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Oral Health Workforce Supply & Demand Methodology Brief

Council Presentation

California Department of Healthcare Access and Information (HCAI)

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Table of Contents

Research Data Center Overview

Assembly Bill 133 (2021) created the Research Data Center within the Office of Health Workforce Development

- Central source of health care workforce and education data in the state

Health and Safety Code Section 128051 requires HCAI to collect, to the extent available, all the following data:

- The current supply of health care workers, by specialty.
- The geographical distribution of health care workers, by specialty.
- The diversity of the health care workforce, by specialty, including, but not necessarily limited to, data on race, ethnicity, and languages spoken.
- The current and forecasted demand for health care workers, by specialty.
- The capacity of educational programs to train new healthcare workers, including details on slots, enrollment, attrition, and wait times.

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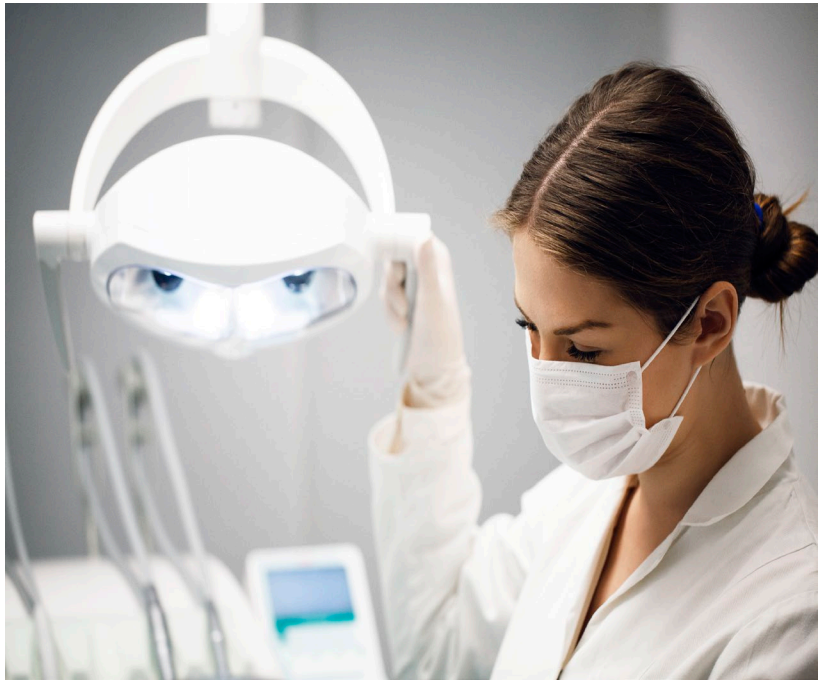
Strategic Goals: Core Mandate of the Oral Health Supply & Demand Model and its Impact

Goals and Objectives

- **Goal**: Enable data-driven decisions for oral health access
- **Approach:** HCAI License Renewal Survey data for actual supply (full time equivalents (FTEs)) and population needs-based demand modeling using clinical recommendations and validated assumptions.
- **Outcome:** Tool for policy and resource allocation

Background and Context

- Oral health access is essential for overall health and a critical component of primary health care
- Workforce shortages risk longer wait times and deferred care
- Need for proactive planning to avoid gaps in preventive and treatment services



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Key Facts: Oral Health Disease Burden and Insurance Coverage in California

Key Facts: Oral Health Disease Burden in California

- **61%** of third-grade children have experienced tooth decay[1]
- **925,000** children ages **3-11** have never had a dental checkup[2]
- **1 in 4** California adults report teeth in "fair" or "poor" condition[2]

1. https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/CDCB/Pages/OralHealthProgram/DataStatistics.aspx
2. https://healthpolicy.ucla.edu/our-work/oral-health

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Key Facts: Health Insurance Coverage

- **30.3%** of CA adults lack dental insurance vs **15.2%** of CA children[1]
- Nearly **36%** of the CA population is enrolled in Medi-Cal in 2024[2]
- **79%** of CA dentists don't provide care for Medi-Cal patients[3]
- Only **9.9%** of dentists are Hispanic or Black[4] vs **60%** of low-income population[3]

