



Report on the 2011- 2012 Florida Workforce Survey of Dental Hygienists

May 2014

Rick Scott
Governor

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Florida Department of Health

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To be the Healthiest State in the Nation

Values:

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COLLABORATION

We use teamwork to achieve common goals and solve problems.

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We promote quality outcomes through learning and continuous performance improvement

Division of Community Health Promotion
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Acknowledgements

The Florida Department of Health, Division of Community Health Promotion, would like to thank the Florida Department of Medical Quality Assurance, the Florida Dental Association, the Florida Dental Hygiene Association, Florida State University, and the dentists and dental hygienists who took time to participate in the census for their efforts to help build a better understanding of the dental workforce in Florida.

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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. Legislation recently enacted in Florida (ss. 466.003, 466.023, 466.0235, and 466.024, F.S.) expands the scope and area of practice of dental hygienists by authorizing hygienists to provide certain specified services unsupervised in health access settings. 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...."¹ 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.²

In 2009, the Florida Department of Health developed a workforce survey for dental hygienists. The survey was administered on a voluntary basis in conjunction with biennial renewal of dental hygiene licenses in February 2010. The second administration of this survey coincided with the renewal deadline of February 28, 2012. All responses are self-reported. Eighty-nine percent of dental hygienists with an active Florida license responded to the 2011-2012 survey. 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. The main purpose is to identify the supply of workforce professionals relative to the overall Florida population and examine factors related to dental practice location and career plans; assist those in the oral health career industry and other decision makers to better prepare strategic efforts for enhancing the dental health care of Floridians.

Summary of Findings

Key findings from this report include the following:

- Of 13,342 dental hygienists who applied for licensure renewal, 12,693 dental hygienists were designated having "Active" license status.
- A total of 11,460 dental hygienists responded to the workforce survey.
- Of the state's dental hygienists who practice in Florida, 8,340 responded to the survey.
- Of 8,339 respondents practicing in Florida who reported their gender, 8,073 dental hygienists are females (96.8%) and 266 (3.2%) are males.

- The mean ages of dental hygienists actively practicing in Florida are 43 years for females and 41.5 years for males.
- The majority of female dental hygienists actively practicing in Florida are between 40 and 49 years of age, while the majority of male dental hygienists are between 30 and 49 years of age.
- The majority (73.0%) of dental hygienists with active licenses practicing in Florida are white.
- Of dental hygienists with an active license who graduate from a Florida dental hygiene program, 80.3% practice in-state.
- The majority of dental hygienists with an active license practicing in Florida graduated from a Florida dental hygiene program.
- The dental hygiene programs in Florida graduating the largest number of dental hygienists at the time of the survey are Miami Dade College, St. Petersburg College and Palm Beach State College.
- The majority (89.6 %) of dental hygienists with active Florida licenses practicing in Florida report working in a general practice.
- Of the dental hygienists with active licenses practicing in Florida, 84.7% practice between 11 and 12 months of the year.
- Nearly half (48.0%) of dental hygienists with active licenses practicing in Florida report working between 31-40 hours per week.
- The majority (73.2%) of dental hygienists with active licenses practicing in Florida report working in one practice setting only.
- Two-thirds (66.8%) of dental hygienists working in Florida report that they practice in the county in which they reside.
- The majority (82.6%) of dental hygienists with active licenses practicing in Florida report that they were not seeking any additional employment at this time.
- Of those dental hygienists who reported seeking further employment, 34.9% are seeking an additional 5 to 8 hours a week; about 23% are seeking 17 or more additional work hours per week.
- The majority (62.0%) of dental hygienists practicing in Florida report seeing an average of 26-50 patients per week.
- A total of 3,509 (53.8%) dental hygienists with active licenses practicing in Florida report no difficulty in finding employment as a dental hygienist.
- A total of 1,525 (23.4%) dental hygienists with active licenses practicing in Florida report that they are not able to obtain full-time employment.
- Overall, 526 respondents (6.4%) report that they plan to end their practice of dental hygiene in Florida within the next five years.
- Approximately 30% of dental hygienists practicing in Florida report performing volunteer services, most frequently at school events.
- The percentage of respondents practicing in Florida who speak one or more languages other than English is high among Hispanics/Latinos (96.4%) and Asian respondents (73.9%).
- Although the majority (75.3%) of survey respondents with active licenses practice in Florida, 24.7% do not practice in this state.
- Nearly 38% of dental hygienists with an active license not practicing in Florida report that they practice in another state, while 15.8% indicate that they are unemployed and seeking employment related to dentistry.

- Of dental hygienists with an active license not practicing in Florida, 69.4% stated that they plan to relocate to Florida sometime in the future.

¹Florida Statutes, Chapter 466.003, *Definitions*. Available at: http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0400-0499/0466/Sections/0466.003.html. Accessed May 21, 2014.

²Florida Statutes, Chapter 466.023, *Dental hygienists; scope and area of practice*. Available at: http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0400-0499/0466/Sections/0466.023.html. Accessed May 21, 2014.

INTRODUCTION

This report from the Florida Department of Health presents data from the 2011 - 2012 workforce survey of dental hygienists. The survey was designed to obtain information concerning Florida's dental workforce that would better inform healthcare policymakers and shape oral healthcare policy development. Analysis of responses is guided by those objectives. Florida statute and administrative rules require renewal of dental licenses every two years, including the biennial period ending on February 28, 2012. To coincide with this license renewal period, the Florida Department of Health prepared and administered the second voluntary workforce survey of dental hygienists (Appendix A).

