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Health Policy Brief

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Income Disparities Widen the Gap in Oral Health of California Adults

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"Aspects of a person's life such as socioeconomic and environmental factors can exert a greater influence on health than access to health care."

SUMMARY: Social determinants of health are increasingly acknowledged as barriers to improving population health, particularly among people who experience multiple disadvantages, such as low income and poor health. Evidence indicates that socioeconomic and environmental factors play a similar role in oral health status. Using data from the 2017 and 2018 California Health Interview Surveys (CHIS), we explored the association of these factors with poor oral health among California adults. Our analyses confirmed that most of the factors we studied were associated with poor oral health, and that adults with the lowest income experienced greater disparities. Our findings indicate the need for multifaceted and systemic interventions that include promoting oral health education and oral health literacy and expanding access to oral health care for adults. Our findings also indicate the need for assessment of oral health status through screening tools for nondental health care providers and organizations, and subsequent delivery of patient-centered services that address the needs of the whole person.

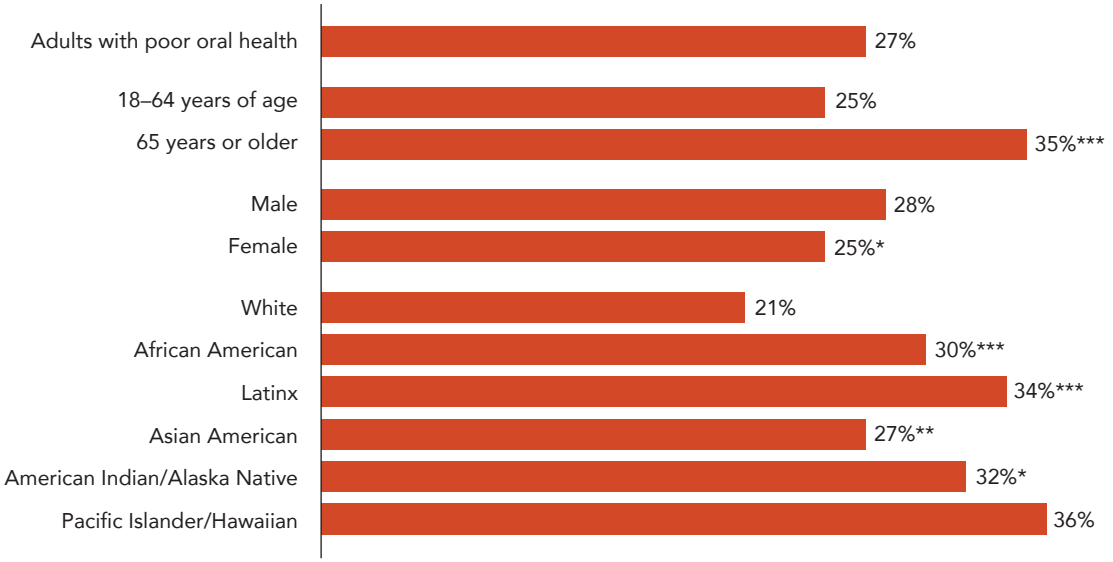
Social determinants of health (SDOH) are the conditions in which people are born, grow, learn, work, live, and age.[1,2] While access to health care is included as an SDOH, other aspects of a person's life—such as social, economic, and environmental factors—exert a greater influence on health.[3,4] Understanding the role of SDOH is essential when implementing sustainable policies that promote health, including oral health, and reduce disparities.[5,6] However, the evidence of the collective impact of SDOH on oral health status is limited. In this policy brief, we examine the oral health status of California adults and highlight the association of various SDOH with poor oral health overall and with income. We used the 2017 and 2018 California Health Interview Surveys (CHIS) to obtain recent and comprehensive available data on oral health status and SDOH for California adults. We identified adults who reported their oral health status as fair or poor (referred to herein as poor), compared to excellent, very good, or good. We used the federal poverty level (FPL) to measure income, and we grouped SDOH indicators into economic, social, environmental, and health access categories.

Many California Adults, Including Communities of Color, Have Poor Oral Health

Over one-quarter (27%) of California adults reported their oral health as poor (Exhibit 1). In contrast, 21% of California adults reported their overall health as poor (data not shown).

