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# Understanding Dental Workforce Issues in California

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San Diego County Oral Health Coalition

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# Key Facts

- Oral care remains among the most unmet health needs in the US
- California has the greatest number of dentists per population of any state in the US. Yet, there are 78 population-specific shortage areas and 15 geographic dental health professional shortage areas currently listed in the state.
  - San Diego has 43 census tracts designated as Medi-Cal population D-HPSAs
- Only 15% of California dentists participate in Medi-Cal in a meaningful way for adult patients (>100 patients/year)
  - In San Diego, this number is 19%
- The cost of dental education has skyrocketed, at an average of \$300K per student, although has declined slightly post-pandemic
- Shortages of dental hygienists and dental assistants are pervasive post-COVID, but also vary by region and setting
  - San Diego has among the lowest ratio of allied providers per dentist

# Structure, Distribution and Supply of the Oral Health Workforce

# Oral Health Workforce: Regulatory Structure

Dental Board of California

Dental Hygiene  
Board of California

Dentists  
(General and Specialists)

Registered Dental  
Assistants (RDA)

Dental Hygienists

Dental Hygienists  
in Alternative  
Practice

Certificates:  
Ultrasonic Scaling  
Orthodontic Assistant  
Dental Sedation  
Radiology

Extended Function  
(RDAEF, *RDHEF*)

Dental Assistants (DA)  
– trained on the job,  
limited scope

Primary Care  
Providers (Screening,  
Fluoride varnish, etc)

Dental Therapists (13 states)  
Denturists (6 states)  
Community Dental Health  
Coordinators (25 states)



# DENTISTS DEMOGRAPHICS

California  
2022



All Dentists  
30,727



Per 100,000  
78.7

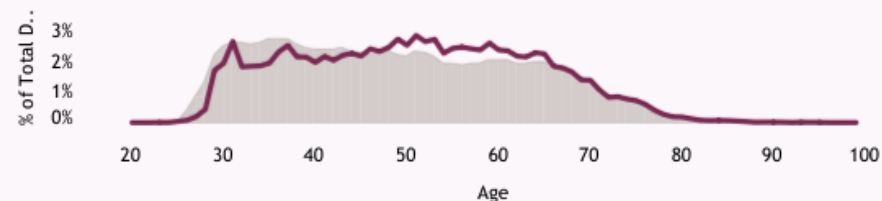


## DISTRIBUTION OF DENTIST AGE

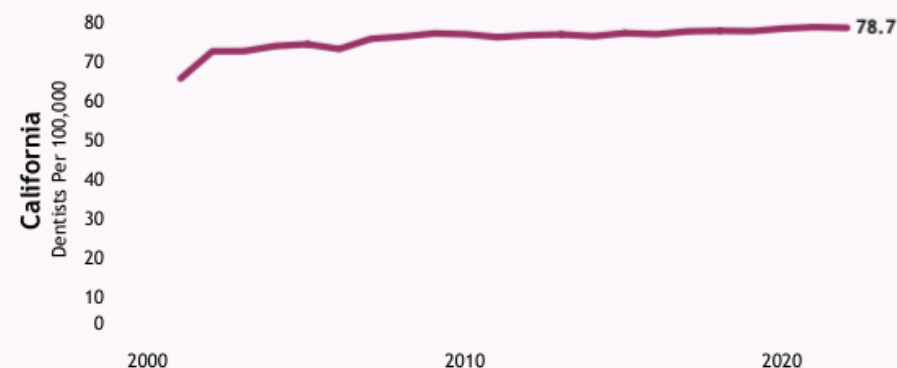
% of State Dentist Count  
% of US Dentist Count