Respondents could complete the survey in conjunction with their license renewal paperwork. The survey consisted of questions soliciting responses regarding demographics, professional education, practice characteristics, productivity, and retention and attrition. Licensure data maintained by the Department of Health, Division of Medical Quality Assurance, provided the source material for the analysis. A summary of the survey methodology used follows in the next section of this report. A more detailed statement of survey methods is included in Appendix B.

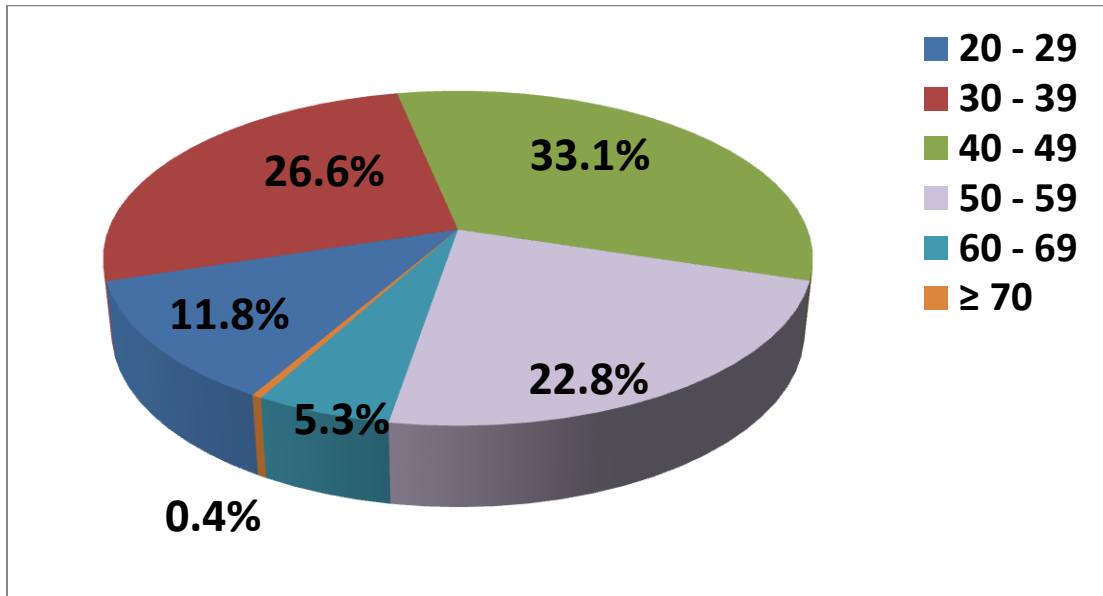
The Florida Department of Health, Division of Community Health Promotion, in collaboration with the Division of Medical Quality Assurance, prepared and administered separate workforce surveys of dentists and dental hygienists to coincide with the license renewal process. As part of their on-line renewal, dentists and hygienists were asked to complete a survey. The response rates overall were acceptable: for all four surveys (the two in 2009 – 2010; the two in 2011 – 2012) at least 85.9% of practitioners renewing their professional dental licenses completed the questionnaire. It should be noted however that the number of responses for individual questions varied since respondents may not have completed all of the questions. Any changes in dental practice status occurring between survey completion and the report reference date would not be 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.

FINDINGS

Licensed Dental Hygienists Practicing in Florida - Demographics

Of the 8,340 dental hygienists with active licenses practicing in Florida who responded to the 2011 - 2012 Florida Workforce Survey, the majority (55.9%) are 40- 59 years of age and nearly 40% are 20-39 years of age (Figure 1).

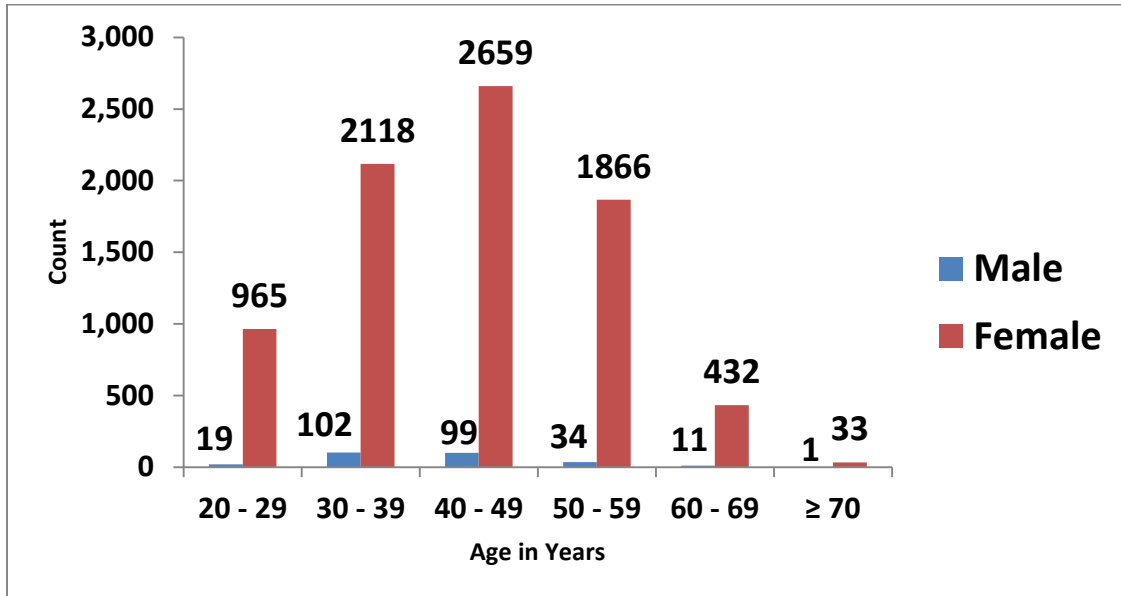
Figure 1. Age Distribution of Dental Hygienists Practicing in Florida



The mean ages for respondents practicing in Florida are 43.0 years for females and 41.5 years for males. Nearly 97% of respondents are females, and the remaining 3% are males.

