

Authors

Sean Boynes, DMD, MS

President
Dental Medicine Consulting

Hayam Megally, BDS, MPH, CPH

Science Writer
American Institute of Dental Public Health

Don Clermont, MPH

Lead Analyst
American Institute of Dental Public Health

Valerie Nieto, RDH, MS

Clinical Lecturer
University of Michigan School of Dentistry
Research Specialist
The American Institute of Dental Public Health

Helen Hawkey, RDH, PHDHP

Executive Director
Pennsylvania Coalition for Oral Health

Annaliese Cothron, DHSC, MS, CPH

Executive Director
American Institute of Dental Public Health

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David Capelli, DMD, MPH, PhD, Professor and Chair of the Department of Biomedical Sciences at the University of Nevada Las Vegas

Candace Chen, MD, MPH, Associate Professor, George Washington University

Raul Garcia, DMD, MMedSc, FACD, Professor and Chair, Department of Health Policy and Health Services Research at Boston University

Lauren Wagner, BS, data visualization of maps and charts

Editorial Team

Grace Linn, MA, BS, BA

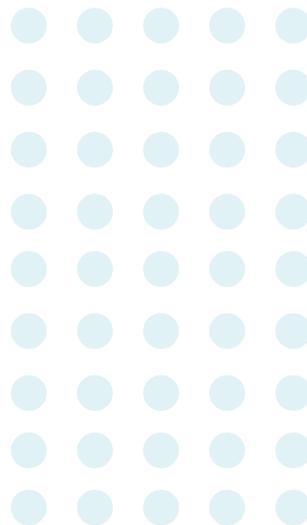
Communication Lead
American Institute of Dental Public Health

Kristina Lusk

Communication Specialist
American Institute of Dental Public Health

Amber Shaver, MS

Biostatistician
American Institute of Dental Public Health



The Financial and Policy Impacts of the COVID-19 Pandemic on U.S. Dental Care Workers

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Research Main Findings

Loss of Dental Health Care Workers (DHCWs) will result in tax revenue and labor income decreases as well as shortages in Medicaid and Medicare provider networks

- States that have not fully rebounded from 2020 workforce shortages lost \$66.5M in annual state income tax revenue, an average of \$3.32M per state affected.
- States with above average rural populations had a 3.2% decline in DHCWs per population ratio. Attrition of providers in rural areas resulted in the loss of \$340k per dentist in rural labor income that could be spent in those communities.²
- Increasing the number of dentists that participate in Medicaid and Medicare programs has proven to be challenging.³⁻⁴ The decrease in available DHCWs per population ratio was most significant in states that recently expanded Medicaid adult dental coverage (12.2% per 100,000 population).

There are fewer DHCWs today than before the COVID-19 pandemic

- The U.S. is experiencing a reduction in DHCWs since the onset of the COVID-19 pandemic. All dental profession types decreased in number, and none has completely returned to pre-pandemic levels.
- Dental hygienist attrition is most significant among DHCWs, and the group is comparatively farthest from returning to full capacity.
- Dental assistants lost a sizable portion of the workforce that has not yet rebounded. Despite this decrease, projections indicate dental assistants to be one of the most in-demand professions over the next decade.

While wages have slowly increased for DHCWs since 2020, rates remain comparatively low and may be driving workforce shortages

- Wage increases in dentistry (2–3%) are slightly below the U.S. average of annual pay raise rates (3.2%). Low compensation, poor work flexibility, and lack of health benefits continue to be cited as reasons for leaving the dental workforce.¹
- Annual salary for employed dentists decreased 5% from 2020 to 2021 resulting in a combined \$660M of lost earnings.





Background and Purpose

The COVID-19 pandemic negatively affected oral health care teams across the U.S. Beginning in March of 2020, dental care was considered non-essential health care, thereby canceling non-emergency dental procedures for several months. By June of 2020, four months into the pandemic, only one-third of dental offices were operating normally, while the remaining two-thirds were either closed or seeing far fewer patients.⁹

The shut down of dental clinics, coupled with patients fearing for their safety when clinics reopened, resulted in dental practitioners being furloughed or permanently unemployed. Now, two years later, the long-term impacts on the dental health care workforce can be examined.

The purpose of this research brief is two-fold:

1. Evaluate trends and differences of the dental health care workforce before and after the onset of the COVID-19 pandemic.
2. Assess the impact of dental health care worker (DHCW) shortages by state and geographic region.

By June of 2020, four months into the pandemic, only one-third of dental offices were operating normally, while the remaining two-thirds were either closed or seeing far fewer patients.



Employment Trends

by Dental Health Care Worker Profession Type

To evaluate the impact on workforce numbers and wages, data from the U.S. Bureau of Labor Statistics (US-BLS) Occupational Employment and Wage Statistics were analyzed (Figure 1).

