2015 Pulse of Pennsylvania's Dentist and Dental Hygienist Workforce

A Report on the 2015 Survey of Dentists and Dental Hygienists

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Bureau of Health Planning Division of Plan Development



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INTRODUCTION

Dentists diagnose and treat conditions and diseases of the head and neck that are generally related to the oral cavity. They also provide preventive health advice to patients.

Dentists perform a variety of activities, such as removing tooth decay, filling cavities, repairing fractured teeth and bones of the jaw, reading x-rays, performing corrective surgery on gums and supporting bones to treat gum diseases, extracting teeth, and providing replacements for missing teeth. Dentists may administer anesthetics and write medication prescriptions in conjunction with the activities that they perform.

Individuals studying to become dentists will complete at least eight years of education following high school. In addition to completing a bachelor's degree, individuals must take the Dental Admission Test before applying for admission to dental school. Upon graduation from an accredited dental school, a dentist receives a degree of either a Doctor of Dental Surgery (D.D.S.) or a Doctor of Dental Medicine (D.M.D.). Dentists may practice in general dentistry or may choose to undergo further training by completing a residency program in general practice or one of the specialty areas of dentistry that include orthodontics, oral and maxillofacial surgery, pediatric dentistry, periodontics, prosthodontics, endodontics, oral pathology, oral and maxillofacial radiology, or public health dentistry. Dental residencies require an additional commitment of one to four years to complete, depending on the area of specialty.



According to the American Dental Association, there are 64 dental schools operating in the United States. Pennsylvania is home to three dental schools.

In all 50 states, the District of Columbia and territories, dentists must be licensed to practice dentistry. To obtain a license, dentists must graduate from an accredited dental school and pass a licensing clinical examination accepted by the state in which they wish to practice. In Pennsylvania, the State Board of Dentistry (board) within the Department of State is responsible for regulating dental practice through licensure, registration and certification of members of the dental professions.

Dental hygienists provide preventive dental care such as cleaning teeth and educating patients on good oral health practices. The board also licenses dental hygienists upon completion of an approved dental hygiene education program and passing written and clinical examinations.

Individuals who have completed a board-approved training program and passed an initial certification examination may become certified by the State Board of Dentistry as an expanded function dental assistant. A dental hygienist whose accredited training program included sufficient hours of instruction on restorative functions may also become certified as an expanded function dental assistant. Expanded function dental assistants may perform higher level procedures under the direct supervision of a dentist.

A dental hygienist may become certified by the State Board of Dentistry as a public health dental hygiene practitioner upon completion of 3,600 hours of practice under the supervision of a dentist and after securing appropriate professional liability insurance. Public health dental hygiene practitioners may provide dental hygiene services in certain public health settings without the supervision of a dentist.

METHODS AND TECHNICAL NOTES

Dentists and dental hygienists renew their Pennsylvania license to practice every two years through the Department of State, Bureau of Professional and Occupational Affairs (BPOA). In cooperation with the BPOA, the Department of Health's Bureau of Health Planning surveys dentists and dental hygienists renewing their licenses. The surveys are designed to collect information on the characteristics and distribution of the dentist and dental hygienist workforces in the commonwealth.

In 2015, dentists and dental hygienists licensed under the State Board of Dentistry were surveyed during the license renewal period that ran from January to May. The surveys were conducted online and on paper, depending on the medium chosen by the respondent. Because these surveys are tied to the licensure renewal process, the data captured does not include first-time licensees or most individuals in training. The dentist survey instrument, in its paper form, is available in appendix 8, and the dental hygienist survey instrument, in its paper form, is available in appendix 13.

Data analysis was completed on valid surveys returned for both dentists and dental hygienists. Surveys without a valid license number, duplicate responses and surveys with inactive or expired license numbers were removed. The tables below provide the number of dentists and dental hygienists who renewed their licenses, the number of valid surveys returned, and the associated response rates.

Dentists

	2003	2005	2007	2009	2011	2013	2015
Renewals	9,241	8,757	9,222	9,274	9,428	9,449	9,479
Valid surveys returned	6,800	6,956	8,326	8,628	8,320	8,230	7,590
Response rate (surveys/renewals)	73.6%	79.4%	90.3%	93.0%	88.2%	87.1%	80.1%

Dental Hygienists

	2003	2005	2007	2009	2011	2013	2015
Renewals	6,745	6,787	7,440	7,934	8,304	8,571	8,829
Valid surveys returned	5,453	5,738	6,878	7,671	7,774	7,908	7,384
Response rate (surveys/renewals)	80.8%	84.5%	92.4%	96.7%	93.6%	92.3%	83.6%

METHODS AND TECHNICAL NOTES, CONTINUED

Not all individuals chosen to participate in surveys do so, and the extent of non-response (missing) data varies. Non-response bias results when respondents differ in meaningful ways from non-respondents. It can affect how well the response data represents the population being surveyed. Approximately 20 percent of renewing dentists and 16 percent of renewing dental hygienists did not complete and return valid surveys. Therefore, exercise caution when interpreting the response data and descriptive findings presented here. This report describes the 80 percent of dentists and 84 percent of dental hygienists who responded to the survey.

A reasonable estimate of the size and characteristics of the entire population of renewing dentists and dental hygienists can be obtained by applying the response rate to the counts reported. The calculation is as follows:

Count ÷ response rate = estimated population of license renewals

For example, to estimate the number of female dentists licensed in Pennsylvania, divide the number of female survey respondents (1,968) by the response rate (80.1%), thus estimating 2,457 total female dentists licensed in Pennsylvania.

 $1,968 \div 0.801 = 2,457$

This method does not include an adjustment for items with missing values, thus yielding a conservative, or low, estimate.

The information presented in this report, unless noted, is based upon actual response counts. Not all questions were answered by all respondents; therefore, the number of responses may vary for each question.

Information from prior dentist and dental hygienist report findings and national findings is included for comparison purposes.

The survey questions used for both dentists and dental hygienists have changed over the different survey years, resulting in some differences in the data collected.

EXECUTIVE SUMMARY

The 2015 Pulse of Pennsylvania's Dentist and Dental Hygienist Workforce presents findings from the 2015 Dentist Survey and 2015 Dental Hygienist Survey. These surveys were designed to collect information on the characteristics and distribution of the dentist and dental hygienist workforces within the commonwealth.

The surveys were conducted in conjunction with the biennial license renewal for dentists and dental hygienists. It is important to note that dentists and dental hygienists receiving their first license were not included in the survey. A detailed explanation of the data collection and analysis may be found in the Methods and Technical Notes, beginning on page ix.

In 2015, there were more dentists and dental hygienists who renewed their licenses compared to prior survey years. Since 2003, there were 238 or 3 percent more dentists and 2,084 or 31 percent more dental hygienists who renewed their licenses in Pennsylvania.

Dentists

Responding dentists licensed in Pennsylvania resided around the nation and across the globe, with 95 percent employed in dentistry. Seventy-nine percent of respondents employed in dentistry provided direct patient care in Pennsylvania.

Respondents who provided direct patient care in Pennsylvania became a more diverse group, with females increasing from 18 percent in 2007 to 25 percent in 2015. Asian respondents increased from 9 percent in 2013 to 11 percent in 2015.

Respondents who provided direct patient care in Pennsylvania are aging, with the average age increasing from 51.3 years in 2007 to 52.5 years in 2015. Thirty-five percent of respondents were age 60 or older.

In 2015, 10 percent of respondents who provided direct patient care in Pennsylvania were board certified in a dental specialty, a decrease from 15 percent in 2011. Seventy-seven percent of respondents who provided direct patient care performed general dentistry.

Dentist respondents who provided direct patient care in Pennsylvania and practiced in rural counties was 19 percent in 2015.^{*} Based on the 2015 survey response data, the rate of dentists providing direct patient care per 100,000 population was 33.6 in rural counties and 52.1 in urban counties, with each rate representing a decrease from 2013.^{*}

In 2015, 88 percent of respondents who provided direct patient care in Pennsylvania worked in a private office practice. Forty-one percent of respondents owned a solo private practice, and 29 percent were owners of a partnership private practice.

Medicaid patients were accepted by 25 percent of respondents who provided direct patient care in Pennsylvania, an increase from 17 percent in 2003. Ninety-six percent of respondents accepted new patients in 2015. Of those who accepted new patients, 30 percent accepted Medicaid patients.

Thirty-five percent of dentist respondents who practiced direct patient care in Pennsylvania anticipated practicing for 16 or more years and 27 percent for less than six years. Respondents who specialized in oral surgery represented the highest percentage (35 percent) of all specialties leaving direct patient care in less than six years.

^{*} Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data.

EXECUTIVE SUMMARY, CONTINUED

Dental Hygienists

Responding dental hygienists licensed in Pennsylvania resided around the nation and across the globe, with 90 percent employed in dental hygiene. Of those respondents employed in dental hygiene, 97 percent provided direct patient care in Pennsylvania.

Seventy-five percent of respondents who provided direct patient care in Pennsylvania completed an associate degree as their highest level of education. In 2015, 4 percent of respondents who provided direct patient care in Pennsylvania were enrolled in higher education programs.

In 2015, respondents who provided direct patient care in Pennsylvania indicated 5,937 dental hygiene certifications, such as an expanded function dental assistant permit, a school hygienist certificate or a dental hygiene local anesthesia permit. (Respondents could select one or more certification; therefore, the total does not represent individuals with certificates.) Four percent of respondents intended to apply for a license to practice as a public health dental hygiene practitioner, a decrease from 12 percent in 2013.

Twenty-three percent of respondents who provided direct patient care in Pennsylvania held their primary job in a rural county.^{*} The rate of dental hygienist respondents per 100,000 population was 38.5 in rural counties and 49.7 in urban counties, both rates showing a decrease over 2013 numbers.^{*}

One-quarter (25 percent) of respondents who provided dental hygiene direct patient care in Pennsylvania were employed in more than one dental hygiene position. Private dental practices, both partnerships and solo dentists, employed 91 percent of respondents who provided direct patient care in Pennsylvania.

Of respondents who provided direct patient care in Pennsylvania, 94 percent were satisfied or very satisfied with their primary job, and 95 percent were satisfied or very satisfied with dental hygiene as a career.

Forty-three percent of dental hygiene respondents who practiced direct patient care in Pennsylvania anticipated practicing for 16 or more years and 15 percent for less than six years. In 2015, 53 percent of respondents anticipated practicing 16 or more years in Pennsylvania.

Eighteen percent of respondents who provided direct patient care in Pennsylvania planned to leave dental hygiene direct patient care in less than six years. Of those who planned to leave direct patient care, 52 percent reported retirement as their principal reason, while 9 percent reported physical demand as their principal reason.

^{*} Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data.

Dentists Licensed in Pennsylvania Responding to the 2015 Survey of Pennsylvania Dentists

All Dentists Licensed in Pennsylvania

This section provides information on all the dentists who responded to the 2015 Pennsylvania dentist relicensing survey. A total of 7,590 dentists who renewed their Pennsylvania licenses in 2015 responded to this survey, a decrease of 640 dentists from 2013. In 2015, these respondents resided in 47 states, Washington, D.C. and around the world.

Age

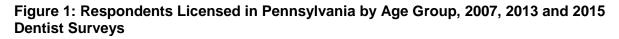
In 2015, the average age of dentist respondents was 52.5 years, which is an increase of 1.8 years from 2007 when the average age of respondents was 50.7 years. Table 1 lists the distribution of respondents by age group for 2015, with 59 percent of respondents aged 50 years or older.

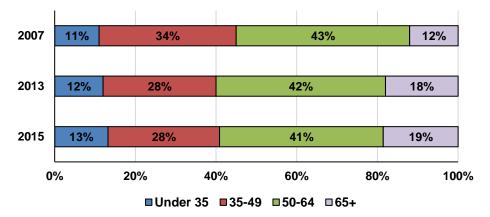
Age Group	Number	Percent
25-29	276	4%
30-34	728	10%
35-39	702	9%
40-44	663	9%
45-49	732	10%
50-54	898	12%
55-59	1,008	13%
60-64	1,175	15%
65+	1,408	19%
Total	7,590	100%*

Table 1: Respondents Licensed in Pennsylvania by Age Group, 2015 Dentist Survey

* Percentages do not total 100 due to rounding

Figure 1 presents the distribution of dentist respondents by age group in 2007, 2013 and 2015.





Sex

In 2015, males comprised 74 percent of dentist respondents. Females increased from 19 percent of respondents in 2007 to 26 percent in 2015. Table 2 lists the distribution of respondents by sex.

Table 2: Respondents Licensed in Pennsylvania by Sex, 2015 Dentist Survey

Sex	Number	Percent
Male	5,622	74%
Female	1,968	26%
Total	7,590	100%

Race and Ethnicity

Dentist respondents selected one category that best described their race and indicated if they were of Hispanic/Latino origin. The distribution of respondents by race is listed in Table 3. Asian respondents increased from 10 percent in 2013 to 12 percent in 2015.

Table 3: Respondents Licensed in Pennsylvania by Race, 2015 Dentist Survey

Race	Number	Percent
White	6,295	83%
Asian	921	12%
Other	132	2%
Black	200	3%
American Indian/Alaska Native	25	< 1%
Native Hawaiian/other Pacific Islander	17	< 1%
Total	7,590	100%*

* Percentages do not total 100 due to rounding

The percentage of dentist respondents who reported being of Hispanic/Latino origin held stable from 2007 to 2015 at 2 percent. Table 4 lists the ethnicity of respondents in 2015.

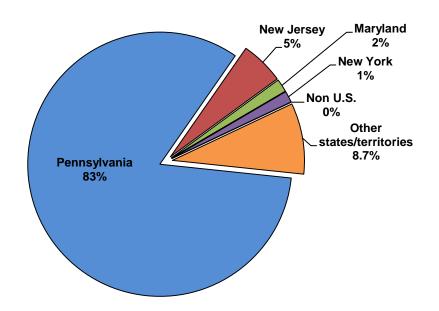
Table 4: Respondents Licensed in Pennsylvania by Ethnicity, 2015 Dentist Survey

Ethnicity	Number	Percent
Hispanic/Latino	165	2%
Non-Hispanic/Latino	7,425	98%
Total	7,590	100%

Residence

Dentist respondents resided in 47 states, Washington, D.C. and in various U.S. territories in 2015. Figure 2 presents the state of residence for respondents, with 83 percent residing in Pennsylvania. Other states and territories, not specified in the figure, each individually accounted for 1 percent or less of respondents.

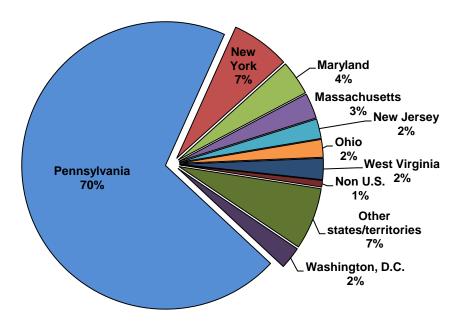
Figure 2: Respondents Licensed in Pennsylvania by State of Residence, 2015 Dentist Survey



Dental Education

In 2015, 70 percent of respondents had graduated from dental school in Pennsylvania. Figure 3 displays the states from which respondents graduated from dental school. Other states and territories not specified in the figure each accounted for 1 percent or less of respondents.

Figure 3: Respondents Licensed in Pennsylvania by State of Dental School Graduation, 2015 Dentist Survey



Following graduation from dental school, 28 percent of respondents completed a postdoctoral certificate program in general dentistry.

Four percent of dentist respondents were completing training as a resident or fellow in 2015. Table 5 lists the training status of respondents.

Table 5: Respondents Licensed in Pennsylvania by Training Status, 2015 Dentist Survey

Training Status	Number	Percent
Resident	300	4%
Fellow	100	1%
Neither	7,146	95%
Total	7,546	100%

Board Certification

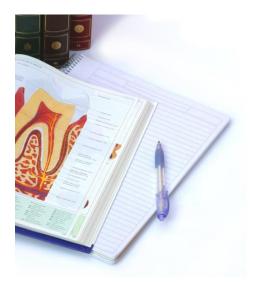
In 2015, 11 percent of respondents were board certified in a dental specialty, and less than 1 percent had double board certification. Table 6 lists the board certification or lack of board certification of respondents. Note: respondents had the option to choose one or more certifications.

Table 6: Respondents Licensed in Pennsylvania by Board Certification, 2015 Dentist
Survey

Certification	Number
None	6,661
American Board of Oral and Maxillofacial Surgery	265
American Board of Orthodontics	185
American Board of Periodontology	131
American Board of Dental Public Health	90
American Board of Pediatric Dentistry	143
American Board of Endodontics	68
American Board of Prosthodontics	44
American Board of Oral and Maxillofacial Radiology	25
American Board of Oral and Maxillofacial Pathology	35
Total	7,647

Licensure

Eighty-one percent of respondents received their first dental license in Pennsylvania, followed by 4 percent in New York, 3 percent in New Jersey and 2 percent in Maryland. Other states, territories and countries each individually accounted for 1 percent or less of respondents.



Employment

In 2015, 95 percent of dentist respondents were employed in dentistry, direct or indirect. Table 7 lists the employment status of respondents, and Table 8 shows the employment type of respondents.

Table 7: Respondents Licensed in Pennsylvania by Employment Status, 2015 Dentist
Survey

Employment Status	Number	Percent
Employed in dentistry, direct or indirect	7,207	95%
Retired	131	2%
Student, leave of absence or sabbatical	77	1%
Unemployed, seeking work in dentistry	60	<1%
Employed, not in dentistry	35	< 1%
Unemployed, disabled	19	< 1%
Unemployed, not seeking work in dentistry	19	< 1%
Total	7,548	100%

Table 8: Respondents Licensed in Pennsylvania by Employment Situation, 2015 DentistSurvey

Employment Situation	Number	Percent
Administrative	84	1%
Direct patient care	6,847	95%
Education	257	4%
Other non-patient care	8	<1%
Research	9	<1%
Total	7,205	100%*

* Percentages do not total 100 due to rounding

Eighty-eight percent of dentist respondents employed in dentistry provided one or more hours of direct patient care in Pennsylvania per week in 2015. Table 9 lists the number of hours that respondents, employed in dentistry, provided direct patient care in Pennsylvania each week.

Table 9: Respondents Employed in Dentistry by the Number of Hours Spent Providing Direct Patient Care in Pennsylvania Each Week, 2015 Dentist Survey

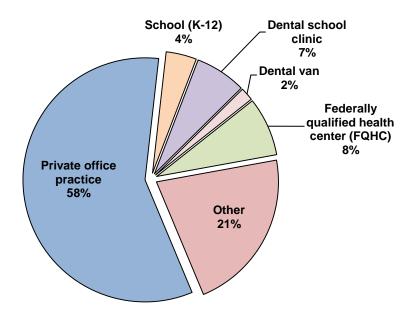
Hours	Number	Percent
1-10	203	3%
11-19	375	6%
20-30	1,067	18%
31-40	3,466	58%
More than 40	882	15%
Total	5,993	100%

Of those dentist respondents whose primary employment situation was not in direct patient care, 27 percent planned to return to direct patient care within the next five years.

Volunteering

In 2015, 22 percent of respondents volunteered their services as a dentist in Pennsylvania. Respondents could select the location where they volunteered their services. Figure 4 presents the locations where respondents volunteered dental services.

Figure 4: Locations Where Respondents Provided Volunteer Dental Services in Pennsylvania, 2015 Dentist Survey



Dentists Who Provided Direct Patient Care in Pennsylvania Responding to the 2015 Survey of Pennsylvania Dentists

All Dentists Practicing Direct Patient Care in Pennsylvania

This section provides information on dentists who responded to the 2015 Pennsylvania dentist relicensing survey and provided direct patient care in Pennsylvania. In 2015, these 5,993 respondents were 79 percent of all respondents.

In previous Pennsylvania Dentist and Dental Hygienist Workforce Reports, respondents who provided direct patient care in Pennsylvania were defined as those who reported employment in health care and a primary employment situation of direct patient care in Pennsylvania. In this report, respondents who provided direct patient care in Pennsylvania are defined as those who reported employment in dentistry and provided at least one hour of direct patient care in Pennsylvania per week during the prior year.

Age

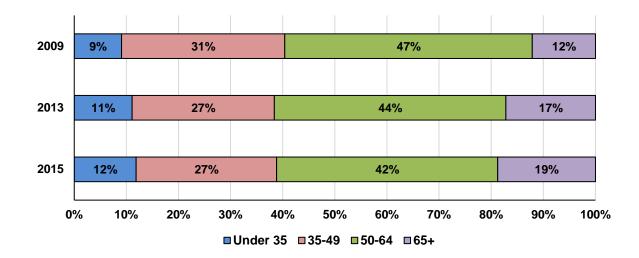
In 2015, the average age of dentist respondents who provided direct patient care in Pennsylvania was 52.5 years, an increase from 2009 when the average age of respondents was 51.6 years. Table 10 lists the age distribution of respondents who provided direct patient care in Pennsylvania in 2015, with 61 percent of respondents age 50 or older. Appendix 3 lists respondents by age and county of primary practice.

Table 10: Respondents Who Provided Direct Patient Care in Pennsylvania by Age Group,2015 Dentist Survey

Age Group	Number	Percent
25-29	187	3%
30-34	525	9%
35-39	549	9%
40-44	505	8%
45-49	561	9%
50-54	733	12%
55-59	842	14%
60-64	967	16%
65+	1,124	19%
Total	5,993	100%*

* Percentages do not total 100 due to rounding

Figure 5 displays the age distribution of dentist respondents who provided direct patient care in Pennsylvania in 2009, 2013 and 2015.





Sex

In 2015, males comprised 75 percent of dentist respondents who provided direct patient care in Pennsylvania. Females increased from 21 percent of respondents in 2011 to 25 percent in 2015. Table 11 lists the distribution of respondents who provided direct patient care in Pennsylvania by sex.

Table 11: Respondents Who Provided Direct Patient Care in Pennsylvania by Sex, 2015 Dentist Survey

Sex	Number	Percent
Male	4,508	75%
Female	1,485	25%
Total	5,993	100%

While males providing direct patient care in Pennsylvania outnumbered females within all age groups in 2015, the difference based on sex was not as large among those under 40 years of age, as shown in Figure 6.

