

Priorities in Advancing Oral Health Equity

New Hampshire Oral Health Forum Series



CAPT (Ret.) Dean Coppola
Retired Dental Officer

#18: RADM Bill Bailey,
2010-2014

#15: RADM Bill Maas,
1997-2001

#13: RADM Skip Collins,
1991-1995

#11: RADM Bob Mecklenberg,
1981-1987

#17: RADM Chris Halliday,
2006-2010

#19: RADM Nick Makrides,
2014-2018

Dr. Steve Geiermann,
American Dental Association

#16: RADM Dushanka Kleinman,
2001-2006

#20: RADM Tim Ricks,
2018-2022

#14: RADM Steve Corbin,
1995-1997

Disclosure(s)

I have no disclosures regarding financial relationships, commercial interests, or funding from commercial support or external sources.

Where appropriate, I have referenced sources for the information provided.

Overview

- Overview of the U.S. Public Health Service
- Summary of COVID-19 and oral health, including impact on delivery of care and opportunities for the future
- Description of oral health disparities
- Dental workforce issues
- Overview of the forthcoming Surgeon General's Report on Oral Health

A Quick Overview of the USPHS



Photo by Kun Shen



In the Service of Health

“In Officio Salutis”



Who We Are

- **Our origins trace back more than 200** years to when the U.S. Marine Service acted to contain the spread of disease from sailors returning from foreign ports and provide care to new immigrants
- **One of eight uniformed services**, and the only one dedicated solely to protecting America's public health
- **Specialties include** physicians, dentists, nurses, pharmacists, clinical and rehabilitation therapists, dietitians, engineers, environmental health and health services officers, scientists, and veterinarians
- **Led by the Assistant Secretary for Health**, with operations and activities overseen by the U.S. Surgeon General
- **Inspired by the call to serve vulnerable and underserved communities** through addressing public health issues

What We Do

Protect, promote and advance the health and safety of our nation.

- **Provide essential health services** to vulnerable and underserved populations.
- **Serve on the frontline of public health emergencies**
- **Lead public health programs and policy development** throughout the federal government.
- **Advance innovation and science**



USPHS Dentist Locations



National Institutes of Health



COMMISSIONED CORPS
OF THE U.S. PUBLIC HEALTH SERVICE

What a USPHS dentist does

- **Delivers critical dental services** to vulnerable and underserved populations including American Indians and Alaska Natives (Indian Health Service), inmates (Federal Bureau of Prisons), immigrants and detainees (Immigration and Customs Enforcement Health Service Corps), service members (U.S. Coast Guard), and to poor and underserved across the country through community health centers (Health Resources and Services Administration)
- **Manages population-based oral health programs** such as Medicaid (Centers for Medicare and Medicaid Services), national surveillance, infection control guidance, and community water fluoridation (Centers for Disease Control and Prevention), oral health-related grants (HRSA), etc.
- **Conducts Research** including basic laboratory, translational, and clinical research (National Institute of Dental and Craniofacial Research)
- **Regulates Dental Products** such as dentrifices (Food and Drug Administration)

Oral Health Interconnectivity

“5-eyes” Colleagues:

- Canada
- New Zealand
- Australia
- U.K. (England, Ireland, Scotland, Wales)



Global



Organized Dentistry



www.NDHAonline.org



Regulatory



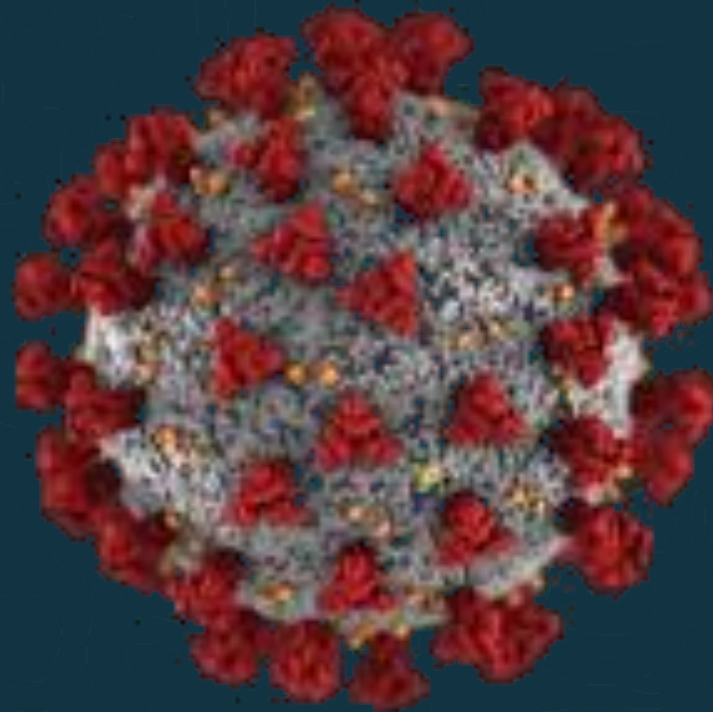
Federal

USPHS Categories:

- Dietitians
- Engineers
- Environmental Health
- Health Services Officers
- Nurses
- Pharmacists
- Physicians
- Scientists
- Therapists
- Veterinarians



COVID-19 & Oral Health



Opportunities Ahead

- **Tele-dentistry**
 - Screening
 - Specialty Care
- **Integration of Oral Health and Overall Health**
 - Education: HPV, Influenza, etc.
 - Referral
 - Point of Care Testing
- **Expansion of Alternative Dental Workforce Models**
- **Minimally Invasive Dentistry**
 - Silver Diamine Fluoride
 - Interim Therapeutic Restorations



Opportunities Ahead – HPV Vaccinations

Number of HPV-Associated and HPV-Attributable Cancer Cases per Year			
Cancer site	Average number of cancers per year in sites where HPV is often found (HPV-associated cancers)	Percentage probably caused by any HPV type ^a	Number probably caused by any HPV type ^a
Cervix	12,143	91%	11,000
Vagina	867	75%	700
Vulva	4,114	69%	2,800
Penis	1,348	63%	900
Anus ^b	7,083	91%	6,500
Female	4,751	93%	4,400
Male	2,332	89%	2,100
Oropharynx	19,775	70%	14,000
Female	3,530	63%	2,200
Male	16,245	72%	11,800
TOTAL	45,330	79%	35,900

<https://www.cdc.gov/cancer/hpv/statistics/cases.htm>



Oral Health Inequities





EQUALITY

EQUITY

What is “health *inequity*?”

Concept	Research question	Application to policy or program planning
Disparity	Is there a difference in health status rates between population groups?	Is the difference too large?
Inequity	Is the disparity in rates due to differences in social, economic, environmental or healthcare resources?	Is the distribution of resources <i>fair</i> ?
Inequality*	How do rates vary with the amount of the resource, and how is the population distributed among resource groups?	Can the distribution of the population among resource groups and/or the rates within resource groups be influenced?
Burden	How many people are affected in specific groups and in the total population?	How many people would benefit from interventions?

https://www.cdc.gov/nchs/ppt/nchs2010/41_klein.pdf



When is a health **disparity** an **inequity**?

- One in six **American Indian/Alaska Native** (AI/AN) adults aged 45 years and older experiences subjective cognitive decline, the self-reported experience of worsening or more frequent confusion or memory loss.
- **African Americans** aged 18–49 years are twice as likely to die from heart disease as whites, and African Americans aged 35–64 years are 50% more likely to have high blood pressure than whites.
- **Americans living in rural areas** are more likely to die from heart disease, cancer, unintentional injuries, chronic lower respiratory disease, and stroke than Americans in urban areas.
- **Native Americans** are twice as likely as whites to have diabetes. For 2 in 3 Native Americans with kidney failure, diabetes is the cause.

<https://www.cdc.gov/publichealthgateway/didyouknow/topic/healthdisparities.html>



Oral Health Disparities Across the Lifespan

	Caries Prevalence, 2-5 years	Untreated Decay, 2-5 years	Caries Prevalence, 6-11 years	Untreated Decay, 6-11 years	Caries Prevalence, 12-19 years	Untreated Decay, 12-19 years	Untreated Decay, 65+ years	Total tooth loss 65+ years
<i>Race/Ethnicity</i>								
White, non-Hispanic	17.9%	6.7%	13.4%	4.3%	54.3%	15.6%	13.4%	15.2%
Black, non-Hispanic	28.0%	14.8%	21.6%	7.1%	57.1%	20.4%	29.1%	30.7%
Mexican American	32.9%	15.1%	24.5%	7.5%	68.9%	20.8%	35.9%	16.7%
<i>Income</i>								
<200% FPL	29.6%	13.9%	22.0%	6.9%	65.0%	21.6%	28.6%	28.6%
≥200% FPL	15.7%	6.0%	12.0%	3.5%	48.7%	11.1%	9.9%	10.7%

