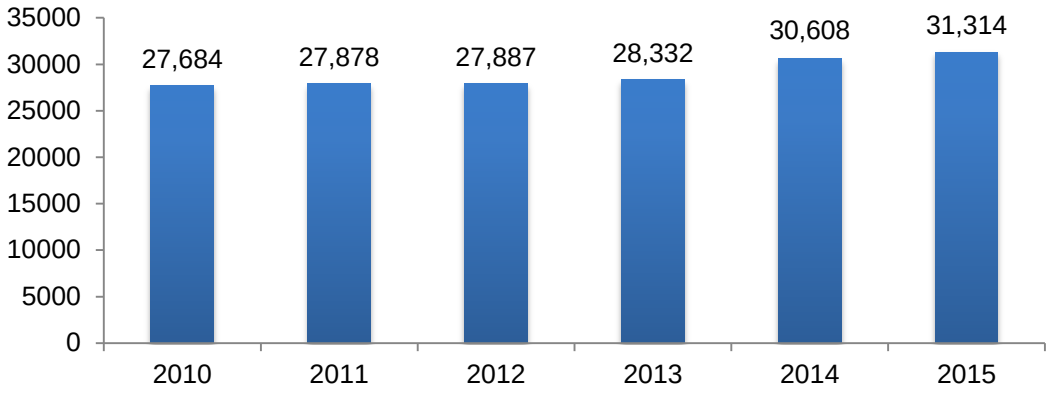
Figure 6. English Language Learners for Santa Cruz County, 2014-15



Source: California Department of Education

[48] Bureau of Economic Analysis, US Dept of Commerce, 2015, *Real Personal Income for States and Metropolitan Areas 2013*, http://bea.gov/newsreleases/regional/rpp/2015/pdf/rpp0615.pdf
[49] Public Policy Institute of California, 2015, *California Poverty Rates by County,* http://www.ppic.org/main/mapdetail.asp?i=1396
[50] Feinstein JS. The relationship between socioeconomic status and health: a review of the literature. *Milbank Q.* 1993;71(2):279–322.
[51] http://quickfacts.census.gov/qfd/states/06/06053.html
[52] California Department of Education. http://dq.cde.ca.gov/dataquest/

Figure 7. English Language Learners for Monterey County, 2014-15



Source: California Department of Education

Families where English skills may be limited may also have a low level of oral health literacy, which possibly interferes with their ability to process and understand oral health information, or possibly influence oral health status. According to U.S. Census data, 31.0% of Santa Cruz County households *sometimes or always speak a language other than English at home;* the proportion in Monterey County is much higher at 52.6% (statewide, 43.7%).[53]

Community Needs Index

Because geographic proximity and transportation are notable structural barriers, socioeconomic data at the zip code level can be important in considering locations of new dental services or expanding existing sites. A Community Need Index (CNI) is used by some hospitals in gathering socioeconomic factors in their communities to help pinpoint specific areas that have greater need than others.[54] Hospitals apply these indices in their needs assessments for community benefits planning and expansion of health services. The CNI provides a score for every populated zip code on a scale of 1 to 5 with a score of 5 representing a zip code with the most need. The score is an average of 5 different barrier scores (insurance status, education, housing, cultural and income) using 2014 source data.[55]

Tables 10 and 11 on the next 2 pages show CNI scores for Santa Cruz and Monterey Counties, respectively, by city. Santa Cruz County's overall median CNI score was 3.2 while Monterey County's overall median CNI is higher at 3.9.

Because the CNI is strongly linked to variations in community healthcare needs, these CNI scores are another source of information for the Santa Cruz County stakeholders in addressing expansion of oral health services.

[53] http://factfinder2.census.gov
[54] Developed by Dignity Health and Truven Health. Available at http://cni.chw interactive.org/Truven_Health_2014_Source_Notes_Community_Need_Index.pdf
[55] Once each zip code is assigned its barrier scores, all 5 barrier scores for each zip code are averaged together to yield the CNI score. Each of the 5 barrier scores receives equal weight in the CNI score.

Table 10. CNI Scores for Santa Cruz County, by City

Zip Code	CNI Score	Population	City	County	State
95019	4.6	8809	Freedom	Santa Cruz	California
95076	4.4	85421	Watsonville	Santa Cruz	California
95064	3.6	8461	Santa Cruz	Santa Cruz	California
95017	3.4	560	Davenport	Santa Cruz	California
95062	3.4	37239	Santa Cruz	Santa Cruz	California
95010	3.2	9645	Capitola	Santa Cruz	California
95060	3.2	48957	Santa Cruz	Santa Cruz	California
95065	3	8225	Santa Cruz	Santa Cruz	California
95003	2.6	25056	Aptos	Santa Cruz	California
95073	2.6	10912	Soquel	Santa Cruz	California
95006	2.4	9619	Boulder Creek	Santa Cruz	California
95066	2.4	15132	Scotts Valley	Santa Cruz	California
95005	2.2	6822	Ben Lomond	Santa Cruz	California
95018	2.2	8421	Felton	Santa Cruz	California
95033	2	9200	Los Gatos	Santa Cruz	California

Source: Dignity Health and Truven Health

Lowest Need — **Highest Need**

1 - 1.7 Lowest | 1.8 - 2.5 2nd Lowest | 2.6 - 3.3 Mid | 3.4 - 4.1 2nd Highest | 4.2 - 5 Highest

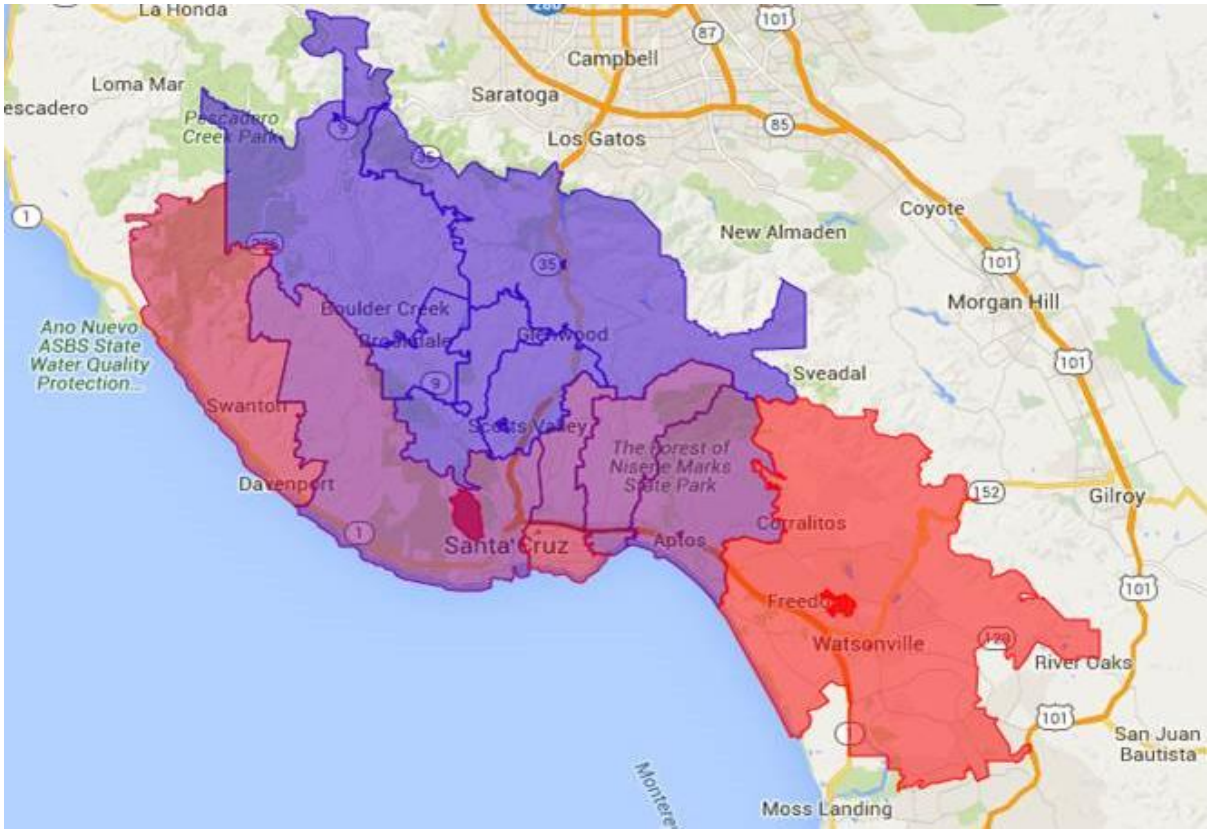


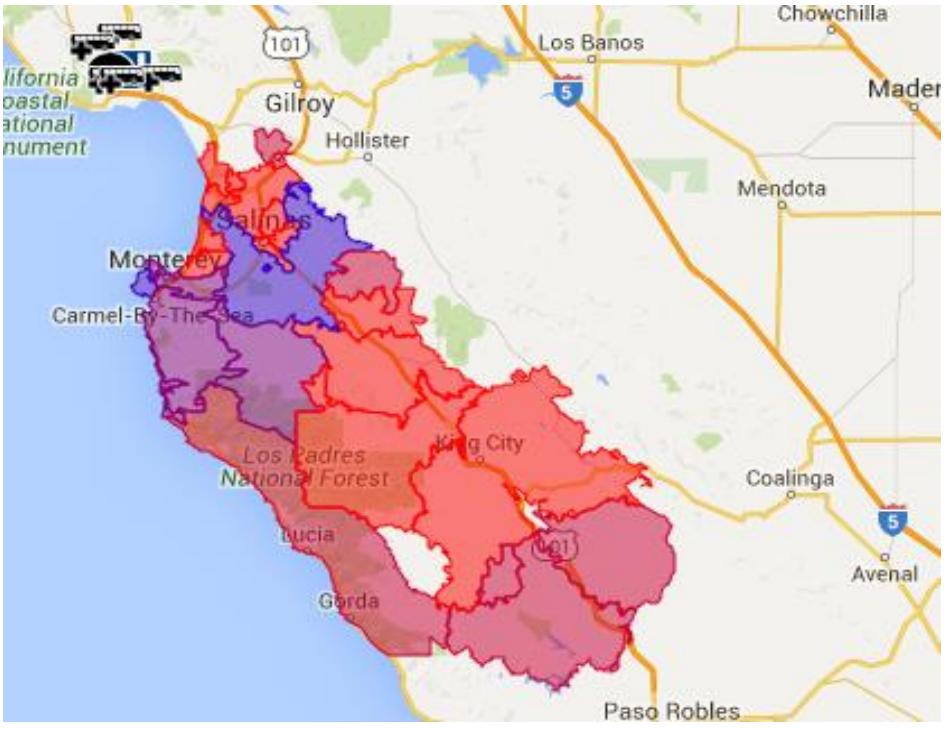
Table 11. CNI Scores for Monterey County, by City

Zip Code	CNI Score	Population	City	County	State
95039	4.8	1783	Moss Landing	Monterey	California
93901	4.6	27591	Salinas	Monterey	California
93905	4.6	64873	Salinas	Monterey	California
93926	4.6	9549	Gonzales	Monterey	California
93930	4.6	17624	King City	Monterey	California
93906	4.4	62910	Salinas	Monterey	California
93960	4.4	28660	Soledad	Monterey	California
95012	4.4	10701	Castroville	Monterey	California
93907	4.2	21974	Salinas	Monterey	California
93927	4.2	19265	Greenfield	Monterey	California
93933	4.2	23187	Marina	Monterey	California
93955	4.2	34963	Seaside	Monterey	California
93450	4	590	San Ardo	Monterey	California
93426	3.8	1506	Bradley	Monterey	California
93925	3.8	1120	Chualar	Monterey	California
93932	3.8	966	Lockwood	Monterey	California
93943	3.8	26	Monterey	Monterey	California
93920	3.4	1495	Big Sur	Monterey	California
95004	3.4	4400	Aromas	Monterey	California
93950	2.8	15054	Pacific Grove	Monterey	California
93923	2.6	15996	Carmel	Monterey	California
93924	2.6	6300	Carmel Valley	Monterey	California
93940	2.6	29210	Monterey	Monterey	California
93944	2.6	2042	Monterey	Monterey	California
93908	2	14246	Salinas	Monterey	California
93953	1.8	4709	Pebble Beach	Monterey	California

Source: Dignity Health and Truven Health

Lowest Need **Highest Need**

1 - 1.7 Lowest | 1.8 - 2.5 2nd Lowest | 2.6 - 3.3 Mid | 3.4 - 4.1 2nd Highest | 4.2 - 5 Highest



Other Related Community Characteristics

Dental Health Professional Shortage Area

The federal Health Resources and Services Administration develop shortage designation criteria and use them to decide whether a geographic area, population group or facility is a Health Professional Shortage Area or a Medically Underserved Area or Population. Shortage areas are designated in response to a request generally from a county, city, agency or individual healthcare professional.

Dental Health Professional Shortage Area (DHPSA) is a federal designation recognizing communities that can demonstrate they have a shortage of dental professionals. DHPSA designation is a prerequisite for participating in a variety of state and federal funding programs designed to increase access to services. It is given to areas that demonstrate a shortage of healthcare providers, on the basis of availability of dentists. The designation is based on MSSA (medical service study area) boundary, population-to-dental practitioner ratios of 1:5,000, available access to healthcare and other factors.[56] According to the Office of Statewide Health Planning and Development, the number of requests for Dental HPSAs has been declining in recent years, probably because the dental designation offers only one benefit compared to primary care designation: loan payback for new dental graduates who agree to practice in the HPSA for a certain period of time.[57]

There are 3 designated Dental HPSAs in Monterey County and 3 in Santa Cruz County (Table 12).[58] (Although Santa Cruz Community Health Centers, East Cliff Health Center, is listed as one of the 3 designated Santa Cruz Dental HPSAs, the organization does not offer dental services.) Dientes' DHPSA status is covered under the County's FQHC, qualifying it for the loan payback program.

Table 12. Dental Health Professional Shortage Areas by Population Group

Population Group	Entities	HPSA Score[1]
Low Income - MSSA 105/King City	*Monterey County Health Department:* King City/San Lucas	15
Low Income/Migrant Farmworker - MSSA 108/ Carmel Valley	*Monterey County Health Department:* Carmel Valley/Castroville/ Marina/Moss Landing/Ord	11
Low Income/Migrant Farmworker - MSSA 109.2/Salinas	*Monterey County Health Department:* Salinas/Spreckels	17
Low-Income population/Migrant Farmworker/Homeless	*Santa Cruz County Health Services Agency:* Santa Cruz County	17
Low-income population/Migrant Farmworker	*Salud Para le Gente:* Santa Cruz County	10

Source: http://datawarehouse.hrsa.gov/tools/analyzers/HpsaFindResults.aspx
[1]Out of 26. Higher scores indicate greater need.

[56] http://www.oshpd.ca.gov/MSSA/
[57] Personal communication with Hovik Khosrovian, OSHPD HPSA Contact, December 17, 2015.
[58] http://datawarehouse.hrsa.gov/tools/analyzers/HpsaFindResults.aspx

Community Supply of Fluoridated Water

Maximizing dental health is a challenge in Santa Cruz County, particularly due to the county's inability, as yet, to establish a community drinking water fluoridation program.[59]

Community water fluoridation is considered one of the 10 great public health achievements of the 20th century.[60] Optimally fluoridated water is the single most cost-effective strategy that a community can take to improve the oral health of its residents regardless of age, educational attainment, or income level. Studies consistently show that water fluoridation reduces tooth decay by 20-40%. Nearly all water contains some fluoride, but usually not enough to help prevent tooth decay or cavities. Community water systems can add the right amount of fluoride to the local drinking water to prevent tooth decay. In 2012, 74.6% of the U.S. population and 63.7% of the California population were on public water systems receiving fluoridation.[61] The safety and benefits of fluoride are well documented.[62]

California law requires cities with more than 10,000 residents to fluoridate their water if an outside entity covers costs. Although California mandated water fluoridation, it never funded the program and therefore cannot legally require it; the choice is left to the cities. Despite a previous opportunity that could have funded fluoridation in Santa Cruz it was strongly opposed by the community and ultimately was not taken up. There are no public water systems shown for Santa Cruz and Monterey Counties in the 2013 list of California cities that fluoridate their drinking water supplies, are naturally fluoridated, or receive purchased fluoridated water.[63] Despite widespread support for the safety and efficacy of community water fluoridation, there continues to be controversy over this effective public health measure.

[59] Health Santa Cruz County 2015 http://www.santacruzhealth.org/Portals/7/Pdfs/HSA%20Health%20Reports/2015/2015SCRZHealthReport.pdf
[60] Achievements in Public Health, 1900-1999: Fluoridation of Drinking Water to Prevent Dental Caries. MMWR. October 22, 1999 /48(41);933-940.
[61] http://www.cdc.gov/fluoridation/statistics/index.htm
[62] Improving Oral Health: Preventing Dental Caries (Cavities). Recommendations of the Community Preventive Services Task Force. April 2013. http://www.thecommunityguide.org/oral/caries.html
[63] http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/fluoridation/Tables/Data2013.pdf

III. Extent of Dental Disease

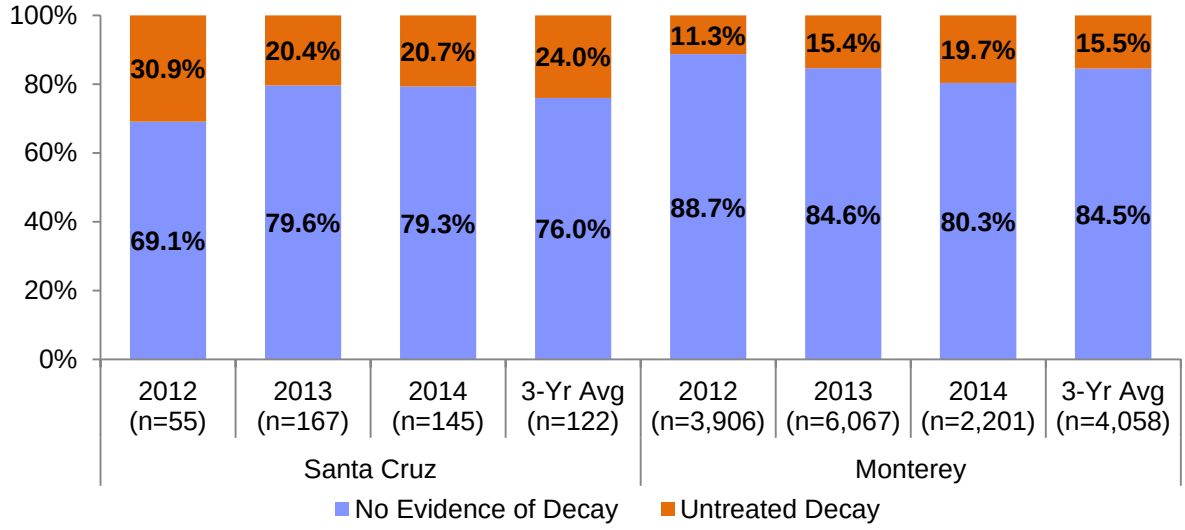
"Investment in community water fluoridation is still the answer; it remains a cost effective strategy in children's oral health." - Key Informant Interview

What is the Prevalence of Oral Disease among Local Children?

The consequences of poor oral health are particularly critical for children, and can have a huge impact on overall health as well as children's performance in school. Dental disease, the most common chronic childhood disease, contributes to school absenteeism, difficulty learning, and diminished nutritional status, self-esteem and overall well-being. Prevalence of untreated decay in primary or permanent teeth among children from lower-income households is more than twice that among children from higher-income households.[64]

While there are limited data available to measure the extent of dental disease among children in Santa Cruz and Monterey Counties, pre-kindergarten assessments[65] provide one picture of disease prevalence. Based on the most recent 3-year average (2012-2014), screening results for the reporting school districts in both counties show that one-quarter (24%) of the children in Santa Cruz County and 15.5% of Monterey County children had evidence of untreated dental decay (Figure 8).

Figure 8. Results of Pre-Kindergarten Dental Screenings, Reporting School Districts in Santa Cruz and Monterey Counties



Source: California Dental Association AB 1433 Pre-K Reported Data

[64] http://www.cdc.gov/mmwr/preview/mmwrhtml/su6302a9.htm

[65] AB 1433 (enacted in 2006 through the efforts of the California Dental Association) required that children have a dental checkup by May 31 of their first year in public school, at kindergarten or first grade. The requirement for screening was later changed to a voluntary basis because of school funding issues and the removal of certain mandates. The CDA is working to restore the oral health screening requirement.

What is the Prevalence of Oral Disease among Local Adults?

Dental disease is a chronic problem among low-income adults as well as children. A study titled "Prevalence of Periodontitis in Adults in the United States: 2009 and 2010" estimated that 47.2% of all American adults aged 30 and older have mild, moderate or severe periodontitis; of these, 8.9% have severe periodontitis, the more advanced form of periodontal disease. In adults 65 and older, prevalence rates increase to 70.1 percent.[66]

As with children, adults from low-income groups are disproportionately affected by dental disease when compared to more affluent segments of the U.S. population. A Government Accounting Office report that examined disparities in oral health care between low-income and high-income adults using key dental health indicators found:[67]

- Adults living at or below the federal poverty level were less than half as likely to have seen a dentist in the past year as adults earning more than four times the poverty level.
- Adults with Medicaid coverage made fewer visits to dentists than their higher-income counterparts.
- Residents of rural areas were slightly less likely to have visited a dentist in the past year than urban residents.
- The most vulnerable low-income populations are people who are homeless.

An important marker of dental health is tooth loss from untreated decay or gum disease. Key findings from oral health disparities examined by the Centers for Disease Control and Prevention indicated the prevalence of complete tooth loss was more than twice as high for adults aged 65–74 living at or below 100% of the federal poverty level (34%), compared with those living above the poverty level (13%). Tooth retention was lower among Hispanic and Black adults. [68]

Forty percent of poor adults age 20 years and older in the U.S. were estimated to have at least one untreated decayed tooth in 2012; [69] among 45-64 year olds, the percentage with untreated dental caries was 48.6%.[70]

Applying prevalence estimates locally from this collective research suggests the following could be the case for adults in Santa Cruz County:

- With 14.6% (26,881) of the 184,120 adult population below the federal poverty level, approximately 47% with mild, moderate or severe periodontitis means an estimated 12,634 adults age 21+ has some level of oral disease, and 2,392 has severe periodontitis, the more advanced form of periodontal disease.
- 10,752 low-income adults (40% of poor age 20 years and older) likely have at least one untreated decayed tooth.

[66] Eke PI, et al. Prevalence of periodontitis in adults in the United States: 2009 and 2010. *J Dent Res* 2012 Oct;91(10):914-20.
[67] http://www.gao.gov/new.items/he00072.pdf
[68] http://www.cdc.gov/nchs/data/databriefs/db104.pdf
[69] http://www.cdc.gov/oralhealth/publications/factsheets/adult_oral_health/adults.htm
[70] Untreated dental caries, by selected characteristics: United States, selected years 1988–1994 through 2011–2012. http://www.cdc.gov/nchs/data/hus/hus14.pdf#066

IV. Overview of the Medi-Cal Dental Program

"If we were to do it, we'd rather just give the dentistry away and not be involved with their [Denti-Cal] hassle." - Dentist survey respondent

Medi-Cal is the primary source of insurance of most patients in community clinics who have some form of coverage. Thus, the information in this section provides a context for understanding the requirements, features, and benefit structures of California's Medi-Cal Dental Services Program, as well as its relationship to medical and dental providers.

The California Department of Health Care Services (DHCS) is responsible for administering the $92 billion Medi-Cal program. The dental program represents a fraction of its budget—1.5%. Medi-Cal Dental Services Division is responsible for oversight and monitoring, which includes ensuring access to dental care services, availability of appropriate levels of care, quality of care delivered to recipients, provider recruitment and outreach, policy and rate setting, and auditing.

Medi-Cal is a significant purchaser of medical and dental services for low-income individuals. It now covers 1 in 3 Californians—and more than half of all children. The total certified Medi-Cal eligible count reached 12,549,540 in May 2015—1.3 million greater than May 2014's total[71]—representing a 34% increase in enrollment since the Affordable Care Act went into effect.

What are the Required Dental Benefits?

Children Age 0-20

Children's services mandated through the federal Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) benefit requires states to provide a comprehensive dental benefit to Medicaid-enrolled children.[72] Medicaid policy requires direct referrals of enrolled children to dental providers for comprehensive diagnostic, preventive and treatment services that include:[73]

- Diagnostic and preventive dental hygiene (e.g. examinations, x-rays, fluoride treatment and teeth cleanings)
- Emergency services for pain control
- Tooth extractions
- Fillings
- Root canal treatments
- Prosthetic appliances

[71] California Department of Health Care Services Medi-Cal Statistical Brief. June 2015. http://www.dhcs.ca.gov/dataandstats/statistics/Documents/Enrollment_May2015_final.pdf
[72] Snyder A, Gehshan S. *State Health Reform: How Do Dental Benefits Fit In? Options for Policy Makers.* National Academy for State Health Policy. April 2008.
[73] Centers for Medicare and Medicaid Services. Dental Screening Services. Early and Periodic Screening, Diagnostic and Treatment (EPSDT) Services. State Medicaid Manual. Part 5, Section 5123.2, pp. 10-93.

- Orthodontics for children who qualify

Adults Age 21+

While children with Medi-Cal benefits are entitled to dental services, states may choose whether to offer dental benefits to adults.[74] Due to budget issues, California eliminated coverage for routine dental care for most adults in 2009. Effective May 1, 2014, however, some basic adult dental benefits were restored. The scope includes the following benefits, which are not as broad as those provided by the program prior to the 2009 benefit elimination:

- Exams and x-rays
- Cleanings
- Fluoride treatments
- Fillings
- Anterior root canals (front teeth)
- Prefabricated crowns
- Full dentures
- Other medically necessary dental services

Attachment 3 identifies the limitations of Denti-Cal coverage for adults as of December 1, 2015.

How are Dental Benefits Administered?

Similar to other states, California has shifted most of its Medi-Cal beneficiaries into managed care systems.[75] Approximately three-quarters of Medi-Cal beneficiaries in all 58 California counties receive their *medical* care through 6 main models of managed care. In Santa Cruz and Monterey Counties, Medi-Cal beneficiaries receive their medical care through the Central California Alliance for Health, one of the state's County Organized Health System models.

Dental services are "carved out," or not included in managed care. DHCS administers these services directly through the Denti-Cal program, which operates independently of *medical* managed care. This means that Medi-Cal managed care contractors are not responsible for providing (paying for) dental services to Medi-Cal members, only referring them for this care. Reviews have shown that the various carve outs, such as dental, have posed difficulties in managing needed care for members.[76] They have found that, generally, there is little to no care coordination, communication between differing provider networks, or data sharing between administrators of carved out services and managed care plans though some plans are working broadly to try to expand coordination between various providers.

How does the Medi-Cal Dental Program Operate?

About 90% of the Medi-Cal dental program is administered as Denti-Cal Fee-For-Services (FFS), and its policies, including rates, are the foundation of the entire dental care program. Under this system, dental groups, dentists, Federally Qualified Health Centers (FQHCs) and Tribal, Rural Health Centers and other community clinics submit applications for enrollment as Denti-Cal providers.