Year:  
2022

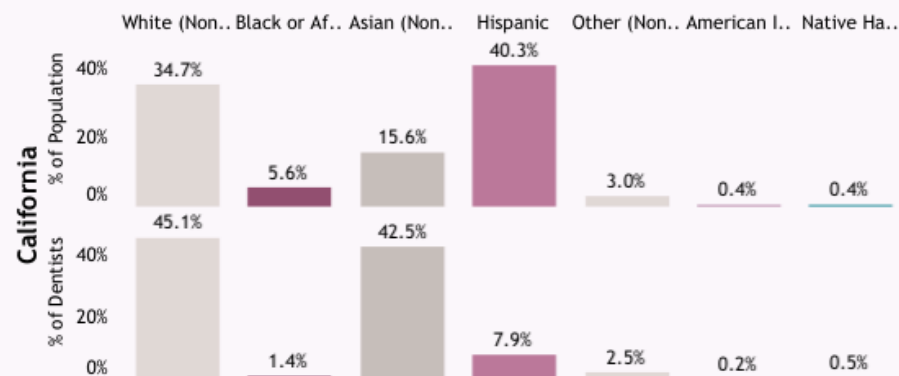
Show history



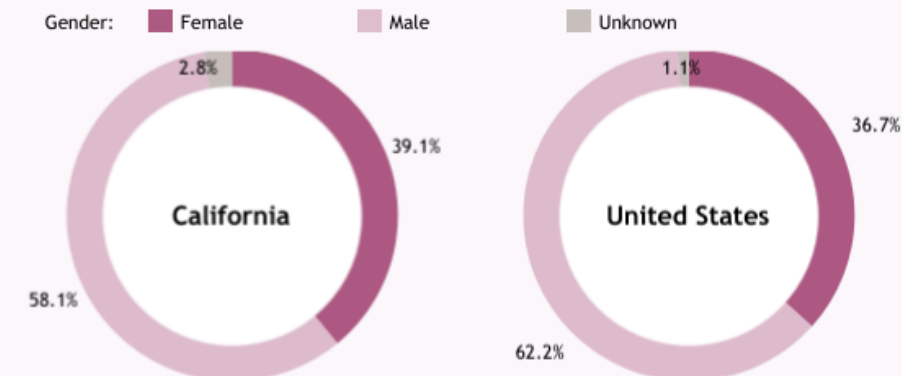
## DENTISTS PER CAPITA



## RACE AND ETHNICITY



## GENDER



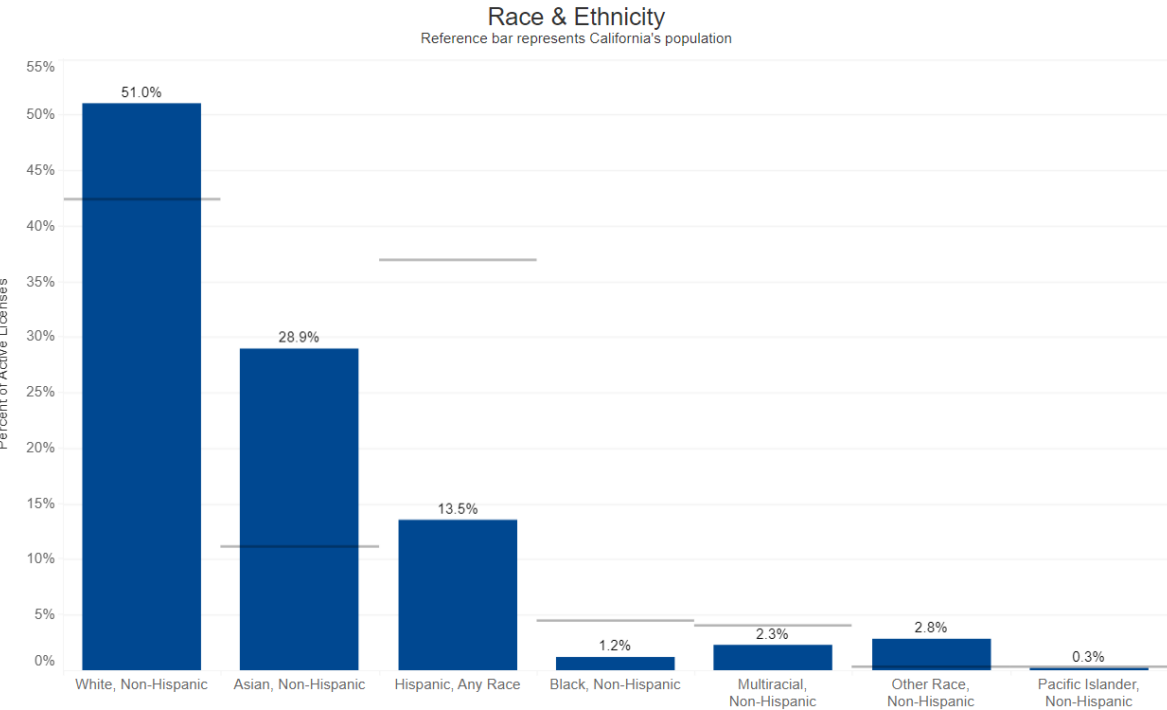
Geography  
California

Year  
2022

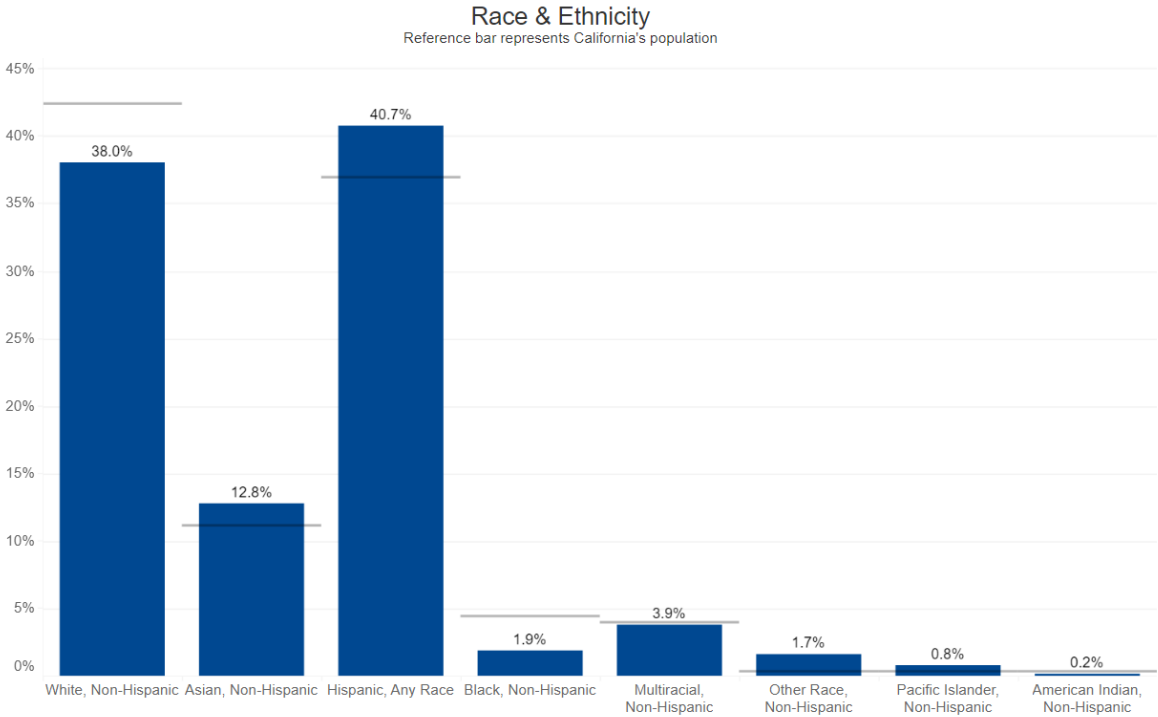


# Race/Ethnic Breakdown of Dental Providers in San Diego Area

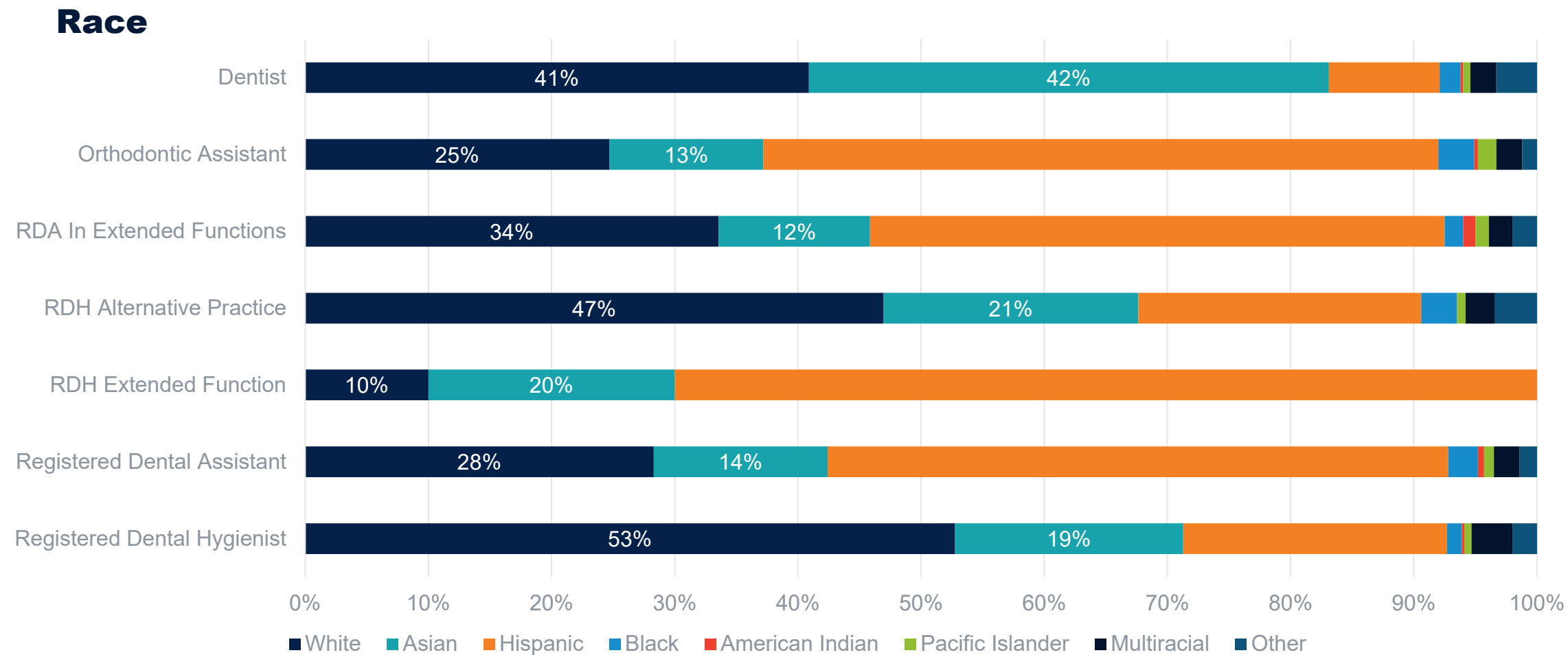
- Dentists



- Dental Assistants and Hygienists

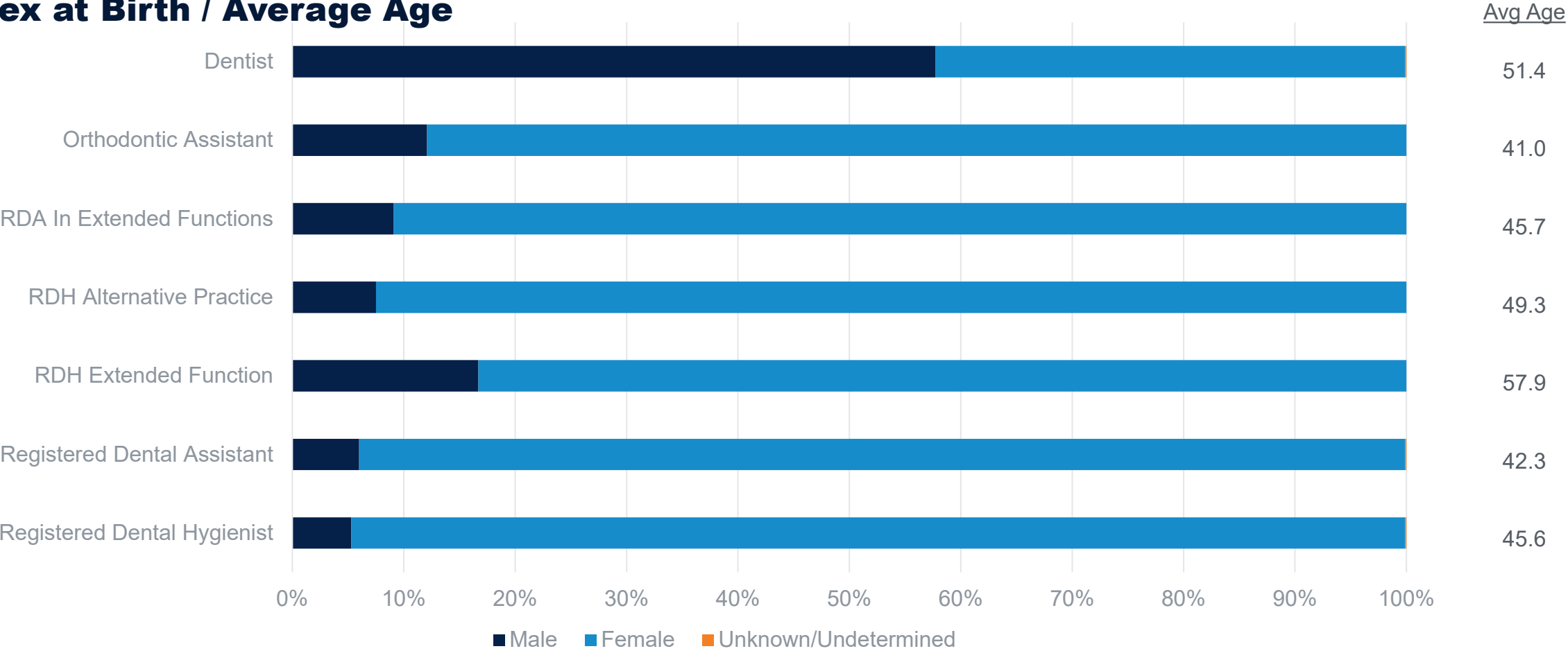


# Active License Holders in Dental Occupations (2023)

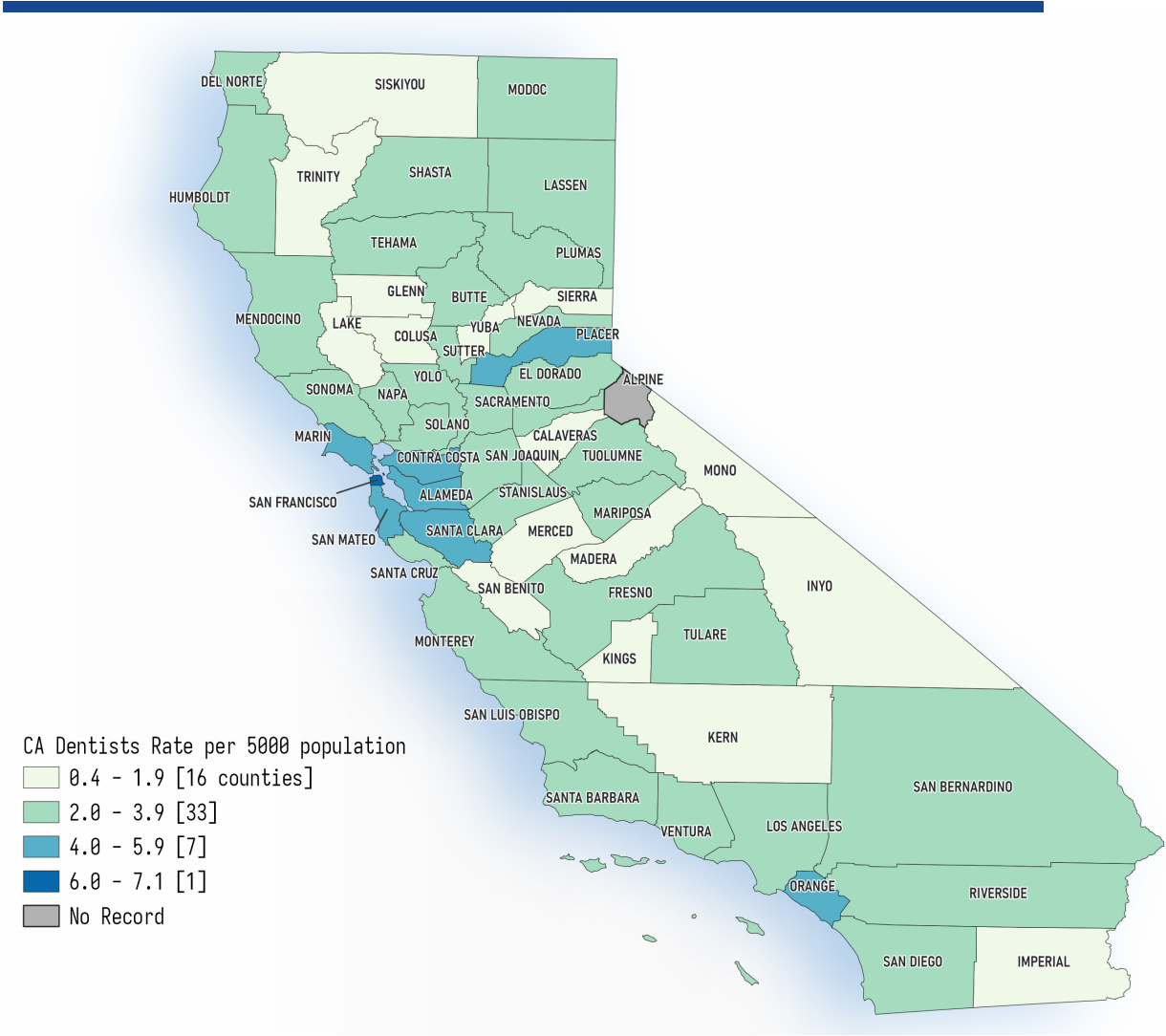


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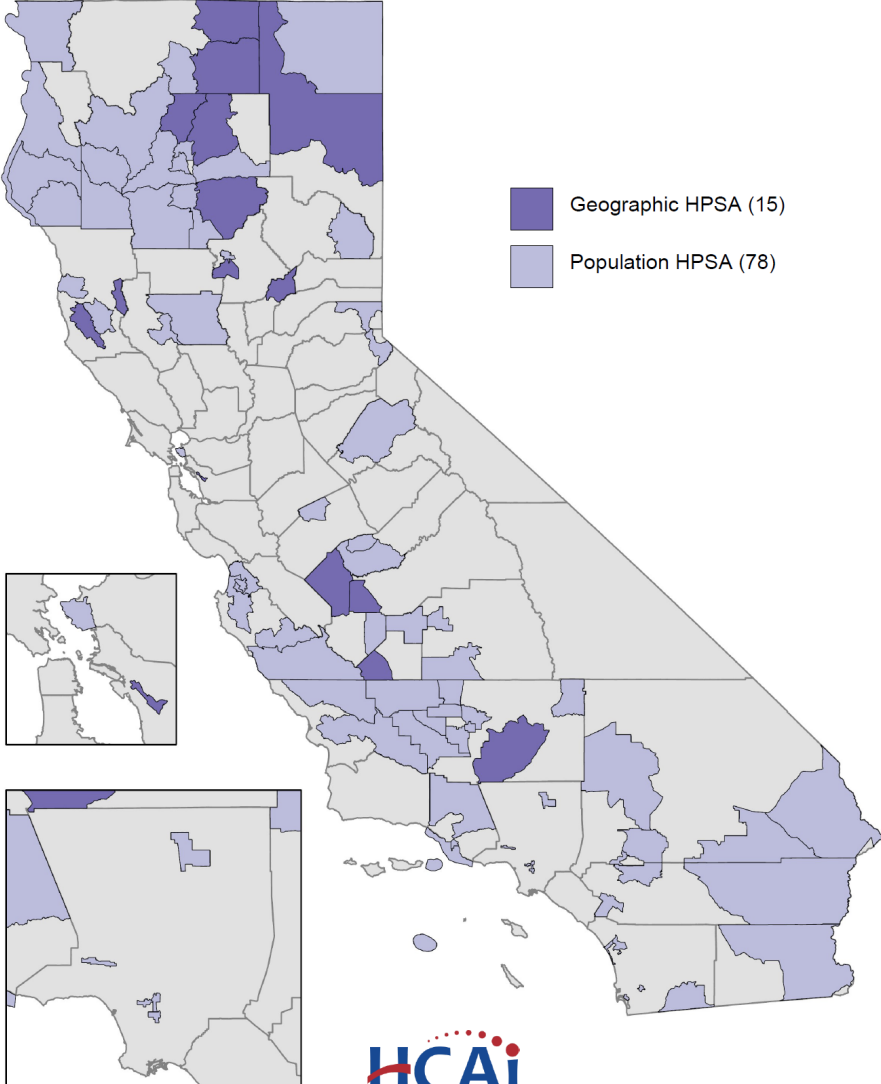
Sex at Birth / Average Age



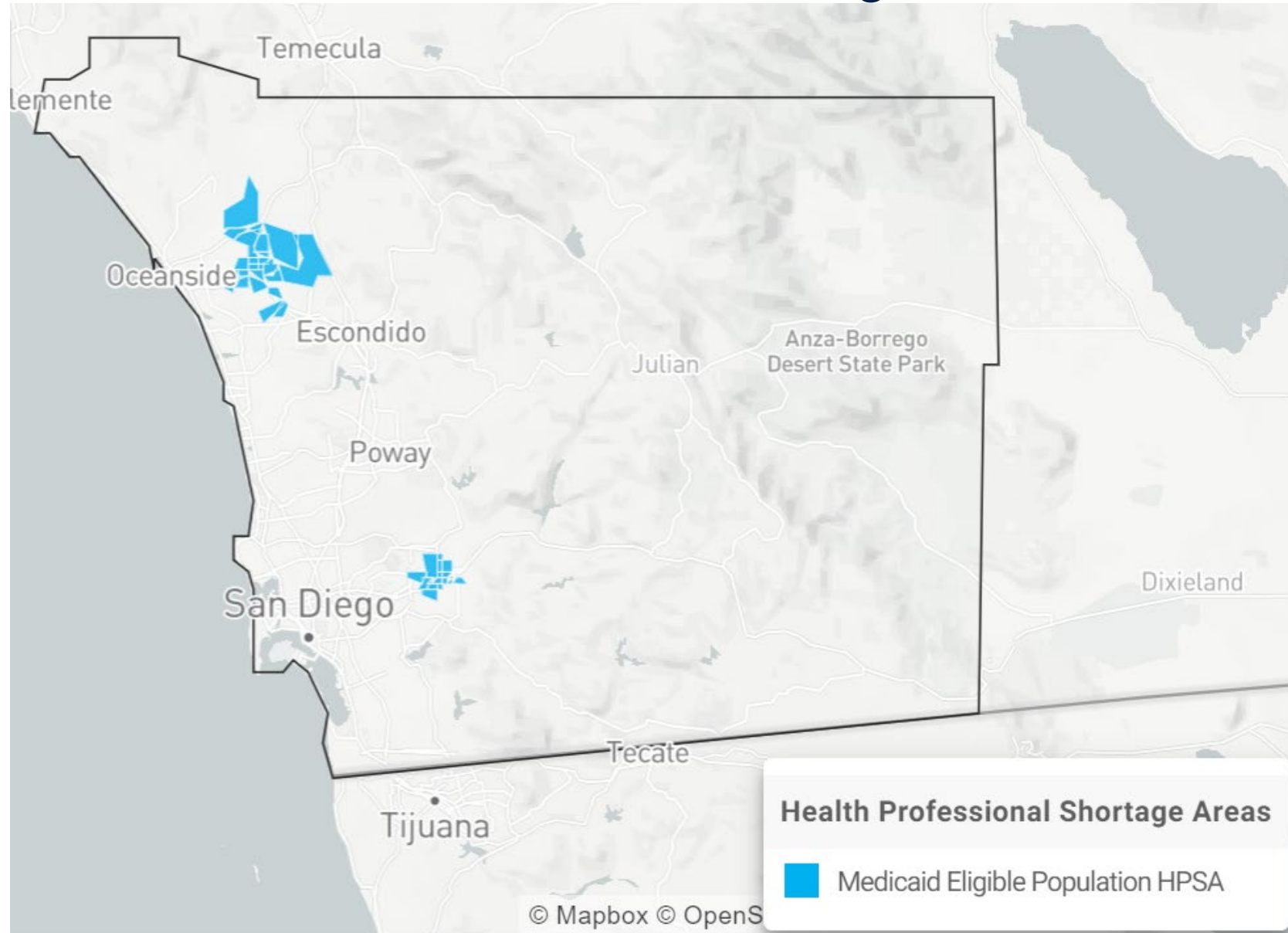
# Dentist Supply (2021)



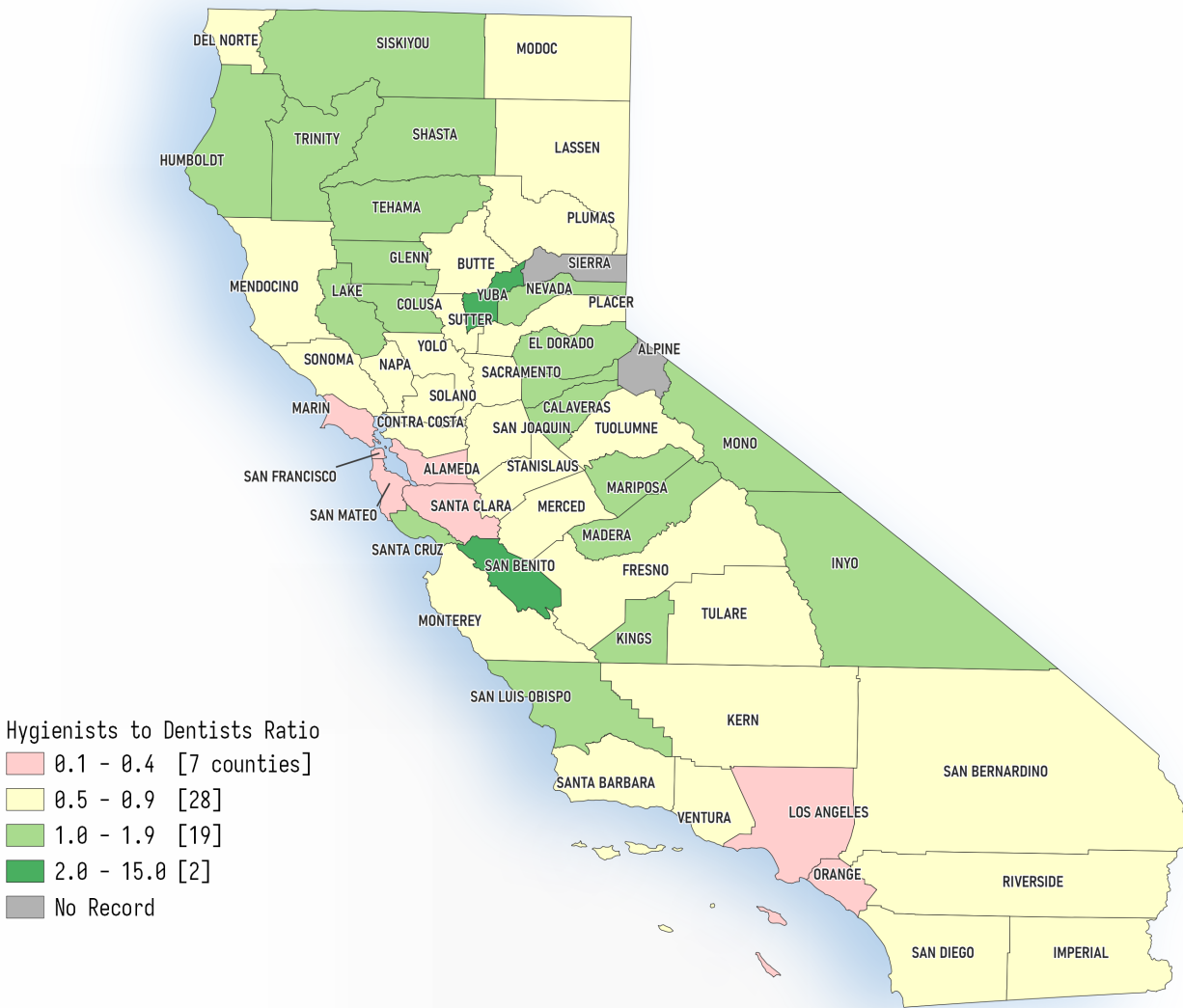
## Health Professional Shortage Areas Dental Health