1. https://healthpolicy.ucla.edu/our-work/oral-health and CHIS
2. https://www.dhcs.ca.gov/dataandstats/statistics/Documents/SOGI-Data-Collection-Nov2024.pdf
3. https://healthpolicy.ucla.edu/sites/default/files/2023-04/dental-care-needs-low-income-ca-adults-policybrief-jun2021.pdf
4. https://hcai.ca.gov/visualizations/race-ethnicity-of-californias-health-workforce/

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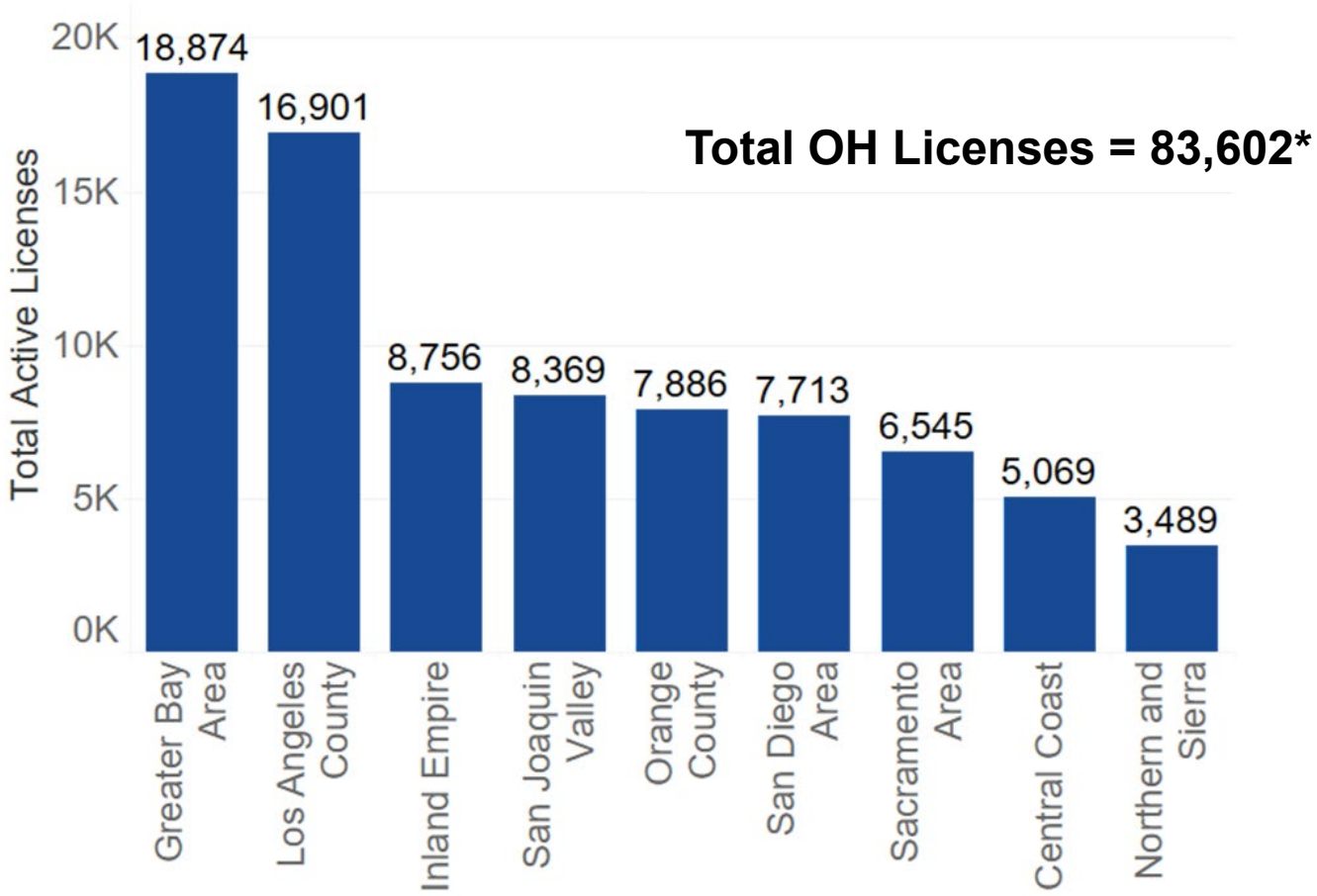
Key Facts: Regional Active License Counts