Exhibit 1

Demographic Characteristics of Adults With Poor Oral Health, Ages 18 and Older, California, 2017–2018



Sources: 2017 and 2018 California Health Interview Surveys

Notes: Data indicate those identifying their oral health as fair or poor. Significant differences for each indicator are indicated as * p <0.05, ** p <0.01, *** p <0.001. For race/ethnicity, all groups are compared to whites.

"Poor oral health was least frequently reported by whites compared with nearly all other racial and ethnic groups."

Poor oral health was associated with age, gender, and race/ethnicity. Poor oral health was reported more often by adults ages 65 and older than by adults ages 18–64 (35% vs. 25%), and more often by males than females (28% vs. 25%).

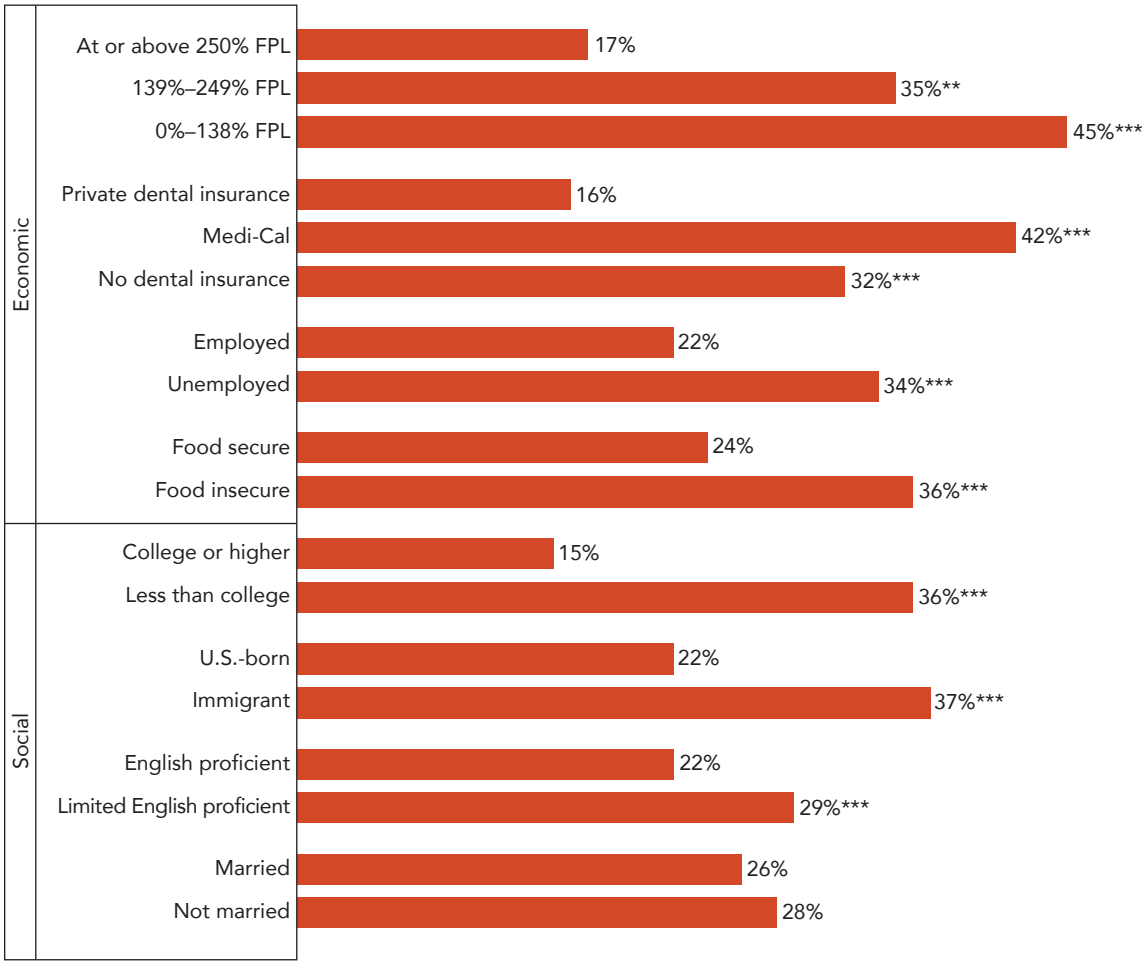
Poor oral health was least frequently reported by whites (21%) compared with nearly all other racial and ethnic groups. Those with rates of poor oral health significantly higher than that of whites included Latinx (34%), American Indians and Alaska Natives (32%), African Americans (30%), and Asian Americans (27%). Native Hawaiians and Pacific Islanders also reported high rates (36%), but the difference with the rates for whites was not statistically significant.