Registered Dental Hygienists (RDHs)

In 2020, the total number of RDHs decreased by 12.1% nationally, with just over half of these (6.5%) returning to the workforce by the end of 2021. Cited reasons for not returning include lack of childcare, work/life balance, decreased satisfaction with career choice, vaccination mandates, and low compensation.⁵⁻⁹ As a result, many practices and dental service organizations (DSOs) reported staffing shortages. According to the American Dental Association Health Policy Institute (ADA-HPI), 90% of hiring dentists report significant challenges in filling staffing vacancies.⁹⁻¹¹

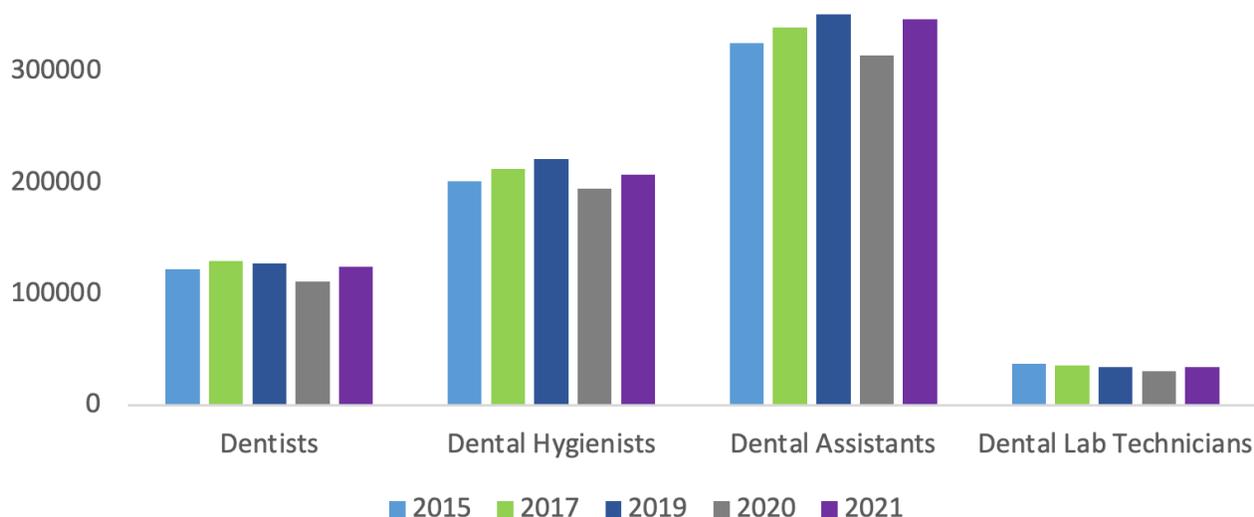
Dental Assistants (DAs)

The pandemic created a 10.5% reduction of DAs throughout 2020. In 2021, employment numbers were within 1.2% of pre-pandemic numbers; however, dentists reported difficulty finding and hiring dental assistants.¹²⁻¹³ The US-BLS Labor Outlook reports that the demand for dental assistants will increase by 11% through 2029, more than the average of all other U.S. occupations.¹⁴⁻¹⁵

Dental Lab Technicians (DLTs)

DLTs experienced the quickest workforce recovery after the onset of the pandemic, compared to all DHCWs. After losing 10.6% of their workforce in 2020, DLTs have nearly made a full recovery. Even though there have been significant advancements in technology, decreased number of dental laboratories, and decreased CODA accredited programs (from

Figure 1: Total number of employed DHCWs by profession type (2015 – 2021)



56 programs in 1992 to 13 programs in 2021), DLT employment has rebounded from pandemic lows.¹³⁻
¹⁵ The majority of existing laboratories transitioned to digital operations long before COVID-19, used 3D technology, and had multiple machines for scaled production.^{14,16} The DLTs receive on-the-job training as they shift from traditional analog workflow models to digital workflow models, while new overnight and same-day delivery businesses have emerged.

Dentists

Employed dentists are within 2.0% of pre-pandemic levels after a reduction of 12.6% in 2020. However, increased burnout and compassion fatigue are affecting retention of dentists in the workforce.¹⁷ The ADA-HPI reported an increase in the number of retiring dentists during the early part of 2022.¹⁸

The US-BLS does not include self-employed dentists within their calculation; therefore, only a subset of dentists is represented within the data. Workforce estimates vary widely upon the methods and vendors used to determine the total number of dentists available to a population.¹⁹⁻²⁰ As indicated in Table 1,

one of the main challenges with understanding dentist workforce supply is the wide variation in the published total number of dentists.²¹⁻²²

All DHCWs

The total number of employed DHCWs within the U.S. decreased by 11.5% between 2019 (740,020) and 2020 (654,590) after there was a consistent increase from 2015 (683,490) to 2019. Results indicate a slight rebound in 2021 (717,900); however, the dental workforce as a whole is still reduced by 3.0% from pre-pandemic levels.

THE DENTAL
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3% FROM PRE-
PANDEMIC LEVELS.



Table 1: Variation in reporting on the total number of dentists in the U.S. during the COVID-19 period

Reporting Agency or Organization	Keywords	2015	2017	2019	2020	2021
American Dental Association	Active Dentists	195,770	195,500	200,419	201,117	201,927
Statista.com	Active Dentists	195,770	198,517	200,419		
Statista.com	Active General Practice Dentists	---	---	158,240	---	---
Zippia.com	General Dentists in the U.S.	---	---	---	---	111,023
IBIS-World	Dentists	171,700	175,250	174,300	173,600	174,500
Kaiser Family Foundation	Professionally Active Dentists	---	---	---	---	186,426
Georgia Institute of Technology	Active Dentists	---	---	204,279	---	---
Becker's Dental Review	Active Dentists	---	---	---	---	192,723
Area Health Resources Files (AHRF)	All Dentists	---	---	---	227,241	235,357
Stroding.com	Dentists Actively Working	---	---	199,486	---	---
National Center for Health Statistics	Dentists in the U.S.	195,770	199,486	200,419	---	---