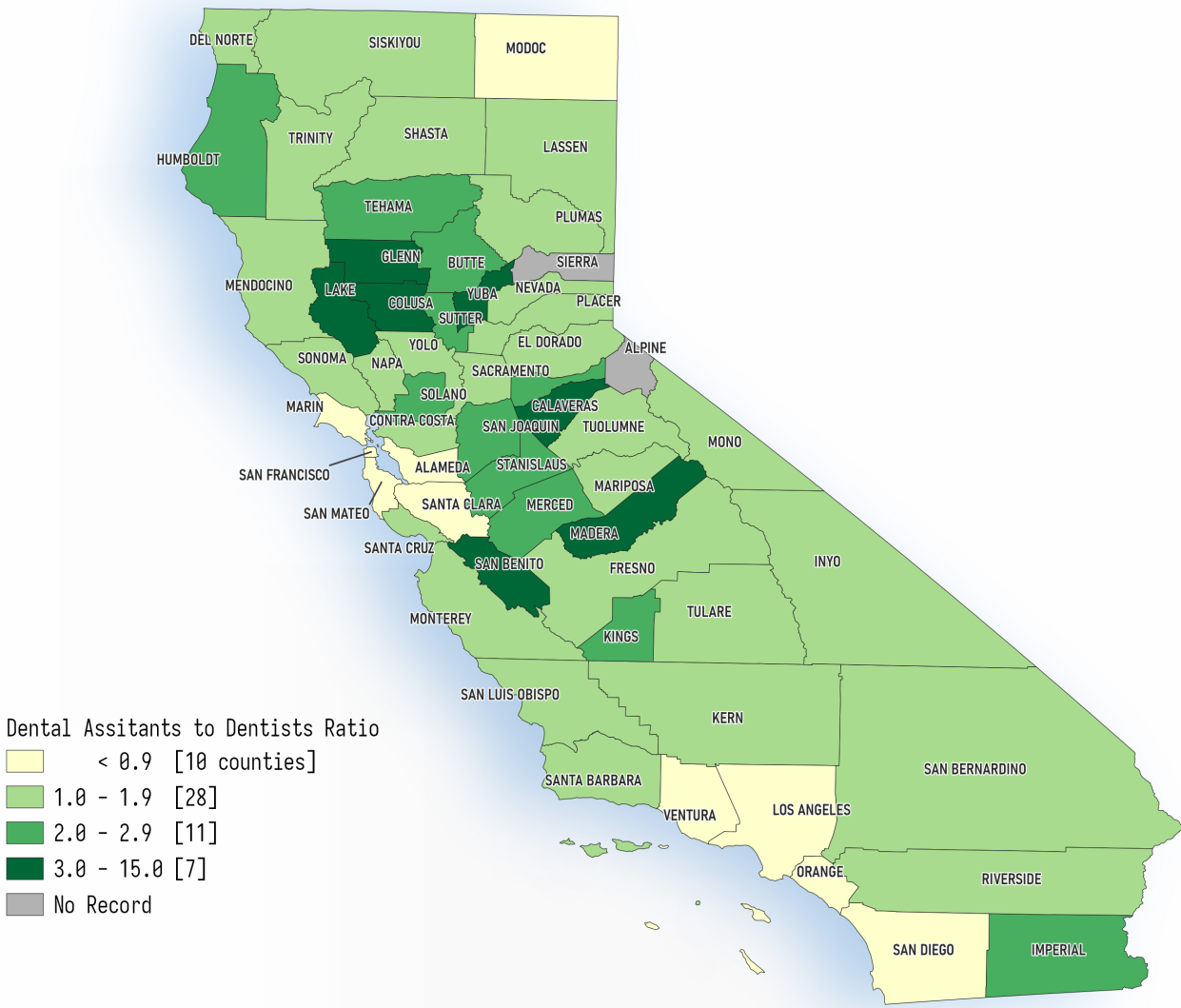
# San Diego Dental Health Professional Shortage Areas



# Dental Hygienists



# Dental Assistants

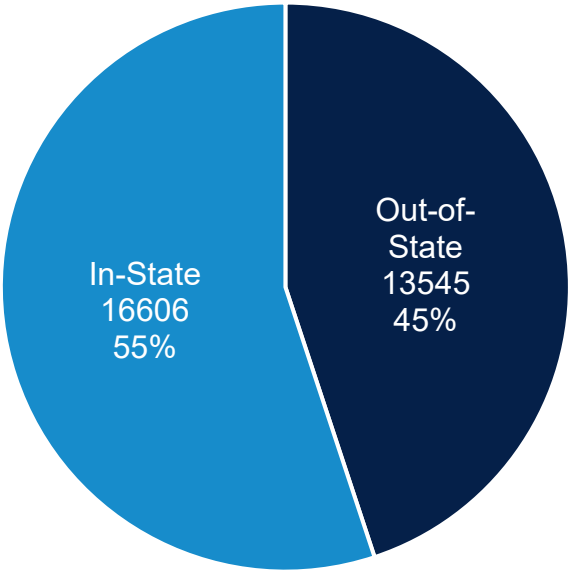


# Active Dentists in CA (2021)

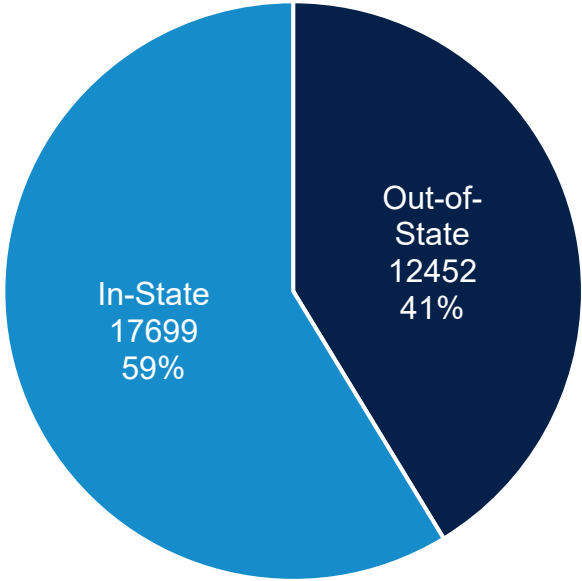
## Majority are educated In-State vs. Out-of-State

Total: 30,151 Dentists actively practicing in CA

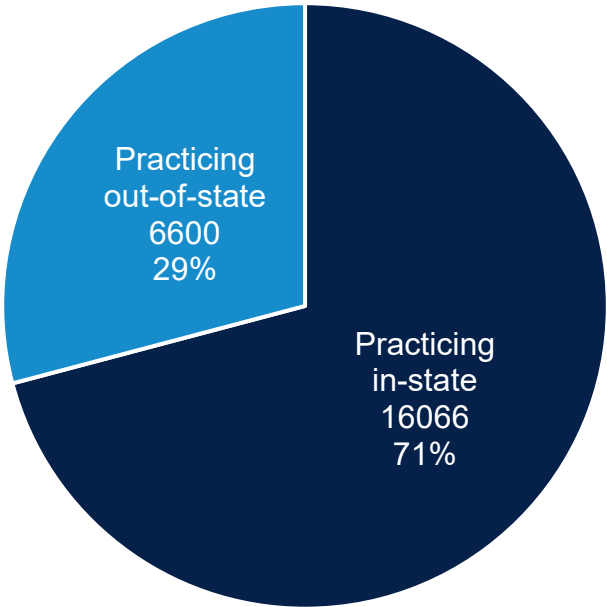
Dental Education  
(first degree)



First degree or  
advanced education



Practice location of  
all active dentists in  
the US who have  
graduated from a  
dental school in  
California

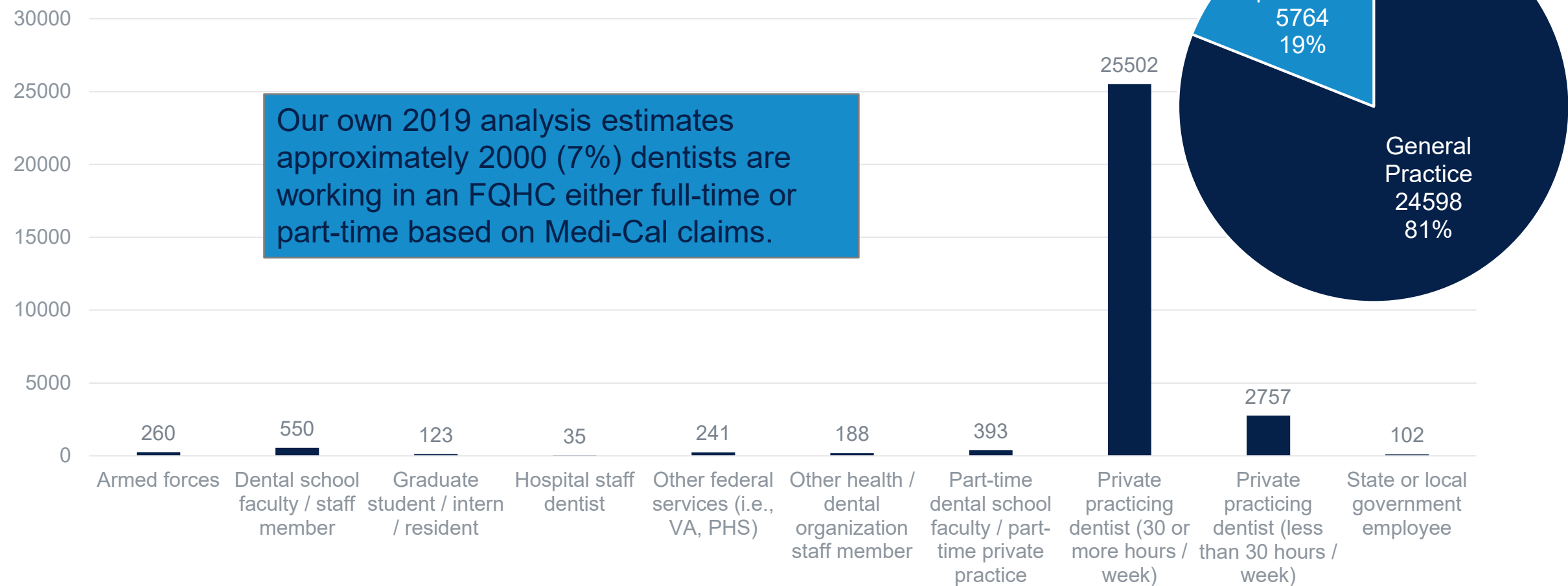




# Active Dentists in CA (2021)

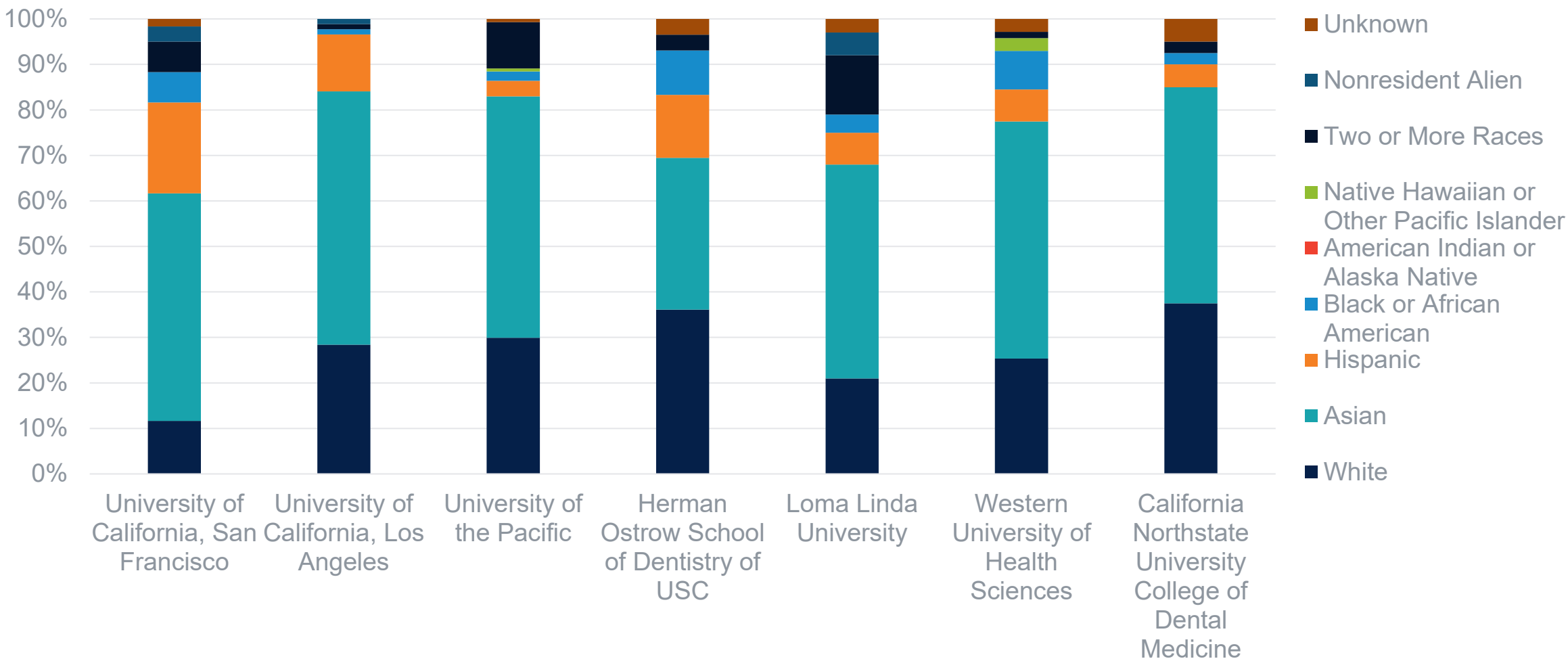
Occupational setting and specialty distribution mirror US trends