<https://www.cdc.gov/oralhealth/publications/OHSR-2019-index.html>



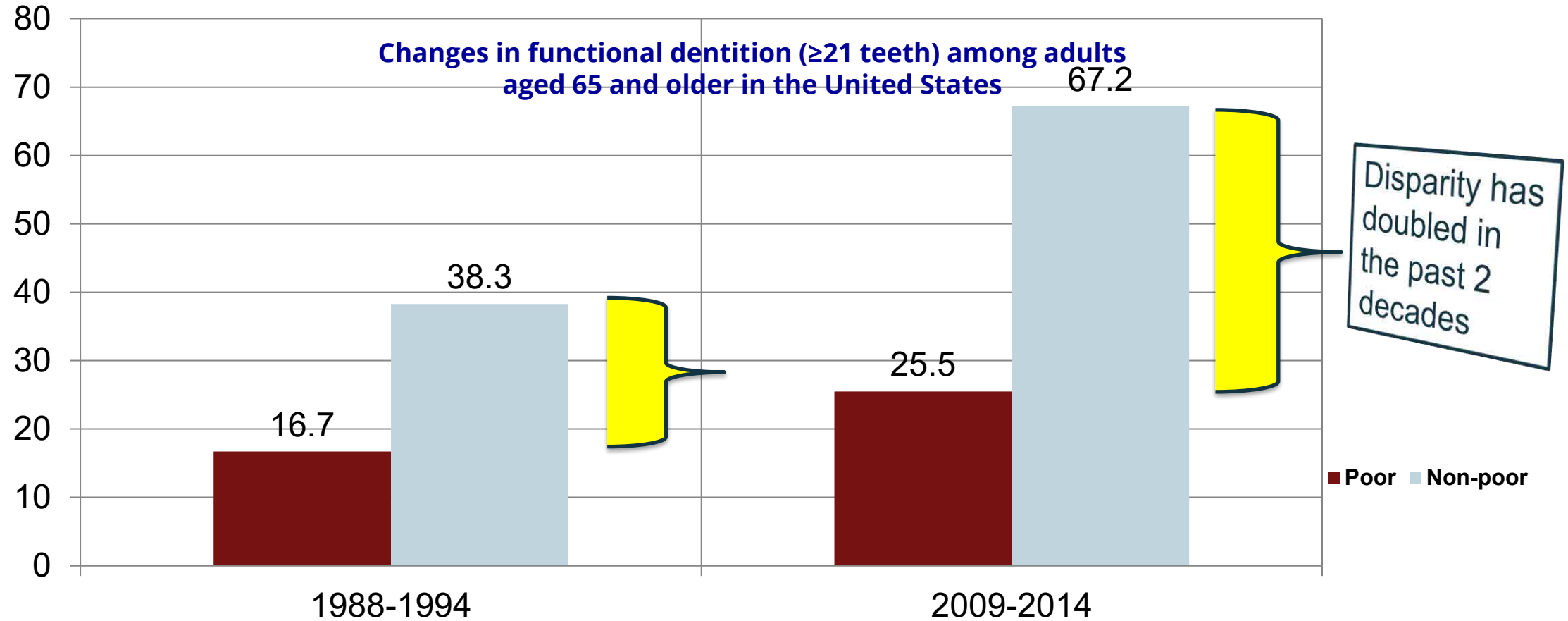
Inequities among American Indians/Alaska Natives

- AI/AN children and youth have twice the prevalence of caries experience as the U.S. population.
- AI/AN children, youth, and adults have 2 – 4x the rate of untreated dental caries, an indicator of access to dental services.
- AI/AN adults also disproportionately suffer from periodontal disease, missing teeth, and self-reported food avoidance due to oral pain.

Comparing AI/AN Oral Health to the rest of the U.S.

Age	How do American Indians & Alaska Natives compare to the rest of the U.S. with dental disease?	
2-5	Decayed & filled teeth	4x as many
3-5	Untreated tooth decay/cavities	4x as much
6-8	Untreated tooth decay/cavities	5x as much
13-15	Ever had a cavity	2x as many
13-15	Untreated tooth decay/cavities	3x as much
35+	Untreated tooth decay/cavities	2½x as much
35+	Severe gum disease	2x as much
35+	Avoid food because of toothaches	2x as much

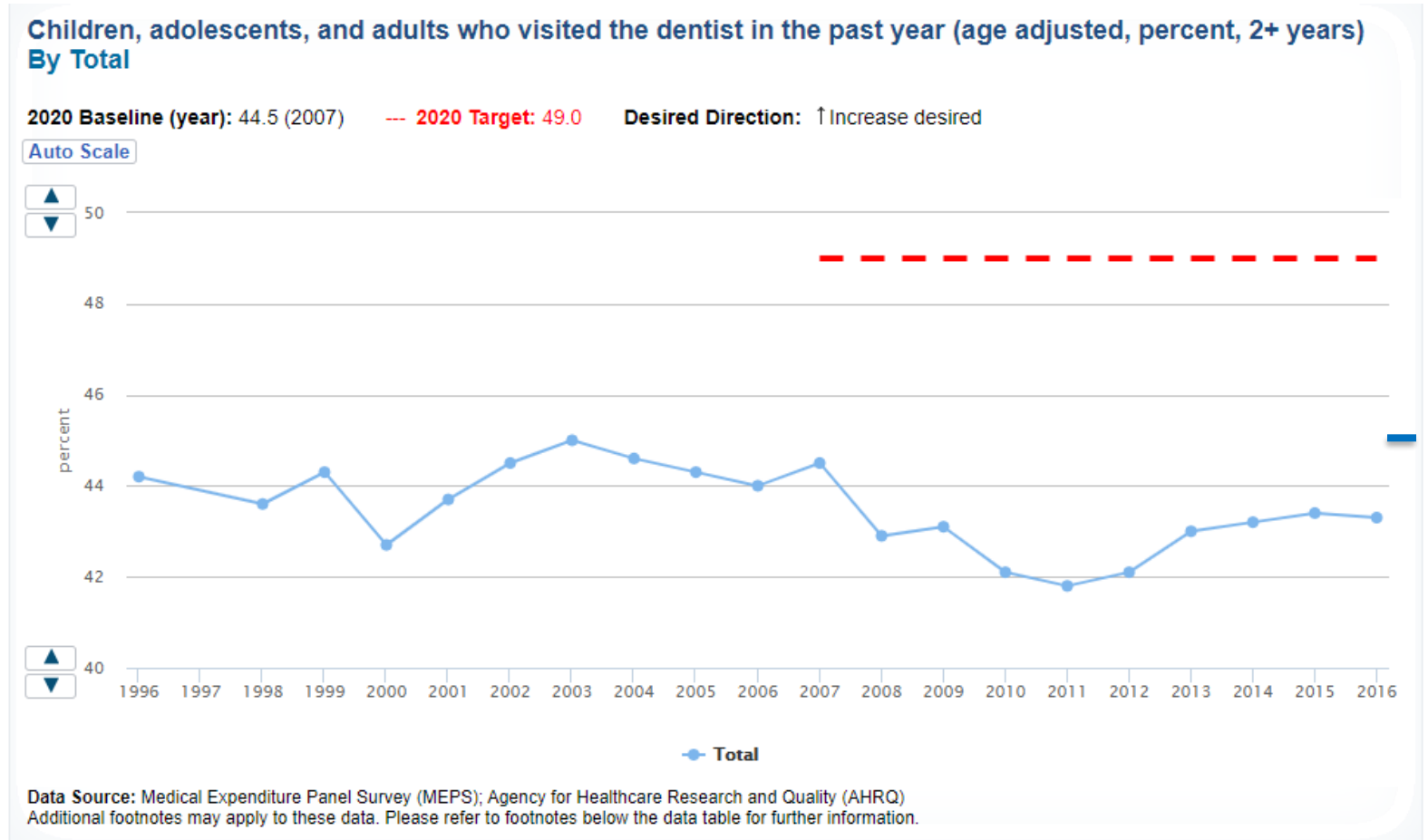
Older Adult Oral Health Disparities



Dye et al. <https://pubmed.ncbi.nlm.nih.gov/17633507/>

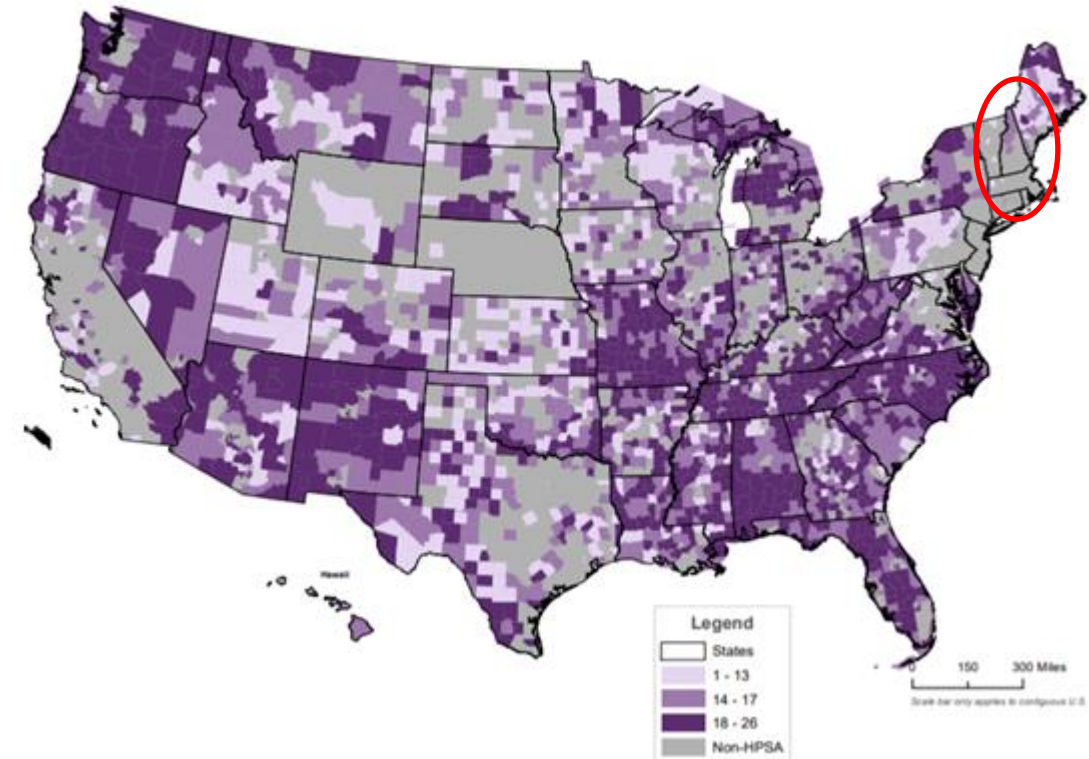
Access to Care in the U.S.

