

SPECIAL REPORT SERIES

# A Longitudinal Assessment of Diversity in Indiana's Health Workforce



## Indiana Oral Health Professionals



**SCHOOL OF MEDICINE**  
BOWEN CENTER FOR HEALTH  
WORKFORCE RESEARCH & POLICY

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# EXECUTIVE SUMMARY

Oral health is often considered the window to an individual's overall health, making the oral health workforce a vital contributor to general health and well-being. Professionals in the oral health workforce provide services focused on prevention, restoration and maintenance of oral health.<sup>1</sup> Keeping a finger on the pulse of this workforce, supply, distribution and characteristics is important to identifying and addressing gaps. Demographic information provides important insights into diversity and representation within the workforce and as compared to the population. This report features historical information on diversity within Indiana's oral health workforce.

The Indiana Health Workforce Diversity Brief Series was established to evaluate and understand the status of diversity in Indiana's health workforce. This report includes a longitudinal assessment of Indiana's Dentists and Dental Hygienists, focusing primarily on certain demographic measures (race, ethnicity, sex, and age). Oral health workforce data was captured directly from dentists and dental hygienists during the license renewal periods between 2010-2022.

Indiana's dentist and dental hygienist workforce has become increasingly diverse over the last 12 years. The percentage of Indiana dentists who identify as a racial minority group has more than doubled from 2010 to 2022, and the percentage of dental hygienists who identify as Hispanic, Latino(a), or Spanish origin has also nearly doubled. Additionally, there has been a significant increase in female dentists over the last decade; Females have increased from being one in five dentists to one in three over the last decade. Overall, both professions have trended toward being younger in age in recent years.

There are a variety of health workforce programs, policies, and initiatives in place to address diversity in the oral health workforce. Many of these programs have been established by professional associations, federal and state government, and academic institutions. It is likely that these programs have contributed to a general increase in diversity among Indiana's oral health workforce. However, future research is needed to explore the direct impact of these programs on diversity, as well as the impact of diversity on health care delivery and patient health outcomes.

## How is Underrepresented Minority Defined?

According to the Bureau of Health Workforce - HRSA, an underrepresented minority is defined as, **“someone from a racial or ethnic group considered inadequately represented in a specific profession relative to the representation of that racial or ethnic group in the general population.”**

Bureau of Health Workforce (HRSA).  
Glossary. Cited from [https://bhw.hrsa.gov/glossary#:~:text=Underrepresented%20Minority%20\(URM\),group%20in%20the%20general%20population](https://bhw.hrsa.gov/glossary#:~:text=Underrepresented%20Minority%20(URM),group%20in%20the%20general%20population)

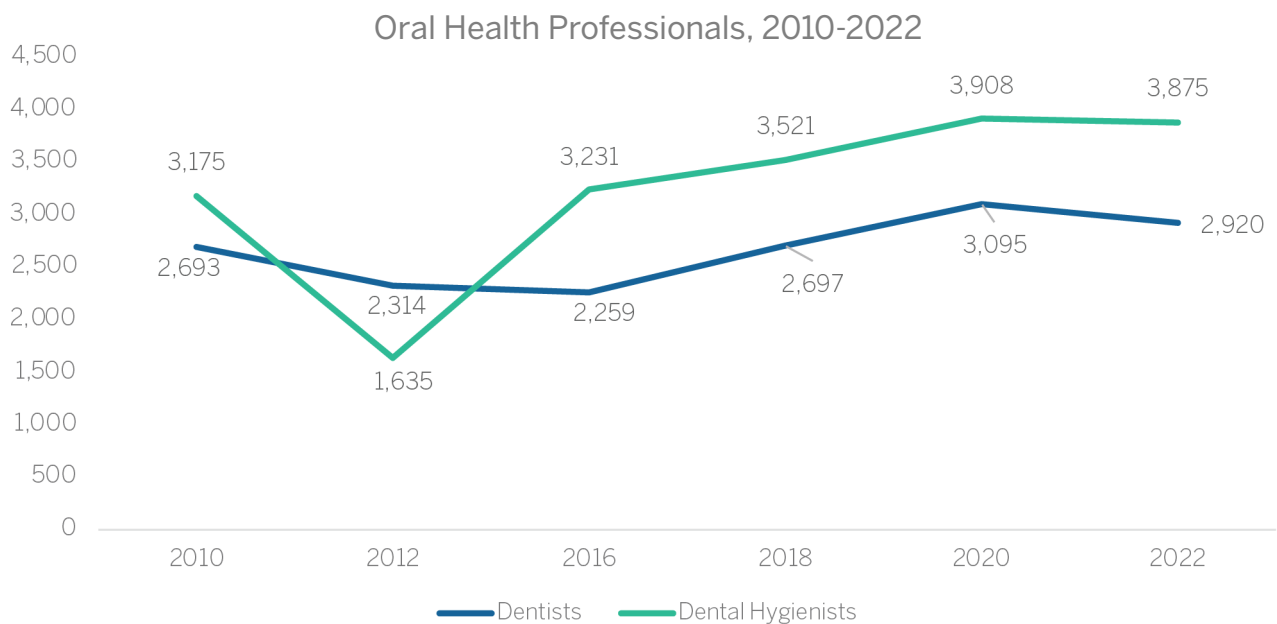
# DIVERSITY IN INDIANA'S ORAL HEALTH WORKFORCE