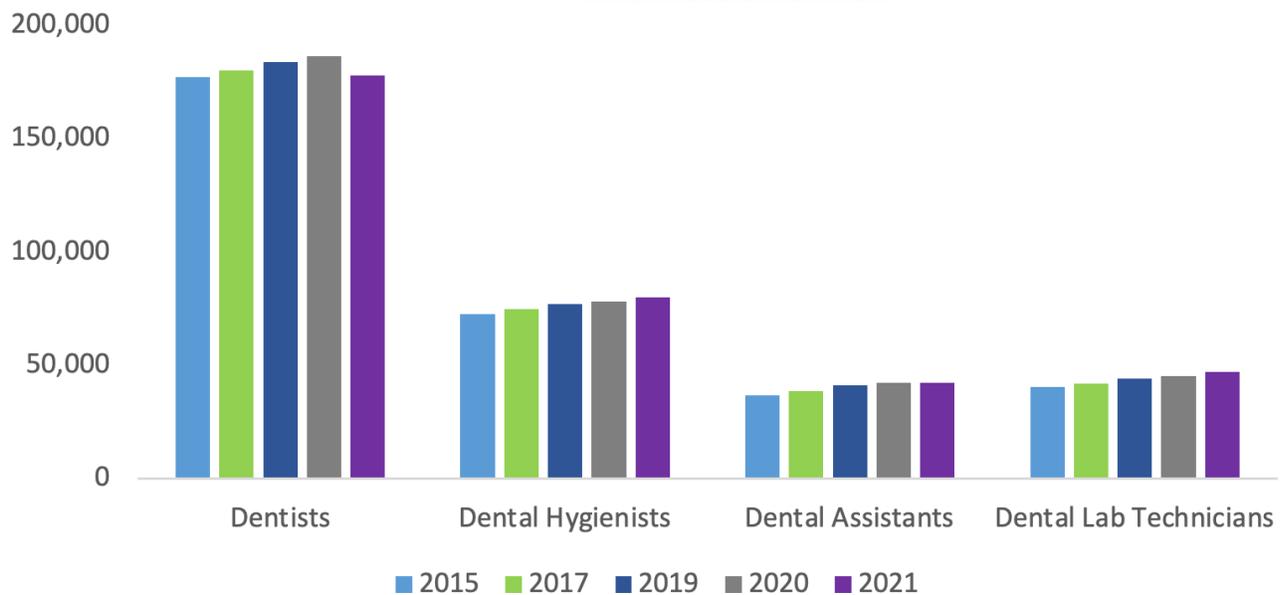


Wages and Salaries

Implications from salaries and wages become more salient as the U.S. steers toward a historical inflation rate. The tuition for dental training programs has increased at a 7.0% average annualized growth, adding to a growing financial burden of student loans with unpredictable salary ramifications.²³ An evaluation of 2015 to 2021 US-BLS reports on hourly wages and annual salaries reveals modest increases in reported income around 2% to 3% each year (Figure 2). The average annual pay increase for all occupations in the U.S. was 3.2%, demonstrating lower average increases across all dental profession types, compared to national trends.

Dentists were the only DHCWs to experience a decrease in annual salary during the pandemic. From 2015 to 2020, dentists reported close to 2% increases in income for each year reviewed; however, a 4.6% decrease to \$177,770/year followed in 2021. The ADA-HPI reported that 8 out of 10 dentists have recently given raises to dental hygienists and assistants, suggesting that a potential increase in DHCW pay may be substantiated in future US-BLS reports.²⁴

Figure 2: Annual salaries and wages of DHCWs by profession type (2015–2021)





State and Geographic Implications

Workforce

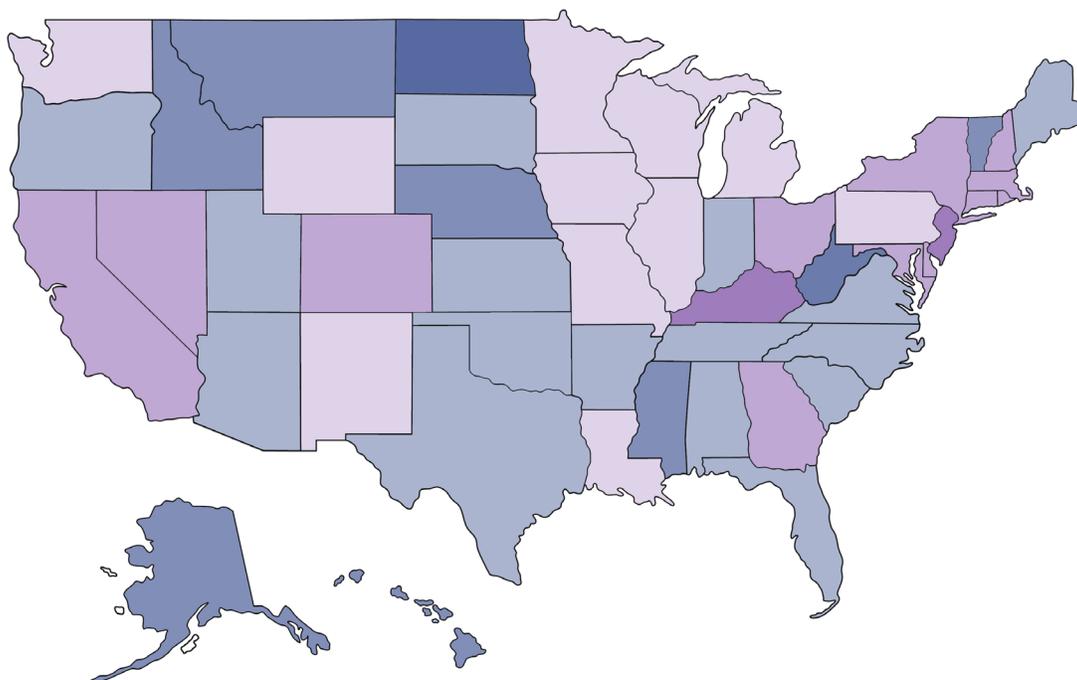
Smaller DHCW samples within the US-BLS could impair interpretation of state-level data, creating variation in data interpretation. This potential variation requires the use of Relative Standard Error (RSE) rates. More information on RSEs is provided within the methods and limitations section within Appendix A and Appendix B.