(All Oral Health Professions)[1], 2024



- The Greater Bay Area has the highest total count (23%) of oral health licenses.
- The Greater Bay Area and Los Angeles County together account for **43%** of statewide licenses

Data as of November 2024
*Note: Some providers hold multiple licenses, so the raw count of providers is less than 83,602

1. Includes Dentists (General and Specialists), Registered Rental Assistants (RDA), Registered Dental Hygienist (RDH) and Dental Hygienists in Alternative Practice

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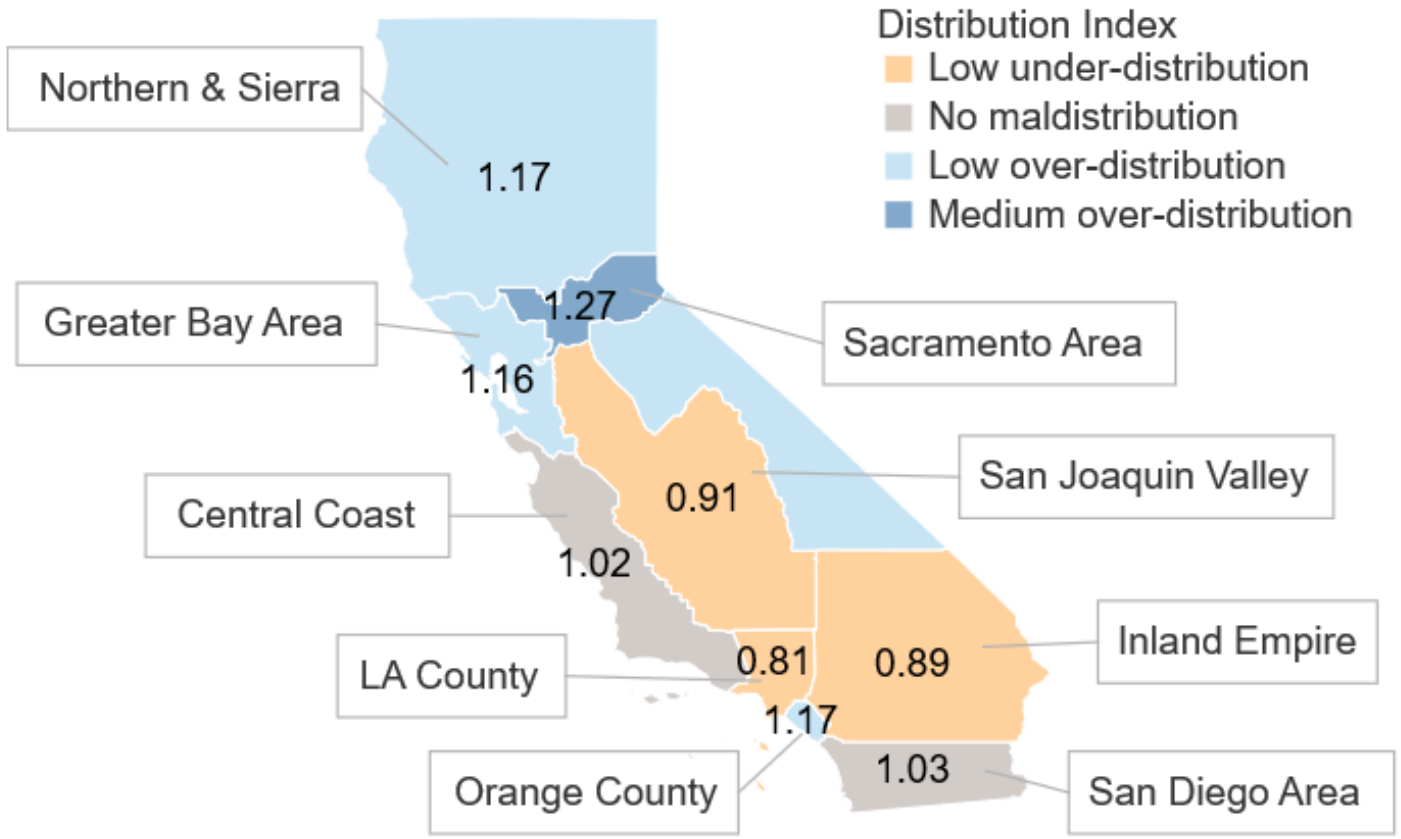
Key Facts: How Supply is Distributed across California