Total: 30,151 Dentists actively practicing in CA

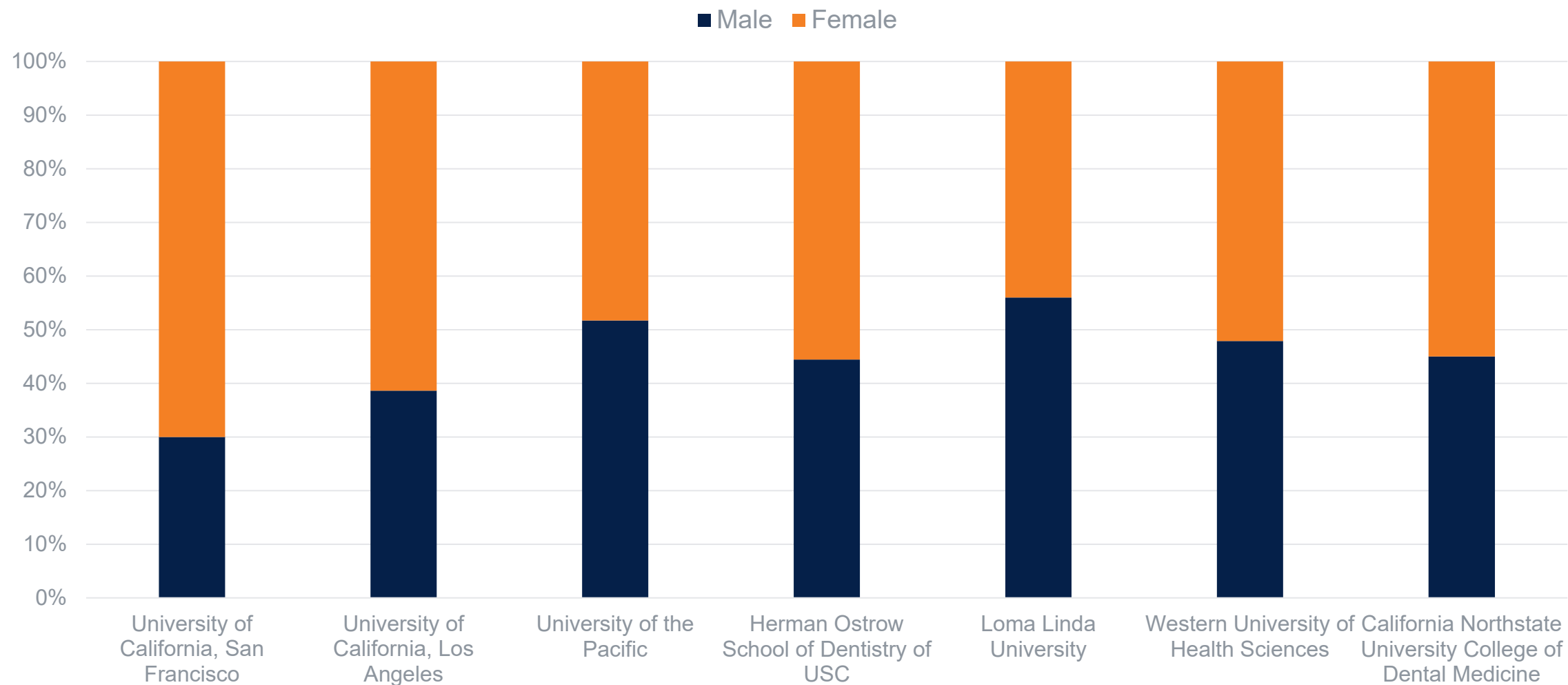


# Oral Health Provider Education in California

# First Year Enrollment in CA Dental Schools by Race/Ethnicity



# First Year Enrollment in CA Dental Schools by Gender



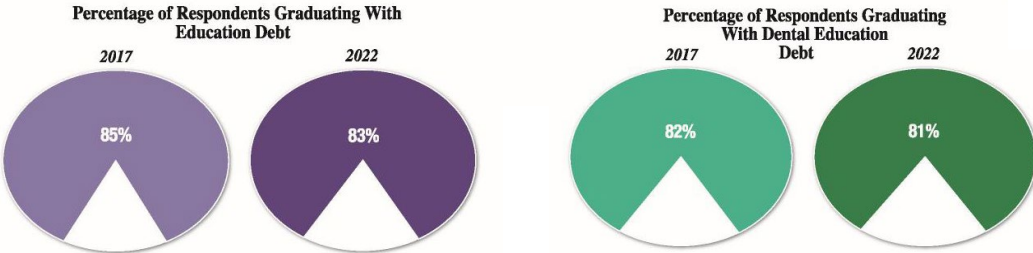
Average Education Debt and Average Dental School Debt, 2017 to 2022 for ADEA Senior Survey Respondents, in 2022 Dollars



Notes: The number of respondents expecting to graduate with dental school debt was 2,376 in 2022 and 4,097 in 2017. The response rates for this survey question vary between 35% in 2020 and 75% in 2017. A response rate reflects the number of respondents for the debt question relative to the senior student population in that academic year. Education debt is a combination of the dental school debt the senior students graduate with from dental school (the loans contracted to finance partially or all of the cost of the predoctoral degree) and their predental education debt, which is the outstanding education debt the senior students had when they entered dental school. Debt values are adjusted to 2022 dollars with the U.S. Bureau of Labor Statistics Consumer Price Index for all urban consumers.

Sources: American Dental Education Association. Survey of Dental School Seniors, Classes of 2017 to 2022.

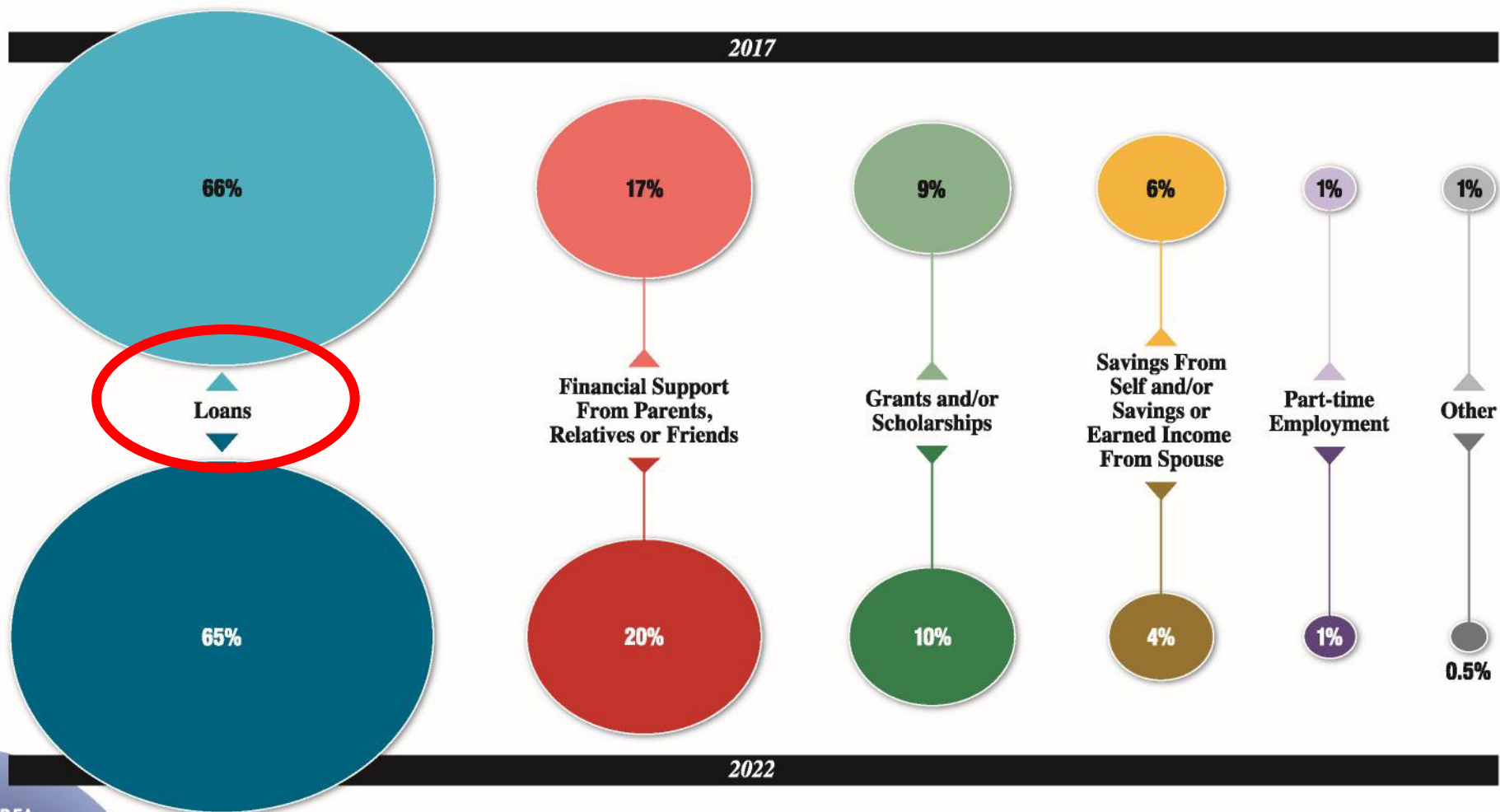
ADEA  
Trends in  
Dental Education  
2022-23



# How Are Students Paying for Dental School?

The senior predoctoral students of the Class of 2022 responding to the ADEA survey are funding their dental education with loans and using grants and scholarships at about the same rate as the Class of 2017 respondents to the ADEA Senior Survey. Federal loans remain the top source of debt for financing dental school.

**Funding Sources for Dental Doctoral Education, Average of the Percentage of Each Funding Source as Stated by ADEA Survey Respondents, 2017 and 2022**



## Dental Loan Repayment Programs\*

National Health Service Corps (Federal)

CA State Loan Repayment Program (HCAI)

CA Dental Corps Loan Repayment (CDB)

CalCares (Prop 56)

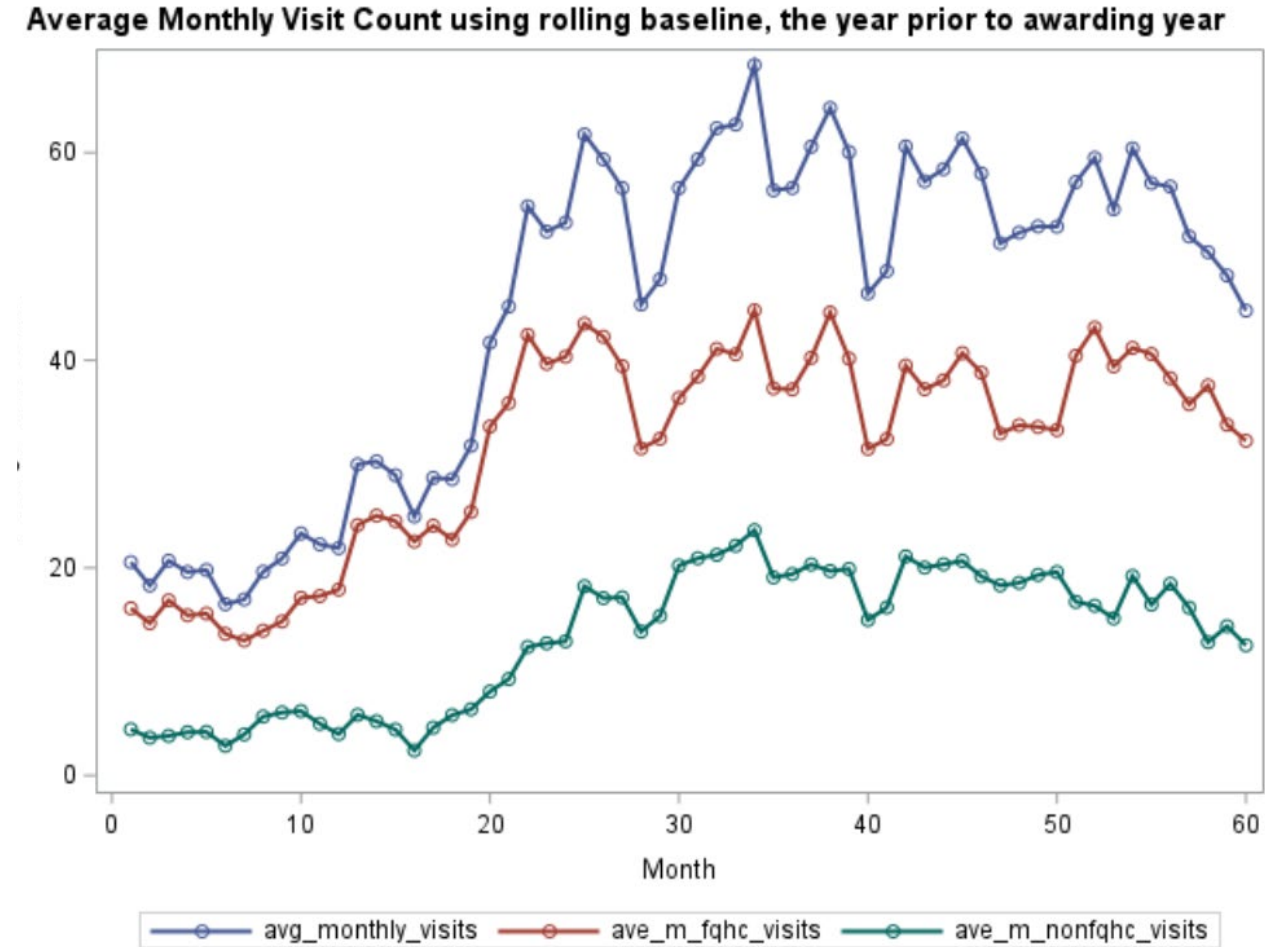
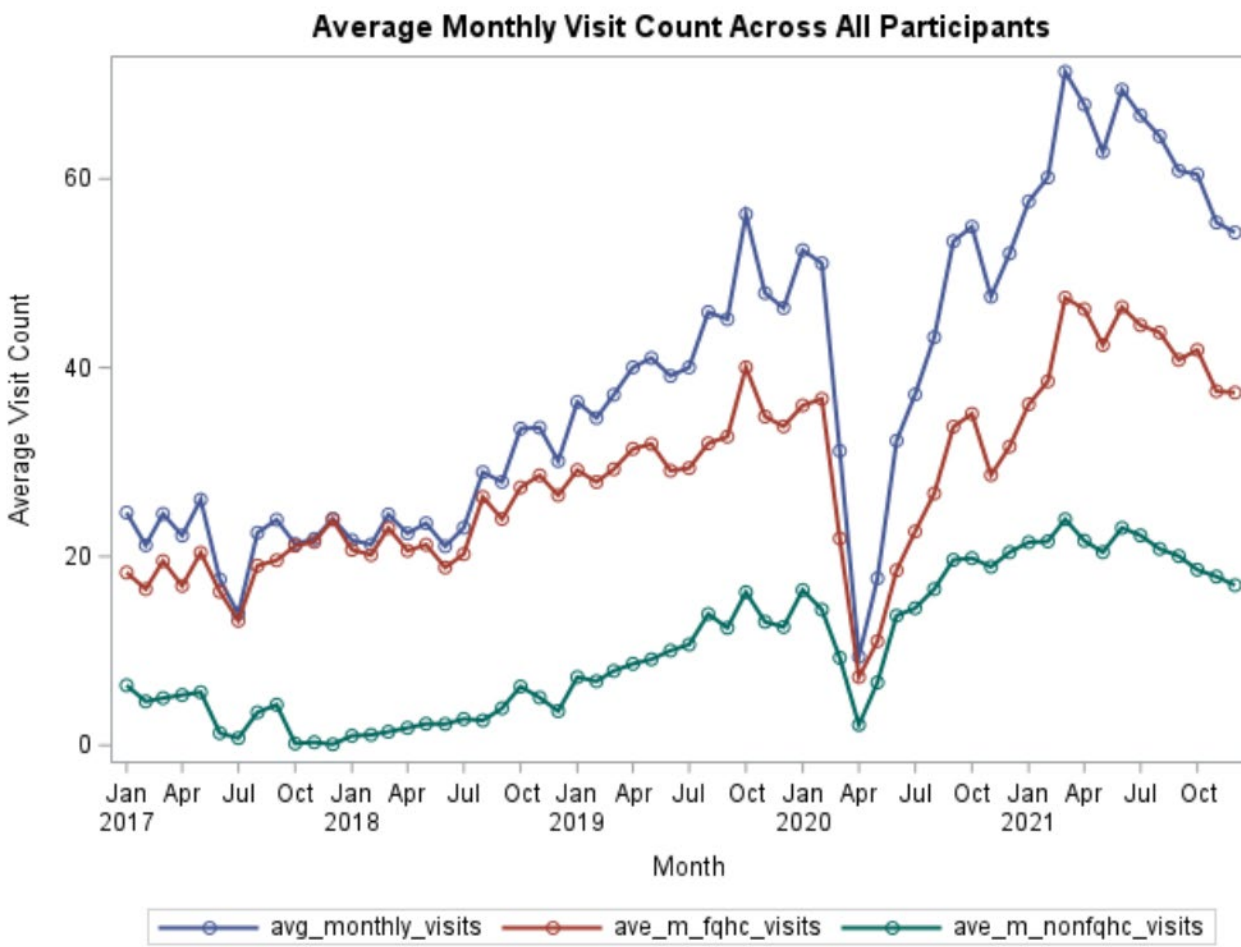
CDA Loan Repayment Program (retired in 2022)

*\*no estimate available on cumulative number of participants per year*

Notes: Percentages may add up to more than 100% due to rounding. The number of respondents to this question was 2,871 in 2022 and 4,882 in 2017. Sources: American Dental Education Association. Surveys of Dental School Seniors, Classes of 2017 and 2022.