Forty-five of 54 U.S. states and territories reported dental workforce decreases in 2020 (Appendix C), indicating the significant impact of the COVID-19 pandemic on state dental health workforces.

Recovery to the pre-pandemic workforce levels has not yet occurred in most states (28), even though 87% of all states reported increases in DHCWs from 2020 to 2021.

An analysis of states where more than 20% of the population lives in rural areas revealed a 3.9% decline in all DHCWs. These workforce reductions are more impactful given rural communities were already experiencing shortages in DHCWs before the onset of the pandemic.

Figure 3: Percent change in DHCWs 2019 to 2021



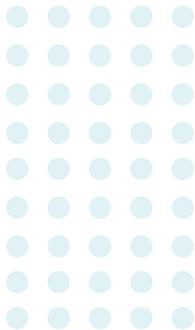
Economic

In 24 of 54 (44.4%) U.S. states and territories, DHCWs experienced a decrease in average annual salary from 2019 to 2021. Dental professionals stimulate local economies through employment and tax revenue.²⁵⁻²⁶ Dental care delivery sites generate approximately \$33 – \$40 billion in local taxes annually. The economic impact of a single dentist in 2000 was \$1.3 million per year.³ State income tax revenue is a primary resource for state budgets, and thus DHCWs are significant contributors to state government revenue.^{3,25} States that have not fully rebounded from 2020 DHCW shortages lost \$66.5M in annual state income tax revenue, an average of \$3.32M per state affected. Workforce reductions have the most significant economic impact in rural areas where one rural dentist generates an average of \$340k in employee salaries that can be spent in rural communities.²

Policy implications were evaluated alongside DHCW workforce trends within each state. The number of DHCWs from 2019 (15,096) to 2021 (14,588) decreased by 14.8% within states that expanded Medicaid to include an adult dental benefit. This resulted in an increase of individuals per DHCWs in these states by 12.2%. The DHCW per 100,000 population was 390 in 2019, 503 in 2020, and 405 in 2021.

States that have not fully rebounded from 2020 DHCW shortages lost \$66.5M in annual state income tax revenue, an average of \$3.32M per state affected.

States without Medicaid expansion, states with 1115 waiver Medicaid expansion, traditional Medicaid expansion states, and states that expanded adult dental Medicaid were compared to national averages and other state groups. This analysis did not detect any statistically significant differences in DHCW reductions using these variables.





Summary

This report assessed the change in U.S. dental health care workers in the U.S. before the start of the COVID-19 pandemic and two years after. Our evaluation indicated a decrease in the number of dentists, dental hygienists, dental assistants, and dental lab technicians from 2019 to 2021, and none of these groups has completely returned to pre-pandemic levels.

Dental hygienists showed the highest decrease in workforce number. Examining trends of wages and annual salaries, DHCWs had an annual salary increase from 2015–2021, except for dentists who showed a decrease in annual salary between 2020–2021. However, 44% of U.S. states and territories experienced a decrease in average annual DHCW salary from 2019 to 2021. This may have a negative economic impact as a consequence of potential losses in the annual state income tax revenues and rural labor incomes.

The economic implications of lost labor and wages are substantial. A \$66.5M annual loss from state revenue impacts the flexibility of social services, creates budgeting shortfalls, and reduces economic growth in local communities. Economic challenges are experienced most significantly in rural areas where workforce shortages have a more rapid impact on the community. The long term state-based health policy and workforce implications for Medicaid remain to be seen.

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Strategic Recommendations

This report highlights a decrease in DHCWs and economic stability stimulated by the COVID-19 pandemic. As a result of these concerning trends, the following strategic recommendations should be considered:

1. Clinical care delivery models should adapt to the anticipated shortages by promoting team-based approaches that allow all DHCWs to practice at the top of their licensure.
2. State dental licensing boards should consider reciprocity models that allow DHCWs more flexibility to practice if moving to a different state or region. Traveling practice models may also alleviate shortages, similar to traveling nurses and other healthcare professionals — a workforce model that became more viable as a result of the COVID-19 pandemic.
3. Dentists, state health agencies, and state licensing boards should urgently address the decrease in dental hygiene workforce. Dentist practice owners should consider opportunities to improve pay and job satisfaction. At the same time, state licensing boards can ensure dental hygiene scopes of practice match the skill and experience of the workforce. Medicaid and Medicare can consider fee schedules that benefit all DHCWs.
4. Trends in workforce should be monitored long term to identify influencers and drivers of change that were catalyzed by the COVID-19 pandemic. While implications for rural areas and particular segments of DHCWs are highlighted as areas of significant impact in this brief, more data evaluated over time can identify critical gaps in the oral health workforce.