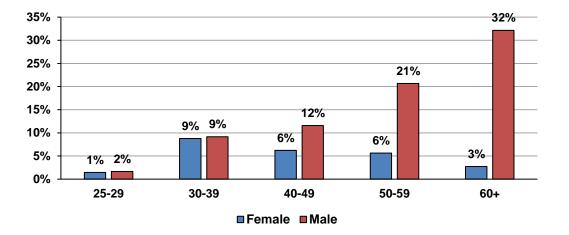


Figure 6: Respondents Who Provided Direct Patient Care in Pennsylvania by Age and Sex, 2015 Dentist Survey

Race and Ethnicity

Dentist respondents selected one category that best described their race and indicated if they were of Hispanic/Latino ethnicity. Of respondents who provided direct patient care in Pennsylvania, 84 percent were white, followed by 11 percent who were Asian. The distribution of race for respondents who provided direct patient care in Pennsylvania is listed in Table 12.

Table 12: Respondents Who Provided Direct Patient Care in Pennsylvania by Race, 2015Dentist Survey

Race	Number	Percent
White	5,060	84%
Asian	677	11%
Other	89	2%
Black	132	2%
American Indian/Alaska Native	22	< 1%
Native Hawaiian/other Pacific Islander	13	< 1%
Total	5,993	100%

Table 13 lists the ethnicity of respondents who provided direct patient care in Pennsylvania in 2015.

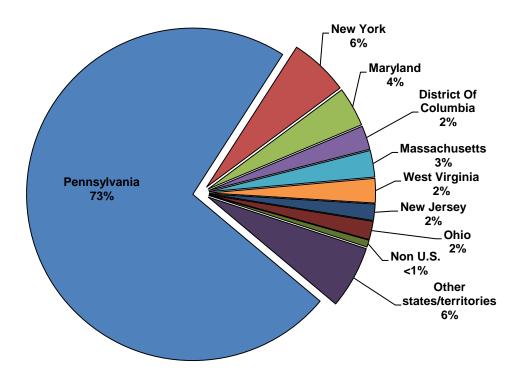
Table 13: Respondents Who Provided Direct Patient Care in Pennsylvania by Ethnicity,2015 Dentist Survey

Ethnicity	Number	Percent
Hispanic/Latino	119	2%
Non-Hispanic/Latino	5,874	98%
Total	5,993	100%

Dental Education

In 2015, 73 percent of respondents (4,374) who provided direct patient care in Pennsylvania graduated from one of the three dental schools in Pennsylvania. Seventy percent of respondents (4,176) reported Pennsylvania as both the location of their dental school education and the state of first licensure. Figure 7 displays the states from which respondents graduated from dental school. Other states and territories, not listed in the figure, each individually accounted for 1 percent or less of respondents.

Figure 7: Respondents Who Provided Direct Patient Care in Pennsylvania by State of Dental School Graduation, 2015 Dentist Survey



Following graduation from dental school, 25 percent of respondents who provided direct patient care in Pennsylvania completed a postdoctoral certificate program in general dentistry. Postdoctoral programs in general dentistry are either an Advanced Education in General Dentistry (AEGD) or General Practice Residency (GPR) program at a dental school or medical institution such as a hospital.¹

In 2015, 3 percent of dentist respondents who provided direct patient care in Pennsylvania were completing training as a resident or fellow. Table 14 lists the training status of respondents.

Table 14: Respondents Who Provided Direct Patient Care in Pennsylvania by Training Status, 2015 Dentist Survey

Training Status	Number	Percent
Neither	5,752	96%
Resident	171	3%
Fellow	68	1%
Total	5,991	100%

Board Certification

In 2015, 10 percent of respondents who provided direct patient care in Pennsylvania were board certified in a dental specialty, with less than 1 percent certified in two or more specialties. Oral and maxillofacial surgery was the most reported board certification in 2015. Table 15 displays the certification status of respondents who provided direct patient care in Pennsylvania in 2015. Note: respondents had the option to select one or more certifications.

Table 15: Respondents Who Provided Direct Patient Care in Pennsylvania by Board Certification, 2015 Dentist Survey

Certification	Number
None	5,393
American Board of Oral and Maxillofacial Surgery	174
American Board of Orthodontics	133
American Board of Dental Public Health	71
American Board of Pediatric Dentistry	99
American Board of Periodontology	85
American Board of Endodontics	46
American Board of Prosthodontics	27
American Board of Oral and Maxillofacial Radiology	20
American Board of Oral and Maxillofacial Pathology	22
Total	6,070

Licensure

Eighty-four percent of respondents who provided direct patient care in Pennsylvania received their first dental license in Pennsylvania, followed by 3 percent in New York, 2 percent in New Jersey and 2 percent in Maryland. Each of the other states, territories and countries that were reported individually accounted for 1 percent or less of respondents.

Of respondents who provided direct patient care in Pennsylvania and received their first dental license in Pennsylvania, 70 percent completed dental school in Pennsylvania.

Specialty

General dentistry was the most reported specialty by respondents who provided direct patient care in Pennsylvania. Figure 8 presents the dental practice specialties of respondents. Appendix 2 lists respondents who provided direct patient care in Pennsylvania with a general dentistry specialty by county of primary practice.

Figure 8: Respondents Who Provided Direct Patient Care in Pennsylvania by Specialty, 2015 Dentist Survey

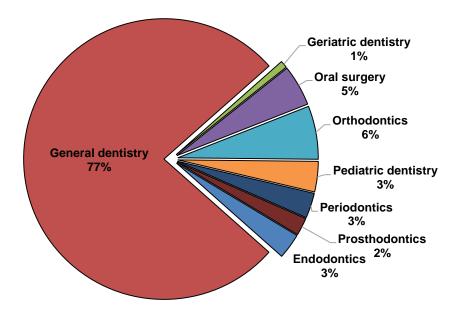


Table 16 lists the dental practice specialties of respondents by sex.

Table 16: Respondents Who Provided Direct Patient Care in Pennsylvania by Specialty and Sex, 2015 Dentist Survey

Specialty	Males		Females		Total
	Number	Percent	Number	Percent	Total
General dentistry	3,469	75%	1,141	25%	4,610
Orthodontics	273	74%	95	26%	368
Oral surgery	260	92%	23	8%	283
Pediatric dentistry	104	50%	106	50%	210
Endodontics	137	78%	39	22%	176
Periodontics	134	77%	40	23%	174
Prosthodontics	94	77%	28	23%	122
Geriatric dentistry	37	74%	13	26%	50

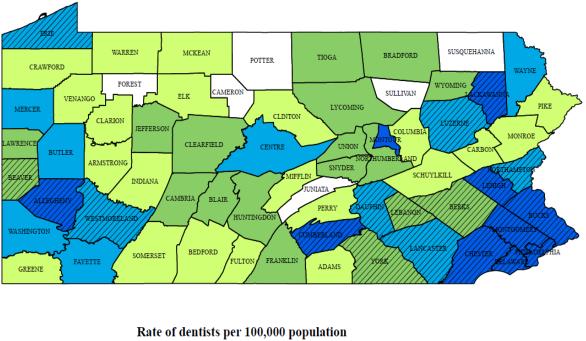
Geography

Respondents who provided direct patient care in Pennsylvania practiced dentistry in all 67 counties in 2015. Across the commonwealth, the rate of respondents who provided direct patient care in Pennsylvania was 47.1 per 100,000 population. Appendix 1 lists respondents who provided direct patient care in Pennsylvania by their county of primary practice.

Based upon the Center for Rural Pennsylvania's definition of rural and urban counties and the 2010 U.S. Census population, Pennsylvania has 48 rural counties, with 27 percent of the population residing in those counties.

In 2015, 19 percent of respondents who provided direct patient care in Pennsylvania practiced in rural counties. Based on the survey response data, the rate of dentists providing direct patient care per 100,000 population was 33.6 per in rural counties and 52.1 in urban counties. The map in Figure 9 presents the state-wide variation in these rates.

Figure 9: Respondents Who Provided Direct Patient Care in Pennsylvania per 100,000 Population by County of Primary Practice, 2015 Dentist Survey





Hours Providing Direct Patient Care

Forty-nine percent of dentist respondents who provided direct patient care in Pennsylvania provided 31 or more hours of direct patient care in Pennsylvania each week in the prior year. Table 17 lists respondents by the number of hours they spent providing direct patient care in Pennsylvania each week.

Table 17: Respondents who Provided Direct Patient Care in Pennsylvania by the Hours Spent Providing Direct Patient Care in Pennsylvania, 2015 Dentist Survey

Hours	Number	Percent	
1-10	432	7%	
11-19	729	12%	
20-30	1,866	31%	
31-40	2,693	45%	
More than 40	217	4%	
Total	5,937	100.0%*	

* Percentages do not total 100 due to rounding

Males were more likely than females to have spent 31 or more hours each week providing direct patient care in Pennsylvania. Figure 10 compares the number of hours respondents spent providing direct patient care by sex.

Figure 10: Respondents Who Provided Direct Patient Care in Pennsylvania by Sex and Hours Spent Providing Direct Patient Care in Pennsylvania, 2015 Dentist Survey

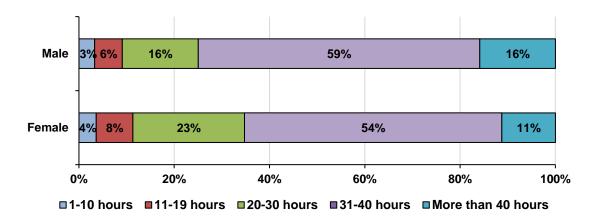
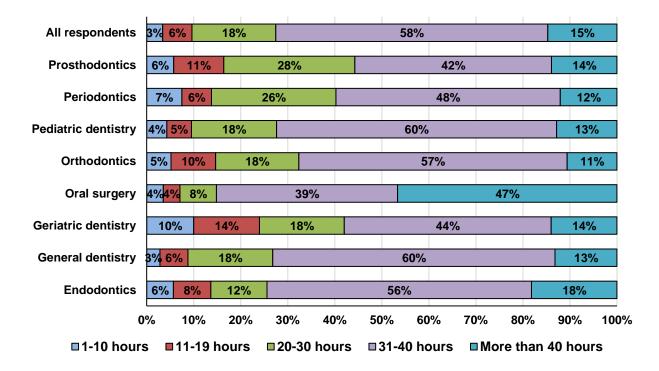


Figure 11: Respondents Who Provided Direct Patient Care in Pennsylvania by Hours and Specialty, 2015 Dentist Survey



Practice Setting

In 2015, dentist respondents who provided direct patient care in Pennsylvania practiced in a variety of settings, such as in schools and clinics. Private office practice was the most reported setting accounting for 88 percent of respondents. Table 18 lists the practice settings of respondents who provided direct patient care in Pennsylvania.

Table 18: Respondents Who Provided Direct Patient Care in Pennsylvania by Practice Setting, 2015 Dentist Survey

Practice Setting	Number	Percent
Private office practice	5,252	88%
Clinic or center	446	7%
Dental school	167	3%
Other	61	1%
Industry/business	26	<1%
Mobile dental unit or community setting	30	<1%
School health (K-12/college/university)	8	<1%
Total	5,993	100%

Practice Ownership

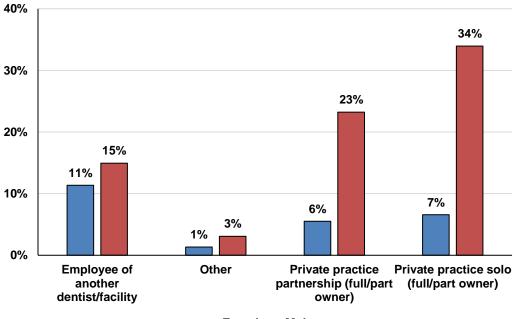
In 2015, 69 percent of dentist respondents who provided direct patient care in Pennsylvania were full or part owners of a private practice. Table 19 lists the practice ownership of respondents in 2015.

Table 19: Respondents Who Provided Direct Patient Care in Pennsylvania by Practice Ownership, 2015 Dentist Survey

Practice Ownership	Number	Percent
Private practice solo (full/part owner)	2,429	41%
Private practice partnership (full/part owner)	1,722	29%
Employee of another dentist/facility	1,575	26%
Other	265	4%
Total	5,991	100%

Seventy-six percent of males who provided direct patient care in Pennsylvania were full or part owners of private practices compared to 48 percent of females. Figure 12 displays the distribution of respondents who provided direct patient care in Pennsylvania by practice ownership and sex.

Figure 12: Respondents Who Provided Direct Patient Care in Pennsylvania by Practice Ownership and Sex, 2015 Dentist Survey



■Female ■Male

Younger dentist respondents were less likely to be a full or part owner of a private practice than older respondents. Private practice ownership peaked with respondents in the 50-54 age group at 84 percent. Figure 13 compares private practice ownership to solo and partner ownership by age for respondents who provided direct patient care in Pennsylvania.

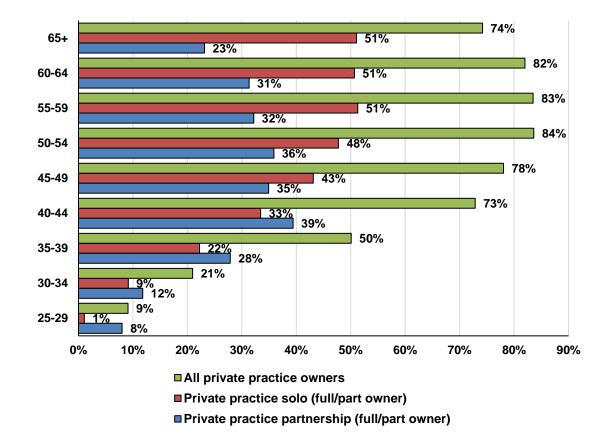
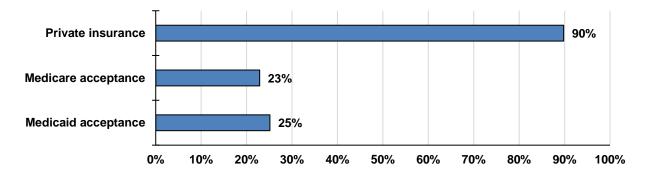


Figure 13: Respondents Who Provided Direct Patient Care in Pennsylvania by Private Practice Ownership and Age Group, 2015 Dentist Survey

Accepted Dental Coverage

Acceptance of Medicaid by dentist respondents who provided direct patient care in Pennsylvania increased from 19 percent in 2007 to 25 percent in 2015. Figure 14 presents a comparison of three categories of dental coverage for respondents providing direct patient care in Pennsylvania. Appendix 4 lists respondents who provided direct patient care in Pennsylvania by their county of practice and acceptance of Medicaid, Medicare and private insurance.

Figure 14: Respondents Who Provided Direct Patient Care in Pennsylvania by Accepted Dental Coverage, 2015 Dentist Survey



Respondents specializing in pediatric dentistry had the highest acceptance of Medicaid (68 percent), while respondents specializing in oral surgery had the highest acceptance of Medicare (77 percent) and private insurance (96 percent). Table 20 lists the acceptance of Medicaid, Medicare and private insurance for respondents who provided direct patient care in Pennsylvania by specialty.

Specialty	Medicaid		Medicare		Private insurance	
opecially	Number	Percent	Number	Percent	Number	Percent
Endodontics	15	9%	15	9%	157	89%
General dentistry	1,048	23%	980	21%	4,180	91%
Geriatric dentistry	10	20%	10	20%	42	84%
Oral surgery	152	54%	219	77%	273	96%
Orthodontics	105	29%	44	12%	336	91%
Pediatric dentistry	143	68%	65	31%	195	93%
Periodontics	18	10%	17	10%	128	74%
Prosthodontics	16	13%	22	18%	72	59%
Total	1,507	25%	1,372	23%	5,383	90%

Table 20: Respondents Who Provided Direct Patient Care in Pennsylvania by Acceptance of Dental Coverage and Specialty, 2015 Dentist Survey

Almost all (97 percent) dentist respondents who provided direct patient care in Pennsylvania reported that their practice submitted claims to insurance companies on behalf of patients.

Table 21: Respondents Who Provided Direct Patient Care in Pennsylvania by ClaimsSubmission, 2015 Dentist Survey

Submit Claims	Number	Percent
No	195	3%
Yes	5,790	97%

New Patients

In 2015, 96 percent of dentist respondents who provided direct patient care in Pennsylvania accepted new patients. Respondents were asked which of the following four types of dental coverage for new patients they accepted: Medicaid, Medicare, private insurance and uninsured. Table 22 lists the number of respondents who accepted new patients by each type of dental coverage. The total number of responses is greater than the number of respondents because respondents could select all types of dental coverage they accepted.

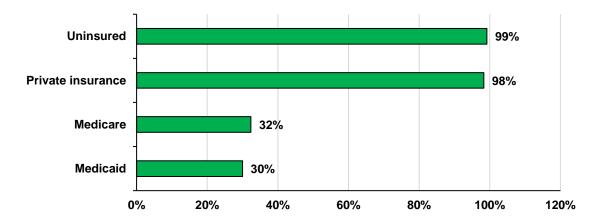
 Table 22: Respondents Who Provided Direct Patient Care in Pennsylvania and Accepted

 New Patients by Dental Coverage, 2015 Dentist Survey

Accepted Coverage Plan	Number
Medicaid	1,724
Medicare	1,860
Private insurance	5,648
Uninsured	5,698

Of dentist respondents who provided direct patient care in Pennsylvania and accepted new patients, 98 percent accepted new private insurance patients, while only 30 percent accepted new Medicaid patients. Figure 15 compares respondents who accepted new patients by dental coverage.

Figure 15: Respondents Who Provided Direct Patient Care in Pennsylvania and Accepted New Patients by Dental Coverage, 2015 Dentist Survey



Specialty	No (Number)	No (Percent)	Yes (Number)	Yes (Percent)
Endodontics	-	-	174	99%
General dentistry	202	4%	4,401	96%
Geriatric dentistry	-	-	48	96%
Oral surgery	9	3%	274	97%
Orthodontics	8	2%	360	98%
Pediatric dentistry	-	-	207	99%
Periodontics	-	-	169	97%
Prosthodontics	10	8%	112	92%
Total	241	4%	5,745	96%

Table 23: Respondents Who Provided Direct Patient Care in Pennsylvania and AcceptedNew Patients by Specialty, 2015 Dentist Survey

Note: Numbers less than six are withheld for privacy purposes, although they are included in the total.

Appendix 6 lists respondents who provided direct patient care in Pennsylvania by their county of practice and acceptance of new patient by Medicaid, Medicare, private insurance or no dental coverage.

Sedation

Patients with severe developmental or physical handicaps may have difficulty receiving dental treatment. A variety of accommodations, including general anesthesia or deep sedation, are used by dentists to provide these patients with access to dental services. In 2015, 5 percent of respondents who provided direct patient care in Pennsylvania provided general anesthesia or deep sedation for general dentistry procedures to patients with severe developmental or physical handicaps.

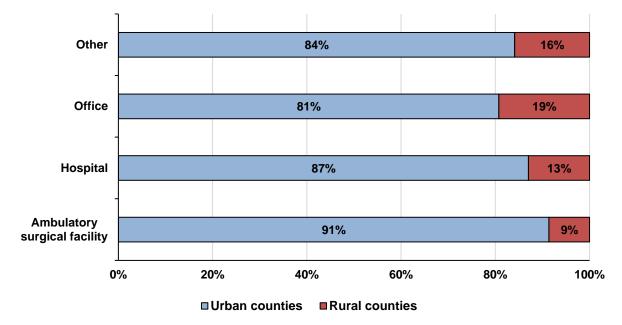
Respondents were asked if they provided general anesthesia or deep sedation in the following settings: ambulatory surgical facility, hospital, office or other. Table 24 lists the number of respondents who provided general anesthesia or deep sedation to patients with severe developmental or physical handicaps by setting.

Table 24: Respondents Who Provided General Anesthesia or Deep Sedation for GeneralDentistry Procedures on Patients with Severe Developmental or Physical Handicaps bySetting, 2015 Dentist Survey

Setting	Number
Office	187
Hospital	131
Ambulatory surgical facility	116
Other	27

Respondents who provided general anesthesia or deep sedation to patients with severe developmental or physical handicaps were overwhelmingly located in urban counties for all settings, as shown in Figure 16.

Figure 16: Respondents Who Provided General Anesthesia or Deep Sedation for General Dentistry Procedures on Patients with Severe Developmental or Physical Handicaps by Setting and Rural or Urban County of Practice, 2015 Dentist Survey*



* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data.

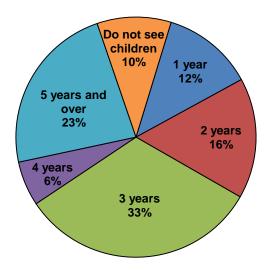
Table 25: Respondents Who Provided Direct Patient Care in Pennsylvania by Sedation Setting by Medicaid Acceptance, 2015 Dentist Survey

Medicaid Acceptance	Number	Percent
Ambulatory surgical facility	75	65%
Hospital	84	64%
Office	102	55%
Other	19	70%

Children

In 2015, 90 percent of respondents who provide direct patient care in Pennsylvania provide care to children. Figure 17 displays the distribution of age groups for children seen by Pennsylvania dentists.

Figure 17: Respondents Who Provided Direct Patient Care in Pennsylvania by Age of Children Seen, 2015 Dentist Survey



Volunteering

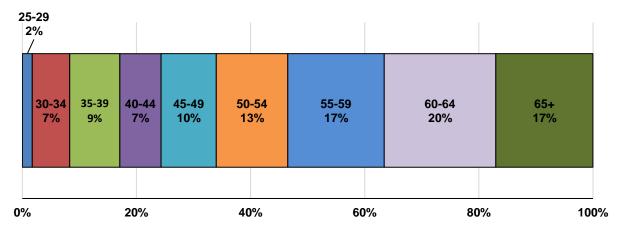
In 2015, 26 percent of respondents who provided direct patient care in Pennsylvania also volunteered their services as a dentist in Pennsylvania. Respondents of all ages volunteered their services in the last year, with the highest percentage of volunteers coming from the 55-59 and 60-64 age groups. Table 26 lists the rate of volunteerism by age group for respondents who provided direct patient care services in Pennsylvania.