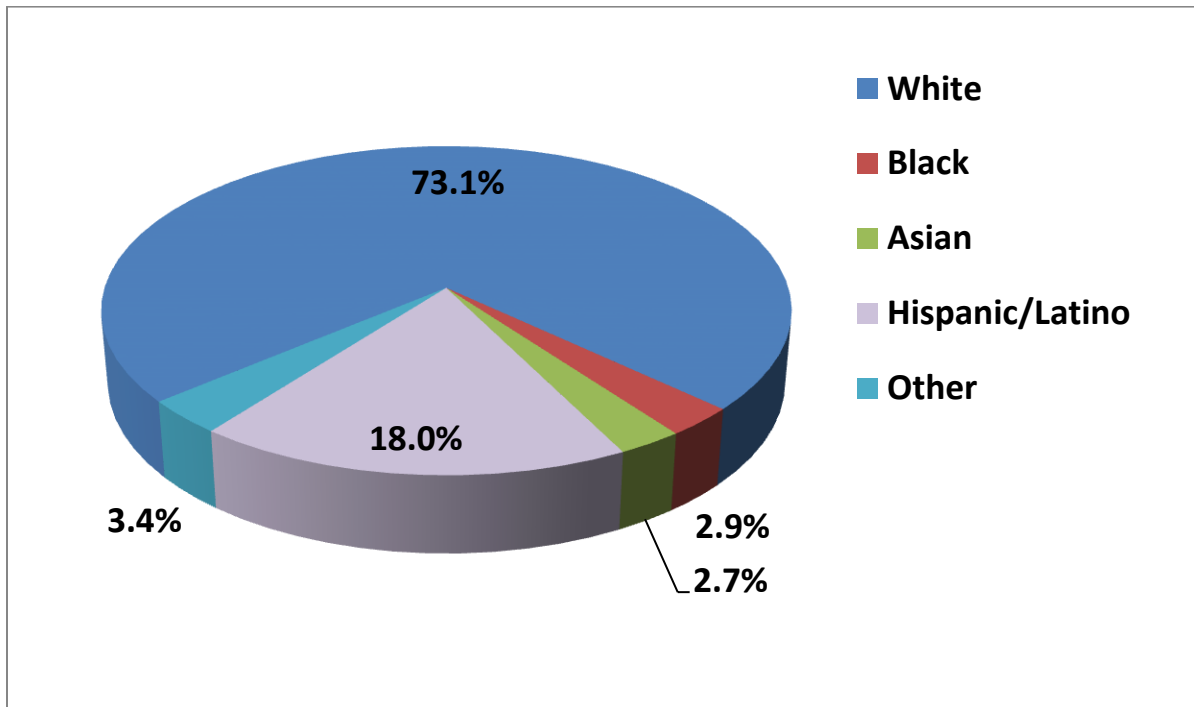
The gender distribution of respondents practicing in Florida does not vary substantially across age groups. Females constitute the majority of practicing dental hygienists for all age groups when compared to male hygienists (Figure 2). For both males and females, the contribution of older hygienists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

Figure 2. Gender by Age Group for Dental Hygienists Practicing in Florida



Dental hygienists practicing in Florida are predominantly white (73.1%) or Hispanic/Latino (18.0%). Asian and black dental hygienists practicing in Florida comprise approximately 2.7% and 2.9%, respectively, of dental hygiene workforce respondents (Figure 3).

Figure 3. Race/Ethnicity of Dental Hygienists Practicing in Florida



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 (96.4%). Foreign language proficiency also is high among Asian respondents (73.9%), but is relatively low among Native American (13.0%) and White (7.8%) respondents. Nearly one-quarter of black respondents speak one or more second languages other than English.

Figure 4. Percentage of Dental Hygienists with Non-English Language Speaking Ability by Race/Ethnicity