## DENTISTS

### LONGITUDINAL TRENDS

The total number of dentists who reported actively practicing in Indiana has increased from 2,693 in 2010 to 2,920 in 2022 (Figure 1). Over the years, the strategy used to identify actively practicing dentists has been modified to align with changes in oral health care delivery and the improvement of questions being asked to the Indiana's oral health workforce in the bi-annual licensure renewal supplemental survey. More information on these changes can be found in the Diversity Report: Methodology and Introduction.<sup>2</sup>

**Figure 1. Count of Actively Practicing Oral Health Professionals, 2010 - 2022**



Since 2010, the proportion of female dentists actively practicing in Indiana has nearly doubled and the age of the overall dentist workforce has decreased. As a workforce, Indiana dentists are predominantly white and not of a Hispanic, Latino/a, or Spanish origin. Over the last 12 years, however, there has been an increase in dentists identifying as a racial minority (8.3% in 2010 as compared to 17.1% in 2022). Indiana's population identifying as a racial minority has also experienced a similar increase during this period.

## **POLICY CONTEXT**

Diversity has been a longstanding priority for the dental workforce. There have been a broad range of diversity and inclusion-focused programs and initiatives within the dental community. National institutes and associations focus on commitments to cultures of diversity and harboring safe and equitable work environments for dentists of all backgrounds. Perhaps the most relevant of these policies to a diversity focus are those by the American Dental Association and the National Institute of Dental and Craniofacial Research.

The American Dental Association (ADA) is the leading dentist membership and advocacy association. The ADA has directly focused on promoting a culture of diversity through their published core values of “Diversity” and “Inclusion.” A direct commitment of this association is that their inclusion of diversity will not only advance the dental profession, but also improve the overall health of the public.<sup>3</sup> Additionally, the ADA has a diversity and inclusion plan (2020-2025) in place to advance diversity and inclusion among ADA staff and membership at both the national and state-affiliate levels. Relatedly, the ADA has established an Institute for Diversity in Leadership to strengthen leadership skills among traditionally underrepresented dentists.<sup>4</sup>

The National Institute of Dental and Craniofacial Research has recognized the value of diversity among research staff in contributing new perspectives and ideas among the research community. NIDCR is committed to diversifying the oral health research workforce within the Institute, which includes both traditional scientists and clinician scientists, and has developed a diversity-focused Postdoctoral Fellowship Program to that end. The National Institutes of Health has also broadly committed to ending racial inequities and addressing structural racism in the research workforce broadly (not just among dental and craniofacial researchers).<sup>5</sup>

At a national level, the Health Resources and Services Administration’s Bureau of Health Workforce offers loan repayment, scholarship, and educational programming funding to support oral health workforce development broadly. Although these programs do not specifically target diversity goals, they do generally support oral health professionals and students seeking to further their education and experience by working in underserved communities.<sup>6</sup> One such program exists in Indiana - the Community-Based Dental Education program provided at Indiana University School of Dentistry (IUSD). This clinical experience is offered to fourth-year dental students and provides training at community health centers throughout Indiana. During this rotation, student gain knowledge and skills in interprofessional collaboration and cultural competency. The aim of this educational program is to provide dental students to the opportunity to learn about oral health care in underserved communities.