[74] Most states now offer some amount of Medicaid adult dental benefits.
[75] Central California Alliance for Health currently serves 328,486 members in Santa Cruz, Monterey and Merced Counties combined. http://www.ccah-alliance.org/aboutus.html
[76] Coleman C, Connolly J. Medi-Cal Managed Care: Raising the Bar for Quality and Outcomes. Insure the Uninsured Project (ITUP) January 2015. http://itup.org/wp-content/uploads/2015/01/Medi-Cal-Managed-Care-ITUP.pdf

DHCS also administers a dental managed care program in 2 counties in which it contracts with dental managed care plans to serve beneficiaries. The dental services delivered through dental managed care plans operate independently of Medi-Cal *medical* managed care. The Sacramento County program is called Geographic Managed Care (GMC) and in Los Angeles it is referred to as the Prepaid Health Plans (PHP) program. Uniquely, Dental GMC in Sacramento County is a *mandatory* program. Except for certain eligibility aid codes, Medi-Cal recipients there must select one of the available GMC dental plans for their dental care. In Los Angeles County, Dental PHP is a *voluntary* program where beneficiaries can choose to enroll in one of the contracted dental managed care plans—which about 19% choose to do—or receive services through the traditional FFS system. In FFS, beneficiaries are on their own to find dentists who accept Denti-Cal; in dental managed care, they choose or are assigned to a dental provider that serves as their dental home.

How are Medi-Cal Dental Services Reimbursed?

Fee-for-Service

DHCS contracts with Delta Dental of California, its fiscal intermediary for dental services, which processes and adjudicates claims and reimburses providers based on the services they rendered. Enrolled Denti-Cal providers submit claims to Delta and claims are paid by Delta at the Medi-Cal rate for the service, as established by the program.

Payment under Dental Managed Care

Dental plan contractors accept full financial and operational risk for providing the required scope of services. Unlike providers in FFS Denti-Cal, GMC plans do not submit claims to Delta Dental or the State for services provided. The plans are paid upfront by DHCS on a capitation basis: a set amount based on the number of enrollees, paid on a per-member-per-month (pmpm) basis. The Medi-Cal dental FFS provider reimbursement rates are used for determining the dental managed care capitation rate. The rates are not negotiated with the plans and all plans are paid the same amount. (The pmpm was $11.45 as of September 2015.)

Payment to Federally Qualified Health Centers and Other Community Clinics

For Medi-Cal dental (and medical) patients, reimbursements for each visit are fixed at a rate negotiated with the federal and state government, an arrangement known as the Prospective Payment System (PPS). PPS is an all-inclusive rate designed to reimburse the facility for the overall cost of providing services to Medi-Cal patients, with each visit billed at the average cost. For these patients, clinics do not bill for individual procedures but submit a single charge (the encounter rate) for each visit. The PPS rate is set at a baseline, with annual adjustments tied to the Medicare Economic Index (MEI), which does not necessarily cover the actual increases in costs.[77]

Medi-Cal Dental Rates in Comparison to Other States

While most states' Medicaid payment rates are below market rates, California's rates are substantially below national rates and among the lowest in the nation[78] While in the United States in 2013, Medicaid fee-for-service reimbursement rate was, on average, 48.8% of commercial insurance charges for pediatric dental services, in California it was 29% (a -28.2% change from 10

[77] A community health center may apply for a rate increase based upon a change in scope of services, e.g., adding a new operatory, adult dental care. or other additional services.
http://www.chcf.org/~/media/MEDIA%20LIBRARY%20Files/PDF/PDF%20E/PDF%20ExpandingAccessToDentalCareIB.pdf

[78] *California Department of Health Services. Weaknesses in its Medi-Cal Dental Program Limit Children's Access to Dental Care*. Report 2013-125. Sacramento: California State Auditor, December 2014.

years earlier).[79] For example, the national Medicaid average payment for "periodic oral evaluation, established patient," one of the 10 dental procedures most frequently authorized for payment, was $44.10 while in California the maximum allowance was $15.00 (later reduced to $13.50 as a result of budget cuts).

In July 2015, DHCS conducted a rate review that compared reimbursement rates of the top 25 most utilized Denti-Cal FFS procedures, with other comparable states' Medicaid Programs, in addition to the commercial rates from 5 different geographic regions around the nation.[80] The review found that Denti-Cal FFS pays an average of 86.1% of Florida's Medicaid Program's dental fee schedule, 65.5% of Texas', 75.4% of New York's, and 129.2% of Illinois' Medicaid Program's dental fee index.

The rate issue is critical because economic studies have found a positive, albeit modest, relationship between Medicaid payment rates and dental care utilization.[81] The explanation of the positive relationship is that higher payments increase the supply of services to Medicaid patients by inducing more dentists to participate in the program.

Statewide Provider Participation in Denti-Cal

The July 2015 DHCS report referred to above, *Medi-Cal Dental Services Rate Review*, showed that while there has been a nearly 40% percent increase in enrolled children and 77% increase in enrolled adults, there has been a double-digit *decrease* in dental providers in that same timeframe.[82] Although a higher percentage are *listed* as providers, only about 26% of the state's dentists *actively participate* in Denti-Cal, and most of these dentists see a relatively low volume of patients.[83,84,85] Nationally, 42% of dentists participate at some level in Medicaid.[86] Numerous studies show that Denti-Cal rates are the main reasons for lack of willingness to participate in the program.[87-88]

In addition to the private dentists who participate in Denti-Cal, community dental clinics are one of the principal safety net providers for many of the state's low-income and uninsured children and adults. Some level of dental care is provided at about two-thirds of the health centers statewide. About half of the clinics offering dental services are co-located in primary care (medical) settings.[89]

---

[79] Nasseh K, Vujicic M, Yarbrough C. A Ten-Year, State-by-State, Analysis of Medicaid Fee-for-Service Reimbursement Rates for Dental Care Services. Research Brief. Health Policy Institute, American Dental Association. October 2014.
[80] Medi-Cal Dental Services Rate Review July 1, 2015. California Department of Health Care Services. http://www.dhcs.ca.gov/Documents/2015_Dental-Services-Rate-Review.pdf
[81] Buchmueller TC, Orzol S, Shore-Sheppard LD. The effect of Medicaid payment rates on access to dental care among children. *Amer J Health Econ* Spring 2015(1);2:194-223.
[82] http://www.dhcs.ca.gov/Documents/2015_Dental-Services-Rate-Review.pdf
[83] California Health Care Almanac, Denti-Cal Facts and Figures, May 2010, California Healthcare Foundation.
[84] *Without Change it's the Same Old Drill: Improving Access to Denti-Cal Services for California Children through Dentist Participation.* Sacramento, CA: Barbara Aved Associates, October 2012. http://www.barbaraavedassociates.com/samples/denti-cal-final-report-nov-2-2012.pdf.
[85] *Provider Experience with Denti-Cal: Findings from a Market Study of California Dentists and Clinics*. Sacramento, CA: Barbara Aved Associates, January 2015 (unpublished).
[86] The Oral Health Care System: a State-be-State Analysis. Health Policy Institute, American Dental Association accessed at http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/OralHealthCare-StateFacts/Oral-Health-Care-System-Full-Report.ashx
[87] *Ibid.*
[88] Buchmueller TC, Orzol S, Shore-Sheppard LD. The effect of Medicaid payment rates on access to dental care among children. *Amer J Health Econ* Spring 2015(1);2:194-223.
[89] Pourat N, Martinez, AE, Crall J. Better Together: Co-Location of Dental and Primary Care Provides Opportunities to Improve Oral Health. UCLA Center for Health Policy Research. Health Policy Brief. September 2015.

Utilization Measurement and Monitoring in Medi-Cal

DHCS developed Performance Measures and Benchmarks for the dental managed care contracts in Los Angeles and Sacramento Counties in 2013 to increase accountability since payment in dental managed care is made on a prepaid basis. The Department uses these measures to monitor plan utilization of members. Plans do not receive full payment when they fail to reach benchmarks. These measures and benchmarks are not applied to the statewide FFS dental system (Denti-Cal), and FFS utilization trends have not been as closely monitored by DHCS as dental managed care.

Improvements Planned for Denti-Cal

On December 30, 2015, California received approval of its renewal request of the Medicaid Section 1115 Waiver that implemented the Affordable Care Act, and is effective January 1, 2016. For the first time, California's Waiver also includes opportunities for improvements in the Medi-Cal Dental Program, as the new Medi-Cal 2020 1115 Waiver Renewal is looking to address local needs to expand access to dental services *for low-income children* through incentives.[90] The Dental Transformation Initiative (DTI), as it is referred to, provides incentive payments to Medi-Cal dental providers who meet certain requirements and benchmarks. According to DHCS, the incentive payments are not considered direct reimbursement for dental services under the State Plan. The financial incentives will fall within 3 domains: early childhood preventative dental screening, caries risk assessment and treatment (age 6 and under), and continuity of care (age 20 and under). Providers who render preventive services to a number of children who meet or exceed the DHCS pre-determined number of beneficiaries, by county, would qualify for the incentive payment. DHCS will also disburse incentive payments to providers who were not previously participating in Medi-Cal and rendering preventive services, but who do so during the demonstration, on the condition that they meet or exceed services based on the Department pre-determined number of beneficiaries, by county, needed to be served to achieve the goal. The details of this initiative are yet to be worked out.

Implications for Community Clinics

Safety net clinics will also be eligible for these incentives and supplied with incentive payments separate and apart from their Prospective Payment System (PPS) or Memorandum of Agreement (MOA) rates for Federally Qualified Health Centers/Rural Health Centers and Tribal Health Centers, respectively. Each safety net clinic office location will be considered a dental service office location for purposes of this domain. More information about the criteria, conditions, payment incentives and other special terms and conditions can be found on the DHCS website, at upcoming DHCS webinars and the Waiver award document.[91]

Adult Coverage

The new dental strategies of the Medi-Cal Waiver do not benefit adults. This is troubling given the gap in dental care benefits (scope of services) and dental services use between Medi-Cal and privately insured adults which is much wider than it is for children.

[90] http://www.dhcs.ca.gov/provgovpart/Pages/WaiverRenewal.aspx
[91] http://www.dhcs.ca.gov/provgovpart/Documents/MC2020_FINAL_STC_12-30-15.pdf

Changes in Covered California

In January 2014, Covered California required all children's (age 0-18) health plans offered through the insurance exchange to include pediatric dental coverage as an essential health benefit (it is included as part of their health insurance plan). Under the Affordable Care Act, dental care for adults is not considered "essential" and thus, dental coverage is not part of the individual mandate. Beginning in 2015, *optional* dental coverage began to be offered through the health exchange; adults must purchase a health plan on the state's exchange to be able to purchase an "add-on" dental policy. The optional add-on dental plans available on the exchange, which are not subsidized, have monthly premiums ranging from $11 to $65. Dental insurers offering the add-on coverage are not allowed to reject enrollees because of pre-existing conditions. According to the exchange, adult enrollment in a dental plan "continued at a healthy pace" during open enrollment as of November 2015."[92]

Because adult dental benefits are not part of the essential health benefits requirement, analysts have suggested that future dental benefit patterns will depend on how purchasing behavior evolves among three key groups: employers, individuals, and state governments.[93]

[92] Covered California release, November 18, 2015, accessed at http://news.coveredca.com/2015/11/enrollment-figures-show-robust-interest.html

[93] Vujicic M, Goodell S, Nasseh K. Dental Benefits to Expand for Children, Likely Decrease for Adults in Coming Years. Research Brief. ADA Health Policy Institute. April 2013.

V. ACCESS TO SERVICES

"This is not a complaining population, so we may not always be aware of all the access problems."- WIC program representative

This section of the report highlights oral health access barriers, and the potential and existing resources that could be improved to strengthen the oral health safety net.[94]

What are Common Barriers and Other Access Issues for Oral Health Services?

While most children and adults living in Santa Cruz County enjoy good oral health and ready access to high-quality dental care, many of them do not. Barriers to accessing oral health services are the result of a combination of both delivery system and patient personal factors. Lack of available resources including willing providers, restrictive policies, provider attitudes and lack of ability to manage very young children in the dental office account for the common "structural" barriers to utilization on the delivery side.

On the patient side, common barriers that impact access include lack of perceived need and knowledge about the importance of oral health, financial concerns (lack of dental insurance, high deductibles and share of costs), unawareness of having dental benefits, not being able to find a provider, dental fear, and logistical challenges like transportation that contribute to high rates of no-shows for appointments. Community representatives interviewed for this study believe the 2 biggest personal obstacles are having to take time off work to go to the dentist and fear of the dentist. Cultural attitudes such as "fatalism" among Latinos (a strong belief that uncertainty is inherent in life and each day is taken as it comes), [95] for example, or the "no pain, why go?" outlook are also strong influences on health-seeking behaviors and act as barriers to using preventive services.

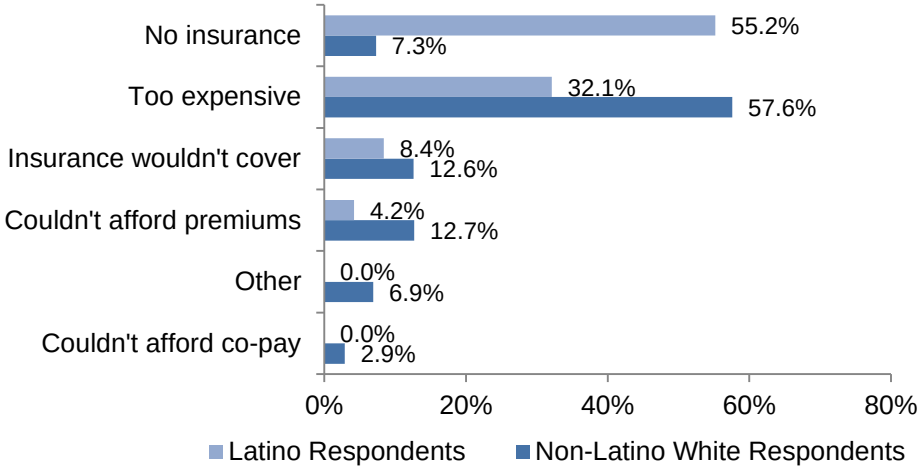
Findings from the Santa Cruz County Community Assessment Project

The Community Assessment Project (CAP), a multi-year initiative sponsored by the United Way of Santa Cruz County and conducted by Applied Survey Research, measures the quality of life in Santa Cruz County. The survey is conducted across all income levels and the 1,000 households it reaches is considered a representative sample. While not all of the same dental information is collected each year, and some dental questions are asked differently now, the 2013 and 2014 assessments offer some information about barriers for those who "needed dental care and were unable to receive it."[96] The 2014 findings, which were available by total respondents/Latino-only respondents (not inclusive of other ethnic/racial groups) showed that the greatest barriers for Latinos were lack of insurance (55.2% vs. 7.3%) and cost of care (32.1%, albeit lower than non-Latino white respondents at 57.6%).

[94] Because the needs assessment was not designed as a strategic market analysis for dental services, we do not, for example, examine the number of operatories needed to fit capacity or staffing needed to appropriately meet the service area need.
[95] http://www.cdc.gov/healthcommunication/pdf/audience/audienceinsight_culturalinsights.pdf
[96] The full 2015 report can be accessed at http://static1.squarespace.com/static/5176dcd7e4b0e5c0dba41ee0/t/563a84b1e4b0330ccadca6fa/1446675633287/CAP%2B20%2BComplete%2BReport.pdf

Concerns about scope of coverage and the cost of premiums were slightly lower for Latino respondents (Figure 9).

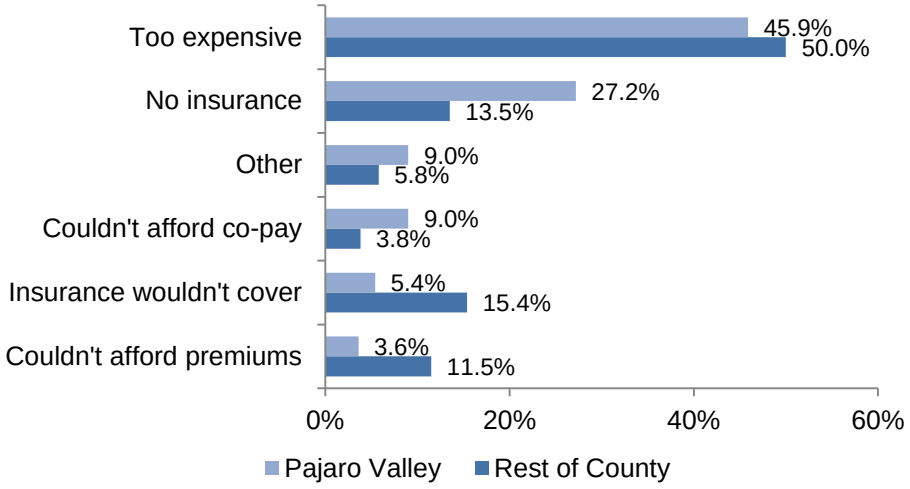
Figure 9. Access Barriers, Total CAP Respondents and Latino-Only Respondents[1]



Source: Applied Survey Research, 2014 CAP
[1]In rank order by Latino-only respondents

The 2013 CAP oversampled respondents to hear directly from Pajaro Valley (PV) residents about the reasons that contributed to not needing dental care.[97] Lack of insurance was a barrier for twice as many PV respondents as for the rest of the county, 27.2% vs. 13.5%. Similar to countywide respondents, about half (45.9%) of the PV residents reported being concerned about the cost of care as a major barrier (Figure 10).

Figure 10. Access Barriers, CAP Respondents, Pajaro Valley and the Rest of Santa Cruz County[1]



Source: Applied Survey Research, 2013 CAP
[1]In rank order by Pajaro Valley respondents

[97] *A Glimpse of Reality: Health & Other Disparities in the Pajaro Valley, 2013*. Pajaro Valley Community Health Trust and Applied Survey Research. Oversampling, which is done every 2 years, was skipped in 2015; it will also be skipped in 2017 but will likely be conducted again in 2019 according to Raquel Ramirez Ruiz, Pajaro Valley Community Health Trust; personal communication November 16, 2015.

While not all young children *receive* dental care, access based on coverage is generally positive. In 2011, the most current year with available CAP dental data on children age 0-5, 84% of Santa Cruz County families surveyed said that at least one of their children ages 0-5 had dental insurance.[98]

Findings from the Santa Cruz Head Start Program

In conversations with staff about access issues, the 2 biggest barriers to dental services noted for the many families enrolled in Head Start were parents' inability to take time off work for dental appointments and fear of the dentist (either the parent's or the child's).[99]

Findings from Sacramento and Los Angeles Medi-Cal Recipients

We conducted a Member Survey for the Medi-Cal dental plans in Sacramento and Los Angeles Counties in fall 2015 to determine why children and adults with Medi-Cal did not more fully utilize their dental benefits.[100] Although the findings are not from beneficiaries living in the Central Coast, they reflect the type of barriers that could just as likely be faced by Medi-Cal families and adults in Santa Cruz and Monterey Counties. Surveys in English and Spanish were mailed to the enrollees with no record of a dental visit in the prior year. Based on 849 completed surveys (341 families with children and 508 from adults) we learned:[101]

- Most (85.8%) parents were aware their child had dental benefits as part of their Medi-Cal insurance. However, similar to national dental studies of Medicaid recipients, there was confusion among adults: 33% reported not knowing they had dental coverage.
- While 74% of parents reported taking the initiative themselves as the main reason for their youngest child's last dental visit, twice the proportion (23% vs. 11.6%) of those who completed the survey in Spanish went in response to being called in by the dental office or clinic.
- Long waiting time during the dental visit and fear of the dentist (by either the child or the adult) posed the largest barriers to care. Many parents complained of "having to wait for hours" because of overbooked appointments, and "not being able to take off a whole morning or afternoon" for dental appointments—access problems that discourage patients from keeping appointments and add to the dilemma of no-show rates. Waiting too long during the dental visit was an access barrier especially noted by the Spanish-language respondents. The inconvenience of slow patient flow matters more for patients who are paid on an hourly basis.
- Six barriers for families with children were statistically significant by survey language type; the English survey group gave higher ranking to these reasons for no dental visit:
    - I think my child is too young to need to see a dentist
    - I don't know where to take him/her
    - I or my child is afraid of the dentist
    - I can't miss that much work
    - I don't have a way to get there
    - My child doesn't have any tooth pain

[98] Source: Applied Survey Research, *Santa Cruz County Community Assessment Project (CAP), 2012*. As reported in First 5 Santa Cruz County Annual Evaluation Report, October 2015.
[99] Personal communication with Hannah Hayes, Program Manager, Child & Family Development Programs, October 23, 2015.
[100] *Medi-Cal Dental Managed Care Survey: Why Members Do Not Utilize Their Dental Benefits*. Barbara Aved Associates, Sacramento, CA, December 2015.
[101] The survey response rate was relatively low for the number of surveys mailed, however: 7.1% overall (5.7% children, 8.5% adults).

- Confusion about payment conditions ranked as the *most important* reason for adults not going to the dentist. While Denti-Cal is "free," financial concerns are legitimate because of the limited scope of adult Medi-Cal dental benefits and patient responsibility for payment for the additional needed treatment.

- About 10% of both adults and parents of children reported that a dental appointment was not needed "because there is no tooth pain." Pain as the driver for a dental visit implies a lack of understanding about the importance of regular oral health maintenance.

- Some people believed self-care alone was adequate—close to 3% of adults said their mouth was "healthy" and thought taking care of their teeth themselves (brushing/flossing) was a reason not to need to see a dentist. This group is unlikely to "demand" any of the "supply" of available dental services.

What are the Local Dentist Supply and Denti-Cal Provider Ratios?

While overall dentist supply can affect the number of dentists available to treat people with Denti-Cal, supply is not a limiting factor in Santa Cruz or Monterey. With approximately 203 licensed dentists,[102] Santa Cruz County is considered to have a medium-to-high supply with an estimated dentist-to-population ratio of 3.7 dentists/5,000 population, mirroring the average statewide ratio. Monterey County, with 297 licensed dentists, has a slightly lower ratio of 3.4 dentists/5,000 population. (Although the dentist-to-population ratios are favorable, dentists are not evenly distributed throughout the counties.) Approximately 80% of the active dentists in these 2 counties are general or family dentists, with the remaining 20% split among the specialties.[103]

Dentist supply, however, does not address the question of whether dentists are willing to see patients with Denti-Cal or whether general dentists are trained and agreeable to seeing very young children in their practices. According to the 2014 state Auditor's Report,[104] the ratio of general dental office providers to beneficiaries willing to accept new Medi-Cal child patients for Santa Cruz County as of December 2013 was 1:1,016. The ratio for Monterey County was slightly higher at 1:1,335. (By contrast, of the counties with providers—some had none—Orange County had the most favorable ratio of 1:328 and Humboldt had the worst of 1:8,503).

What are Local Dentists' Experience with and Opinions about Denti-Cal?

Study Sample

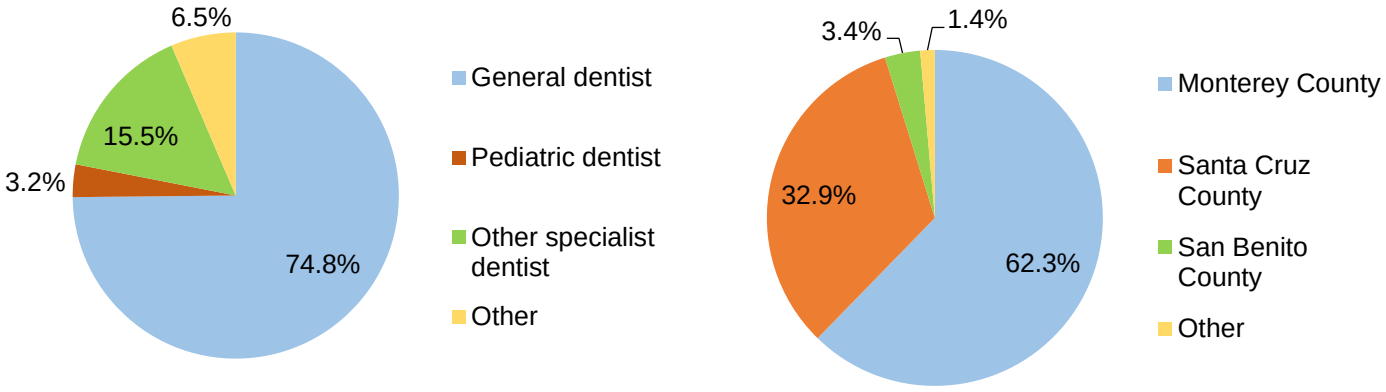
This section of the report presents findings from our survey the Monterey Bay Dental Society (MBDS) made available to its members,[105] providing a unique opportunity to learn more about local dentists' experience, attitudes and opinions about Denti-Cal. The survey addressed some of the same general issues about Denti-Cal as other statewide studies have done. The findings have relevance for understanding current and anticipating future participation by local dentists, and for

[102] Date source is California Dental Board as of October 26, 2015, accessed at http://report.oshpd.ca.gov/?DID=HWDD&RID=Provider_Count_By_License_Type.
[103] Personal communication with Debi Diaz, Executive Director, Monterey Bay Dental Society. And, according to the California Dental Association, the 80% general dentist/20% specialist split is the rule of thumb as a common reference.
[104] *California Department of Health Services. Weaknesses in its Medi-Cal Dental Program Limit Children's Access to Dental Care*. Report 2013-125. Sacramento: California State Auditor, December 2014.
[105] The Monterey Bay Dental Society sent the survey online with a cover letter by Joseph Robb, DDS, MBDS County Director Because 81% of dentists in Santa Cruz, Monterey and San Benito Counties are members of the MBDS, most dentists in these 3 counties would have been reached with this survey.

legislative and other advocacy efforts local collaboratives may elect to undertake to increase access and utilization.

A total of 157 dentists responded to the survey, generating a relatively high response rate of 37.1%. Three-quarters (74.8%) of the respondents self-identified as general dentists, 3.2% as pediatric dentists, and 15.5% as other dental specialists (Figure 11). Because the majority of the 6.5% of dentists in the "other" category identified themselves as oral surgeons, periodontists, and endodontists, the "other dentist specialist" category is actually closer to 20%, which is generally reflective the characteristics of the 423 total membership in MBDS who could have responded to the survey. The county of respondents' practices also aligns with the MBDS overall membership by practice location.

Figure 11. Characteristics of the Monterey Bay Dentist Survey Respondents (n=157)



Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

Eighty-one percent of the dental offices served both children and adults; 14.9% saw only adults and 4.1% saw only children (Table 13).