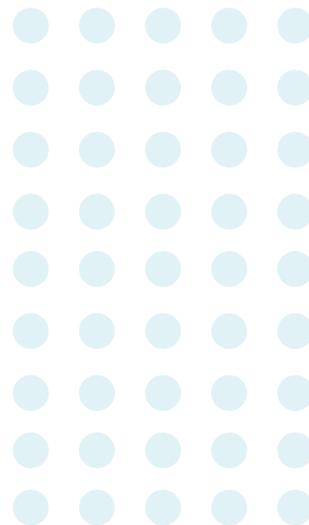
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Table 1 References

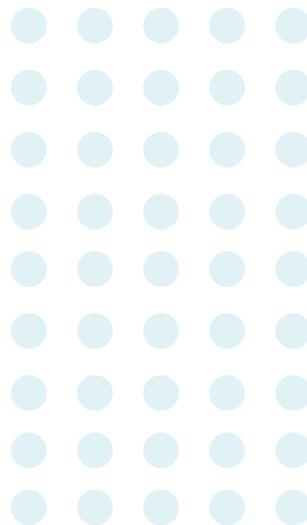
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Appendix A:

Methods and Limitations



Methods

Quantitative evaluations are confined to descriptive statistics, including standard summation, an estimation of means, and valid percent for identified variables. Additional analysis for responses was tabulated and compared using chi-square, t-tests, and analysis of variance with significance placed on P values equal to or less than 0.05.

The Bureau of Labor Statistics, Occupational Employment and Wage Statistics (OEWS) program conducts a semiannual survey designed to produce estimates of employment and wages for specific occupations. The OEWS program collects data on wages and salaries of workers in non-farm establishments to create employment and wage estimates for about 830 occupations. Data from self-employed persons are not collected and are not included in the forecast. The OEWS program has occupational estimates for the entire nation, by state, by urbanpolitan or non urbanpolitan area, and by industry or ownership. The Bureau of Labor Statistics produces occupational employment and wage estimates for 415 industry classifications at the national level. The employment data are benchmarked to an average of the May and November employment levels. The most recent wage data are for May 2021. The OEWS survey began using the North American Industry Classification System (NAICS) in 2002. The May 2021 OEWS estimates are based on the 2017 NAICS classification system. Data before 2002 are based on the Standard Industrial Classification (SIC) system.

Data on employment was gathered by analyzing the occupational profiles provided at the national level and by each of the fifty-four states and territories. Because the data are aggregated at the national and state level, no additional restrictions can be applied based on demographics. All data provided by multiple entities were transferred into master Microsoft (M.S.) Excel spreadsheets and used to calculate data. The master spreadsheet was used to create a snapshot of the dental workforce for each research year, utilizing data from 2015, 2017, 2019, 2020, and 2021. Population data for each US-BLS research year was obtained via the annual estimates of population report published by the Census Bureau.²⁷ These population data were used to calculate the supply of each occupation per population estimates at the national and state levels. Statistical analysis was completed utilizing StataCorp 2019.²⁸

Tax rate and tax bracket data for each state was downloaded from a publicly available dataset at the Tax Foundation (<https://taxfoundation.org/publications/state-individual-income-tax-rates-and-brackets/>). Tax revenue loss was calculated utilizing states that felt a decrease in DHCWs from 2019 to 2021 and have state income taxes. This information was compared to the annual salaries or wages of all DHCWs, loss in earned wages, and individual income tax rate per state.

All mapping was completed utilizing the visual analytics platform, Tableau®.²⁹ Location information was imported from M.S. Excel files to provide a geographic role, which associates each value in a field with a latitude and longitude value. The mapping is customized to the U.S. states and territories included within the data set. Tableau® automatically assigns latitude and longitude values to each location in that field by finding a match already built into the installed geocoding database. Then a value is provided for each site and a range assigned to give a lighter to darker shade based on percent change or total percentage.

The total number of DHCWs was determined using the sum of all profession types within each state.