The Diversity Dental Scholarship has also been established at IUSD to support both a dental and dental hygiene student representing an underrepresented population or with a diverse cultural experience.<sup>7</sup> Additionally, the Indiana University School of Dentistry has developed a strategic plan for diversity, which includes goals to enhance diversity among faculty, staff and students through recruitment efforts, holistic admissions processes, and enhanced training for search and screen committees.<sup>8</sup> These in-state programs, both alongside and in addition to other broader programs at the state and national level,<sup>9,10</sup> will be important to advance diversity goals among Indiana’s dentist workforce.

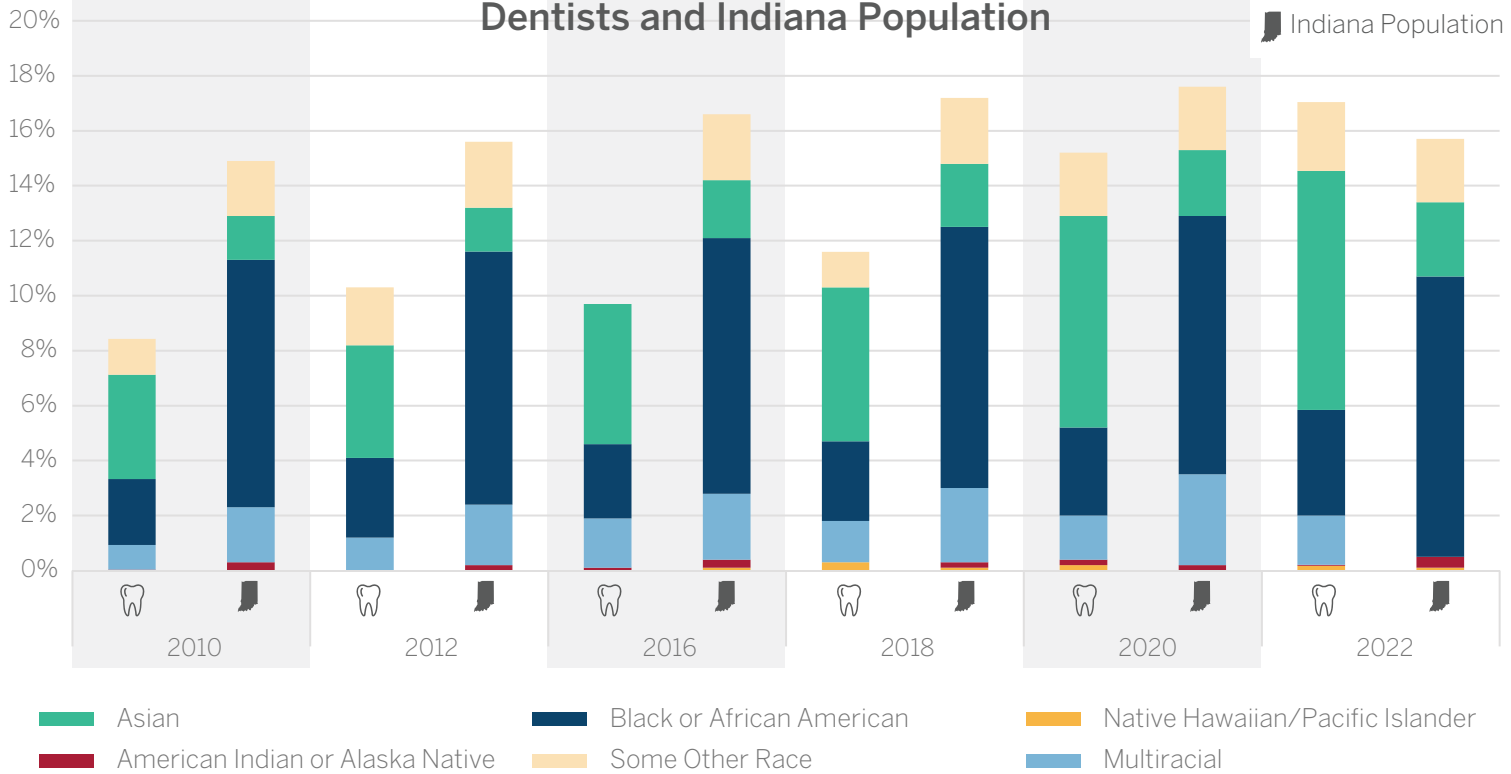


# Indiana Dentist Demographics Trends

Figure 1.1

## Trends in Racial Minority Groups for Dentists and Indiana Population

🦷 Indiana Dentists  
🇺🇸 Indiana Population



Asian and Pacific Islander demographics combined 2010-2012 / age groups 35-54 combined in 2010; Dentists license and supplemental data are not available for 2014.  
 Source: Indiana Dentist License and Supplemental Survey Data, 2010 – 2022  
 A breakdown of all racial demographic characteristics are located in the appendix of Longitudinal Assessment of Diversity in Indiana's Health Workforce: Indiana Oral Health Professionals