Table 13. Type of Patients Seen in Dental Practice by Age (n=148)

	Number	Percent
Children only	6	4.0%
Adults only	22	14.9%
Both children and adults	120	81.1%

Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

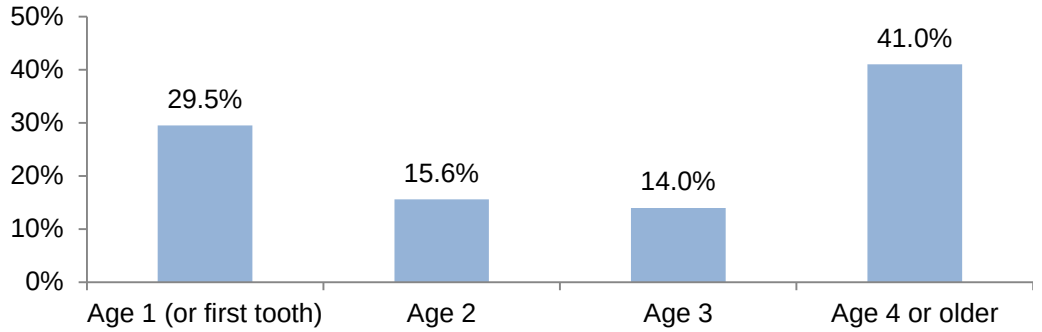
Age at Which Dentists Will See Child for First Dental Visit

To examine access issues for very young children we asked all dentists who serve children at what age they first start seeing them in their practice. Close to one-third (29.5%) of the respondents reported they start seeing children by age 1 or the first tooth (Figure 12).[106] Another 15.6% will see

[106] These percentages are impressive. In a representative sample of dentists statewide, 18% of general dentists started seeing children at age 1; 82.2% of pediatric dentists reported they saw children at the recommended age 1. http://www.barbaraavedassociates.com/samples/denti-cal-

them by age 2. While these findings are positive, they also suggest that a concerted effort could be helpful in Santa Cruz and Monterey Counties to increase the proportion of dental practices that follow the recommendation for "the first dental visit at the first tooth or first birthday."[107]

Figure 12. Age at Which Dentists First Start Seeing Children in the Practice (n=122)

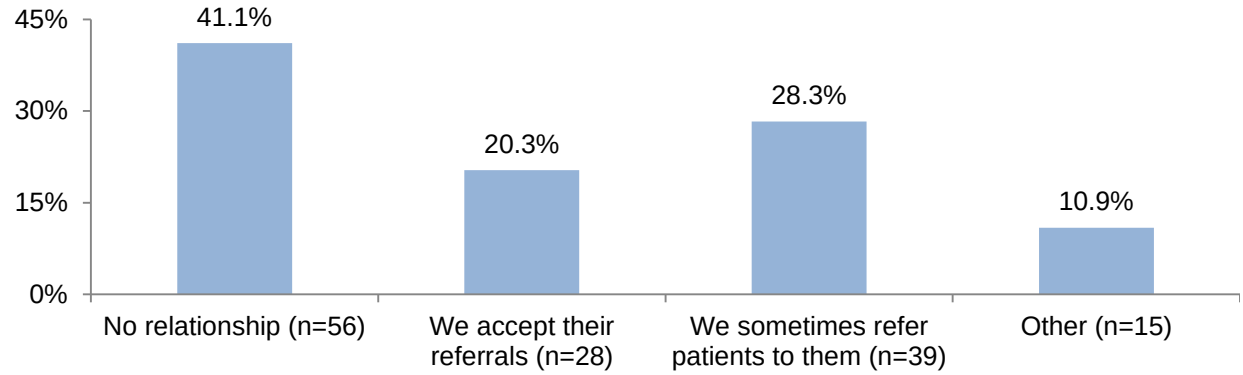


Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

Dentists' Relationship with Community Clinics

Statewide, community safety net dental clinics have begun to forge new relationships with private practice dentists, increasing collaboration within the dental community and widening the base of support for patients with Medi-Cal. In the Monterey Bay Area, 20.3% of dentists who answered the question said they accept referrals from clinics, and 28.3% occasionally refer patients to them; 41.1% reported having no relationship with clinics, however (Figure 13).

Figure 13. Relationship of Dentists and Community Clinics (n=138)



Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

final-report-nov-2-2012.pdf. On the other hand, in a statewide sample of only Denti-Cal providers, 33% of dentists reported seeing children by age 1. *Dental Provider Network Capacity Survey Summary*. CA Department of Health Care Services, June 2015. http://www.denti cal.ca.gov/provsrvcs/docs/dent_prov_netw_capac_srvy_sum_june_2015.pdf

[107] American Dental Association, American Academy of Pediatric Dentistry, American Academy of Pediatrics policy statements. 2014. http://www.aapd.org/media/policies_guidelines/p_eccclassifications.pdf

Dentists' Current Participation in Denti-Cal

A number of studies have confirmed that the limited provider network for federally funded programs such as Medi-Cal is one of the primary limiting factors for access to care for this population. Three-quarters (75.2%) of the Monterey Bay dentist survey respondents do not accept patients with Denti-Cal in their private practice. While 18% said they take Denti-Cal (Table 14), the California State Auditor reported about 12% participation for children in 2013 for these counties.[108] Another 6% of the survey respondents noted they will see patients with Denti-Cal on a voluntary basis in other settings.

Table 14. Dentists' Participation in Denti-Cal (n=141)

Do you take patients with Medi-Cal in this practice?		
	Number	Percent
Yes, in this practice	26	18.4%
Yes, but only on a voluntary basis elsewhere (e.g. CDA Cares Day, health fairs)	9	6.4%
No	106	75.2%

Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

Wanting to provide services to the low-income population was the main reason that influenced participating dentists' decisions to participate, cited by 70.8% of the enrolled Denti-Cal providers (Table 15). Between one-quarter and one-third (29.2%) reported that seeing Medi-Cal patients was a helpful source of revenue. "Other" reasons as answers to the question were that Denti-Cal had "always been part of the practice" and that Denti-Cal was useful to help build up a practice.

Table 15. Main Factors that Influenced Dentists' Decision to Participate in Denti-Cal (n=24)

	Number	Percent
It's a helpful source of revenue	8	33.3%
I want to provide a service to these patients/to the community	17	70.8%
It's generally no more difficult to submit claims/get paid than a commercial insurance company	2	8.3%
Other	5	20.8%

Source: Study author survey administered by Monterey Bay Dental Society, October 2015.
Note: respondents could cite more than 1 factor.

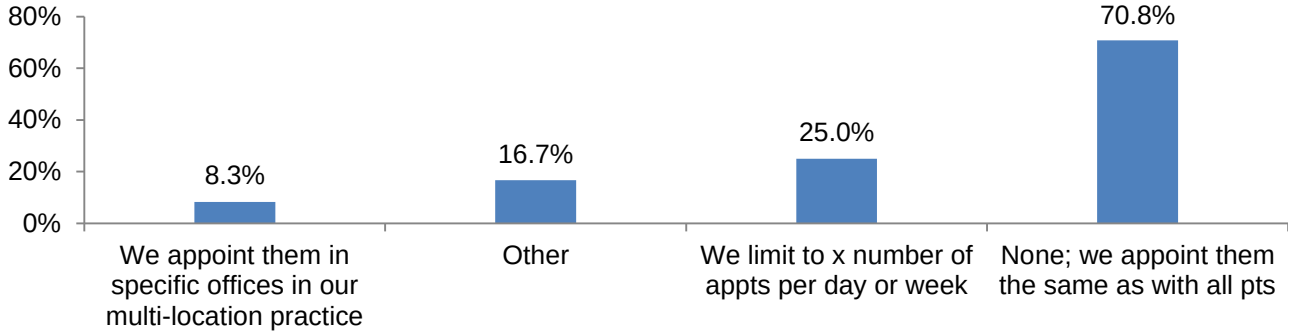
Limitations and Capacity for More Denti-Cal Patients

About three-quarters (70.8%) of the dental practices said they did not place any limitations or restrictions for seeing Denti-Cal patients (Figure 14). Restricting appointments to a certain number per day or per week was the case for 25% of the respondents. Another 8.3% appointed them only to specific offices in the multi-location practice. "Other" types of limits on Denti-Cal included only

[108] *California Department of Health Services. Weaknesses in its Medi-Cal Dental Program Limit Children's Access to Dental Care*. Report 2013-125. Sacramento: California State Auditor, December 2014.

serving special needs patients, limiting the number in treatment or type of services ("no dentures because it barely covers lab costs"), or taking emergency walk-ins only and referring others to the State Denti-Cal 800 telephone number.

Figure 14. Limitations Placed on Seeing Patients with Medi-Cal (n=24)



Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

A two-and-a-half week wait was the average time appointments for children with Medi-Cal were booked out. Seven weeks was the average for adult Medi-Cal patient appointments. A little more than half (54.5%) of the providers reported having the capacity to see more patients with Medi-Cal, and another 20.8% said they could accommodate "a few more;" 25% did not have additional capacity.

Table 16. Current Medi-Cal Providers Capacity to See More Denti-Cal Patients (n=24)

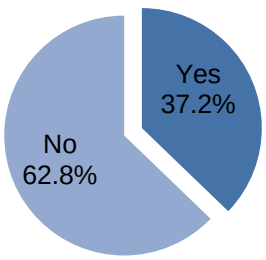
Do you have current capacity to see more Medi-Cal in this practice?		
	Number	Percent
Yes	13	54.2%
Yes, but just a few more	5	20.8%
No	6	25.0%

Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

Dentists' Prior Participation in Denti-Cal

As Figure 15 shows, 37.2% of the dentists reported that while they no longer took Denti-Cal in their practice, they had done so in the past.

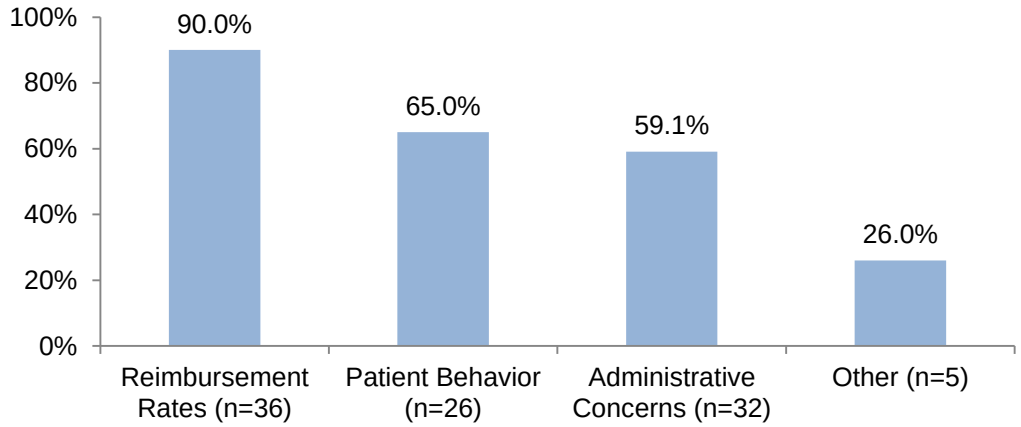
Figure 15. Dentists' Prior Participation in the Denti-Cal Program (n=113)



Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

Low reimbursement rates accounted for the main reason (90%) these dentists had dropped out (Figure 16). Patient behavior such as no-shows, and administrative issues that add to the cost of seeing Denti-Cal patients such as claims processing and prior authorization challenges also accounted for 65% and 59%, respectively, of the reason these dentists had left the program.

Figure16. General Reasons Dentists Stopped Taking Denti-Cal (n=40)



Source: Study author survey administered by Monterey Bay Dental Society, October 2015.
Note: respondents could select more than 1 response choice.

These responses mirror and add to the findings of our statewide studies,[109,110] in which dentists consistently cite the same 3 primary reasons for non-participation in Denti-Cal:

- Reimbursements that are well below commercial rates;
- Difficulties in navigating the program's administrative requirements that can overwhelm small offices;
- Patients that can be harder to appoint and work with than private-pay patients.[111]

A few Monterey Bay dentists offered the following "other" specific examples for no longer participating in Denti-Cal (Table 17 on the next page); their frustration is evident:

[109] *Without Change it's the Same Old Drill: Improving Access to Denti-Cal Services for California Children through Dentist Participation.* Sacramento, CA: Barbara Aved Associates, October 2012. http://www.barbaraavedassociates.com/samples/denti-cal-final-report-nov-2-2012.pdf.
[110] *Provider Experience with Denti-Cal: Findings from a Market Study of California Dentists and Clinics*. Sacramento, CA: Barbara Aved Associates, January 2015 (unpublished).
[111] *Oral Health: Factors Contributing to Low Use of Dental Services by Low-Income Populations*. General Accountability Office, Washington: DC. 2000, pp. 10-11. http://www.gao.gov/new.items/he00149.pdf.

Table 17. Other Reasons Dentists Stopped Participating in Denti-Cal (n=5)

- *"Basic treatment finished and not paid for. Multiple lost or returned claims."*
- *"Denti-Cal patients took approximately 75% of my time for 30% of my gross income."*
- *"Adversarial relationship. Always fighting with claims, eligibility, and payments, without making financial sense. We'd rather just give the dentistry away and not be involved with their hassle."*
- *"From [period of time] I was probably the only dentist in Santa Cruz accepting Medi-Cal. I was overwhelmed. I did my part, now someone else can do it!"*
- *"I would rather do my own selective 'low rate' or free dental treatment on my own than be subjected to the laborious system of Denti-Cal mandates at horrendously low fees. I don't need that kind of misery!"*

Incentives for Dentist Participation and Likelihood of Participating

While nothing would persuade 45.9% of the responding dentists to participate in Denti-Cal, 54.1%% indicated certain improvements that might make a difference to future participation (Table 18).

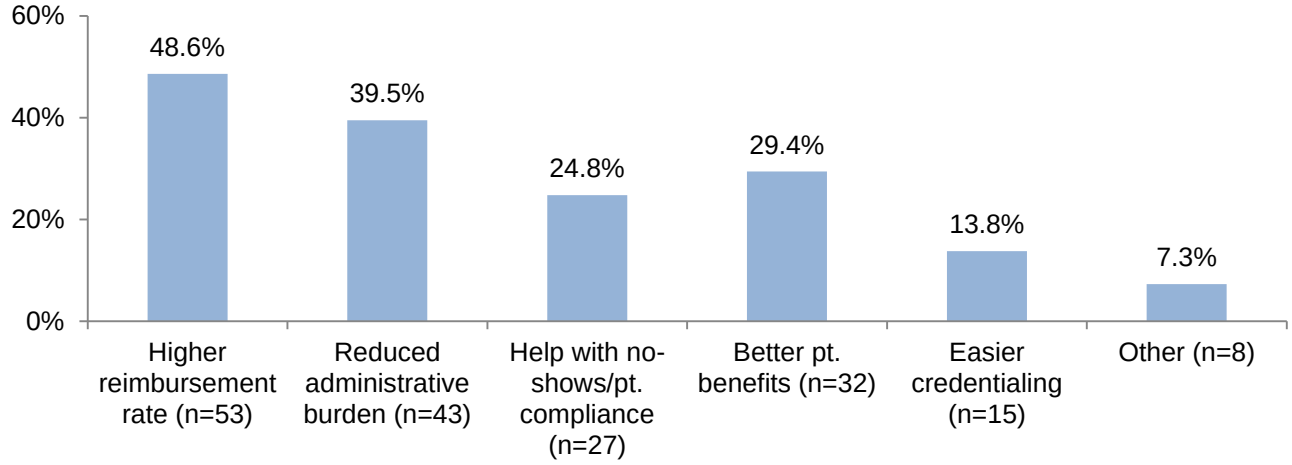
Table 18. What Would Motivate Dentists to Take Denti-Cal (n=69)

If you do not currently accept Denti-Cal, what would it take for you to see Denti-Cal patients in your practice?	Number	Percent
Nothing; I don't wish to accept Denti-Cal	50	45.9%
I could be interested if certain changes occurred	59	54.1%

Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

The specific changes or improvements non-Denti-Cal providers said it would take to potentially interest them in participating again or ever in Denti-Cal essentially restated the factors that accounted for their never taking it or having stopped it in the first place (Figure 17 below). The factors go beyond the importance of higher reimbursement rates, however, as 29.4% want to offer broader benefits to patients with Denti-Cal, based on their greater needs (one dentist commented that the current scope of services is "not compatible with my practice style").

Figure 17. Changes that Could Affect Dentists' Willingness to See Patients with Denti-Cal (n=109)

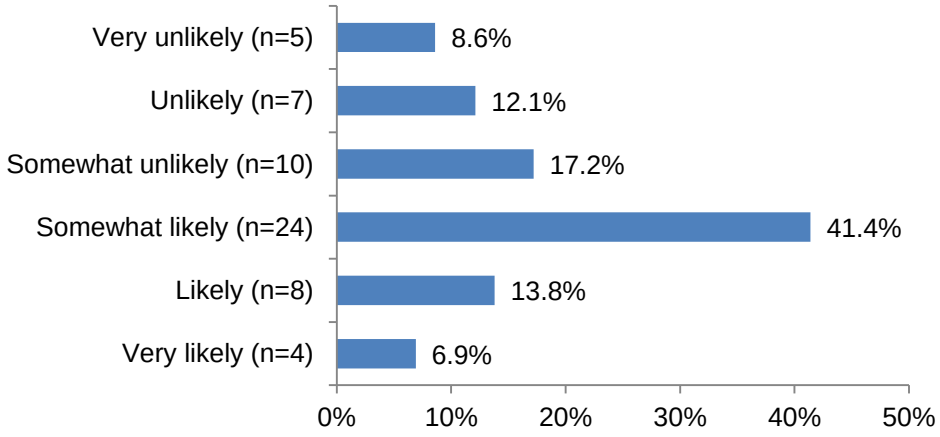


Source: Study author survey administered by Monterey Bay Dental Society, October 2015.
Note: respondents could select more than 1 response choice.

Most of the "Other" feedback from dentists reiterated concerns about reimbursement rates and "government program inefficiency" ("*they always make things worse")*, although 2 respondents noted they are not the ones who make the decision in the practice for what kinds of patients to accept.

Figure 18 indicates the likelihood of the non-participating dentists beginning to take Denti-Cal in their private practice *if* the improvements described in the survey (or written-in by them) were to occur. While it is hardly a large proportion, 20.7% of the respondents who answered the question (12 dentists) said it was "likely" or "very likely" they would participate. Another 41.4% indicated "somewhat likely."

Figure 18. Dentists Likelihood of Taking Denti-Cal if Positive Changes Occurred (n=58)

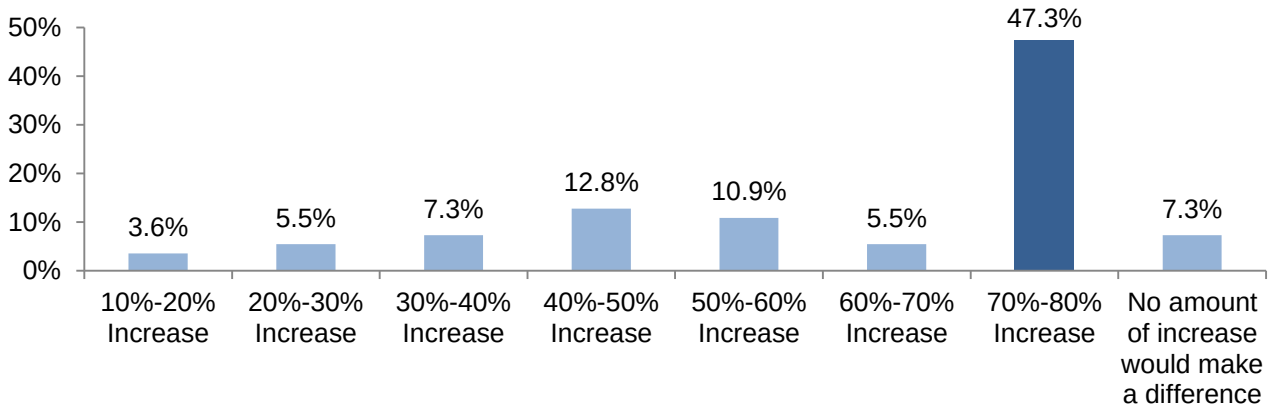


Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

Dentists' Opinions about Rates

Because of the important, positive association between provider rates and access to services, we used the opportunity of this study to ask the dentists who were not current Denti-Cal providers how much of an increase in reimbursement would make a difference to their practice to participate. As Figure 19 indicates, nearly two-thirds (63.7%) indicated the rates needed to be increased by 50% or more. Close to half (47.3%) said an increase of 70%-80% would be necessary for them to see patients with Denti-Cal. Notably, however, 7.3% said *no* amount of increase would make a difference in taking Denti-Cal patients in their practice (Figure 7).[112]

Figure 19. Non-Participating Dentists' Opinions about Reimbursement Rate Change Needed to Participate in Denti-Cal (n=55)



Source: Study author survey administered by Monterey Bay Dental Society, October 2015.

Dentists' Additional Comments about Denti-Cal

Table 19 shows some of the representative comments dentist survey respondents added about their experiences and opinions concerning the Medi-Cal dental program.

Table 19. Additional Comments from Dentists about Medi-Cal

- *"They were some of my favorite patients, since they were very grateful to be seen."*
- *"We are seeing more out of county patients [Monterey DDS]. We have patients coming from Santa Cruz, San Benito, Santa Clara and Merced Counties. The treatment wait has become longer."*
- *"Denti-Cal just got worse as the years went on especially in the sectors mentioned in this survey."*
- *"If reimbursement was equal to what I get from Delta [for privately insured], I would consider serving those patients. Our practice is already very busy, so I don't really need a lot of patients who can't afford their co-pays."*

Table continues on next page

[112] These findings are not as discouraging as they could be. Nothing could entice 47.6% of dental practices to participate again no matter what the rate change would be according to our statewide study of former Denti-Cal providers: *Provider Experience with Denti-Cal: Findings from a Market Study of California Dentists and Clinics*. Sacramento, CA: Barbara Aved Associates, January 2015 (unpublished). And, the same was reported by 39.8% of 236 Sacramento general and specialist dentists in our recent study: *Sacramento Children and Dental Care: Better Off Than Five Years Ago?* www.barbaraavedassociates.com. December 2015.

(continued from previous page)

- *"If every local dentist accepted some then there would be no access issue. Instead the few that do get "dumped on" by non Denti-Cal accepting dentists. Decent reimbursement would also solve the access issue."*
- *"Denti-Cal is currently having the doctor pay to treat patients (reimbursement is less than overhead) costs. The state should make treating Denti-Cal patients a tax deduction if they insist on keeping rates low."*
- *"Due to low reimbursement and rising costs we soon will probably not take new Denti-Cal patients but just keep the current patients."*
- *"I gradually phased out my participation due to stagnant and reduced reimbursement rates. The threat of a fee 'claw back' cemented my decision."*
- *"We don't need more headaches dealing with patients that can't afford treatment. Denti-Cal benefits for adults don't go far enough. Happy to volunteer my time at a different location, but don't want to mess with the system we have in my practice."*

What Other Dental Insurance Programs are Available to Low-Income Persons?

Healthy Kids

In 2004, First 5 Santa Cruz County helped create a children's health initiative called Healthy Kids, an insurance program for low-income children who do not have documentation of residency to qualify for Medi-Cal. HK enrolls children into the Healthy Kids Health Plan, and Medi-Cal. (Central California Alliance for Health is the HK Health Plan Administrator and contracts with Delta Dental of California concerning dental benefits.) With the implementation of SB-4, by May 2016 children currently enrolled in HK will qualify for an expanded Medi-Cal program. Outreach is conducted by bilingual/bicultural Certified Application Assisters who assist income-eligible families apply to either of those programs. Because Medi-Cal and Covered California cannot cover all of the uninsured, First 5 also funds the premiums for children who qualify for the local Healthy Kids health insurance plan.[113] In 2014-15, 768 children age 0-18 were enrolled in the Santa Cruz County Health Kids health insurance program. (See page 74 in the next chapter for a description of Healthy Kids dental utilization.)

What Safety Net Dental Services are Available?

In addition to the few private dentists who accept patients with Denti-Cal, community dental services provide safety net dental care for Santa Cruz and Monterey Counties' low-income population. (Table 20, which begins on page 54, lists these resources. A map of the sites is included in Attachment 6.)

Dientes Community Dental Clinic

Dientes operates out of a 15-chair clinic centrally located in Santa Cruz near Dominican Hospital. Dientes staffs its main site on Commercial Way in Santa Cruz with 2 hygienists, 2 general and 2 pediatric dentists during the week, and 3 general dentists on Saturdays. At the Watsonville site

[113] First 5 Santa Cruz County. Annual Evaluation Report 2014-15. October 2015.

(which is co-located with the Santa Cruz Public Health Department's Health & Dental Center) there are 2 general dentists. Approximately 16% of Dientes patients are uninsured, and over 96% are at or below the Federal Poverty Level.[114]

Capacity is a particularly critical issue at the Santa Cruz clinic site. Santa Cruz is booked out for new adult appointments 90 days and 45 days for pediatric, although Watsonville is currently taking a limited number of new adults. Because it was having difficulty scheduling needed treatment appointments for children once they were given exams as new patients, the Watsonville site restricts the number of new pediatric patients it can accept. The Watsonville clinic does not see children under age 7 but refers them to the pediatric specialist at the in Santa Cruz clinic. Dientes at Commercial Way reports it has to turn away about 20 new patients a day. The average wait for a regular pediatric appointment of current patients at Commercial Way is 45 days for exams, 70 days for treatment; at Watsonville, pediatric exam wait time of current patients is 33 days, and treatment wait time 45 days. Due to capacity limitations, neither site is currently accepting new adult emergency patients.

A total of 21,648 dental encounters (defined as exams or treatments) was reported by Dientes for 2014.[115] The 3-month average number of visits at Commercial Way between August and October 2015 was 2,176 (with an average no-show rate of 12%); during the same period, Watsonville had a monthly average of 437 visits (19% no-show rate). Dental staff observed that many new adult patients at Commercial Way arrive without having been to a dentist or had regular care for up to 5 years; for Watsonville, the average is much higher, 7-10 years.

Mobile dental services are provided at varying times during the month through the outreach program at 15 schools in Santa Cruz County as well as at the WIC office in Watsonville and at multiple Skilled Nursing Facilities throughout Santa Cruz County.

Salud Para la Gente

Salud Para la Gente, which offers both medical and dental services, operates 5 dental clinics, 3 in Santa Cruz County and 2 in Monterey County. It also provides dental services through its 9 school-based clinics in Santa Cruz and Monterey Counties. The total dental encounters reported for 2014 was 23,635.[116]

Due to limited capacity, Salud is only taking new *external* (i.e., someone not already a patient of the FQHC) adult patients on an emergency basis. Staff state they receive around 10 calls a week for new adult patients looking for a dentist whom they cannot accommodate. Salud treats the emergency (walk-ins and same-day emergency slots are available for urgent appointments) and refer the patient to area providers who accept Denti-Cal. New appointments are currently accepted for children, however. Current adult primary care patients referred *internally* by Salud's medical department are accepted for dental services, and can usually get an appointment within 2-3 weeks. Child appointments for regular, non-urgent care are also generally available within 2-3 weeks. Similar to Dientes' staff observations, new adult dental patients at Salud have often not had a dental visit or regular care for 3-5 years and arrive with varying degrees of decayed teeth and other signs of dental disease.

[114] http://www.santacruzhealth.org/Portals/7/Pdfs/HSA%20Health%20Reports/2015/2015SCRZHealthReport.pdf
[115] Health Improvement Partnership of Santa Cruz County (HIPSCC), 2014 Santa Cruz County Safety Net Clinic Coalition (SNCC) Utilization Highlights prepared June 2014. Data source was OSHPD, provided to study author November 2015.
[116] Ibid.

Salud serves a large migrant population (it has agreements with the local Migrant Health Start program) and while some children are new to the area many are new to dental care. These children are particularly at high risk for caries (and have untreated caries) due to their economic and nutritional status.