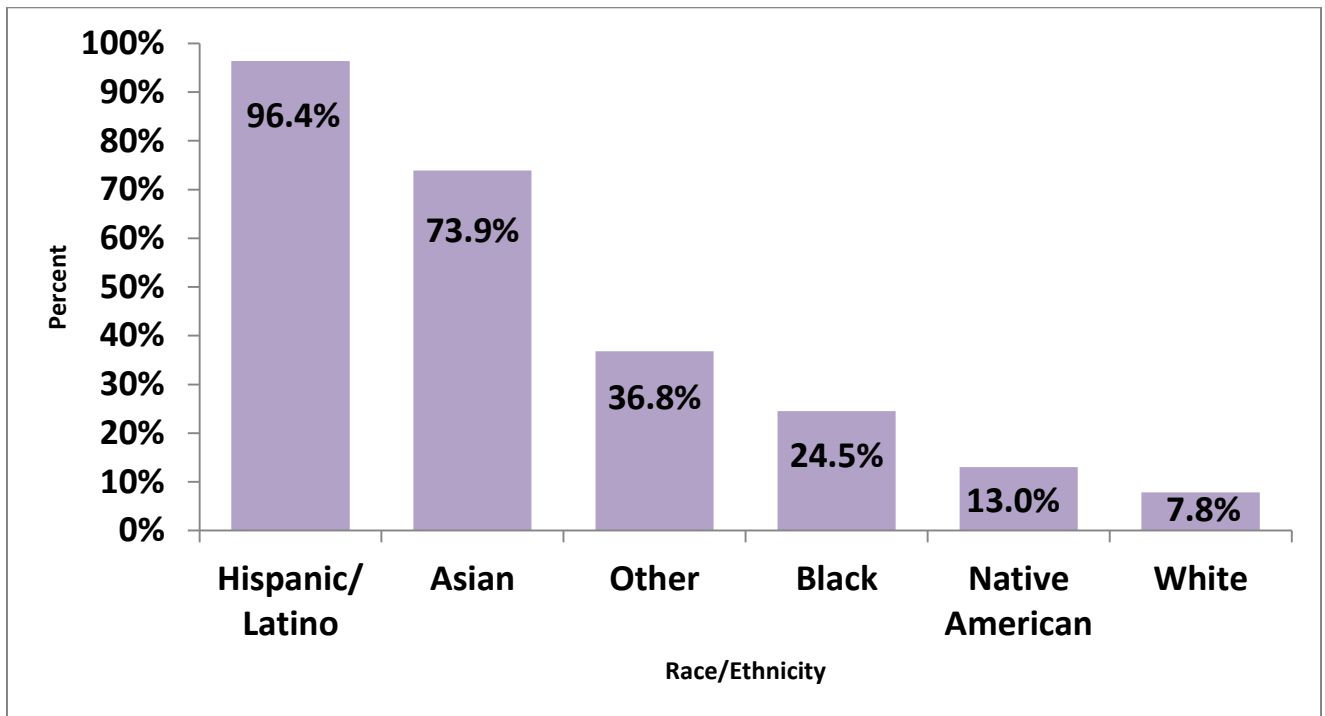


Table 1 identifies the foreign languages spoken by respondents with active licenses practicing in Florida who reported speaking a language in addition to English. The table provides the number and percentage of these respondents aggregated by language spoken and race/ethnicity. For each race/ethnicity group, the most frequently spoken language is highlighted in yellow, and the second most is highlighted in gray. Spanish is the most frequently spoken non-English language for all race/ethnicity groups except Asians and blacks. Tagalog (Philippine language) and other Asian language are the most frequently spoken non-English languages among Asian respondents; Creole and French are the most frequently non-English languages cited among blacks.

Table 1. Selected Non-English Languages Spoken by Dental Hygienists Practicing in Florida by Race/Ethnicity

LANGUAGE	ASIAN		BLACK		HISPANIC/ LATINO		WHITE		OTHER	
	No.	%	No.	%	No.	%	No.	%	No.	%
Arabic	0	0.0%	0	0.0%	1	0.1%	15	2.6%	5	4.0%
Chinese (Mandarin or Cantonese)	11	6.4%	0	0.0%	1	0.1%	1	0.2%	0	0.0%
Creole	0	0.0%	44	47.8%	0	0.0%	2	0.4%	9	7.3%
French	0	0.0%	27	29.3%	16	1.1%	61	10.7%	12	9.7%
German	1	0.6%	0	0.0%	6	0.4%	47	8.3%	1	0.8%
Hebrew	0	0.0%	0	0.0%	0	0.0%	9	1.6%	0	0.0%
Italian	0	0.0%	0	0.0%	9	0.6%	23	4.0%	4	3.2%
Japanese	4	2.3%	0	0.0%	1	0.1%	1	0.2%	0	0.0%
Korean	5	2.9%	0	0.0%	1	0.1%	0	0.0%	0	0.0%
Other African language	0	0.0%	0	0.0%	0	0.0%	2	0.4%	2	1.6%
Other Asian language	52	30.1%	0	0.0%	0	0.0%	1	0.2%	6	4.8%
Other European language	0	0.0%	2	2.2%	3	0.2%	57	10.0%	5	4.0%
Other language (unspecified)	6	3.5%	3	3.3%	4	0.3%	29	5.1%	5	4.0%
Other Middle Eastern language	0	0.0%	0	0.0%	0	0.0%	5	0.9%	5	4.0%
Polish	0	0.0%	0	0.0%	0	0.0%	20	3.5%	1	0.8%
Portuguese	1	0.6%	1	1.1%	44	2.9%	30	5.3%	16	12.9%
Russian	1	0.6%	0	0.0%	0	0.0%	59	10.4%	2	1.6%
Spanish	7	4.0%	15	16.3%	1425	94.3%	206	36.3%	49	39.5%
Tagalog	68	39.3%	0	0.0%	0	0.0%	0	0.0%	1	0.8%
Vietnamese	17	9.8%	0	0.0%	0	0.0%	0	0.0%	1	0.8%

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. Of those respondents, 72.0% trained at a Florida dental hygiene school, 19.4% trained at an out-of-state program and 8.6% trained at a foreign-trained dental program.

