

2015-2016 Workforce Survey of Dental Hygienists

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Executive Summary

In day-to-day clinical practice, dentists typically work collaboratively with dental hygienists and dental assistants. Dental hygienists provide a number of services for patients, including assessing their oral health condition, taking and developing dental radiographs (x-rays), removing deposits from tooth surfaces, applying topical fluorides and dental sealants to the teeth, teaching patients proper oral hygiene techniques, and counseling patients about nutrition and its impact on oral health.

Similar to dentists, dental hygienists may work in private dental offices, clinics, or in publicly supported health access settings. Florida statutes authorize licensed dental hygienists to provide educational, preventive, and therapeutic dental services and related procedures. Some services may be provided without supervision of a dentist, while others require direct, indirect, or general supervision. A dental hygienist licensed in Florida may perform a number of remediable tasks in a *health access setting* without the physical presence, prior examination or authorization of a dentist. Such tasks include dental charting, recording of a patient's health history, application of topically-applied fluorides and dental sealants, and removal of calculus deposits, accretions and stains from tooth surfaces.¹ A *health access setting* is defined as: "…a program or an institution of the Department of Children and Family Services, the Department of Health, the Department of Juvenile Justice, a nonprofit community health center, a Head Start center, a federally qualified health center or look-alike as defined by federal law, a school-based prevention program, a clinic operated by an accredited college of dentistry, or an accredited dental hygiene program in this state…."²

Florida statute and administrative rules require renewal of dental hygienist licenses every two years, including the biennial period which ended on February 28, 2016. Since 2009, the Florida Department of Health (Department) has developed a workforce survey for dental hygienists. The fourth administration of this survey coincided with the licensure renewal deadline of February 28, 2016. All responses are self-reported. Over 89.2% of dental hygienists with an active Florida license responded to the 2015-2016 survey.

The importance of access to care and oral health as Department priority areas was first recognized as part of the state health assessment process in 2011. This process led to the Florida State Health Improvement Plan 2012-2015 (SHIP). It identified a strategy to assess current and future practitioner needs through re-licensure surveys of dental hygienists under the area of "Access to Care."³ A revision of the SHIP in March of 2014 identified as one of its objectives: *AC4.3.1: By December 31, 2015, ascertain the geographic distribution of practitioners and types of dental practices throughout Florida and provide an analysis of the re-licensure survey to oral health partners and stakeholders.⁴*

This report also will assist the Workforce Advisory Committee (Committee) in its efforts to provide evidence based recommendations to the State Surgeon General and the Department on matters concerning dental workforce needs. The Committee is composed of representatives from the Department's Public Health Dental Program, the Florida Dental Association and the Florida Dental Hygiene Association. The report identifies the supply of workforce professionals practicing in Florida and examines factors related to dental practice location and career plans. The report assists those in the oral health career industry and other decision makers to better prepare strategic efforts for enhancing the oral health care delivery system in Florida.

¹ Florida Statutes, Chapter 466.023, *Dental hygienists; scope and area of practice*.

² Florida Statutes, Chapter 466.003, *Definitions*.

³ Florida Department of Health. (2012). Florida State Health Improvement Plan 2012-2015.

⁴ Florida Department of Health. (2014). 2012-2015 SHIP Revision.

Key Findings

Key findings from this report include the following:

Demographics

- Of 14,464 dental hygienists who applied for licensure renewal, 13,451 (93.6%) dental hygienists were designated having "Active" license status, and a total of 12,003 (83.0%) dental hygienists responded to the workforce survey.
- Of the actively practicing dental hygienists who responded to the survey, 9,035 (75.3%) practice in Florida.
- Of 9,035 respondents actively practicing in Florida who reported their gender, 8,717 dental hygienists are females (96.5%) and 318 (3.5%) are males.
- The mean age of dental hygienist survey respondents is 44.8 years for females and 42.0 years for males.
- The largest age group for female and male dental hygienists respondents actively practicing in Florida is between 40 and 49 years of age, the percentages are 28.8% and 31.1%, respectively.
- The majority (70.8%) of dental hygienists actively practicing in Florida are White.

Professional Education

- The majority (74.9%) of dental hygienists actively practicing in Florida graduated from an in-state Florida dental hygiene program.
- The dental hygiene programs in Florida graduating the largest number of dental hygienists at the time of the survey were: Miami Dade College, St. Petersburg College and Palm Beach State College.

Practice Characteristics

- The majority (91.1%) of dental hygienists actively practicing in Florida report working in a general practice.
- Of the dental hygienist respondents actively practicing in Florida, 85.2% practice between 11 and 12 months of the year.
- Over half (54.5%) of respondents actively practicing in Florida report working between 31-40 hours per week.
- The majority (70.1%) of dental hygienist respondents actively practicing in Florida report working for one employer or in one practice setting only.
- A majority (73.5%) of dental hygienist respondents actively practicing in Florida report that they practice solely in the county in which they reside.