Many Low-Income, Unemployed, and Immigrant Adults Have Poor Oral Health

Multiple economic and social characteristics were associated with poor oral health. Based on economic indicators, those adults with

Economic and Social Characteristics of Adults With Poor Oral Health, Ages 18 and Older, California, 2017–2018

Exhibit 2



Sources: 2017 and 2018 California Health Interview Surveys

Notes: Data indicate those identifying their oral health as fair or poor. FPL = federal poverty level. Significant differences for each indicator are indicated as * p <0.05, ** p <0.01, *** p <0.001. For FPL, all groups are compared to those with incomes at or above 250% FPL. For insurance, all groups are compared to those with private dental insurance.

the lowest income (0%–138% FPL) had a significantly higher likelihood (45%) of reporting poor oral health than those whose incomes were 139%–249% FPL (35%) or at or above 250% FPL (17%) (Exhibit 2).

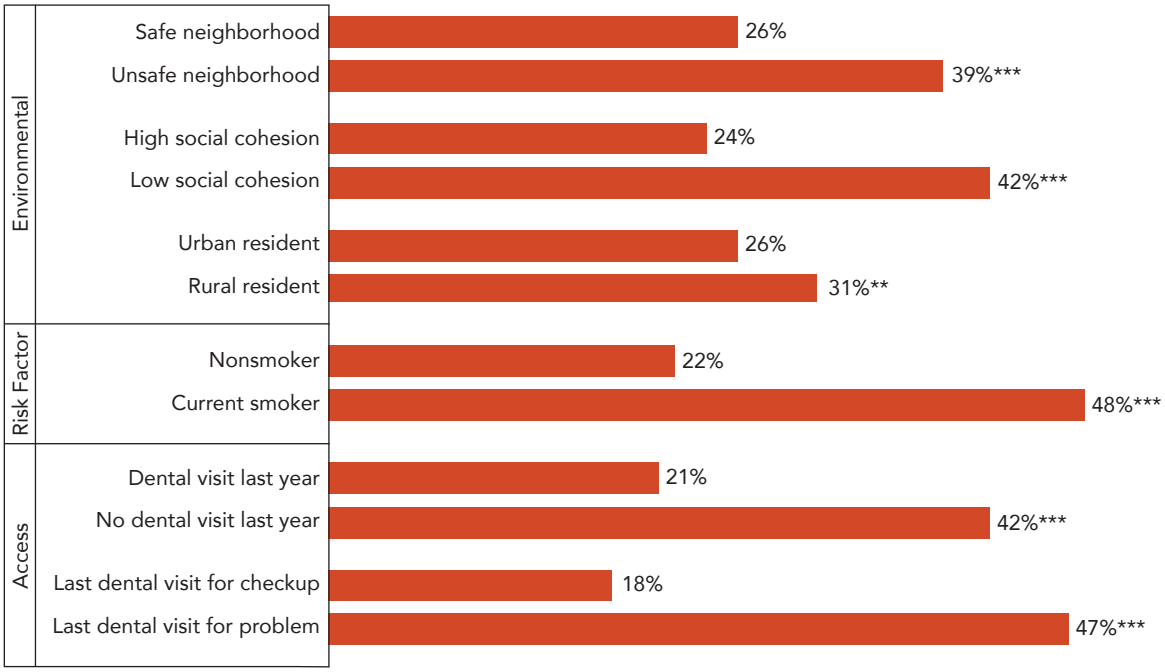
Those who lacked any dental insurance (32%) or who had Medi-Cal (Medicaid, in California) coverage (42%) were at least twice as likely to have poor oral health than adults with private insurance (16%). Those who were unemployed (34%) or who reported food insecurity (36%) were also more likely to report poor oral health than the employed (22%) or food secure (24%).