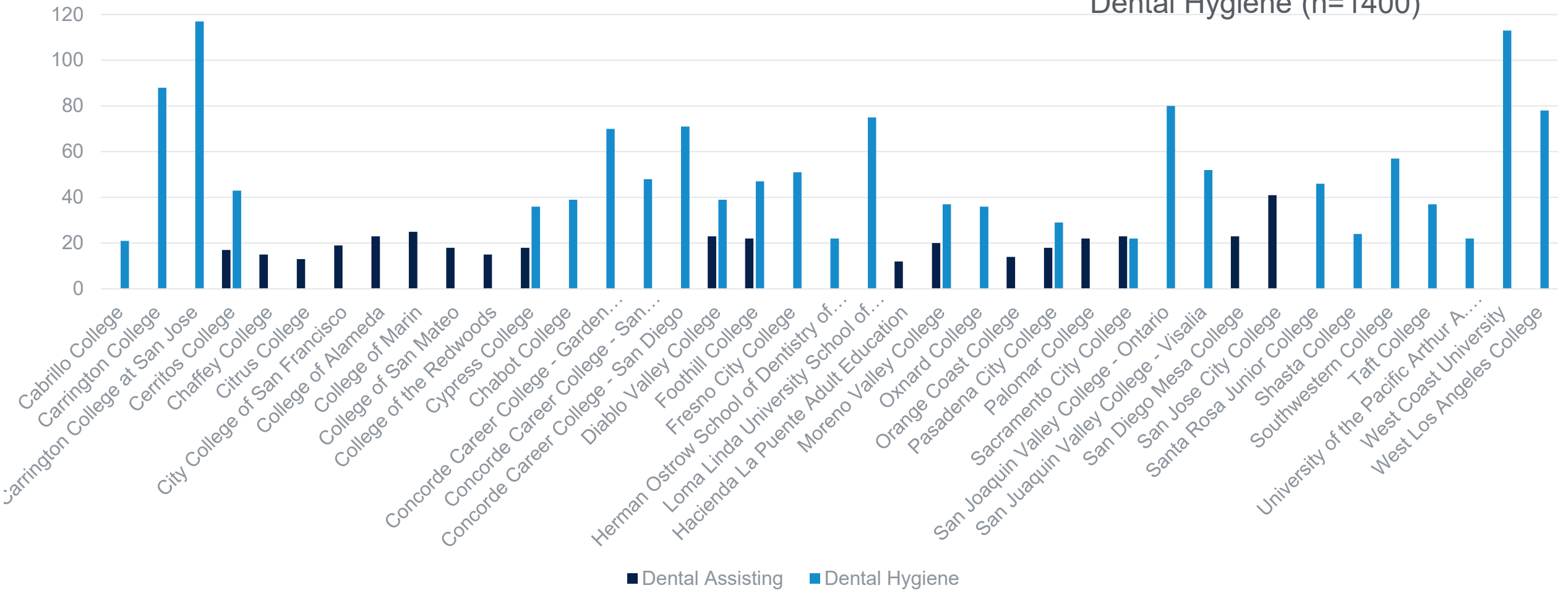


# Visit impact of Proposition 56 Dental Loan Repayment Program (CalHealthCares) on for Medi-Cal Patients



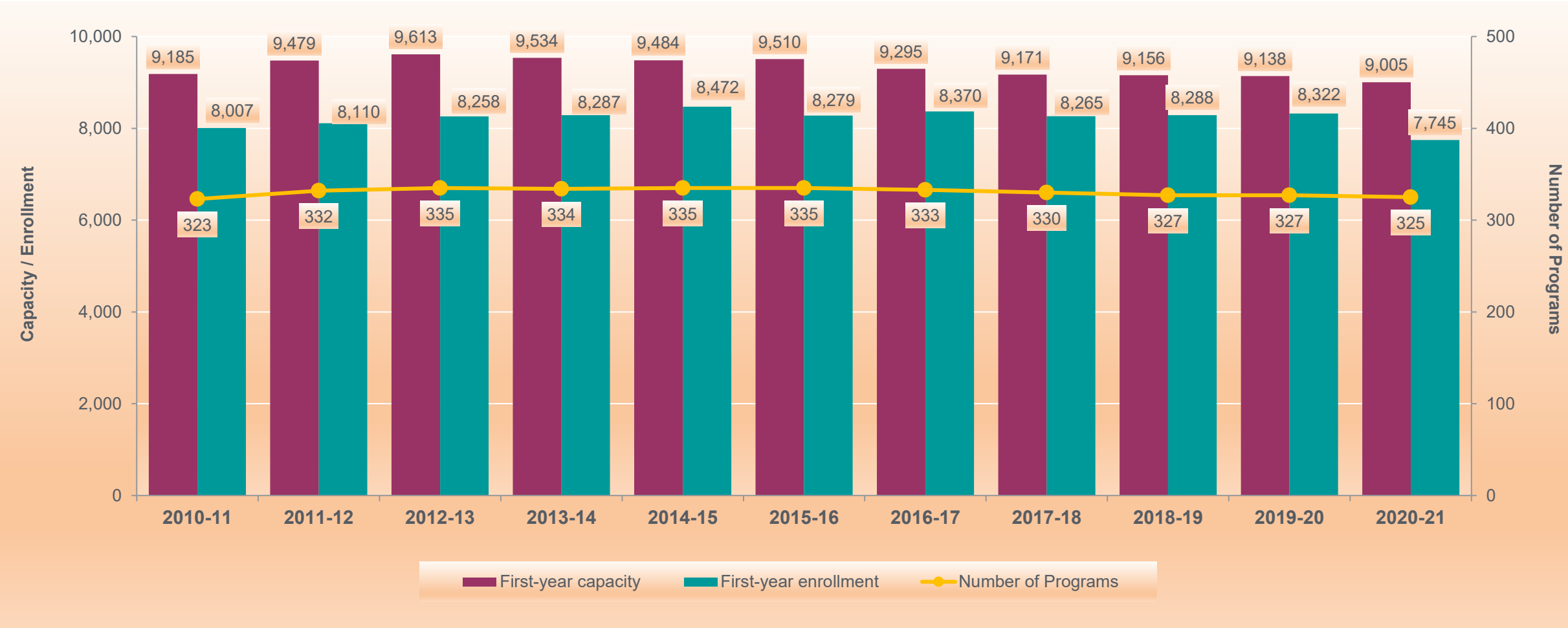
# Total Enrollment in Allied Educational Programs (2021-2022)

Dental Assisting (n=381)  
Dental Hygiene (n=1400)

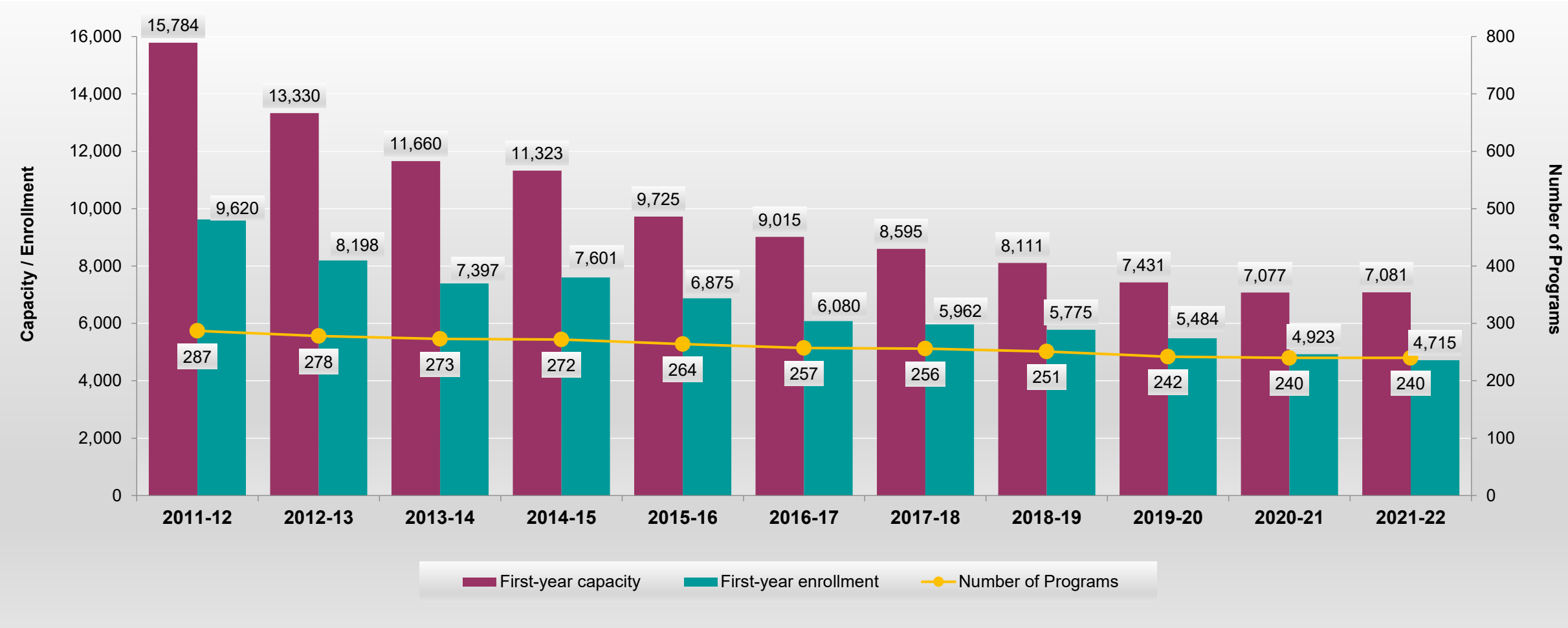




# First-Year Student Capacity Versus Enrollment by Number of Dental Hygiene Programs in the US, 2010-11 to 2020-21



# First-Year Student Capacity Versus Enrollment by Number of Dental Assisting Programs in the US, 2011-12 to 2021-22



# Key Facts About Allied Workforce Shortages

- In November 2021, 87% of dental offices reported that when compared to pre-pandemic, it was extremely challenging to recruit and hire dental assistants
- In the same survey, 44% of dental offices identified that trouble filling vacant staff positions has limited their practice's ability to treat more patients
- Additionally, it is estimated that over the last 10 years, there has been a nearly 50% decline in the number of first-year enrollment in dental assistant education programs
- The educational pipeline for DA and DH is stagnant or declining, and most programs are not operating at capacity due to faculty shortages and lack of clinical placement sites.

# National Research On Oral Health Workforce Shortages

- Vacant DA and DH positions have reduced dental practice capacity by 10% nationally. COVID impacted these largely female occupations similar to many others in health care
- One third of the DA and DH workforce indicate they intend to retire in the next five years
- Many who have left did so voluntarily due to dissatisfaction

## TOP 3 REASONS FOR DISSATISFACTION AT WORK

### DENTAL ASSISTANTS

1. Insufficient pay
2. Overworked
3. Workplace culture

### DENTAL HYGIENISTS

1. Workplace culture
2. Insufficient pay
3. Overworked



Dental Workforce  
Shortages:

Data to Navigate  
Today's Labor Market



# **Dental Provider Participation and Access for Medi-Cal Enrollees**

# Medi-Cal Dental Policy Timeline 2009-Present

CalAIM (January 2022) ➔

| 2009   | 2014                  | May 2014                      | Jan 2016                           | July 2015        | Jul 2016         | Jul 2017                                       | Jan 2018                   | Jul 2018                         | May 2019                  | Sep 2019        | May 2020                  | Jun 2021                  |
|--|-----------------------|-------------------------------|------------------------------------|------------------|------------------|--|----------------------------|----------------------------------|---------------------------|-----------------|---------------------------|---------------------------|
| Elimination of adult benefits (with phase out) | ACA expanded Medi-Cal | Partial adult benefits (AB82) | DTI initiated (focus on children)* | 10% fee increase | HRSA OHSE grants | Prop 56 suppl. payments for specific CDT codes | Full adult benefits (SB97) | Prop 56 suppl. payments expanded | FY18-19 loan repay. award | HRSA OHI grants | FY19-20 loan repay. award | FY20-21 loan repay. award |

State Auditor's Report

Little Hoover Commission #1

Little Hoover Commission #2

Master Plan on Aging (2021)

\* Impact on service would vary by demonstration pilot sites, which also vary by domains and counties

ACA = Affordable Care Act; DTI = Dental Transformation Initiative; HRSA = Health Resources and Services Administration; OHSE = oral health service expansion; suppl. = supplemental; repay. = repayment; OHI = oral health infrastructure; CDT = dental procedure codes