Productivity

- The majority (85.1%) of dental hygienist respondents actively practicing in Florida report that they were not seeking any additional employment at this time.
- Of those dental hygienists who reported seeking further employment, 40.8% are seeking an additional 5 to 8 hours a week; about 15.1% are seeking 17 or more additional work hours per week.
- The majority (60.7%) of dental hygienist respondents actively practicing in Florida report seeing an average of 26-50 patients per week.
- A total of 4,425 (49.0%) dental hygienist respondents actively practicing in Florida report no difficulty in finding employment as a dental hygienist.

• A total of 1,281 (14.2%) dental hygienists actively practicing in Florida report that they are not able to obtain full-time employment.

Retention and Attrition

- Overall, 1,025 dental hygienist respondents (11.9%) actively practicing in Florida report that they plan to end their practice of dental hygiene in Florida within the next five years.
- Of dental hygienist respondents actively practicing in Florida, 18.8% report performing volunteer services most frequently at a private office as part of an organized event or at school events.
- The percentage of respondents actively practicing in Florida who speak one or more languages other than English is higher among Hispanics/Latinos (91.3%) and Asian respondents (64.6%).
- The majority (77.6%) of survey respondents with active licenses practice in Florida and the remaining 22.4% do not practice in this state.
- Nearly 35.4% of dental hygienist respondents with an active license not practicing in Florida report that they practice in another state, while 8.3% indicate that they are unemployed and seeking employment related to dentistry.
- Of dental hygienist respondents with an active license not practicing in Florida, 80.0% stated that they plan to relocate to Florida sometime in the future.

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Introduction

Florida statute and administrative rules require renewal of dental licenses biennially by the end of February of even-numbered years. The most recent renewal period ended on February 28, 2016. The Department prepared and administered a workforce survey of dental hygienists to coincide with the license renewal process. (See Appendix A for accompanying survey). As part of their online renewal, dental hygienists were asked to voluntarily complete the survey. All responses are self-reported.

This report presents data from the 2015-2016 workforce survey of dental hygienists. The survey was designed to obtain information concerning Florida's dental workforce that would better inform health care policymakers and shape oral health care policy development. Analysis of responses is guided by those objectives. In order to address the dental workforce as a whole, it is recommended that the results of this report be considered alongside the 2015-2016 workforce survey results of dentists.

The survey consisted of questions soliciting responses regarding demographics, professional education, practice characteristics, productivity, and retention and attrition. The survey is designed to obtain an understanding of the changing landscape of the dental hygienist workforce. The survey is not designed to address population growth and maintenance of the current level of service and does not address portions of the population not currently served.

Licensure data, maintained by the Department's Division of Medical Quality Assurance, provided the data for this report. A more detailed statement of survey methods and data analysis is included in Appendix B. Any changes in dental practice status occurring between survey completion and the report reference date are not reflected in the data. Therefore, counts or estimates of dental hygienists actively practicing or not practicing in Florida are approximate with respect to the report's reference date. It should be noted that the number of responses for individual questions varied greatly since the workforce survey contained skip patterns and respondents may not have completed all of the questions. Thus, the sample size of true responses per question is provided for each figure in the report.

For the purposes of data analysis and reporting for this report, survey responses were restricted to those dental hygienists with an active license status, it does not include those with an inactive status which may include some retired dental hygienists. Most of the report was restricted to those who indicated that they are currently practicing within the state of Florida. The response rate for the 2015-2016 dental hygienist workforce survey among this population was 83.0%.

Findings

Licensed Dental Hygienists Practicing in Florida - Demographics

Of the 9,035 dental hygienists with active licenses practicing in Florida who responded to the 2015-2016 Florida Workforce Survey, the majority (55.7%) are 40-59 years of age and 34.4% are 20-39 years of age (Figure 1).





The mean age for respondents practicing in Florida is 44.8 years for females and 42.0 years for males. Females represent 96.5% of respondents, and the remaining 3.5% are males. The gender distribution of respondents practicing in Florida does not vary substantially across age groups. Females constitute the majority of practicing dental hygienists for all age groups when compared to male hygienists (Figure 2). For both males and females, the contribution of older hygienists to the workforce declines after 49 years of age.





Respondents practicing in Florida are predominantly White (70.8%) or Hispanic/Latino (20.2%). Black and Asian dental hygienists practicing in Florida comprise approximately 3.6% and 2.6%, respectively, of dental hygiene workforce respondents (Figure 3).



Figure 3. Race/Ethnicity of Dental Hygienists Practicing in Florida (n = 9,034), 2015-2016

As shown in Figure 4, the percentage of respondents practicing in Florida who speak one or more languages other than English is highest among Hispanics/Latinos (91.3%). Additional language proficiency also is high among Asian respondents (64.6%), but is relatively low among White (6.7%) and Native American (3.7%) respondents. Over one in five Black respondents speak one or more languages other than English.