Western Dental

Western Dental, which serves a large portion of Medi-Cal patients, has 2 clinics in Santa Cruz County that serve children and adults Monday – Saturday. They offer general dentistry (these dentists cover most specialties) and orthodontics. Discounted rates and a financing plan are offered for treatment and other services not covered by Denti-Cal. The 2 clinics in Monterey County are based on the same model. Walk-ins are accepted, and capacity to accommodate patients varies at the clinics, but waiting times for appointments must meet Knox-Keene licensing requirements (e.g., 21-day maximum for regular appointments)[117] and Quality Assurance Management tracks access monthly. Western experiences a 40% appointment no-show rate statewide and reports a comparable percentage for its Santa Cruz and Monterey clinics. Similar to other Denti-Cal providers following the restoration of adult benefits, Western experienced a barrage of patients with "horrific" periodontal needs and co-morbidities. The staff states this pent up demand is finally receding. [118]

Cabrillo College

The Dental Hygiene Program serves approximately 3,000 patients and year and offers assessment, prophylaxis, root planning, and sealants along with local anesthesia and nitrous oxide analgesia services. The youngest age patient is usually 4 years old. Appointments are preferred, but the clinic has triage sessions on Thursdays where walk-ins can come in, but are usually only assessed. Although Cabrillo is a Denti-Cal provider, staff reports it does not accept this form of payment due to not having adequate staff to process Denti-Cal claims.[119]

Clinica De Salud Del Valle[120]

Clinica De Salud Del Valle in Monterey County, which serves the healthcare needs of agricultural and other low-income families, offers both primary care medical and dental services. Dental care is offered at 6 clinic sites as well as through mobile clinics that serve many homeless communities. A total of 42,899 dental encounters were reported for 2014.[121]

[117] Reasonable appointment availability was confirmed by a few secret shopper phone calls we made requesting child and adult appointments.
[118] Personal communication with Ron Inge, DDS, Quality Management Department, Western Dental, December 3, 2015.
[119] Personal communication with Bridgete Clark, Cabrillo College Dental Hygiene Program, February 21, 2016.
[120] Information is limited to the agency's website and publicly-reported annual utilization data as the agency declined requests for an interview for this study. Data sources: http://www.csvs.org/index.htm and Office of Statewide Health Planning and Development. Primary Care and Specialty Clinics Annual Utilization Data. http://www.oshpd.ca.gov/hid/Products/Hospitals/Utilization/PC_SC_Utilization.html
[121] OSHPD 2014 Annual Utilization Data. http://www.oshpd.ca.gov/hid/Products/Hospitals/Utilization/PC_SC_Utilization.html

Table 20. Dental Providers Currently Accepting Denti-Cal, by Category of Provider[1]

Organization/ Provider	Address	Hours	Dental Services	Payment Options
SANTA CRUZ COUNTY				
Community Dental Clinics				
Dientes Community Dental Care	1830 Commercial Way Santa Cruz	Mon-Thurs 8:30am - 12:30pm, 1:30pm - 5pm Friday & Saturday 7:30am - 12pm, 1pm - 4pm	Dental exams, x-rays, cleanings, fluoride treatments, sealants, fillings, crowns, limited root canals, specialized children's dentistry, full & partial dentures, stay plates, limited oral surgery, extractions, oral health education	Medi-Cal, Healthy Kids, Visa, MasterCard, cash, check, sliding scale for uninsured patients; no private insurance
Santa Cruz County's Watsonville Health & Dental Center	1430 Freedom Blvd., Suite C Watsonville	Mon-Thurs 8:30am - 12:30pm, 1:30pm - 5pm Friday 7:30am – 12pm, 1pm - 4pm	Children >age 7 only; Dental exams, x-rays, cleanings, fluoride treatments, sealants, fillings, crowns, limited root canals, full & partial dentures, stay plates, limited oral surgery, extractions, oral health education	
Outreach Program	WIC, SNF, 15 Santa Cruz County Schools	Days at WIC coordinate with prenatal education classes are and generally open to only WIC clients	Dental exams, x-rays, cleanings, fluoride treatments, sealants, fillings, crowns, root cleaning, full & partial dentures, stay plates, limited oral surgery, extractions, oral health education	
Homeless Services Center Outreach Program	115 Coral St. Santa Cruz	Opening in 2016		
Salud Para La Gente	East Beach Street Clinic 204 East Beach St. Watsonville	Mon-Sat 8:30am – 5pm	Patient education, prevention and general dental including exams, x-rays, emergencies, fillings, extractions, cleanings, sealants, and fluoride.	Medi-Cal, sliding fee scale, private insurance, Delta Dental Healthy Kids, Delta Dental of CA, Pacific Union Dental, Pinnacle Claims Management, Western Growers Assurance
	Clínica Del Valle Del Pájaro 45 Nielson St. Watsonville	Mon-Fri 8:30am – 5pm		
	Beach Flats Clinic 302 Riverside Ave. Santa Cruz	Tue, Wed, Thurs, and Fri 8:30am – 5pm		
School-Based Clinics	Pajaro Valley Unified (6 sites) Live Oak (1 site) Salinas (1 site) Castroville (1 site)	Days and times vary	Patient education, prevention and general dental including exams, x-rays, fillings, extractions, cleanings, sealants, and fluoride. Mostly children	
Cabrillo College Dental Hygiene Program	6500 Soquel Drive, Bldg. 2100 Aptos	Mon 1pm-4pm, Tues-Thurs 8:15-4pm Appointments preferred. Triage sessions on Thursdays where walk-ins can be assessed.	Assessment, prophylaxis, root planning, local anesthesia, nitrous oxide analgesia, sealants for patients age 4 and older.	Cash (patients can bill their private insurance). No capacity to bill Denti-Cal though it is a Denti-Cal provider.

Table continues on next page

Continued from previous page

Organization/ Provider	Address	Hours	Dental Services	Payment Options
Western Dental Offices				
Western Dental	1895 Main St. Watsonville 1107 Ocean St. Santa Cruz	Mon-Fri 9am-7pm Sat 8am-4:30pm	General dentistry (most specialties covered) and orthodontics	Medi-Cal (with discounted rates and financing plan for non-covered services) and private insurance
Private Dentists[2]				
Deepak Sachdev, DDS	122 Thicket Ln. Freedom		General dentistry	Medi-Cal, private insurance, cash
Donald Connolly, DDS	386 S Green Valley Rd., Suite A Watsonville 9059 Soquel Dr., Ste D Aptos 824 Mission St. Santa Cruz		Orthodontics and Dentofacial Orthopedics	Medi-Cal, private insurance, cash
Terry Schmunk, DDS	1505 Soquel Dr., Ste 11 Santa Cruz		Adults; children on emergency basis. Specializes in dentures, bridges. 10% office-based; 90% hospital-based (for denture fabrication)	Medi-Cal, private insurance, cash
Jergensen Dental	24 Alexander St. Watsonville		General dentistry; Adults only	Medi-Cal, private insurance, cash
Holly Asadi, DDS	94 Mariposa Ave. Watsonville		General dentistry	Medi-Cal, private insurance, cash
Sofia Espinoza, DDS	21 Brennan St., Ste 1 Watsonville		General dentistry	Medi-Cal, private insurance, cash
MONTEREY COUNTY				
Western Dental Offices				
Western Dental	921 S. Main St. Salinas 1229 N. Main St Salinas	Mon-Fri 9am-7pm Sat 8am-4:30pm	General dentistry (most specialties covered) and orthodontics	Medi-Cal (with discounted rates and financing plan for non-covered services) and private insurance
Community Dental Clinics				
Salud Para La Gente	Seaside Community Health Clinic 1130 Fremont Blvd., Suite 210B, Seaside Salinas Mobile Clinic 1441 Del Monte Ave. Salinas	Tues, Wed and Thurs 8:30am-5pm Fri 8:30am-12:30pm Mon-Thurs 8am-7pm	Patient education, prevention and general dental including exams, x-rays, emergencies, fillings, extractions, cleanings, sealants, and fluoride.	Medi-Cal, sliding fee scale, private insurance, Delta Dental Healthy Kids, Delta Dental of CA, Pacific Union Dental, Pinnacle Claims Management, Western Growers Assurance

Table continues on next page

(Continued from previous page)

Organization/ Provider	Address	Hours	Dental Services	Payment Options
Clinica De Salud Del Valle*	620 E Alvin Dr. Salinas	Mon-Thurs 8am-9pm Fri 8am-5pm Saturday 9am-4:30pm	General dentistry, cosmetic dentistry, oral surgery, endodontics, pediatric dentistry, preventative dentistry	Medi-Cal, sliding fee scale, private insurance, Covered CA
	29-A Bishop Rd. Pajaro	Saturdays 8:30am-5pm		
	10561 Merritt St. Castroville	Mon-Thurs 8:30am-5:30pm Fri 7:30am-4:30pm		
	808 Oak Ave. Greenfield	Mon-Fri 8am- 5pm 1st and 3rd Saturday 8am-12pm		
	122 San Antonio Dr. King City	Mon-Fri 8am-5pm Every 2nd Saturday 8am-12pm		
	799 Front St. Soledad	Mon –Fri 8am-5pm		
	Mobile clinics: homeless communities in the Monterey Peninsula, Salinas's Chinatown District, and Pajaro River District in North Monterey County	Hours vary		
Private Dentists[3]				
Central Coast Pediatric Dental Group	945 Blanco Cir., Ste D Salinas		General dentistry; pediatric dentistry	Medi-Cal, private insurance, cash
	633 E Alvin Dr., Ste B Salinas			
	1717 Fremont Blvd. Seaside			
Chattan Patel, DDS	652 E Laurel Dr., Ste C Salinas		General dentistry	Medi-Cal, private insurance, cash
Harshita Patel, DDS	640 E Alvin Dr. S Salinas		General dentistry	Medi-Cal, private insurance, cash
Peter Yang, DDS	41 W Romie Ln. Salinas		General dentistry	Medi-Cal, private insurance, cash
Hamlet Karapetian, DDS	550 Canal St., Ste A King City		General dentistry	Medi-Cal, private insurance, cash
Ernesto Mireles, DDS	696 Walnut Ave., Ste 1 Greenfield		General dentistry	Medi-Cal, private insurance, cash
	608 E Boronda Rd., Ste B Salinas			
Aparnavalli Nayudu, DDS	1089 S. Main St. Salinas		General dentistry	Medi-Cal, private insurance, cash

*The agency declined requests for an interview. Information for the chart was retrieved from its website http://www.csvs.org/ on 12/21/15.

Sources of information: Organization websites; interviews with organization representatives; and Medi-Cal Dental Services Program, accessed on 12/10/15 at http://www.denti-cal.ca.gov/WSI/Bene.jsp?fname=ProvReferral.

[1]Information current as of 12/21/15.

[2]Information verified by telephone with office personnel.

[3]Information from Medi-Cal Dental Services Program website of current providers.

Note that while the resources shown are for Santa Cruz and Monterey Counties only, some providers in other nearby counties, such as private dentists in San Benito County (Hollister), also serve individuals with Medi-Cal.

What Other Community Resources are Working to Address the Needs?

Other local organizations play important roles in supporting oral health services in the Monterey Bay area. This includes nurturing collaborative relationships, conducting awareness campaigns, making referrals, providing community oral health education, offering financial support, and sponsoring community assessments.

Dominican Mobile Clinic operates a mobile clinic that was set up to decompress its emergency room. It provides urgent care services and only serves the uninsured and does not take or bill Medi-Cal; the services are written off as charity as part of its community benefits program. Patients with urgent care dental problems are referred to Dientes, and staff makes the appointment for them. Dominican covers the charges at a negotiated flat rate that includes 2 visits. Staff noted there is some loss to follow-up in ensuring referred patients keep their dental appointments.

Santa Cruz Community Health Centers on Locus Street and at the East Cliff Family Health Center includes routine questions about dental health and use at all well child and adult appointments. It offers referrals to community dental clinics, including Cabrillo College dental hygiene clinic, for patients without a dentist. The agency also promotes oral health at its centers by handing out toothbrushes at well care appointments for children and placing dental clinic brochures and other oral health literature in its lobby.

Santa Cruz Public Health Department's FQHC in Watsonville contracts with Dientes to provide co-located dental services. The partnership also includes providing dental services for persons with HIV as well as to the homeless population within the county. The Department reports its FQHC staff actively refers patients for dental care but has no feedback mechanism except to ask the patients in follow-up whether they were able to be seen for dental services. The providers who see children are recommending fluoride varnish and offering oral health education to parents/caretakers. Coordination of medically complex patients is said to usually come from the dentist. The waiting time for new dental appointments is "already at capacity."

Women Infants and Children Program (WIC) in Santa Cruz County also provides space for Dientes to provide co-located dental services. The clinic, which offers cleaning, exams, fluoride varnish, and x-rays for children and adults, is set up to coordinate with the days WIC is holding prenatal classes. Currently, this is once a month and due to limited capacity the dental services are generally reserved for WIC clients and their families, not the broader community. (Dientes' Watsonville location is within 5 miles of WIC and most South County patients are referred there.)

The Pajaro Valley Community Health Trust (Health Trust) has recognized the need to improve access to preventive and dental treatment services and has made oral health one of its continuing program strategic plan priorities for community investments since 2002.[122] The Health Trust's 2016-2020 Program Strategic Plan identifies 3 oral health outcome objectives in its move "upstream to focus increasingly on prevention, including promotion of routine oral healthcare and access to care, especially for children and low-income populations."

The Dental Affinity Project (DAP) started by the Health Trust and Dientes has been in place since 2007 and focuses on recruiting local dentists to provide pro bono care to uninsured adults living in Santa Cruz County whose income falls below 150% of the poverty line. The program was developed with the understanding that "responsibility for improving oral health care must be shared, and community partnerships are essential to improving the oral health of the community." Salud Para la Gente works with the DAP by identifying eligible patients (the Dental Director reviews each

[122] http://www.pvhealthtrust.org/sites/pvhealthtrust.org/files/PVCHT_StrategicPlan%20Final.pdf

case to ensure the patient is appropriate for the program), and scheduling their dental appointments with participating dentists who are available on a rotational basis. It receives a small grant for case management services. Volunteer dentists, who are paid a lab reimbursement fee up to $500 (and agree to absorb expenses over that limit) see clients in their own offices and have the option to accept a specific number of referrals each year. Patients are asked to pay $50 one-time for treatment services. Because the DAP has a limited number of dental appointments, patients can wait several weeks to a few months for their initial dental appointment.[123] Dientes no longer participates in DAP but receives a grant for an alternate model (identifying subcontractor specialists to see patients at Dientes clinics).

United Way supports the Community Assessment Project[124] and its 2014 report specifically identified oral health needs among the prioritized goals of Santa Cruz County and for 21 years has included at least one question about dental needs in its household surveys.

Other Support and Advocacy

Other formal collaborative relationships invested in access to oral health contribute to the strength of the safety net in the 2-county region. These relationships underscore the continuing need to focus attention and community investments on improving access to oral health services, and have created the opportunity for valuable relationship development:

The Central California Alliance for Health is responsible for new Medi-Cal and other member orientation, mailing new members an orientation package when it receives the eligibility files from the State. Oral health information is not a routine part of the package. Although dental services are "carved out" of Medi-Cal Managed Care Plan contracts (the Plans are not responsible for providing dental services) an Alliance vendor makes new member welcome calls in which information about how members would access dental services is provided. Medi-Cal members are informed that dental services are covered through the Denti-Cal program rather than the Alliance and are given the toll-free statewide telephone number for Denti-Cal. Alliance sends members a quarterly newsletter and bases the health promotion content, which varies, "on what the Plan wishes to reinforce." There were no oral health-related messages in the newsletters during 2015.[125] Dientes helped shape member messages in the past and Alliance indicated a willingness to have that occur again.

According to the Alliance staff, Medi-Cal members frequently call about dental access problems, but specific data are not available as tracking of dental is not a separate call category. Asked to estimate for purposes of this needs assessment, staff thought about 75% of the calls were in response to access issues, and 25% related to questions about coverage (common examples were, Do you cover braces? Do you cover root canals?). The split between calls concerning children and adults is about 60%/40%.

The Central Coast Oral Health Collaborative (CCOHC) was convened by the Pajaro Valley Community Health Trust in July 2007. It is made up of partnering organizations that are committed to improving the oral health of low-income and underserved populations on the Central Coast. The CCOHC works by forming ad hoc committees to work on special projects. The ad hoc committees

[123] Dientes used to participate in this program but recently increased its uncompensated care fund to serve the patients directly. A recent grant will allow the agency to contract with specialists (endodontists and oral surgeons are the greatest need) to provide the services at Dientes. For patients with Medi-Cal, the agency bills Medi-Cal and receives the encounter rate supplementing it with the grant money for what is provided beyond the Medi-Cal scope of benefits.
[124] *Santa Cruz Community Assessment Project: Year 20.* http://static1.squarespace.com/static/5176dcd7e4b0e5c0dba41ee0/t/563a84b1e4b0330ccadca6fa/1446675633287/CAP%2B20%2BComplete%2BReport.pdf
[125] Personal communication with Jan Wolf, Alliance Member Services, September 28, 2015.

are assigned to carry out specific objectives and meets as needed between Collaborative meetings. The Health Trust provides administrative support by organizing Collaborative meetings, facilitating committees meetings, preparing meeting agendas and minutes and coordinating the meeting schedule.

First 5 Santa Cruz County, although it does not have an identified oral health objective in its 2016-2020 Strategic Plan, has set a Healthy Children goal to increase the number of children with a dental home. One important way it supports this goal is through the continuing investment in the Healthy Kids health insurance program. (See page 51 for a description of the HK program.)

The Health Improvement Partnership of Santa Cruz County (HIP), launched in 2004, is a nonprofit coalition of public and private health care leaders representing 26 member organizations dedicated to increasing access to health care and building stronger local health care systems. One of its 2015-202 Strategic Plan goals calls for all low-income Santa Cruz residents to have access to medical homes with integrated behavioral health, dental and social services. The Safety Net Clinic Coalition (SNCC) of HIP, for example, includes 10 organizations and according to HIP forms the cornerstone of HIP's work to improve health status and access for Santa Cruz County residents who receive care through publicly-funded programs.

What are the Access Barriers to Hospital and Surgery Center-Based Dental Procedures?

Not all treatment of early childhood caries can be accomplished without sedation. The American Academy of Pediatric Dentistry (AAPD) recognizes that non-pharmacological behavior guidance techniques are not viable for some pediatric dental patients.[126] According to the AAPD, some children with special health care needs have treatment conditions, acute situational anxiety, uncooperative age-appropriate behavior, immature cognitive functioning, disabilities, or medical conditions that require deep sedation/general anesthesia (GA) to undergo dental procedures in a safe and humane fashion.[127] Parental acceptance of dental treatment with hospital- and surgery center-based GA has increased, and dentistry under GA has become a more commonplace occurrence.[128]

The management of the behavior of mentally challenged adults, or adults with other conditions that render dental office-based care implausible, also requires a hospital setting. Dental care provided under general anesthesia continues to be an important means to predictably manage adult behavior as well.[129]

[126] Silverman J, Reggiardo P, Scott Litch CS. An Essential Health Benefit: General Anesthesia for Treatment of Early Childhood Caries. Technical Report 2-2012. Pediatric Oral Health Research and Policy Center. May 2012..

[127] American Academy of Pediatric Dentistry. Guideline on behavior guidance for the pediatric dental patient. *Pediatr Dent 2008;30(suppl):125-33.* American Academy of Pediatric Dentistry. Guideline on use of anesthesia personnel in the administration of office-based deep sedation/general anesthesia to the pediatric dental patient. Adopted 2001, Revised,2005, 2007, 2009.

[128] Eaton JJ, McTigue DJ, Fields HW, Beck M. Attitudes of contemporary parents toward behavior management techniques used in pediatric dentistry. *Pediatr Dent,* 2005;27:107-113. See also Thikkurissy S, Smiley M, Cassamassimo PS. Concordance and contrast between community-based physicians' and dentist anesthesiologists' history and physicals in outpatient pediatric dental surgery. *Anesth Progress,* 2008 Summer;55(2):35-39.

[129] Ananthanarayan C, Sigal M, Godlewski W. General Anesthesia for the Provision of Dental Treatment to Adults with Developmental Disability. *Anesth Prog* 1998;45:12-17.

Prior Authorization

Access to dental sedation services can be impeded by the need for pre-authorization from the patient's Medi-Cal managed care plan. This is because the plan pays for the facility and anesthesia fee when a medical anesthesiologist provides anesthesia for dental procedures, while Medi-Cal dental pays for the dental procedure which includes the dentist's professional fee.[130]

Although denials, delays or other difficulties for Medi-Cal GA dental requests by managed health care plans has been a problem in other areas of the state, it has not been an issue for Santa Cruz and Monterey Alliance members. The Alliance has always required authorization for GA for dental care, and except for a minor change made in the fall of 2015, the prior authorization process has not changed. Alliance reports its staff has been working with dental providers to make sure they understand the requirements and information needed to process the requests. According to the Alliance, of 193 authorization requests in 2015 (62 in Santa Cruz County and 131 in Monterey County), only 2 (1%) were denied.[131] (The 2 denials were determined to be best completed under local anesthesia.) Urgent authorization is completed within 48 hours and routine authorizations within 5 working days. Hence, any access problems to dental anesthesia services are likely to be attributed to provider or facility availability and not to the pre-authorization process.

Providers and Facilities

Access issues to hospital dentistry from too few local oral surgeons and other dentists willing to take Denti-Cal GA cases are compounded in Santa Cruz and Monterey Counties (and elsewhere) by low Denti-Cal facility reimbursement rates. This has increasingly limited the number of hospitals and surgery centers willing to accommodate dental cases as operating room time competes for more financially equitable cases.[132] One local hospital commented that these cases can be "financially disastrous" and while open to accepting dental OR cases stated that "the cases would have to be financially approved on a case-by-case basis or via a contract."

Publicly-insured individuals needing sedation dentistry in Santa Cruz County must usually travel out of the county to receive care as there are no facilities in the area for hospital dentistry that accept Denti-Cal, though Watsonville Community Hospital reported there was 1 dental GA case done there in 2015. At that time, a private dentist brought a 2–year old from his office for an extraction of an infected tooth from the jaw. The patient was admitted after the procedure, and the billing source was Blue Cross HMO as primary, Medi-Cal as secondary insurance. The case did not involve the emergency department.

Children referred to UC San Francisco for GA procedures have reported waits of 4-6 months. Children in Santa Cruz County needing treatment under sedation are generally referred to Central Coast Pediatric Dental Group (CCPDG) in Monterey County and Children's Dental Center (CDC) in Santa Clara County. CDC has sites in multiple counties and serves "more than 70% Medi-Cal." Because of its proximity to Santa Cruz County, children referred to CDC are served in either the

[130] The CA Department of Health Care Services (DHCS) recently issued an All Plan Letter (APL 15-012, *Revised, August 21, 2015)* describing the requirements for Medi-Cal managed care health plans to cover intravenous sedation and GA services provided for dental services in hospitals, ambulatory medical surgical settings, or dental offices. Although DHCS interprets the APL as providing *guidelines* for what should be *considered*, some medical managed care plans have cited the new *policy* in denying care. Unfortunately, the APL has not helped to solve the problem.

[131] Care for Santa Cruz Alliance members was requested at, was approved for, and took place at a number of facilities including Dominican, Natividad, Bay Area Dental in Santa Clara, UCSF, Stanford, San Jose Dental Surgery Center, and Highland General Hospital. Personal communication with Dale Bishop, MD, Chief Medical Officer, Central California Alliance for Health, January 13 and January 29, 2016.

[132] Not only are dental cases in general low priority for hospital ORs and surgery centers but the problem worsened with increased demand when adult Medi-Cal dental cases began to compete for OR time after the restoration of adult benefits in May 2014.

San Jose or Sunnyvale site; the former performs GA dental services 4 days a month while the latter offers it 1 day a month. Generally, patients can be seen within about 1 month of the referral. Staff notes a no-show rate for these cases of about 30%.[133]

CCPDG has 4 practice locations in Monterey County, 2 of which offer pediatric dental surgery centers. The surgery centers are in south Salinas at 945 Blanco St., and north Salinas, at 633 Alvin Street. There, the 5 dentists on staff offer conscious sedation (oral) services 5 days a week. The wait for these cases is about 2-3 months. For children who need to be treated under general anesthesia, 2 of the center dentists (Drs. Chiang and Saisho) perform the restorative work at Natividad Medical Center in Salinas. The GA dental cases at Natividad are scheduled 2-3 days a month, and generally 5-6 cases are performed each of those days. There is an average wait of 2 months (except for emergencies) to schedule the GA cases at Natividad. CCPDG indicated they did not receive many referrals from Santa Cruz County providers.[134]

The referral options for GA for adult and older teenage patients with Medi-Cal are very limited. The most accessible resource for Santa Cruz County residents is an oral surgeon in Hollister (San Benito County), Dr. Terry Slaughter, who takes Denti-Cal and sees both children and adults. Conscious sedation and GA are offered in his office (not the hospital). There is a 2-3 month wait for these cases, according to his office which confirmed they receive "many referrals" from Santa Cruz providers, including Dientes, Salud and Western Dental.[135]

Western Dental reports it does not provide general anesthesia in any of its Santa Cruz and Monterey offices. If GA is required for Medi-Cal patients (and perhaps any Western patient), they report the patients "are referred to specialists in the community." Western stated it had "no visibility" on the question of appointment availability or any other access problems once the referral was made. They were not able to offer information for which facility(ies) GA cases were performed.[136]

Key informants interviewed for this study who were aware of the issues say increasing access to sedation and GA dentistry for children and adults is one of the important improvement needs in Santa Cruz County.

To What Extent are Emergency Departments Being Used for Preventable Dental Care?

The use of the emergency department (ED) for dental problems serves as a marker for disparities in the quality of and access to adequate dental care. The use of EDs for non-urgent or preventable conditions is a growing problem. Visiting an ED for non-traumatic *dental* problems, which have risen over the past decade,[137,138] is likely a reflection of poor prevention and suggests lack of access to readily-available community dental services.

One of the consequences of the reduction of adult Denti-Cal benefits, as California experienced between July 2009 and May 2014, is increased use of EDs for dental problems by Medi-Cal beneficiaries. One study found ED visits by this population increased by 23% several months after

[133] Personal communication with Becky Phan, Practice Manager, January 15, 2016.
[134] Personal communication with Kathy Diaz, Administrator, January 25, 2016.
[135] Personal communication with Office Manager, January 29, 2016.
[136] Personal communication with Ron Inge, DDS, Quality Management Department, Western Dental, January 18, 2016.
[137] Lee HH, Lewis CW, Saltzman B, Starks H. Visiting the emergency department for dental problems: trends in utilization, 2001 to 2008. *Amer J Pub Health.* Nov 2012;102(11):e77–83.
[138] Wall T. Recent trends in dental emergency department visits in the United States:1997/1998 to 2007/2008. *J Pub Health Dent.* Summer 2012;72(3):216–220.

California eliminated Medi-Cal dental benefits.[139] A Maryland study found that Medicaid spending for ED dental care for adults rose by 8% after that state eliminated Medicaid dental benefits.[140]

Children enrolled in Medi-Cal have a consistently higher rate of visiting an ED one or more times in the past year than children covered by employer-sponsored insurance (ESI), according to a recent study.[141] Nearly one-quarter of Medi-Cal enrollees (24%) had been to an ED, compared to 13% of children with ESI in 2013. Hospital EDs are not equipped to provide definitive treatment for toothaches and dental abscesses.

Using 2014 discharge data from the Office of Statewide Health Planning and Development (OSHPD) for Santa Cruz and Monterey Counties, we examined ED use when an oral condition was the primary diagnosis.[142] The data were also broken out by payer type to see how well publicly-funded programs are keeping children out of the ED. The oral conditions were identified by primary ICD-9 diagnosis codes. Some of the codes are considered to be *ambulatory care sensitive conditions* (ACS)—that is, those that reflect the conditions that would "likely or possibly benefit from better prevention or primary care,"[143] and are therefore considered potentially avoidable. The greatest majority of dental ED visits in the 2 counties were for an avoidable condition.

Emergency Department Dental Visits by County Residents

In 2014, there were 65,609 ED visits[144] made by Santa Cruz County residents and 141,321 ED visits made by Monterey County residents for all reasons. Of the Santa Cruz County ED visits, 932 (1.42%) were due to a primary oral condition diagnosis; the majority of these dental visits (72.5%) were made for an *ACS* dental condition. A much higher proportion of Monterey County residents' 1,532 ED oral visits, 95.1%, were made for an *ACS* dental condition (Table 21 on the next page),[145] further pointing to the need for linkage to a dental home.