# Dental Transformation Initiative

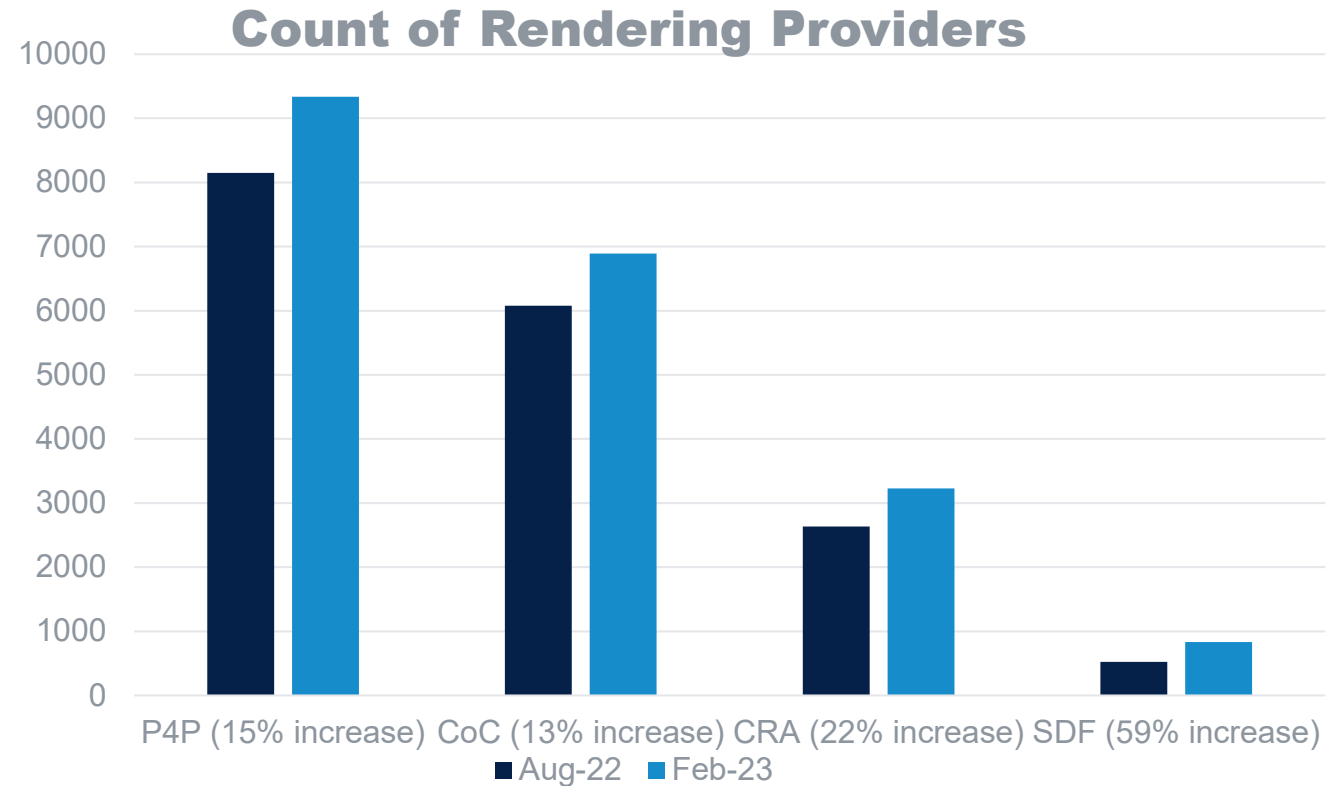
- January 2016-December 2020, waiver extension through 2021
- Four domains of innovation (age 1-20) which varied by geography and over time
  - Increase preventive services
  - Caries risk assessment
  - Continuity of care
  - Local dental pilot projects
- Interim report released with mixed results through 2018
- Final report released in June 2023
  - <https://www.dhcs.ca.gov/provgovpart/Documents/DTI-Evaluation-Final-Report.pdf>
  - The evaluation also that much of the increase in preventive service use was due to Safety Net Clinics increasing the number of children enrolled in Medi-Cal they serve. This finding suggests that participation in Medi-Cal among office-based dental providers might need to remain a priority area if California wishes to increase access further.
  - The evaluation found no evidence that DTI widened the pool of dental providers participating in Medi-Cal. In fact, they found essentially the same number of dental providers providing preventive services to children enrolled in Medi-Cal in 2019 as was observed in 2015, the year before DTI.

# CalAIM Dental Initiatives

Extends work started in DTI

*DHCS set a goal to achieve at least a 60% dental utilization rate for Medi-Cal eligible children.*

- Expanded pay-for-performance (P4P) payments that reward increasing the use of preventive services and establishing/maintaining continuity of care (CoC) through a dental home
- Caries Risk Assessment (CRA) Bundle for young children
- Silver Diamine Fluoride (SDF) for young children and specified high-risk and institutional populations



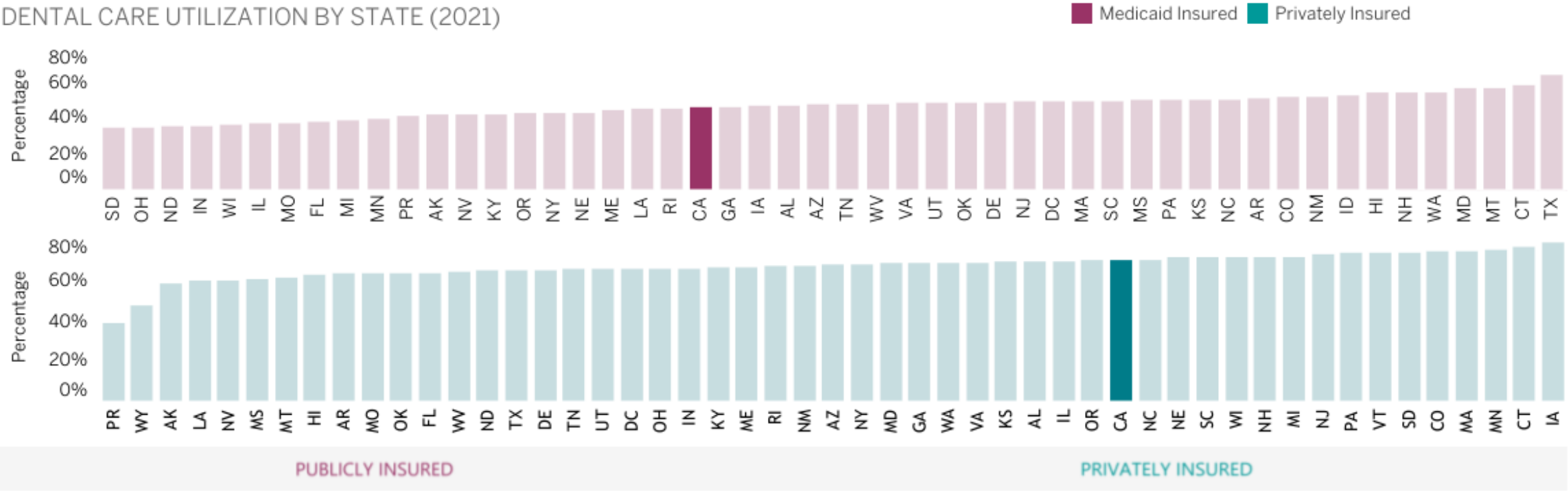


# DENTAL CARE UTILIZATION RATE FOR CHILDREN

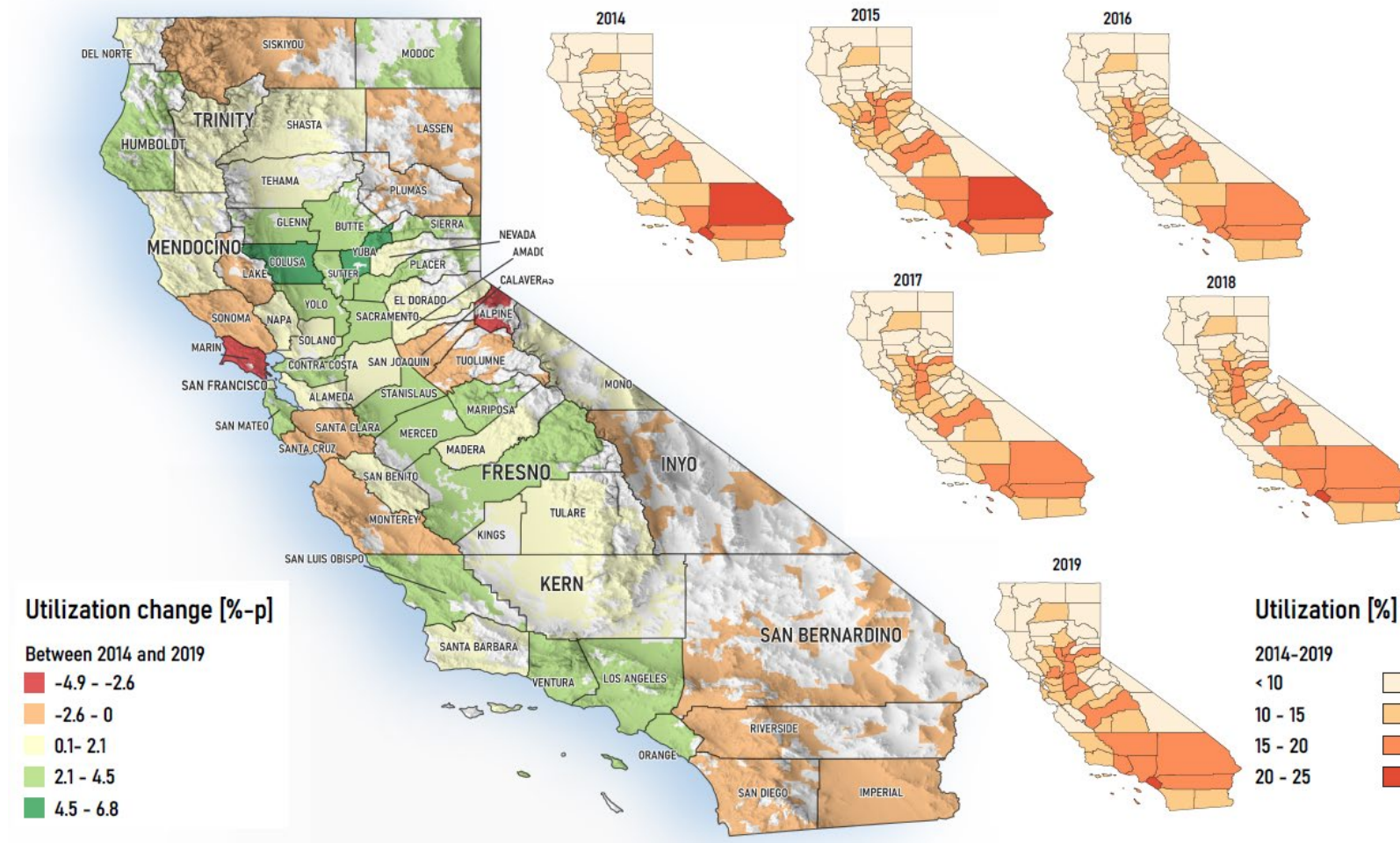
Percentage of children who saw a dentist in the last 12 months.

| PUBLICLY INSURED CHILDREN (MEDICAID) |               | PRIVATELY INSURED CHILDREN |               |
|--------------------------------------|---------------|----------------------------|---------------|
| 47%                                  | United States | 66%                        | United States |
| 46%                                  | California    | 69%                        | California    |

DENTAL CARE UTILIZATION BY STATE (2021)