Limitations

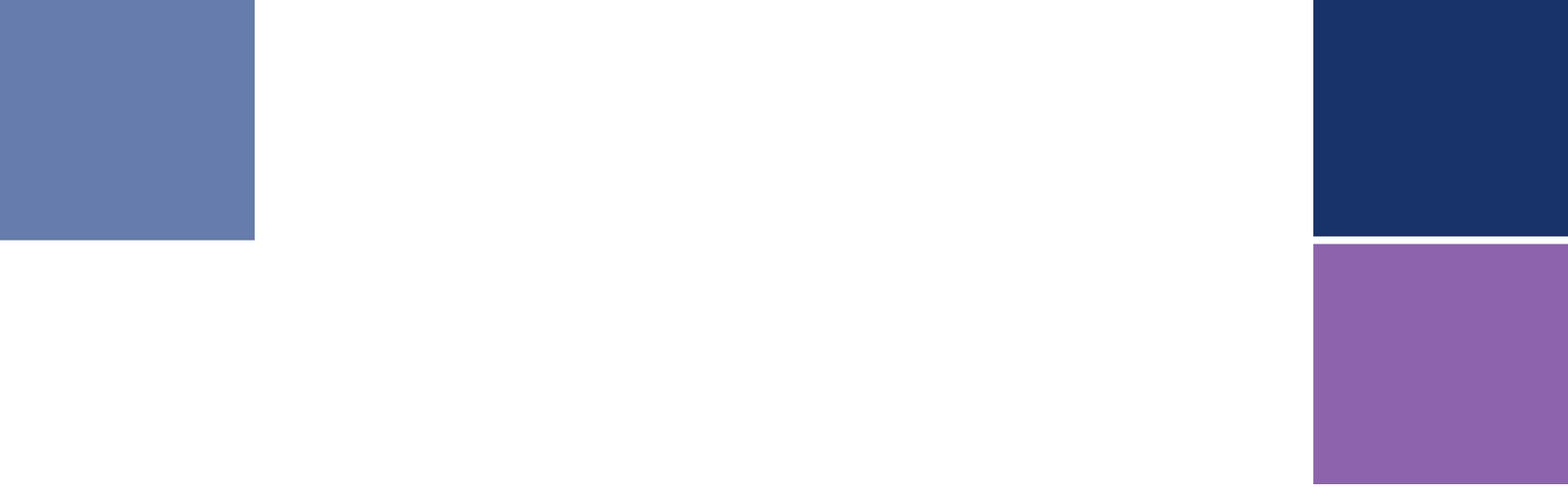
This report is based on publicly available data. The accuracy of the raw data sets is the responsibility of each organization providing that data publically. The data analysis is completed in good faith with the supplying organizations that the data is accurate and best practices were followed with data entry and management.

Because US-BLS estimates are based on a sample of the population, there is an amount of error involved. Standard errors are expressed in percentage form as the ratio of standard errors (RSEs) to survey estimates. OEWS provides RSEs for the occupations in this report. Based on previous research, the RSE for US-BLS data tends to get smaller, or more representative of a group, as sample sizes increase.³⁰⁻³² Guidance from the US-BLS provides that:

“Standard errors can be used to measure the precision with which an estimate from a particular sample approximates the expected result (value) of all possible samples (population). The chances are about 68 out of 100 that an estimate from the survey differs from a population result by less than the standard error. The chances are about 90 out of 100 that this difference would be within 1.645 standard errors. The standard errors can be used to define a range or level of confidence (confidence interval) around an estimate. BLS uses a 90 percent confidence level. If all possible samples were selected and an estimate of a value and its sampling error were computed for each, then (for approximately 90 percent of the samples) the intervals from 1.645 standard errors below the estimate to 1.645 standard errors above the estimate would include the "true" average value. In an example below, the 90 percent confidence interval for a total compensation estimate of \$37.03 with a relative standard error of 1.3 percent is \$37.03 plus or minus \$0.79 (1.645 standard errors times \$0.48) or \$36.24 to \$37.82.”

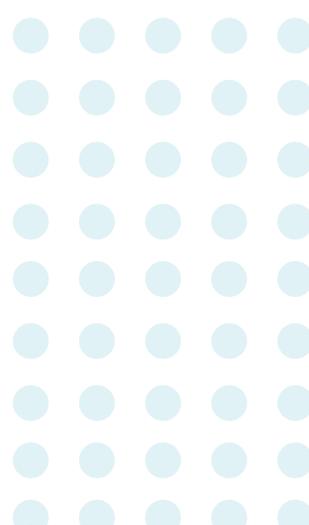
US-BLS RSEs for profession type employed and annual wage are provided in Appendix A. Because of a lower sample size, the profession type “Dentists, other specialists” has the most variability in RSEs and has missing information for several states. Therefore, an independent evaluation of this profession type was not performed; however, some state reports include this number in the yearly accounting. The RSEs for this report range from 0.9 – 47.7. The median for national data sets utilized is 0.9, with higher ranges for state-level data. At the state level, dental hygienists and dental assistants are more representative, having lower RSEs compared to dentists and DLTs. Unitization or grouping of profession types also improves RSEs. State level trends found within this analysis align with other publications cited within this document. More information on RSEs is provided within the methods and limitations section as well as Appendix A.

This report represents a snapshot of information known to demonstrate variability over time. Cautions should be exercised when interpreting the response data and descriptive findings presented in this report.



Appendix B:

US-BLS Reports on Number of DHCWs and Yearly Wages or Salary with National (and the Most Significant State) RSEs²



²Because US-BLS estimates are based on a sample of the population, there is an amount of error involved. Standard errors are expressed in percentage form as the ratio of standard errors (RSEs) to survey estimates. If all possible samples were selected and an estimate of a value and its sampling error were computed for each, then (for approximately 90 percent of the samples) the intervals from 1.645 standard errors below the estimate to 1.645 standard errors above the estimate would include the "true" average value.