Figure 5. Program of Graduation among Dental Hygienists Practicing in Florida

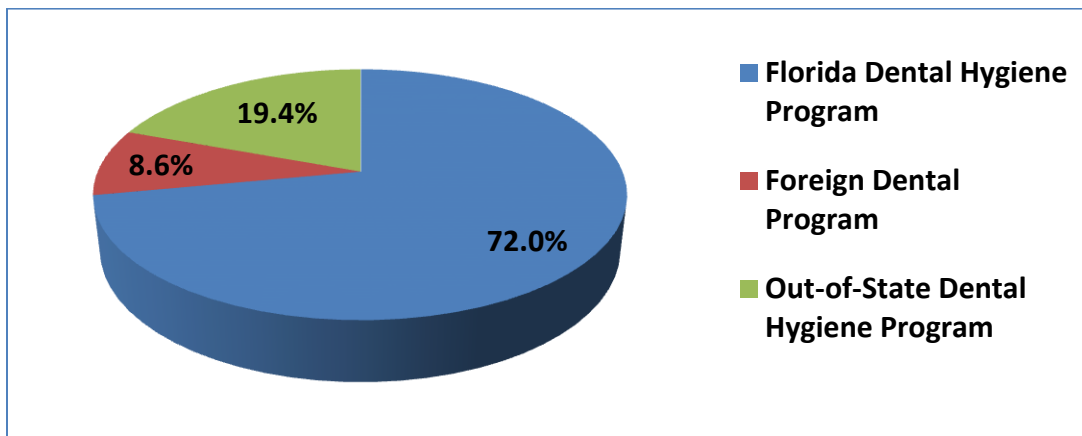
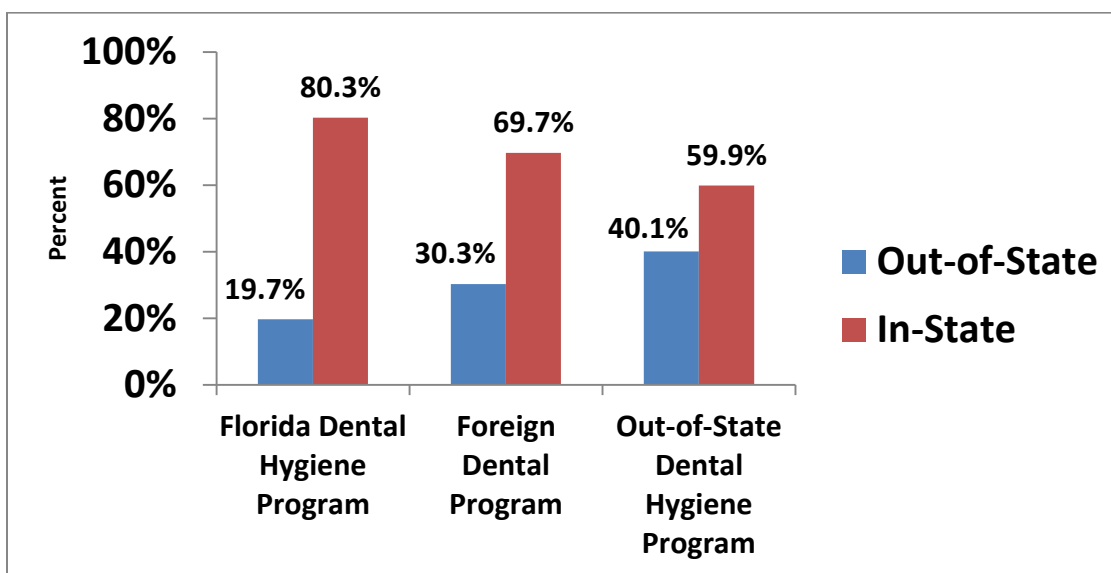


Figure 6 displays the percentage of all respondents with an active Florida license who practice in Florida by the type of program from which they have received a degree. About 80% of those who attended a Florida dental hygiene program report practicing in Florida; nearly 70% of dental hygienists trained at a foreign dental hygiene program and nearly 60% of out-of-state dental hygiene program graduates also report that they practice dental hygiene in-state.

Figure 6. Percentage of Dental Hygienists with an Active License by Practice Location and Program of Graduation



Graduates of Miami-Dade College, St. Petersburg College and Palm Beach State College constituted the highest percentages of survey respondents (Figure 7). Following in percentage of survey respondents were graduates from Santa Fe College and Pensacola State College, both located in North Florida.

Figure 7. Distribution of Dental Hygienists by Dental Hygiene School of Graduation in Florida