Among social indicators, those who did not have a college education (36%), who were immigrants (37%), and who had limited English proficiency (29%) more frequently reported poor oral health than those who had a college education (15%), were born in the U.S. (22%), and were proficient in English (22%).

"Those with the lowest income had a significantly higher likelihood of reporting poor oral health than those with higher incomes."

Exhibit 3

Environmental Characteristics, Risk Factor, and Oral Health Access of Adults With Poor Oral Health, Ages 18 and Older, California, 2017–2018



Sources: 2017 and 2018 California Health Interview Surveys

Notes: Data indicate those identifying their oral health as fair or poor. Significant differences for each indicator are indicated as *p <0.05, ** p <0.01, *** p <0.001.

"Among adults who were unemployed, immigrant, and had limited English proficiency, those with the lowest income were more likely to have poor oral health than their higher-income counterparts."

Adults Living in Unsafe Neighborhoods and Those Without Dental Visits Have Poor Oral Health

Environmental characteristics, having a risk factor, and lack of access to oral health care were associated with poor oral health. Adults who felt unsafe in their neighborhoods (39%) and those living in neighborhoods with low social cohesion (42%)—measured by low levels of trust, getting along, or helping each other in the neighborhood—more frequently reported poor oral health than those feeling safe or living in neighborhoods with high social cohesion (Exhibit 3).

Smoking, a risk factor, was also associated with poor oral health. More current smokers (48%) reported poor oral health than nonsmokers (22%).

Among access indicators, those without a dental visit last year (42%) and those whose last dental visit was for a problem (47%) more often reported poor oral health than those who had a dental visit last year and whose last visit was for a checkup.

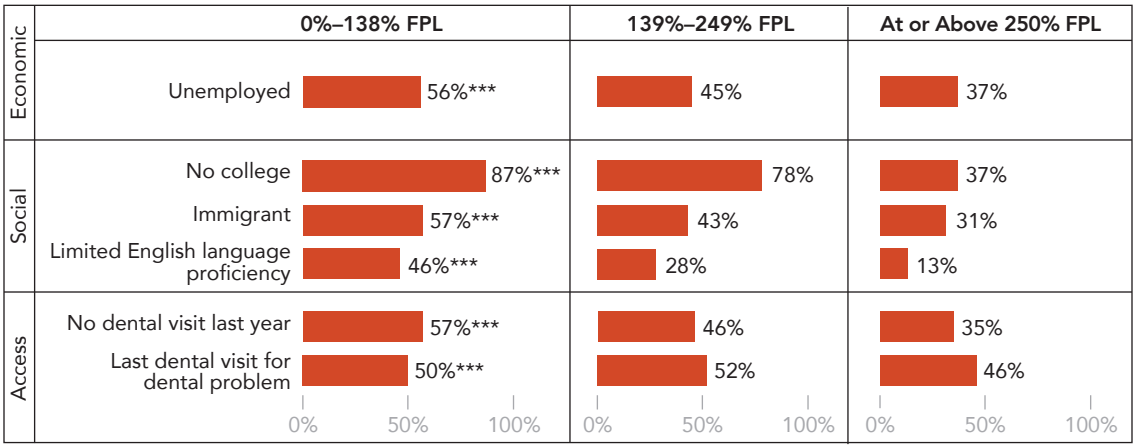
Poor Oral Health Is Exacerbated by Income Disparities

Examining the relationships between economic, social, environmental, and access characteristics and poor oral health based on income showed significant gaps between adults with the lowest income and those with higher incomes for a number of these factors (Exhibit 4). In terms of economic characteristics, among those who were unemployed, adults with the lowest income (56%) reported poor oral health more often than those with higher incomes.

The same pattern was observed for social characteristics, including not having a college education (87%), being an immigrant (57%), and having limited English proficiency (46%). Based on access indicators, the majority of those without dental visits last year (57%) and those whose last visit was for

Poor Oral Health of Adults by Income (FPL) and Other Characteristics, Ages 18 and Older, California, 2017–2018

Exhibit 4



Sources: 2017 and 2018 California Health Interview Surveys

Notes: Data indicate those identifying their oral health as fair or poor. FPL = federal poverty level. * indicates p values for significant differences between 0-138% FPL vs. at or above 250% FPL. Significant differences for each indicator are indicated as * p <0.05, ** p<0.01, and *** p <0.001.

a dental problem instead of for a checkup (50%) also reported poor oral health more often than their higher-income counterparts.