Table 26: Respondents Who Provided Direct Patient Care in Pennsylvania and Who
Volunteered Their Services as a Dentist in Pennsylvania in the Last Year by Age Group,
2015 Dentist Survey

Age Group	Number	Percent
25-29	27	14%
30-34	101	19%
35-39	135	25%
40-44	111	22%
45-49	149	27%
50-54	193	26%
55-59	260	31%
60-64	301	31%
65+	262	23%
Total	1,539	26%

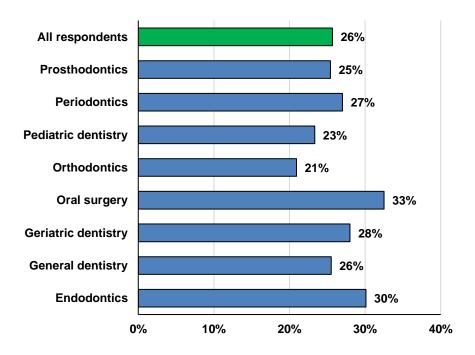
The distribution of dentist respondents who provided direct patient care in Pennsylvania and volunteered in Pennsylvania in the last year revealed a general increase in volunteerism with age, through 64 years of age. One out of every five volunteers was in the 60-64 age group as shown in Figure 18.





Respondents specializing in periodontics, oral surgery, geriatric dentistry and endodontics exceeded the rate of volunteerism across all respondents providing direct patient care in Pennsylvania, as presented in Figure 19.

Figure 19: Respondents Who Provided Direct Patient Care in Pennsylvania and Volunteered Services as a Dentist in Pennsylvania in the Last Year by Specialty, 2015 Dentist Survey



Respondents who provided direct patient care in Pennsylvania and volunteered their services as a dentist in Pennsylvania did so at a variety of locations. Private practice offices were the most frequently reported location where respondents volunteered. Table 27 lists the number of respondents who provided direct patient care in Pennsylvania and volunteered their services as a dentist in Pennsylvania by service location.

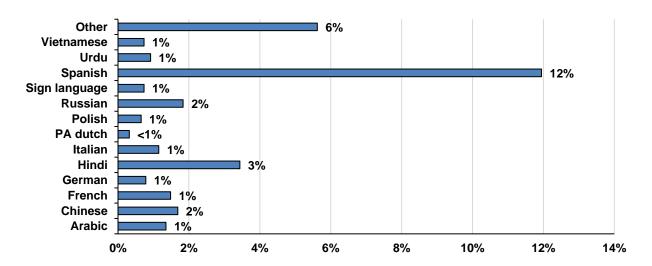
Table 27: Respondents Who Provided Direct Patient Care in Pennsylvania and Volunteered Their Services as a Dentist in Pennsylvania in the Last Year by Service Location, 2015 Dentist Survey

Service Location	Number
Private practice office	939
Other	317
Federally qualified health center (FQHC) or health center	114
Dental school clinic	79
School (K-12)	65
Dental van	25

Dental/Medical Translation

In 2015, 25 percent of respondents who provided direct patient care in Pennsylvania reported personally speaking a language other than English to their patients. Of respondents who personally provided dental/medical translation to patients, 74 percent communicated effectively for most clinical purposes in one language, followed by 20 percent in two languages. Languages represented in the category of other included: Korean, Portuguese and Ukrainian. Figure 20 presents the languages in which respondents who provided direct patient care in Pennsylvania communicated effectively for most clinical purposes.

Figure 20: Languages Other than English in Which Respondents Who Provided Direct Patient Care in Pennsylvania Communicated Effectively for Most Clinical Purposes, 2015 Dentist Survey



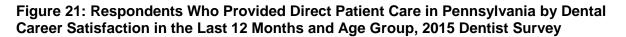
Professional Satisfaction/Dissatisfaction

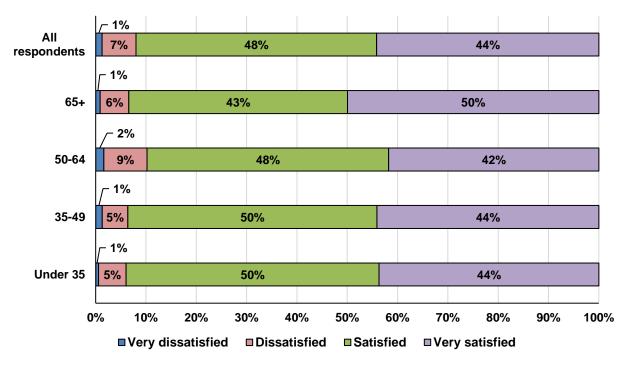
In 2015, 92 percent of dentist respondents who provided direct patient care in Pennsylvania were either satisfied or very satisfied with their dental career in the last 12 months. Table 28 lists respondents' satisfaction with their dental career in the last 12 months.

Table 28: Respondents Who Provided Direct Patient Care in Pennsylvania by Dental Career Satisfaction in the Last 12 Months, 2015 Dentist Survey

Satisfaction	Number	Percent
Very satisfied	2,644	44%
Satisfied	2,865	48%
Dissatisfied	403	7%
Very dissatisfied	76	1%
Total	5,988	100%

Dentists aged 65 years of age and older and providing direct patient care in Pennsylvania were those most likely to report being very satisfied with their dental career in the last 12 months (51 percent). Figure 21 compares respondents' satisfaction with their dental career in the last 12 months by age group.





Geriatric dentists had the highest percentage of dissatisfaction at 14 percent. Pediatric dentists and periodontists were the only specialties with no respondents who provided direct patient care in Pennsylvania and who reported being very dissatisfied with their dental career in the last 12 months. Figure 22 compares respondents' dental career satisfaction in the last 12 months by specialties.

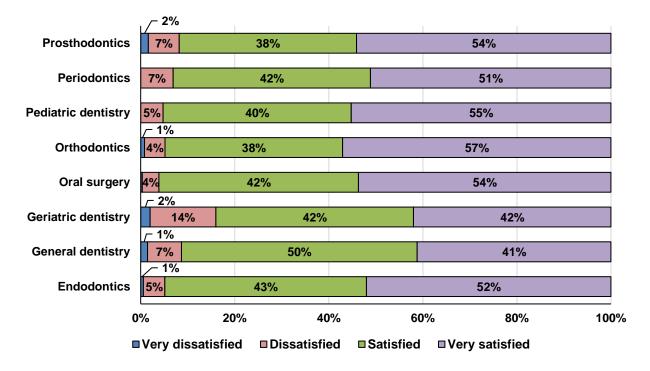


Figure 22: Respondents Who Provided Direct Patient Care in Pennsylvania by Dental Career Satisfaction in the Last 12 Months and Specialty, 2015 Dentist Survey

Dentist respondents who provided direct patient care in Pennsylvania reported higher levels of satisfaction with their dental career overall versus the last 12 months. Ninety-six percent were either satisfied or very satisfied with their dental career overall. Table 29 lists respondents' satisfaction with their dental career overall.

Table 29: Respondents Who Provided Direct Patient Care in Pennsylvania by OverallDental Career Satisfaction, 2015 Dentist Survey

Satisfaction	Number	Percent
Very satisfied	3,105	52%
Satisfied	2,642	44%
Dissatisfied	202	3%
Very dissatisfied	40	1%
Total	5,989	100%

The 65 and older age group contained the highest percentage (66 percent) of dentist respondents providing direct patient care in Pennsylvania and reporting very satisfied with their dental career overall. Figure 23 compares respondents' satisfaction with their dental career overall by age group.

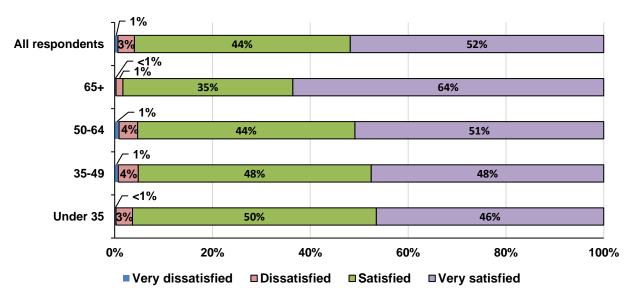


Figure 23: Respondents Who Provided Direct Patient Care in Pennsylvania by Overall Dental Career Satisfaction and Age Group, 2015 Dentist Survey

Orthodontics was the specialty with the highest percentage of respondents providing direct patient care in Pennsylvania and reporting very satisfied with their overall dental career (65 percent). Figure 24 compares respondents' satisfaction with their dental career overall by specialty.

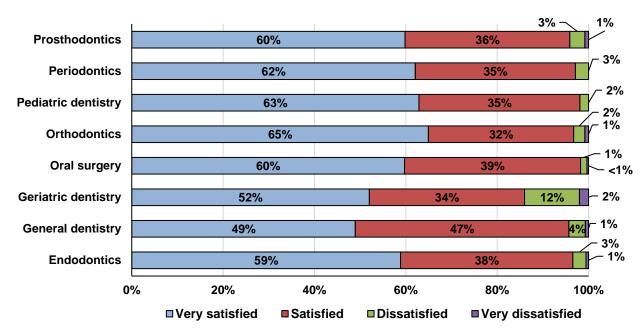
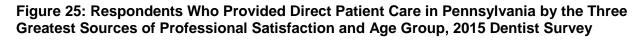
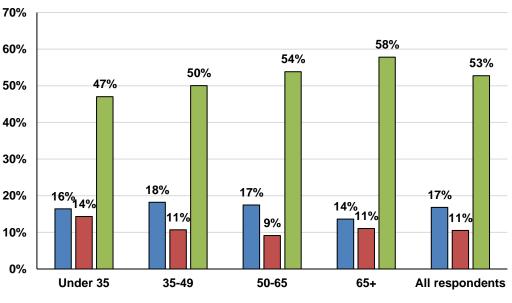


Figure 24: Respondents Who Provided Direct Patient Care in Pennsylvania by Overall Dental Career Satisfaction and Specialty, 2015 Dentist Survey

Patient relationships were the greatest source of professional satisfaction for 53 percent of dentist respondents who provided direct patient care in Pennsylvania, followed by decision-making autonomy (17 percent) and intellectual challenge (11 percent). Figure 25 compares the distribution of these sources of professional satisfaction for respondents by age group.

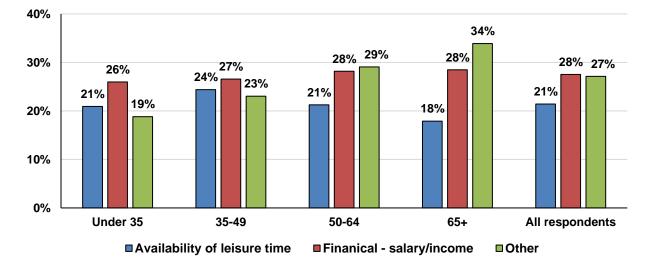




■ Decision making autonomy ■ Intellectual challenge ■ Patient relationships

Financial – other/insurance was the greatest source of professional dissatisfaction for 28 percent of 2015 dentist respondents who provided direct patient care in Pennsylvania followed by other reasons (27 percent) and availability of leisure time (21 percent). Respondents of all ages consistently reported (1) availability of leisure time, (2) other, and (3) financial – salary/income as their greatest sources of professional dissatisfaction, as shown in Figure 26.

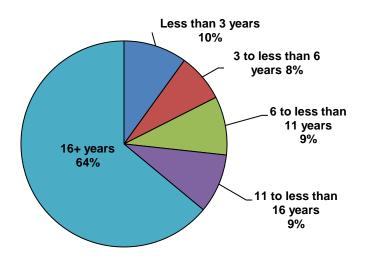




Length of Practice

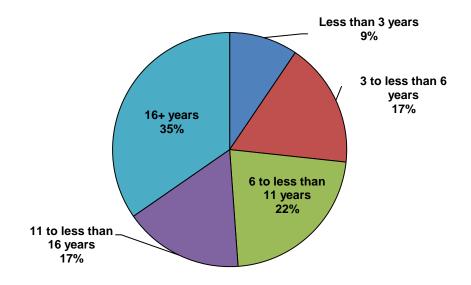
Sixty-four percent of respondents who provided direct patient care in Pennsylvania practiced dentistry in Pennsylvania for 16 or more years. Figure 27 presents the length of time during which respondents who provided direct patient care in Pennsylvania practiced dentistry.

Figure 27: Respondents Who Provided Direct Patient Care in Pennsylvania by Years Practicing Dentistry in Pennsylvania, 2015 Dentist Survey

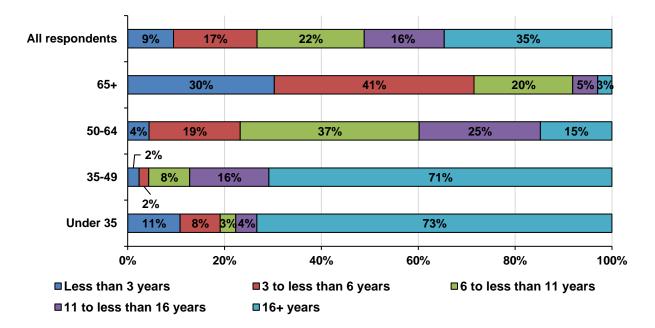


The anticipated length of time in practice reported by respondents providing direct patient care in Pennsylvania varied significantly by age, as presented in Figures 28 and 29. Seventyone percent of respondents in the 65 and over age group anticipated leaving the practice of dentistry in Pennsylvania in less than six years. Appendix 5 lists respondents' anticipated length of dental practice in Pennsylvania by their county of primary practice.

Figure 28: Respondents Who Provided Direct Patient Care in Pennsylvania by Years Anticipating Practicing Direct Patient Care in Pennsylvania, 2015 Dentist Survey







Respondents specializing in orthodontics had the highest percentage (42 percent) of those who anticipated practicing dentistry in Pennsylvania for 16 or more years. Conversely, almost one out of three (35 percent) respondents specializing in oral surgery anticipated continuing to practice dentistry in Pennsylvania for less than six years. Table 30 lists the length of time respondents anticipated practicing dentistry in Pennsylvania by specialty.

Table 30: Respondents Who Provided Direct Patient Care in Pennsylvania by the Length
of Time They Anticipated Continuing to Practice Direct Patient Care in Pennsylvania and
Specialty, 2015 Dentist Survey

Specialty	Less than 6 years		6 to less than 11 years		11 to less than 16 years		16+ years	
Specialty	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Endodontics	48	27%	29	16%	28	16%	70	40%
General dentistry	1,201	26%	1,060	23%	763	17%	1,581	34%
Geriatric dentistry	13	26%	12	24%	9	18%	16	32%
Oral surgery	98	35%	64	23%	40	14%	81	29%
Orthodontics	90	24%	65	18%	59	16%	154	42%
Pediatric dentistry	65	31%	31	15%	33	16%	81	39%
Periodontics	49	28%	35	20%	36	21%	54	31%
Prosthodontics	35	29%	30	25%	20	16%	37	30%
Total	1,599	27%	1,326	22%	988	16%	2,074	35%

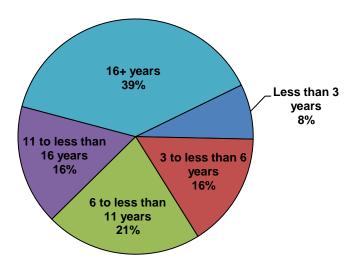
Table 31: Respondents Who Provided Direct Patient Care in Pennsylvania by Length of
Time They Anticipated Continuing to Practice Direct Patient Care in Pennsylvania by
Medicaid Acceptance, 2015 Dentist Survey

Anticipate practicing DPC in Pa	Do Not Accept Medicaid (Number)	Do Not Accept Medicaid (Percent)	Accept Medicaid (Number)	Accept Medicaid (Percent)
Less than 3 years	394	9%	173	11%
3 to less than 6 years	771	17%	259	17%
6 to less than 11 years	1,017	23%	309	21%
11 to less than 16 years	785	18%	203	13%
16+ years	1,512	34%	562	37%
Total	4,479	100%*	1,506	100%*

* Percentages do not total 100 due to rounding

Respondents who provided direct patient care in Pennsylvania were asked how long they anticipated practicing dentistry, as well as how long they anticipated practicing dentistry in Pennsylvania. Of respondents who anticipated practicing dentistry for 16 or more years, almost all anticipated practicing for those years in Pennsylvania.

Figure 30: Respondents Who Provided Direct Patient Care in Pennsylvania by Years Anticipating Practicing Dentistry, 2015 Dentist Survey



Leaving Direct Patient Care in Less Than Six Years

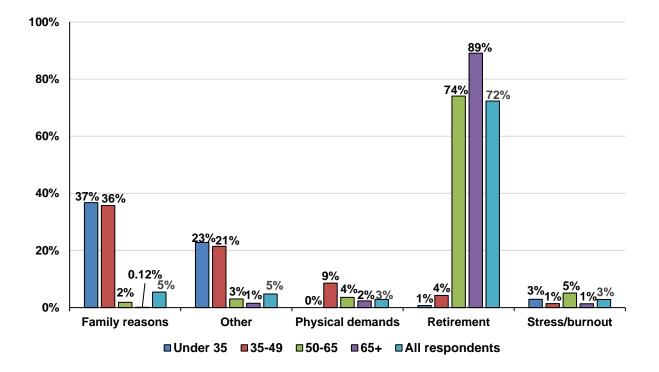
Of dentist respondents who provided direct patient care in Pennsylvania, 27 percent planned to leave direct patient care in less than six years. Retirement was the principal reason why respondents who provided direct patient care in Pennsylvania planned to leave direct patient care in less than six years, as listed in Table 32.

Table 32: Respondents Who Provided Direct Patient Care in Pennsylvania and Planned toLeave Direct Patient Care in Less Than Six Years by Reason for Leaving, 2015 DentistSurvey

Reason	Total	Percent
Change careers	29	2%
Complete further training	17	1%
Family reasons	87	5%
Financial reasons - salary/income/benefits	29	2%
Not applicable	88	6%
Other	76	5%
Physical demands	46	3%
Practice demands	22	1%
Retirement	1,156	72%
Stress/burnout	46	3%
Total	1,596	100%

The primary reason why those who provided direct patient care in Pennsylvania planned to leave direct patient care in less than six years varied across age groups. Family reasons and other were the first and second most frequently reported reasons why respondents under 35 years of age planned to leave direct patient care, while retirement was the most reported reason for respondents in the 65 and over age group. Figure 31 compares five reasons why respondents who provided direct patient care in Pennsylvania planned to leave direct patient care in Pennsylvania planned to leave direct patient care in Pennsylvania planned to leave direct patient care in less than six years by age group.





All Dental Hygienists Licensed in Pennsylvania Responding to the 2015 Survey of Pennsylvania Dental Hygienists

Dental Hygienists Licensed in Pennsylvania

This section provides information on all the dental hygienists who responded to the 2015 Pennsylvania dental hygienist relicensing survey. A total of 7,384 dental hygienists renewed their licenses in 2015 and responded to the survey, a decrease of 524 respondents from 2013. In 2015, these respondents resided in most states, Washington, D.C., and around the world.

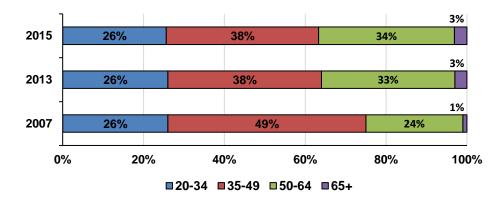
Age

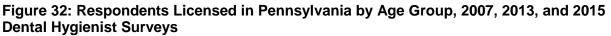
In 2015, the average age of dental hygienist respondents was 44.0 years, an increase from 2007 when the average age of respondents was 42.1 years. Table 33 lists the distribution of respondents across age groups for 2015.

Table 33: Respondents Licensed in Pennsylvania by Age Group, 2015 Dental HygienistSurvey

Age Group	Number	Percent
20-24	213	3%
25-29	801	11%
30-34	878	12%
35-39	854	12%
40-44	897	12%
45-49	1,032	14%
50-54	1,054	14%
55-59	906	12%
60-64	519	7%
65+	230	3%
Total	7,384	100%

Figure 32 compares the distribution of dental hygienist respondents across age groups in 2007, 2013 and 2015. While the 35-49 age group decreased from 49 percent in 2007 to 38 percent in 2015, the 50-64 age group increased from 24 percent in 2007 to 34 percent in 2015.





Sex

In 2015, females comprised 99 percent of dental hygienist respondents. Table 34 lists the distribution of respondents by sex.

Table 34: Respondents Licensed in Pennsylvania by Sex, 2015 Dental Hygienist Survey

Sex	Number	Percent
Male	75	1%
Female	7,309	99%
Total	7,384	100%

Race and Ethnicity

Dental hygienist respondents selected one category that best described their race and indicated if they were of Hispanic/Latino origin. The distribution of respondents by race is listed in Table 35.

Table 35: Respondents Licensed in Pennsylvania by Race, 2015 Dental Hygienist Survey

Race	Number	Percent
White	7,073	96%
Black	123	2%
Asian	100	1%
Other	56	1%
American Indian/Alaska Native	23	< 1%
Native Hawaiian/other Pacific Islander	9	< 1%
Total	7,384	100%*

* Percentages do not total 100 due to rounding

The percentage of dental hygienist respondents who reported being of Hispanic/Latino origin increased from 1 percent in 2007 to 2 percent in 2015. Table 36 lists the ethnicity of respondents in 2013.