Year	Access %
1996	44.2%
2000	42.7%
2003	45.0%
2005	44.3%
2010	42.1%
2016	43.3%
HP2020 Goal	49.0%
HP2030 Goal	45.0%



Dental Health Professional Shortage Areas (HPSAs)

- Over 60 million people living in dental HPSAs
- 6,559 dental health professional shortage areas (HPSAs)
- 10,853 practitioners needed to remove HPSA designation

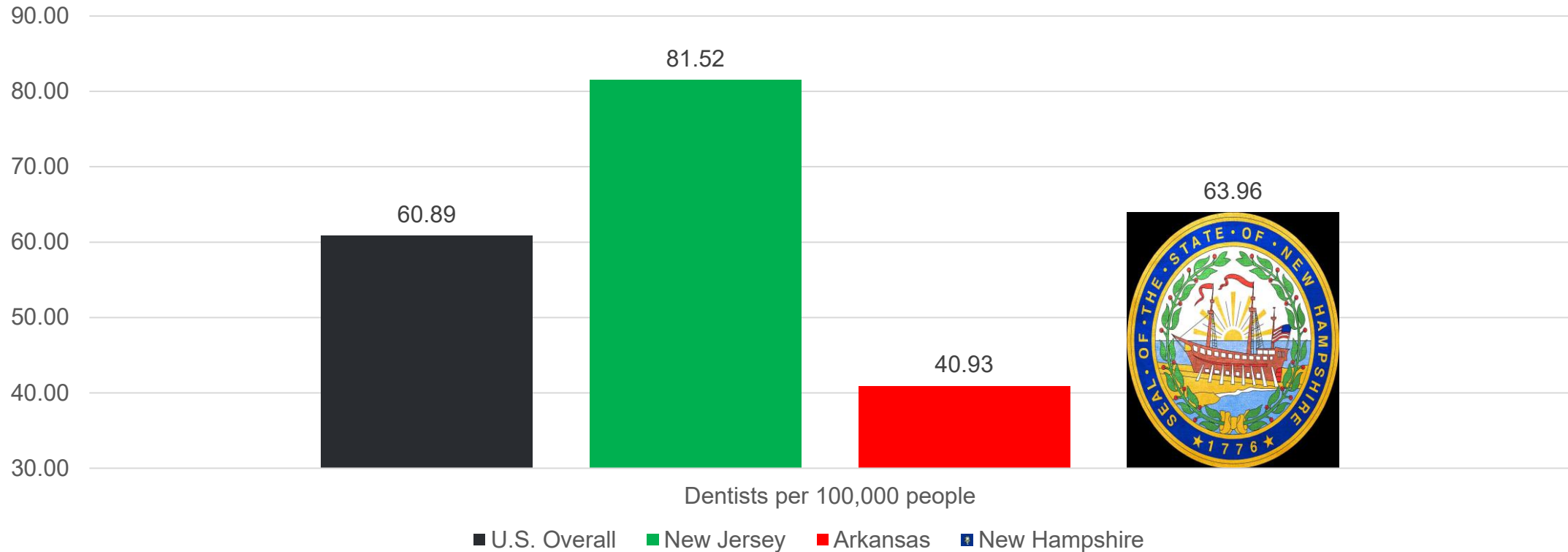


<https://data.hrsa.gov/topics/health-workforce/shortage-areas>



Number of Dentists Per Capita

Dentists Per Capita, 2015

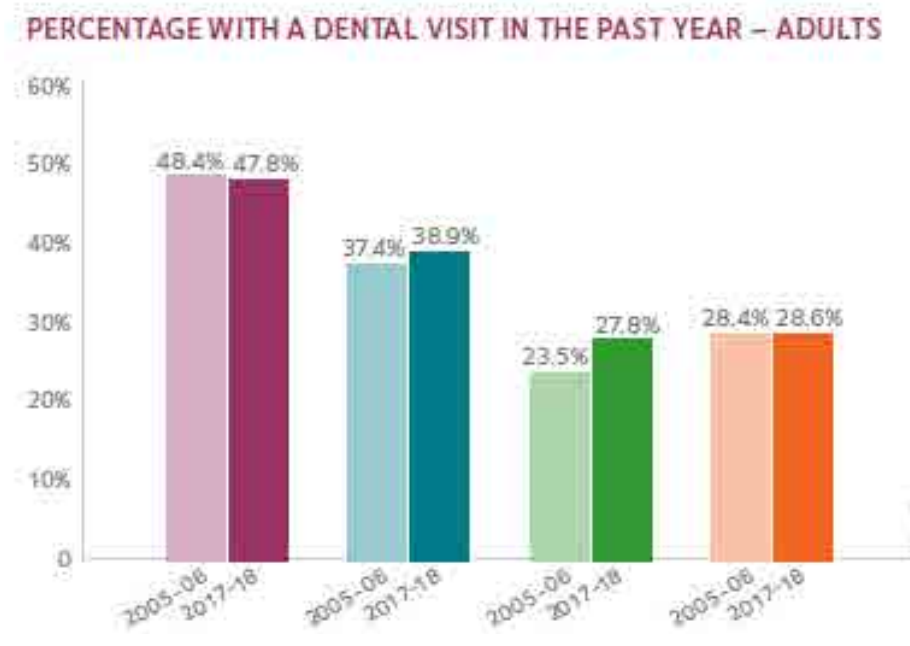
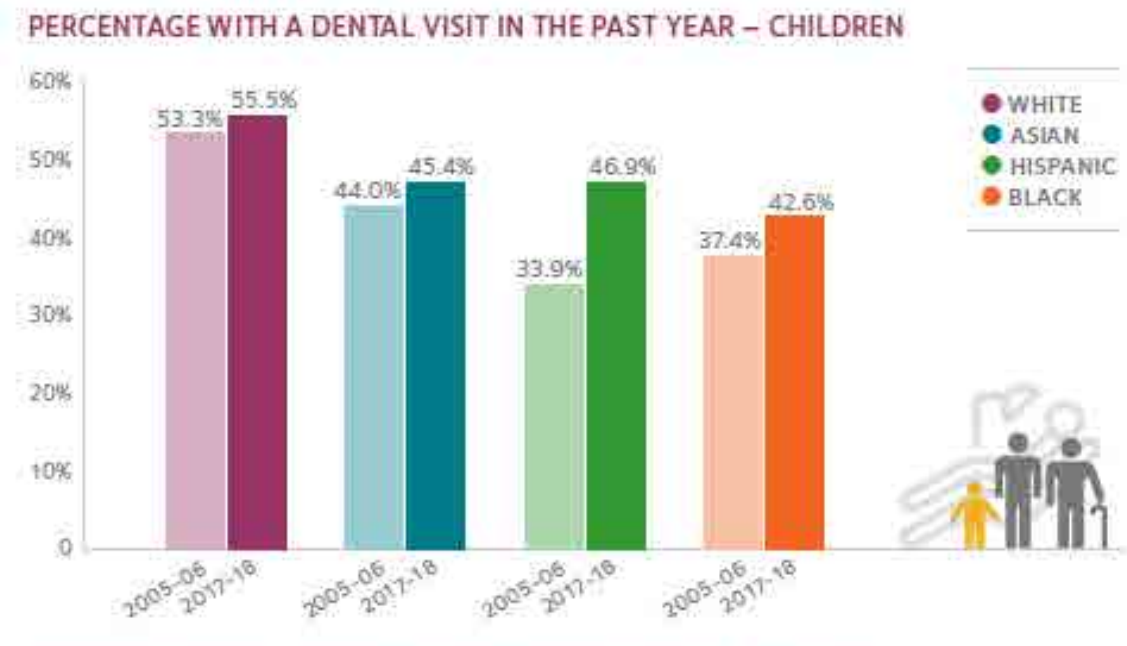


