

### Highlights

- ◆ **Dentists and dental hygienists are unevenly distributed across New York.**
- ◆ **There is wide regional variation in the ratio of dental hygienists to dentists.**
- ◆ **Most of the dentists and dental hygienists practicing in New York trained in New York.**
- ◆ **While the vast majority of dentists are male, an overwhelming majority of dental hygienists are female.**
- ◆ **Dentists and dental hygienists practicing in New York are not as racially and ethnically diverse as the state's population.**
- ◆ **Most dentists and dental hygienists work in private offices.**
- ◆ **The majority of dentists in New York do not serve Medicaid patients.**

### Background

While New York has made strides in recent years to improve the oral health of its diverse population, concerns about oral health disparities persist. Populations at greatest risk for these disparities include children, the elderly, the poor, racial and ethnic minorities, rural populations, and people with special needs.<sup>1</sup> Policymakers, oral health providers, and advocates continue to seek solutions to the problems of low oral health literacy and other barriers that limit access to preventive, restorative, and therapeutic oral health services for high-need populations.

New York is one of 16 states in the U.S. that provides a full adult dental benefit in all service categories in its Medicaid program.<sup>2</sup> However, only 32% of the state's Medicaid enrollees had at least one dental visit between 2009 and 2011 and fewer than 28% of Medicaid enrollees had a preventive dental visit in the same period.<sup>3</sup> In contrast, 71% of all adults in New York had a dental visit in 2008 and 2009. In addition, only 42% of children between the ages of 2 and 20 who were enrolled in Medicaid in New York had at least one dental visit between 2009 and 2011. According to the Pew Center on the States, New York is among the 10 states in which low-income children are least likely to receive dental care.<sup>4</sup> One of the challenges in New York is the small number of dentists who actively participate in Medicaid; fewer than half of the state's dentists are enrolled in the program.<sup>5</sup>

New York is one of 21 states receiving oral disease prevention program grants from the U.S. Centers for Disease Control and Prevention to enhance oral health

programs, engage in oral disease surveillance, and support collaborations to improve oral health. New York is also the recipient of funds from the Health Resources and Services Administration to build linkages between dentists and underserved communities in the state.<sup>6</sup> Several oral health programs are funded with these grants including a sealant program for children in public schools in underserved communities. Still, there are geographic differences and regional variation in oral health status. Two-thirds of third-grade children in St. Lawrence County (67%) and 74% of third-graders in Madison County had treated or untreated caries in 2009 to 2011, while only 25% of third-graders in Dutchess and Albany counties had treated or untreated caries in those years.<sup>3</sup>

The oral health workforce is an important link between these policy efforts and programs to improve the oral health of high-need populations. Two key oral health professions, dentists and dental hygienists practicing in New York, are described in this brief. The information presented here is drawn from an ongoing data collection effort conducted by the Center for Health Workforce Studies and sponsored by the New York State Department of Health.

### Distribution of the Oral Health Workforce

While the statewide supply of both dentists and dental hygienists is above the national average, access to oral health services remains problematic for underserved populations in many areas of the state. In June 2014, there were three federally designated geographic dental health professional shortage areas (DHPSAs) in New York, 32 special population DHPSAs for either Medicaid-eligible or

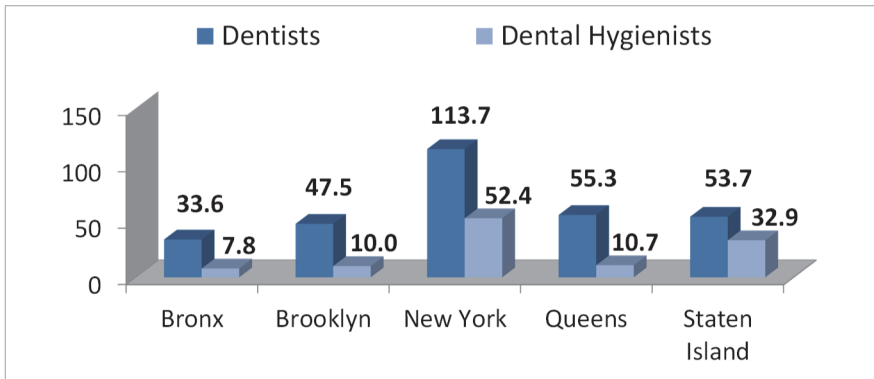
**Table 1: General/Pediatric Dentist and Dental Hygienist Supply by Region**