Table 1 identifies the additional languages spoken by respondents with active licenses practicing in Florida who reported speaking a language in addition to English. The table provides the number and percentage of responses aggregated by language spoken and

race/ethnicity. The number and percent of responses exceeds that of respondents (except for "Native") because some respondents spoke more than one language other than English. For each race/ethnicity group, the most frequently spoken language is highlighted in yellow, and the second most is highlighted in gray (except for "Native" which is all in yellow). Spanish is the most frequently spoken non-English language for all race/ethnicity groups except Asians and Blacks. Tagalog (Philippine language) and other Asian languages are the most frequently spoken non-English languages among Asian respondents; Creole and French are the most frequently non-English languages cited among Black respondents.

LANGUAGE	ļ	SIAN	В	LACK	-	PANIC / TINO	N	IATIVE	0	THER	v	VHITE
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Arabic	0	0.00%	1	1.45%	2	0.12%	0	0.00%	6	9.23%	15	3.47%
Chinese (Mandarin or Cantonese)	8	5.23%	0	0.00%	1	0.06%	0	0.00%	0	0.00%	2	0.46%
Creole	0	0.00%	59*	85.51%*	3	0.18%	0	0.00%	6	9.23%	0	0.00%
French	0	0.00%	35**	50.72%**	20	1.20%	0	0.00%	8	12.31%	41	9.49%
German	0	0.00%	0	0.00%	7	0.42%	0	0.00%	1	1.54%	43	9.95%
Hebrew	0	0.00%	0	0.00%	1	0.06%	0	0.00%	0	0.00%	13	3.01%
Italian	0	0.00%	0	0.00%	11	0.66%	0	0.00%	2	3.08%	22	5.09%
Japanese	7	4.58%	0	0.00%	0	0.00%	0	0.00%	1	1.54%	1	0.23%
Korean	4	2.61%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	0.23%
Other African	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	3.08%	1	0.23%
Other Asian	35**	22.88%**	0	0.00%	0	0.00%	0	0.00%	3	4.62%	0	0.00%
Other European	0	0.00%	0	0.00%	2	0.12%	0	0.00%	3	4.62%	61	14.12%
Other (unspecified)	7	4.58%	2	2.90%	11	0.66%	0	0.00%	6	9.23%	24	5.56%
Other Middle Eastern	0	0.00%	0	0.00%	0	0.00%	0	0.00%	3	4.62%	7	1.62%
Polish	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	21	4.86%
Portuguese	1	0.65%	2	2.90%	39**	2.34%**	0	0.00%	20**	30.77%**	24	5.56%
Russian	1	0.65%	0	0.00%	2	0.12%	0	0.00%	0	0.00%	75**	17.36%**
Spanish	5	3.27%	11	15.94%	1654*	99.22%*	1*	100.00%*	33*	50.77%*	166*	38.43%*
Tagalog	77*	50.33%*	0	0.00%	1	0.06%	0	0.00%	0	0.00%	1	0.23%
Vietnamese	23	15.03%	0	0.00%	0	0.00%	0	0.00%	1	1.54%	0	0.00%
TOTAL Responses	168	109.80%	110	159.42%	1754	105.22&	1	100.00*	95	146.15%	518	119.91%
TOTAL Respondents	153	100.0%	69	100.0%	1667	100.0%	1	100.0%	65	100.0%	432	100.0%
*Yellow = Highe	est											

Table 1. Additional Languages Spoken by Dental Hygienists Practicing in Florida by
Race/Ethnicity (n = 2,414), 2015-2016

**Gray = Second Highest

Licensed Dental Hygienists Practicing in Florida – Professional Education

Most practicing dental hygienists indicate that they have received their dental hygiene training in Florida. Figure 5 portrays the type of dental hygiene program among survey respondents who practice in Florida. From the number of responses, 74.9% trained at a Florida dental hygiene school, 18.5% trained at an out-of-state program and 7.5% trained at a foreign-trained dental program.





Graduates of Miami-Dade College, St. Petersburg College and Palm Beach State College constituted the highest percentages of survey respondents (Figure 6). Following in percentage of survey respondents were graduates from Santa Fe College and Florida State College at Jacksonville, both located in North Florida.

Figure 6. Distribution of Dental Hygienists by Dental Hygiene School of Graduation in Florida (n = 6,771), 2015-2016



Figure 7 illustrates the regions of Florida and the location of the state's dental hygiene schools. As depicted, most of Florida's dental hygiene schools are located in the eastern and southern portions of the state; only three schools are located in the panhandle region. Dental hygiene

schools and locations have remained constant or experienced little change since the initial 2009-2010 Dental Hygienist Workforce Survey.