[139] California HealthCare Foundation, *Eliminating adult dental benefits in Medi-Cal: an analysis of impact.* Oakland, CA. 2011, California HealthCare Foundation.
[140] Cohen, L.A., R.J. Manski, and F.J. Hooper. 1996. Cohen LA, et al. Does the elimination of Medicaid reimbursement affect the frequency of emergency department dental visits? *J Amer Dent Assoc 1996;*127(5):605–609.
[141] Medi-Cal Versus Employer-Based Coverage: Comparing Access to Care. California Healthcare Foundation. July 2015. http://www.chcf.org/~/media/MEDIA%20LIBRARY%20Files/PDF/M/PDF%20MediCalAccessComparedUCLA.pdf
[66] Oral conditions as a secondary diagnosis were not analyzed due to very small occurrences.
[143] Shortridge EF, Moore, JR. Use of Emergency Departments for Conditions Related to Poor Oral Health Care. Rural Health Research & Policy Centers, and NORC Walsh Center for Rural Health Analysis. Final Report, August 2010.
[144] The number of unduplicated individuals making an ED visit for a preventable dental condition was not analyzed due to data insufficiency. According to the Office of Statewide Planning and Development, more than 40% of children do not have a social security number at the time of the ED encounter and thus cannot be uniquely identified.
[145] This is a lower rate of ED use for ACS dental conditions than the national average. Nationally, more than 2% of all emergency department visits are now related to non-traumatic dental conditions, according to recent research. https://med.stanford.edu/news/all-news/2015/08/medicaid-dental-coverage-may-not-prevent-tooth-related-er-visits.html

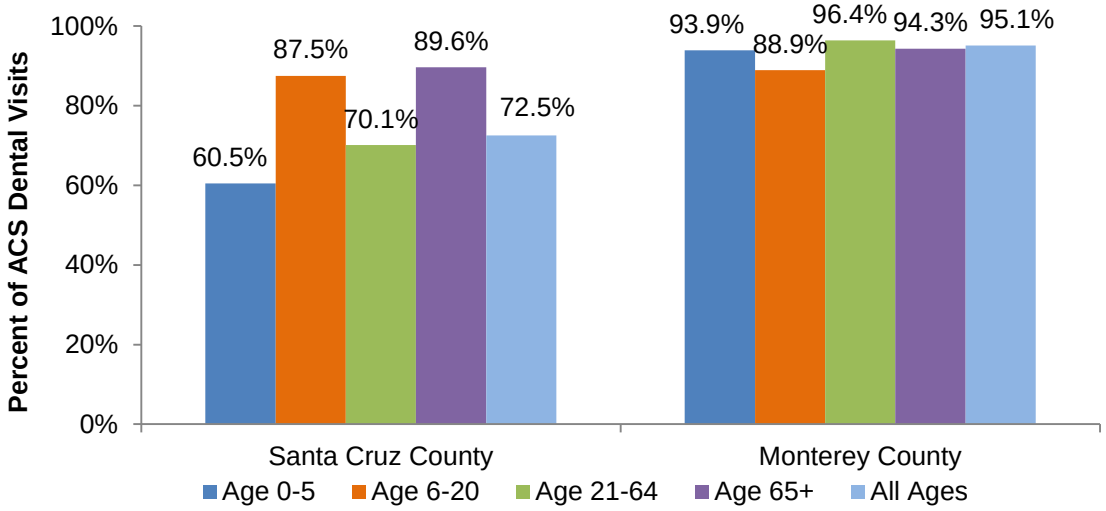
Table 21. ED Visits Made by Residents of Santa Cruz and Monterey Counties[1] by Age Group, 2014

ED Visits	Santa Cruz County									
	Age 0-5		Age 6-20		Age 21-64		Age 65+		All Ages	
All Reasons	7,435		10,533		38,172		9,434		65,574	
All Oral	76	1.02%	88	0.84%	720	1.89%	48	0.51%	932	1.42%
ACS Oral[2]	46	0.62%	77	0.73%	510	1.33%	43	0.46%	676	1.03%
ACS Oral as % of all Oral		60.5%		87.5%		70.1%		89.6%		72.5%
	Monterey County									
	Age 0-5		Age 6-20		Age 21-64		Age 65+		All Ages	
All Reasons	24,538		26,406		74,383		15,576		140,903	
All Oral	230	0.94%	171	0.65%	1,078	1.44%	53	0.34%	1,532	1.09%
ACS Oral[2]	216	0.89%	152	0.58%	1,039	1.40%	50	0.32%	1,457	1.03%
ACS Oral as % of all Oral		93.9%		88.9%		96.4%		94.3%		95.1%

[1]By county of residence.
[2]Ambulatory Care Sensitive Conditions. Primary ICD-9 Codes included in the analysis: 521-523, 528, and 529.
Source: Office of Statewide Health Planning and Development, Healthcare Information Resource Center.

There were also some notable differences between the 2 counties by specific age groups. A significantly higher proportion (93.9%) of children 0-5 in Monterey County used the ED for an ACS dental condition than in Santa Cruz County (60.5%), as did adults 21-64 (96.4% vs. 70.1%). School age children and youth (age 6-20) and seniors used the ED at somewhat equal proportions in both counties (Figure 20).

Figure 20. Percent of ED Visits for an ACS Oral Condition[1] as a Percent of all ED Oral Visits Made by Residents of Santa Cruz and Monterey Counties[2] by Various Age Groups, 2014



[1]Ambulatory Care Sensitive Conditions. Primary ICD-9 Codes included in the analysis: 521-523, 528, and 529.
[2]By county of residence.
Source: Office of Statewide Health Planning and Development, Healthcare Information Resource Center.

Emergency Department Dental Visits at County EDs

In 2014, there was a total of 2,392 ED visits to the 6 ED facilities in Santa Cruz and Monterey Counties for an ACS dental condition. (Note: the previous discussion was based on visits by *county of patient residence*, while this section addresses visits by *county of facility*.) Santa Cruz County hospitals experienced a slightly higher proportion of the area's ACS dental ED visits than Monterey County hospitals, as 37% or 888 of the 2,392 total visits to the 6 facilities were made to the Santa Cruz hospitals (Table 22).

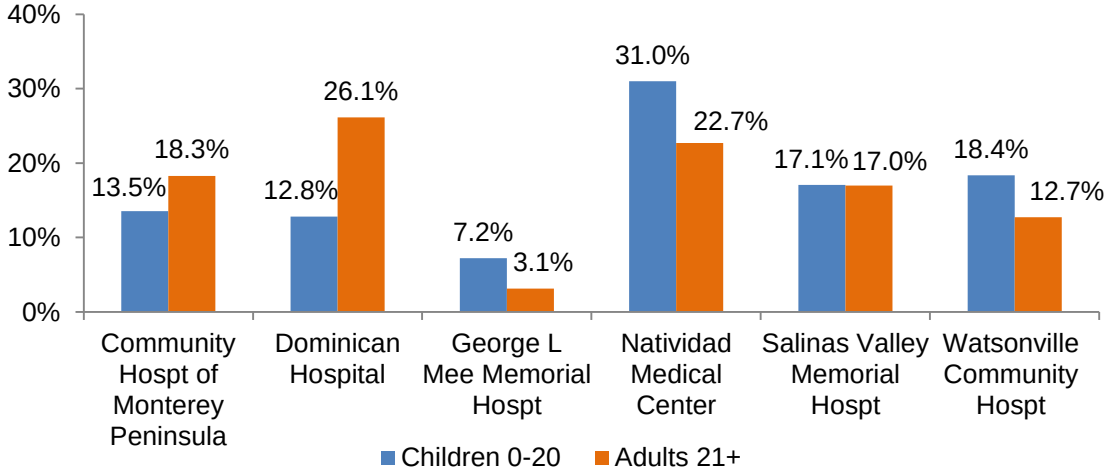
Table 22. Number of ED Visits Made by Children and Adults to a Monterey County and Santa Cruz County ED[1] for an ACS Oral Condition[2], 2014

Facility	County	Children 0-20	Adults 21+	Total
Dominican Hospital	Santa Cruz	69	484	553
Watsonville Community Hospital	Santa Cruz	99	236	335
Community Hospital of Monterey Peninsula	Monterey	73	339	412
George L Mee Memorial Hospital	Monterey	39	58	97
Natividad Medical Center	Monterey	167	421	588
Salinas Valley Memorial Hospital	Monterey	92	315	407
Total		539	1,853	2,392

[1]By county of facility.
[2]Ambulatory Care Sensitive Conditions. Primary ICD-9 Codes included in the analysis: 521-523, 528, and 529.
Source: Office of Statewide Health Planning and Development, Healthcare Information Resource Center.

Figure 21 shows each ED facilities' share of the total child and adult ASC dental visits in 2014. Proportionately, Natividad Medical Center saw more children while Dominican Hospital saw more adults.

Figure 21. ED Visits for an ACS Oral Condition[1] as a Percent of all ED Oral Visits Made by Children and Adults to a Monterey County and Santa Cruz County ED[2], 2014



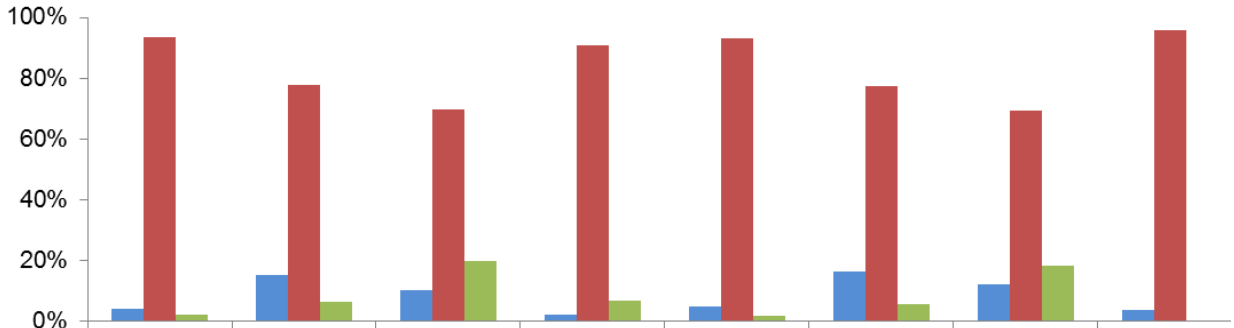
[1]Ambulatory Care Sensitive Conditions. Primary ICD-9 Codes included in the analysis: 521-523, 528, and 529.
[2]By county of facility.
Source: Office of Statewide Health Planning and Development, Healthcare Information Resource Center.

Emergency Department Dental Visits by Payer Source

Use of the ED for avoidable dental conditions is expensive, especially when compared to the price of prevention. In California in 2007, the average cost of an ED visit without hospitalization was $141 and $5,044 when hospitalization occurred, compared to $41 for a periodic dental exam.[146] A Health Policy Research Institute Medicaid ED study concluded that the majority of dental ED visits could be diverted to a dental office with the savings estimated to be up to $1.7 billion per year—money that could be used instead to fund preventive dental visits or other more cost-effective interventions.[147]

Public programs—nearly entirely represented by Medi-Cal—picked up the tab for the clear majority of the Santa Cruz and Monterey County residents' ED dental visits considered preventable in 2014 (Figure 22 on the next page). The highest proportion of these ACS dental ED visits for both counties' residents was made by 0-5 year-olds: 93.5% for Santa Cruz County and 93.1% for Monterey County. The disproportionately high percentage of ED visits covered by Medi-Cal supports the need for expanded access for dental services and increased education and prevention services for this population.

Figure 22. Payer Source for ED Visits Made by Monterey and Santa Cruz Residence[1] for an ACS Oral Condition,[2] by Age Group, 2014



	Santa Cruz County				Monterey County			
	Age 0-5 (n=46)	Age 6-20 (n=77)	Age 21-64 (n=510)	Age 65+ (n=43)	Age 0-5 (n=216)	Age 6-20 (n=152)	Age 21-64 (n=1,039)	Age 65+ (n=50)
Private Insur	4.3%	15.5%	10.4%	2.3%	5.1%	16.4%	12.4%	4.0%
Pub Prog	93.5%	77.9%	69.8%	90.7%	93.1%	77.6%	69.3%	96.0%
Self Pay	2.2%	6.5%	19.8%	7.0%	1.9%	5.9%	18.3%	0.0%

[1]By county of residence.
[2]Ambulatory Care Sensitive Conditions. Primary ICD-9 Codes included in the analysis: 521-523, 528, and 529.
Source: Office of Statewide Health Planning and Development, Healthcare Information Resource Center.

Other Evidence of Need Related to Preventable Dental Conditions

Using the same Ambulatory Care Sensitive Conditions (ACS) Primary ICD-9 Codes for preventable dental conditions used by hospital emergency departments, Santa Cruz County Medical Clinic Services data showed that 632 (1.7%) of the 37,665 visits to its 3 community clinics in 2014 were

[146] Emergency Department Visits for Preventable Dental Conditions in California. California Healthcare Foundation. 2009. http://www.chcf.org/~/media/MEDIA%20LIBRARY%20Files/PDF/PDF%20E/PDF%20EDUseDentalConditions.pdf
[147] Wall T, Nasseh K, Vujicic M. *Majority of Dental-Related Emergency Department Visits Lack Urgency and Can Be Diverted to Dental Offices.* Research Brief. The Health Policy Institute, American Dental Association. August 2014.

attributable to an ACS dental condition. Not surprisingly, the proportion of ACS visits at the Homeless Persons Health Program was the highest among the clinic sites (Table 23).

Table 23. Visits to Santa Cruz County Medical Clinics for Preventable Dental Conditions,[1] 2014

	All Visits	Dental Visits	
	Number	Number	%
SC Homeless Persons Health Program (HPHP)			
Age 0-18	8	0	0.0%
Age 19+	3,702	97	2.6%
Total	3,710	97	2.6%
SC Health Center (Emeline St.)			
Age 0-18	752	5	0.7%
Age 19+	12,944	273	2.1%
Total	13,696	278	2.0%
SC Watsonville Clinic			
Age 0-18	6,066	87	1.4%
Age 19+	14,193	170	1.2%
Total	20,259	257	1.3%
Total	37,665	632	1.7%

Source: County of Santa Cruz, Health Services Agency, Medical Clinic Services, February 17, 2015.
[1]ICD 9 Codes 521 – 528.99 (including sub codes).
Note: Because of the switch from ICD 9 to ICD 10 codes during 2015, consistent full-year data for 2015 were not available

VI. UTILIZATION OF DENTAL SERVICES

"Almost no one we see ever gets their teeth cleaned." - Staff, Dominican Mobile Clinic

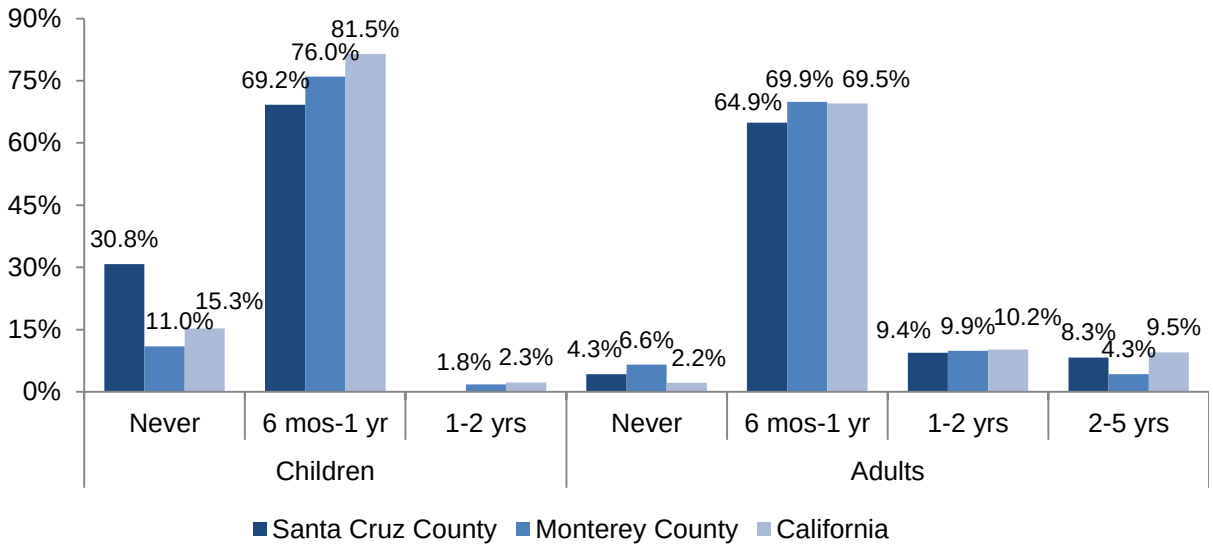
While there have been gains in access to dental care for Santa Cruz and Monterey children with Denti-Cal in recent years, utilization levels could be improved even more, particularly among the youngest children. Moreover, access for low-income adults, which was all but eliminated between 2009 and mid-2014, has failed to come close to addressing the oral health needs of this population.

Population-Based Utilization

Findings from California Health Interview Survey (CHIS)

According to the 2014 CHIS, Santa Cruz County residents visit the dentist a little less frequently than residents of Monterey County and Californians as a whole.[148] About two-thirds (69.2%) Santa Cruz respondents reported taking their child age 1-11[149] to a dentist within the past year, a lower proportion than the statewide average of 81.5% (Figure 23). The proportion of Santa Cruz County children who had *never* visited the dentist (30.8%) was higher than in Monterey County and double the statewide average (15.3%). Adults in Santa Cruz County, on the other hand, generally mirrored the proportion of dental visits by adults statewide.

Figure 23. Frequency of Last Dental Visit, Children and Adults, 2014



Source: 2014 California Health Interview Survey
Note: some data statistically unstable due to small sample size

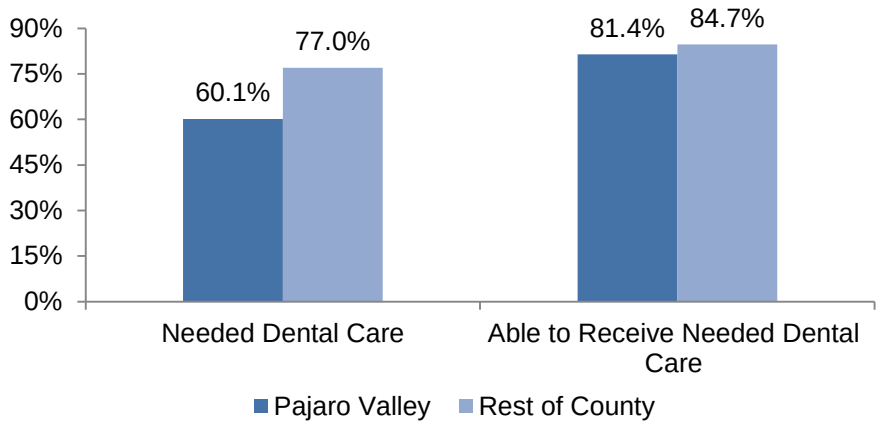
[148] UCLA Center for Health Policy Research. http://ask.chis.ucla.edu/AskCHIS/tools/_layouts/AskChisTool/home.aspx#/geography. Some of the CHIS data for Santa Cruz County are considered "statistically unstable" due to small samples—which is true for other counties as well. It is important to note that self-reported utilization of dental services may be higher than that which can be verified.
[149] For this measure, the CHIS question asks parents to include "any child up to age 11 with teeth so it is possible the age group contains some children <1."

Findings from the Santa Cruz County Community Assessment Project (CAP)

The 2013 CAP report regarding dental care that oversampled for Pajaro Valley (PV) residents[150] compared to all Santa Cruz County residents found:[151]

- PV survey respondents were significantly less likely than respondents in the rest of the county to report needing dental care in the past year, 60.1% vs. 77.0% (Figure 24). However, 81.4% reported they were able to receive needed dental care, a slightly smaller proportion than 87.4% in the rest of the county who reported getting care. (Note: the wording of the survey question makes it unclear if people were responding to "need" as defined by the importance and desire for an annual dental visit or "need" because they had experienced a dental problem that required attention.)

Figure 24. Perceived Need and Success Getting Dental Care, by Location, 2013



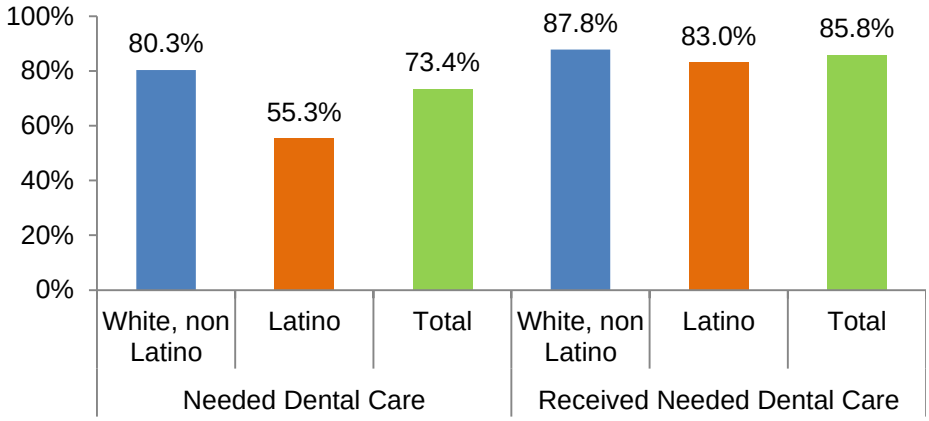
Source: 2013 CAP Oversample. Applied Survey Research

The 2014 CAP report regarding dental care found:[152]

- The percent of respondents with dental insurance decreased to 58% in 2013 from 72% a decade ago (Figure 25 on the next page).
- The greatest majority of respondents reported being able to get the dental care they needed in the past year. (As noted above, participants' intentions with regard to utilization are unclear.)

[150] Oversampling is done every 2 years but was not done in 2015.
[151] Applied Survey Research. The full 2013 report, *A Glimpse of Reality: Health & Other Disparities in the Pajaro Valley, 2013*. Pajaro Valley Community Health Trust and Applied Survey Research, can be accessed at http://www.pvhealthtrust.org/sites/pvhealthtrust.org/files/Pajaro%20Valley%20Health%20Trust%20Data%20Report_2013-FINALv2.pdf
[152] Applied Survey Research. The full 2014 report can be accessed at http://www.appliedsurveyresearch.org/scccap/

Figure 25. Perceived Need and Success Getting Dental Care, by Ethnicity, 2014

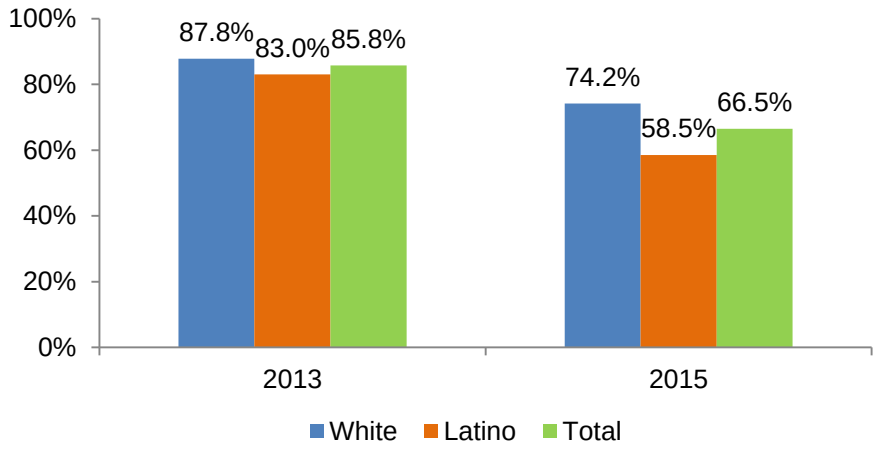


Source: 2014 CAP. Applied Survey Research

The 2015 CAP report worded dental care differently than in the previous reports, directly asking if respondents had gotten dental care in the past 12 months, and found:[153]

- The majority (67%) of CAP survey respondents reported getting dental care, although White respondents reported receiving services at a higher percentage than Latino respondents (74% vs. 59%), a statistically significant difference (Figure 26).
- Fewer respondents (both White and Latino) reported receiving dental services in 2015 than in 2013.

Figure 26. Receipt of Dental Care in the Past 12 Months, by Ethnicity, 2015



Source: 2014 CAP. Applied Survey Research

[153] Applied Survey Research. The full 2015 report can be accessed at http://static1.squarespace.com/static/5176dcd7e4b0e5c0dba41ee0/t/56534614e4b0cb56225029d0/1448298004100/CAP+21+Complete+Report.pdf

Denti-Cal Utilization

Denti-Cal Utilization by Age Group and Source of Care

The Denti-Cal utilization data in Table 24 show the number of children and adults in Santa Cruz and Monterey Counties who were eligible for Denti-Cal and the number who utilized at least one dental service in 2014. The data are broken out by type of provider seen: the number who were seen only at an FQHC; the number who were seen only at a non-FQHC (primarily dentists); and those who were seen at both an FQHC and a non-FQHC during the reporting period. These are unduplicated numbers of beneficiaries with no continuous eligibility requirements.

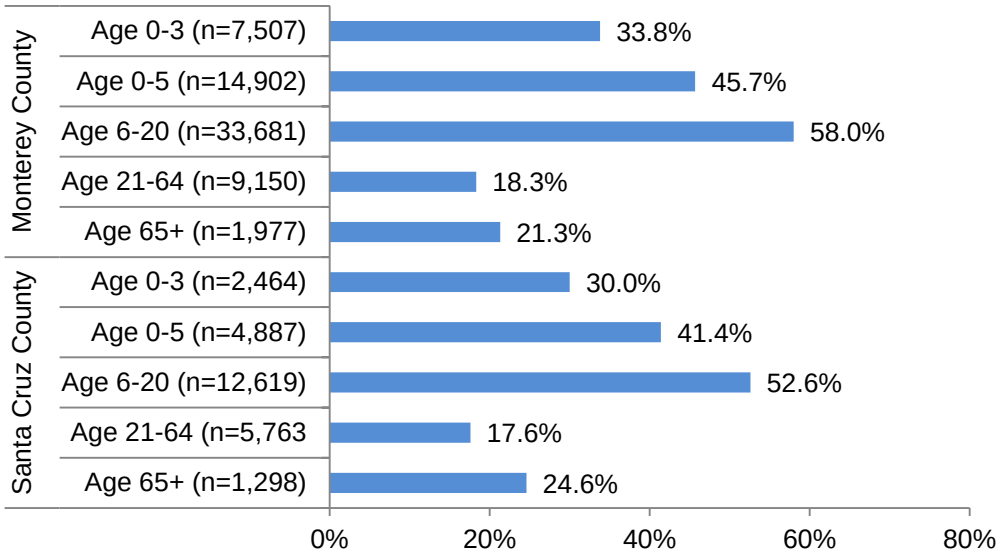
Table 24. Number of Denti-Cal Beneficiaries and Users, by Type of Provider Utilized, 2014

Age Group	Beneficiaries	Total Users	FQHC-Only Users	Non FQHC-Only Users	Both FQHC and non-FQHC Users
Santa Cruz County					
Age 0-3	8,120	2,464	1,194	798	472
Age 0-5	11,897	4,887	2,013	1,623	1,251
Age 6-20	24,008	12,619	2,562	4,875	5,182
Age 21-64	32,793	5,763	1,503	2,467	1,784
Age 65+	5,287	1,298	232	557	509
Total[1]	73,985	24,567	6,310	9,531	8,726
Monterey County					
Age 0-3	22,181	7,507	1,229	5,455	823
Age 0-5	32,587	14,902	1,977	10,617	2,308
Age 6-20	58,084	33,681	2,357	23,998	7,326
Age 21-64	49,946	9,150	3,261	4,237	1,652
Age 65+	9,269	1,977	304	1,078	595
Total[2]	149,886	59,710	7,899	39,930	11,881

Source: Medi-Cal Dental Division, October 23, 2015.
Unduplicated beneficiaries in each age group with no continuous eligibility requirements with any dental service during the reporting period.
[1] To avoid duplication, total does not include age group 0-3.
[2] To avoid duplication, total does not include age group 0-3.

Denti-Cal utilization rates were higher in Monterey than in Santa Cruz County in 2014 for each age group (Figure 27 on the next page), except adults age 65 and older; 24.6% of seniors made a dental visit in Santa Cruz vs. 21.3% in Monterey. The greatest difference in age groups between the 2 counties occurred for children 6-20—58% utilization in Monterey County compared to 52.6% in Santa Cruz County.