(All Oral Health Professions)[1], 2024



- Sacramento Area has the highest distribution of active licenses (1.27)
- Los Angeles County has the lowest distribution (0.81)

Distribution Index Description:

- Shows the magnitude of difference between a regions share of licenses and its share of the state's population.
- A value of 1 = the region has an equal share of the licenses and population (e.g., 10% of licenses, 10% of population)
- A value below 1 = smaller share of licenses than pop
- A value above 1 = larger share of licenses than pop

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Supply & Demand Methodology Overview

Methodology Overview

Building a Model to Forecast Oral Health Workforce Needs

Focus

Supply

- Dentists
- Registered Dental Hygienists (RDHs)[1]
- Registered Dental Assistants (RDAs)[1]

Demand

- Population size stratified by age groups
- Restorative and preventive care needs

Output

Projected oral health workforce gaps by county and HCAI Workforce Regions, 2026-2030

Result

Actionable insights that guide investment, policy, and program design

1. Includes Extended Functions (RDAEF, RDHEF)

Methodology Overview: Key Concepts

Our approach integrates primary data, evidence-based assumptions grounded in credible research and expert guidance, clinical recommendations, and scenario analysis.

Incorporate pipeline, productivity, and demand drivers

Employs robust methodologies: Full-time equivalent (FTE) staffing estimates and a population needs–based approach

Validate assumptions with subject matter experts

Methodology Overview: Key Questions the Model Addresses

Workforce Availability

- Number of Dentists, RDHs, and RDAs
- Distribution by county and region

Access & Geographic Gaps

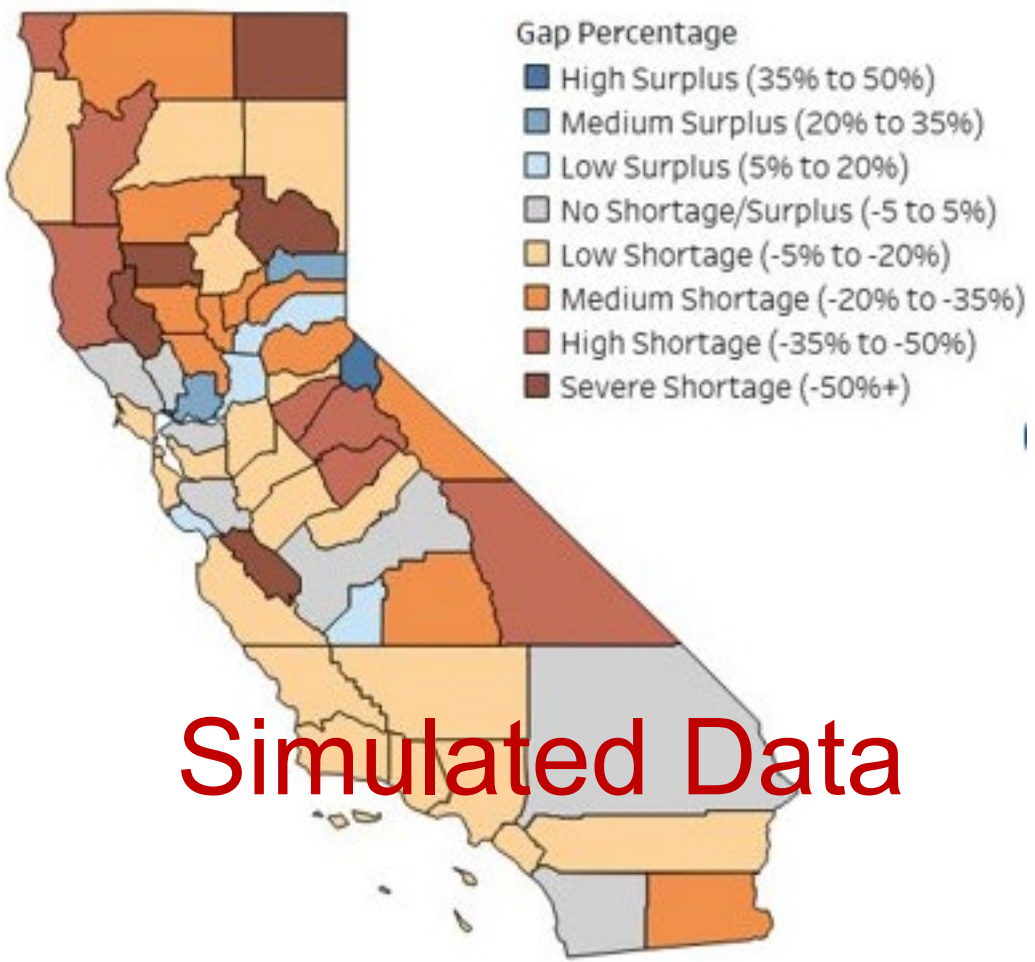
- Shortage areas relative to population need
- Regions experiencing access challenges