Licensed Dental Hygienists Practicing in Florida – Practice Characteristics

A majority of respondents (94.4%) who reported practicing in Florida work in a private office setting which consists of solo practice, group practice as a single specialty, or group practice as a multi-specialty. Five practice settings — academic institutions, community health centers, county health departments, federally qualified health centers, and other state government clinical settings — constitute "safety-net" practices for individuals who might otherwise lack access to dental care (data not shown). Almost 5% percent of dental hygienists who reported practicing in Florida work in "safety-net" practice settings. The remaining less than 1% represent dental hygienists at facilities such as correctional facilities, military facilities, and VA clinics.

A large majority (91.1%) of dental hygienists actively practicing in Florida report their primary practice as general, while 9.6% report their practice type as specialty. The remaining 1.4% reported as neither general or specialty practice. Figure 8 portrays the distribution of dental hygiene practice specialties among survey respondents who practice in Florida. Specialties with the three highest number of hygienists are periodontics, pediatric dentistry, and prosthodontics.





Over 85% of the respondents who practice in Florida worked between 11 and 12 months in the year prior to completing the survey (Figure 9).





Figure 10 illustrates the number of years respondents practiced in their current practice arrangement by practice type. The percentage of survey respondents who report having between two and five years of experience is the largest group across all practice settings. Among those practicing in private office settings (solo, group single specialty, or group multi-specialty practice) the percentage of respondents who have worked six or more years is slightly higher for those who work in solo office practices and single specialty group office practices than for those who work in multi-specialty group office settings. For dental hygienists working six or more years, the percentage for those practicing in private office settings is higher than in the non-office group.

The majority (70.1%) of dental hygienists actively practicing in Florida work for one employer or in one practice setting; 26.7% work for more than one employer or in more than one practice setting,





Of the percentage of dental hygienist respondents actively practicing in Florida, 85.1% of respondents reported that they are not seeking additional employment; the remainder are seeking additional employment. Of the survey respondents actively practicing in Florida who indicate they are seeking additional work hours, 40.8% are seeking 5 to 8 additional hours per week; 12.9% are seeking 9 to 12 hours per week. Approximately 15.2% are seeking 17 or more additional work hours per week (Figure 11).



Figure 11. Distribution of Additional Hours of Work per Week Sought by Dental Hygienists Practicing in Florida (n = 1,310), 2015-2016

As shown in Figure 12, dental hygienists who responded to the question on volunteer services and are working in a safety-net practice most typically perform volunteer work in either outside events such as school events (15.1%) and health fairs (16.4%) or within a safety-net clinic settings (18.4%). Dental hygienists who responded to the question and are employed in private practice settings report providing volunteer services most frequently at an organized event in a private office setting (9.0%) and school events (8.6%). It should be noted that of the dental hygienists who responded to this question in the workforce survey 32.1% responded that they did not provide any volunteer hygiene services, 31.5% for dental hygienists who practice in private office settings and 21.0% for dental hygienists in safety-net settings.





Figure 13 displays the difficulties respondents experience when searching for a dental hygienist position. Although 49.0% of dental hygienists respondents who actively practice in Florida report experiencing no difficulty in finding a position as a dental hygienist, dental hygienists experience difficulties that include inadequate benefits (21.5%) and salary (16.3%). 14.2% indicate that they cannot obtain full-time work (undefined) in the field. Other responses are excessive commuting distance (6.1%), unsatisfactory work environment (5.8%) and an unsuitable work schedule (5.7%). Only 2.8% of dental hygienists report they are unable to obtain part-time employment in their profession.



Figure 13. Difficulties Dental Hygienists Practicing in Florida Experience in Finding a Position as a Dental Hygienist (n = 9,035), 2015-2016

A majority (73.5%) of respondents with an active license working in Florida report always practicing in the county in which they reside. Over 16% of respondents report that they do not practice dental hygiene in their county of residence; and over 10% indicate that they practice in their county of residence less than a 100% of the time.

Licensed Dental Hygienists Practicing in Florida – Productivity

Figure 14 displays the distribution of respondents who actively practice in Florida by the number of hours they work in a given week. Approximately 54.5% of respondents work 31-40 hours weekly, while only 4.3% work between 41 and 50 hours. Approximately 40.8% practiced dental hygiene part-time (less than 31 hours per week), including 19.9% who worked 20 hours per week or less.



Figure 14. Distribution of Dental Hygienists Practicing in Florida by Hours of Practice per				
Week (n = 8,538), 2015-2016				

Less than 30% of dental hygienist respondents had under 26 encounters per week. The majority of respondents indicate that on average they have 26 or more patient encounters per week: 60.7% reported seeing an average of 26-50 patients per week, 6.1% reported seeing an average of 51-75 patients per week and 1.2% reported seeing 76 or more patients per week (Figure 15).