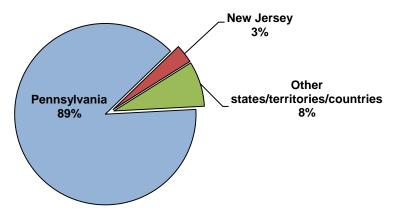
Table 36: Respondents Licensed in Pennsylvania by Ethnicity, 2015 Dental Hygienist	
Survey	

Ethnicity	Number	Percent
Hispanic/Latino	125	2%
Non-Hispanic/Latino	7,259	98%
Total	7,384	100%

Residence

In 2015, dental hygienist respondents resided in 39 states, Washington, D.C., and in many U.S territories. Figure 33 presents the state of residence of respondents, with 89 percent residing in Pennsylvania. Other states, territories and countries, not specified in the figure, each individually accounted for 1 percent or less of respondents.

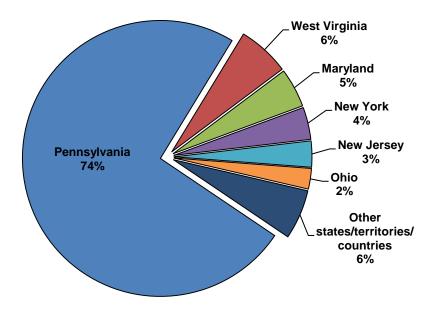
Figure 33: Respondents Licensed in Pennsylvania by State of Residence, 2015 Dental Hygienist Survey



Dental Hygiene Education

In 2015, respondents graduated from dental hygiene schools in 45 states, Washington, D.C., and many U.S territories. Figure 34 displays the states in which respondents graduated from dental hygiene school, with 74 percent graduating in Pennsylvania. Other states, territories and countries, not specified in the figure, each individually accounted for 1 percent or less of respondents.

Figure 34: Respondents Licensed in Pennsylvania by State of Graduation from Dental Hygiene School, 2015 Dental Hygienist Survey



Seventy-four percent of respondents completed an associate degree as their highest dental hygiene degree. Table 37 lists respondents by the highest dental hygiene degree.

Table 37: Respondents Licensed in Pennsylvania by Highest Dental Hygiene Degree,
2015 Dental Hygienist Survey

Dental Hygiene Degree	Number	Percent
Certificate	714	10%
Associate degree	5,449	74%
Bachelor's degree	1,171	16%
Master's degree	47	1%
Total	7,381	100%*

* Percentages do not total 100 due to rounding

Those aged 65 years or older represented the group with the lowest proportion of associate degrees and the highest proportion of certificates. Those aged 18 through 34 years had the lowest proportion of certificates (6 percent). Figure 35 compares respondents' highest dental hygiene degree by age group.

Figure 35 Respondents Licensed in Pennsylvania by Highest Dental Hygiene Degree and Age Group, 2015 Dental Hygienist Survey

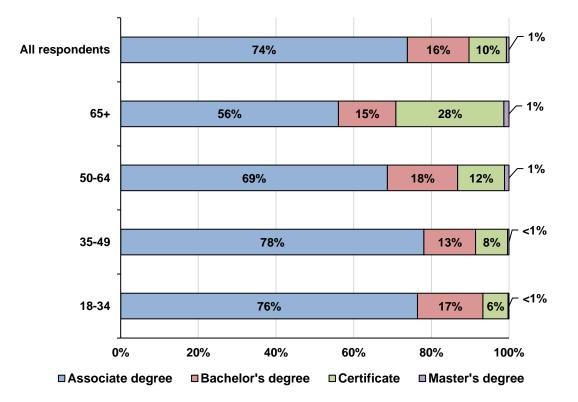


Table 38: Respondents Licensed in Pennsylvania by Highest Non-Dental Hygiene Degree,2015 Dental Hygienist Survey

Highest Degree of Non-Dental Hygiene	Total	Percent*
Associate	1,864	25%
Bachelor	1,163	16%
Doctoral	30	<1%
Master	246	3%
Not applicable	4,076	55%
Total	7,379	100%

* Note: Percentages do not total 100 due to rounding

Four percent (329) of respondents were enrolled in higher education programs in 2015. Of those respondents enrolled in higher education programs, 53 percent were enrolled in dental hygiene programs. Of those respondents enrolled in dental hygiene programs, approximately half (49 percent) were enrolled in bachelor's degree programs. Table 39 lists respondents by enrollment in a higher education program.

Table 39: Respondents Licensed in Pennsylvania by Enrollment in a Higher Education Program, 2015 Dental Hygienist Survey

Higher Education Program	Number	Percent
Dental hygiene associate degree	78	1%
Dental hygiene bachelor's degree	86	1%
Dental hygiene master's degree	10	< 1%
Other bachelor's degree	63	1%
Other master's degree	38	<1%
Other non-degree	49	1%
None	7,055	96%
Total	7,384	100%*

* Percentages do not total 100 due to rounding

Dental Hygiene Certification

Through additional training, dental hygienists can become certified to perform advanced duties with or without direct supervision. Respondents reported certification of an expanded function dental assistant certificate, Pennsylvania school hygienist certificate or Pennsylvania dental hygiene local anesthesia permit. Respondents could select more than one type of certification. Table 40 lists the number of respondents who held dental hygiene certifications.

Table 40: Respondents Licensed in Pennsylvania by Dental Hygiene Certification, 2015Dental Hygienist Survey

Certification	Number
Expanded function dental assistant certificate	203
School hygienist certificate	1,258
Dental hygiene local anesthesia permit	1,962
Total respondents	7,908

Note: Respondents may be represented in more than one category.

Public Health Dental Hygiene Practitioners

Public health dental hygiene practitioners (PHDHPs) were first licensed in Pennsylvania in January 2010. In 2015, 531 respondents reported being licensed as PHDHPs in Pennsylvania. Of those 531 respondents, 125 (24 percent) reported performing as a PHDHP in their primary job.

PHDHPs were created to increase access to dental services for individuals living in Health Professional Shortage Areas (HPSAs) by allowing these dental hygienists to perform educational, preventive, therapeutic, intra-oral and radiologic procedures without the direct supervision of a dentist at identified practice sites. PHDHPs are required to refer patients to a dentist annually. Identified practice sites include schools; correctional facilities; health care facilities, such as hospitals; personal care homes; domiciliary care facilities; older adult daily living centers; federally qualified health centers (FQHCs); and public or private institutions under the jurisdiction of a federal, state or local agency.

Employment

In 2015, 90 percent of respondents were employed in dental hygiene. Table 41 lists the employment status of respondents.

Table 41: Respondents Licensed in Pennsylvania by Employment Status, 2015 DentalHygienist Survey

Employment Status	Number	Percent
Employed in dental hygiene	6,622	90%
Unemployed, seeking dental hygiene employment	210	3%
Employed, not in dental hygiene	271	4%
Unemployed, not seeking dental hygiene employment	138	2%
Retired	66	1%
Unemployed, disabled	40	1%
Student, leave of absence or sabbatical	29	< 1%
Total	7,376	100%*

* Percentages do not total 100 due to rounding

Table 42: Respondents Employed in Dental Hygiene by Position Held in Primary Job,2015 Dental Hygienist Survey

Position	Number	Percent
Administration/management	74	1%
Direct patient care	6,398	97%
Educator	129	2%
Not employed as a dental hygienist	-	-
Other non-patient care	9	<1%
Researcher/consultant	-	-
Total (no N/A)	6,619	100%

Note: Numbers less than six are withheld for privacy purposes, although they are included in the total.

Of respondents employed in dental hygiene, 94 percent provided one or more hours of direct patient care per week in Pennsylvania in 2015. Table 43 lists the approximate number of hours respondents who were employed in dental hygiene provided direct patient care in Pennsylvania each week.

 Table 43: Respondents Employed in Dental Hygiene by the Number of Hours Spent

 Providing Direct Patient Care in Pennsylvania Each Week, 2015 Dental Hygienist Survey

Hours	Number	Percent
Zero	388	6%
1-10	511	8%
11-19	771	12%
20-30	1,926	29%
31-40	2,788	42%
More than 40	236	4%
Total	6,620*	100%**

* Note: Approximately 295 survey participants answered the underlying question incorrectly. Therefore, the total presented in this table is too high by at least 295.

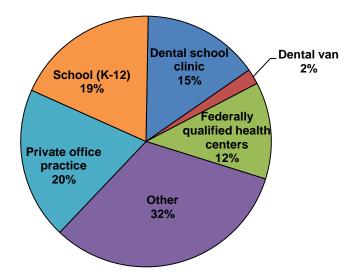
** Percentages do not total 100 due to rounding

Of those respondents who held a position in dental hygiene that was not direct patient care, 20 percent planned to return to direct patient care within the next five years.

Volunteer Services

In 2015, 12 percent (856) of dental hygienist respondents provided unpaid volunteer services as a dental hygienist in Pennsylvania. Figure 36 presents the locations where respondents volunteered in Pennsylvania as unpaid dental hygienists. Respondents could select only one location where they provided these services.

Figure 36: Locations Where Respondents Provided Volunteer Services as a Dental Hygienist in Pennsylvania, 2015 Dental Hygienist Survey



Dental Hygienists Who Provided Direct Patient Care in Pennsylvania Responding to the 2015 Survey of Pennsylvania Dental Hygienists

Dental Hygienists Who Provided Direct Patient Care in Pennsylvania

This section provides information on dental hygienists who responded to the 2015 Pennsylvania dental hygienist relicensing survey and provided direct patient care in Pennsylvania. In 2015, these 5,937 respondents were 80 percent of all respondents.

Respondents who provided direct patient care in Pennsylvania are defined as those respondents who reported employment in dental hygiene and provided at least one hour of direct patient care in Pennsylvania per week during the prior year.

Age

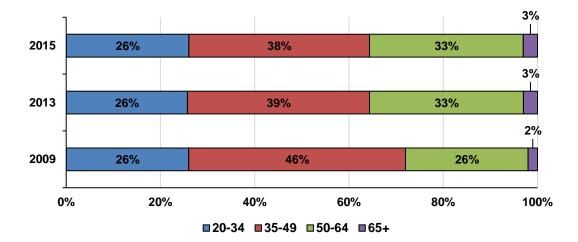
In 2015, the average age of dental hygienist respondents was 44.0 years, an increase from 2009 when the average age of respondents was 42.3 years. Table 44 lists the distribution of respondents who provided direct patient care in Pennsylvania across age groups for 2015, with over half (50.4 percent) of the respondents in the 30-49 age group. Appendix 10 lists respondents by age group and county of their primary job.

Table 44: Respondents Who Provided Direct Patient Care in Pennsylvania by Age Group,
2015 Dental Hygienist Survey

Age Group	Number	Percent
18-24	175	3%
25-29	653	11%
30-34	719	12%
35-39	686	12%
40-44	729	12%
45-49	860	14%
50-54	857	14%
55-59	680	11%
60-64	402	7%
65+	176	3%
Total	5,937	100%

Figure 37 compares the distribution of dental hygienist respondents who provided direct patient care in Pennsylvania across age groups in 2009, 2013 and 2015. While the 35-49 age group decreased from 46 percent in 2009 to 38 percent in 2015, the 50-64 age group increased from 26 percent in 2009 to 33 percent in 2013 and 2015.





Sex

In 2015, females comprised 99 percent of dental hygienist respondents who provided direct patient care in Pennsylvania. The number of males has remained at 1 percent since 2003. Table 45 lists the distribution of respondents by sex.

Table 45: Respondents Who Provided Direct Patient Care in Pennsylvania by Sex, 2015 Dental Hygienist Survey

Sex	Number	Percent
Male	61	1%
Female	5,876	99%
Total	5,937	100%

The 35-49 age group accounted for 44 percent of the males and 38 percent of the females who provided direct patient care in Pennsylvania. Table 46 lists the distribution of respondents by age group and sex.

Table 46: Respondents Who Provided Direct Patient Care in Pennsylvania by Age Group and Sex, 2015 Dental Hygienist Survey

Age Group	Male	Female
20-34	31%	26%
35-49	44%	38%
50-64	21%	33%
65+	3%	3%
Total	100%	100%

Race and Ethnicity

Dental hygienist respondents selected one category that best described their race and indicated if they were of Hispanic/Latino ethnicity. The distribution of respondents who provided direct patient care in Pennsylvania by race is listed in Table 47.

Table 47: Respondents Who Provided Direct Patient Care in Pennsylvania by Race, 2015Dental Hygienist Survey

Race	Number	Percent
White	5,720	96%
Black	81	1%
Asian	72	1%
Other	40	1%
American Indian/Alaska Native	19	< 1%
Native Hawaiian/other Pacific Islander	-	-
Total	5,937	100%

Note: Numbers less than six are withheld for privacy purposes, although they are included in the total numbers.

The percentage of dental hygienist respondents who provided direct patient care in Pennsylvania and reported being of Hispanic/Latino origin has increased to 2 percent (1 percent in 2013). Table 48 lists the ethnicity of respondents in 2015.

Table 48: Respondents Who Provided Direct Patient Care in Pennsylvania by Ethnicity,2015 Dental Hygienist Survey

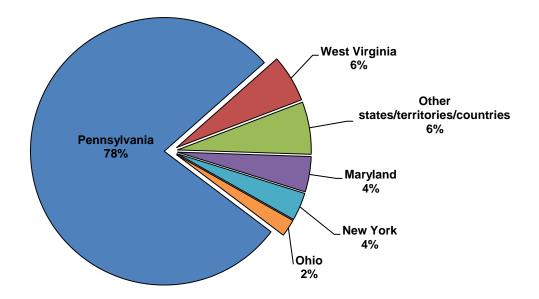
Ethnicity	Number	Percent
Hispanic/Latino	90	2%
Non-Hispanic/Latino	5,847	98%
Total	5,937	100%



Dental Hygiene Residence and Education

Respondents who provided direct patient care in Pennsylvania graduated from dental hygiene schools in 44 states, Washington, D.C., and several U.S territories. Figure 38 displays the states in which respondents who provided direct patient care in Pennsylvania graduated from dental hygiene school. Other states, territories and countries, not specified in the figure, each individually accounted for 1 percent or less of respondents.

Figure 38: Respondents Who Provided Direct Patient Care in Pennsylvania by State of Graduation from Dental Hygiene School, 2015 Dental Hygienist Survey



Three out of every four (75 percent) respondents who provided direct patient care in Pennsylvania completed an associate degree as their highest dental hygiene degree. Table 49 lists respondents by their highest dental hygiene degree.

Dental Hygiene Degree	Number	Percent
Certificate	574	10%
Associate degree	4,450	75%
Bachelor's degree	892	15%
Master's degree	21	<1%
Total	5,937	100%

Table 49: Respondents Who Provided Direct Patient Care in Pennsylvania by Highest
Dental Hygiene Degree, 2015 Dental Hygienist Survey

As the highest dental hygiene degree attained, certificates were reported most frequently within the age group of 65 years and older (27 percent), whereas the lowest proportion of certificates was realized among survey participants aged 18 through 34 years (7 percent). Figure 39 compares the highest dental hygiene degree respondents attained by age group.

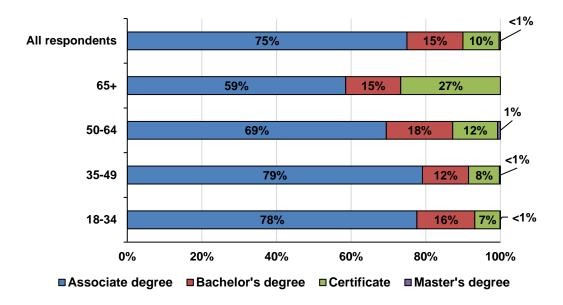


Figure 39: Respondents Who Provided Direct Patient Care in Pennsylvania by Highest Dental Hygiene Degree and Age Group, 2015 Dental Hygienist Survey

In 2015, 4 percent of respondents who provided direct patient care in Pennsylvania were enrolled in higher education programs. Of those respondents enrolled in higher education programs, 59 percent were enrolled in dental hygiene programs. Half of those respondents enrolled in dental hygiene programs were enrolled in bachelor degree programs. Table 50 lists respondents who provided direct patient care in Pennsylvania by enrollment in a higher education program.

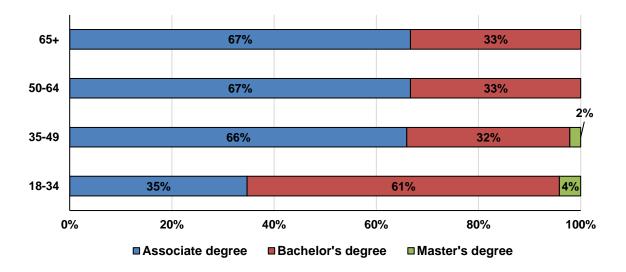
Table 50: Respondents Who Provided Direct Patient Care in Pennsylvania by Enrollmentin a Higher Education Program, 2015 Dental Hygienist Survey

Higher Education Program	Number	Percent
Not enrolled	5,704	96%
Dental hygiene associate degree	68	1%
Dental hygiene bachelor's degree	65	1%
Dental hygiene master's degree	-	-
Other bachelor's degree	44	1%
Other master's degree	19	< 1%
Other non-degree	33	1%
Total	5,937	100%

Note: Numbers less than six are withheld for privacy purposes, although they are included in the total.

Respondents aged 18 through 34 years were approximately 1.8 times more likely than older respondents to be enrolled in bachelor's degree programs. Figure 40 compares enrollment by degree and age.

Figure 40: Respondents Who Provided Direct Patient Care in Pennsylvania and Were Enrolled in Dental Hygiene Higher Education Programs by Age Group, 2015 Dental Hygienists Survey



Dental Hygiene Certification

Through additional training, dental hygienists can become certified to perform advanced duties with or without direct supervision. Respondents reported certification of an expanded function dental assistant certificate, Pennsylvania school hygienist certificate or Pennsylvania dental hygiene local anesthesia permit. Respondents could select more than one type of certification. Table 51 lists the number of respondents who provided direct patient care in Pennsylvania by the type of dental hygiene certification(s) they held. Respondents may possess multiple certificates.

Table 51: Respondents Who Provided Direct Patient Care in Pennsylvania by DentalHygiene Certification, 2015 Dental Hygienist Survey

Certification	Number
Expanded function dental assistant permit	163
School hygienist certificate	1,020
Dental hygiene local anesthesia permit	1,701

In 2015, 28 percent of respondents who were certified as expanded functional dental assistants identified this role in their primary duties. Table 52 displays expanded function dental assistants by age group.

Table 52: Respondents Who Provided Direct Patient Care in Pennsylvania by Expanded Function Dental Assistant in Primary Job by Age Group, 2015 Dental Hygienist Survey

Age Group	Number	Percent
18-34	14	30%
35-49	21	46%
50-64	11	24%
65+	0	0%
Total	46	100.0%

Fifty-five percent of the 2015 survey respondents who were certified as Pennsylvania school hygienists also reported this as their primary job.

Table 53: Respondents Who Provided Direct Patient Care in Pennsylvania byPennsylvania School Dental Hygienist in Primary Job by Age Group, 2015 DentalHygienist Survey

Age Group	Number	Percent
18-34	180	32%
35-49	203	37%
50-64	166	30%
65+	7	1%
Total	556	100%

In 2015, 79 percent of respondents who had a permit to provide local anesthesia in Pennsylvania reported this function in their primary job.

Table 54: Respondents Who Provided Direct Patient Care in Pennsylvania byPennsylvania Local Anesthesia in Primary Job by Age Group, 2015 Dental HygienistSurvey

Age Group	Number	Percent
18-34	657	49%
35-49	453	34%
50-64	219	16%
65+	9	1%
Total	1,338	100%

Public Health Dental Hygiene Practitioners

PHDHPs were first licensed in Pennsylvania in January of 2010. In 2015, 472 respondents who provided direct patient care in Pennsylvania were licensed as PHDHPs. Of those 472 respondents, 115 (24 percent) reported performing as a PHDHP in their primary job.

PHDHPs were created to increase access to dental services for individuals living in HPSAs by allowing these dental hygienists to perform educational, preventive, therapeutic, intra-oral and radiologic procedures without the direct supervision of a dentist at identified practice sites. PHDHPs are required to refer patients to a dentist annually.

Identified practice sites include schools; correctional facilities; health care facilities, such as hospitals; personal care homes; domiciliary care facilities; federally qualified health centers (FQHCs); and public or private institutions under the jurisdiction of a federal, state or local agency.

In 2015, 4 percent of respondents who provided direct patient care in Pennsylvania intended to apply for a PHDHP license, a decrease from 2013 when 12 percent intended to apply.

Table 55: Respondents Who Provided Direct Patient Care in Pennsylvania by PublicHealth Dental Hygiene Practitioner as a Primary Job by Age Group, 2015 Dental HygienistSurvey

Age Group	Total	Percent
18-34	23	20%
35-49	45	39%
50-64	43	37%
65+	-	-
Total	115	100%

Note: Numbers less than six are withheld for privacy purposes, although they are included in the total.

Respondents who provided direct patient care in Pennsylvania selected practice sites at which they practiced as a PHDHP. FQHCs were the most selected practice site, followed by health care facilities, such as hospitals. Table 56 lists the number of respondents who provided direct patient care in Pennsylvania and who worked as a PHDHP at each type of practice site. Respondents could select one type of practice site where they primarily practiced as a PHDHP.

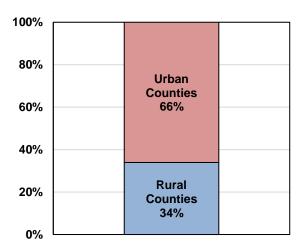
Table 56: Respondents Who Provided Direct Patient Care in Pennsylvania and Practicedas a Public Health Dental Hygiene Practitioner by Type of Practice Site, 2015 DentalHygienist Survey

Types of Practice Sites	Number
Federally qualified health center (FQHC)	51
Health care facility	26
School	18
Public/private or federal/state institution	9
Personal care home	-
Correctional facility	-
Domiciliary care facility	-

Note: Numbers less than six are withheld for privacy purposes.

Respondents who provided direct patient care and practiced as a PHDHP overwhelmingly practiced in urban counties. Respondents who provided direct patient care in Pennsylvania and practiced as PHDHPs practiced in 43 of the 67 counties in the commonwealth. Figure 41 shows respondents by the type of county in which they practiced as a PHDHP.

Figure 41: Respondents Who Provided Direct Patient Care in Pennsylvania and Practiced as a Public Health Dental Hygiene Practitioner in Pennsylvania by Rural or Urban County of Practice, 2015 Dental Hygienist Survey*



* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data.