Figure 1.2

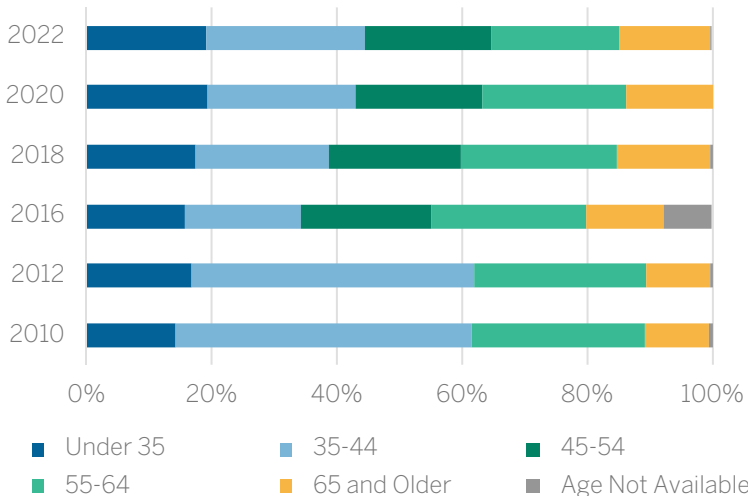
## Trends in Ethnicity for Dentists and Indiana Population



License and supplemental data are not available for 2014.

Figure 1.3

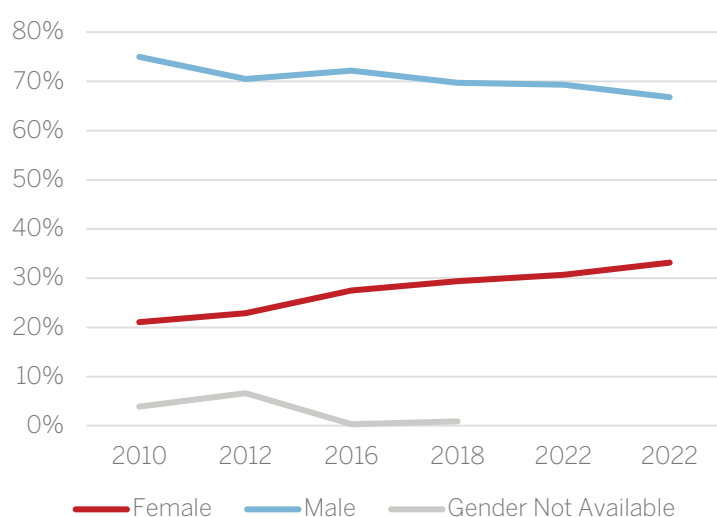
## Trends in Dentist Age



Age groups 35-54 combined in 2010. License and supplemental data are not available for 2014.

Figure 1.4

## Trends in Dentist Gender



License and supplemental data are not available for 2014.

# DENTAL HYGIENISTS

## LONGITUDINAL TRENDS

The total number of dental hygienists who reported actively practicing in Indiana has increased from 3,175 in 2010 to 3,875 in 2022 (Figure 1). The strategy used to identify actively practicing dental hygienists has been modified to align with changes in oral health care delivery and the improvement of questions being asked to the Indiana's oral health workforce in the bi-annual licensure renewal supplemental survey. More information on these changes can be found in the Diversity Report: Methodology and Introduction.<sup>11</sup>

During this time, the dental hygienist workforce has been predominantly female and younger in age with little to no change in gender or age distribution. Dental hygienists are predominantly white and not Hispanic, Latino/a, or Spanish. Although the proportion of dental hygienists who identify as Hispanic, Latino/a, or Spanish is small, the percentage has more than doubled since 2010 (1.6% in 2010 and 3.6% in 2022). However, the racial diversity among Indiana's dental hygienists remains substantially lower than other health care professions, and falls far behind that of Indiana's population. This highlights the continued importance and need for strategies to support diversity among Indiana's dental hygienists.

