

## A Profile of Oral Health Providers in New York State

### Highlights

- There are more dentists per capita in New York State compared with the national rate per capita but fewer dental hygienists per capita.
- Dentists and dental hygienists are not as diverse as New York's population, with many fewer dentists and dental hygienists who are African American/Black or Hispanic/Latino.
- There are more dentists per capita in urban areas of the state compared with rural areas.
- Older dentists are more likely to own their practices, while younger dentists are more likely to be employees of organizations or private practices.

### Background

There are strong linkages between oral and general health. Despite efforts to improve the oral health of the state's population, oral health disparities persist. Those at greatest risk for lack of access to basic oral health services include rural populations, racial and ethnic minorities, people with special needs, the elderly, and low-income populations. Many factors contribute to these disparities. Among the factors that are critical to oral health access is the supply and distribution of an oral health workforce to provide needed services. This research brief examines the dentist and dental hygienist workforce in New York.

### Data and Methods

The data for this research brief were drawn from the American Community Survey (ACS), conducted by the US Census Bureau.<sup>a</sup> The most recent 5-year ACS data (years 2009 through 2013) provide information on more than 15 million individuals, including occupation and employment location as well as demographic information. Analysis was conducted by occupation and by geographic location, including at the state and substate levels.<sup>b</sup> The data were weighted to represent the entire population.

Previous research briefs of New York's oral health workforce used data from the Center for Health Workforce Studies' (CHWS) re-licensure surveys of dentists and dental hygienists. However, low response rates to these voluntary surveys have precluded using these data for any workforce analyses.

### Limitations

While the ACS provides some basic information on the oral health workforce, there are limitations to the data. First, patient care hours are not available. Additionally, the data identify only the primary job location. For those oral health providers with 2 or more jobs, there is no information on the amount of time spent at each separate location. Consequently, it is impossible to fully assess the capacity of the oral health workforce and how that capacity varies across the state. Finally, ACS does not identify the specialties of the dentists or the specialties of the dental practices where dental hygienists work. Thus, there is no method for determining which oral health providers work in general dentistry and which provide specialty care.

<sup>a</sup> United States Census Bureau, American Community Survey (ACS), 2009-2013 ACS 5-Year Public Use Microdata Samples (PUMS). <https://www.census.gov/programs-surveys/acs/data/pums.html>. Accessed November 9, 2015.

<sup>b</sup> Substate analyses used Public Use Microdata Areas (PUMAs), which are contiguous geographic areas built on census tracts and counties. PUMAs also may be matched to counties with a crosswalk to obtain urban and rural indicators.

## Findings

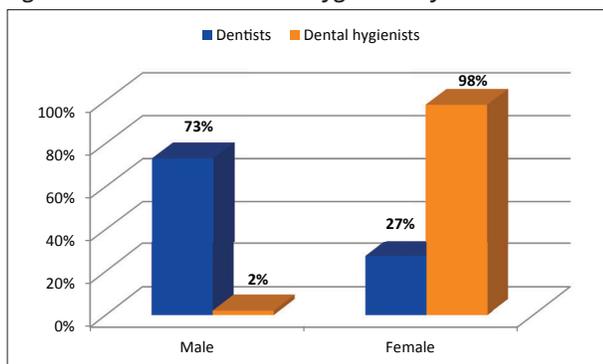
### Counts and Demographic Characteristics

#### There are more dentists per capita in New York State compared with the national rate per capita but fewer dental hygienists per capita.

A total of 12,773 dentists and 9,038 dental hygienists reported actively practicing in New York State, and a total of 163,178 dentists and 156,929 dental hygienists reported actively practicing nationally. Among active dentists, there were 65 dentists per 100,000 population in the state, compared with a national rate of 52 dentists per 100,000 population. There were 46 dental hygienists per 100,000 population in New York State compared with a national rate of 50 dental hygienists per 100,000 population.

About 73% of all dentists were male, while 27% were female. Among dental hygienists, 98% were female while only 2% were male (Figure 1).