Volunteer Services

In 2015, 13 percent (749) of dental hygienist respondents who provided direct patient care in Pennsylvania provided unpaid volunteer services at locations other than their primary job. Figures 42 and 43 present the locations where respondents who provided direct patient care in Pennsylvania provided volunteer services as dental hygienists other than at their primary job. Respondents could select only one location where they provided services. The "other" category includes locations such as pre-school and daycare settings, health fairs, senior centers, nursing homes, shelters and dental hygiene schools. Of the 749 respondents who reported volunteering in 2015, 151 were also licensed as PHDHPs.

Figure 42: Locations Where Respondents Who Provided Direct Patient Care in Pennsylvania Provided Volunteer Services Other Than at Their Primary Job, 2015 Dental Hygienist Survey

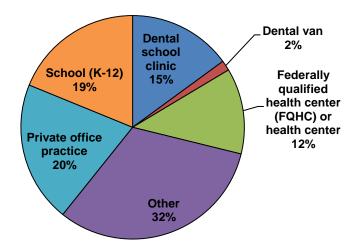
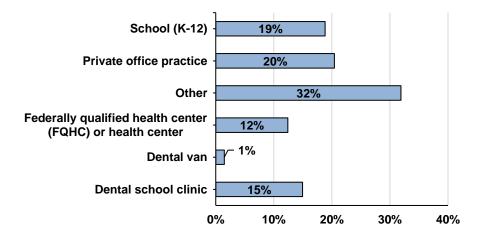


Figure 43: Respondents Who Provided Direct Patient Care in Pennsylvania Whose Services Were Provided as a Volunteer by Location, 2015 Dental Hygienist Survey



Hours Providing Direct Patient Care

Approximately half (51 percent) of the dental hygienist respondents who provided direct patient care in Pennsylvania provided less than 30 hours of direct patient care each week in the prior year. Table 57 lists respondents by the number of hours they spent providing direct patient care in Pennsylvania each week.

Table 57: Respondents by the Number of Hours Spent Providing Direct Patient Care inPennsylvania, 2015 Dental Hygienist Survey

Hours	Number	Percent
1-10	432	7%
11-19	729	12%
20-30	1,866	31%
31-40	2,693	45%
More than 40	217	4%
Total	5,937	100%*

* Percentages do not total 100 due to rounding

Fifty-five percent of respondents in the 18-34 age group provided direct patient care 31-40 hours per week, compared to 22 percent of respondents in the 65+ age group. Figure 44 compares the number of hours respondents spent providing direct patient care by age group.

Figure 44: Respondents by the Number of Hours Spent Providing Direct Patient Care in Pennsylvania and Age Group, 2015 Dental Hygienist Survey

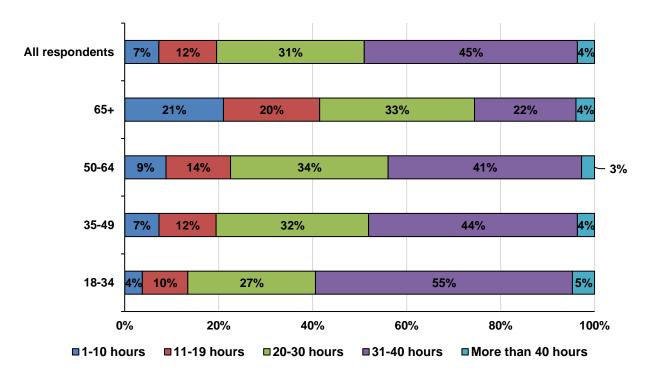


Table 58: Respondents by the Number of Hours Spent Providing Direct Patient Care inPennsylvania by Public Health Dental Hygienist Practitioner in Primary Job, 2015 DentalHygienist Survey

Hours	Number	Percent
1-10 hours	11	10%
11-19 hours	10	9%
20-30 hours	17	15%
31-40 hours	70	61%
More than 40 hours	7	6%
Total	115	100%

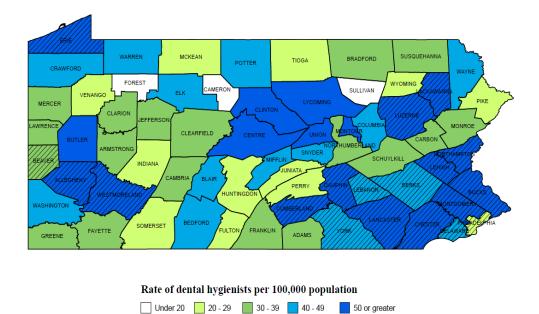
Geography

In 2015, dental hygienist respondents who provided direct patient care in Pennsylvania were employed in 65 counties. Across the commonwealth, the rate of respondents who provided direct patient care in Pennsylvania was 46.7 per 100,000 population. Appendix 9 lists respondents who provided direct patient care in Pennsylvania by their county of primary employment.

Based upon the Center for Rural Pennsylvania's definition of rural and urban counties and the 2010 U.S. Census population, Pennsylvania has 48 rural counties, with 27 percent of the state population residing in those counties.

In 2015, approximately one out of every five respondents (1,337 or 23 percent) who provided direct patient care in Pennsylvania was employed in a rural county. The rate of dental hygienist respondents who provided direct patient care in Pennsylvania per 100,000 population was 38.5 in rural counties and 49.7 in urban counties. Figure 45 shows the wide variation in rates of respondents who provided direct patient care in Pennsylvania per 100,000 population across the commonwealth, from zero in Forest and Cameron counties to the highest in Cumberland County (71.8 per 100,000).

Figure 45: Respondents Who Provided Direct Patient Care in Pennsylvania per 100,000 Population by County of Primary Employment, 2015 Dental Hygienist Survey



Employment

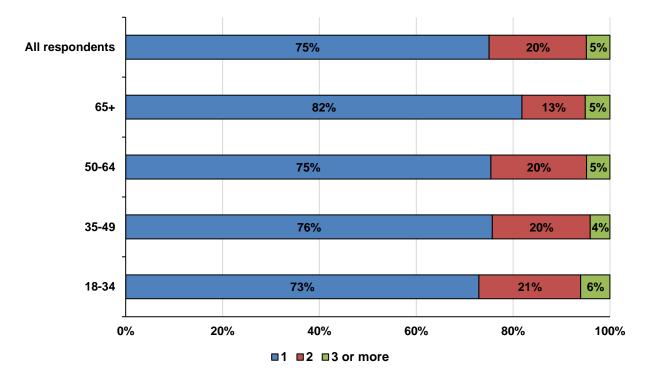
In 2015, 25 percent of dental hygienist respondents who provided direct patient care in Pennsylvania were employed in more than one dental hygiene position (20 percent reported two positions; 5 percent reported three or more). Respondents in the 10-29 age group were most likely to be employed in more than one dental hygiene position. Table 59 lists respondents who provided direct patient care in Pennsylvania and were employed in more than one dental hygiene position by age group and Figure 46 shows the distribution by age.

Table 59: Respondents Who Provided Direct Patient Care in Pennsylvania and WereEmployed in More Than One Dental Hygiene Position by Age Group, 2015 DentalHygienist Survey

Urban Rural

Age Group	Number	Percent
18-24	60	34%
25-29	185	28%
30-34	174	24%
35-39	155	23%
40-44	178	24%
45-49	220	26%
50-54	207	24%
55-59	173	25%
60-64	97	24%
65+	32	18%
Total	1,481	25%





Private dental practices, both partnerships and solo dentists, employed 91 percent of dental hygienist respondents who provided direct patient care in Pennsylvania. Table 60 lists respondents by their primary employment setting.

Table 60: Respondents Who Provided Direct Patient Care in Pennsylvania by Primary Employment Setting, 2015 Dental Hygienist Survey

Employment Setting	Number	Percent
Private practice solo dentist (excluding retail site)	3,247	55%
Private practice partnership (excluding retail site)	2,164	36%
Clinic or center	339	6%
Other	76	1%
School health (K-12/college/university)	45	1%
Retail/industry/business site	35	< 1%
Mobile dental unit (using portable equipment)	31	< 1%
Total	5,937	100%

Figures 47 and 48 compare the number of hours respondents worked per week at their primary job by employment setting.

Figure 47: Respondents Who Provided Direct Patient Care in Pennsylvania by Number of Hours Worked at Their Primary Job, 2015 Dental Hygienist Survey

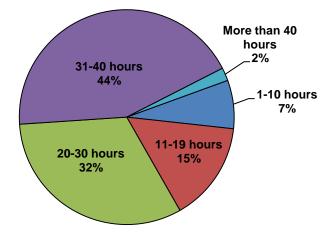
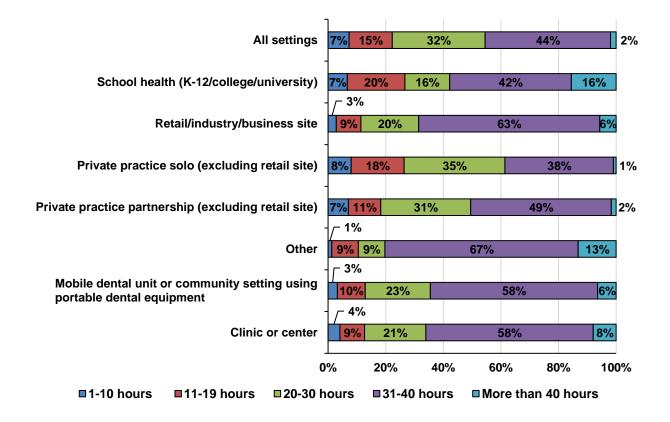
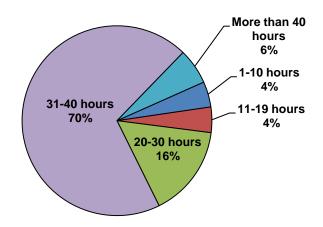


Figure 48: Respondents Who Provided Direct Patient Care in Pennsylvania by the Number of Hours Worked Per Week at Their Primary Job and Employment Setting, 2015 Dental Hygienist Survey



In 2015, 70 percent of PHDHP respondents who provided direct patient care in Pennsylvania worked 31-40 hours each week in their primary job. Figure 49 shows the breakdown of hours.

Figure 49: Public Health Dental Hygienist Practitioner Respondents Who Provided Direct Patient Care in Pennsylvania by the Number of Hours Worked, 2015 Dental Hygienist Survey



See Children in Practice

In 2015, over half (51 percent) of dental hygienists reported seeing children as patients when the child is 3 years of age, while 4 percent reported not seeing children. Figure 50 displays the age distribution of children seen by dental hygienists.

Figure 50: Respondents Who Provided Direct Patient Care in Pennsylvania by the Age of Children Seen, 2015 Dental Hygienist Survey

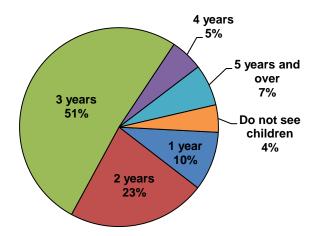
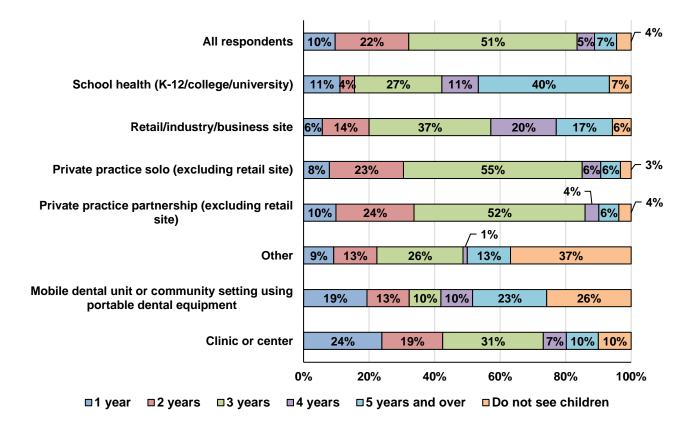


Figure 51: Respondents Who Provided Direct Patient Care in Pennsylvania by Age of Children Seen and Setting, 2015 Dental Hygienist Survey



Level of Work

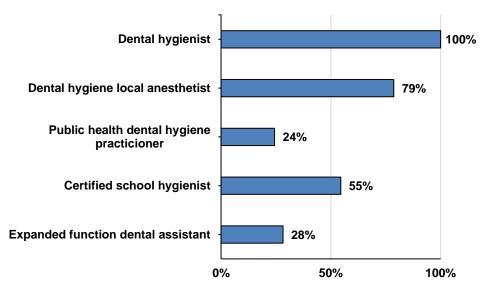
Respondents who provided direct patient care in Pennsylvania performed work at the level of a dental hygienist, expanded function dental assistant, certified Pennsylvania school hygienist, public health dental hygiene practitioner or Pennsylvania dental hygiene local anesthetist at their primary job. Table 61 lists the number of respondents who provided direct patient care in Pennsylvania by the level(s) they performed in their primary job. The total number of responses is greater than the number of respondents because respondents could select more than one level of work.

Table 61: Respondents Who Provided Direct Patient Care in Pennsylvania by Level of Work Performed in Their Primary Job, 2015 Dental Hygienist Survey

Level of Work	Number
Dental hygienist	5,937
Public health dental hygiene practitioner	115
Pennsylvania dental hygiene local anesthetist	1,338
Certified Pennsylvania school hygienist	556
Expanded function dental assistant	46

Figure 52 lists the percentage of respondents who provided direct patient care in Pennsylvania and reported working in the field in which they were certified or licensed in their primary job.

Figure 52: Percent of Respondents Who Provided Direct Patient Care Working in Their Primary Job in the Field in Which They Were Certified or Licensed in Pennsylvania, 2015 Dental Hygienist Survey



Professional Satisfaction/Dissatisfaction

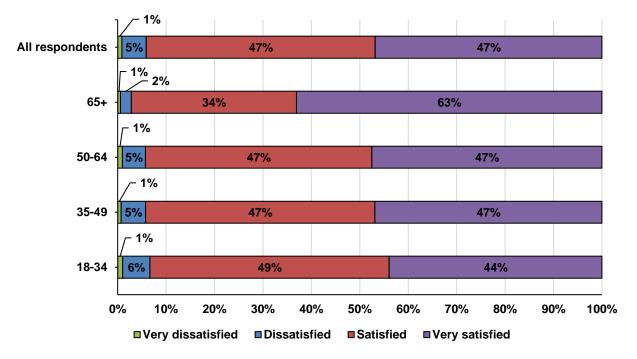
In 2015, 94 percent of dental hygienist respondents who provided direct patient care in Pennsylvania were either satisfied or very satisfied with their primary job. Table 62 lists respondents' satisfaction with their primary job.

Table 62: Respondents Providing Direct Patient Care in Pennsylvania by Primary Job Satisfaction, 2015 Dental Hygienist Survey

Satisfaction	Number	Percent
Very satisfied	2,779	47%
Satisfied	2,807	47%
Dissatisfied	298	5%
Very dissatisfied	52	1%
Total	5,937	100%

The 65+ age group reported the highest percentage (63 percent) of dental hygienist respondents who provided direct patient care in Pennsylvania and were very satisfied with their primary job. Figure 53 compares respondents' satisfaction with their primary job by age group.





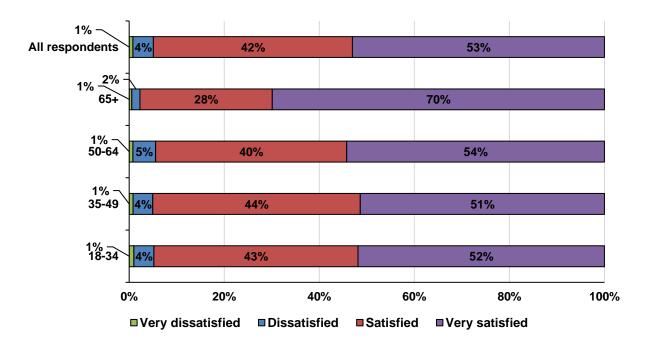
Respondents who provided direct patient care in Pennsylvania reported higher levels of satisfaction with dental hygiene as a career field compared to satisfaction with their primary job. Ninety-five percent were either satisfied or very satisfied with dental hygiene as a career. Table 63 lists respondents' satisfaction with dental hygiene as a career.

Table 63: Respondents Who Provided Direct Patient Care in Pennsylvania by Satisfaction
with Dental Hygiene as a Career, 2015 Dental Hygienist Survey

Satisfaction	Number	Percent
Very satisfied	3,147	53%
Satisfied	2,487	42%
Dissatisfied	255	4%
Very dissatisfied	47	1%
Total	5,936	100%

The 65+ age group reported the highest percentage (70 percent) of respondents who provided direct patient care in Pennsylvania and were very satisfied with dental hygiene as a career. Figure 48 compares respondents' satisfaction with dental hygiene as a career by age group.

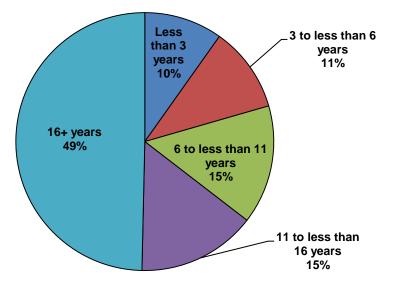
Figure 54: Respondents Who Provided Direct Patient Care in Pennsylvania by Satisfaction with Dental Hygiene as a Career and Age Group, 2015 Dental Hygienist Survey



Length of Practice

Almost half (49 percent) of respondents who provided direct patient care in Pennsylvania have been a dental hygienist in Pennsylvania for 16 or more years. Figure 55 presents the length of time respondents who provided direct patient care in Pennsylvania have been a dental hygienist in Pennsylvania.

Figure 55: Respondents Who Provided Direct Patient Care in Pennsylvania by Years as a Dental Hygienist in Pennsylvania, 2015 Dental Hygienist Survey



The anticipated length of dental hygiene practice among those respondents providing direct patient care in Pennsylvania varied by age, as presented in table 64.

Table 64: Respondents Who Provided Direct Patient Care in Pennsylvania by the Length
of Time They Anticipated Remaining in Dental Hygiene by Age Group, 2015 Dental
Hygienist Survey

	Anticipated Time							
Age	Less than	6 years	6 to less than 11 years 11 to less than 16 years		16+ years			
Group	Number	Percent	Number	Percent	Number	Percent	Number	Percent
18-24	6	3%	8	5%	13	7%	148	85%
25-29	38	6%	39	6%	48	7%	528	81%
30-34	42	6%	51	7%	74	10%	552	77%
35-39	36	5%	52	8%	143	21%	455	66%
40-44	40	5%	103	14%	190	26%	396	54%
45-49	53	6%	132	15%	339	39%	336	39%
50-54	75	9%	332	39%	323	38%	127	15%
55-59	203	30%	322	47%	133	20%	22	3%
60-64	256	64%	122	30%	16	4%	7	2%
65+	144	82%	25	14%	-	-	-	-
Total	893	15%	1,186	20%	1,283	22%	2,574	43%

Numbers less than six are withheld for privacy purposes, although they are included in the totals.

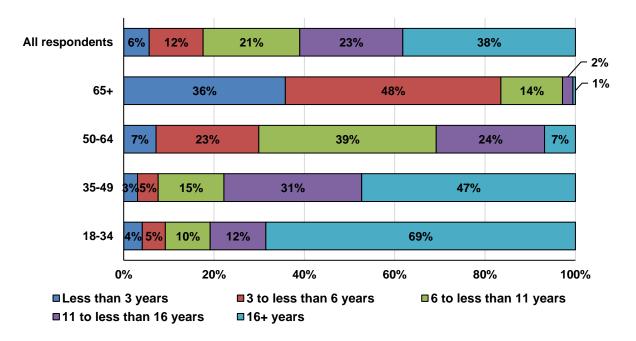
Appendix 11 lists the length of time respondents anticipated remaining in dental hygiene in Pennsylvania by the county of their primary job.

Respondents who provided direct patient care in Pennsylvania were asked how long they anticipated remaining in dental hygiene, providing direct patient care in Pennsylvania. Of respondents who anticipated remaining in dental hygiene for 16 or more years, 88 percent anticipated remaining in direct patient care in Pennsylvania for those years.

Table 65: Respondents Who Provided Direct Patient Care in Pennsylvania and Anticipate Being in Direct Patient Care in Pennsylvania, 2015 Dental Hygiene Survey

Anticipate being in DPC dental hygiene in Pa	Number	Percent
16+ years	2,269	38%
11 to less than 16 years	1,354	23%
6 to less than 11 years	1,269	21%
3 to less than 6 years	708	12%
Less than 3 years	336	6%
Total	5,937	100%

Figure 56: Respondents Who Provided Direct Patient Care in Pennsylvania and Anticipate Being in Direct Patient Care in Pennsylvania by Anticipated Time and Age Group, 2015 Dental Hygienist Survey



Leaving Direct Patient Care in Less Than Six Years

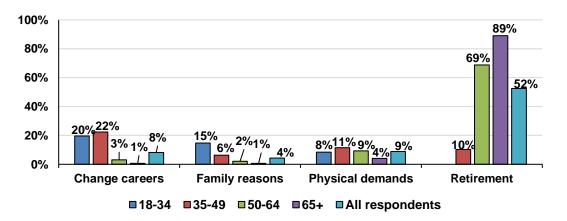
Of dental hygienist respondents who provided direct patient care in Pennsylvania, 18 percent planned to leave direct patient care in less than six years. Retirement was the principal reason why respondents planned to leave direct patient care in less than six years, as listed in Table 66.

Table 66: Respondents Who Provided Direct Patient Care in Pennsylvania and Planned toLeave Direct Patient Care in Less Than Six Years by Principal Reason for Leaving, 2015Dental Hygienist Survey

Reason	Number	Percent
Retirement	548	52%
Change careers	86	8%
Physical demands	92	9%
Stress/burnout	75	7%
Family reasons	45	4%
Other	58	6%
Complete further training	32	3%
Financial reasons – salary/income	39	4%
Not applicable	68	7%
Total	1,044	100%

Across age groups, the principal reason why respondents who provided direct patient care in Pennsylvania planned to leave direct patient care in less than six years varied. Change of career was the most reported reason among respondents under age 50, while retirement was the most reported reason for respondents age 50 and older. Figure 57 compares four reasons why respondents who provided direct patient care in Pennsylvania planned to leave direct patient care in Pennsylvania planned to leave direct patient care in Pennsylvania planned to leave direct patient care in less than six years by age group.