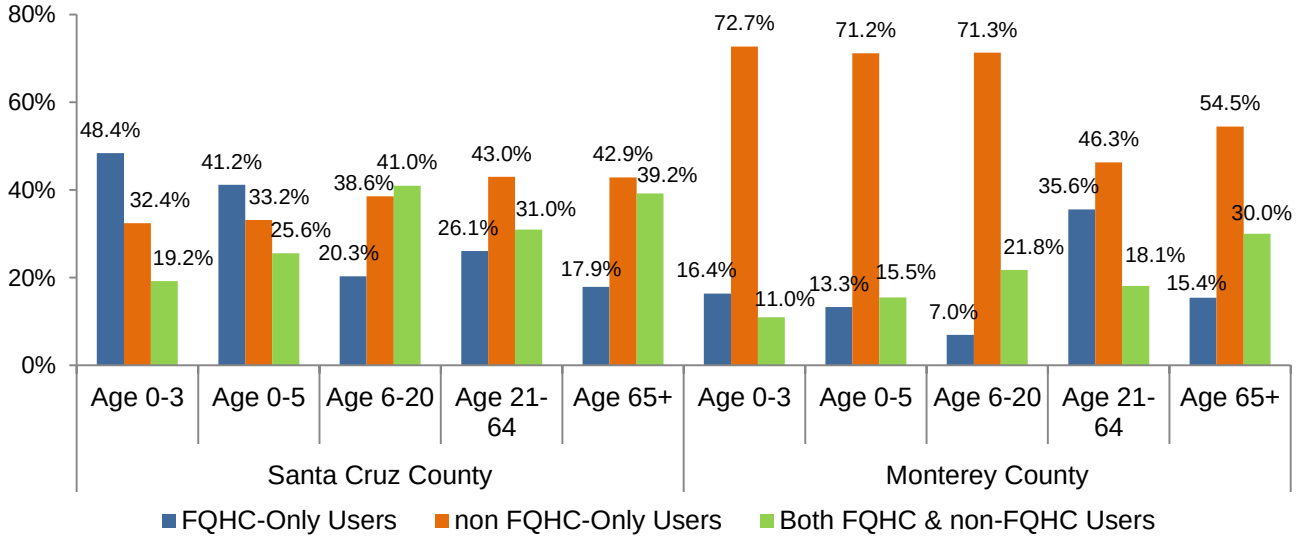
Figure 27. Denti-Cal Utilization Rates of Total Users, by Age Group, 2014



Source: Medi-Cal Dental Division, October 23, 2015.
Beneficiaries with no continuous eligibility requirement with any dental service during the reporting period.

Children with Denti-Cal in Santa Cruz County made a higher percentage of dental visits to an FQHC-only provider than children in Monterey County, while in Monterey County the percentage of visits to a non-FQHC provider were higher (Figure 28). Santa Cruz County adults in both adult age groups made a lower percentage of visits to an FQHC-only provider than adults in Monterey County. The percentage of all Denti-Cal patients who saw both an FQHC and a non-FQHC provider in 2014 was much higher in Santa Cruz County than in Monterey County.

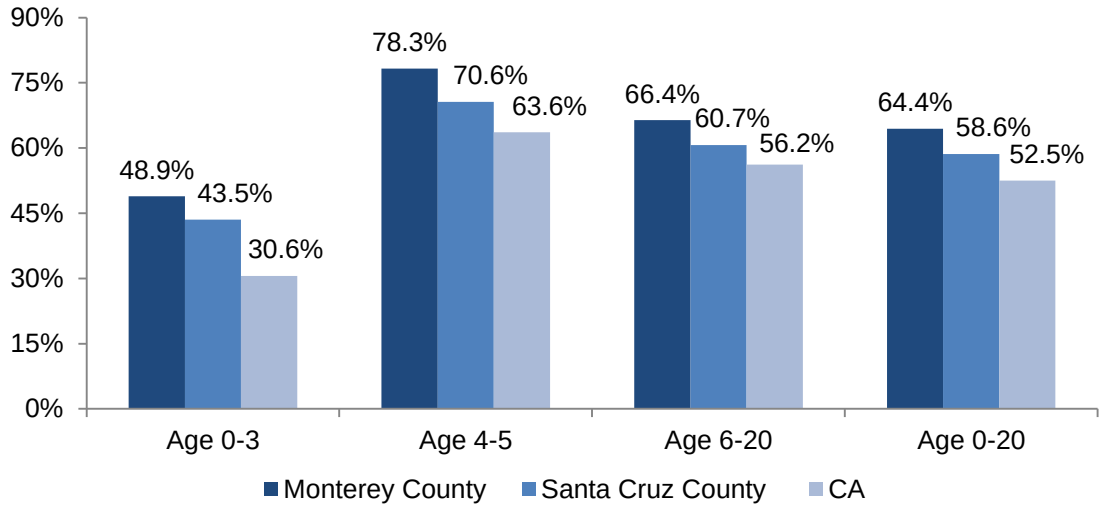
Figure 28. Denti-Cal Utilization Rates by Type of Provider Seen, by Age Group, 2014



Source: Medi-Cal Dental Division, October 23, 2015.
Beneficiaries with no continuous eligibility requirement with any dental service during the reporting period.

Despite genuine unmet needs, children in the 2-county region have among the highest Denti-Cal utilization rates in California. In 2014, Monterey and Santa Cruz were 2nd and 3rd best in the state. This favorable comparison can be better appreciated by viewing the chart in Attachment 5 that lists the utilization rates for all California counties. For the age groups 4-5 and 6-20, Monterey County had the highest utilization in the state; Santa Cruz was 4th and 5th best for these age groups, respectively. Figure 29 below compares the 2 counties with the statewide average.

Figure 29. Denti-Cal Utilization Rate of Local Children Compared to Statewide, 2014



Source: Department of Health Care Services. Med-Cal Dental Division, August 28, 2015.
Includes full scope beneficiaries who used any dental service and had 11 of 12 months of eligibility with no more than a 1-month gap (therefore continuous coverage).

Denti-Cal Utilization by Zip Code

In 2014-15, DHCS instituted a more complex process for responding to data requests and issued "Guidelines for Public Aggregate Reporting for DHCS Business"[154] which limits what DHCS can now share when sample sizes are too small. The Denti-Cal utilization data by zip code we requested fell under these guidelines, and consequently DHCS had to suppress some data and combine some zip codes. Table 25 on the next page shows a summary of the Denti-Cal utilization rates by zip code for children (age 0-20) and adults in Santa Cruz and Monterey Counties sorted by highest utilization rates. (Attachment 4 contains more detail about these zip codes, i.e., age breakouts 0-3; 0-5; 6-20; 21-64; 65+, and use by FQHC only/non-FQHC only/both an FQHC and non-FQHC-only.

The 3-digit zip codes in Table 25 indicate the last 2 digits in those areas are hidden for data suppression purposes. The "all others" next to the 3-digit zip code indicates that all other zip codes with those beginning with 3 digits are included in that data set. This differentiates it from the more specific zip codes. For example, for Monterey County, there is a data set called "939 (all others)." There are other data sets for zip codes that also begin with 939, such as 93901 and 93905. The "939 (all others)" would therefore include all zip codes that begin 939xx except for the specific zip codes included in this data pull such as 93901 and 93905. These are relatively limited data but offer at least some community-level information we relied on in making recommendations in this study.

[154] http://www.dhcs.ca.gov/dataandstats/data/DocumentsOLD/IMD/PublicReportingGuidelines.pdf

Table 25. Denti-Cal Beneficiaries and Utilization, Santa Cruz and Monterey Zip Codes[1]

Santa Cruz County							
Children				Adults			
Zip Code	Beneficiaries	Total Users	% Utilization	Zip Code	Beneficiaries	Total Users	% Utilization
95073 & 95076	21,330	10,980	51.5%	95062	6,117	1,066	17.4%
95062	3,895	1,650	42.4%	95073 & 95076	18,865	3,227	17.1%
950 (all others)	7,589	2,959	39.0%	950 (all others)	9,672	1,529	15.8%
95060	3,544	1,328	37.5%	95060	7,192	1,054	14.7%
95065 & 95066	1,621	514	31.7%	95065 & 95066	2,242	302	13.5%
951-988	431	101	23.4%				

Monterey County							
Children				Adults			
Zip Code	Beneficiaries	Total Users	% Utilization	Zip Code	Beneficiaries	Total Users	% Utilization
93905	26,032	14,294	54.9%	93901	7,108	1,288	18.1%
93955	6,838	3,577	52.3%	93930	3,955	712	18.0%
95076	3,871	1,969	50.9%	95012	2,737	484	17.7%
95012	3,796	1,926	50.7%	93906	13,494	2,265	16.8%
93960	6,152	3,066	49.8%	93960	4,294	701	16.3%
93927	7,239	3,578	49.4%	93933	4,236	676	16.0%
93930	5,075	2,494	49.1%	939 (all others)	7,643	1,085	14.2%
93906	16,801	8,126	48.4%	93926	1,927	270	14.0%
93926	2,866	1,371	47.8%	93907	4,628	648	14.0%
93933	3,771	1,799	47.7%	93927	5,347	742	13.9%
93901	6,176	2,631	42.6%	93905	18,255	2,502	13.7%
93907	4,284	1,786	41.7%	95076	2,818	380	13.5%
939 (all others)	5,517	2,156	39.1%	93955	6,275	777	12.4%
940-960 (all others)	1,736	485	27.9%	940-960 (all others)	1,722	184	10.7%
900-938	1,693	342	20.2%	900-938	1,320	114	8.6%
Unknown/Invalid	764	110	14.4%	Unknown/Invalid	906	45	5.0%

Source: DHCS Medi-Cal Dental Division, January 21, 2016.
[1]Zip codes are in rank order by age group for each county. Three-digit zip codes indicates where DHCS suppressed data.
Note: the data for all tables were pulled by the beneficiary's county of residence. The data were not based on place of service or claims data. In stratifying the data by zip code, DHCS stated some beneficiaries may have been counted more than once based on their zip code; for example, if a beneficiary moved from one zip code to another within Santa Cruz County and had a dental visit in both zip codes, it may have been counted as 2 visits. Therefore, the totals are higher for the zip code data than the county summary totals described elsewhere in this report.

Utilization by Children in Healthy Kids

In 2014-15, 768 Santa Cruz County children age 0-18 were enrolled in the Healthy Kids health insurance program. Table 26 breaks out the number of enrolled members by various age groups.[155]

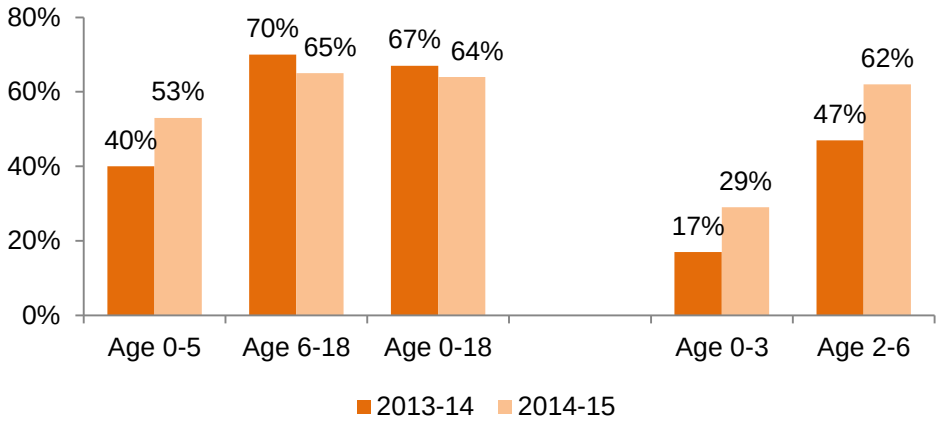
Table 26. Number of Children Enrolled in Healthy Kids

Age Group	2013-3014	2014-2015
Age 0-5	118	34
Age 6-18	913	734
Age 0-18	1,031	768
Age 0-3	47	7
Age 2-6	95	29

Source: Delta Dental, Courtesy of Central California Alliance for Health, November 5, 2015

Close to two-thirds of the children with Healthy Kids coverage (64%, down from 67% in 2013-14) utilized their dental benefits in 2014-15, i.e., made at least 1 dental visit during the reporting period (Figure 30). About one-half (53%) in the age group 0-5 did so. Although the proportion of the youngest children, age 0-3, with a dental visit was relatively small, the jump in utilization for this age group between 2013-14 and 2014-2015 was significant (a percentage increase of 71%). The increase in utilization for children age 2-6 was also notable (a 32% increase).

Figure 30. Dental Utilization in Healthy Kids, 2013-14 and 2014-15



Source: Delta Dental, Courtesy of the Central California Alliance for Health, November 5, 2015
Note: the age breakouts were requested by the consultant.

[155] In order to avoid double counting HK members who progressed to a new age during the course of the year, children were "locked" into their current age band as of the end of the fiscal year, i.e., 12/31, for reporting on a FY basis. Personal communication with Baron Bliss, Central California Alliance for Health, November 6, 2015

Utilization by Children in Head Start

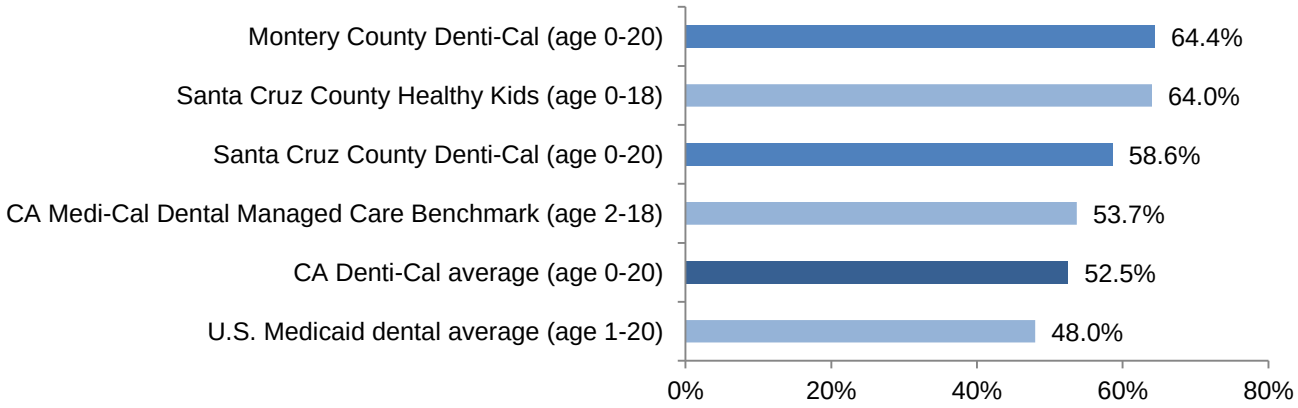
Health highlights from the 2014-2015 Santa Cruz County Head Start Program Information Report concerning children's dental care showed:[156]

- 94.3% of the children had a dental home.
- 92.3% of preschool children completed a professional dental exam.
- 22.8% of the preschool children who received a professional dental exam needed dental treatment (consistent with findings from the AB 1433 pre-K reported screening data; see page 31).
- 65.4% of the preschool children needing dental treatment were able to receive it (34.6% were not).

Summary of Children's Dental Utilization

Figure 31 displays Santa Cruz and Monterey children's dental utilization in the various local, statewide and national programs (comparable adult data are not available). Although the age ranges for some of these programs differs somewhat, the data provide a picture of the relatively favorable comparison, on average, of Monterey and Santa Cruz County children's utilization with state and U.S. experience. Although California's Medi-Cal benchmark is only applicable to the dental *managed care* program, and not the traditional statewide Denti-Cal fee-for-service system, we show it as another basis of comparison.

Figure 31. Children's Dental Utilization, Various Populations



Sources: DHCS Medi-Cal Dental Division; Delta Dental; U.S. Centers for Medicare and Medicaid Services
Note: Healthy Kids data are FY 2014-15; all others are CY 2014. Utilization percentages are in order of magnitude.

California Healthy Kids Survey (CHKS)

CHKS collects data on students in grades 5, 7, 9 and 11 a minimum of every 2 years across California school districts. The Survey is often used to look at student attitudes, behaviors and utilization of health-related services. According to the Santa Cruz County Office of Education, there are no CHKS data regarding oral health.[157] This is a missed opportunity in CHKS, not unique to Santa Cruz or Monterey, however.

[156] Personal communication with Hanna Hayes, MPH, Health Manager, Child & Family Development Programs, Encompass Community Services, November 17, 2015, and accessed at http://scccc.org/child-and-family-development/head-start
[157] Personal community with Carole Mulford, Child Development Department Manager, Santa Cruz County Office of Education.

CONCLUSIONS AND RECOMMENDATIONS

"If a woman is undocumented and pregnant, this might be the only time she's covered for dental care. It's the window of opportunity for care and teaching."
- Key Informant Interview

Despite disparities and other gaps in access to oral health services, Santa Cruz and Monterey have many assets upon which to build a more effective safety net. Many groups and organizations with commitment and expertise are working to address oral health in schools, clinics, and the public health system. The Central Coast is fortunate to have forward-thinking dental health leadership and advocates.

These recommendations are intended to improve access to services and suggest a few specific areas for growth. In focusing primarily on Santa Cruz, as requested, we recognize there will be overlap as some of the same solutions can address multiple needs as well as benefit both counties. There is no particular significance in the order of the recommendations. Deciding which recommendations to implement and assigning priorities is the appropriate role of the local stakeholders, for example the Central Coast Oral Health Collaborative, and should be based on criteria such as the degree of difficulty in addressing the need, the feasibilty and cost of implementation, and the impact to other systems if changes are made. Thereafter, creating an action plan that identifies a timeframe and assignments for assuming responsibility and potential sources of support should be the next step to applying this needs assessment information.

1. Expand access to care in high-need communities by adding new clinical capacity.

With the enhanced reimbursement for Medi-Cal, community health centers represent one of the most viable models for providing prevention and treatment services for low-income populations. They are appropriately structured to meet the social, cultural, and linguistic needs of clients, and those with dental clinics have developed sustainable models. The local FQHCs are thus in a great position to increase access to oral health services by adding new clinical capacity, assuming organizational stability. There are a number of ways this can be accomplished with an adequate amount of additional support including expanded hours/days of operation at existing sites; capital investment in new sites; recruitment of dentists who increasingly seek associate or salaried positions; contracting with private dentists (discussed below); and increasing the use of expanded-scope dental professionals.

Applying some of the key needs assessment factors described above suggests particular areas for growth in the county. For example, population size, poverty, unemployment, Denti-Cal utilization, and CNI score strongly suggests that the Watsonville area (primarily zip code 95076) continues to represent a high need area in Santa Cruz County. Although the area is currently served by all 3 dental clinics (Dientes/County Public Health, Salud and Western) and 3 dentists who accept Denti-Cal, the adult Denti-Cal utilization is low (16.3%), and poverty and unemployment clearly exceed the county average.

The other geographic areas that seem to warrant attention for expanded access are the Santa Cruz city zip codes of 95060 and 95062 (i.e., close to Capitola and Soquel). Similar to Watsonville, adult Denti-Cal utilization is very low (average of 14% for these zip codes), but the areas are served by

only 1 FQHC dental clinic and 2 private dentists who see Denti-Cal patients. The poverty level in zip code 95060 is among the highest in the county, 25.8%. Both of these areas have relatively large population sizes, including high numbers of Medi-Cal eligibles that suggest potential demand for increased services.[158]

We recognize that because Santa Cruz County recently completed a capital project to build the dental clinic in Watsonville there may not be high interest in another project of that kind. With only 4 chairs, this space is already at capacity, however. Expanding the dental clinic through additional grant resources, such as funding from the Alliance capital grant program, would be highly beneficial in this region. This option should not be disregarded for other areas of the county as well and in particular consideration should be given to adding clinical space for adults at the County's Emeline Clinic located in the 95060 zip code which shows one of the lowest utilization rates in the community.

In Monterey County, the assessment findings suggest areas of growth include the Seaside and Marina communities (zip codes 93955 and 93933, respectively, where the poverty rate is close to 19% and Denti-Cal adult utilization is 12.1%), and only 1 FQHC dental clinic. Salinas (especially zip code 93905) is another example with similar unmet need characteristics, including a disproportionately high population of Medi-Cal eligibles.[159]

2. Expand the use of mobile clinic resources to extend care.

Expanding services at existing clinics is the most practical strategy, but it doesn't satisfy the objective of expanding oral health care access to new geographic areas with lower numbers of populations-in-need or underserved populations. The planned outreach site at the Homeless Services Center compound on Coral Street, in partnership with Dientes and Santa Cruz County/ Homeless Persons Health Program, is an example of an organizational model that offers access in spite of homeless patient challenges, as well as the benefit of connecting oral health to other health needs including substance abuse and mental health. With services planned for one day a week this site will quickly reach capacity so expanding hours and/or days might be considered. While Salud and Dientes school-based programs are already extensive—currently serving 25 locations—identifying support to cover additional schools might be explored. The school sites would also offer the prospects of offering dental services to more adults. Additional staffing might include recruiting new dental graduates (dentists, dental hygienists) or current providers to volunteer who have an interest in "sharing in some of the care" outside of their own practices.

3. Consider FQHC contracting with private dentists.

Contracting between private dentists and community clinics is an example of a partnership that could move the dental community to participate more in seeing patients with Medi-Cal. This strategy is endorsed by the California Dental Association (CDA) and the California Primary Care Association (CPCA) and has been called a win-win because "it increases care, increases dentist revenue, and provides timely response to patients' needs." CPCA indicated that many dental clinics were "not sophisticated enough" to make this work for the percentage of money and type and number of

[158] While there is not necessarily a one-to-one relationship between "need" (which can be based on a person's beliefs about the importance of oral health or their need to find treatment for a toothache) and "demand," the two overlap in the concept of access to care. The many calls to Salud and Dientes for adult care that have to be turned away and referred elsewhere due to lack of capacity is a fair expression of both need and demand.

[159] We are reluctant to make further recommendations for Monterey County as public health and clinic representatives in that county declined requests for an interview and therefore our information is more limited.

patients to keep/refer, and so have not made it enough of a priority to explore.[160] When we asked whether this had been successfully implemented anywhere we were told there was an FQHC in Southern California "who doesn't want to be identified because they assumed they'd be besieged with how-to requests." However, both CDA and CPCA staff stated they are anxious to help community clinics implement this strategy and offered the following as advantages:

For the clinic:

- Increase capacity to provide dental services; flexible to need
- Avoids large capital investment
- Reduces permanent staffing requirements
- Supports and utilizes local infrastructure; widens base of support
- Stabilizes dental service costs (but have to "share" some of the PPS rate in negotiating dentist reimbursement)

For the dentist:

- Allows dentist to provide services to Medicaid beneficiaries without becoming an enrolled provider; no billing responsibility/reduced staff time and resources expended on billing issues
- Provides dentist a higher rate than normal Medi-Cal fees (can negotiate with clinic)
- Provides dentist control and flexibility over patient flow
- Can make empty chair time productive

For the patient:

- Increases access locations
- Decreases wait times
- May increase availability of certain services

Key informants who we tested this idea with were favorable, and think some local dentists could be receptive. Two factors, evidenced by our dentist survey, especially suggest this could be a viable strategy: the high percentage of current Denti-Cal providers with capacity to see more (see Table 16), and the proportion of dentists who already have some relationship with community dental clinics. As more access to specialty services for Denti-Cal patients is needed—endodontists and oral surgeons are the greatest need, in addition to more general dentists for adult care—these dentists should be the priority for consideration in contracting. Debi Diaz, Executive Director of the Monterey Bay Dental Society, will be a key asset in making this strategy successful: (831) 658-0168, www.mbdsdentist.com.

The contact at CPCA is:

Emili LaBass
Senior Program Coordinator of Care Delivery
California Primary Care Association
Phone: (916) 440-8170
elabass@cpca.org

The CDA contact is:

Gayle Mathe, RDH
Director, Community Programs
Public Affairs
California Dental Association
916.554.4995
gayle.mathe@cda.org

An FQHC Handbook developed by the Children's Dental Health Project[161] provides useful information about implementing this strategy and includes a model service contract. It can be found

[160] Personal communication with Ginger Smith, Director of Operations, CPCA, October 23, 1015.
[161] *Increasing Access to Dental Care through Public Private Partnerships: Contracting Between Private Dentists and Federally Qualified Health Centers*

at: http://www.ada.org/~/media/ADA/Public%20Programs/Files/access-to-dental-care_fqhc-handbook.ashx

The National Association of Community Health Centers and National Network for Oral Health Access also provides a helpful primer about contracting at: http://www.nnoha.org/nnoha-content/uploads/2013/09/Contracting-with-Private-Practice-Dentists_Partnerships-for-Access.pdf

4. Implement a "First Tooth/First Birthday" campaign countywide.

About one-third of the respondents to the dentist survey in this assessment reported following the recommendation by the American Academy of Pediatrics and the American Academy of Pediatic Denistry that infants should be seen by a dentist by their 1st tooth or 1st birthday. This suggests a need for a countywide "First Tooth/First Birthday" campaign that could be effective in improving the utilization rate for children age 0-3.

An excellent example of a successful "1T1B" campaign that could be replicated is the partnership by First 5 Sacramento and the Sacramento District Dental Society (SDDS). The campaign was launched in 2010 with educational outreach materials mailed to the 1,600 SDDS members and OB-GYN, family practice and pediatrician members of the Sacramento Sierra Valley Medical Society, and tailored for targeting to the public. In addition, First 5's funded partners, including the FQHCs, worked together to share the campaign messaging with parents and caregivers, and the Medi-Cal dental and *medical* managed care plans helped in promoting the campaign materials in provider offices. The message was simple: *Kids need to be seen by a dentist early, before problems arise*. The early education and prevention message—and an attractive 1T1B magnet and logo—is still seen on bus tails and in medical and dental offices. The awareness efforts have paid off as 74% of dentists recently surveyed in the Medi-Cal dental managed care network reported seeing a child by age 1. (The proportion was 52% for general dentists not participating in Denti-Cal.) A companion survey of parents showed 72% agreed or strongly agreed this is the time for a first dental visit, and 92% agreed or strongly agreed "baby teeth are important."[162]

The contact person for additional information, if you consider implementing this recommendation, is Cathy Levering, Executive Director, Sacramento District Dental Society: 916.446.1211 cathy@sdds.org.

5. Design and implement an oral health promotion program specific to pregnant women.

Good oral health and control of oral disease protects a woman's health before and during pregnancy and has the potential to reduce the transmission of bacteria from mothers to their children thereby improving early childhood oral health. Despite these benefits, most women don't seek—and aren't often advised to seek—dental care as part of their prenatal care, although pregnancy provides a "teachable moment" as well as being the only time some woman are eligible for dental benefits. Despite wide distribution of evidence-based guidelines in California,[163] many prenatal providers are still unaware of the importance of oral health during pregnancy, and many dentists and physicians (and women themselves) still think it is unsafe to treat women while they are pregnant. Medical and dental school curricula seldom address dental care delivery during pregnancy adequately, if at all.

[162] Sacramento County Children and Dental Care: Better Off Than 5 Years Ago? Barbara Aved Associates, December 2015.
[163] Oral Health During Pregnancy and Early Childhood:: Evidence-Based Guidelines for Health Professionals. California Dental Association Foundation. February 2010. http://www.cdafoundation.org/Portals/0/pdfs/poh_guidelines.pdf

It is not known how well public and private sector health care providers in Santa Cruz County are connecting pregnant women to dental care, but scheduling an outreach program at WIC on days when prenatal classes are offered, as Dientes does, is one example of a current strategy. Key informants interviewed for this assessment believe there are multiple additional opportunities to coordinate the oral health and prenatal communities. Some suggested a comprehensive campaign along the lines of how First 5 has widely promoted early literacy would be a replicable model to consider.

To be effective, the local medical and dental societies should be engaged—specifically dental providers, obstetrician-gynecologists, pediatricians and family practice physicians—along with provider groups and community organizations in helping to plan, promote and implement educational strategies for professionals as well as their patients. Inviting topic experts like Dr. John Featherstone, Dean at UCSF School of Dentistry, to present a continuing education session tagged onto other meetings, a hosted dinner, etc. can also be of great value.