Figure 1. Dentists and Dental Hygienists by Gender

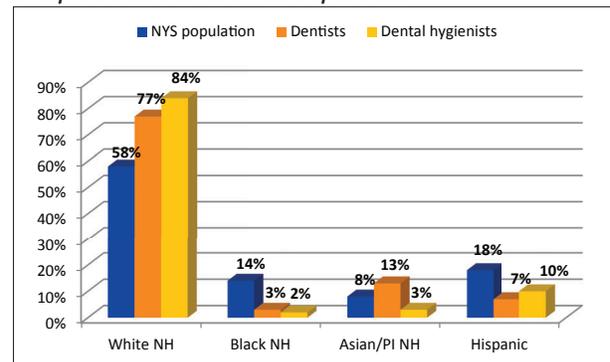


#### Dentists and dental hygienists are not as diverse as New York's population, with many fewer dentists and dental hygienists who are African American/Black or Hispanic/Latino.

There was a higher percentage of White, non-Hispanic dentists and dental hygienists relative to the distribution of these racial/ethnic groups in the general population in New York State. Additionally, Asians/Pacific Islanders were overrepresented in the dentist population in the state but not in the dental hygienist population. According to the ACS data, 58% of New York's population between 2009 and 2013 were White, non-Hispanic, but 77% and 84% dentists

and dental hygienists, respectively, were White, non-Hispanic (Figure 2). There were underrepresented minorities (URMs) in both the dental and dental hygienist populations. Fourteen percent of New York's population were Black, non-Hispanics, while only 3% of all dentists and 2% of all dental hygienists were Black, non-Hispanic. Compared with the percentage of individuals who were Hispanic/Latino in the population (18%), a smaller percentage of both Hispanic dentists (7%) and Hispanic dental hygienists (10%) practiced in New York.

Figure 2. Race/Ethnicity of Dentists and Dental Hygienists Compared With New York's Population

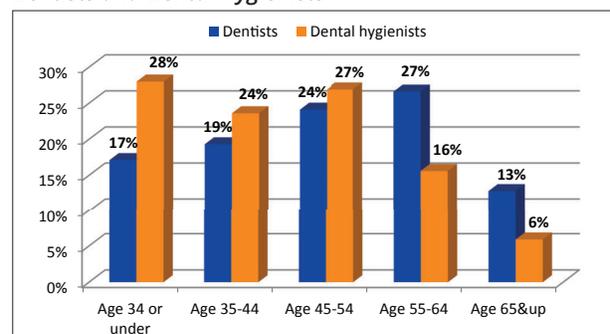


NH, non-Hispanic; NYS, New York State; PI, Pacific Islander.

#### Dentists are older than New York's civilian workforce, while dental hygienists are comparable in age to New York's civilian workforce.

The median age of New York's dental hygienists was 44 years, similar to that of New York's general workforce. In contrast, the median age of practicing dentists was 51 years. A larger percentage of dental hygienists were in younger age groups compared with dentists (Figure 3). Fifty-two percent of dental hygienists were age 44 or younger, compared with only 36% of dentists. About 39% of dentists were age 55 and older, compared with only 22% of dental hygienists.

Figure 3. Distribution of Age Groups Among Practicing Dentists and Dental Hygienists