Service Capacity

- Estimated service capacity (dental visits, procedures)

Workforce Pipeline & Trends

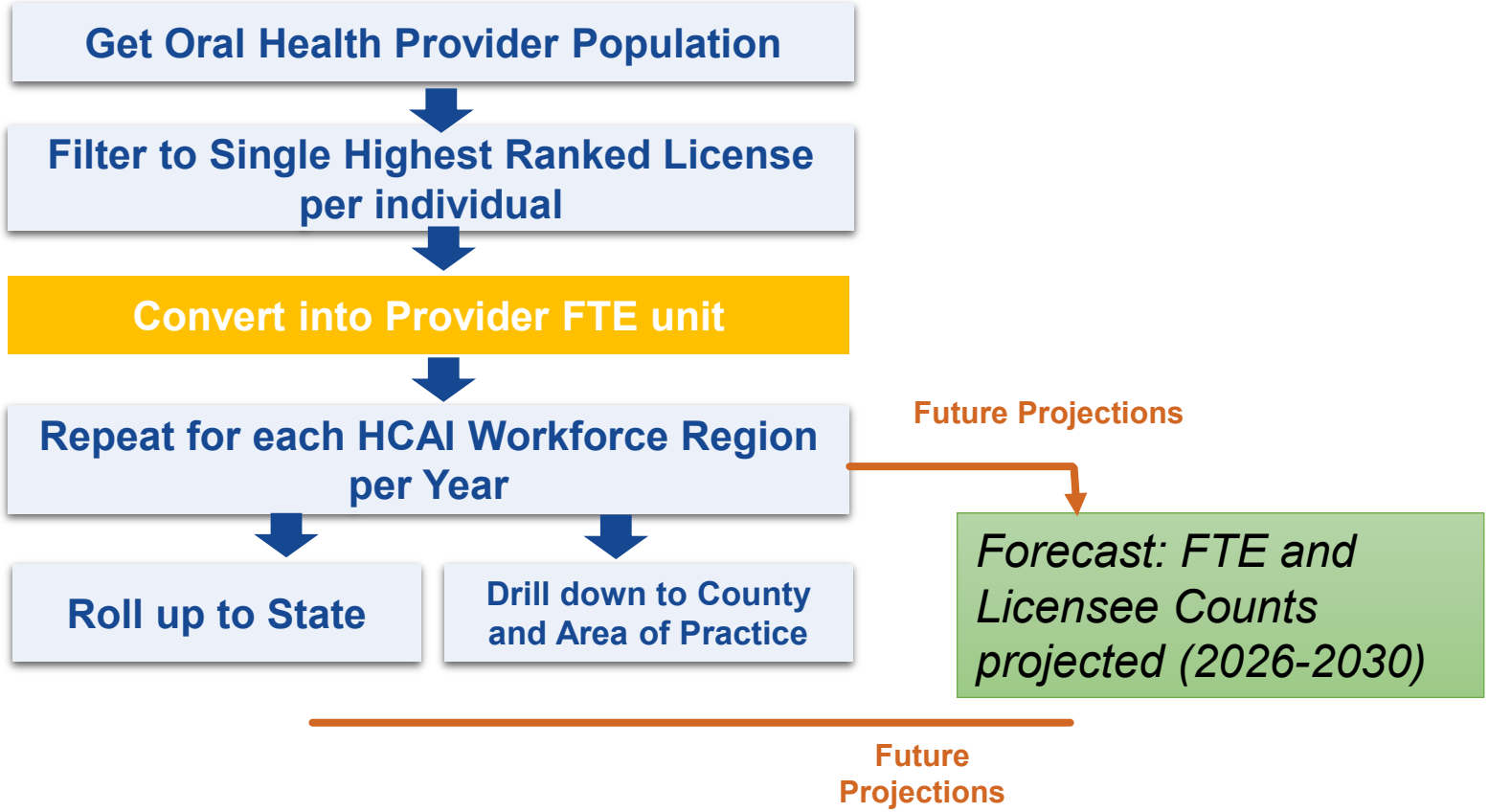
- New professionals entering the workforce
- 5-year supply, demand, and gap projections