<https://www.cdc.gov/nchs/data/hs/2016/086.pdf>



Maldistribution of Dental Access by Race/Ethnicity

NH: 3% Hispanic, 2% AA, 3% Asian-American, 94% White



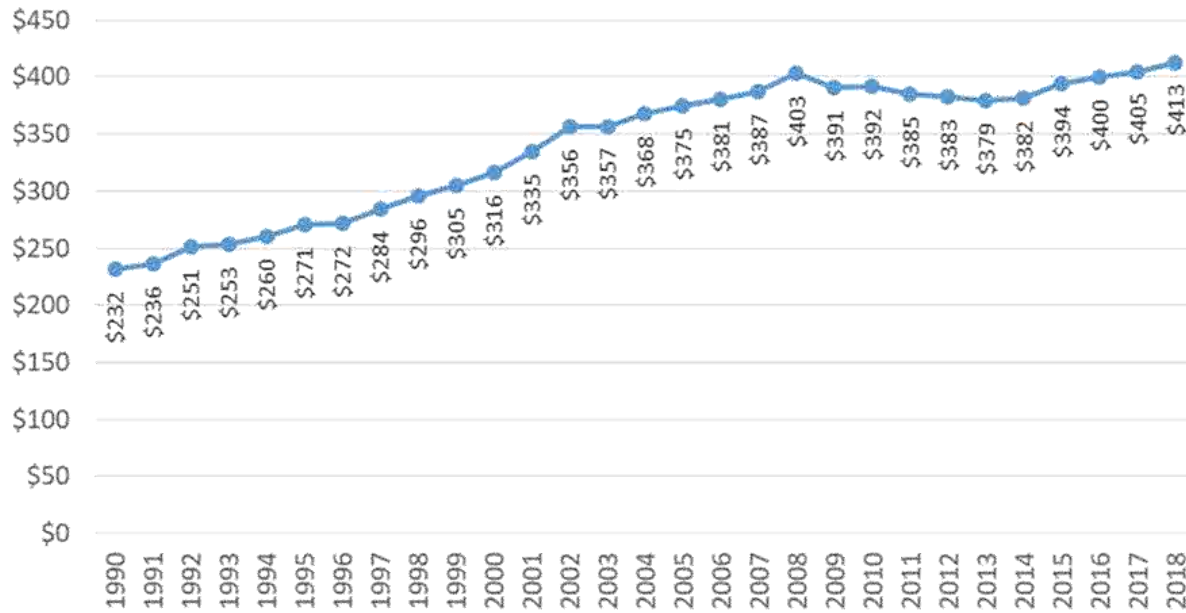
https://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIgraphic_0421_4.pdf?la=en



Effect of Oral Health Costs

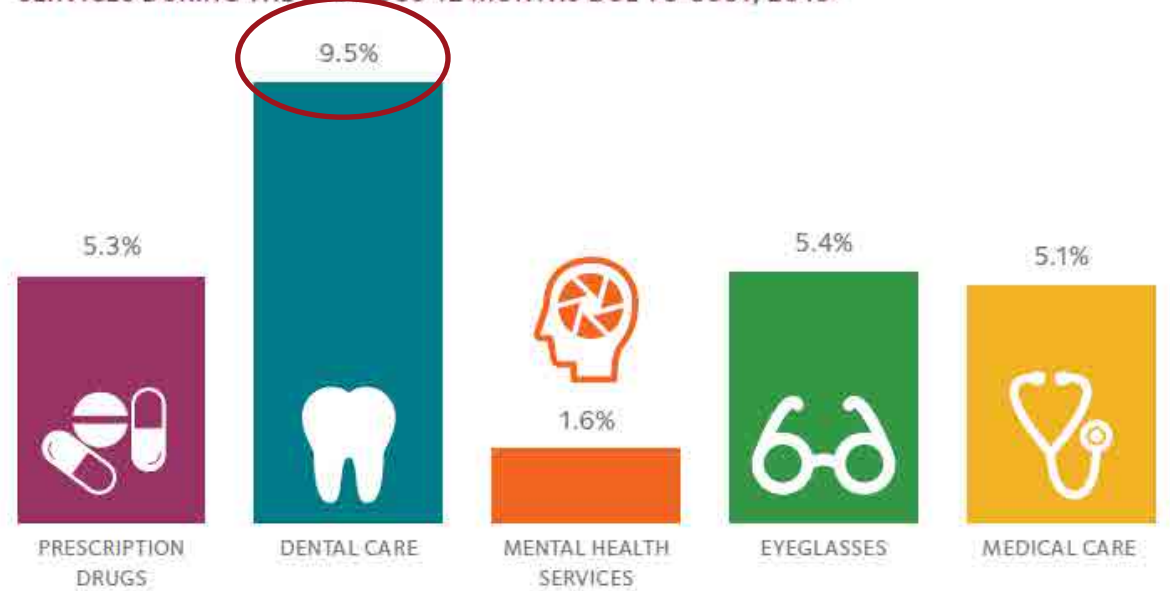
NH: \$76,768 median household income, 8th highest, but 7.3% living in poverty

Total Per-Capita Dental Spending in the U.S. (Inflation Adjusted)



DENTAL CARE consistently ranks at the top in terms of health care services with affordability challenges.

PERCENTAGE OF THE POPULATION WHO NEEDED BUT DID NOT OBTAIN SELECT HEALTH CARE SERVICES DURING THE PREVIOUS 12 MONTHS DUE TO COST, 2015²

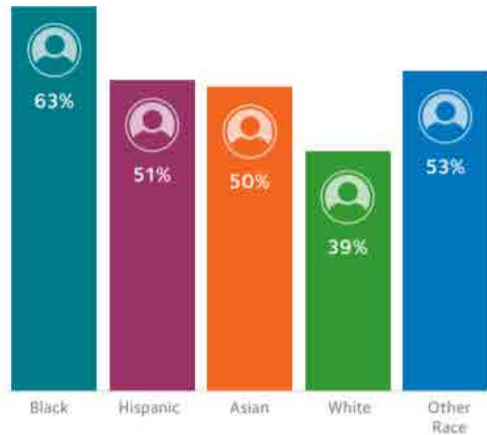


https://www.ada.org/en/science-research/health-policy-institute/publications/infographics?utm_source=adaorg&utm_medium=hpifeaturedbox&utm_content=infographics