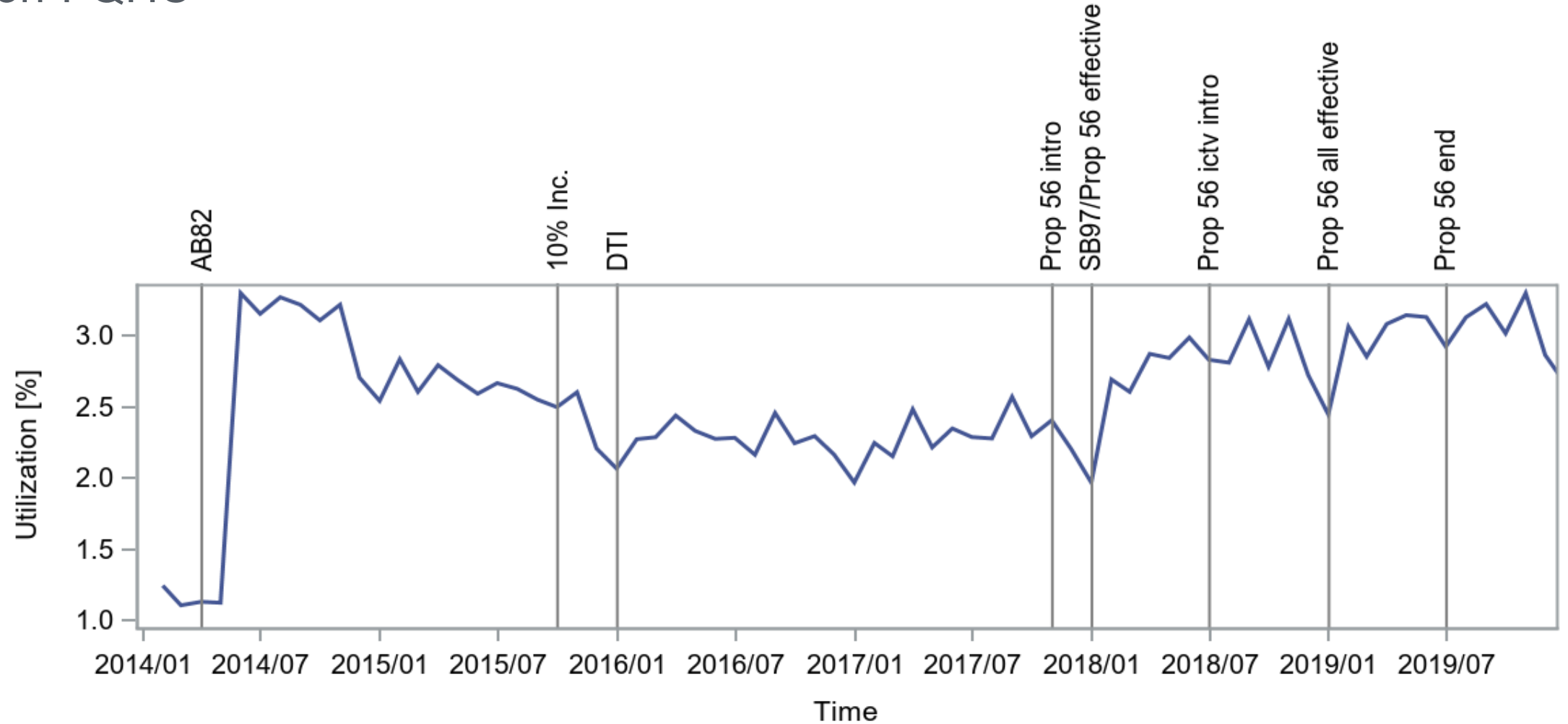


# Adult Utilization was Mixed in Non-FHQC Settings Prior to COVID Across the State

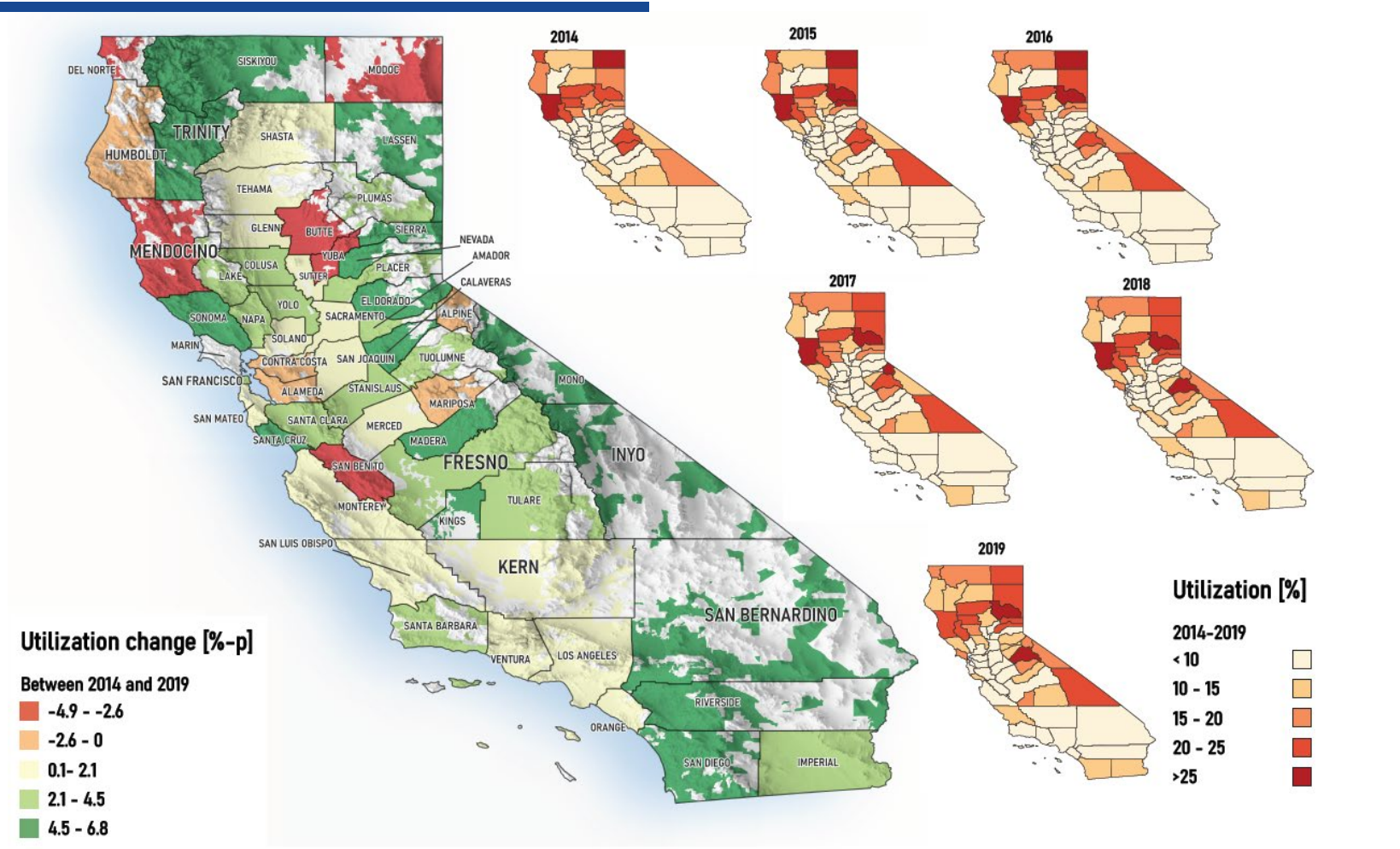


# Monthly adult utilization by setting of care

Non-FQHC

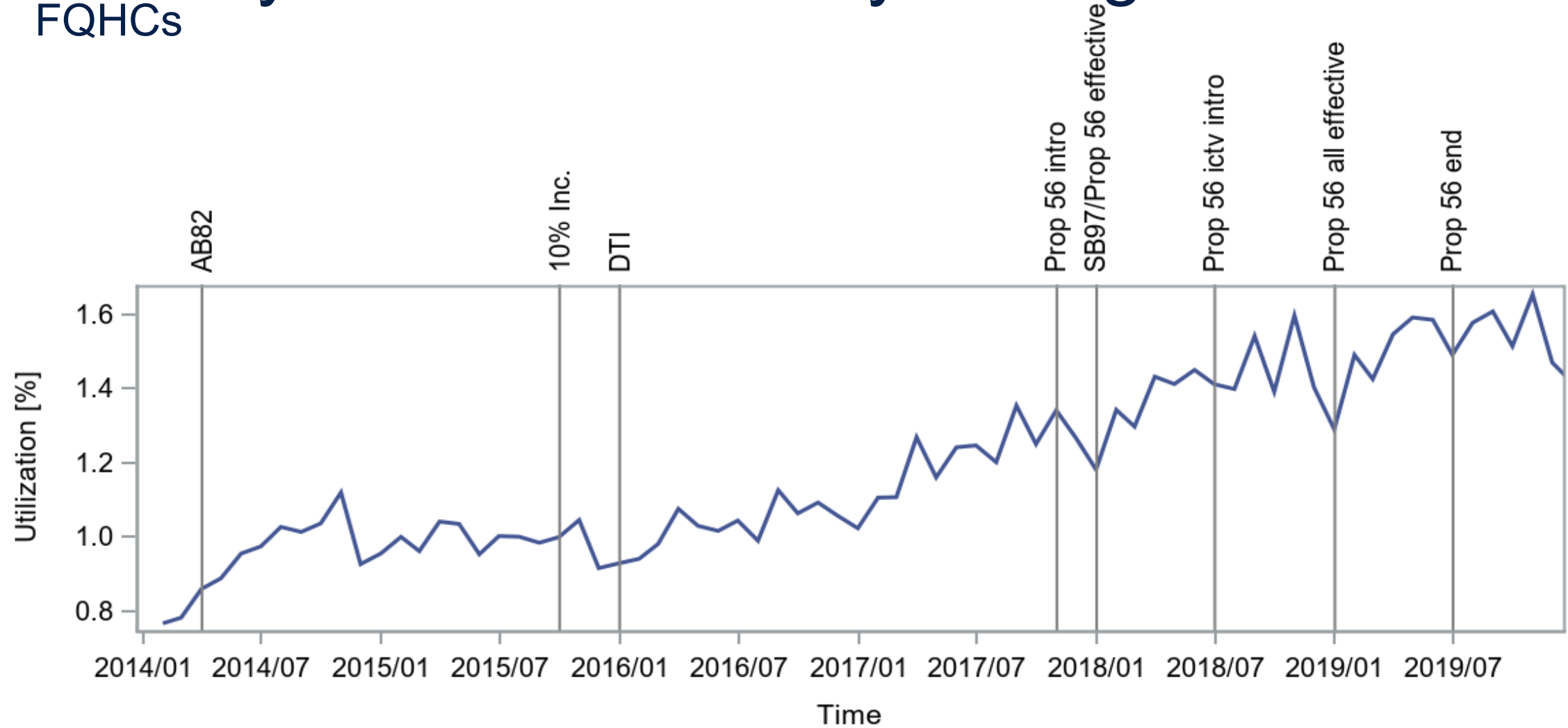


# Adult Utilization in FQHCs Increased Until COVID in Most Counties



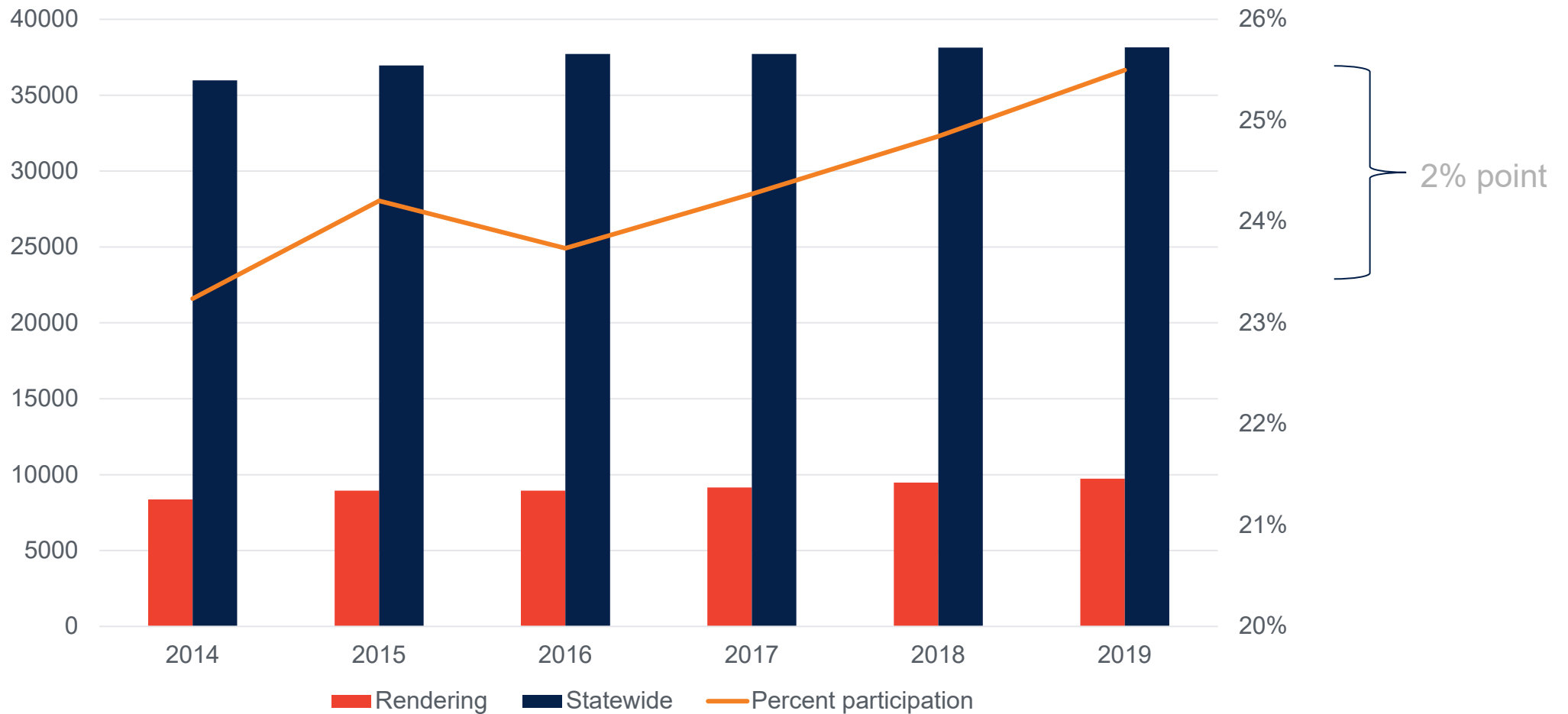
# Monthly adult utilization by setting of care

## FQHCs



# Providers

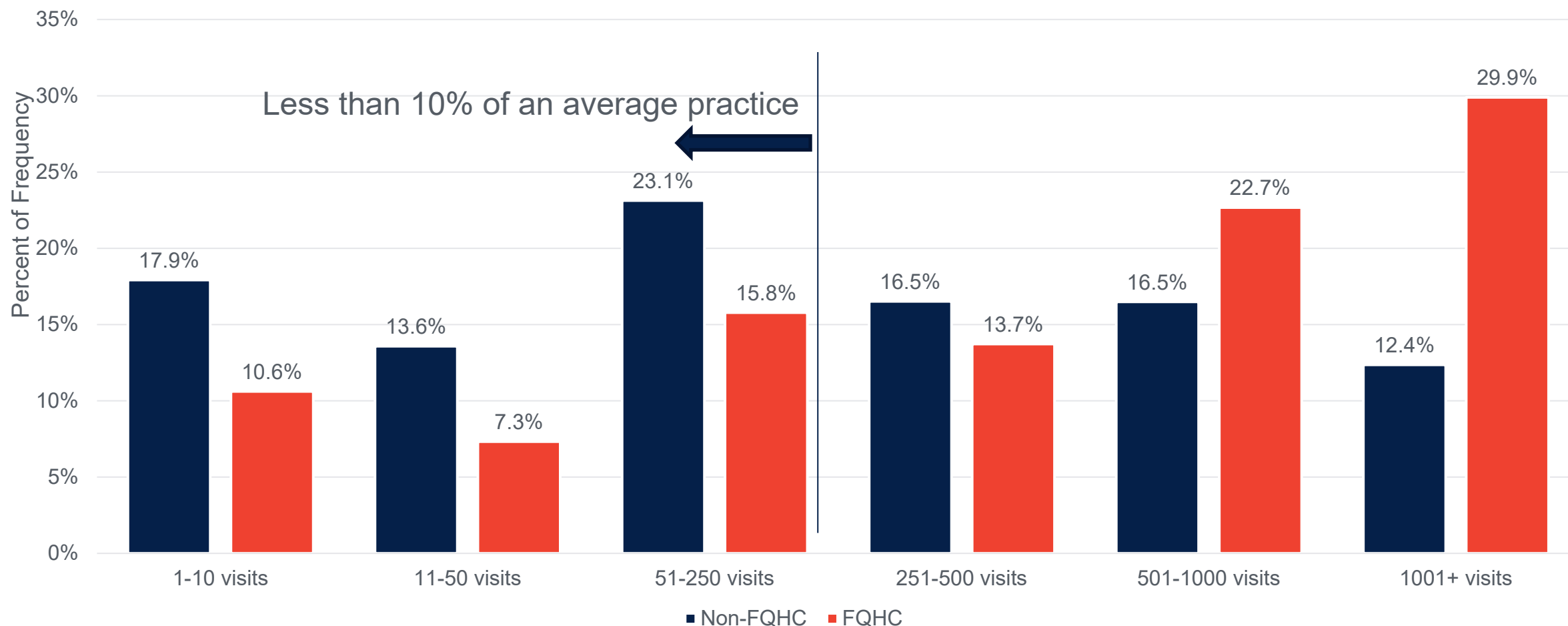
Rendering\* vs. all active licensees in California\*\*