Simulated Data

Methodology Overview: Supply

Use licensing data and care delivery trends by role to calculate supply



Supply for all roles is sourced from DCA/RDC license data. For FTE, we use data from HCAI's Licensure Renewal Survey.

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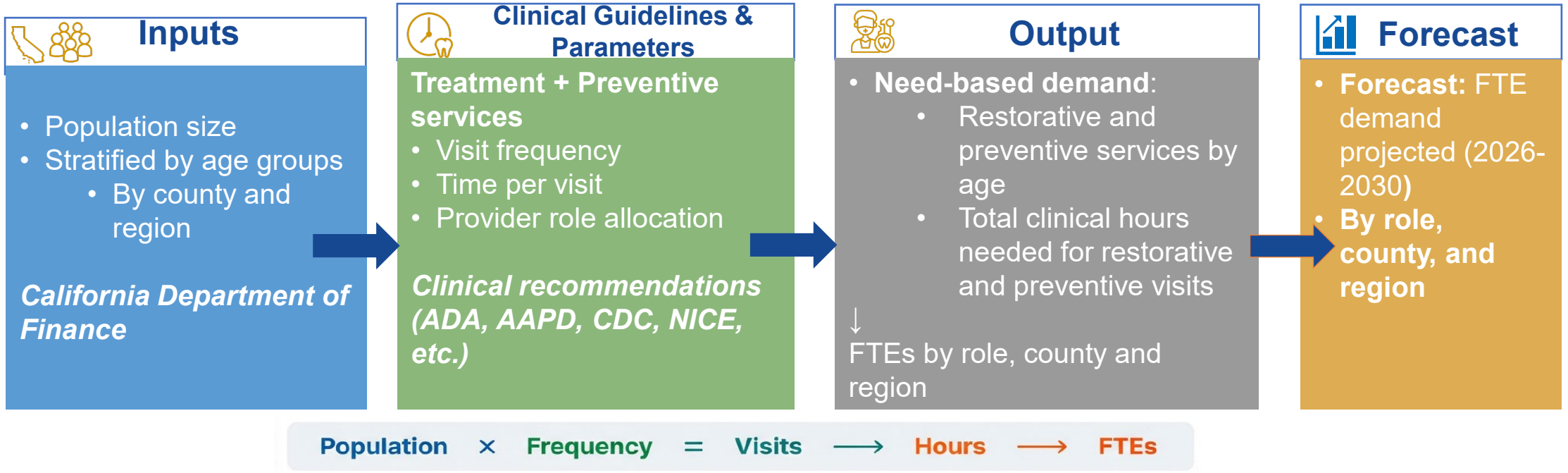
Methodology Overview: Demand

Population Needs-Based Demand Framework:

- **Methodological Shift:** From measuring service utilization to conducting a robust needs assessment
- **Goal:** Estimate the total care required to treat and provide ongoing care for California's entire population, rather than quantifying only the care currently delivered or consumed.