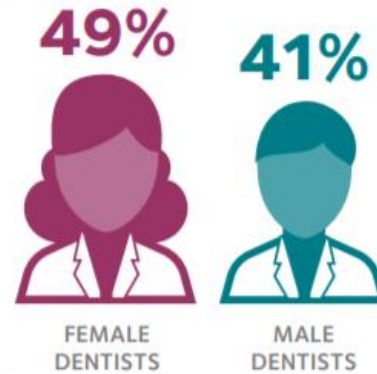
Medicaid Participation Rates

Dentist Participation in Medicaid

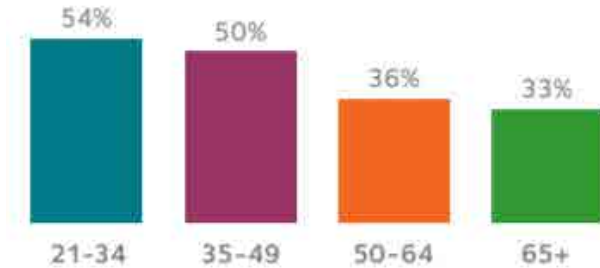
BY RACE/ETHNICITY



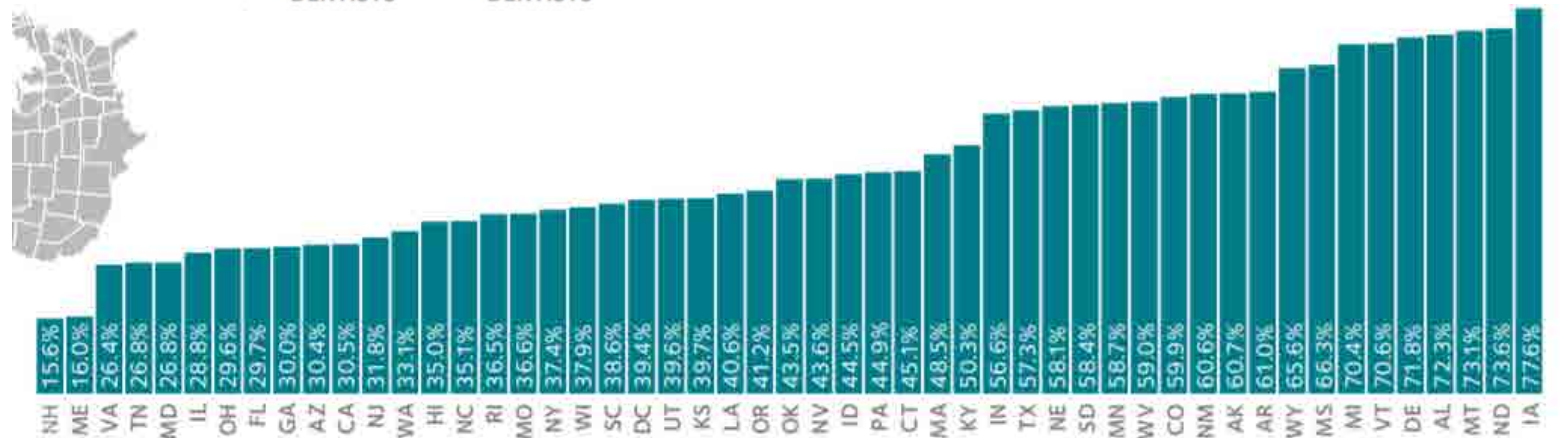
BY GENDER



BY AGE

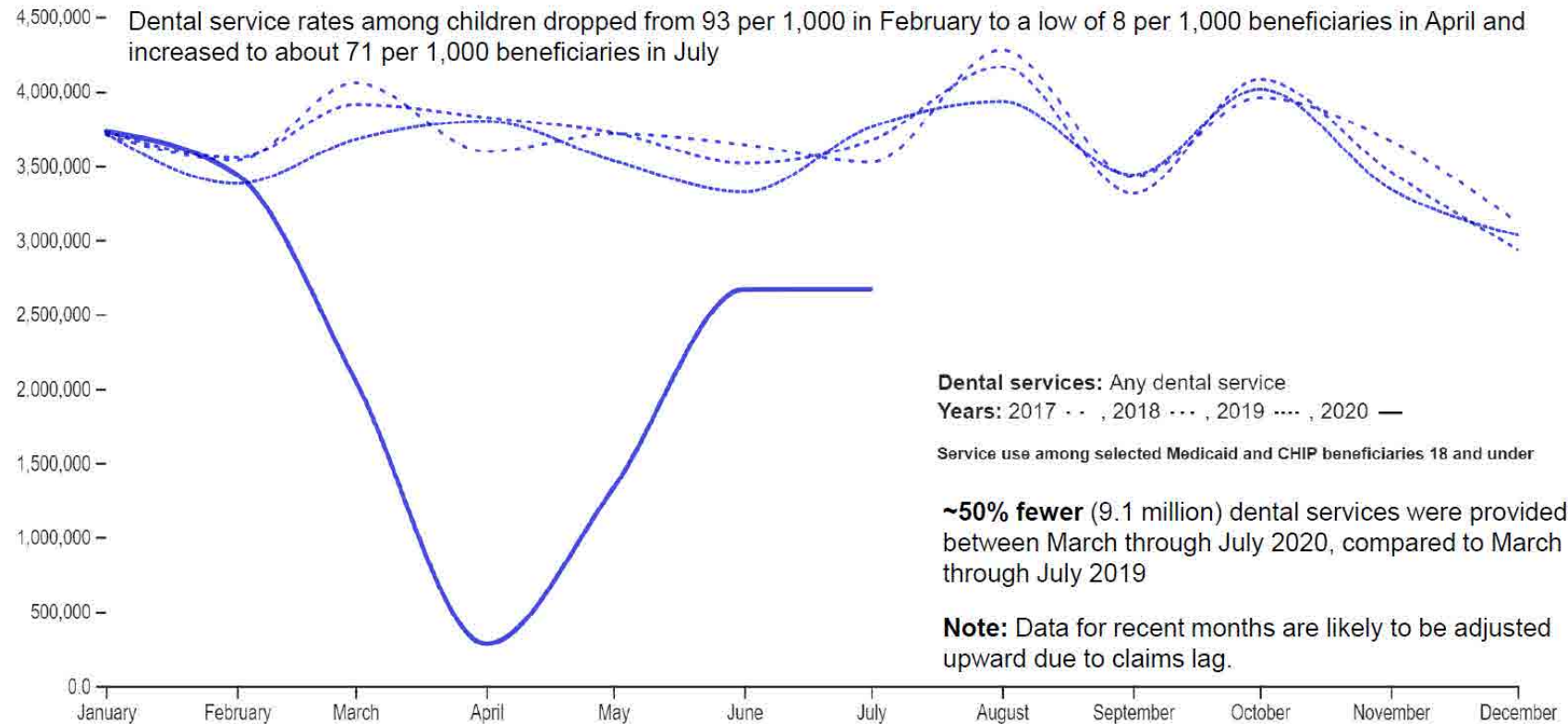


ADA Health Policy Institute, 2021:
https://www.ada.org/en/science-research/health-policy-institute/publications/infographics?utm_source=adaorg&utm_medium=hpifeaturedbox&utm_content=infographics



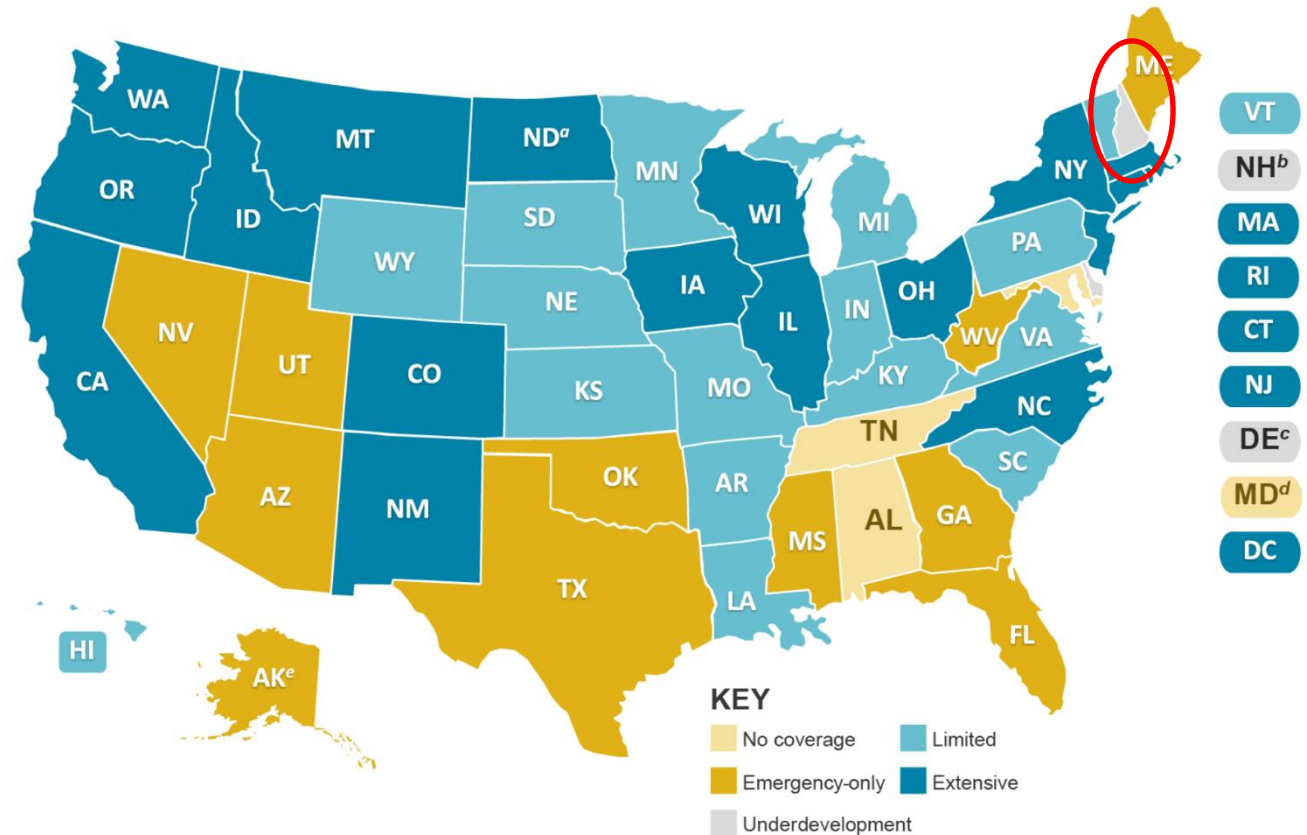
Impact on Medicaid

Preliminary data show the number of dental services for children declined substantially in April, increased through July, but are still below prior years' rates



Adult Medicaid Dental Benefits

- 74 million Americans lack dental coverage.
- As of 2020, only 18 states have extensive dental benefits as part of Medicaid.
- “Extensive” or “Comprehensive” means more than 100 services covered.