Licensed Dental Hygienists Practicing in Florida – Retention and Attrition

Figure 16 shows career plans of dental hygienist respondents actively practicing in Florida over the next five years by age group. Overall, 1,025 respondents (11.9%) report that they plan to end their practice of dental hygiene in Florida within the next five years. Across all age groups, except for those aged 70 years or older, a larger number of respondents (79.4%) do not plan to end or reduce their practice in Florida over the next five years, as compared with those who report that they plan to end or reduce their practice in the state (20.6%) during the same time period. The age groups with the largest number of respondents who report that they are planning to end their dental practice in Florida within five years are 50–59 years (n = 306) and 60-69 years (n = 335). Forty-two respondents 70 years of age or older (of 60 total) indicate that they either plan to end their practice in Florida or plan to reduce their practice hours within the next five years.





*Colored segments of the bar for age group \geq 70 years are not drawn to scale because the counts are small.

Figure 17 shows the number and percentage of respondents in Florida by dental practice type who report that they plan to retire within the next five years. For all practice types, a large majority of actively practicing dental hygienists indicate that they plan to continue practicing their profession. The practice types with the highest percentages of respondents planning to retire within five years are orthodontics and dentofacial orthopedics (12.0%) and oral and maxillofacial pathology (10.0%). The next two highest groups are oral and maxillofacial surgery (9.3%) and periodontics (9.0%).

Figure 17. Number and Percentage of Dental Hygienists Practicing in Florida Who Plan to Retire in the Next Five Years by Dental Practice Type (n = 765), (2013-2014)



Licensed Dental Hygienists Not Practicing in Florida

Percentages of respondents with an active Florida license who reported practicing in Florida or out-of-state indicate that although the majority (75.3%) of survey respondents with active licenses do practice in Florida, 9.1% do not practice in this state.

Differences between respondents who practice in Florida and those who do not are presented in Table 2. Almost 49% of respondents who do not practice in Florida reside in another state compared to 0.6% of respondents who practice in Florida. More than half (51.7%) of respondents who do not practice in Florida report holding an out-of-state license compared to 13.0% of respondents who practice in Florida. Nearly three-quarters of respondents (74.9%) who received their dental hygiene degree from a Florida school practice in the state, as compared with 49.6% who report that they practice outside of Florida. As compared with respondents who practice in Florida, a lower percentage of respondents not practicing in Florida identify themselves as Hispanic (12.1% vs 20.2%).

Fable 2. Profile of Dental Hygienists with an Active Florida License by Practice Status,
2015-2016

CHARACTERISTIC	PRACTICE IN FLORIDA	DOES NOT PRACTICE IN FLORIDA
Average Age	44.2	47.5
% White	70.8	78.6
% Hispanic	20.2	12.1
% Currently resides out of state	0.6	48.7
% Licensed in another state	13.0	51.7
% Received dental hygiene degree from Florida school	74.9	49.6

Figure 18 presents the primary reasons for not practicing in Florida as reported by survey respondents with an active Florida license. Of the 12,003 dental hygienists who responded to the workforce survey, 24.6% do not practice clinical dental hygiene in Florida. Each respondent was asked to choose her/his main reason for not using their Florida license to practice in Florida and the most frequently cited reason is that they practice in another state (35.4%), followed by the response "Other" (24.9%). The next two most common reasons were employed/self-employed in Florida in a job unrelated to dental hygiene (10.2%) and that they were retired (6.9%). Only 8.3% of respondents indicated they are unemployed and seeking employment in dental hygiene, 4.9% for part-time and 3.4% for full-time.

Figure 18. Reasons Dental Hygienists with an Active Florida License Do Not Use Florida License to Practice in the State (n = 2,954), 2015-2016



Figure 19 depicts future plans to practice in Florida among dental hygienists not currently practicing in the state. Nearly 79.9% of respondents with an active Florida license who do not currently practice in the state report that they intend to practice here at some time in the future, with almost 27% planning to do so within next two years. Approximately 20.1% of survey respondents indicate no future plans to practice dental hygiene in Florida.





Age is closely related to plans for future practice in Florida (Figure 20). The percentage of respondents reporting that they do not plan to practice dental hygiene within Florida in the future increases with age, from 8.5% for 20-29 year-olds to 41.4% for those 70 years and older.



Figure 20. Future Plans to Practice in Florida among Respondents Having an Active Florida License, but Not Currently Working in the State, by Age Group (n = 2,615), 2015-2016

Conclusions

The Florida Department of Health is constantly committed to the measure, review, and evaluation of dental workforce attributes and needs in Florida. The Department makes every effort to collaborate with all state and national oral health partners to ensure the recruitment and retention of highly trained and diverse dental hygiene workforce professionals, especially in underserved communities.