Studies show that women with less access to technology (emails, web-based programs, text messaging), mail and in-person education is still considered the most effective strategy for providing health-related information, and may be preferred. For instance, a large survey of pregnant women in a health plan[164] found they overwhelmingly preferred to receive dental health information by mail, regardless of whether they were enrolled in a public or private health plan. They also preferred to receive information on infant-specific topics over information concerning their own health, so marketing the campaign to promote infant oral health might be the way to gain women's interest, and then incorporate information on self-care for the mother. What is most important about the messaging is that women receive information that is accurate. The Alliance would be an especially important resource for providing patient information to Medi-Cal members.

The California Department of Public Health recently received a 4-year federal grant to promote perinatal and infant oral health. The project will include looking at referral systems, developing tools for warm hand-offs, and educating providers. We understand it will be piloted first in Sonoma County with additional counties phased in over time. We recommend contacting CDPH (Dr. Jay Kumar, Dental Director) to explore the opportunity of volunteering the Central Coast counties as part of the early pilot/phase-in.

6. Increase opportunities to promote oral health education and access for Medi-Cal managed care members.

The Alliance can play a key role in helping to promote oral health for the Medi-Cal population by also implementing the following

- Insert messages and information about the importance of good oral health in new member orientation packages (first tooth/first birthday and care during pregnancy are important examples). We recognize this adds cost. Assume at least one-third of adults could still be unaware they have dental benefits even if they receive written material about it.
- Include oral health content more frequently in newsletters and other promotions. Dientes and others would be willing to help shape the material.

[164] Thoele MJ, Asche SE, Rindal DB, Fortman KK. Oral Health Program Preferences among Pregnant Women in a Managed Care Organization. J *Pub Health Dent*, 2008; 68(3):174–177, in Improving Access to Perinatal Oral Health Ca re: Strategies & Considerations for Health Plans Issue Brief July 2010, Children's Dental Health Project.

- Rather than give only the phone number for Denti-Cal during new member welcome calls, instruct the vendor to also provide the phone numbers or at least the names of the FQHC dental clinics as they serve half of the Medi-Cal volume in Santa Cruz County. The negligible amount of time this will add to each call will be offset by the benefit of potentially increasing access and utilization.
- Add a couple of dental questions to the required member survey the Alliance conducts every other year to learn more about patient barriers.[165] Even though this is a standardized tool, there is no prohibition to expanding the survey with added questions. In addition, supporting qualitative approaches like occasional focus groups could be extremely valuable (for example, it would allow asking *what* made the difference to the patient to decide to visit the dentist) for targeting and tailoring outreach and case management.

7. Improve access for patients requiring sedation dental services.

Access to dental care for Medi-Cal patients requiring sedation/general anesthesia is limited by too few Denti-Cal providers and facilities willing to take these cases. Appointment availability is *relatively* available for children outside of the county at Central Coast Pediatric Dental Group in Monterey (Salinas). Access for older teens and adults is much more limited, although Dr. Slaughter in Hollister appears to be the closest resource for adults (as well as children) with Denti-Cal. Key informants interviewed for this study who were aware of these issues say increasing access to local sedation and GA for both children and adults should be one of the important needs to address in Santa Cruz County. This might be an area of future focus for the HIP Safety Net Clinic Coalition since its charge is to improve access for Santa Cruz County residents who receive care through publicly-funded programs. Administrators from both local hospitals should also be engaged in discussions for helping to increase facility access.

Data on local access problems and resolutions should be shared with the Department of Health Care Services Medi-Cal Dental Division as further evidence of the statewide access problem, and for their improvement efforts to move forward.

8. Encourage schools to continue the AB 1433 pre-Kindergarten dental visit requirement to ensure children are accessing care by the age of 6, and to participate in the centralized online reporting of student oral health data.

Schools have an important role to play in narrowing the disparity gap of dental disease among children. The Kindergarten Dental Check-up law (AB 1433) was enacted to help identify children with unmet oral health needs and to provide schools with essential information concerning student health and ability to learn. However, a reorganization of categorical program funding made the program optional 2 years ago, and it's unclear whether the local school districts still require a dental visit or offer dental screening assessments prior to kindergarten enrollment (either was allowed under AB 1433).[166] The high rates of utilization among 4-6 year-olds in the state have likely been a result of this law.

[165] Medi-Cal managed health care plans are required to conduct Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys asking patients to report on and evaluate their experience and satisfaction with health care. The CAHPS tool used by Health Plans does not assess experience with care provided by dental plans, dentists or their staff.
[166] Schools still get the funding but decide how to spend it. Oral Health Assessment funding is included as part of the Local Control Funding Formula.

We also recommend that if the local school districts are not already reporting into the SCOHR (System for California Oral Health Reporting) they are encouraged to do so. (Some schools screen or require evidence of a dental visit but don't complete and submit the form for reporting it and the opportunity for sharing data is lost.) SCOHR tracks the status of all Oral Health Assessment/Waiver Request Forms and includes a report generator utility to run ad-hoc, custom lists and aggregate reports at the school, district, county, and/or state levels. The state has recognized the need for better oral health surveillance and coming forward we will see some sort of surveillance as one of the goals in the new Oral Health Plan for California.

9. Implement more models of medical-dental integration

The benefits of integrating oral health and primary care include facilitating an interdisciplinary and patient-centered model of care; identifying disease precursors; raising patients' awareness of the importance of oral health; expanding dental entry points; and providing significant cost savings to the health care system.[167] One of the best and most common examples is those FQHCs in which both clinical medical and dental services are offered, such as Salud Para la Gente and the County/Dientes collaboration in Watsonville. Other FQHCs in the state have integrated their electronic health records and a few have integrated to the extent, for example, that medical staff provide Early Childhood Caries risk assessment and fluoride varnish applications and dental staff provide HIV or diabetes screenings.[168,169] Being housed in the same physical structure does not assure integration of services, however. While co-location supports integrated care, planning is required to achieve fully integrated services in which *bidirectional* handoffs are made and care is coordinated (e.g., between prenatal and dental providers).

Given oral health's link to larger patient outcomes, we encourage you to consider some of the approaches below. A key resource should be the Health Improvement Partnership of Santa Cruz County because of its expressed goal for promoting integrated medical, behavioral and dental services.

- Look for more opportunities to co-locate clinical services (including through mobile clinics), especially for the most vulnerable populations. In addition to more complex dental treatment needs, uninsured, undocumented, homeless, Medi-Cal and other low-income populations are likely to be more medically compromised and less attentive to maintaining their own health and managing chronic conditions than the general public. Concerning FQHCs, perhaps start first with patients currently seeking medical care in the health center.

- Provide professional education sessions such as the oral health forum the Trust is sponsoring on February 17th. Additionally, engage the local medical as well as dental society and offer professional education seminars and other continuing education events that draw both types of providers to the sessions, and include activities that promote communication (i.e., breaking down medical and dental silos), build awareness of the key science and promote cross-referrals. Include nurse practitioners, midwives and physician assistants as well. Professional organizations are a key resource for cross-training of dentists and medical providers on standards of care for oral health.

- Interview the major private practice primary care providers in the Alliance network to find out if patients are being referred to dentists/dental clinics, and if providers know whether patients

[167] Returning the Mouth to the Body: Integrating Oral Health & Primary Care. Grant Makers in Health. Issue Brief No. 40. September 2012.
[168] Hilton I. Creating Medical Dental Integration. Helpful Hints & Best Practices. Presentation to Illinois Primary Health Care Association, June 2, 2013. Available at http://www.iphca.org/Portals/0/Documents/6-2-13_IL_PAC_%20PCHH_FINAL.pdf.
[169] Although the state began to work toward a medical-dental integration pilot project with children in Los Angeles last year, Medi-Cal medical and dental care still operate largely in two separate worlds with little coordination or collaboration between the two.

keep their dental appointments. This would be a valuable endeavor especially as there are no formal local data on patient barriers.

- Build support for integrated models by educating other important stakeholders such as school district personnel as well as the general public to increase awareness of the importance of prevention and maintaining good oral health.

10. Reduce use of the emergency department for preventable dental conditions to support better access to community dental services and lower ED costs.

The best strategy to reduce ED use for ambulatory care sensitive services like most dental conditions seen in the ED is to increase access to regular community-based dental care. Most EDs don't have adequate diagnostic equipment to accurately evaluate presenting dental conditions or, typically, staff trained to diagnose dental disease and provide definitive treatment, such as extractions or endodontic care. Treatment is generally limited to a prescription for an antibiotic and something for pain.

Administrators from both local hospitals—that collectively saw 888 ED cases for preventable dental conditions last year—need to be engaged in discussions for helping to support better access to community dental services and reduce use of the ED. The FQHCs could reach out directly to ED directors, meeting with them at least quarterly, and offer tailored in-service education to ED staff on each shift and provide updated lists of community clinic information and other oral health literature. You can also provide posters and pre-printed Rx pads with clinic information, with the "Rx" being to contact one of the community dental clinics for an appointment. (Note: Connecticut Medicaid program does this and they report these Rx pads work well.) For ED visits that occur during the day, encourage the hospitals to consider asking ED staff to make a warm hand-off by calling a dental clinic most convenient to the patient and securing a follow-up dental appointment for a time that works for the patient. (This is currently being implemented at the University of Michigan medical center ED.) It would also be of interest in Santa Cruz County to monitor and report the outcomes of ED visits for ACS dental conditions such as by oral health status and use of the community dental care system.

11. Continue to support and improve the United Way Community Assessment Project.

The CAP survey is an incredible resource for tracking demographic, health status, utilization and other trends. The continued inclusion of dental questions is very valuable. We offer a few suggestions:

- Asking "Have you needed dental care in the past year?" implies a problem that required needing to seek treatment. We don't think this is the intention of this question, but it's unclear. Asking if the person needed dental care followed by asking, "Were you able to receive *the care you needed*?" then seems to be a proxy for utilization. It would be clearer if "need" was asked only in reference to the question about barriers (which currently focuses on financial barriers, but could be expanded to include other important barriers as described above), and "use" was asked more directly.

- The results for "Have you had dental care in the last year?" in the main sample and the every-2-year oversample are shown by ethnicity (White/Latino) but not by age group. It would be helpful for service delivery planning purposes to report the data for children and adults.[170]

- We wonder if asking the utilization question by "….have you had dental *care*?" could cause some respondents to answer "no" if they thought the question referred to treatment (i.e., care = treatment services). Perhaps a purer question might be "Did you get a regular dental check-up within the last year?" The recommendation for this change should be discussed with Applied Survey Research, the CAP survey contractor.

12. Advocate for higher Medi-Cal dental reimbursement rates.

While raising Medi-Cal dental rates is not within the control of local policymakers, advocacy for more equitable reimbursement should remain a priority of every local organization and its statewide affiliates. The research is indisputable that links adequate provider participation (which increases access and utilization) to reimbursement rates.

13. Work toward supporting full-scope dental care (up to the Denti-Cal benefit) at all FQHCs to ensure best practice and outcomes for patients.

State and federal funding for health centers is competitive and finite and does not always cover the costs of services, making it a challenge in allocating funds to both primary care and dental services; this in some cases limits the scope of dental care offered. In addition to exams and preventive services, however, quality of care includes completing treatment plans and providing necessary restorative services, which can be costly. A countywide goal should be established to secure additional funding over the next 2 years to support expanding the scope of dental services up to the Denti-Cal benefit at all local FQHCs and other health centers.

14. Increase the proportion of communities with fluoridated community water systems.

Our recommendations include:

- Provide evidence-based educational information to key stakeholders and the general public that addresses health and safety concerns, and respond to requests for information on community water fluoridation through presentations to health professionals, community stakeholders or policymakers.

- Sustain and expand the local, broad-based coalitions that support and defend community water fluoridation, and continue to advocate for community water fluoridation in communities that are not currently fluoridating their community water systems.

15. Share the needs assessment information with decision makers, policymakers, and stakeholders through oral and written briefings.

The goal is to engage local stakeholders in advocating for and serving more of the need for oral health services in Santa Cruz and Monterey Counties

[170] Research has found that parents are optimistic reporters of their children's dental care. Accuracy of parental report in surveys can be affected by recall confusion of time, or overestimation of visits because of social desirability.

APPENDICES

"We don't need more headaches dealing with patients that can't afford treatment. Happy to volunteer my time at a different location, but don't want to mess with the system we have in my practice." - Dentist survey respondent

Attachment 1:	Key Informant Interviews and Other Contacts
Attachment 2:	ACS Oral Conditions and Associated ICD-9 Codes
Attachment 3:	Denti-Cal Coverage of Benefits for Adults as of 12/1/15
Attachment 4:	Denti-Cal Utilization by Zip Code
Attachment 5:	Denti-Cal Utilization Rate of Children by California County, 2014
Attachment 6:	Map of Denti-Cal Services in Santa Cruz and Monterey Counties
Attachment 7:	Santa Cruz and Monterey Zip Code Maps

ATTACHMENT 1

KEY INFORMANT INTERVIEWS AND OTHER CONTACTS

(Alphabetical Order by First Name)

Name	Agency/Organization
Key Informant Interviews	
Alan McKay	CEO, Central California Alliance for Health
Audra Earle	CEO, Watsonville Community Hospital
Cathy Cavanaugh	Program Director, WIC, Santa Cruz County
Cynthia Matthews	Councilmember, Santa Cruz City Council
David Brody	Executive Director, First 5 Santa Cruz
Debi Diaz	Executive Director, Monterey Bay Dental Society
Dori Rose Inda	CEO, Salud Para la Gente
Hannah Hayes	Health Manager, Child and Family Development Programs (Head Start)
Jan Wolf	Member Services Director, Central California Alliance for Health
Javier Carrillo	Health Programs Manager, Central California Alliance for Health
Jerry Kondo, DDS	Private Practice; Dientes Dental Advisory Committee
John Leopold	Supervisor, Santa Cruz County Board of Supervisors
Larry DeGhetaldi, MD	President, Sutter Santa Cruz/Palo Alto Medical Foundation
Lisa Hernandez, MD, MPH	Health Officer, Santa Cruz County Public Health
Mary Lou Goeke	Executive Director, United Way of Santa Cruz
Rachel Ruby	Nurse Practitioner, Dignity Health Dominican, Mobile Health Unit
Raquel Ruiz	Director of Programs, Pajaro Valley Community Health Trust
Shelly Barker	Program Coordinator, Health Improvement Partnership of Santa Cruz County
Storey La Montagne	Data Services Director, Santa Cruz Community Health Clinics
Contacted for Specific Information	
Becky Phan	Practice Manager, Children's Dental Center, San Jose
Bridgete Clark	Cabrillo College Dental Hygiene Program
Carole Mulford	Child Development Department Manager, Santa Cruz County Office of Education
Dale Bishop, MD	Chief Medical Officer, Central California Alliance for Health
Francine Rodd	First 5 Monterey
Gayle Mathe	Director of Community Programs, California Dental Association
Ginger Smith	Director of Health Center Operations, California Primary Care Association
Kathy Diaz	Practice Manager, Central Coast Pediatric Dental Group
Nicette Short	Director of Policy, California Dental Association
Ronald Inge, DDS	Chief Dental Officer, Western Dental
Sepideh Walthard, DDS	Dental Director, Dientes Community Dental Care

ATTACHMENT 2

ACS Oral Conditions and Associated ICD-9 Codes[171]

The following descriptions help explain the various ICD-9 codes hospitals used in coding the Ambulatory Care Sensitive (ACS) oral conditions of the emergency department (ED) visits reported in this study.

- "Pulp and periapical tissues" are "toothaches" that elicit pain through the "pulp" organ of the tooth which contains a nerve, blood vessels and fibrous connective tissue.
- "Periapical Tissues" are the jaw bone, the root nerve and blood vessels connected to the tooth and the periodontal ligament (connective tissue) that holds the tooth in the bone, at the top of the tooth. These are the tissues involved in a true abscess, when the infection of the caries eats through the tooth, then the pulp and out the tip (apex) of the tooth to eat/destroy the bone and surrounding tissues. This is the condition that causes swelling; there is no swelling when an infection occurs just in the tooth, as there is no space for it to expand.
- "Oral Soft Tissues" are the gingiva (gums) both attached and free, oral mucosa (inner cheeks, floor of the mouth, vestibule (inner lip area that attaches gums), lips, roof of the mouth, soft palate, hypo pharynx, tonsillar pillars. The things one can get here are cuts, bruising and trauma, cold sores, ulcers from food or drug allergy, burns (e.g., from pizza), Thrush (a fungus), cysts, Lichen Planus, infection (bacterial and virus)

All the above can also affect the tongue.

520.6 = "Disturbances in tooth eruption" - misplaced teeth, broken or retained baby teeth, infected eruption sac, premature permanent teeth.
520.7 = "teething syndrome" - painful teething, infection….
521.0 = "Unspecified Dental Caries"
522.1 = "Pulpitis" - infected or inflamed pulp
522.4 = "Acute apical periodontitis of pulpal origin" - a true abscess
522.5 = "Periapical abscess without sinus"
522.6 = "Chronic apical periodontitis"
522.7 = "Periapical abscess with sinus"
522.8 = "Radicular Cyst" - odontogenic cystic lesion of inflammatory origin.
523.0 = "Acute Gingivitis, Plaque induced" - gingival inflammation
523.1 = "Acute gingivitis, non-plaque induced"
523.2 = "Gingival recession - unspecified "
523.3 = "Aggressive periodontitis, unspecified" - inflammation and destruction of the periodontal ligament
523.4 = "Chronic periodontitis, unspecified"
523.5 = "Periodontitis" - degenerative, non-inflammatory destruction of the periodontium, originating in one or more of the periodontal structures and characterized by migrating and loosening of the teeth in the presence or absence of secondary epithelial proliferation and pocket formation or secondary gingival disease.
523.6 = "Accretions of the teeth" - Hard or soft material deposited on a tooth surface, such as dental calculus or plaque and materia alba
523.8 = "Other specified periodontal disease"
523.9 = "Unspecified gingival or periodontal disease"
528.2 = "Oral Apthae" - Canker or Cold sore
528.6 = "Leukoplakia of the Oral mucosa or tongue" - a "whitish", flat lesion

[171] Prepared by Jack C. Luomanen, DMD, October 2015. Note: the ICD 9 Codes were in use at this time and relevant to billing.

Denti-Cal Coverage of Benefits for Adults as of 12/1/15*

Code	Procedure	ADULT MC COVERAGE	ADULT/Frequency	Notes
	Diagnostic& Preventive			
D0120	Recall exam-ADULT (w/x-rays)	N	12 mo.	MC PREGNANT WOMEN OK
D0150	NP exam-ADULT (w/x-rays)	Y	once	
D0120	Recall exam-PEDO (w/x-rays, PX)			
D0150	NP exam-PEDO (w/x-rays, PX)			
D1110	Prophylaxis-adult	Y	12 mo.	
D1120	Prophylaxis-child (if not done w/recall)			
D1351	Sealant	N		
D1510	Spacer	N		
D8210	Retainer	N		
	Restorative			
D2140	Amalgam-1surf., Prim/Perm	Y	12 mo.	
D2150	Amalgam-2surf. Prim/Perm	Y	12 mo.	
D2160	Amalgam-3surf. Prim/Perm	Y	12 mo.	
D2161	Amalgam-4+ surf., Prim/Perm	Y	12 mo.	
D2330	Composite-Anterior 1 surface	Y	12 mo.	
D2331	Composite-Anterior 2 surface	Y	12 mo.	
D2332	Composite-Anterior 3 surface	Y	12 mo.	
D2335	Composite-Anterior 4+ surface	Y	12 mo.	
D2391	Composite-Posterior 1 surface	Y	12 mo.	
D2392	Composite-Posterior 2 surface	Y	12 mo.	
D2393	Composite-Posterior 3 surface	Y	12 mo.	
D2751	CROWN (PFM) PORCELAIN/BASE	Y	5 yrs.	Adult: anterior only
				Posterior-against part
D2790	CROWN FULL (Gold)	N		
D2791	CROWN (Full) Cast Metal	Y	5 yrs.	posterior against
				partial only
D2740	Crown-All ceramic750	N		
D2920	Re-cement crown	Y	12 mo.	
D2930	Prefab stain steel crown-prim	N		
D2931	Prefab stain steel crown-perm	Y	12 mo.	
D2950	Crown buildup, include any pins	N		
D2952	Post-Cast post &core in add to crown	Y	for RCT teeth	
D2954	Post -Prefabricated in add to crown	Y	for RCT teeth	
D2955	Post Removal	N		
D6930	Re-cement Bridge	N		
	Endodontic			
D3310	Root canal therapy - anterior	Y		
D3320	Root canal therapy - bicuspid	Y		
D3330	Root canal therapy - molar	Y		
D3346	Retreat- Root canal therapy - anterior	Y	after 12 mo.	
D3347	Retreat-Root canal therapy - bicuspid	Y	after 12 mo.	
D3348	Retreat-Root canal therapy - molar	Y	after 12 mo.	
D3220	Pulpotomy-Primary	N		

Table continues on next page.

D3110	Pulp cap-direct (excl. final restoration)	N		
D3120	Pulp cap-indirect (excl. final restoration)	N		
D3221	Pulpal Debridement (**O&D**)	Y	once per tooth	
	Periodontics			
D4341	Root Planning/per quad	Y	2 yrs.	full mouth probe & current x-rays
D4210	Gingevectomy-4+	Y	3 yrs.	
D4211	Gingevectomy-1-3	Y	3 yrs.	
D4355	Full Mouth Debridement	N		
	Prosthodontics			
D5110	Denture - Upper	Y	5 yrs.	
D5120	Denture - Lower	Y	5 yrs.	
D5213	Upper Partial	Y	5 yrs.	opposing denture ONLY
D5214	Lower Partial	Y	5 yrs.	opposing denture ONLY
D5211	STAYPLATE-Upper	Y	5 yrs.	missing anterior teeth;
	charge teeth/clasp fee for NOMINAL ONLY			Or 5 missing posterior teeth per arch
				Or 1st-2nd molar & bicuspid missing-same side
D5212	STAYPLATE-Lower	Y	5 yrs.	missing anterior teeth;
	charge teeth/clasp fee for NOMINAL ONLY			Or 5 missing posterior teeth per arch
				Or 1st-2nd molar & bicuspid missing-same side
D5411	Denture adjustment (lower)	Y	twice in 12 mo.	billable to MC 6 mo. after delivery
D5410	Denture adjustment (upper)	Y		of denture; charge cash pt. after 6 mo.
D5520	Replace/repair denture tooth	Y	2 times in a	
D5640	Teeth-replace/repair-part or SP (also D5650)	Y	12 month	
D5630	Clasp-replace/repair-part or SP (also D5660)	Y	period	
D5620	Partial base repair	Y		
	Reline-denture (upper or lower)CHAIRSIDE	Y	12 mo. period	wait 12 mo. after chairside for
	Reline-partial (upper or lower) LAB	Y	12 mo. period	lab relines to be covered
	Oral Surgery			stayplate-chairside reline ONLY
D7140	Extraction-simple	Y		
D7210	Extraction-surgical/erupt tooth	Y		
	Adjunctive Services			
D9230	Nitrous (cash pt./child-always no charge)	Y		behavior/developmental/emotional
				adults-document
D9430	Office visit for observation Em w/1 PA	Y		
D9940A	Night guard-Hard	N		
D9940B	Night guard-Soft	N		
D2940	Sedative Fill	Y	6 mo.	
D9110	Emerg treatment, palliative (minor proc)	Y		**not O&D-use D3221**
	Pharmaceuticals			
200000	Amox 500 mg 30 tabs			
200003	Chlorhex. Oral Rinse 480 mL			
200004	Clindamycin 300 mg 30 tabs			
200005	Ibuprofen 600mg 30 tabs			
200006	Ibuprofen 800mg 30 tabs			
200009	Amox 500 mg 4 tabs			
200010	Clindamycin 150mg 4 tabs			

*This table reflects covered benefits for patients of FQHCs; private offices using a FFS schedule have more limited benefits.