<https://dentaquest.com/oral-health-resources/adult-dental-benefit/>

Factors Affecting Access to Dental Care

GRANT MAKERS OF HEALTH

Healthy People Social Determinants of Health

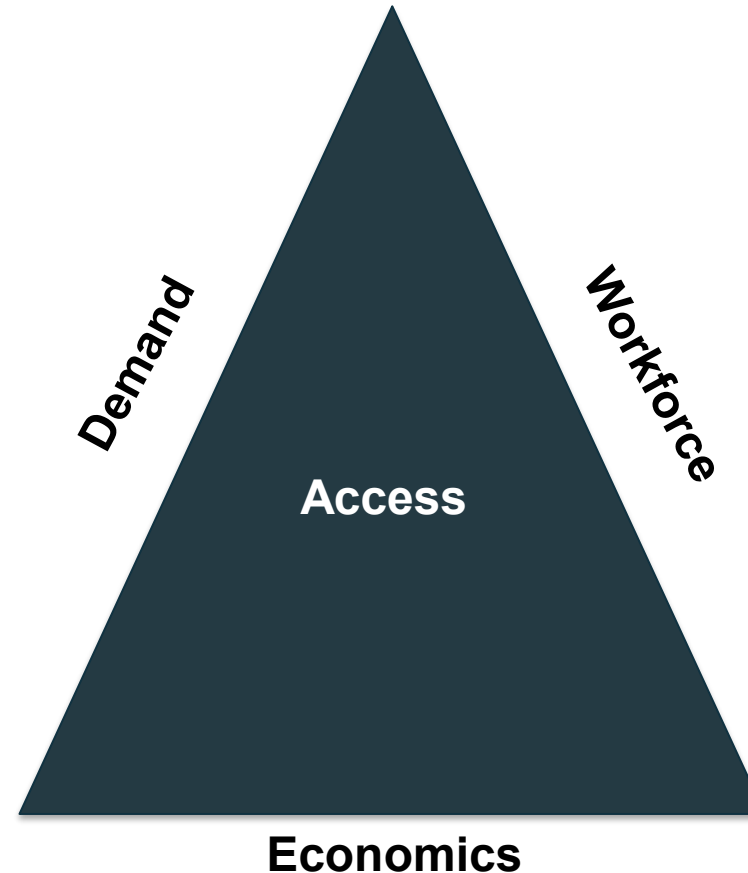
- **Economic Stability**
 - Poverty
 - Employment
 - Food Security
 - Housing Stability
- **Education**
 - High School Graduation
 - Enrollment in Higher Education
 - Language and Literacy
 - Early Childhood Education & Development
- **Social and Community Context**
 - Social Cohesion
 - Civic Participation
 - Discrimination
 - Incarceration
- **Health and Health Care**
 - Access to Health Care
 - Access to Primary Care
 - Health Literacy
- **Neighborhood and Built Environment**
 - Access to Healthy Foods
 - Quality of Housing
 - Crime and Violence
 - Environmental Conditions

SOURCE: <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health#two>



Other Drivers of Inequities

- Oral health literacy/education
- Lack of culturally competent care
- Transportation
- Other social determinants (housing, food availability, etc.)
- Other health problems
- And many more.....





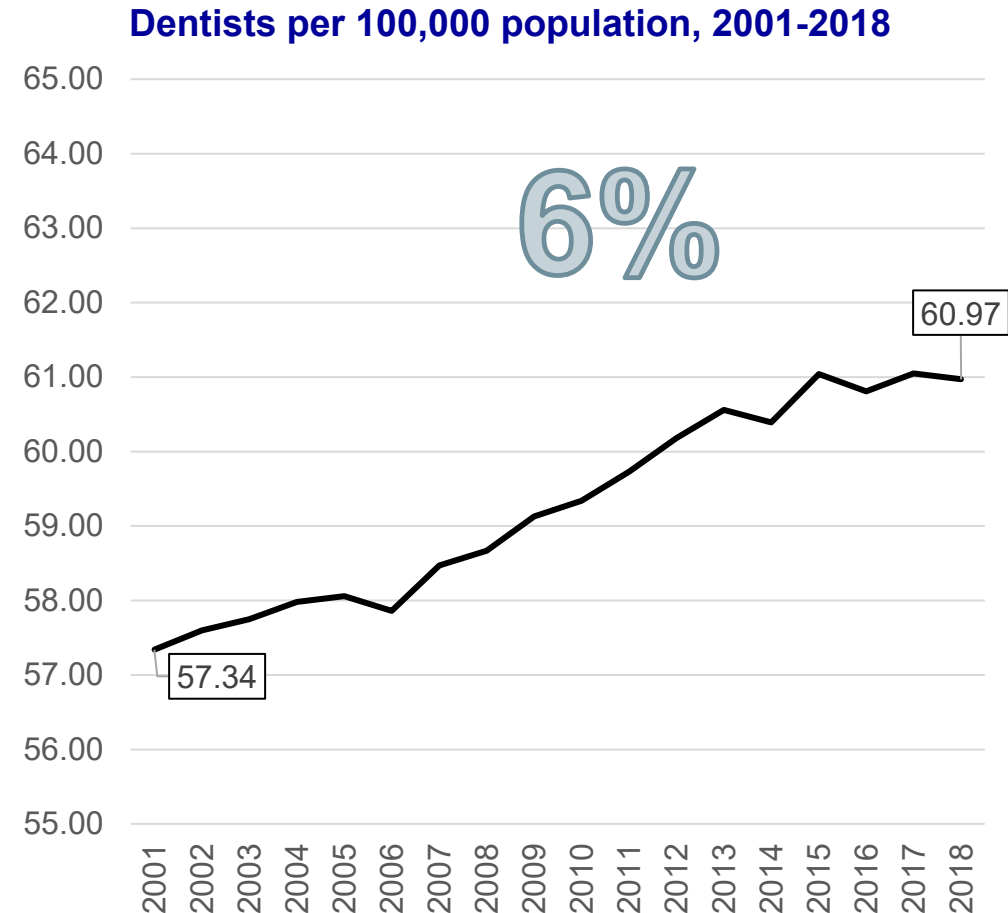
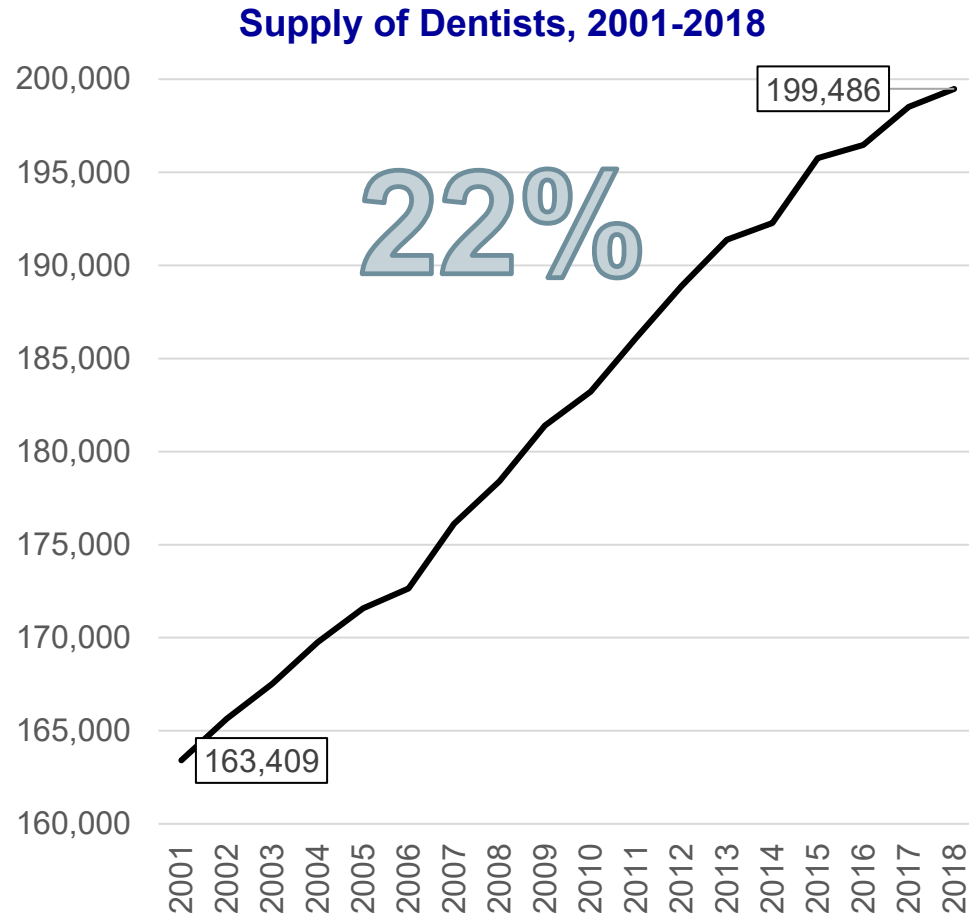
EQUALITY

EQUITY

Workforce Issues



Workforce Issues – where are dentists going?



American Dental Association, Health Policy Institute. Supply of Dentists in the U.S.: 2001-2018, February 2019.