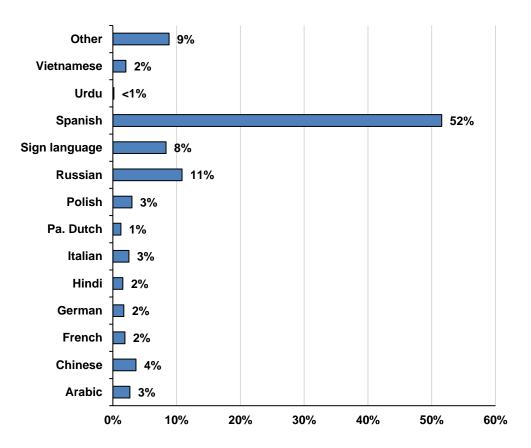
Figure 57: Respondents Who Provided Direct Patient Care in Pennsylvania and Planned to Leave Direct Patient Care in the Less Than Six Years by Reason for Leaving and Age Group, 2015 Dental Hygienist Survey



Dental/Medical Translation

In 2015, 9 percent of respondents who provided direct patient care in Pennsylvania reported personally providing dental/medical translation to patients. Of respondents who personally provided dental/medical translation to patients, 85 percent communicated effectively for most clinical purposes in one language, followed by 12 percent in two languages. Languages represented in the category of other included: Greek, Portuguese and Ukrainian. Figure 58 shows the languages in which respondents who provided direct patient care in Pennsylvania communicated effectively for most clinical purposes.

Figure 58: Respondents Who Provided Direct Patient Care in Pennsylvania by Languages Other than English in Which They Communicated Effectively for Most Clinical Purposes, 2015 Dental Hygienist Survey



County	Total	Percent
Pennsylvania	5,987	100%
Rural counties	1,167	19%
Urban counties	4,820	81%
Adams*	27	1%
Allegheny	816	14%
Armstrong*	19	< 1%
Beaver	64	1%
Bedford*	13	< 1%
Berks	151	3%
Blair*	50	1%
Bradford*	22	< 1%
Bucks	378	6%
Butler*	88	2%
Cambria*	51	1%
Cameron*	-	-
Carbon*	19	< 1%
Centre*	68	1%
Chester	270	5%
Clarion*	11	< 1%
Clearfield*	27	1%
Clinton*	9	< 1%
Columbia*	20	< 1%
Crawford*	24	< 1%
Cumberland	120	2%
Dauphin	119	2%
Delaware	297	5%
Elk*	8	< 1%
Erie	120	2%
Fayette*	57	1%
Forest*	-	-
Franklin*	47	1%
Fulton*	-	-
Greene*	10	< 1%
Huntingdon*	14	< 1%
Indiana*	24	< 1%

County	Total	Percent
Jefferson*	15	< 1%
Juniata*	-	-
Lackawanna	114	2%
Lancaster	228	4%
Lawrence*	32	1%
Lebanon	53	1%
Lehigh	198	3%
Luzerne	142	2%
Lycoming*	39	1%
McKean*	13	< 1%
Mercer*	50	1%
Mifflin*	13	< 1%
Monroe*	51	1%
Montgomery	546	9%
Montour*	15	< 1%
Northampton	123	2%
Northumberland*	29	1%
Perry*	12	< 1%
Philadelphia	773	13%
Pike*	13	< 1%
Potter*	-	-
Schuylkill*	44	1%
Snyder*	15	< 1%
Somerset*	18	< 1%
Sullivan*	-	-
Susquehanna*	7	< 1%
Tioga*	15	< 1%
Union*	14	< 1%
Venango*	16	< 1%
Warren*	11	< 1%
Washington*	93	2%
Wayne*	22	< 1%
Westmoreland	155	3%
Wyoming*	10	< 1%
York	153	3%

* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data. Numbers less than six are withheld for privacy purposes and are not displayed in the county results, although they are included in the total Pennsylvania numbers and total rural/urban numbers.

County	Total	Percent
Pennsylvania	4,604	100%
Rural counties	990	22%
Urban counties	3,614	78%
Adams*	20	< 1%
Allegheny	571	12%
Armstrong*	18	< 1%
Beaver	48	1%
Bedford*	12	< 1%
Berks	130	3%
Blair*	39	1%
Bradford*	20	< 1%
Bucks	286	6%
Butler*	67	2%
Cambria*	43	1%
Cameron*	-	-
Carbon*	13	< 1%
Centre*	47	1%
Chester	203	4%
Clarion*	11	< 1%
Clearfield*	22	1%
Clinton*	9	< 1%
Columbia*	19	< 1%
Crawford*	21	1%
Cumberland	93	2%
Dauphin	95	2%
Delaware	232	5%
Elk*	6	< 1%
Erie	97	2%
Fayette*	51	1%
Forest*	-	-
Franklin*	42	1%
Fulton*	-	-
Greene*	10	< 1%
Huntingdon*	13	< 1%
Indiana*	21	1%

APPENDIX 2: GENERAL DENTISTS BY COUNTY OF PRIMAR	Y PRACTICE
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County	Total	Percent
Jefferson*	13	< 1%
Juniata*	-	-
Lackawanna	87	2%
Lancaster	179	4%
Lawrence*	29	1%
Lebanon	46	1%
Lehigh	151	3%
Luzerne	120	3%
Lycoming*	34	1%
McKean*	13	< 1%
Mercer*	42	1%
Mifflin*	13	< 1%
Monroe*	40	1%
Montgomery	414	9%
Montour*	11	< 1%
Northampton	95	2%
Northumberland*	28	1%
Perry*	12	< 1%
Philadelphia	514	11%
Pike*	13	< 1%
Potter*	-	-
Schuylkill*	40	1%
Snyder*	11	< 1%
Somerset*	15	< 1%
Sullivan*	-	-
Susquehanna*	7	< 1%
Tioga*	14	< 1%
Union*	11	< 1%
Venango*	14	< 1%
Warren*	11	< 1%
Washington*	76	2%
Wayne*	19	< 1%
Westmoreland	129	3%
Wyoming*	9	< 1%
York	124	3%

* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data. Numbers less than six are withheld for privacy purposes and are not displayed in the county results, although they are included in the total Pennsylvania numbers and total rural/urban numbers.

Country	Tatal	25-	-34	35-	-49	50-	-64	65+		Average
County	Total	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Age
Pennsylvania	5,987	712	12%	1,614	27%	2,538	42%	1,123	19%	52.5
Rural counties	1,167	103	9%	307	26%	537	46%	220	19%	53.6
Urban counties	4,820	609	13%	1,307	27%	2,001	42%	903	19%	52.2
Adams*	27	0	0%	14	52%	12	44%	-	-	49.8
Allegheny	816	109	13%	183	22%	372	46%	152	19%	53.0
Armstrong*	19	-	_	-	-	11	58%	-	-	58.8
Beaver	64	-	-	14	22%	34	53%	14	22%	55.5
Bedford*	13	-	-	-	-	-	-	-	-	51.5
Berks	151	11	7%	47	31%	65	43%	28	19%	52.6
Blair*	50	-	-	19	38%	14	28%	12	24%	51.7
Bradford*	22	0	0%	8	36%	8	36%	6	27%	54.0
Bucks	378	28	7%	117	31%	161	43%	72	19%	52.8
Butler*	88	12	14%	24	27%	37	42%	15	17%	51.2
Cambria*	51	-	-	13	25%	24	47%	10	20%	54.8
Cameron*	-	0	0%	0	0%	-	-	0	0%	51.0
Carbon*	19	-	-	-	-	9	47%	-	-	55.2
Centre*	68	8	12%	23	34%	26	38%	11	16%	50.5
Chester	270	20	7%	93	34%	122	45%	35	13%	51.5
Clarion*	11	0	0%	-	-	-	-	-	-	53.1
Clearfield*	27	-	-	8	30%	14	52%	-	-	52.4
Clinton*	9	0	0%	-	-	-	-	-	-	56.3
Columbia*	20	-	-	-	-	10	50%	-	-	55.4
Crawford*	24	-	-	-	-	12	50%	6	25%	57.7
Cumberland	120	8	7%	32	27%	57	48%	23	19%	54.5
Dauphin	119	13	11%	29	24%	53	45%	24	20%	53.2
Delaware	297	33	11%	75	25%	128	43%	61	21%	53.0
Elk*	8	-	-	-	-	-	-	0	0%	49.6
Erie	120	15	13%	26	22%	63	53%	16	13%	52.5
Fayette*	57	-	-	12	21%	31	54%	10	18%	54.7
Forest*	-	0	0%	0	0%	-	-	0	0%	62.0
Franklin*	47	8	17%	13	28%	15	32%	11	23%	51.3
Fulton*	-	0	0%	-	-	-	-	0	0%	51.3
Greene*	10	0	0%	-	-	-	-	-	-	57.0
Huntingdon*	14	-	-	-	-	7	50%	-	-	55.6
Indiana*	24	-	-	-	-	13	54%	7	29%	59.0
Jefferson*	15	-	-	-	-	-	-	6	40%	55.8
Juniata*	-	0	0%	0	0%	-	-	0	0%	56.7

APPENDIX 3: DENTIST AGE AND AVERAGE AGE BY COUNTY OF PRIMARY PRACTICE

Country	Tatal	25–	-34	35-	-49	50-	50–64		+	Average
County	Total	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Age
Lackawanna	114	12	11%	31	27%	53	46%	18	16%	52.6
Lancaster	228	23	10%	82	36%	95	42%	28	12%	50.7
Lawrence*	32	-	-	8	25%	18	56%	-	-	54.0
Lebanon	53	8	15%	13	25%	17	32%	15	28%	54.9
Lehigh	198	27	14%	70	35%	76	38%	25	13%	49.5
Luzerne	142	12	8%	30	21%	63	44%	37	26%	54.8
Lycoming*	39	-	-	6	15%	23	59%	6	15%	54.7
McKean*	13	-	-	-	-	-	-	-	-	51.8
Mercer*	50	-	-	8	16%	32	64%	8	16%	57.3
Mifflin*	13	0	0%	-	-	6	46%	-	-	58.9
Monroe*	51	-	-	16	31%	21	41%	10	20%	53.7
Montgomery	546	66	12%	158	29%	210	38%	112	21%	52.6
Montour*	15	-	-	-	-	8	53%	-	-	51.0
Northampton	123	13	11%	42	34%	52	42%	16	13%	50.9
Northumberland*	29	-	-	-	-	15	52%	9	31%	56.0
Perry*	12	0	0%	-	-	6	50%	-	-	57.7
Philadelphia	773	184	24%	182	24%	251	32%	156	20%	50.0
Pike*	13	-	-	6	46%	-	-	-	-	50.4
Potter*	2	0	0%	-	-	-	-	0	0%	49.5
Schuylkill*	44	-	-	8	18%	21	48%	10	23%	55.4
Snyder*	15	-	-	6	40%	6	40%	-	-	51.5
Somerset*	18	0	0%	-	-	14	78%	-	-	56.6
Sullivan*	1	0	0%	0	0%	-	-	0	0%	58.0
Susquehanna*	7	0	0%	-	-	-	-	0	0%	53.7
Tioga*	15	-	-	-	-	7	47%	-	-	49.0
Union*	14	-	-	-	-	-	-	-	-	49.6
Venango*	16	-	-	-	-	7	44%	6	38%	57.2
Warren*	11	-	-	-	-	7	64%	-	-	57.3
Washington*	93	8	9%	32	34%	35	38%	18	19%	53.6
Wayne*	22	-	-	6	27%	11	50%	0	0%	46.8
Westmoreland	155	7	5%	32	21%	73	47%	43	28%	56.5
Wyoming*	10	-	-	-	-	-	-	0	0%	48.4
York	153	18	12%	51	33%	56	37%	28	18%	51.4

APPENDIX 3: DENTIST AGE AND AVERAGE AGE BY COUNTY OF PRIMARY PRACTICE, CONTINUED

* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data.

Numbers less than six are withheld for privacy purposes and are not displayed in the county results, although they are included in the total Pennsylvania numbers and total rural/urban numbers.

Country	Tatal	Medi	icaid	Medi	icare	Private In	nsurance
County	Total	Number	Percent	Number	Percent	Number	Percent
Pennsylvania	5,987	1,507	25%	1,372	23%	5,380	90%
Rural counties	1,167	296	25%	260	22%	1,035	89%
Urban counties	4,820	1,211	25%	1,112	23%	4,345	90%
Adams*	27	-	-	-	-	24	89%
Allegheny	816	247	30%	281	34%	753	92%
Armstrong*	19	6	32%	7	37%	18	95%
Beaver	64	17	27%	20	31%	62	97%
Bedford*	13	-	-	-	-	13	100%
Berks	151	28	19%	23	15%	131	87%
Blair*	50	17	34%	13	26%	44	88%
Bradford*	22	9	41%	6	27%	19	86%
Bucks	378	42	11%	45	12%	340	90%
Butler*	88	18	20%	23	26%	78	89%
Cambria*	51	20	39%	17	33%	49	96%
Cameron*	-	0	0%	0	0%	-	-
Carbon*	19	-	-	-	-	18	95%
Centre*	68	9	13%	-	-	55	81%
Chester	270	31	11%	30	11%	244	90%
Clarion*	11	-	-	-	-	10	91%
Clearfield*	27	11	41%	10	37%	25	93%
Clinton*	9	-	-	0	0%	7	78%
Columbia*	20	7	35%	-	-	17	85%
Crawford*	24	10	42%	7	29%	23	96%
Cumberland	120	13	11%	18	15%	104	87%
Dauphin	119	21	18%	19	16%	109	92%
Delaware	297	49	16%	40	13%	276	93%
Elk*	8	0	0%	0	0%	8	100%
Erie	120	30	25%	26	22%	114	95%
Fayette*	57	16	28%	18	32%	52	91%
Forest*	-	0	0%	0	0%	0	0%
Franklin*	47	11	23%	10	21%	42	89%
Fulton*	-	-	-	0	0%	-	-
Greene*	10	-	-	-	-	8	80%
Huntingdon*	14	-	-	-	-	10	71%
Indiana*	24	-	-	7	29%	22	92%
Jefferson*	15	10	67%	8	53%	15	100%
Juniata*	-	-	-	0	0%	-	-

APPENDIX 4: ACCEPTED DENTAL COVERAGE BY COUNTY OF PRIMARY PRACTICE

Country	Tatal	Medi	caid	Medi	care	Private In	nsurance
County	Total	Number	Percent	Number	Percent	Number	Percent
Lackawanna	114	35	31%	24	21%	104	91%
Lancaster	228	51	22%	38	17%	189	83%
Lawrence*	32	8	25%	6	19%	29	91%
Lebanon	53	6	11%	10	19%	42	79%
Lehigh	198	44	22%	40	20%	178	90%
Luzerne	142	40	28%	27	19%	133	94%
Lycoming*	39	-	-	-	-	31	79%
McKean*	13	-	-	-	-	11	85%
Mercer*	50	12	24%	8	16%	47	94%
Mifflin*	13	-	-	-	-	12	92%
Monroe*	51	9	18%	-	-	41	80%
Montgomery	546	81	15%	72	13%	467	86%
Montour*	15	7	47%	6	40%	13	87%
Northampton	123	20	16%	19	15%	110	89%
Northumberland*	29	8	28%	-	-	25	86%
Perry*	12	-	-	-	-	9	75%
Philadelphia	773	390	50%	310	40%	708	92%
Pike*	13	-	-	-	-	12	92%
Potter*	-	-	-	0	0%	-	-
Schuylkill*	44	8	18%	8	18%	40	91%
Snyder*	15	-	-	-	-	13	87%
Somerset*	18	11	61%	7	39%	18	100%
Sullivan*	-	0	0%	0	0%	-	-
Susquehanna*	7	-	-	-	-	6	86%
Tioga*	15	-	-	-	-	9	60%
Union*	14	-	-	0	0%	9	64%
Venango*	16	-	-	6	38%	14	88%
Warren*	11	-	-	-	-	9	82%
Washington*	93	19	20%	30	32%	91	98%
Wayne*	22	6	27%	-	-	19	86%
Westmoreland	155	43	28%	52	34%	146	94%
Wyoming*	10	-	-	-	-	9	90%
York	153	23	15%	18	12%	135	88%

APPENDIX 4: ACCEPTED DENTAL COVERAGE BY COUNTY OF PRIMARY PRACTICE, CONTINUED

* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data.

Numbers less than six are withheld for privacy purposes and are not displayed in the county results, although they are included in the total Pennsylvania numbers and total rural/urban numbers.

County	Tetal	Less than	n 6 years	6 to less t	nan 11 years	11 to less th	nan 16 years	16+ years	
County	Total	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Pennsylvania	5,987	1,597	27%	1,324	22%	987	16%	2,074	35%
Rural counties	1,167	334	29%	272	23%	176	15%	384	33%
Urban counties	4,820	1,263	26%	1,052	22%	811	17%	1,690	35%
Adams*	27	5	19%	7	26%	5	19%	10	37%
Allegheny	816	234	29%	186	23%	140	17%	256	31%
Armstrong*	19	5	26%	8	42%	4	21%	2	11%
Beaver	64	14	22%	17	27%	15	23%	18	28%
Bedford*	13	5	38%	3	23%	1	8%	4	31%
Berks	151	32	21%	38	25%	20	13%	61	40%
Blair*	50	15	30%	8	16%	9	18%	18	36%
Bradford*	22	9	41%	1	5%	3	14%	9	41%
Bucks	378	84	22%	94	25%	66	17%	133	35%
Butler*	88	13	15%	23	26%	12	14%	40	45%
Cambria*	51	16	31%	8	16%	10	20%	17	33%
Cameron*	1	0	0%	0	0%	0	0%	1	100%
Carbon*	19	6	32%	4	21%	4	21%	5	26%
Centre*	68	13	19%	16	24%	16	24%	23	34%
Chester	270	53	20%	54	20%	56	21%	107	40%
Clarion*	11	3	27%	5	45%	0	0%	3	27%
Clearfield*	27	7	26%	7	26%	3	11%	10	37%
Clinton*	9	3	33%	1	11%	2	22%	3	33%
Columbia*	20	8	40%	5	25%	2	10%	5	25%
Crawford*	24	9	38%	6	25%	2	8%	7	29%
Cumberland	120	45	38%	30	25%	16	13%	29	24%
Dauphin	119	32	27%	33	28%	23	19%	31	26%
Delaware	297	68	23%	65	22%	51	17%	112	38%
Elk*	8	0	0%	3	38%	2	25%	3	38%
Erie	120	24	20%	32	27%	17	14%	47	39%
Fayette*	57	16	28%	17	30%	8	14%	16	28%
Forest*	1	1	100%	0	0%	0	0%	0	0%
Franklin*	47	14	30%	7	15%	8	17%	18	38%
Fulton*	4	0	0%	1	25%	0	0%	3	75%
Greene*	10	4	40%	4	40%	0	0%	2	20%
Huntingdon*	14	6	43%	4	29%	0	0%	4	29%
Indiana*	24	9	38%	5	21%	5	21%	5	21%
Jefferson*	15	5	33%	4	27%	2	13%	4	27%
Juniata*	3	1	33%	2	67%	0	0%	0	0%

APPENDIX 5: YEARS ANTICIPATED PRACTICING DENTISTY IN PENNSYLVNAIA BY COUNTY OF PRIMARY PRACTICE

County	Total	Less thar	n 6 years	6 to less than	n 11 years	11 to less t	han 16 years	16+	years
County	Total	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Lackawanna	114	34	30%	18	16%	17	15%	45	39%
Lancaster	228	56	25%	47	21%	43	19%	82	36%
Lawrence*	32	9	28%	11	34%	6	19%	6	19%
Lebanon	53	16	30%	12	23%	7	13%	18	34%
Lehigh	198	43	22%	38	19%	37	19%	79	40%
Luzerne	142	42	30%	23	16%	36	25%	41	29%
Lycoming*	39	14	36%	7	18%	-	-	13	33%
McKean*	13	6	46%	0	0%	-	-	6	46%
Mercer*	50	18	36%	11	22%	12	24%	9	18%
Mifflin*	13	-	-	7	54%	-	-	-	-
Monroe*	51	16	31%	10	20%	-	-	19	37%
Montgomery	546	132	24%	104	19%	95	17%	215	39%
Montour*	15	-	-	-	-	-	-	-	-
Northampton	123	27	22%	25	20%	20	16%	51	41%
Northumberland*	29	10	34%	7	24%	-	-	9	31%
Perry*	12	-	-	-	-	-	-	-	-
Philadelphia	773	222	29%	182	24%	100	13%	268	35%
Pike*	13	-	-	-	-	-	-	7	54%
Potter*	-	-	-	0	0%	0	0%	-	-
Schuylkill*	44	16	36%	14	32%	-	-	11	25%
Snyder*	15	6	40%	-	-	-	-	6	40%
Somerset*	18	7	39%	-	-	-	-	-	-
Sullivan*	-	0	0%	-	-	0	0%	0	0%
Susquehanna*	7	-	-	-	-	-	-	0	0%
Tioga*	15	-	-	-	-	-	-	6	40%
Union*	14	-	-	-	-	-	-	8	57%
Venango*	16	-	-	-	-	-	-	-	-
Warren*	11	-	-	-	-	-	-	-	-
Washington*	93	25	27%	18	19%	16	17%	34	37%
Wayne*	22	-	-	-	-	-	-	12	55%
Westmoreland	155	53	34%	30	19%	31	20%	41	26%
Wyoming*	10	-	-	-	-	0	0%	-	-
York	153	52	34%	24	16%	21	14%	56	37%

APPENDIX 5: YEARS ANTICIPATED PRACTICING DENTISTY IN PENNSYLVNAIA BY COUNTY OF PRIMARY PRACTICE, CONTINUED

* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data.