Region	Dentists		Dental Hygienists	
	Count	Per 100k Pop	Count	Per 100k Pop
Capital District	706	65	827	76
Central New York	415	53	537	68
Finger Lakes	664	54	1,011	83
Hudson Valley	1,714	74	1,174	51
Long Island	2,357	83	1,556	55
Mohawk Valley	246	50	268	54
New York City	5,079	60	1,622	19
North Country	190	44	214	49
Southern Tier	325	50	494	76
Western New York	844	61	1,023	73
New York State	12,541	64	8,728	44

low-income New Yorkers, and 92 facility designations.<sup>7</sup> As shown in Table 1, the distribution of dentists and dental hygienists in New York varies widely, ranging from 83 general/pediatric dentists per 100,000 population in the Long Island region to 44 per 100,000 population in the North Country region, and from 83 dental hygienists per 100,000 population in the Finger Lakes region to 19 per 100,000 population in the New York City region.

Per capita, there are far fewer dental hygienists in the New York City region than in the rest of the state. Furthermore, within the New York City region, there is also wide variation by county in the supply of oral health professionals (see Figure 1). In New York County (Manhattan), there are 114 general/pediatric dentists and 52 dental hygienists per 100,000 population which is greater than in the other counties in the region (Bronx, Kings, Richmond, and Queens).

**Figure 1: General/Pediatric Dentist and Dental Hygienist Supply**

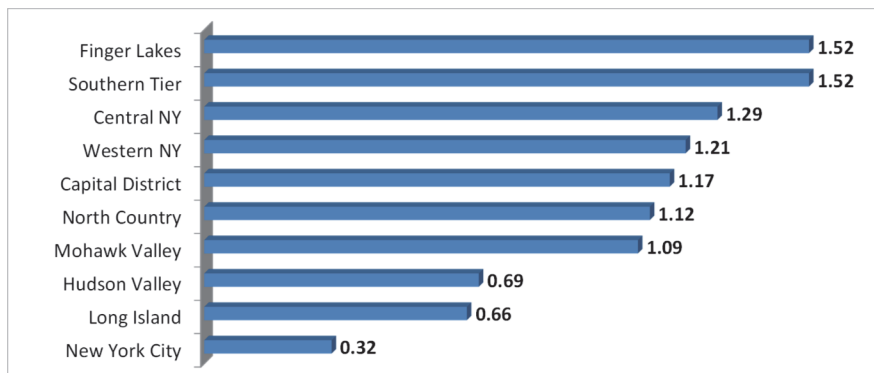


As shown in Figure 2, there is also variation in the ratio of dental hygienists to dentists by region in the state. The Finger Lakes and Southern Tier regions both have ratios of 1.52 dental hygienists to each dentist. The ratio is smallest in New York City, Long Island, and the Hudson Valley regions at 0.32, 0.66, and 0.69 dental hygienists per general/pediatric dentist, respectively.

**Practice Characteristics**

Consistent with national practice patterns, a majority of dentists in New York (77%) practice general dentistry. Among practicing dental specialists in the state, the most common specialties are orthodontics and dentofacial orthopedics (5%), oral and maxillofacial surgery (4%), and periodontics (4%).

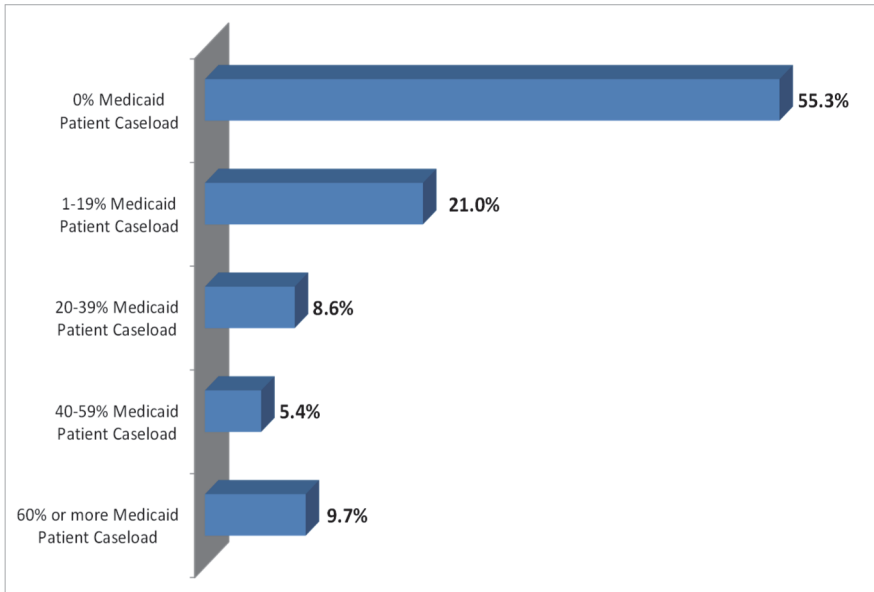
**Figure 2: Ratio of Dental Hygienist to General/Pediatric Dentists**



More than 90% of dentists and dental hygienists work in private offices. Very few practice in community health centers and other safety net settings. Eighty-three percent of dentists and 45% of dental hygienists work full time (defined as 30 or more hours per week).