Cost of Dental Education

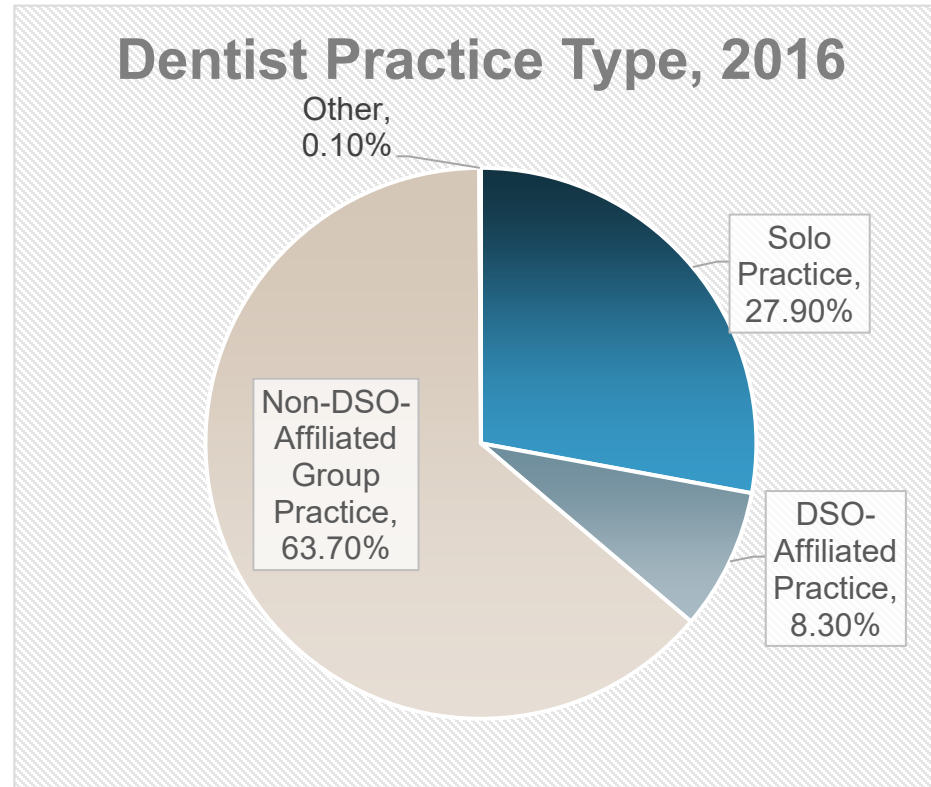


- **\$292,169** - Average educational debt for the Class of 2019
- **39%** - Percentage of 2019 dental school graduates owing >\$300,000
- Assuming \$300,000 debt paid over 25 years:
 - **\$2,314** per month for 25 years
 - **\$694,239** total repayment
 - **\$394,239** total interest cost

https://www.adea.org/GoDental/Money_Matters/Educational_Debt.aspx

https://www.adea.org/GoDental/Money_Matters/Sample_repayment_amounts.aspx

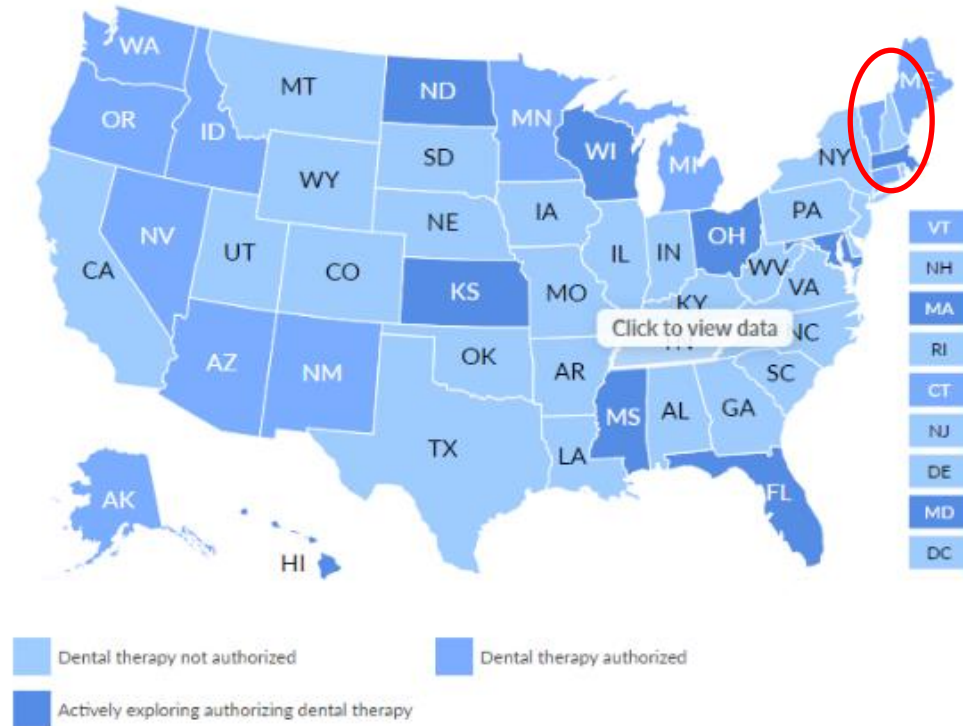
Changing Workforce Models – Group Practice



American Dental Association, Health Policy Institute. *Supply of Dentists in the U.S.: 2001-2018, February 2019.*

Changing Workforce Models - Therapy

Dental therapy policies by state

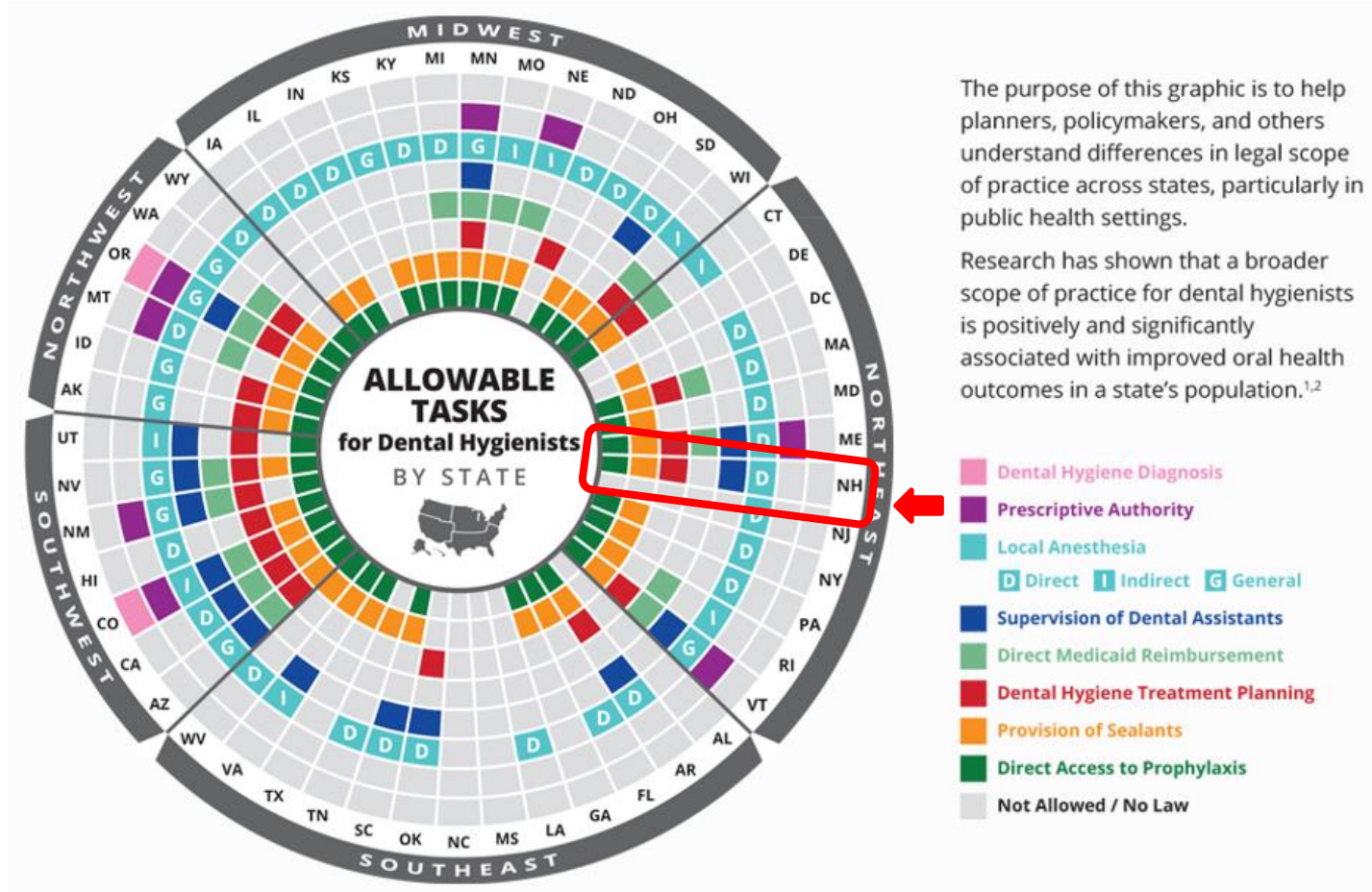


- Begun in 2000
- No universal model
- 12 states have authorized therapy
 - 2004 – Alaska
 - 2009 – Minnesota
- 9 states “actively exploring authorizing dental therapy”

<https://www.pewtrusts.org/en/research-and-analysis/articles/2016/09/28/states-expand-the-use-of-dental-therapy>