Methodology Overview: Demand

For each of these roles, we will assess :

- ✓ Provider role allocation
- ✓ Clinical time per visit type

Preventive Services

Preventive care

- Registered Dental Hygienist primary role
- Mostly hygiene-driven

+

Treatment/Restorative Services

Treatment care

- Dentist + Registered Dental Assistant heavy involvement

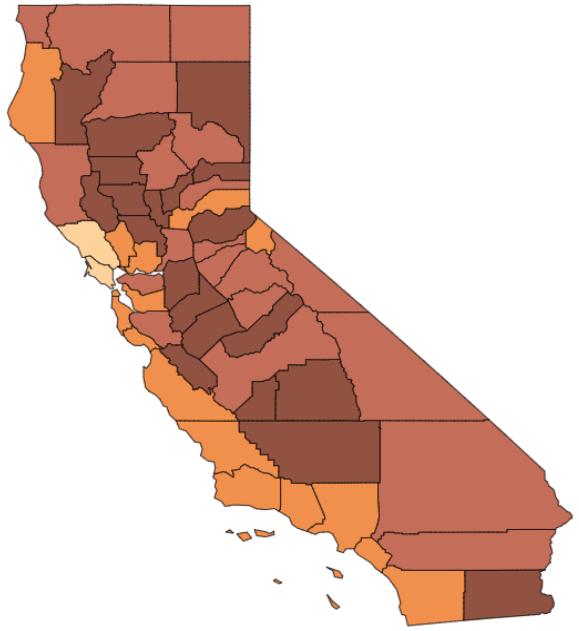
Methodology Overview: Drivers of Supply/Demand

- **Pipeline** (education inflow)
- **Workload** (Full Time Equivalent, FTE)
- **Productivity** (team-based care, role optimization: Dentists, Hygienists, Dental Assistants)
- **Population growth** (preventive vs treatment mix)

Methodology Overview: Sample of How the Results Will Look Like

County Data | **Regional Data** | **Trends** | **Forecast Comparisons**

Year: 2022 | Role/Group: (All) | Region Type: CHIS Region | Region: (All) | County: (All)



County	Est. Supply (FTE)	Est. Demand (FTE)	Supply-Demand Gap	Gap per 100k Pop	Gap %
Alameda	6,259.0	9,048.6	-2,789.6	-169.7	-30.8%
Alpine	2.0	3.1	-1.1	-89.0	-34.6%
Amador	70.0	135.5	-65.5	-163.8	-48.4%
Butte	585.0	1,011.5	-426.5	-206.8	-42.2%
Calaveras	87.0	149.2	-62.2	-138.2	-41.7%
Colusa	20.0	85.2	-65.2	-300.3	-76.5%
Contra Costa	3,042.0	4,886.7	-1,844.7	-160.4	-37.7%
Del Norte	53.0	95.1	-42.1	-156.1	-44.3%
El Dorado	413.0	1,047.1	-634.1	-335.0	-60.6%
Fresno	2,038.0	3,534.6	-1,496.6	-148.2	-42.3%
Glenn	38.0	113.2	-75.2	-261.2	-66.4%
Humboldt	479.0	675.1	-196.1	-146.2	-29.1%
Imperial	208.0	589.1	-381.1	-211.3	-64.7%
Inyo	36.0	61.2	-25.2	-133.1	-41.2%
Kern	1,205.0	2,641.4	-1,436.4	-158.2	-54.4%
Kings	193.0	560.4	-367.4	-242.2	-65.6%
Lake	82.0	275.5	-193.5	-286.2	-70.2%
Lassen	36.0	100.4	-64.4	-216.0	-64.1%
Los Angeles	30,151.0	45,564.1	-15,413.1	-156.3	-33.8%
Madera	196.0	524.7	-328.7	-209.3	-62.6%
Marin	1,722.0	2,117.1	-395.1	-154.7	-18.7%
Mariposa	30.0	56.2	-26.2	-154.0	-46.6%
Mendocino	247.0	493.7	-246.7	-273.4	-50.0%

- Low Shortage (-5% to -20%)
- Medium Shortage (-20% to -35%)
- High Shortage (-35% to -50%)
- Severe Shortage (-50% or more)
- No Shortage/Surplus (-5% to 5%)
- Low Surplus (5% to 20%)
- Medium Surplus (20% to 35%)
- High Surplus (35% to 50%)
- Severe Surplus (50% or more)

Simulated Data

Data Overview

Transparent and Evidence-Based Inputs

DCA Licensing data (2014–2025)

HCAI License Renewal Survey data for FTE (2022–2025)

Education Data (IPEDS)

Provider Role assumptions (AAPD, ADA, CDC, NICE, etc.)