The majority of dentists in New York (55%) do not provide services to Medicaid-insured patients. Among those dentists who do provide care to this population, less than 10% have a patient caseload comprised mainly of Medicaid insured patients (defined as more than 60%).

**Figure 3: Medicaid Caseloads for New York Dentist**

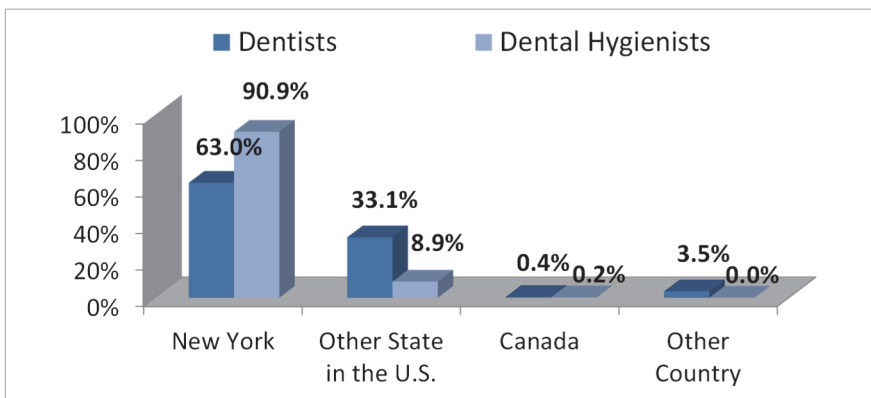


The majority of Medicaid patients in New York receive oral health services from a small number of dentists.

**Education**

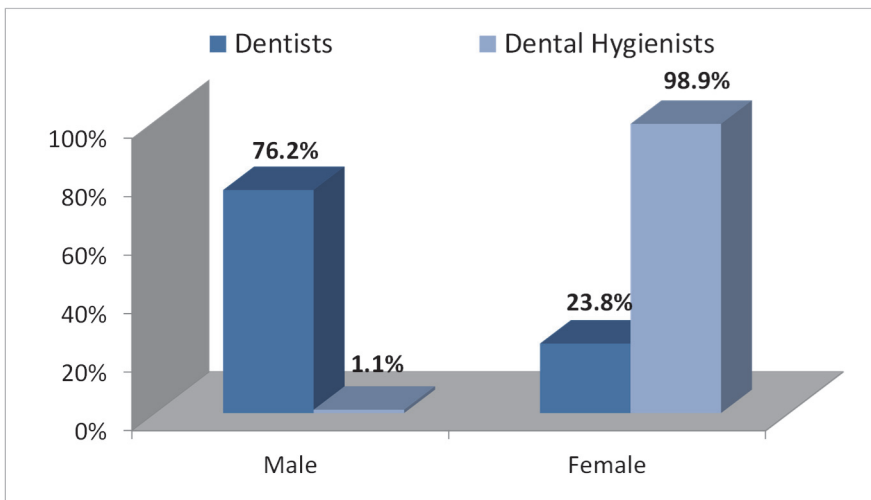
Most dentists and dental hygienists practicing in New York were trained in the state. Sixty-three percent of dentists practicing in New York were trained in New York, while the remainder were trained in another state or outside the U.S. (See Figure 4). Thirty-six percent of practicing dentists in the state completed their training at New York University, which produced a greater percentage of active dentists in the state than all other dental schools combined.

**Figure 4: Location of Dental Training**



The vast majority of practicing dental hygienists in New York were trained in the state (91%) as well. Among the 10 schools that train dental hygienists in New York, the State University of New York (SUNY) at Farmingdale trained the most (17% of all the dental hygienists currently practicing in the state) followed by Erie Community College (15%), Hudson Valley Community College (13%), and City University of New York (CUNY) College of Technology (13%). Ninety-three percent of dental hygienists reported an associate degree as their highest dental hygiene degree while less than 5% reported holding a bachelor’s degree.