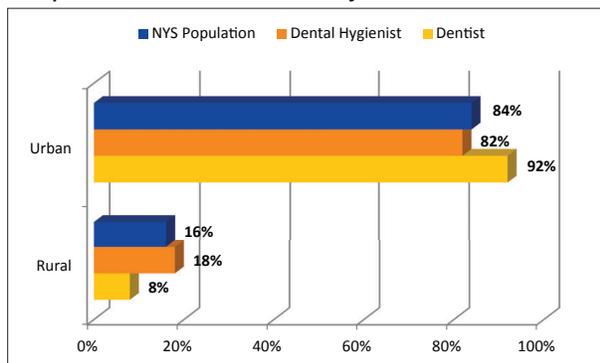


## Practice Characteristics

**There are more dentists per capita in urban areas of the state compared with rural areas.**

Based on Eberts and Merschrod's urban/rural classifications for New York State,<sup>c</sup> 84% of New York's population resided in urban areas and 16% in rural areas (Figure 4). About 82% of dental hygienists worked in urban areas and 18% worked in rural areas. Among dentists, 92% worked in urban areas and only 8% worked in rural areas, indicating that dentists were overrepresented in urban communities relative to the distribution of both dental hygienists and that of the total population. There were 1.5 dental hygienists for every dentist in rural areas compared with 0.55 dental hygienists for every dentist in urban areas.

**Figure 4. Geographic Distribution of State Population Compared With Oral Health Workforce**



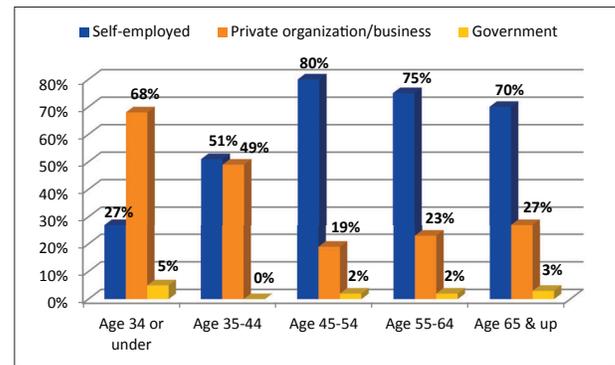
**The majority of dental hygienists hold an Associate degree as their highest degree.**

About 74% of practicing dental hygienists in New York State held an associate degree as their highest degree, while about 23% held a bachelor's degree. Only about 4% held a graduate or professional degree. Dental hygienists actively practicing in urban areas are slightly more likely to hold bachelor's degrees or higher (27%) compared with dental hygienists practicing in rural areas (22%).

**Older dentists are more likely to own their practices, while younger dentists are more likely to be employees of organizations providing oral health services, including private practices.**

The majority of dentists were self-employed, while the vast majority of dental hygienists were employees in organizations providing oral health services, including private practices. About 63% of dentists reported being self-employed (Figure 5). Slightly more than one-third of dentists were employed in organizations providing oral health services, including private practices, compared with 97% of dental hygienists. For all age groups, the vast majority of dental hygienists reported employment in private practices. For dentists, a different pattern emerged; the majority of dentists (68%) aged 34 years and under reported employment in private practices, but the majority of dentists in all older age groups reported being self-employed.

**Figure 5. Employment Type Among Active Dentists in New York**



<sup>c</sup> Eberts PR, Merschrod K. Socioeconomic Trends in New York State, 1950-2000. 3rd ed. Albany, NY: New York State Legislative Commission on Rural Resources; 2004.

## Discussion

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While the overall oral health of the US population has improved, significant oral health disparities remain for many underserved populations, including those with limited or no dental insurance, children, rural populations, the elderly, and racial and ethnic minorities. Additionally, New York's active dentists are older, on average, than the civilian workforce of the state. While this brief provides a broad overview of the oral health workforce in New York, data that describe the location of practices, the amount of time spent providing patient care, and characteristics of the patients served are required to obtain a fuller understanding of the supply and distribution of the state's oral health workforce and its impact on access to care. Timely data and information on the supply and distribution of the state's oral health workforce are critical for effective health workforce planning to meet New York's dental needs.



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This research was conducted at the Center for Health Workforce Studies (CHWS) by Tracey Continelli, Cassandra Bruce, Erin Roberts, and Robert Martiniano. Support for this analysis was provided by the New York State Department of Health.

CHWS, established in 1996, is based at the School of Public Health, University at Albany, State University of New York (SUNY). The mission of CHWS is to provide timely, accurate data and conduct policy relevant research about the health workforce. The research conducted by CHWS supports and promotes health workforce planning and policymaking at local, regional, state, and national levels.