## POLICY CONTEXT

As specialists in preventive oral healthcare, dental hygienists have a large role in direct patient interaction, providing preventive treatments such as cleanings and screenings, and educating patients on the importance of oral health overall. Thus, cultural competence and culturally appropriate care are of utmost importance in the dental hygiene field. Various diversity-focused programs and initiatives exist to advance dental hygiene diversity and the provision of culturally competent oral health care.

The American Dental Hygienists' Association has outlined "Diversity and Inclusion" as one of the organization's core values,<sup>12</sup> but no specific policies or programs were identified to address diversity within the dental hygiene workforce at a national level. It is important to note that many of the federal Health Resources and Services Administration workforce development programs referenced previously within the dentist section of this report also apply to dental hygiene workforce.<sup>13</sup>

At the state-level, the Diversity Dental Scholarship referenced previously that exists at IUSD is in place to support a dental hygiene student from an underrepresented population or with a diverse cultural experience.<sup>14</sup> Additionally, the IUSD's strategic plan for diversity also applies to the dental hygiene program.<sup>15</sup> These dental hygiene diversity programs, both alongside and in addition to other broader programs,<sup>16, 17, 18</sup> will be important to continue to advance diversity goals in Indiana's dental hygiene workforce.

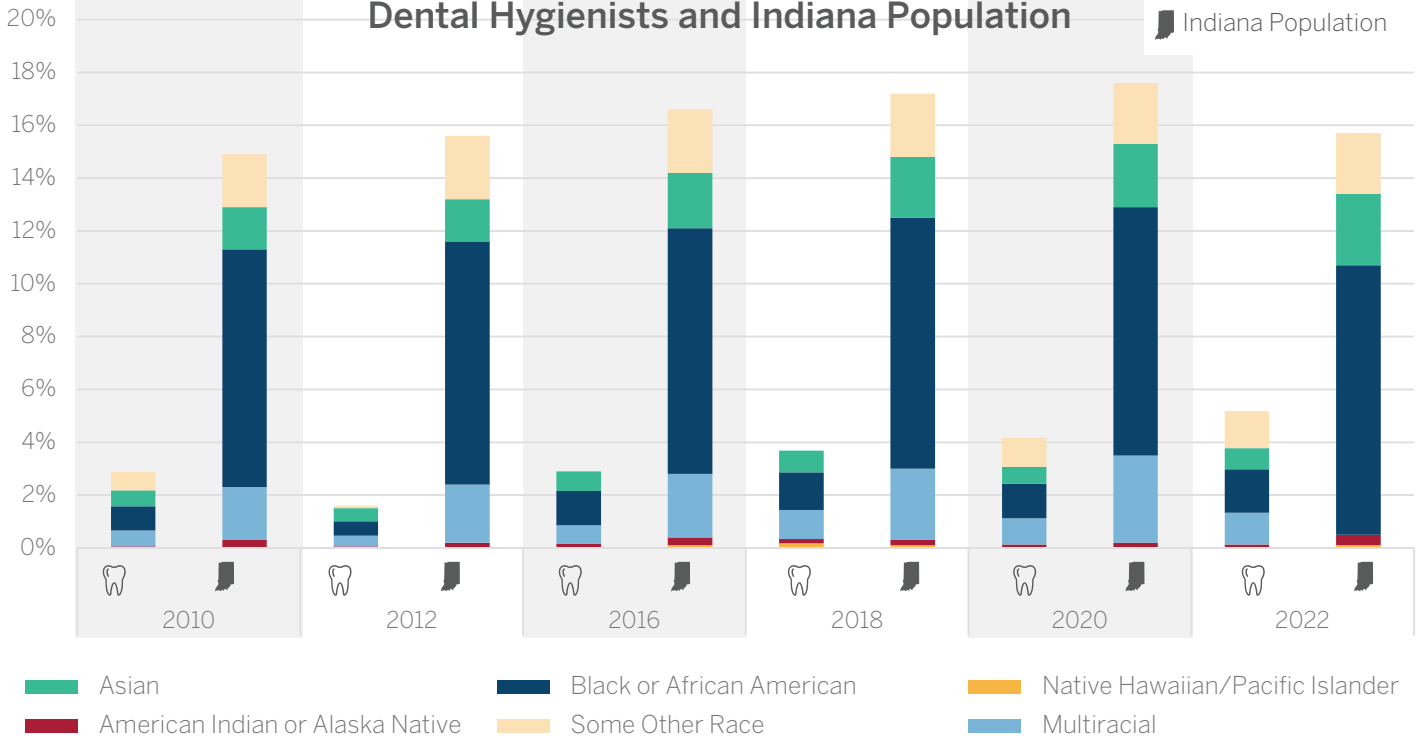


# Indiana Dental Hygienist Demographics Trends

Figure 1.1

## Trends in Racial Minority Groups for Dental Hygienists and Indiana Population

Indiana Dental Hygienist  
 Indiana Population



Note: \* Asian and Pacific Islander demographics combined in 2010 – 2012; dental hygienist license and supplemental data not available for 2014.  
Source: Indiana Dental Hygienist License and Supplemental Survey Data, 2010 – 2022  
A breakdown of all racial demographic characteristics are located in the appendix of Longitudinal Assessment of Diversity in Indiana’s Health Workforce: Indiana Oral Health Professionals

Figure 1.2

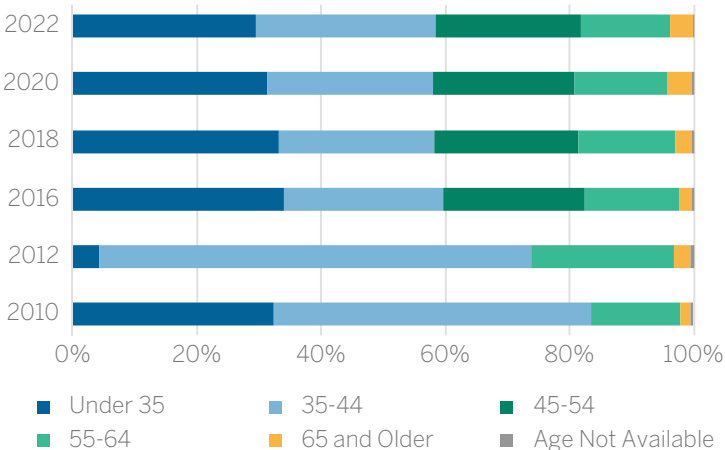
## Trends in Ethnicity for Dental Hygienists and Indiana Population



License and supplemental data are not available for 2014.

Figure 1.3

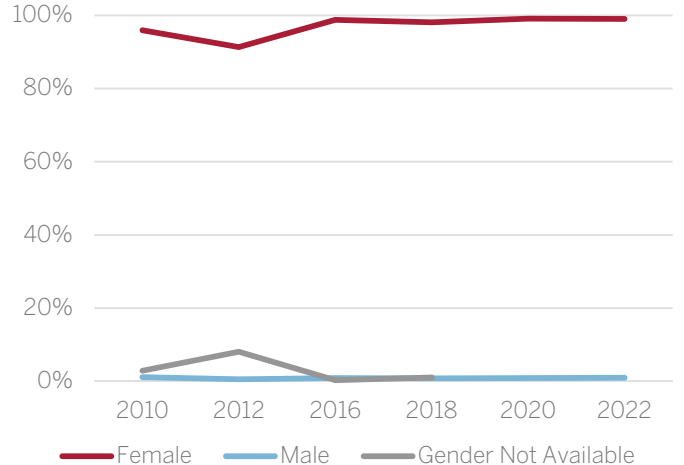
## Trends in Dental Hygienist Age



Age groups 35-54 combined in 2010-2012.  
License and supplemental data are not available for 2014.

Figure 1.4

## Trends in Dental Hygienist Gender



License and supplemental data are not available for 2014.