Income disparities in oral health status were greatest between adults with the lowest income and those with incomes at or above 250% FPL by educational attainment (a gap of 50 percentage points, from 87% to 37%), limited English proficiency (33 percentage points), immigration status (26 percentage points), dental visit last year (22 percentage points), and employment status (19 percentage points).

Implications

The proportion of adults with poor oral health in California is similar to what is seen in national data.[7] Our findings highlight the relationship of economic, social, environmental, and health access indicators with the oral health of adults in California. Many of these factors are closely intertwined, and their effect on oral health is challenging to disentangle.[8,9]

However, the data show that income disparities significantly exacerbate the relationship between poor oral health and socioeconomic factors such as employment, English proficiency, immigration status, and education. These findings highlight the likely impact of poverty on oral health and the need for a greater focus on low-income populations.

Addressing disparities in oral health requires multifaceted and systemic strategies. Significant effort has been focused on providing oral health education and access to preventive oral health care in multiple settings, such as schools, to improve the oral health of children.[10,11] For example, under the Dental Transformation Initiative, California promotes oral health education and preventive services for young children enrolled in Medicaid (Medi-Cal in California) by providing financial incentives to dentists. However, such approaches are less commonly used for adults, particularly those with

"Addressing disparities in oral health requires multifaceted and systemic strategies."

"A shift toward promoting the health of the whole person and integrating oral health into efforts targeting socioeconomically disadvantaged populations is required."

diverse backgrounds and different levels of oral health literacy. Many low-income adults, including those with Medi-Cal, also have significant barriers to accessing dental services because they cannot afford to pay out-of-pocket expenses or cannot find dentists who accept their insurance.[12] Implementing innovative strategies such as having community health workers act as patient navigators may promote such access.

Addressing social factors that determine oral health requires a shift toward a focus on promoting the health of the whole person and integrating oral health into general efforts targeting socioeconomically disadvantaged populations. Significant effort is underway in California and elsewhere to integrate medical, behavioral, and social services for populations enrolled in Medi-Cal. Yet, these efforts rarely focus on oral health status as a significant component of overall health. The first step in integrating oral health into such efforts is to include oral health assessment in social needs screening tools, which include assessment of other conditions such as substance-use disorder and mental health status.[13,14] The second step is to incorporate protocols for addressing oral health needs once the level of need has been established, and the third step is to deliver the needed services effectively. Other innovative approaches may include promoting collaborations and partnerships among providers and social service and community-based organizations to address social determinants of oral health.

Data Source and Methods

We used the pooled 2017 and 2018 California Health Interview Surveys (CHIS) data for these analyses.[15] We constructed "dental insurance" by grouping respondents with Medi-Cal or private insurance as having dental insurance, and those with neither of these as being uninsured. Income was based on the federal poverty level. Social cohesion was measured based on responses to three questions that asked whether people in the neighborhood "helped," "trusted," or "got along" with one another. Responses to these questions were averaged, then divided into three categories of low, middle, and high cohesion. Respondents who reported "always" or "often" feeling unsafe in their neighborhood were identified. "Immigrants" included respondents who were not born in the U.S. Respondents who spoke English "not well" or "not at all" were included in the "limited English proficiency" group. "Food insecurity" was based on the reports of respondents with incomes below 200% FPL concerning their ability to afford enough food.

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Funder Information

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Endnotes

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CHIS california health interview survey

The California Health Interview Survey (CHIS) covers a wide array of health-related topics, including health insurance coverage, health status and behaviors, and access to health care. It is based on interviews conducted continuously throughout the year with respondents from more than 20,000 California households.

CHIS is a collaboration between the UCLA Center for Health Policy Research, California Department of Public Health, California Department of Health Care Services, and the Public Health Institute. For more information about CHIS, please visit ***chis.ucla.edu***.

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