The successful implementation of workforce survey assessments has the potential to provide policymakers with information regarding the clinical practice, geographic location, and scope of practice for Florida dentists. Continued refinement, evaluation, and reporting of these data will assist in the state's efforts to meet current and future dental hygiene workforce needs. The Department continues to work with all professional health organizations to develop innovative, patient-centered, oral healthcare delivery systems.

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Appendix A: 2015-2016 Dental Hygienist Workforce Survey

Dental Hygienist Workforce Survey 2015/2016 22 Questions Total

Assessing Florida's current and future dental workforce is critical in shaping Florida's healthcare policies. Your responses, which constitute a public record, will be summarized in a Florida Dental Hygienist Workforce Report. Previous reports are available online from the Florida Department of Health Public Health Dental Program. We appreciate your time and effort in completing the survey questions below.

Part 1: Demographics

- 1. Indicate the Florida Dental Hygiene college program attended. (Select all that apply.) Brevard Community College **Broward Community College** Daytona State College **Edison State College** Florida State College at Jacksonville (Florida Community College at Jacksonville) Gulf Coast Community College Hillsborough Community College Indian River State College State College of Florid (Manatee Community College) Miami Dade College (Miami Dade Junior College) Palm Beach State College (Palm Beach Junior College) Pasco-Hernando Community College Pensacola State College (Pensacola Junior College) Santa Fe College (Santa Fe Community College) South Florida Community College St. Petersburg College Tallahassee Community College Valencia Community College A Florida program that is not listed None
- 2. Indicate the Out-of-State US Dental Hygiene college program attended. (Select all that apply.)

Alabama	Maryland
Alaska	Massachusetts
Arizona	Michigan
Arkansas	Minnesota
California	Mississippi
Colorado	Missouri
Connecticut	Montana
Delaware	Nebraska
Georgia	Nevada
Hawaii	New Hampshire
Idaho	New Jersey
Illinois	New Mexico
Indiana	New York
Iowa	North Carolina
Kansas	North Dakota
Kentucky	Ohio
Louisiana	Oklahoma
Maine	Oregon

- Pennsylvania Washington Rhode Island West Virginia South Carolina Wisconsin South Dakota Wyoming Tennessee **District of Columbia** Texas Puerto Rico Utah Other US Territory Vermont None Virginia
- 3. Indicate the Foreign Dental Hygiene college program attended. (Select all that apply.)

Argentina	Nigeria
Australia	Philippines
Bahamas	Poland
Brazil	Portugal
Canada	Russia
China	Saudi Arabia
Colombia	Scotland
Cuba	South Africa
Egypt	Spain
England	Ukraine
France	Venezuela
Germany	Vietnam
Haiti	Other Central or South American country
India	Other African country
Ireland	Other Asian country
Israel	Other European country
Italy	Other Middle Eastern country
Japan	Other country (unspecified)
Korea	None
Mexico	

- 4. Indicate your highest dental hygiene degree and non-dental hygiene degree. (Select all that apply.) Dental Hygiene
 - Certificate/Diploma Associate Degree Bachelor's Degree Master's Degree Advanced post grad or doctoral degree Non-Dental Hygiene Certificate/Diploma Associate Degree Bachelor's Degree Master's Degree Advanced post grad or doctoral degree None

5. Do you hold an active dental hygiene license in any location other than Florida? (Select all that apply.)

Alabama	New Hampshire
Alaska	New Jersey
Arizona	New Mexico
Arkansas	New York
California	North Carolina
Colorado	North Dakota
Connecticut	Ohio
Delaware	Oklahoma
Georgia	Oregon
Hawaii	Pennsylvania
Idaho	Rhode Island
Illinois	South Carolina
Indiana	South Dakota
lowa	Tennessee
Kansas	Texas
Kentucky	Utah
Louisiana	Vermont
Maine	Virginia
Maryland	Washington
Massachusetts	West Virginia
Michigan	Wisconsin
Minnesota	Wyoming
Mississippi	District of Columbia
Missouri	Puerto Rico
Montana	Other US Territory
Nebraska	Out of Country
Nevada	Other

6. How many years have you practiced clinical dental hygiene?

<1 year	11
1	12
2	13
3	14
4	15
5	16
6	17
7	18
8	19
9	20
10	>20
New and the late	

- Not applicable
- 7. At present, do you practice clinical dental hygiene in Florida or have you accepted employment for practicing dental hygiene in Florida?

Yes. (Continue to question 8.)

No, but I plan to practice clinical dental hygiene in Florida in <12 months. (Continue to question 7a.)

No, but I plan to practice clinical dental hygiene in Florida in 1-2 years. (Continue to question 7a.) No, but I plan to practice clinical dental hygiene in Florida in 3-4 years. (Continue to question 7a.) No, but I plan to practice clinical dental hygiene in Florida, but I am not sure when. (Continue to question 7a.)

I do not plan to practice clinical dental hygiene in Florida. (Continue to question 7a.)