California population (California Department of Finance)

Preventive and Restorative/Treatment Needs (CDT Codes)

Subject Matter Experts

- **California Department of Public Health, Office of Oral Health**
  - Paula Lee, MPH, RDHAP; Dr. Shakalpi Pendurkar, DDS, MPH; Rosanna Jackson; Kimberly Steele; Victoria Owoyele, DrPH, MPH
- **University of California, San Francisco**
  - Dr. Beth Mertz, PhD

- Dr. Nader Nadershahi, DDS, MBA, EdD

Limitations

Overall Supply and Demand Model

- Assumptions may shift with policy changes
- Model is directional, not predictive at individual level

Demand Specific

- **Data Dependency:** Model requires high-quality, timely data on population oral health, which is often scarce.
- **Complexity:** More difficult to operationalize than simple ratio-based calculations.
- **Current Status:**
  - Most planning still relies on observed utilization and demand.
- **Future Requirement:** Development of information systems to routinely capture needs-based data is critical for adoption.

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Next Steps: A Comprehensive Workforce Planning Tool for Public Access

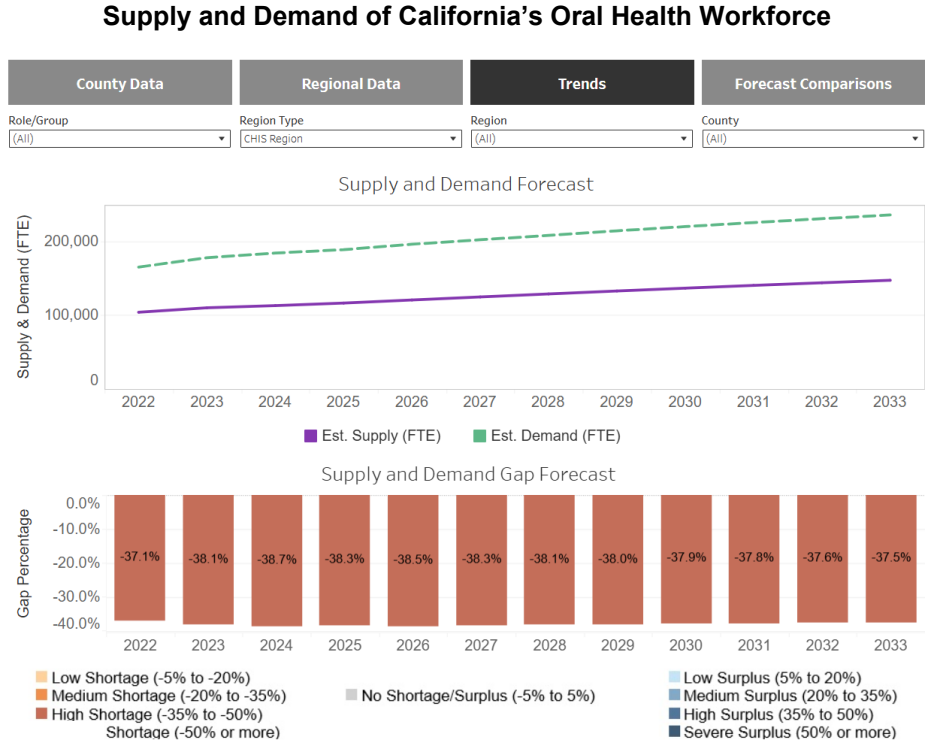
Next Steps

A Comprehensive Workforce Planning Tool

- Provides role- and geography-level analysis of current and future workforce
- Identifies anticipated gaps to address shortages
  - Enables informed funding and programmatic efforts
- Promotes equity by tracking progress toward state goals

Process Overview

Finalize	Validate	Build	Share
finalize assumptions, collect data	validate with experts	build the model	share results on HCAI's website



Simulated Data

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Thank You!

Questions?