Changing Workforce Models – Dental Hygienists

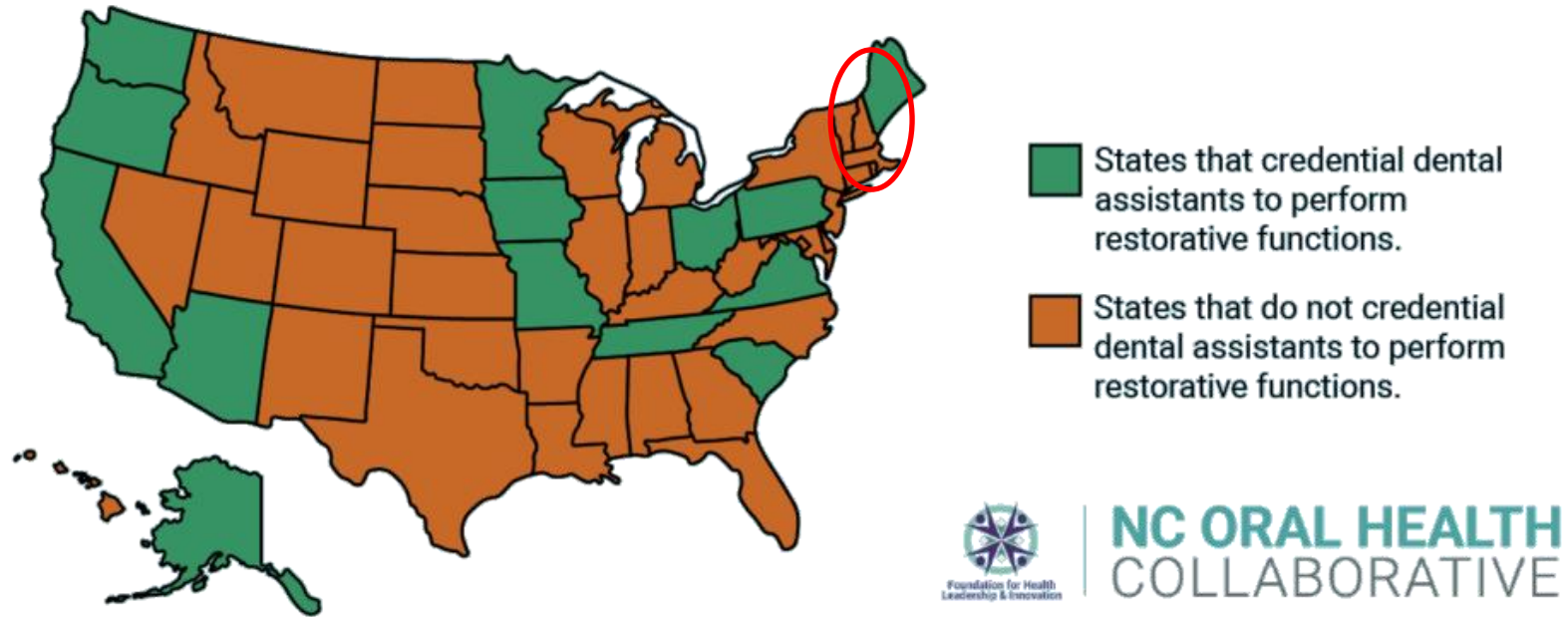


<https://oralhealthnc.org/ncohcs-policy-brief-workforce-utilization/>

Changing Workforce Models — Expanded Function Dental Assistants

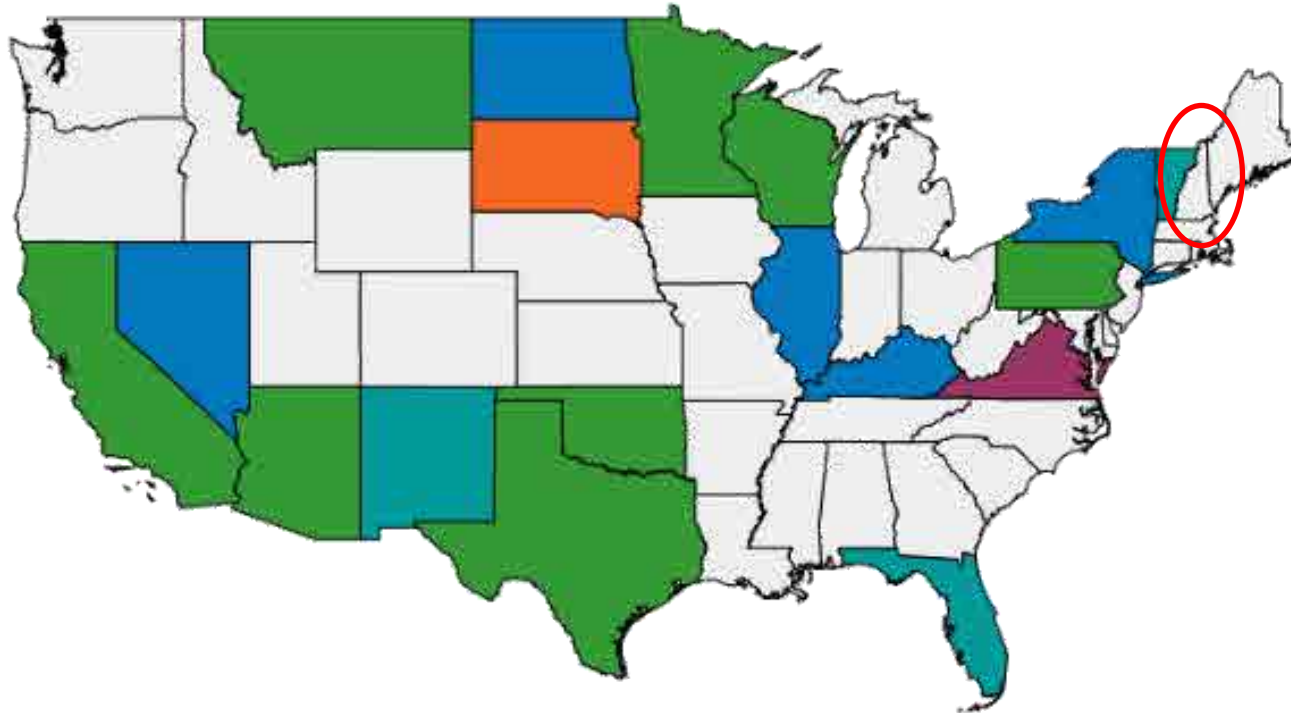
Dental Assistant Restorative Functions

Where can dental assistants be credentialed for expanded functions?



<https://oralhealthnc.org/ncohcs-policy-brief-workforce-utilization/>

Changing Workforce Models – Community Dental Health Coordinators



STATUS

- FULL FUNCTION CDHC ON-SITE
- CDHC HELP NAVIGATE TO PROVIDERS
- PILOTING A CDHC PROGRAM
- VISITING CDHC
- CDHC PROGRAMS IN DEVELOPMENT

<https://www.ada.org/en/public-programs/action-for-dental-health/action-for-dental-health-map>



The Surgeon General's Report



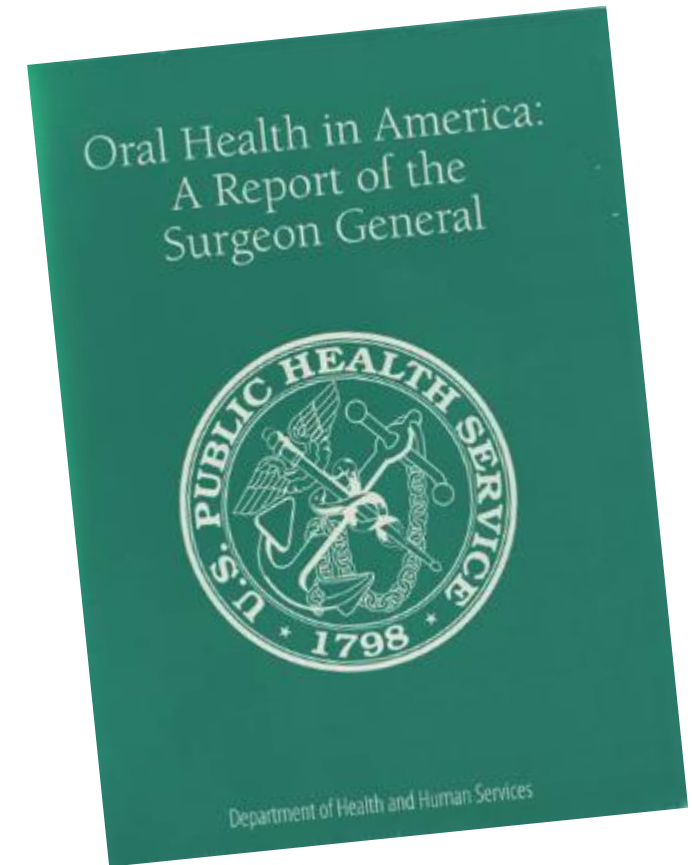
Revisiting the 2000 Report

- First-ever report commissioned by the Surgeon General on oral health
- Available at:

<https://www.surgeongeneral.gov/library/reports/index.html>

- Major Message:

Oral Health means much more than healthy teeth, and is integral to the general health and well-being of all Americans.



Framework for the Upcoming Report

- Effect of Oral Health on the Community, Overall Well-being, and the Economy
- Oral Health Across the Lifespan – Children & Adolescents
- Oral Health Across the Lifespan – Adults & Older Adults
- Oral Health Integration, Workforce, and Practice
- Effects of Addiction and Mental Health Disorders on Oral Health
- Emerging Technologies and Promising Science to Transform Oral Health



<https://www.nidcr.nih.gov/news-events/2020-surgeon-generals-report-oral-health>



Thank You!

Timothy L. Ricks, DMD, MPH, FICD
Rear Admiral, U.S. Public Health Service
Assistant Surgeon General/Chief Dental Officer
(301) 549-2629
USPHSCDO@ihs.gov



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