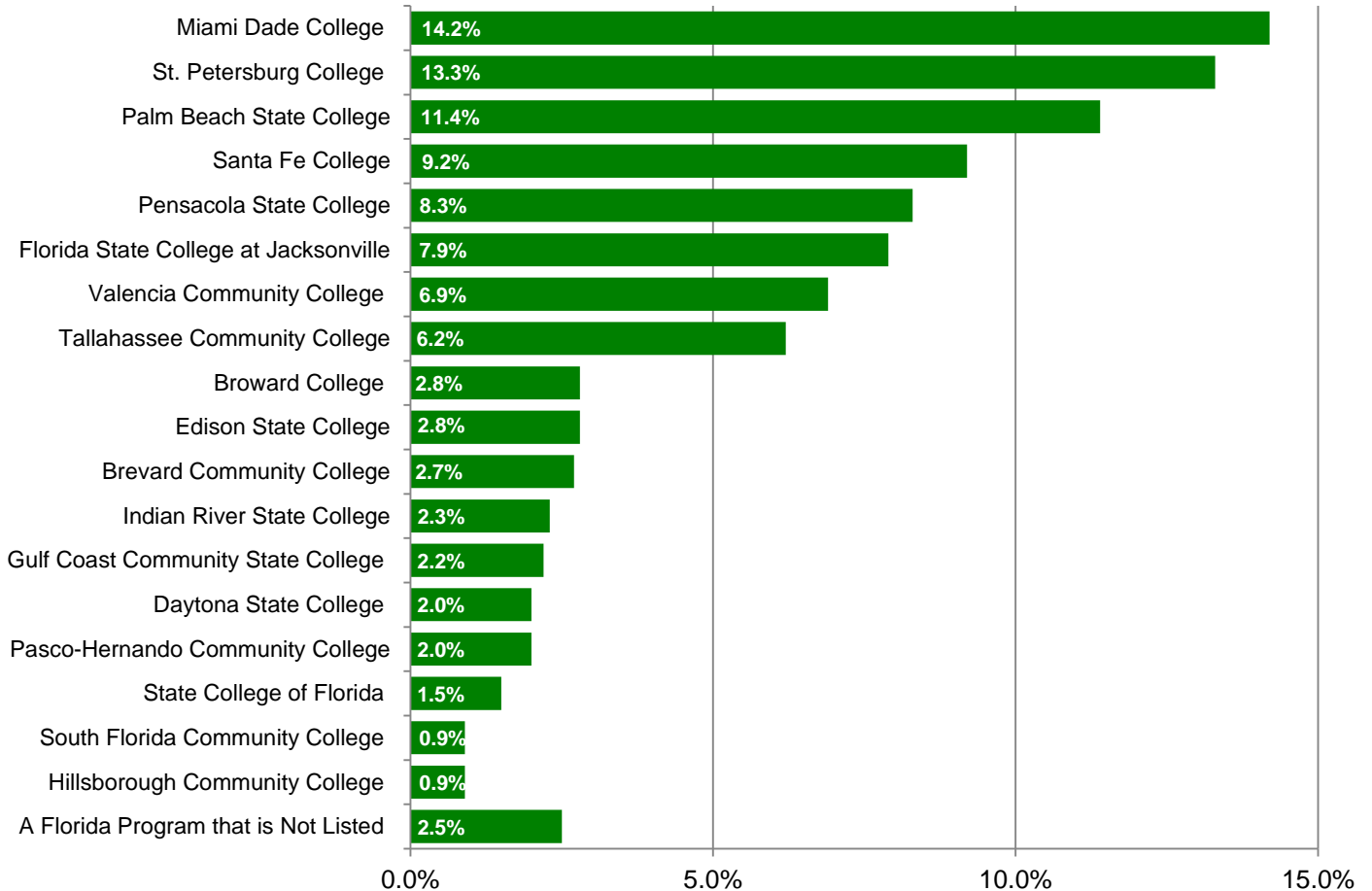
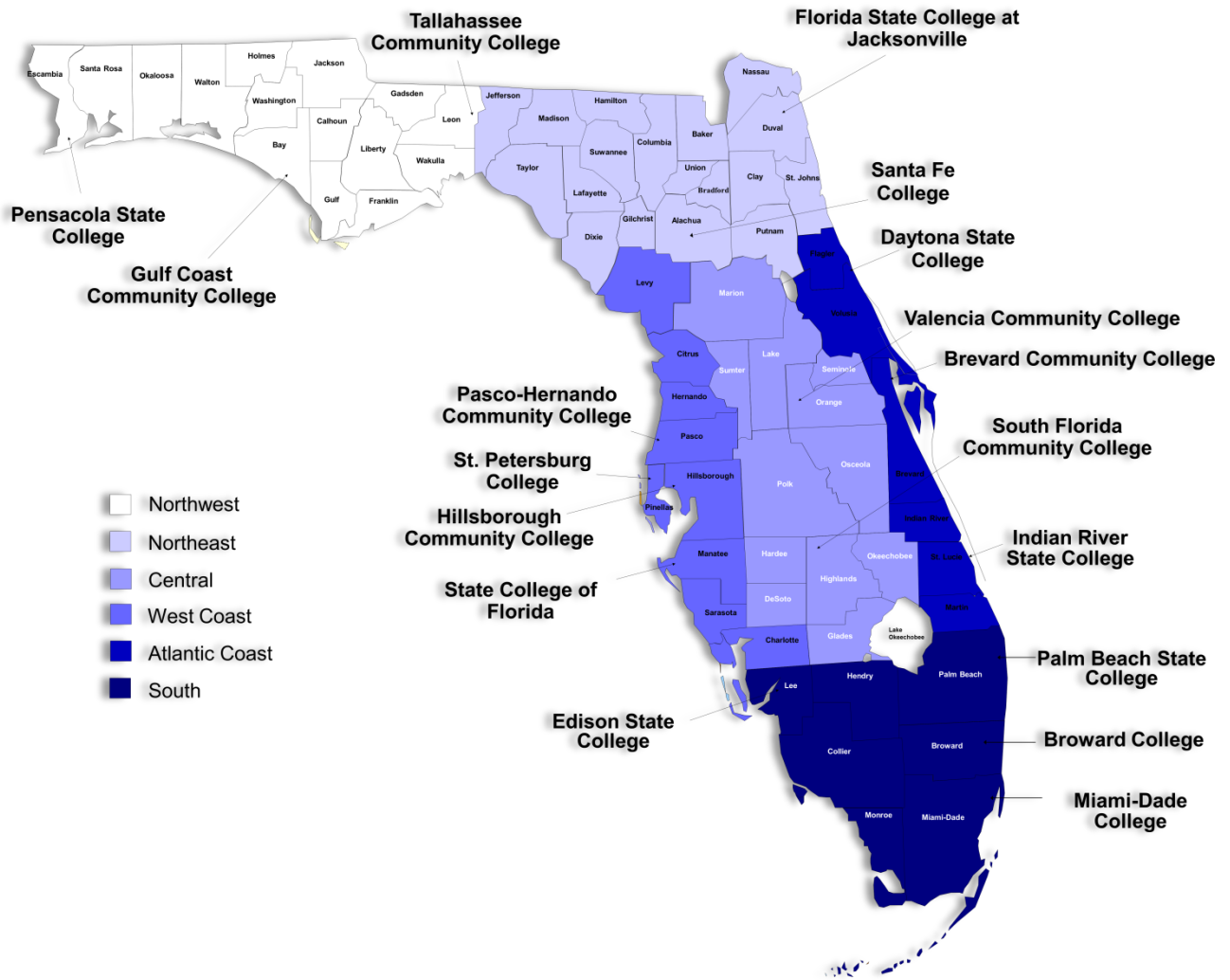


Figure 8 illustrates the regions of Florida and the location of the state's dental hygiene schools. As depicted, most of Florida's dental hygiene schools are located in the eastern and southern portions of the state; only three schools are located in the panhandle region.