Numbers less than six are withheld for privacy purposes and are not displayed in the county results, although they are included in the total Pennsylvania numbers and total rural/urban numbers.

	Total	Medi	caid	Medi	care	Private In	surance	Unins	sured
County	(Accepting New Patients)	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Pennsylvania	5,740	1,723	30%	1,859	32%	5,643	98%	5,693	99%
Rural counties	1,085	315	29%	361	33%	1,055	97%	1,077	99%
Urban counties	4,655	1,408	30%	1,498	32%	4,588	99%	4,616	99%
Adams*	27	-	-	6	22%	27	100%	27	100%
Allegheny	785	263	34%	338	43%	772	98%	778	99%
Armstrong*	18	-	-	9	50%	18	100%	18	100%
Beaver	62	15	24%	24	39%	62	100%	62	100%
Bedford*	10	-	-	-	-	10	100%	10	100%
Berks	148	41	28%	40	27%	145	98%	148	100%
Blair*	45	17	38%	18	40%	40	89%	44	98%
Bradford*	20	7	35%	6	30%	20	100%	20	100%
Bucks	370	61	16%	80	22%	366	99%	366	99%
Butler*	88	24	27%	36	41%	87	99%	88	100%
Cambria*	49	19	39%	20	41%	48	98%	49	100%
Cameron*	-	0	0%	0	0%	-	-	-	-
Carbon*	19	-	-	6	32%	18	95%	18	95%
Centre*	65	13	20%	12	18%	62	95%	65	100%
Chester	260	41	16%	46	18%	258	99%	260	100%
Clarion*	10	-	-	6	60%	10	100%	10	100%
Clearfield*	23	9	39%	9	39%	22	96%	22	96%
Clinton*	8	-	-	0	0%	8	100%	8	100%
Columbia*	16	6	38%	-	-	15	94%	16	100%
Crawford*	24	9	38%	9	38%	24	100%	24	100%
Cumberland	114	26	23%	35	31%	112	98%	112	98%
Dauphin	112	30	27%	31	28%	112	100%	112	100%
Delaware	286	58	20%	59	21%	286	100%	286	100%
Elk*	7	-	-	-	-	7	100%	7	100%
Erie	115	36	31%	40	35%	113	98%	113	98%
Fayette*	52	18	35%	23	44%	51	98%	52	100%
Forest*	-	-	-	-	-	-	-	-	-
Franklin*	44	13	30%	17	39%	43	98%	44	100%
Fulton*	4	-	-	0	0%	-	-	-	-
Greene*	8	-	-	-	-	7	88%	7	88%
Huntingdon*	11	-	-	-	-	10	91%	10	91%
Indiana*	21	7	33%	10	48%	21	100%	21	100%
Jefferson*	13	8	62%	7	54%	13	100%	13	100%
Juniata*	3	-	-	-	-	-	-	-	-

APPENDIX 6: ACCEPTING NEW PATIENTS BY COUNTY OF PRIMARY PRACTICE AND TYPE OF COVERAGE ACCEPTED

Country	Total (Accenting	Medi	caid	Medi	care	Private Insurance		Uninsured	
County	(Accepting New Patients)	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Lackawanna	110	37	34%	30	27%	109	99%	109	99%
Lancaster	221	67	30%	69	31%	217	98%	220	100%
Lawrence*	32	10	31%	11	34%	32	100%	32	100%
Lebanon	48	16	33%	15	31%	45	94%	48	100%
Lehigh	195	58	30%	61	31%	193	99%	195	100%
Luzerne	135	44	33%	35	26%	132	98%	134	99%
Lycoming*	39	-	-	8	21%	37	95%	37	95%
McKean*	10	-	-	-	-	10	100%	10	100%
Mercer*	49	15	31%	16	33%	48	98%	49	100%
Mifflin*	12	-	-	-	-	12	100%	12	100%
Monroe*	50	12	24%	13	26%	49	98%	49	98%
Montgomery	531	106	20%	110	21%	520	98%	525	99%
Montour*	14	7	50%	6	43%	14	100%	14	100%
Northampton	120	31	26%	36	30%	119	99%	119	99%
Northumberland*	24	6	25%	7	29%	22	92%	24	100%
Perry*	11	-	-	-	-	9	82%	11	100%
Philadelphia	748	395	53%	344	46%	733	98%	734	98%
Pike*	11	0	0%	-	-	11	100%	11	100%
Potter*	-	-	-	-	-	-	-	-	-
Schuylkill*	37	7	19%	8	22%	35	95%	37	100%
Snyder*	15	-	-	-	-	14	93%	15	100%
Somerset*	18	10	56%	7	39%	18	100%	18	100%
Sullivan*	-	0	0%	0	0%	-	-	-	-
Susquehanna*	6	-	-	-	-	6	100%	6	100%
Tioga*	13	-	-	-	-	11	85%	13	100%
Union*	11	-	-	-	-	11	100%	11	100%
Venango*	15	-	-	-	-	15	100%	15	100%
Warren*	9	-	-	-	-	9	100%	9	100%
Washington*	91	21	23%	35	38%	91	100%	91	100%
Wayne*	21	8	38%	-	-	21	100%	21	100%
Westmoreland	150	49	33%	70	47%	149	99%	150	100%
Wyoming*	9	-	-	-	-	9	100%	9	100%
York	145	34	23%	35	24%	145	100%	145	100%

APPENDIX 6: ACCEPTING NEW PATIENTS BY COUNTY OF PRIMARY PRACTICE AND TYPE OF COVERAGE ACCEPTED, CONTINUED

* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data.

Numbers less than six are withheld for privacy purposes and are not displayed in the county results, although they are included in the totals.

Measure	2005	2007	2009	2011	2013	2015
Gender						
Male	83%	82%	81%	79%	77%	75%
Female	17%	18%	19%	21%	23%	25%
Race						
White	90%	89%	88%	86%	85%	84%
Black	2%	2%	2%	2%	2%	2%
Asian	5%	6%	7%	8%	9%	11%
Other	2%	2%	2%	3%	3%	2%
Native Hawaiian/Pacific Islander	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
American Indian/Alaska Native	0%	0%	< 1%	< 1%	< 1%	< 1%
Ethnicity						
Hispanic	1%	1%	2%	1%	2%	2%
Age						
Average age	50.3	51.3	51.6	51.9	52.4	52.5
20-34	9%	8%	9%	11%	11%	12%
35-49	38%	34%	31%	29%	27%	27%
50-64	43%	46%	47%	46%	44%	42%
65+	10%	12%	12%	14%	17%	19%
Urban/rural county of practice^						
Urban	79%	80%	79%	81%	80%	81%
Rural	21%	20%	21%	19%	20%	19%
Majority of practice time spent performing	g					
General dentistry	78%	79%	77%	76%	77%	77%
Pediatric dentistry	3%	2%	3%	3%	3%	4%
Geriatric dentistry	< 1%	< 1%	1%	1%	1%	1%
Endodontics	3%	3%	3%	3%	3%	3%
Oral surgery	4%	4%	4%	5%	5%	5%
Orthodontics	5%	6%	6%	6%	6%	6%
Prosthodontics	2%	2%	2%	2%	2%	2%
Periodontics	-	-	-	-	3%	3%
Primary employment situation						
Direct patient care	90%	90%	90%	91%	97%	95%
Administrative	1%	1%	1%	1%	< 1%	1%
Education	3%	3%	5%	4%	2%	4%
Research	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Other non-patient care	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%

APPENDIX 7: COMPARISON OF RESPONSES TO THE PENNSYLVANIA SURVEY OF DENTISTS, 2005 - 2015*

APPENDIX 7: COMPARISON OF RESPONSES TO THE PENNSYLVANIA SURVEY OF DENTISTS 2005 - 2015,* CONTINUED

Measure	2005	2007	2009	2011	2013	2015
How long do you anticipate practicing dentistry?						
0-5 years	14%	14%	13%	18%	22%	24%
6-10 years	21%	21%	23%	22%	20%	22%
11-15 years	23%	23%	23%	21%	19%	17%
16+ years	42%	42%	41%	40%	39%	39%
How long do you anticipate practicing dentistry in Pa.?**						
0-5 years	17%	17%	16%	22%	24%	27%
6-10 years	22%	23%	24%	23%	21%	22%
11-15 years	23%	24%	23%	21%	19%	17%
16+ years	39%	37%	37%	35%	35%	35%

* Prior to 2009, respondents who provided direct patient care in Pennsylvania were those who reported being employed in direct patient care in Pennsylvania. Beginning in 2009, respondents who provided direct patient care in Pennsylvania were those who reported being employed in health care and provided direct patient care in Pennsylvania.

^ Urban and rural counties were defined by Center for Rural Pennsylvania's definition and U.S. Census population estimates from the survey year, except for 2011, which used 2010 U.S. Census population information.

Prior to 2013, the primary employment section included all survey respondents. Beginning in 2013, the primary employment section included only respondents who reported being employed in dentistry.

** Prior to 2013, respondents were asked "How long do you anticipate you will continue practicing dentistry in Pennsylvania?" Beginning in 2013, respondents were asked "How long do you anticipate practicing direct patient care as a dentist in Pennsylvania?"

Note: Percentages may not equal 100% due to rounding.

APPENDIX 8: 2015 DENTIST SURVEY



Commonwealth of Pennsylvania Department of Health 2015 Survey of Dentists License #: D *Required to avoid duplication *Anonymous & aggregate reporting only

IF YOU HAVE ALREADY SUBMITTED YOUR RENEWAL SURVEY ONLINE DO NOT MAIL THIS SURVEY

The Department of Health, with the support of the Department of State, requests that you complete this survey to assist in understanding and describing the dentist workforce. Strict controls are placed upon information when shared for the production of statistical reports and analysis. This information, when released to the public, will be in aggregate form only. To view past dentist workforce reports, visit <u>www.health.state.pa.us/workforce</u>. Thank you for your cooperation!

1. Year of Birth 2. Sex Male Female 3. Hispanic or Latino Origin Yes No
4. Race (check one) American Indian/Alaska Native Asian Black/African American Native Hawaiian/Other Pacific Islander White/Caucasian Other
5. State of Residence (<i>state abbreviation</i>)
6. In which state did you graduate from dental school? (state abbreviation) Image: Constraint of the school of
7. In which state were you first licensed as a dentist? (<i>state abbreviation</i>)
7a. In what year was this first license issued?
8. Have you completed a postdoctoral certificate program in general dentistry?
9. Are you board certified from the American Board of Dental Public Health Yes No 9a. Are you board certified from the American Board of Endodontics Yes No 9b. Are you board certified from the American Board of Oral and Maxillofacial Pathology Yes No 9c. Are you board certified from the American Board of Oral and Maxillofacial Radiology Yes No 9d. Are you board certified from the American Board of Oral and Maxillofacial Surgery Yes No 9d. Are you board certified from the American Board of Orthodontics Yes No 9e. Are you board certified from the American Board of Orthodontics Yes No 9f. Are you board certified from the American Board of Periodontology Yes No 9g. Are you board certified from the American Board of Periodontology Yes No 9g. Are you board certified from the American Board of Prosthodontics Yes No 9h. Are you board certified from the American Board of Prosthodontics Yes No 9h. Are you board certified from the American Board of Prosthodontics Yes No 9h. Are you board certified from the American Board of Prosthodontics Yes No 9h. Are you board certified from the American Board of Prosthodontics Yes No
11. In the fast year, did you volunteer your services (unpaid) as a dentist in Pennsylvania? Yes No >> if 'No', skip to question 12 11a. In which location did you provide most of these unpaid services as a dentist in Pennsylvania? (check one) Dental school clinic Private office practice Dental van School (K-12) Federally Qualified Health Center (FQHC) or health center
12. Select the employment status that most closely resembles your current employment status? (check one)
13. Select the employment situation that most closely resembles your primary employment situation. (check one) Administrative Direct patient care Education Not employed as a dentist Other non-patient care Research
13a. If not in direct patient care, do you plan to return to direct patient care in the next 5 years? 🗌 Yes 🗌 No 🗌 N/A
 14. Indicate the approximate number of hours you spent providing <u>direct patient care each week in Pennsylvania</u> during the last year (including volunteer hours). Note: For the purpose of this report, direct patient care includes the amount of time a dentist spends directly with patients in a dental practice setting or patient-specific office work. This would also include "on call" hours if the dentist is required to remain in a medical/dental practice setting. Zero 1-10 hours 11-19 hours 20-30 hours 31-40 hours More than 40 hours
If your answer to question 14 was "zero", do not provide direct patient care in Pennsylvania, END survey here.
Page 1 of 3

APPENDIX 8: 2015 DENTIST SURVEY - Continued

			License #: D
15. Indicate the category that (check one)	most closely represents the spe	ecialty in which the majority of	your dental practice time is spent.
Endodontics Orthodontics	General Dentistry Pediatric Dentistry	Geriatric Dentistry	Oral SurgeryProsthodontics
15a. In which state are yo	ou primarily practicing this spec	cialty? (state abbreviation)	Non-US (check)
15b. In which county are	you primarily practicing this sp	pecialty? (codes on page 3)	
	lentistry for patients with severation of the se		ndicaps using general anesthesia or
Do you provide general deep sedation in the foll 16a. Ambulatory surgice 16b. Hospital 16c. Office 16d. Other	owing settings?	re developmental or physical h	andicaps using general anesthesia or
17. What is the youngest age 1 year 2 year	e that you regularly see children ars 3 years 4		r Do not see children
Clinic or center Dental school Industry/business (i.	nost closely represents where th e., industrial, retail site) r community setting using porta	Private o School h Other:	nt care hours are spent. (<i>check one</i>) ffice practice (excluding retail site) ealth (K-12/college/university)
	majority of your primary praction nership (full/part owner) 1 (full/part owner)		cility 🗌 Other:
20. Do you accept the follow 20a. Medicaid 20a.1. If "No", wh Credent 20b. Medicare 20c. Private insurance	$\Box Yes \Box No$ hy not? (check one)	nt 🗌 Other:	
21. Does your practice subm	it claims to insurance companie	s on behalf of patients? 🗌 Yes	s 🗌 No
22. Are you currently accepting	ing new patients? 🗌 Yes 🗌] No >> if 'No', skip to q	uestion 23
Do you accept new patie 22a. Medicaid 22b. Medicare 22c. Private insurance 22d. Uninsured	ents with the following coverag Yes No Yes No Yes No Yes No Yes No	e?	
	e you able to communicate with ☐ No >> <i>If 'No', skip to qu</i>		nan English without using an
23a. In which languages, (check all that apply)	other than English, did you cor)	nmunicate with patients without	at using an interpreter?
Arabic PA Dutch Vietnamese	Chinese French Polish Russian Other	German [Sign Language]	☐ Hindi ☐ Italian] Spanish ☐ Urdu
		Page 2 of 3	

APPENDIX 8: 2015 DENTIST SURVEY - Continued

License #: D_____

How satisfied have you b Uery Satisfied	een with your denta	al career in the last 12	months?	
low satisfied are you with	h your dental caree Satisfied	r <u>overall</u> ?	Very Dissatisfied	
Vhat is the greatest source Decision making auto Patient relationships Other:	onomy P			 Intellectual challenge Staff relationships
Vhat is the greatest source Availability of leisure Patient relationships Time spent with patie	e time D		omy Financial rea	sons – salary/income/benefits ships
low long have you practic Less than 3 years			n 11 years 🗌 11 to less t	han 16 years 🗌 16+ years
 low much longer do you Less than 3 years		e _;	n 11 years 🗌 11 to less t	han 16 years 🔲 16+ years
			s a dentist in Pennsylvania? n 11 years 🛛 11 to less t	han 16 years 🔲 16+ years
you plan to leave direct Change careers Financial reasons – sa Retirement Other:	alary/income/benef	Complete	e further training demands	ary reason below (<i>check one</i>). Family reasons Practice demands Not applicable

Thank you!

If you are interested in learning more about emergency disaster response effort volunteer opportunities in Pennsylvania, please access <u>www.serv.pa.gov</u> for more information.

	Pennsylvania County Codes									
01=Adams	11=Cambria	21=Cumberland	31=Huntingdon	41=Lycoming	51=Philadelphia	61=Venango				
02=Allegheny	12=Cameron	22=Dauphin	32=Indiana	42=McKean	52=Pike	62=Warren				
03=Armstrong	13=Carbon	23=Delaware	33=Jefferson	43=Mercer	53=Potter	63=Washington				
04=Beaver	14=Centre	24=Elk	34=Juniata	44=Mifflin	54=Schuylkill	64=Wayne				
05=Bedford	15=Chester	25=Erie	35=Lackawanna	45=Monroe	55=Snyder	65=Westmoreland				
06=Berks	16=Clarion	26=Fayette	36=Lancaster	46=Montgomery	56=Somerset	66=Wyoming				
07=Blair	17=Clearfield	27=Forest	37=Lawrence	47=Montour	57=Sullivan	67=York				
08=Bradford	18=Clinton	28=Franklin	38=Lebanon	48=Northampton	58=Susquehanna					
09=Bucks	19=Columbia	29=Fulton	39=Lehigh	49=Northumberland	59=Tioga					
10=Butler	20=Crawford	30=Greene	40=Luzerne	50=Perry	60=Union	00=Not in PA				

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RESPONDENTS EMPLOYED IN DENTAL HYGIENE PROVIDING DIRECT PATIENT CARE IN PENNSYLVANIA, 2015 APPENDIX 9: DENTAL HYGIENISTS BY COUNTY OF PRIMARY JOB

County	Total	Percent
Pennsylvania	5,935	100.0%
Rural counties	1,337	23%
Urban counties	4,598	77%
Adams*	39	1%
Allegheny	650	11%
Armstrong*	21	< 1%
Beaver	61	1%
Bedford*	22	< 1%
Berks	185	3%
Blair*	56	1%
Bradford*	21	< 1%
Bucks	341	6%
Butler*	105	2%
Cambria*	44	1%
Cameron*	0	0%
Carbon*	24	< 1%
Centre*	88	2%
Chester	264	4%
Clarion*	12	< 1%
Clearfield*	29	1%
Clinton*	21	< 1%
Columbia*	28	1%
Crawford*	37	1%
Cumberland	170	3%
Dauphin	162	3%
Delaware	230	4%
Elk*	13	< 1%
Erie	146	3%
Fayette*	53	1%
Forest*	0	0%
Franklin*	49	1%
Fulton*	-	-
Greene*	15	< 1%
Huntingdon*	11	< 1%
Indiana*	25	< 1%

County	Total	Percent
Jefferson*	16	< 1%
Juniata*	7	< 1%
Lackawanna	128	2%
Lancaster	329	6%
Lawrence	28	1%
Lebanon	55	1%
Lehigh	203	3%
Luzerne	192	3%
Lycoming	62	1%
McKean	11	< 1%
Mercer	44	1%
Mifflin	20	< 1%
Monroe	64	1%
Montgomery	559	9%
Montour	12	< 1%
Northampton	163	3%
Northumberland	37	1%
Perry	10	< 1%
Philadelphia	381	6%
Pike	16	< 1%
Potter	7	< 1%
Schuylkill	50	1%
Snyder	17	< 1%
Somerset	23	< 1%
Sullivan	-	-
Susquehanna	13	< 1%
Tioga	10	< 1%
Union	23	< 1%
Venango	13	< 1%
Warren	18	< 1%
Washington	90	2%
Wayne	22	< 1%
Westmoreland	185	3%
Wyoming	7	< 1%
York	194	3%

* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data. Numbers less than six are withheld for privacy purposes and are not displayed in the county results, although they are included in the totals.