**Figure 5: Gender of Dentists and Dental Hygienists**



**Demographics**

The majority of dentists in New York are male (76%) while the majority of dental hygienists are female (99%). In 2010, 45.7% of first-year dental students in the U.S. were female, suggesting greater gender diversity for the profession in the future.<sup>8</sup> Dentists are, on average, approximately five years older than dental hygienists in the state (median age of 56 compared to 51).

New York’s population is among the most ethnically and racially diverse in the nation. However, dentists and dental hygienists are not representative of the state’s population. Eighty percent of dentists in New York are non-Hispanic White and 11% are Asian/Pacific Islanders. Eighty-eight percent of dental hygienists are non-Hispanic White.

## Conclusion

Limited access to oral health care and disparities in oral health status for certain groups persist in New York despite innovation in the delivery of services. Many of the people who remain underserved are enrolled in the state's Medicaid program and/or live in more sparsely populated areas of the state. One concern is the small number of dentists who actively participate in the Medicaid program. Increasing both the overall participation rate of dentists and also the numbers of Medicaid patients treated by already participating dentists would likely contribute to improvement in oral health outcomes.

While data from New York suggest that the overall supply of both dentists and dental hygienists on a per population basis is greater than or equal to the national average, the distribution of these oral health professionals is extremely uneven. As an example, there are approximately 83 general/pediatric dentists per 100,000 population in the Long Island region and 44 general/pediatric dentists per 100,000 population in the North Country region, reflecting unbalanced regional geographic distribution.

An important finding from this analysis relates to the cross-professional distribution of dentists and dental hygienists. In some areas of the state, the supply of dental hygienists appears to be inversely proportional to the supply of dentists, e.g., some areas with higher numbers of dentists have a smaller number of dental hygienists. Conversely, in other areas with a high number of dental hygienists, there is a low number of dentists. While the reasons for these differences are not well understood, it suggests either differences in regional practice patterns in delivery of oral health services or geographic variation in supply, or both. These distribution patterns have been noted over time and warrant further investigation. Policy makers, state and local planners, researchers, and others should carefully consider the implications of this maldistribution on access to preventive, prophylactic, and restorative oral health services, particularly for underserved populations.

## Data and Methods

Data for this research brief were drawn from ongoing surveys of licensed dentists and dental hygienists in New York conducted by the Center for Health Workforce Studies. Since the surveys began in 2007, more than 9,200 dentists and 6,300 dental hygienists have completed the surveys.

A respondent was determined to be active if the individual reported hours in clinical or direct patient care. Respondents who did not report hours in one of these two activities or who reported being retired were excluded from the analysis. The region in which an individual practiced was based on the principal practice zip code reported on the survey. If the principal practice zip code was missing or located outside of New York, the secondary practice location zip code was used for determining a practice location in New York. Responses were weighted to estimate total dentists and dental hygienists in New York.

Findings from the analysis of data derived from dentist and dental hygienist re-registration surveys make a vital contribution to the general understanding of the oral health workforce in New York. These surveys are an important tool in the continued monitoring of the state's oral health workforce and helps to inform programs and policies designed to increase access to and the efficiency of the delivery of oral health services.

## References

- <sup>1</sup> New York State Department of Health, Bureau of Dental Health. *The Impact of Oral Disease in New York State*. December 2006.
- <sup>2</sup> McGinn-Shapiro, M. *Medicaid Coverage of Adult Dental Services*. *State Health Policy Monitor*. National Academy for State Health Policy. October 2008.
- <sup>3</sup> New York State Department of Health. *New York State Community Health Indicator Reports—Oral Health Indicators*.
- <sup>4</sup> The Pew Charitable Trusts. *In Search of Dental Care*. June 2013.
- <sup>5</sup> Crowley C. *Dentists drop Medicaid after cuts*. *The Times Union*. May 2011.
- <sup>6</sup> New York State Oral Health Coalition. *Annual Report 2013*. News from Jay V. Kumar, DDS, MPH, Director Bureau of Dental Health, NYSDOH.
- <sup>7</sup> Health Resources and Services Administration Data Warehouse. *Health Professional Shortage Area Data Download*, June 2014.
- <sup>8</sup> American Dental Education Association. *U.S. Dental School Applicants and Enrollees, 2010 Entering Class*.

## Center for Health Workforce Studies

This brief was prepared by the Center for Health Workforce Studies at the School of Public Health, University at Albany, State University of New York. Center staff who worked on the report included Gaetano J. Forte, Margaret Langelier, David Armstrong, and Tracey Continelli. Support for this analysis was provided by the New York State Department of Health and the New York State Education Department. For more information please visit the Center's website: <http://chws.albany.edu>