7a. The primary reason you are not using your Florida license to practice clinical dental hygiene in Florida is: (Choose one.)

I currently practice clinical dental hygiene in another state.

I currently practice clinical dental hygiene outside the U.S.

I teach dental hygiene in Florida but do not engage in clinical practice.

I teach dental hygiene outside Florida but do not engage in clinical practice. I work in Florida in an administrative capacity related to dentistry but do not practice clinical dental hygiene.

I work outside Florida in an administrative capacity related to dentistry but do not practice clinical dental hygiene.

I am employed or self-employed in Florida in a job unrelated to dental hygiene. I am employed or self-employed outside Florida in a job unrelated to dental hygiene.

I am currently unemployed and seeking full-time employment related to dental hygiene.

I am currently unemployed and seeking part-time employment related to dental hygiene.

I am currently unemployed and seeking full-time employment related to a school-based dental program.

I am currently unemployed and seeking part-time employment related to a school-based dental program.

I am currently unemployed and seeking employment outside dental hygiene. I am currently retired.

Other (unspecified)

8. Do you currently reside in Florida?

Yes

No

If you do NOT practice dental hygiene in Florida, or have NOT accepted employment for practicing in the state, you are now finished with the survey. Thank you for your participation.

9. What languages do you speak? (Select all that apply.)

English Arabic Chinese (Mandarin or Cantonese) Creole French German Hebrew Italian Japanese Korean Polish Portuguese Russian Spanish Tagalog Vietnamese Other African Language Other Asian Language Other European Language

Other Middle Eastern Language Other Language (unspecified)

Part 2: Practice Characteristics

- 10. How many months did you practice clinical dental hygiene in Florida in the last 12 months?
 - 0-2 Months 3-4 Months 5-6 Months 7-8 Months 9-10 Months 11-12 Months
 - 11. Approximately how many hours and in what Florida county or counties do you practice clinical dental hygiene in a typical week? You may select up to five counties. If you are employed to practice but have not yet started, select "Not applicable."

Not applicable County 1: (drop down menu with all 67 Florida counties listed) Hours: (drop down menu) 1-10 Hours 11-20 Hours 21-30 Hours 31-40 Hours 41-50 Hours More than 50 hours County 2: (drop down menu with all 67 Florida counties listed) Hours: (drop down menu) 1-10 Hours 11-20 Hours 21-30 Hours 31-40 Hours 41-50 Hours More than 50 hours County 3: (drop down menu with all 67 Florida counties listed) Hours: (drop down menu) 1-10 Hours 11-20 Hours 21-30 Hours 31-40 Hours 41-50 Hours More than 50 hours County 4: (drop down menu with all 67 Florida counties listed) Hours: (drop down menu) 1-10 Hours 11-20 Hours 21-30 Hours 31-40 Hours 41-50 Hours More than 50 hours County 5: (drop down menu with all 67 Florida counties listed) Hours: (drop down menu) 1-10 Hours 11-20 Hours 21-30 Hours 31-40 Hours 41-50 Hours More than 50 hours

12. If you routinely practice clinical dental hygiene fewer than 35 hours per week, please select the reason(s) from the list below. (Select all that apply.)

Limited work hours are my personal preference. Limited work hours allow time for volunteer (uncompensated) work. Limited hours allow time for other compensated work. Health-related issues limit my work hours. I am phasing in retirement. I adjust my hours to fit the patient workload. My position is part-time. Other (unspecified)

13. How many hours of clinical volunteer dental hygiene service did you provide in the last 24 months?

None 1-8 hours 9-16 hours 17-24 hours 25-30 hours 31-60 hours 61-120 hours More than 120 hours

- 14. Where did you provide clinical volunteer dental hygiene services in the past 24 months? (Select all that apply.)
 - I did not provide any clinical volunteer dental hygiene services. In a private office(s), on my own. In a private office(s), as part of an organized event (e.g. Give Kids a Smile Day, etc.). At a safety net clinic (e.g. County Health Department, Community Health Center, FQHC, etc.). As part of a health fair. As part of a school-based or school-linked event. International charitable organization. Other (unspecified)
- 15. Indicate your primary type of practice and your primary practice setting where you are currently employed. (Check all that apply. If currently unemployed, select none.)