RESPONDENTS EMPLOYED IN DENTAL HYGIENE PROVIDING DIRECT PATIENT CARE IN PENNSYLVANIA, 2015 APPENDIX 10: DENTAL HYGIENIST AGE AND AVERAGE AGE BY COUNTY OF PRIMARY JOB

O a sure for	Tatal	18-	-34	35-	49	50-64		65+		Average
County	Total	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Age
Pennsylvania	5,935	1,547	26%	2,275	38%	1,937	33%	176	3%	44.0
Rural counties	1,337	385	29%	511	38%	416	31%	25	2%	43.2
Urban counties	4,598	1,162	25%	1,764	38%	1,521	33%	151	3%	44.3
Adams*	39	10	26%	13	33%	16	41%	0	0%	4.5
Allegheny	650	194	30%	214	33%	213	33%	29	5%	43.6
Armstrong*	21	-	-	9	43%	9	43%	-	-	49.4
Beaver	61	16	26%	18	30%	23	38%	-	-	45.6
Bedford*	22	6	27%	8	36%	8	36%	0	0%	43.7
Berks	185	46	25%	69	37%	67	36%	-	-	44.6
Blair*	56	17	30%	22	39%	17	30%	0	0%	42.1
Bradford*	21	-	-	6	29%	9	43%	-	-	49.1
Bucks	341	74	22%	135	40%	120	35%	12	4%	45.3
Butler*	105	30	29%	50	48%	24	23%	-	-	40.9
Cambria*	44	16	36%	15	34%	12	27%	-	-	42.4
Cameron*	0	0	0%	0	0%	0	0%	0	0%	-
Carbon*	24	-	-	8	33%	11	46%	0	0%	46.5
Centre*	88	31	35%	30	34%	25	28%	-	-	41.5
Chester	264	67	25%	91	35%	98	37%	8	3%	44.9
Clarion*	12	-	-	-	-	-	-	0	0%	39.7
Clearfield*	29	9	31%	12	41%	6	21%	-	-	43.3
Clinton*	21	8	38%	-	-	8	38%	-	-	41.5
Columbia*	28	-	-	16	57%	7	25%	0	0.0%	43.0
Crawford*	37	11	30%	14	38%	11	30%	-	-	43.4
Cumberland	170	33	19%	69	41%	63	37%	-	-	45.4
Dauphin	162	48	30%	55	34%	53	33%	6	4%	43.6
Delaware	230	53	23%	91	40%	69	30%	17	7%	45.1
Elk*	13	6	46%	-	-	-	-	-	-	39.8
Erie	146	48	33%	56	38%	40	27%	-	-	41.7
Fayette*	53	13	25%	17	32%	23	43%	0	0%	45.2
Forest*	0	0	0%	0	0%	0	0%	0	0%	-
Franklin*	49	12	25%	23	47%	12	25%	-	-	43.3
Fulton*	-	-	-	-	-	-	-	0	0%	45.0
Greene*	15	6	40%	-	-	6	40%	0	0%	40.9
Huntingdon*	11	-	-	-	-	-	-	0	0%	45.5
Indiana*	25	9	36%	11	44%	-	-	-	-	40.6
Jefferson*	16	7	44%	6	38%	-	-	0	0%	38.9
Juniata*	7	-	-	-	-	-	-	0	0%	49.9

RESPONDENTS EMPLOYED IN DENTAL HYGIENE PROVIDING DIRECT PATIENT CARE IN PENNSYLVANIA, 2015 APPENDIX 10: DENTAL HYGIENIST AGE AND AVERAGE AGE BY COUNTY OF PRIMARY JOB, CONTINUED

		18-34		35-	35-49		50-64		65+	
County	Total	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Average Age
Lackawanna	128	34	27%	45	35%	48	38%	-	-	44.0
Lancaster	329	105	32%	122	37%	94	29%	8	2%	42.2
Lawrence*	28	6	21%	12	43%	10	36%	0	0%	44.0
Lebanon	55	18	33%	25	46%	9	16%	-	-	42.4
Lehigh	203	40	20%	92	45%	67	33%	-	-	45.0
Luzerne	192	41	21%	96	50%	53	28%	-	-	43.4
Lycoming*	62	18	29%	22	36%	21	34%	-	-	43.9
McKean*	11	6	55%	-	-	-	-	0	0%	40.4
Mercer*	44	13	30%	17	38.6%	14	32%	0	0%	42.1
Mifflin*	20	6	30%	9	45.0%	-	-	-	-	42.9
Monroe*	64	19	30%	25	39.1%	18	28%	-	-	42.7
Montgomery	559	114	20%	208	37.2%	212	38%	25	5%	46.4
Montour*	12	-	-	-	-	-	-	0	0%	41.6
Northampton	163	33	20%	53	32.5%	73	45%	-	-	46.5
Northumberland*	37	12	32%	10	27.0%	15	41%	0	0%	44.0
Perry*	10	-	-	-	-	6	60%	0	0%	48.4
Philadelphia	381	117	31%	168	44.1%	90	24%	6	2%	41.6
Pike*	16	-	-	7	43.8%	7	44%	0	0%	49.3
Potter*	7	-	-	-	-	-	-	0	0%	40.6
Schuylkill*	50	14	28%	22	44.0%	12	24%	-	-	42.6
Snyder*	17	-	-	9	52.9%	-	-	0	0%	42.7
Somerset*	23	-	-	11	47.8%	10	44%	-	-	49.1
Sullivan*	-	-	-	0	0%	0	0%	0	0%	33.0
Susquehanna*	13	-	-	-	-	-	-	-	-	41.5
Tioga*	10	-	-	-	-	-	-	0	0%	38.2
Union*	23	-	-	12	52.2%	6	26%	-	-	44.9
Venango*	13	-	-	6	46.2%	-	-	0	0%	43.5
Warren*	18	-	-	7	38.9%	6	33%	0	0%	45.1
Washington*	90	29	32%	29	32.2%	31	34%	-	-	43.0
Wayne*	22	7	32%	9	40.9%	6	27%	0	0%	41.8
Westmoreland	185	46	25%	82	44.3%	52	28%	-	-	43.3
Wyoming*	7	-	-	-	-	-	-	0	0%	44.0
York	194	35	18%	75	38.7%	77	40%	7	4%	46.7

* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data.

Numbers less than six are withheld for privacy purposes and are not displayed in the county results, although they are included in the total Pennsylvania numbers and total rural/urban numbers.

RESPONDENTS EMPLOYED IN DENTAL HYGIENE PROVIDING DIRECT PATIENT CARE IN PENNSYLVANIA, 2015 APPENDIX 11: YEARS ANTICIPATED REMAINING IN DENTAL HYGIENE IN PENNSYLVANIA BY COUNTY OF PRIMARY JOB

County	Total	Less thar	n 6 years	6 to less than 11 years		11 to less th	nan 16 years	16+ years		
County	Iotai	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Pennsylvania	5,935	1043	18%	1,269	21%	1,354	23%	2,269	38%	
Rural counties	1,337	206	15%	301	23%	296	22%	534	40%	
Urban counties	4,598	837	18%	968	21%	1,058	23%	1,735	38%	
Adams*	39	-	-	6	15%	11	28%	18	46%	
Allegheny	650	159	24%	125	19%	137	21%	229	35%	
Armstrong*	21	-	-	-	-	9	43%	-	-	
Beaver	61	19	31%	15	25%	7	11%	20	33%	
Bedford*	22	-	-	-	-	7	32%	8	36%	
Berks	185	24	13%	38	21%	54	29%	69	37%	
Blair*	56	7	13%	11	20%	11	20%	27	48%	
Bradford*	21	7	33%	-	-	-	-	-	-	
Bucks	341	53	16%	81	24%	72	21%	135	40%	
Butler*	105	14	13%	19	18%	23	22%	49	47%	
Cambria*	44	7	16%	9	20%	-	-	23	52%	
Cameron*	-	-	-	-	-	-	-	-	-	
Carbon*	24	-	-	7	29%	6	25%	9	38%	
Centre*	88	11	13%	24	27%	20	23%	33	38%	
Chester	264	36	14%	70	27%	65	25%	93	35%	
Clarion*	12	0	0%	-	-	-	-	6	50%	
Clearfield*	29	-	-	-	-	8	28%	15	52%	
Clinton*	21	-	-	-	-	-	-	9	43%	
Columbia*	28	-	-	7	25%	8	29%	9	32%	
Crawford*	37	7	19%	7	19%	-	-	18	49%	
Cumberland	170	38	22%	46	27%	32	19%	54	32%	
Dauphin	162	28	17%	35	22%	49	30%	50	31%	
Delaware	230	37	16%	50	22%	62	27%	81	35%	
Elk*	13	-	-	-	-	-	-	8	62%	
Erie	146	27	18%	22	15%	30	21%	67	46%	
Fayette*	53	10	19%	19	36%	12	23%	12	23%	
Forest*	-	-	-	-	-	-	-	-	-	
Franklin*	49	-	6%	15	31%	13	27%	18	37%	
Fulton*	-	0	0%	-	-	0	0%	-	-	
Greene*	15	-	-	-	-	-	-	-	-	
Huntingdon*	11	-	-	-	-	-	-	-	-	
Indiana*	25	7	28%	-	-	-	-	9	36%	
Jefferson*	16	-	-	-	-	-	-	7	44%	
Juniata*	7	-	-	-	-	-	-	-	-	

RESPONDENTS EMPLOYED IN DENTAL HYGIENE PROVIDING DIRECT PATIENT CARE IN PENNSYLVANIA, 2015 APPENDIX 11: YEARS ANTICIPATED REMAINING IN DENTAL HYGIENE IN PENNSYLVANIA BY COUNTY OF PRIMARY JOB, CONTINUED

0	Tatal	Less than 6 years		6 to less than 11 years		11 to less th	nan 16 years	16+ Years		
County	Total	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Lackawanna	128	21	16%	31	24%	30	23%	46	36%	
Lancaster	329	51	16%	65	20%	78	24%	135	41%	
Lawrence*	28	7	25%	6	21%	-	-	12	43%	
Lebanon	55	10	18%	7	13%	13	24%	25	45%	
Lehigh	203	34	17%	42	21%	48	24%	79	39%	
Luzerne	192	25	13%	38	20%	46	24%	83	43%	
Lycoming*	62	13	21%	14	23%	13	21%	22	35%	
McKean*	11	-	-	-	-	-	-	-	-	
Mercer*	44	8	18%	7	16%	9	20%	20	45%	
Mifflin*	20	-	-	6	30%	-	-	11	55%	
Monroe*	64	9	14%	18	28%	19	30%	18	28%	
Montgomery	559	104	19%	115	21%	136	24%	204	36%	
Montour*	12	0	0%	-	-	-	-	6	50%	
Northampton	163	32	20%	43	26%	27	17%	61	37%	
Northumberland*	37	9	24%	8	22%	7	19%	13	35%	
Perry*	10	-	-	-	-	-	-	-	-	
Philadelphia	381	61	16%	79	21%	73	19%	168	44%	
Pike*	16	-	-	-	-	-	-	7	44%	
Potter*	7	-	-		0%	-	-	-	-	
Schuylkill*	50	7	14%	-	-	17	34%	21	42%	
Snyder*	17	-	-	9	53%	-	-	-	-	
Somerset*	23	-	-	8	35%	-	-	7	30%	
Sullivan*	-	-	-		0%	0	0%	-	-	
Susquehanna*	13	-	-	-	-	-	-	-	-	
Tioga*	10	-	-	-	-	-	-	6	60%	
Union*	23	-	-	7	30%	-	-	10	43%	
Venango*	13	-	-	-	-	-	-	-	-	
Warren*	18	-	-	-	-	-	-	8	44%	
Washington*	90	17	19%	19	21%	16	18%	38	42%	
Wayne*	22	-	-	-	-	8	36%	9	41%	
Westmoreland	185	35	19%	31	17%	53	29%	66	36%	
Wyoming*	7	0	0%	-	-	-	-	-	-	
York	194	43	22%	35	18%	46	24%	70	36%	

* Rural counties were identified using the Center for Rural Pennsylvania's definition and 2010 Census data.

Numbers less than six are withheld for privacy purposes and are not displayed in the county results, although they are included in the total Pennsylvania numbers and total rural/urban numbers.

RESPONDENTS EMPLOYED IN DENTAL HYGIENE PROVIDING DIRECT PATIENT CARE IN PENNSYLVANIA APPENDIX 12: COMPARISON OF RESPONSES TO THE PENNSYLVANIA SURVEY OF DENTAL HYGIENISTS, 2005-2015*

Measure	2005	2007	2009	2011	2013	2015
Gender						
Male	1%	1%	1%	1%	1%	1%
Female	99%	99%	99%	99%	99%	99%
Race			I.		I	
White	97%	97%	97%	96%	96%	96%
Black/African American	1%	1%	1%	1%	1%	1%
Asian	< 1%	1%	1%	1%	1%	1%
Other	1%	1%	1%	1%	1%	1%
Native Hawaiian/Pacific Islander	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
American Indian/Alaska Native	< 1%	< 1%	1%	< 1%	< 1%	< 1%
Ethnicity	•		•			
Hispanic	1%	1%	1%	1%	1%	2%
Age			I.		I	
Average age	40.8	41.4	42.3	43.2	43.8	44.0
18-34	29%	28%	27%	26%	26%	26%
35-49	52%	49%	46%	43%	39%	38%
50-64	18%	22%	26%	30%	33%	33%
65+	1%	1%	1%	2%	3%	3%
Urban/rural county of practice^						
Urban	77%	77%	77%	77%	77%	77%
Rural	23%	23%	23%	23%	23%	23%
Employment status [#]	•		•			
Employed in dental hygiene	90%	91%	90%	89%	89%	90%
Employed, not in dental hygiene	3%	3%	3%	4%	4%	4%
Unemployed, seeking dental hygiene employment	2%	2%	3%	4%	4%	3%
Unemployed, not seeking dental hygiene employment	4%	3%	3%	2%	2%	2%
Retired	1%	1%	1%	1%	1%	1%
Student	< 1%	< 1%	< 1%	1%	< 1%	
Unemployed, disabled					1%	1%
Primary employment situation (type of position)						
Direct patient care	89%	96%	93%	95%	97%	97%
Administration/management	1%	1%	2%	1%	1%	1%
Educator (includes in-service)	2%	2%	3%	2%	1%	1%
Research/consultant	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Other	< 1%	< 1%	2%	2%	< 1%	< 1%

RESPONDENTS EMPLOYED IN DENTAL HYGIENE PROVIDING DIRECT PATIENT CARE IN PENNSYLVANIA APPENDIX 12: COMPARISON OF RESPONSES TO THE PENNSYLVANIA SURVEY OF DENTAL HYGIENISTS, 2005-2015,* CONTINUED

Measure	2005	2007	2009	2011	2013	2015
How satisfied are you with dental hygiene as a career?						
Very dissatisfied	8%	9%	7%	< 1%	< 1%	1%
Dissatisfied	3%	3%	3%	4%	4%	4%
Satisfied	40%	39%	41%	39%	39%	42%
Very satisfied	49%	49%	50%	57%	56%	53%
How satisfied are you with dental hygiene as a job?						
Very dissatisfied	7%	8%	6%	1%	1%	1%
Dissatisfied	5%	5%	5%	4%	5%	5%
Satisfied	44%	44%	46%	45%	46%	47%
Very satisfied	45%	43%	44%	49%	48%	47%
How much longer do you plan to remain in dental hygiene?						
0-5 years	12%	11%	8%	11%	13%	18%
6-10 years	25%	25%	21%	21%	20%	21%
11-15 years	24%	25%	25%	23%	22%	23%
16+ years	40%	40%	46%	45%	44%	38%

* Prior to 2009, respondents who provided direct patient care in Pennsylvania were those who reported being employed in direct patient care in Pennsylvania. Beginning in 2009, respondents who provided direct patient care in Pennsylvania were those who reported being employed in health care and provided direct patient care in Pennsylvania.

^ Urban and rural counties were defined by Center for Rural Pennsylvania's definition and U.S. Census population estimates from the survey year, except for 2011, which used 2010 U.S. Census population information.

Prior to 2013, the primary employment section included all survey respondents. Beginning in 2013, the primary employment section included only respondents who reported being employed in dental hygiene.

Note: Percentages may not equal 100% due to rounding.

APPENDIX 13: 2015 DENTAL HYGIENIST SURVEY



Commonwealth of Pennsylvania Department of Health 2015 Survey of Dental Hygienists License #: DH______ *Required to avoid duplication *Anonymous & aggregate reporting only

IF YOU HAVE ALREADY SUBMITTED YOUR RENEWAL SURVEY ONLINE DO NOT MAIL THIS SURVEY

The Department of Health, with the support of the Department of State, requests that you complete this survey to assist in understanding and describing the dental hygienist workforce. Strict controls are placed upon information when shared for the production of statistical reports and analysis. This information, when released to the public, will be in aggregate form only. To view past dental hygienist workforce reports, visit <u>www.health.state.pa.us/workforce</u>. Thank you for your cooperation!

1. Year of Birth 2. Sex Male Female 3. Hispanic or Latino Origin Yes No
4. Race (check one) American Indian/Alaska Native Asian Black/African American Native Hawaiian/Other Pacific Islander White/Caucasian Other
5. State of Residence (<i>state abbreviation</i>) Non-US (<i>check</i>) 5a. County of Residence (<i>codes on page 3</i>)
6. In which state did you graduate from dental hygiene school? (<i>state abbreviation</i>) Image: Non-US (<i>check</i>) 6a. In what year did you obtain this degree? Image: Non-US (<i>check</i>)
7. What is your highest level of dental hygiene education completed? (check one) Certificate Associate Bachelor Master
8. If applicable, what is your highest level of <u>non-dental hygiene</u> education completed? (<i>check one</i>) Associate Bachelor Master Doctoral Not applicable
9. Are you currently enrolled in any of the following higher education programs? (<i>check one</i>) Dental hygiene associate degree Dental hygiene bachelor degree Dental hygiene master degree Not enrolled
10. Are you certified in Pennsylvania as an expanded function dental assistant? 10a. Do you perform as an expanded function dental assistant in your primary job? Yes No
 11. Do you hold a Pennsylvania school hygienist certificate? Yes No 11a. Do you perform as a Pennsylvania school hygienist in your primary job? Yes No
12. Do you hold a Pennsylvania dental hygiene local anesthesia permit? Yes No 12a. Do you administer local anesthesia as a dental hygienist in your primary job? Yes No
 13. Are you licensed as a public health dental hygiene practitioner (PHDHP)? ☐ Yes ☐ No >> if 'No', skip to question 14 13a. Do you perform as a PHDHP in your primary job? ☐ Yes ☐ No >> if 'No', skip to question 15 13b. In which county do you primarily practice as a PHDHP? [(codes on page 3) 13c. What type of practice site do you primarily practice at as a PHDHP? (check one) ☐ Correctional facility ☐ Domiciliary care facility ☐ Federally Qualified Health Center (FQHC) ☐ Health care facility ☐ Older adult daily living center ☐ Public/private federal/state institution
14. Do you intend to apply for a PHDHP license? Yes No Already licensed as a PHDHP
15. In the last year, did you volunteer your services (unpaid) as a dental hygienist in Pennsylvania? >> <i>if 'No', skip to question 16</i>
15a. In which location did you provide most of these unpaid services as a dental hygienist in Pennsylvania? (check one) Dental school clinic Private office practice Dental van School (K-12) Federally Qualified Health Center (FQHC) or health center Other:
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APPENDIX 13: 2015 DENTAL HYGIENIST SURVEY - CONTINUED

License #: DH
 16. Select the employment status that most closely resembles your current employment status? (check one) Employed in dental hygiene Unemployed, disabled Unemployed, not seeking work in dental hygiene Retired Unemployed, seeking work in dental hygiene Student, leave of absence, or sabbatical If employed in dental hygiene continue to question 17. If employed not in dental hygiene, retired, student, leave of absence, sabbatical or unemployed, you have finished the survey. Thank you!!
17. What type of position do you hold in your primary job? (check one) Administration/management Direct patient care Educator Other non-patient care Researcher/consultant Not employed as a dental hygienist
17a. If not in direct patient care, do you plan to return to direct patient care in the next 5 years? 🗌 Yes 🗌 No 🗌 N/A
 18. Indicate the approximate number of hours you spent providing <u>direct patient care each week in Pennsylvania</u> during the last year (including all positions and volunteer hours). Note: For the purpose of this report, direct patient care includes the amount of time a dental hygienist spends directly with patients in a dental practice setting and patient-specific office work. Zero 1-10 hours 11-19 hours 20-30 hours 31-40 hours More than 40 hours
If your answer to question 18 was "zero", do not provide direct patient care in Pennsylvania, END survey here.
19. In how many positions are you employed as a dental hygienist? 1 2 3 or more
20. Identify the setting that most closely represents your primary job. (check one) Clinic or center Retail/industry/business site Private practice partnership (excluding retail site) School health (K-12/college/university) Private practice solo (excluding retail site) Other: Mobile dental unit or community setting using portable dental equipment 20a. In which state is your primary job located? (state abbreviation) 20b. In which state is your primary ish located? (cade an page 2) Image: Clinic or canceleft
20b. In which county is your primary job located? (codes on page 3)
21. What is the youngest age that you regularly see children? (check one) □ 1 year □ 2 years □ 3 years □ 4 years □ 5 years and over □ Do not see children
 22. In the past 6 months, were you able to communicate with patients in a language other than English without using an interpreter? □ Yes □ No >> <i>If 'No', skip to question 23</i>
22a. In which languages, other than English, did you communicate with patients without using an interpreter? (<i>check all that apply</i>)
Arabic Chinese French German Hindi Italian PA Dutch Polish Russian Sign Language Spanish Urdu Vietnamese Other Other Sign Language Spanish Urdu
23. How satisfied are you with your current primary job? Very Satisfied Satisfied Dissatisfied Very Dissatisfied
24. How satisfied are you with dental hygiene as a career?
25. How long have you been a dental hygienist in Pennsylvania? ☐ Less than 3 years ☐ 3 to less than 6 years ☐ 6 to less than 11 years ☐ 11 to less than 16 years ☐ 16+ years

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APPENDIX 13: 2015 DENTAL HYGIENIST SURVEY - CONTINUED

License #: DH	_
26. How much longer do you plan to remain in dental hygiene? ☐ Less than 3 years ☐ 3 to less than 6 years ☐ 6 to less than 11 years ☐ 11 to less than 16 years ☐ 16+ years	
27. How much longer do you plan to remain in direct patient care as a dental hygienist in Pennsylvania? ☐ Less than 3 years ☐ 3 to less than 6 years ☐ 6 to less than 11 years ☐ 11 to less than 16 years ☐ 16+ years	
 28. If you plan to leave direct patient care in Pennsylvania in less than 6 years, indicate your <u>primary</u> reason below (<i>check one</i>). Change careers Financial reasons – salary/income/benefits Stress/burnout Complete further training Family reasons Retirement Other:	

Thank you!

If you are interested in learning more about emergency disaster response effort volunteer opportunities in Pennsylvania, please access <u>www.serv.pa.gov</u> for more information.

Pennsylvania County Codes										
01=Adams	11=Cambria	21=Cumberland	31=Huntingdon	41=Lycoming	51=Philadelphia	61=Venango				
02=Allegheny	12=Cameron	22=Dauphin	32=Indiana	42=McKean	52=Pike	62=Warren				
03=Armstrong	13=Carbon	23=Delaware	33=Jefferson	43=Mercer	53=Potter	63=Washington				
04=Beaver	14=Centre	24=Elk	34=Juniata	44=Mifflin	54=Schuylkill	64=Wayne				
05=Bedford	15=Chester	25=Erie	35=Lackawanna	45=Monroe	55=Snyder	65=Westmoreland				
06=Berks	16=Clarion	26=Fayette	36=Lancaster	46=Montgomery	56=Somerset	66=Wyoming				
07=Blair	17=Clearfield	27=Forest	37=Lawrence	47=Montour	57=Sullivan	67=York				
08=Bradford	18=Clinton	28=Franklin	38=Lebanon	48=Northampton	58=Susquehanna					
09=Bucks	19=Columbia	29=Fulton	39=Lehigh	49=Northumberland	59=Tioga					
10=Butler	20=Crawford	30=Greene	40=Luzerne	50=Perry	60=Union	00=Not in PA				

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Sources

¹American Dental Association, Commission on Dental Accreditation: Program Options & Descriptions, on the internet at <u>http://www.ada.org/en/coda/find-a-program/program-options-and-descriptions/</u> (last accessed July 14, 2014).