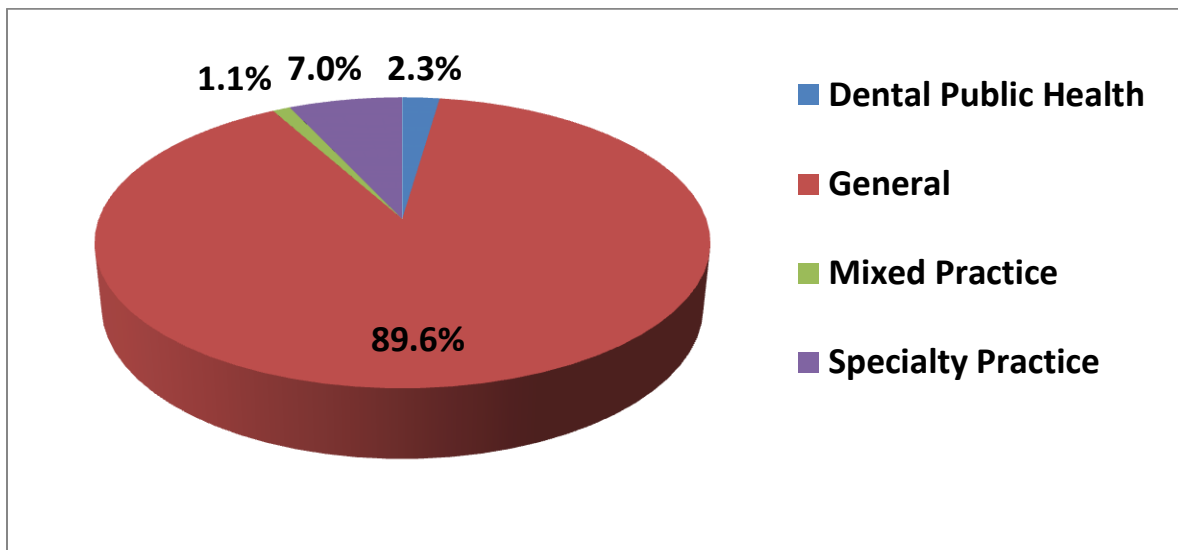
Figure 8. Florida Regions and Dental Hygiene Schools



Licensed Dental Hygienists Practicing in Florida – Practice Characteristics

Figure 9 portrays the distribution of dental hygiene practice types among survey respondents who practice in Florida. A large majority of respondents (89.6%) report their practice as general only, while 2.3% report their practice as dental public health only. Another 7.0% practice in a single specialty only and the remaining 1.1% work in a mixed practice. Specialties listed in the survey include periodontics, prosthodontics, pediatric dentistry, orthodontics and dentofacial orthopedics, oral and maxillofacial surgery, endodontics, oral and maxillofacial pathology, and oral and maxillofacial radiology.

Figure 9. Dental Practice Types among Dental Hygienists Practicing in Florida



Ninety-four percent of respondents who reported practicing in Florida work in a private office setting. Regarding the remaining six percent of respondents, five practice settings— academic institutions, community health centers, county health departments, federally qualified health centers, and other state government clinical settings—constitute “safety-net ” providers for individuals who might otherwise lack access to dental care (data not shown).

Approximately 85% of the respondents who practice in Florida worked between 11 and 12 months in the year prior to completing the survey (Figure 10).

Figure 10. Number of Practice Months in the Past Year among Dental Hygienists Practicing in Florida

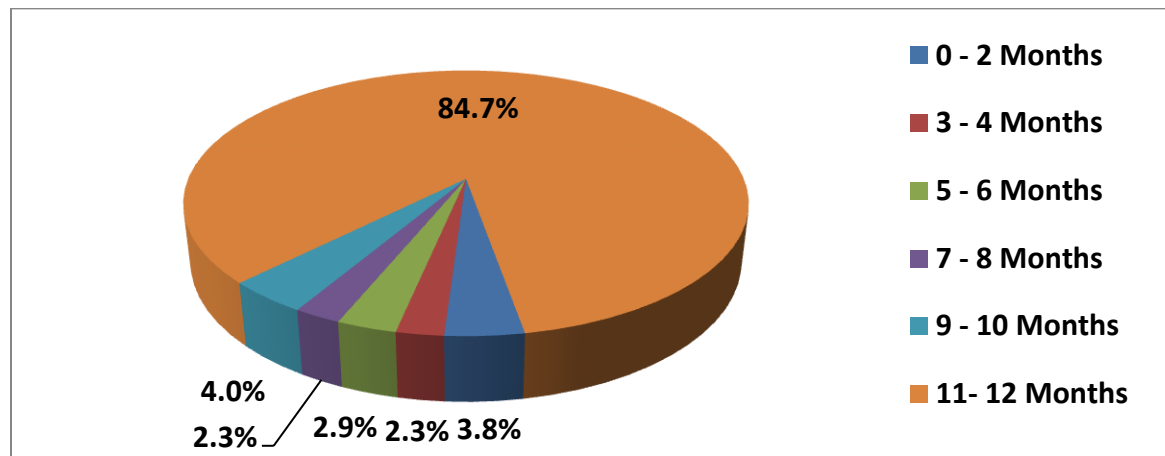
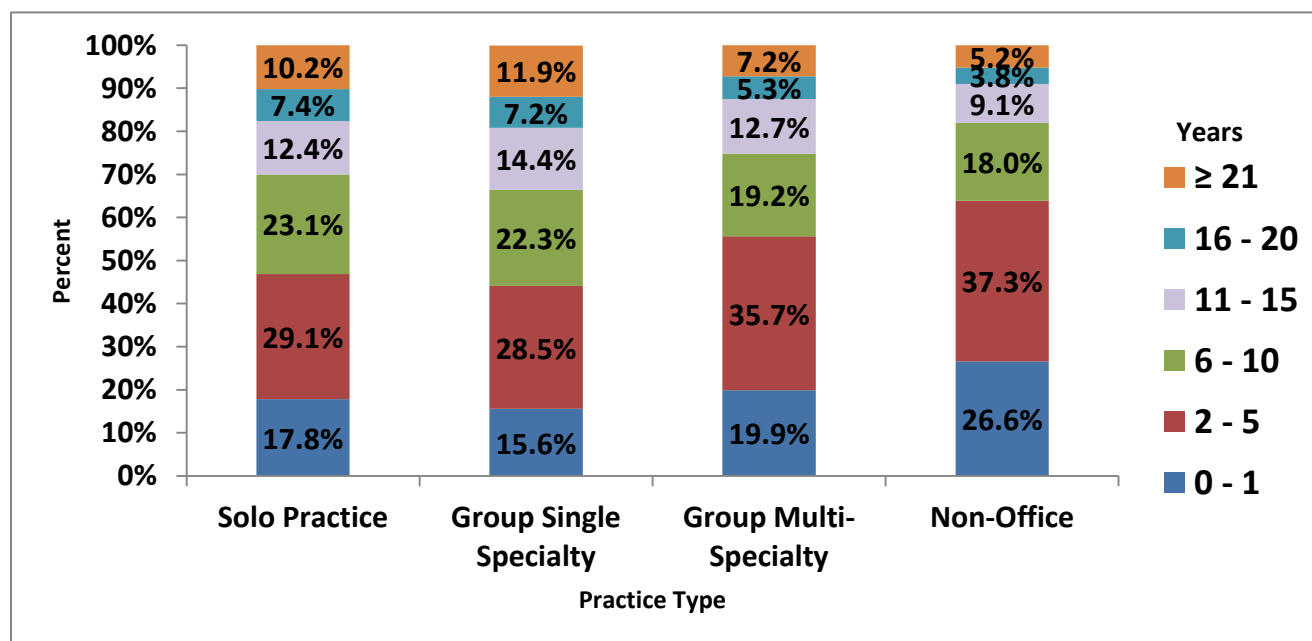