Primary Type of Practice:

General Practice: Private Practice General Practice: Public Health Practice Specialty Practice: Endodontics Specialty Practice: Oral and Maxillofacial Pathology Specialty Practice: Oral and Maxillofacial Radiology Specialty Practice: Oral and Maxillofacial Surgery Specialty Practice: Orthodontics and Dentofacial Orthopedics Specialty Practice: Pediatric Dentistry Specialty Practice: Periodontics Specialty Practice: Prosthodontics None

Primary Practice Setting:

Solo Office Practice Group Office Practice: Single Specialty Group Office Practice: Multi Specialty County Health Department Community Health Center Federally Qualified Heath Center State or Federal Correctional Facility Clinic Other State Government Clinical Setting Military Facility Clinic VA Clinic Academic Institution Indian Health Service Long-Term Care Facility (Nursing Home) Head Start (including Early Head Start) School health service Mobile Unit Dentistry Staffing organization Other (unspecified) None

- 16. Do you practice clinical dental hygiene in the county where you reside? Yes, all of the time (100%) Yes, most of the time (50-99%) Yes, less than half of the time (1-49%)
 - No (0%)
- 17. On average, how many patient encounters do you have in a typical work week? (If you have accepted employment to practice but have not yet started, select "Not applicable.")
 - 1-25 26-50 51-75 76-100 101-125 More than 125 Not applicable
- 18. How many years have you been in your current primary practice setting and/or position?
 - 0-1 2-5 6-10 11-15 16-20 More than 20
- 19. Do you work for more than one employer or in more than one practice setting?
 - Yes
 - No
- 20. Are you currently seeking additional dental hygiene employment?
 - Yes, 1-4 additional hours a week.
 - Yes, 5-8 additional hours a week.
 - Yes, 9-12 additional hours a week.
 - Yes, 13-16 additional hours a week.
 - Yes, 17-20 additional hours a week.

Yes, 21-24 additional hours a week.

Yes, 25 or more additional hours a week.

No.

- 21. What kind(s) of difficulty (if any) have you experienced in finding a position as a registered dental hygienist? (Check all that apply.)
 - None Cannot obtain full-time employment Cannot obtain part-time employment Unsuitable work schedule Inadequate salary Inadequate benefits Unsatisfactory work environment Specific certifications required for the position (e.g. local anesthesia certification) Specific skills required for the position (e.g. electronic health records or digital radiography) Excessive commuting distance Other (unspecified)
- 22. Regarding your practice of clinical dental hygiene in Florida in the next five years, which of the following apply? (Choose one.)

I plan to end my practice of clinical dental hygiene in Florida due to Retirement.

I plan to end my practice of clinical dental hygiene in Florida due to non-hygiene employment in Florida.

I plan to end my practice of clinical dental hygiene in Florida due to employment as a hygienist in another state or country.

I plan to end my practice of clinical dental hygiene in Florida due to non-hygiene employment in another state or country.

I plan to end my practice of clinical dental hygiene in Florida due to another reason.

I plan to reduce my clinical dental hygiene practice hours but continue practicing in Florida. I have no plans to end or reduce my Florida clinical dental hygiene practice within the next five years.

Appendix B: Survey Methodology and Analysis

Florida statute and administrative rules require renewal of dental licenses biennially by the end of February of even-numbered years. The most recent renewal period ended on February 28, 2016. The Florida Department of Health (Department) prepared and administered a workforce survey of dental hygienists to coincide with the license renewal process. As part of their on-line renewal, dental hygienists were asked to voluntarily complete the survey.

The survey was designed to serve as an assessment of Florida's current dental hygiene workforce to better inform and shape public health care policy and plan for future workforce needs. Licensure status is relative to the date the survey was closed. In contrast to licensure information, practice status as summarized in this report is not linked to a single, specific reference date. Information concerning practice status was obtained from the workforce survey. Changes in practice status occurring between survey completion and the report reference date are not reflected in the data. Thus, counts or estimates of dental hygienists actively practicing or not practicing in Florida are approximate with respect to the report's completion date.

Given that practicing dental hygienists are a subset of dental hygienists with active licenses, licensure information maintained by Department helps to screen respondents by identifying dental hygienists who are ineligible to practice. At the time of this survey, there were 13,541 dental hygienists with active license status. For purposes of analysis, respondents with non-active licenses are of limited interest and are excluded from the analysis. The survey respondents with active licenses who practice in Florida (N=9032) represent 75.2% of dental hygienists with active licenses who responded to the survey.

Variations in the response rate can be due to the actual number of required questions by respondent based on answers to specific prior questions. The reason why a respondent may choose not to respond to a specific question or questions varies greatly. This is not uncommon for many state and national surveys whether voluntary or required. The information gathered provides insight into the practice characteristics of the profession and serves to better address the oral health needs of Florida's residents.

While the survey was offered to all dental hygienists with a Florida license, the analysis centered on Florida active licensees practicing in the state. Non-response items are excluded from the analysis because all items were not completed by or applicable to all survey takers. The survey consisted of 22 items regarding the demographics, education and practice characteristics, productivity, and retention and attrition of respondents. Additional demographic information was obtained from the Department's Division of Medical Quality Assurance. Descriptive statistical techniques were used to provide the characteristic profiles of respondents using SPSS Statistics 23.0. Marginal tabulations are reported for the summary descriptions and relationships presented throughout the report.