# APPENDIX

## TABLE 1.1 DENTIST DEMOGRAPHIC CHARACTERISTICS

Dentists	2010		2012		2016		2018		2020		2022	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	2,693		2,314		2,259		2,697		3,095		2,920	
<b>Sex</b>												
Female	568	21.1	531	22.9	622	27.5	793	29.4	950	30.7	970	33.2
Male	2,019	75	1,631	70.5	1,632	72.2	1,881	69.7	2,145	69.3	1,950	66.8
Gender Not Available	106	3.9	152	6.6	5	0.3	23	0.9	-	-	-	-
<b>Age</b>												
Under 35	384	14.3	388	16.8	356	15.8	468	17.4	599	19.4	554	19.0
35-44	1,274*	47.3*	1,045*	45.2*	419	18.5	576	21.4	726	23.5	742	25.4
45-54	-	-	-	-	472	20.9	566	21	624	20.2	591	20.2
55-64	743	27.6	635	27.4	556	24.6	674	25	711	23	600	20.5
65 and Older	276	10.2	235	10.2	281	12.4	401	14.9	435	14.1	423	14.5
Age Not Available	16	0.6	11	0.5	175	7.7	12	0.4	-	-	10	0.3
<b>Ethnicity</b>												
Hispanic, Latino/a, Spanish	53	2	49	2.1	47	2.1	63	2.3	87	2.8	97	3.3
Not Hispanic, Latino/a, Spanish	2,613	97	2,241	96.9	2,008	88.9	2,308	85.6	3,008	97.2	2,823	96.7
Non-Respondents	27	1	24	1	204	9	326	12.1	-	-	-	-
<b>Race</b>												
White	2,383	88.5	2,019	87.3	2,014	89.2	2,352	87.2	2,627	84.9	2,422	82.9
Asian	101*	3.8*	96*	4.1*	115	5.1	151	5.6	239	7.7	254	8.7
Black or African American	64	2.4	66	2.9	60	2.7	79	2.9	99	3.2	112	3.8
Native Hawaiian/Pacific Islander	-	-	-	-	-	-	7	0.3	7	0.2	5	0.2
American Indian or Alaska Native	1	0.03	1	0.04	2	0.1	1	0	7	0.2	1	0.0
Other	34	1.3	49	2.2	-	-	35	1.3	70	2.3	73	2.5
Multiracial	25	0.9	28	2.1	41	1.8	40	1.5	48	1.6	53	1.8
Non-Respondents	85	3.2	55	2.4	27	1.2	32	1.2	-	-	-	-
Note: * means Asian and Pacific Islander demographics combined / age groups 35-54 combined in 2010; Dentists license and supplemental data are not available for 2014.												
Source: Indiana Dentist License and Supplemental Survey Data, 2020-2010												

**TABLE 1.2 DENTAL HYGIENIST DEMOGRAPHIC CHARACTERISTICS**

Dental Hygienists	2010		2012		2016		2018		2020		2022	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	3,175		1,635		3,231		3,521		3,908		3,875	
<b>Sex</b>												
Female	3,044	95.9	1,493	91.3	3,191	98.8	3,454	98.1	3,874	99.1	3,836	99.0
Male	39	1.2	9	0.6	28	0.9	27	0.8	34	0.9	39	1.0
Gender Not Available	92	2.9	133	8.1	12	0.3	40	1.1	-	-	-	-
<b>Age</b>												
Under 35	1,026	32.3	68	4.2	1,097	34	1,168	33.2	1,226	31.4	1,143	29.5
35-44	1,624*	51.1*	1,143*	69.6*	828	25.6	880	25	1,041	26.6	1,118	28.9
45-54	-	-	-	-	737	22.8	816	23.2	893	22.9	908	23.4
55-64	458	14.4	376	23	493	15.3	551	15.6	585	15.0	557	14.4
65 and Older	54	1.7	43	2.6	65	2	96	2.7	152	3.9	138	3.6
Age Not Available	13	0.4	5	0.6	11	0.3	10	0.3	11	0.3	11	0.3
<b>Ethnicity</b>												
Hispanic, Latino/a, Spanish	52	1.6	19	1.2	68	2.1	89	2.5	120	3.1	140	3.6
Not Hispanic, Latino/a, Spanish	3,110	98	1,599	97.8	2,860	88.5	2,950	83.8	3,788	96.9	3,735	96.4
Non-Respondents	13	0.4	17	1	303	9.4	482	13.7	-	-	-	-
<b>Race</b>												
White	3,058	96.3	1,584	96.9	3,112	96.3	3,346	95.0	3,743	95.8	3,673	94.8
Asian	19*	0.6*	8*	0.5*	24	0.7	29	0.8	25	0.6	31	0.8
Black or African American	29	0.9	9	0.6	42	1.3	50	1.4	51	1.3	64	1.7
Native Hawaiian/Pacific Islander	-	-	-	-	1	0.0	6	0.2	1	0.0	1	0.0
American Indian or Alaska Native	2	0.1	1	0.1	4	0.1	6	0.2	4	0.1	4	0.1
Other	21	0.7	2	0.1	-	-	-	-	43	1.1	54	1.4
Multiracial	20	0.6	7	0.4	24	0.7	37	1.1	41	1.0	48	1.2
Non-Respondent	26	0.8	24	1.5	24	0.7	47	1.3	-	-	-	-

Note: \* means Asian and Pacific Islander demographics combined / or ages 34-54 combined in 2010-2012 ; dental hygienist license and supplemental data are not available for 2014.