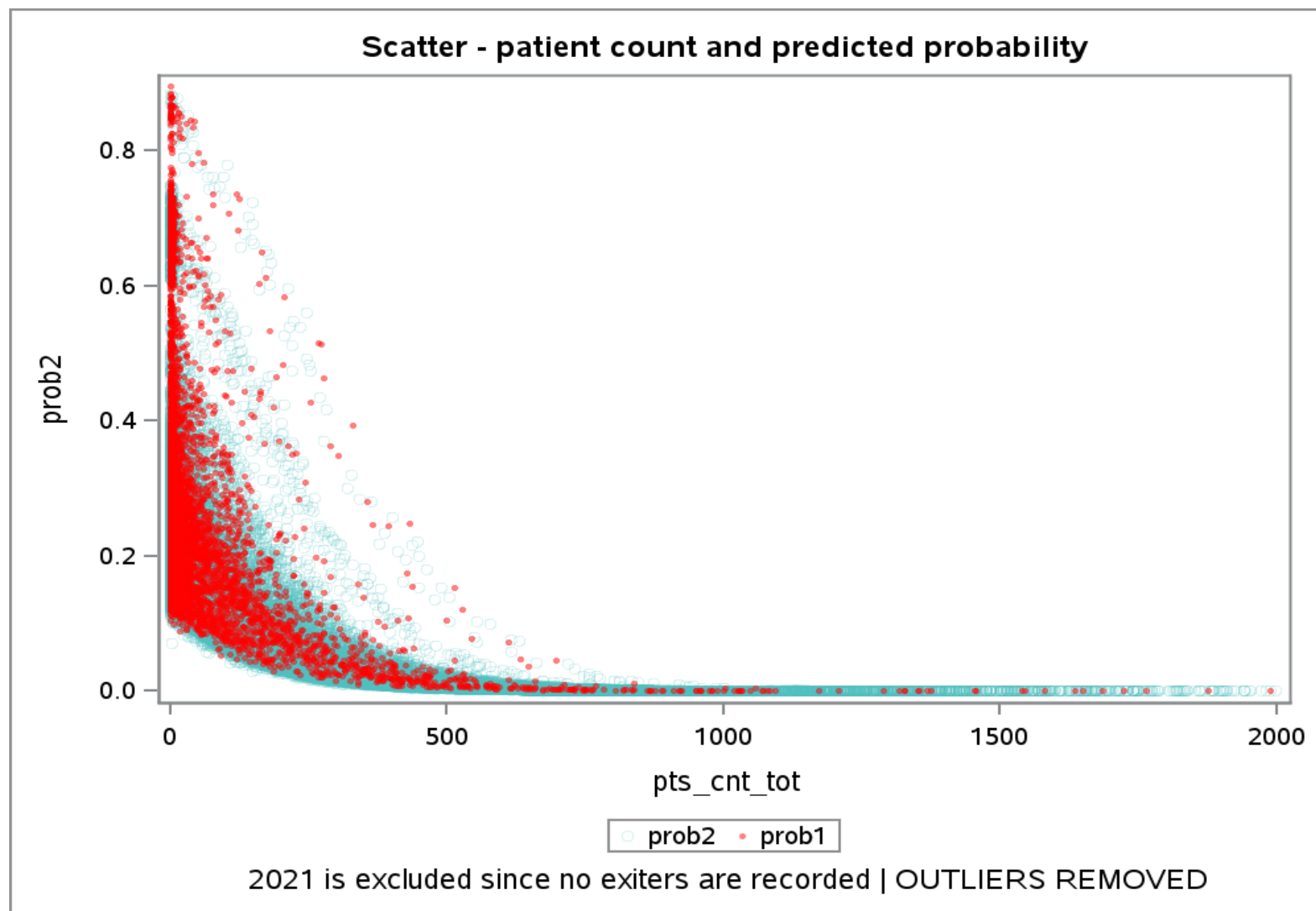


# Extent of Provider Participation

## Distribution of **adult** visits per rendering provider, 2019



# Predicting dentist enrollment exits from Medi-Cal Dental.





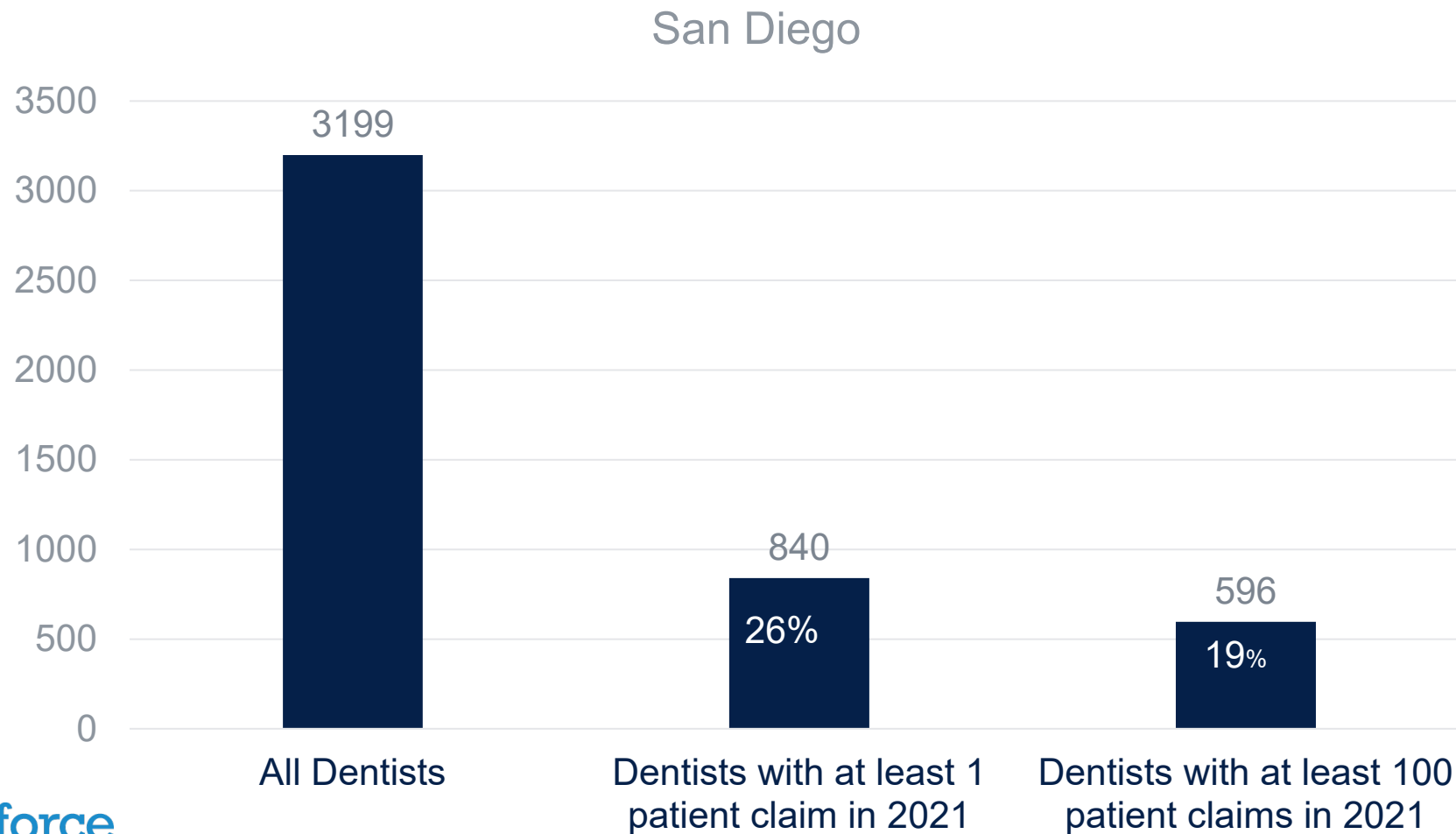
# Racial/ethnic concordance

Average percent of adult Medicaid patient population by provider race/ethnicity, 2019

|                            |                                     | Average percent of patient population of each racial/ethnic group |       |       |          |                                     |                    |       |
|----------------------------|-------------------------------------|---|-------|-------|----------|-------------------------------------|--------------------|-------|
|                            |                                     | American Indian or Alaska Native                                  | Asian | Black | Hispanic | Native Hawaiian or Pacific Islander | Unknown or Missing | White |
| Race/ethnicity of provider | American Indian or Alaska Native    | 5%  | 9%    | 6%    | 38%      | 2%                                  | 11%                | 29%   |
|                            | Asian                               | 0%  | 19%   | 7%    | 39%      | 4%                                  | 14%                | 17%   |
|                            | Black or African American           | 2%  | 4%    | 22%   | 39%      | 2%                                  | 14%                | 18%   |
|                            | Hispanic                            | 1%  | 5%    | 6%    | 56%      | 2%                                  | 14%                | 16%   |
|                            | Native Hawaiian or Pacific Islander | 1%  | 15%   | 4%    | 43%      | 2%                                  | 14%                | 20%   |
|                            | Unknown or Missing                  | 1%  | 7%    | 9%    | 40%      | 3%                                  | 15%                | 26%   |
|                            | White                               | 1%  | 4%    | 9%    | 40%      | 2%                                  | 16%                | 28%   |

# Medi-Cal Participation by Dentists in San Diego (2021)

- 29% of the county's population is enrolled in Medicaid



**Current oral health workforce  
policy approaches**

**State and national resources**

# Expanding Oral Health Workforce Capacity

- Expand the care team both inside and outside the dental office
  - New types of providers
    - Dental Therapists
    - Community Dental Health Coordinators (CHWs)
  - Scope of practice changes for existing providers
    - Expanded practice, public health practice
  - Integration of oral health into primary care practice
    - Physician fluoride varnish application
    - Co-location of medical-dental care
  - Mobile/Portable dental care services
    - K-12 schools,
    - Long term care settings

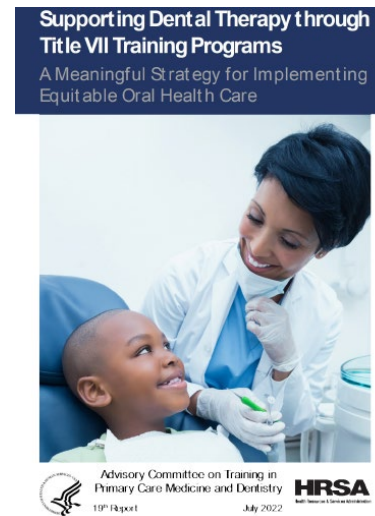
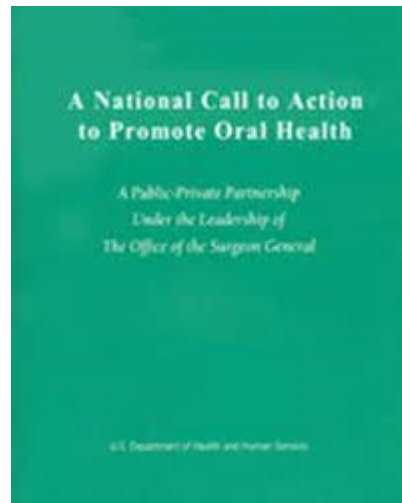
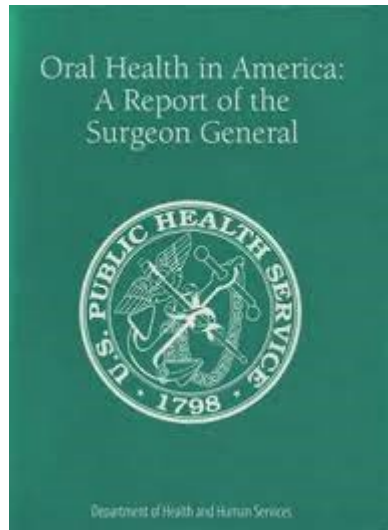
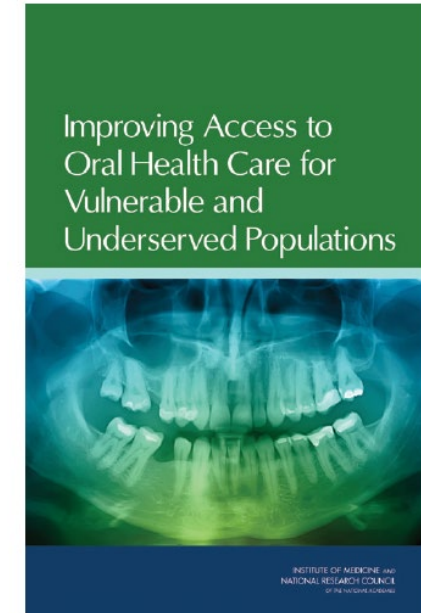
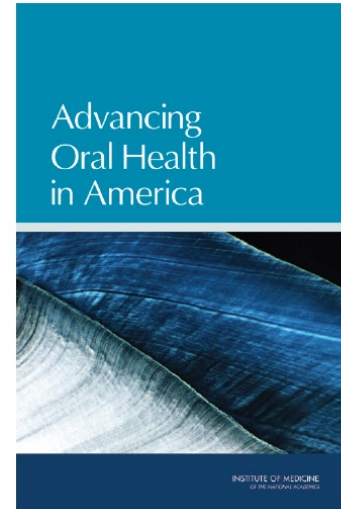
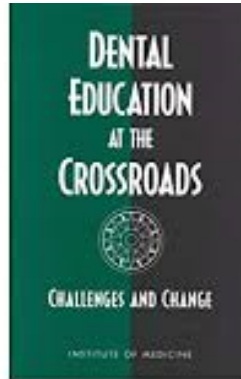
# Expanding Oral Health Workforce Flexibility

- Use information technology to reach more patients
  - CA has pioneered teledentistry as part of DTI (virtual dental home model)
  - Teledentistry has expanded nationally since COVID, particularly in safety net settings
  - Referral/Tracking system development to connect community screening to treatment when needed
- New treatment modalities with a focus on public health settings
  - Silver Diamine Fluoride (SDF)
  - Sealants
  - Fluoride Varnish
- Supervision requirements
  - In particular, dental hygiene has become much more flexible in the past 20 years due to supervision requirement changes

# Expanding Oral Health Workforce Diversity

- Mentoring, bridge, pathway & post-baccalaureate programs
- Dental school admissions policies (i.e. holistic review)
- Scholarship & loan repayment for service
- Health professions education diversity grants
- HRSA scholarships & training programs
- Licensing foreign-trained providers
- Expanding dental team

# National Resources





# California Resources

California Department of Public Health

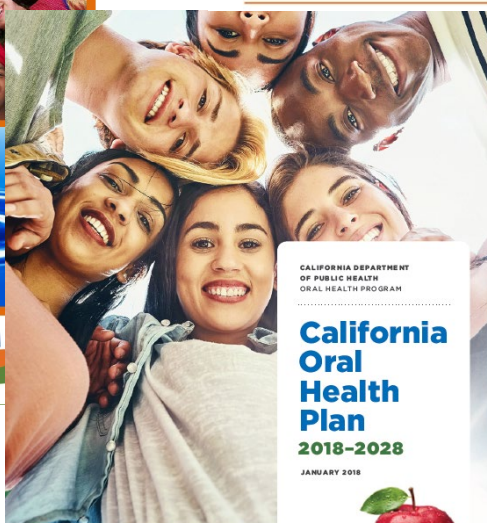
Status of Oral Health in California:  
Oral Disease Burden and Prevention 2017



Lifetime of Wellness



CELEBRATING  
30 YEARS  
**Healthforce  
Center** at UCSF



CALIFORNIA DEPARTMENT  
OF PUBLIC HEALTH  
ORAL HEALTH PROGRAM  
**California  
Oral  
Health  
Plan**  
2018-2028  
JANUARY 2018



Center  
for Oral  
Health



We catalyze a network to take on America's oral health challenges so that everyone has an equitable chance to thrive.



## Technical Assistance Center

CDPH Office of Oral Health ▾

Toolkits ▾

Our Progr

The California Oral Health Technical Assistance Center (COHTAC) provides support and resources to help local oral health programs achieve their goals.

We are a group of UCSF faculty, researchers, and staff with expertise in oral health. We work in partnership with the California Department of Public Health's Office of Oral Health Program and the UCSF Dental Public Health Postgraduate Program to create a healthier California through evidence-based strategies.

## Programs

Our focus is on three areas, recognized by the CDC as fundamental to improve community oral health:

- [School Oral Health Programs & KOHA](#)
- [Tobacco Cessation](#)
- [Water Fluoridation](#)
- [Results Based Accountability \(RBA\)](#)

## Phased Strategies for Reducing the Barriers to Dental Care in California

California Dental Association  
Access Report

access cda  
Understanding the issue. Answering the need.

## Events

TUE  
29  
What Dental  
Providers Need to  
Know about HP...

Date: August 29, 2023  
Time: 6:30-8:00 PM PDT

WED  
30  
Increasing the  
Proportion of  
Children and...

Date: August 30, 2023  
Time: 10:00 AM PDT

UCLA CENTER FOR  
HEALTH POLICY RESEARCH



Healthforce  
Center at UCSF



## Key Take Aways

- Highest ratio of dentist to population in the US, yet allied dental shortages are pervasive, geographic distribution and workforce diversity remain problematic.
- Participation by dental providers, and access for populations enrolled in Medi-Cal, particularly for adults, is abysmal.
- Loan repayment is the primary tool being used for recruitment and retention in the safety-net/underserved communities. Minoritized dentists continue to disproportionately care for these communities.
- Expansion of oral health infrastructure and workforce in FQHCs led to steady growth in that sector pre-COVID. Other policy interventions to date have not led to a significant expansion of the dental provider workforce in the safety net.
- Accurate, real-time data sources on the dental workforce are disparate, contradictory, and difficult to obtain.

# Acknowledgements and Data Sources

- [UCSF team](#)
  - Emily Shen and Matthew Jura, PhD, Shuang Liang, MA, Aubri Kottek, MPH
- HCAI research and evaluation team
  - Eric Neuhauser, MPH, Jaclyn Farrens, Kevin McInturf, Hovik Khosrovian
- **Mathematica team**
  - Diane Rittenhouse, MD, MPH, Sammie Chavez, MPH
- [American Dental Association, Health Policy Institute](#)
  - Marko Vujcic, PhD, Bradley Munson
- [American Dental Association, Health Policy Institute, 2021 Masterfile](#)
- [American Dental Education Association](#)
- [2012 Survey of Underrepresented Minority Dentists in the US \(Mertz et al\)](#)
- [Oral health workforce research center](#)
- [Department of Health Care Access and Information](#)
- [Dental Board of California](#)
- [Department of Consumer Affairs](#)
- [UCLA Center for Health Policy Research](#)