US-BLS Reports on Number of DHCWs and Yearly Wages or Salary with National (and the Most Significant State) RSEs²

Year	State	Profession Type	RSE	Annual Salary (\$)	RSE
2015	Dentists	116,750	1.5	177,130	1.1
2015	Dentists, All Other Specialists	5,550	10.4	171,040	7.9
2015	Dental Hygienists	200,550	1.2	72,720	0.5
2015	Dental Assistants	323,110	1.2	72,720	0.5
2015	Dental Laboratory Technicians.	37,520	2.6	40,520	0.9
2017	Dentists	125,300	1.6	180,010	1.1
2017	Dentists, All Other Specialists	4,590	10.4	199,980	4.1
2017	Dental Hygienists	211,600	1.2	74,680	0.5
2017	Dental Assistants	337,160	0.9	38,690	0.4
2017	Dental Laboratory Technicians.	35,630	2.8	41,990	0.8
2019	Dentists	127,200	1.6	183,060	1.1
2019	Dentists, All Other Specialists	5,330	11.8	178,040	5.0
2019	Dental Hygienists	221,560	1.3	77,230	0.6
2019	Dental Assistants	351,470	0.9	41,170	0.4
2019	Dental Laboratory Technicians.	34,460	2.9	44,330	0.8
2020	Dentists	111,210	2.2	186,300	1.2
2020	Dentists, All Other Specialists	5,610	9.3	194,930	5.0
2020	Dental Hygienists	194,830	1.4	78,050	0.6
2020	Dental Assistants	312,140	0.9	42,310	0.4
2020	Dental Laboratory Technicians.	30,800	3.1	45,230	1.0
2021	Dentists	124,680	2.6	177,770	1.8
2021	Dentists, All Other Specialists	4,750	11.1	179,400	5.6
2021	Dental Hygienists	207,190	2.1	81,360	0.6
2021	Dental Assistants	347,170	1.2	42,510	0.5
2021	Dental Laboratory Technicians.	34,150	2.6	47,320	1.0

State Reports of DHCWs by the least significant (bottom one-third) RSEs for workforce totals³

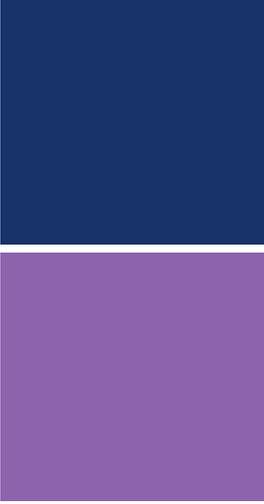
Year	State	Profession Type	RSE
2019	District of Columbia	Dentists, General	31.3
2019	Vermont	Dentists, General	28.3
2019	Alaska	Dentists, General	27.8
2019	Vermont	Dental Assistants	27.6
2019	Nebraska	Dental Hygienists	27.5
2019	Nevada	Dentists, General	25.6
2019	Alaska	Dental Hygienists	24.2
2019	Delaware	Dentists, General	22.5
2019	Mississippi	Dentists, General	22.4
2019	Virgin Islands	Dental Assistants	22.3
2019	Nebraska	Dentists, General	22.1
2019	Delaware	Dental Hygienists	21.9
2019	Maine	Dentists, General	21.8
2019	Utah	Dentists, General	21.6
2019	Iowa	Dentists, General	20.8
2020	Alaska	Dentists, General	32.3
2020	Vermont	Dental Assistants	31.0
2020	District of Columbia	Dentists, General	30.9
2020	Mississippi	Dentists, General	29.9
2020	District of Columbia	Dental Hygienists	28.7
2020	Vermont	Dentists, General	26.7
2020	Utah	Dentists, General	26.5
2020	Guam	Dental Assistants	25.0
2020	Nebraska	Dentists, General	23.2
2020	South Dakota	Dentists, General	21.8
2020	Oregon	Dentists, General	21.6
2020	Mississippi	Dental Hygienists	21.0
2020	Wyoming	Dentists, General	21.0
2020	District of Columbia	Dental Assistants	19.7
2020	Montana	Dentists, General	19.6
2020	Delaware	Dentists, General	19.2
2020	Maine	Dentists, General	19.0
2020	Oklahoma	Dentists, General	18.7
2021	Puerto Rico	Dentists, General	47.7
2021	New York	Dentists, General	28.4
2021	Illinois	Dentists, General	28.3
2021	Rhode Island	Dentists, General	23.1
2021	Nevada	Dentists, General	21.4
2021	Georgia	Dentists, General	20.0
2021	Alaska	Dentists, General	19.7
2021	Hawaii	Dental Hygienists	17.8
2021	Virgin Islands	Dental Assistants	16.9
2021	Massachusetts	Dentists, General	16.8
2021	Tennessee	Dentists, General	16.7
2021	West Virginia	Dentists, General	16.6
2021	Vermont	Dentists, General	16.4
2021	New Jersey	Dental Hygienists	16.3
2021	Vermont	Dental Assistants	16.3
2021	Kentucky	Dentists, General	16.2
2021	Virginia	Dentists, General	16.2

³Includes evaluation of US-BLS profession types: only national level data was utilized for 2015 and 2017 evaluations. For all RSE reporting tables and reports are available at: <https://www.bls.gov/oes/tables.htm>

State Reports of DHCWs by the least significant (bottom one-third) RSEs for annual salary and wage totals⁴