Source: Indiana Dental Hygienist Licensure and Supplemental Data Survey, 2020-2016 & 2014-2012

## ENDNOTES

- 1 Oral Health in America: Advances and Challenges [Internet]. Bethesda (MD): National Institute of Dental and Craniofacial Research (US); 2021 Dec. Section 4, Oral Health Workforce, Education, Practice and Integration. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK578298/>
- 2 A Longitudinal Assessment of Diversity in Indiana's Health Workforce: Introduction and Methodology. (2022). Bowen Center for Health Workforce Research and Policy. Indiana University School of Medicine. Available at: <https://hdl.handle.net/1805/31536>
- 3 American Dental Association. ADA Diversity and Inclusion. Available at: <https://www.ada.org/about/principles/diversity-and-inclusion>
- 4 ADA Institute for Diversity in Leadership. Available at: <https://www.ada.org/resources/careers/ada-institute-for-diversity-in-leadership>
- 5 National Institutes of Health. UNITE. Available at: <https://www.nih.gov/ending-structural-racism/unite>
- 6 HRSA Programs such as the Dental Faculty Loan Repayment Program (<https://www.hrsa.gov/grants/find-funding/HRSA-21-019>), National Health Service Corps Loan Repayment Program (<https://nhsc.hrsa.gov/loan-repayment/nhsc-loan-repayment-program>), National Health Service Corps Scholarship Program (<https://nhsc.hrsa.gov/scholarships/overview>), and other programs (learn more at: <https://bhw.hrsa.gov/funding#loan>).
- 7 IUPUI-IU School of Dentistry Diversity Dental Scholarship. Available at: <https://iu.academicworks.com/opportunities/37538>
- 8 IUSD Diversity Strategic Plan 2021-2023. Available at: <https://dentistry.iu.edu/about/dei/diversity-plan.html>
- 9 Indiana Area Health Education Center Network. Available at: <https://www.indianaahec.org/>
- 10 Indiana State Loan Repayment Program. Available at: <https://www.in.gov/health/cdpc/state-loan-repayment-program/>
- 11 A Longitudinal Assessment of Diversity in Indiana's Health Workforce: Introduction and Methodology. (2022). Bowen Center for Health Workforce Research and Policy. Indiana University School of Medicine. Available at: <https://hdl.handle.net/1805/31536>
- 12 2020-2023 Strategic Plan. American Dental Hygienists' Association. Available at: <https://www.adha.org/about-adha/strategic-plan/>
- 13 HRSA Programs such as the Dental Faculty Loan Repayment Program (<https://www.hrsa.gov/grants/find-funding/HRSA-21-019>), National Health Service Corps Loan Repayment Program (<https://nhsc.hrsa.gov/loan-repayment/nhsc-loan-repayment-program>), National Health Service Corps Scholarship Program (<https://nhsc.hrsa.gov/scholarships/overview>), and other programs (learn more at: <https://bhw.hrsa.gov/funding#loan>).
- 14 IUPUI-IU School of Dentistry Diversity Dental Scholarship. Available at: <https://iu.academicworks.com/opportunities/37538>
- 15 IUSD Diversity Strategic Plan 2021-2023. Available at: <https://dentistry.iu.edu/about/dei/diversity-plan.html>
- 16 Indiana Area Health Education Center Network. Available at: <https://www.indianaahec.org/>
- 17 Indiana State Loan Repayment Program. Available at: <https://www.in.gov/health/cdpc/state-loan-repayment-program/>
- 18 HRSA Programs such as the Dental Faculty Loan Repayment Program (<https://www.hrsa.gov/grants/find-funding/HRSA-21-019>), National Health Service Corps Loan Repayment Program (<https://nhsc.hrsa.gov/loan-repayment/nhsc-loan-repayment-program>), National Health Service Corps Scholarship Program (<https://nhsc.hrsa.gov/scholarships/overview>), and other programs (learn more at: <https://bhw.hrsa.gov/funding#loan>).

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