ATTACHMENT 4

Denti-Cal Utilization by Zip Code

Santa Cruz County - CY2014 (numbers are unduplicated by zip code)								
Zip Code	Age Group[1]	Eligibles[2]	Total Users		FQHC Only Users		Non-FQHC Users	
			Total Users[3]	Total Utilization[4]	FQHC Users[5]	FQHC Utilization[6]	Non-FQHC Users[7]	Non-FQHC Utilization[8]
95060	Ages 0-3	763	148	19.4%	108	14.2%	40	5.2%
	Ages 0-5	1,111	331	29.8%	247	22.2%	84	7.6%
	Ages 6-20	2,433	997	41.0%	653	26.8%	344	14.1%
	Ages 21-64	6,452	881	13.7%	429	6.6%	452	7.0%
	Ages 65+	740	173	23.4%	92	12.4%	81	10.9%
	Total	**10,736**	**2,382**	**22.2%**	**1,421**	**13.2%**	**961**	**9.0%**
95062	Ages 0-3	828	199	24.0%	151	18.2%	48	5.8%
	Ages 0-5	1,234	403	32.7%	303	24.6%	100	8.1%
	Ages 6-20	2,661	1,247	46.9%	874	32.8%	373	14.0%
	Ages 21-64	5,302	815	15.4%	459	8.7%	356	6.7%
	Ages 65+	815	251	30.8%	144	17.7%	107	13.1%
	Total	**10,012**	**2,716**	**27.1%**	**1,780**	**17.8%**	**936**	**9.3%**
95065 & 95066	Ages 0-3	308	40	13.0%	24	7.8%	16	5.2%
	Ages 0-5	447	103	23.0%	66	14.8%	37	8.3%
	Ages 6-20	1,174	411	35.0%	246	21.0%	165	14.1%
	Ages 21-64	2,035	263	12.9%	118	5.8%	145	7.1%
	Ages 65+	207	39	18.8%	25	12.1%	14	6.8%
	Total	**3,863**	**816**	**21.1%**	**455**	**11.8%**	**361**	**9.3%**
95073 & 95076	Ages 0-3	4,808	1,684	35.0%	1,003	20.9%	681	14.2%
	Ages 0-5	7,072	3,233	45.7%	1,731	24.5%	1,502	21.2%
	Ages 6-20	14,258	7,747	54.3%	2,490	17.5%	5,257	36.9%
	Ages 21-64	16,410	2,682	16.3%	1,218	7.4%	1,464	8.9%
	Ages 65+	2,446	545	22.3%	174	7.1%	371	15.2%
	Total	**40,186**	**14,207**	**35.4%**	**5,613**	**14.0%**	**8,594**	**21.4%**
950 (all others)	Ages 0-3	1,608	378	23.5%	244	15.2%	134	8.3%
	Ages 0-5	2,391	782	32.7%	467	19.5%	315	13.2%
	Ages 6-20	5,198	2,177	41.9%	948	18.2%	1,229	23.6%
	Ages 21-64	8,505	1,266	14.9%	569	6.7%	697	8.2%
	Ages 65+	1,167	263	22.5%	107	9.2%	156	13.4%
	Total	**17,261**	**4,488**	**26.0%**	**2,091**	**12.1%**	**2,397**	**13.9%**
900-949	Ages 0-3	252	26	10.3%	14	5.6%	12	4.8%
	Ages 0-5	357	51	14.3%	24	6.7%	27	7.6%
	Ages 6-20	464	109	23.5%	21	4.5%	88	19.0%
	Ages 21-64	821	52	6.3%	Suppressed	Suppressed	Suppressed	Suppressed
	Ages 65+	74	17	23.0%	Suppressed	Suppressed	Suppressed	Suppressed
	Total	**1,716**	**229**	**13.3%**	**65**	**3.8%**	**167**	**9.7%**
951-988	Ages 0-3	105	11	10.5%	Suppressed	Suppressed	Suppressed	Suppressed
	Ages 0-5	142	23	16.2%	Suppressed	Suppressed	Suppressed	Suppressed
	Ages 6-20	289	78	27.0%	42	14.5%	36	12.5%
	Ages 21-64	524	Suppressed	Suppressed	Suppressed	Suppressed	Suppressed	Suppressed
	Ages 65+	76	Suppressed	Suppressed	Suppressed	Suppressed	Suppressed	Suppressed
	Total	**1,031**	**134**	**13.0%**	**63**	**6.1%**	**73**	**7.1%**

Monterey County - CY2014 (Number are unduplicated by zip code)								
Zip Code	Age Group	Eligibles	Total Users		FQHC Only Users		Non-FQHC Users	
			Total Users[3]	Total Utilization[4]	FQHC Users[5]	FQHC Utilization[6]	Non-FQHC Users[7]	Non-FQHC Utilization[8]
	Ages 0-3	1,446	381	26.3%	43	3.0%	338	23.4%
93901	Ages 0-5	2,181	775	35.5%	86	3.9%	689	31.6%
	Ages 6-20	3,995	1,856	46.5%	138	3.5%	1,718	43.0%
	Ages 21-64	6,279	1,035	16.5%	380	6.1%	655	10.4%
	Ages 65+	829	253	30.5%	47	5.7%	206	24.8%
	Total	**13,284**	**3,919**	**29.5%**	**651**	**4.9%**	**3,268**	**24.6%**
93905	Ages 0-3	6,377	2,318	36.3%	444	7.0%	1,874	29.4%
	Ages 0-5	9,417	4,569	48.5%	733	7.8%	3,836	40.7%
	Ages 6-20	16,615	9,725	58.5%	1,231	7.4%	8,494	51.1%
	Ages 21-64	16,443	2,205	13.4%	1,441	8.8%	764	4.6%
	Ages 65+	1,813	300	16.5%	142	7.8%	158	8.7%
	Total	**44,288**	**16,799**	**37.9%**	**3,547**	**8.0%**	**13,252**	**29.9%**
93906	Ages 0-3	3,999	1,138	28.5%	107	2.7%	1,031	25.8%
	Ages 0-5	5,869	2,335	39.8%	216	3.7%	2,119	36.1%
	Ages 6-20	10,932	5,791	53.0%	432	4.0%	5,359	49.0%
	Ages 21-64	11,624	1,867	16.1%	824	7.1%	1,043	9.0%
	Ages 65+	1,870	398	21.3%	119	6.4%	279	14.9%
	Total	**30,295**	**10,391**	**34.3%**	**1,591**	**5.3%**	**8,800**	**29.0%**
93907	Ages 0-3	991	257	25.9%	38	3.8%	219	22.1%
	Ages 0-5	1,441	502	34.8%	64	4.4%	438	30.4%
	Ages 6-20	2,843	1,284	45.2%	150	5.3%	1,134	39.9%
	Ages 21-64	4,174	562	13.5%	213	5.1%	349	8.4%
	Ages 65+	454	86	18.9%	24	5.3%	62	13.7%
	Total	**8,912**	**2,434**	**27.3%**	**451**	**5.1%**	**1,983**	**22.3%**
93926	Ages 0-3	649	193	29.7%	13	2.0%	180	27.7%
	Ages 0-5	945	394	41.7%	27	2.9%	367	38.8%
	Ages 6-20	1,921	977	50.9%	76	4.0%	901	46.9%
	Ages 21-64	1,662	228	13.7%	105	6.3%	123	7.4%
	Ages 65+	265	42	15.8%	20	7.5%	22	8.3%
	Total	**4,793**	**1,641**	**34.2%**	**228**	**4.8%**	**1,413**	**29.5%**
93927	Ages 0-3	1,866	640	34.3%	343	18.4%	297	15.9%
	Ages 0-5	2,706	1,256	46.4%	623	23.0%	633	23.4%
	Ages 6-20	4,533	2,322	51.2%	1,039	22.9%	1,283	28.3%
	Ages 21-64	4,826	640	13.3%	446	9.2%	194	4.0%
	Ages 65+	521	102	19.6%	79	15.2%	23	4.4%
	Total	**12,586**	**4,320**	**34.3%**	**2,187**	**17.4%**	**2,133**	**16.9%**
93930	Ages 0-3	1,261	395	31.3%	161	12.8%	234	18.6%
	Ages 0-5	1,819	808	44.4%	340	18.7%	468	25.7%
	Ages 6-20	3,256	1,686	51.8%	574	17.6%	1,112	34.2%
	Ages 21-64	3,537	618	17.5%	412	11.6%	206	5.8%
	Ages 65+	418	94	22.5%	65	15.6%	29	6.9%
	Total	**9,030**	**3,206**	**35.5%**	**1,391**	**15.4%**	**1,815**	**20.1%**
93933	Ages 0-3	871	267	30.7%	14	1.6%	253	29.0%
	Ages 0-5	1,340	541	40.4%	27	2.0%	514	38.4%
	Ages 6-20	2,431	1,258	51.7%	71	2.9%	1,187	48.8%
	Ages 21-64	3,730	604	16.2%	170	4.6%	434	11.6%
	Ages 65+	506	72	14.2%	11	2.2%	61	12.1%
	Total	**8,007**	**2,475**	**30.9%**	**279**	**3.5%**	**2,196**	**27.4%**
93955	Ages 0-3	1,523	595	39.1%	14	0.9%	581	38.1%
	Ages 0-5	2,290	1,163	50.8%	26	1.1%	1,137	49.7%
	Ages 6-20	4,548	2,592	57.0%	90	2.0%	2,502	55.0%
	Ages 21-64	5,663	687	12.1%	302	5.3%	385	6.8%
	Ages 65+	612	90	14.7%	27	4.4%	63	10.3%
	Total	**13,113**	**4,532**	**34.6%**	**445**	**3.4%**	**4,087**	**31.2%**
93960	Ages 0-3	1,311	387	29.5%	119	9.1%	268	20.4%
	Ages 0-5	1,972	812	41.2%	241	12.2%	571	29.0%
	Ages 6-20	4,180	2,254	53.9%	613	14.7%	1,641	39.3%
	Ages 21-64	3,728	589	15.8%	380	10.2%	209	5.6%
	Ages 65+	566	112	19.8%	64	11.3%	48	8.5%
	Total	**10,446**	**3,767**	**36.1%**	**1,298**	**12.4%**	**2,469**	**23.6%**

Zip Code	Age Group	Eligibles	Total Users		FQHC Only Users		Non-FQHC Users	
			Total Users[3]	Total Utilization[4]	FQHC Users[5]	FQHC Utilization[6]	Non-FQHC Users[7]	Non-FQHC Utilization[8]
95012	Ages 0-3	960	341	35.5%	190	19.8%	151	15.7%
	Ages 0-5	1,393	631	45.3%	320	23.0%	311	22.3%
	Ages 6-20	2,403	1,295	53.9%	409	17.0%	886	36.9%
	Ages 21-64	2,485	429	17.3%	306	12.3%	123	4.9%
	Ages 65+	252	55	21.8%	41	16.3%	14	5.6%
	Total	**6,533**	**2,410**	**36.9%**	**1,076**	**16.5%**	**1,334**	**20.4%**
95076	Ages 0-3	948	354	37.3%	254	26.8%	100	10.5%
	Ages 0-5	1,406	664	47.2%	445	31.7%	219	15.6%
	Ages 6-20	**2,465**	**1,305**	**52.9%**	**560**	**22.7%**	**745**	**30.2%**
	Ages 21-64	2,590	339	13.1%	214	8.3%	125	4.8%
	Ages 65+	228	41	18.0%	22	9.6%	19	8.3%
	Total	**6,689**	**2,349**	**35.1%**	**1,241**	**18.6%**	**1,108**	**16.6%**
939 (all others)	Ages 0-3	1,193	293	24.6%	27	2.3%	266	22.3%
	Ages 0-5	1,714	561	32.7%	46	2.7%	515	30.0%
	Ages 6-20	3,803	1,595	41.9%	107	2.8%	1,488	39.1%
	Ages 21-64	6,336	763	12.0%	219	3.5%	544	8.6%
	Ages 65+	1,307	322	24.6%	47	3.6%	275	21.0%
	Total	**13,160**	**3,241**	**24.6%**	**419**	**3.2%**	**2,822**	**21.4%**
900-938	Ages 0-3	494	46	9.3%	23	4.7%	23	4.7%
	Ages 0-5	728	107	14.7%	52	7.1%	55	7.6%
	Ages 6-20	965	235	24.4%	64	6.6%	171	17.7%
	Ages 21-64	1,198	97	8.1%	Suppressed	Suppressed	Suppressed	Suppressed
	Ages 65+	122	17	13.9%	Suppressed	Suppressed	Suppressed	Suppressed
	Total	**3,013**	**456**	**15.1%**	**163**	**5.4%**	**293**	**9.7%**
940-960 (all others)	Ages 0-3	403	66	16.4%	33	8.2%	33	8.2%
	Ages 0-5	637	144	22.6%	62	9.7%	82	12.9%
	Ages 6-20	1,099	341	31.0%	95	8.6%	246	22.4%
	Ages 21-64	1,544	150	9.7%	Suppressed	Suppressed	Suppressed	Suppressed
	Ages 65+	178	34	19.1%	Suppressed	Suppressed	Suppressed	Suppressed
	Total	**3,458**	**669**	**19.3%**	**234**	**6.8%**	**435**	**12.6%**
Unknown/Invalid	Ages 0-3	126	Suppressed	Suppressed	Suppressed	Suppressed	Suppressed	Suppressed
	Ages 0-5	188	23	12.2%	Suppressed	Suppressed	Suppressed	Suppressed
	Ages 6-20	576	87	15.1%	19	3.3%	68	11.8%
	Ages 21-64	827	45	5.4%	Suppressed	Suppressed	Suppressed	Suppressed
	Ages 65+	79	Suppressed	Suppressed	Suppressed	Suppressed	Suppressed	Suppressed
	Total	**1,670**	**159**	**9.5%**	**38**	**2.3%**	**121**	**7.2%**
Grand Total		**189,277**	**62,768**	**33.2%**	**15,239**	**8.1%**	**47,529**	**25.1%**

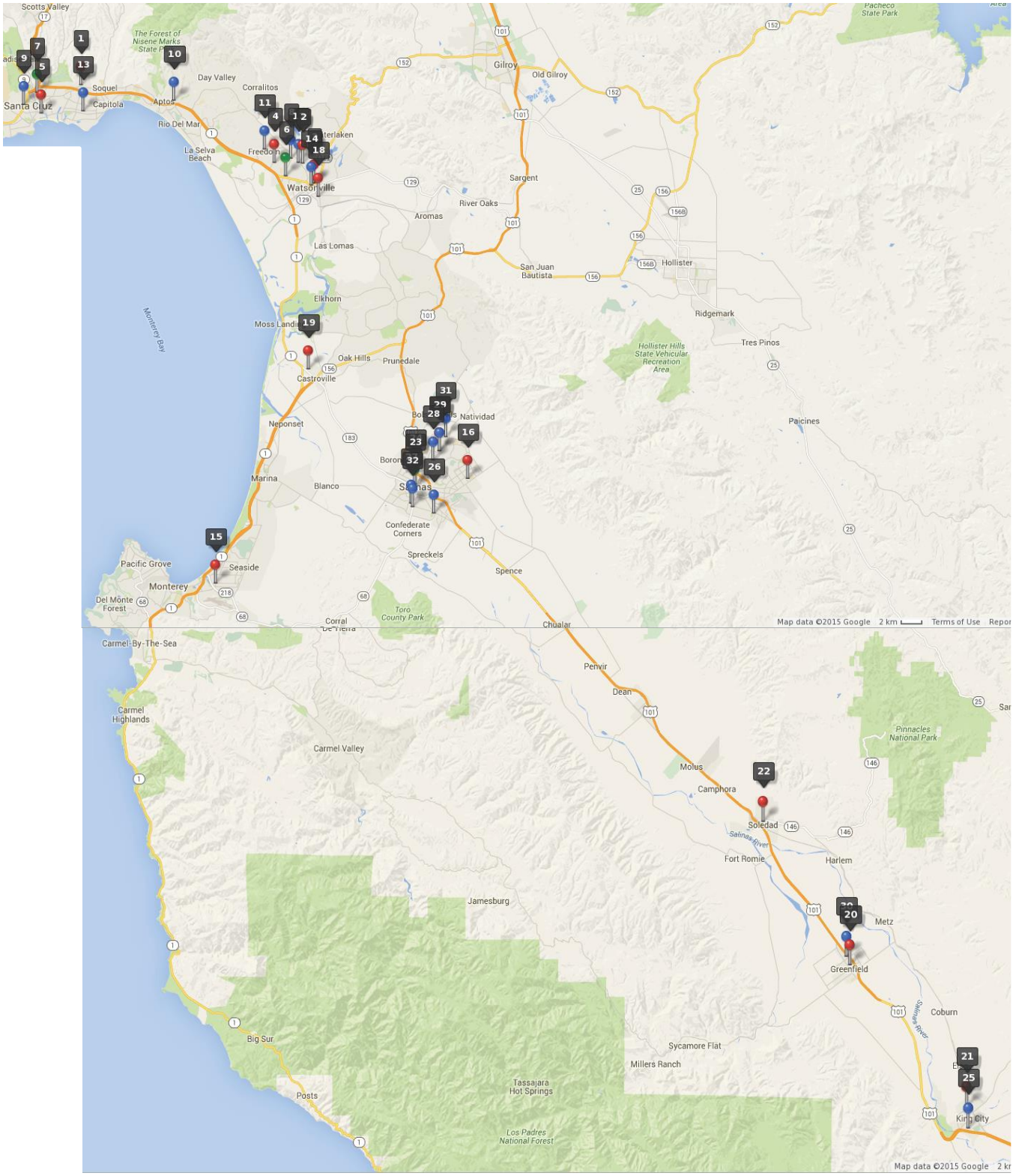
Source: DHCS Medi-Cal Dental Division. January 21, 2016.
Total **number of unduplicated beneficiaries with at least one dental service in the measurement period**
Note: Data are by beneficiary's county of residence, not based on place of service or claims data. In stratifying the data by zip code, some beneficiaries may have been counted more than once, e.g., if the person moved from one zip code to another within the county and had a dental visit in both zip codes.

ATTACHMENT 5

Denti-Cal Utilization Rate of Children by California County, in Order of Rate for Age Group, 2014

County	Age 0-3	County	Age 4-5	County	Age 6-20	County	Age 0-20
Marin	67.3	Monterey	78.3	Monterey	66.4	Marin	67.5
Monterey	48.9	Marin	78.1	Marin	65.8	Monterey	64.4
Napa	47.3	Glenn	72.2	Orange	60.9	Santa Cruz	58.6
Sonoma	46.6	Santa Cruz	70.6	Santa Barbara	60.8	Napa	58.3
San Luis Obispo	44.3	Santa Barbara	70.5	Santa Cruz	60.7	Glenn	57.8
San Francisco	44.1	Colusa	70.1	Colusa	59.9	Orange	57.5
Santa Cruz	43.5	Tehama	69.1	Los Angeles	59.8	Colusa	56.9
Glenn	42.8	Los Angeles	68.7	Napa	59.8	Santa Barbara	56.3
San Benito	39.0	Orange	68.4	Mono	59.7	Los Angeles	56.3
Lake	37.9	Mono	68.2	Santa Clara	59.4	Mono	55.7
San Diego	37.8	Kern	68.1	Madera	59.1	Sonoma	55.4
Sutter	36.9	Santa Clara	67.7	Glenn	59.0	Santa Clara	55.4
Tehama	36.8	Modoc	67.6	Ventura	57.9	San Francisco	55.1
Mono	36.5	San Diego	67.5	San Benito	57.7	Madera	55.0
Lassen	35.7	San Luis Obispo	67.2	Kern	57.3	Tehama	54.8
Orange	35.6	Sutter	66.6	Tehama	57.1	San Benito	54.8
Alameda	35.5	Ventura	66.6	Sutter	56.6	Sutter	54.4
Colusa	34.8	Madera	66.5	San Francisco	56.5	San Diego	54.3
Yuba	34.6	San Benito	66.5	San Diego	56.4	San Luis Obispo	54.2
Modoc	34.4	Napa	66.4	Tulare	56.4	Kern	53.8
Los Angeles	33.6	Lassen	65.8	Statewide	56.2	Ventura	53.6
Mendocino	33.3	Sonoma	65.7	Sonoma	55.8	Statewide	52.5
Santa Barbara	32.5	San Francisco	64.5	San Bernardino	54.9	Tulare	51.7
Madera	32.3	Statewide	63.6	San Luis Obispo	54.5	Alameda	50.6
Kern	31.8	Alameda	62.0	San Mateo	54.4	San Mateo	50.4
Santa Clara	30.8	Tulare	60.8	Fresno	53.9	Yuba	50.2
Statewide	30.6	Yolo	59.7	Riverside	53.8	San Bernardino	50.0
San Mateo	30.1	Yuba	59.7	Kings	52.9	Mendocino	49.4
Butte	29.3	Kings	59.5	Mendocino	52.5	Kings	49.1
Yolo	29.1	Del Norte	59.3	Alameda	52.4	Fresno	48.9
Ventura	28.6	Fresno	59.1	Yuba	52.0	Riverside	48.6
Del Norte	28.2	San Mateo	58.7	Inyo	50.8	Yolo	47.9
Kings	28.0	San Bernardino	58.0	Plumas	50.8	Del Norte	47.5
Tulare	27.8	Lake	57.4	Yolo	50.7	Lake	47.2
El Dorado	26.0	Riverside	57.4	Merced	50.6	Modoc	47.1
Plumas	24.7	Mendocino	57.1	Del Norte	50.4	Merced	46.0
San Bernardino	24.5	Butte	56.4	San Joaquin	49.9	Plumas	45.8
Inyo	24.1	Stanislaus	55.8	Contra Costa	48.7	Inyo	45.8
Solano	23.9	El Dorado	55.2	Lake	48.1	Butte	45.1
Fresno	23.5	Merced	54.8	Stanislaus	48.0	Lassen	45.0
Contra Costa	23.3	San Joaquin	54.7	Butte	47.2	San Joaquin	44.9
Merced	22.4	Inyo	53.5	El Dorado	47.0	Contra Costa	44.7
Riverside	21.9	Contra Costa	52.8	Modoc	46.8	El Dorado	44.4
Tuolumne	21.8	Humboldt	51.7	Mariposa	44.7	Stanislaus	44.0
Humboldt	21.6	Imperial	51.6	Lassen	44.2	Solano	41.0
Placer	21.6	Solano	51.5	Humboldt	43.9	Humboldt	40.5
Imperial	20.9	Plumas	50.9	Solano	43.6	Placer	39.1
Stanislaus	20.3	Shasta	46.8	Placer	42.6	Tuolumne	38.9
San Joaquin	18.4	Nevada	45.8	Shasta	42.5	Imperial	38.7
Shasta	18.1	Siskiyou	44.7	Tuolumne	41.7	Shasta	38.4
Amador	17.4	Calaveras	43.9	Nevada	41.0	Mariposa	38.3
Nevada	17.2	Placer	43.6	Imperial	40.7	Nevada	37.3
Calaveras	15.5	Tuolumne	41.5	Amador	39.9	Amador	36.3
Trinity	14.4	Amador	41.0	Calaveras	38.6	Calaveras	35.3
Siskiyou	13.8	Mariposa	34.9	Siskiyou	34.3	Siskiyou	31.5
Mariposa	13.5	Trinity	31.0	Trinity	31.8	Trinity	28.7
Sacramento	11.4	Sacramento	27.5	Sacramento	30.2	Sacramento	26.4

Source: Department of Health Care Services. Med-Cal Dental Division, data run August 28, 2015.
Includes full scope beneficiaries who used any dental service and had 11 of 12 months of eligibility with no more than a 1-month gap.
Alpine and Sierra Counties are missing due to suppressed data. Note that Sacramento data are fee-for-service only and do not include the managed care population, which is most of the county; FFS is a small population, unique from children in FFS statewide. They largely include children with disabilities and children in foster care and other aid categories who may have greater access issues.



See next page for providers that correspond to map numbers

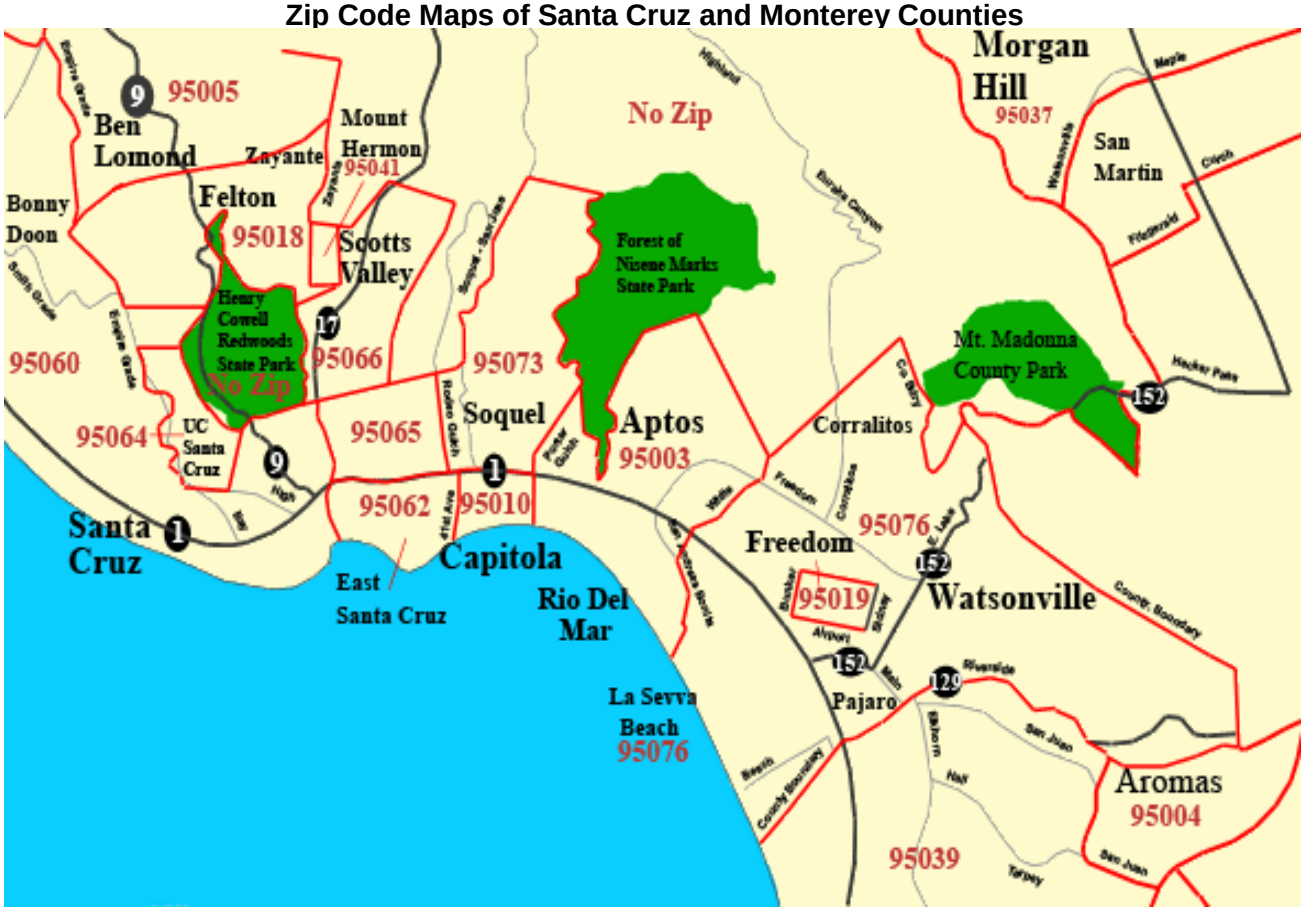
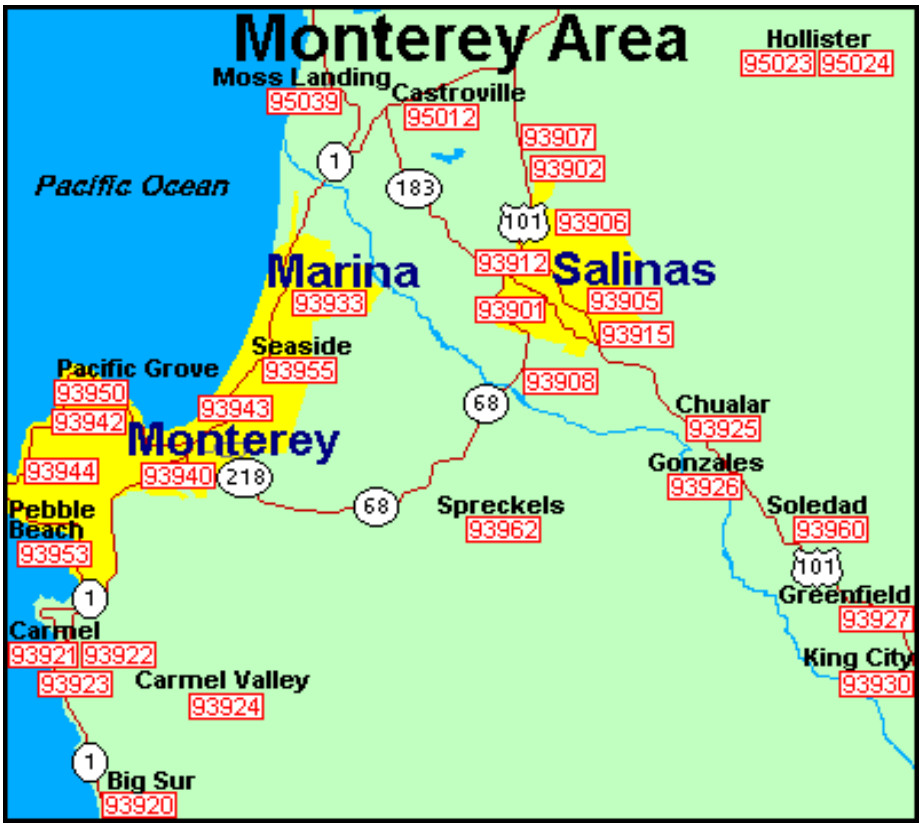
- **Community Dental Clinics**
- **Western Dental Clinics**
- **Private Dentists taking Denti-Ca**

Denti-Cal Services Map List

Santa Cruz County

1 Dientes Community Dental Care
2 Dientes at Watsonville Health & Dental Center
3 Salud Para La Gente East Beach Street Clinic
4 Salud Para La Gente Clínica Del Valle Del Pájaro
5 Salud Para La Gente Beach Flats Clinic
6 Western Dental
7 Western Dental
8 Dr. Donald P. Connolly
9 Dr. Donald P. Connolly
10 Dr. Donald P. Connolly
11 Dr. Deepak Sachdev
12 Dr. Holly Asadi
13 Dr.Terry Schmunk
14 Dr. Sofia Espinoza

Monterey County

15 Salud Para La Gente Seaside Community Health Clinic
16 Salud Para La Gente Salinas Mobile Clinic
17 Clinica De Salud Del Valle
18 Clinica De Salud Del Valle
19 Clinica De Salud Del Valle
20 Clinica De Salud Del Valle
21 Clinica De Salud Del Valle
22 Clinica De Salud Del Valle
23 Western Dental
24 Western Dental
25 Hamlet Karapetian
26 Central Coast Pediatric Group
27 Dr. Peter Yang
28 Dr. Chatten Patel
29 Dr. Harshita Patel
30 Dr.Ernesto Mireles
31 Dr. Ernesto Mireles
32 Dr. Aparnavalli Nayudu

Zip Code Maps of Santa Cruz and Monterey Counties