Year	State	Profession Type	EMP-RSE
2019	Puerto Rico	Dentists, General	18.1
2019	District of Columbia	Dentists, General	17.8
2019	Utah	Dentists, General	16.4
2019	Hawaii	Dentists, General	13.8
2019	Maine	Dentists, General	13.7
2019	Alaska	Dentists, General	13.3
2019	Vermont	Dentists, General	12.7
2019	Colorado	Dentists, General	12.6
2019	South Dakota	Dentists, General	11.8
2019	Wyoming	Dentists, General	11.0
2019	Georgia	Dentists, General	10.9
2019	Arizona	Dentists, General	10.8
2019	Nebraska	Dentists, General	10.7
2019	District of Columbia	Dental Assistants	10.6
2019	Iowa	Dentists, General	10.4
2019	Rhode Island	Dentists, General	9.8
2020	Puerto Rico	Dentists, General	20.6
2020	Utah	Dentists, General	18.6
2020	Vermont	Dentists, General	13.4
2020	Hawaii	Dentists, General	12.4
2020	District of Columbia	Dental Assistants	11.8
2020	Colorado	Dentists, General	11.7
2020	Nebraska	Dentists, General	11.4
2020	Wyoming	Dentists, General	10.9
2020	North Dakota	Dentists, General	10.6
2020	Louisiana	Dentists, General	10.4
2020	Kansas	Dentists, General	10.4
2020	South Dakota	Dentists, General	10.0
2020	Alaska	Dentists, General	9.9
2020	Oklahoma	Dentists, General	9.6
2020	Idaho	Dentists, General	9.6
2020	Rhode Island	Dentists, General	9.5
2021	Puerto Rico	Dentists, General	29.2
2021	Illinois	Dentists, General	14.2
2021	Massachusetts	Dentists, General	12.3
2021	Vermont	Dentists, General	12.1
2021	Tennessee	Dentists, General	10.9
2021	Alaska	Dentists, General	10.3
2021	Nevada	Dentists, General	9.4
2021	Nebraska	Dentists, General	9.2
2021	New York	Dentists, General	8.2
2021	Georgia	Dentists, General	8.1
2021	Louisiana	Dentists, General	8.0
2021	California	Dentists, General	8.0
2021	Utah	Dentists, General	7.9
2021	South Dakota	Dentists, General	7.8
2021	Colorado	Dentists, General	7.7

⁴Includes evaluation of US-BLS profession types: only national level data was utilized for 2015 and 2017 evaluations.



Appendix C:

Percent Change in All DCWs by State and Year (2019 – 2021)

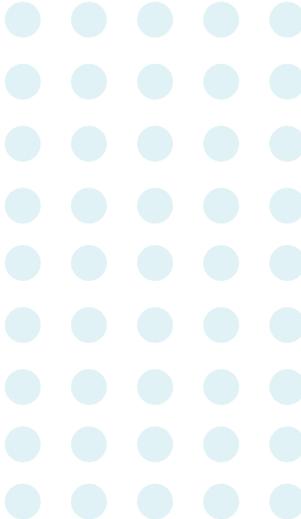


Figure C1. Percent change in all dental care workers 2019–2020

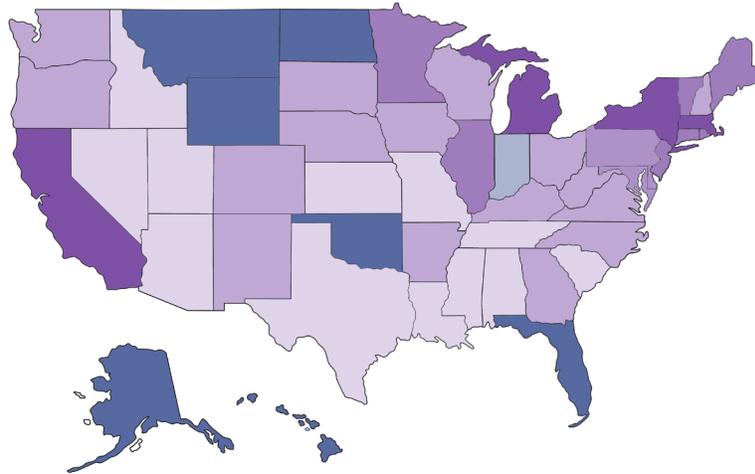


Figure C2. Percent change in all dental care workers 2020–2021

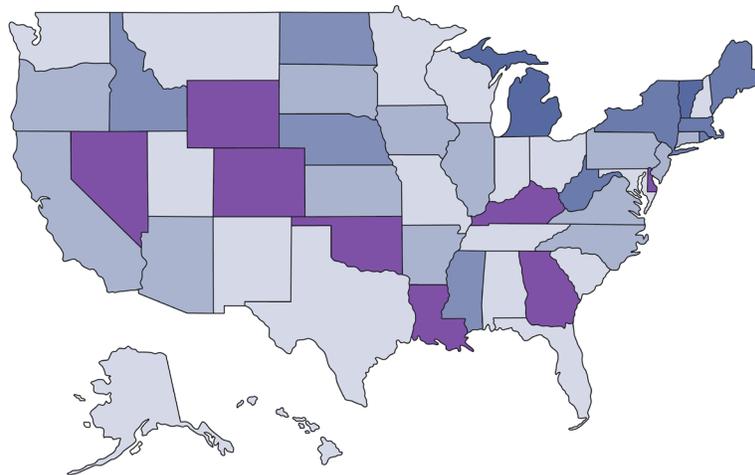


Figure C3. Percent change in all dental care workers 2019–2021