Figure 11 illustrates the number of years respondents practiced in their current practice arrangement by practice type. The percentage of survey respondents who report having between two and five years of experience is the largest group across all practice settings. Among those practicing in private 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.

Figure 11. Dental Hygienists' Years in Current Practice Arrangement by Practice Type

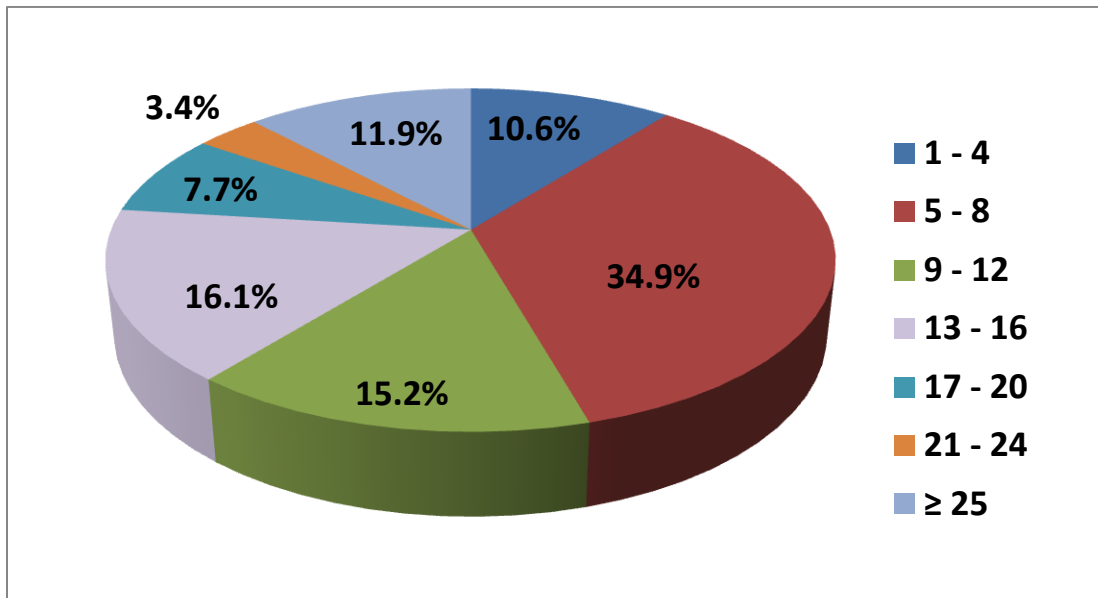


The majority of survey respondents (73.2%) work for one employer in one practice setting; 26.8% work for more than one employer or in more than one practice setting.

Of the percentage of survey respondents practicing in Florida who are currently seeking additional dental hygiene employment; nearly 83% of respondents reported that they are not seeking additional employment.

Of the survey respondents practicing in Florida who indicate they are seeking additional work hours, 34.9% are seeking 5 to 8 additional hours per week; 15.2% are seeking 9 to 12 hours per week. Approximately 23% are seeking 17 or more additional work hours per week (Figure 12).

Figure 12. Distribution of Additional Hours of Work per Week Sought by Dental Hygienists Practicing in Florida



As shown in Figure 13, dental hygienists working in a safety-net practice most typically perform volunteer work in outside events such as school events (30.1%) or health fairs (22.0%). Nearly 16 percent of their volunteer work, however, still is performed in safety-net clinics (15.9%). Similarly, dental hygienists employed in private practice settings report providing volunteer services most frequently at school events (29.3%); however, 21.4% of respondents working in private practice settings report performing volunteer work during an organized event in a private office setting.

Figure 13. Settings for the Provision of Volunteer Services by Practice Type

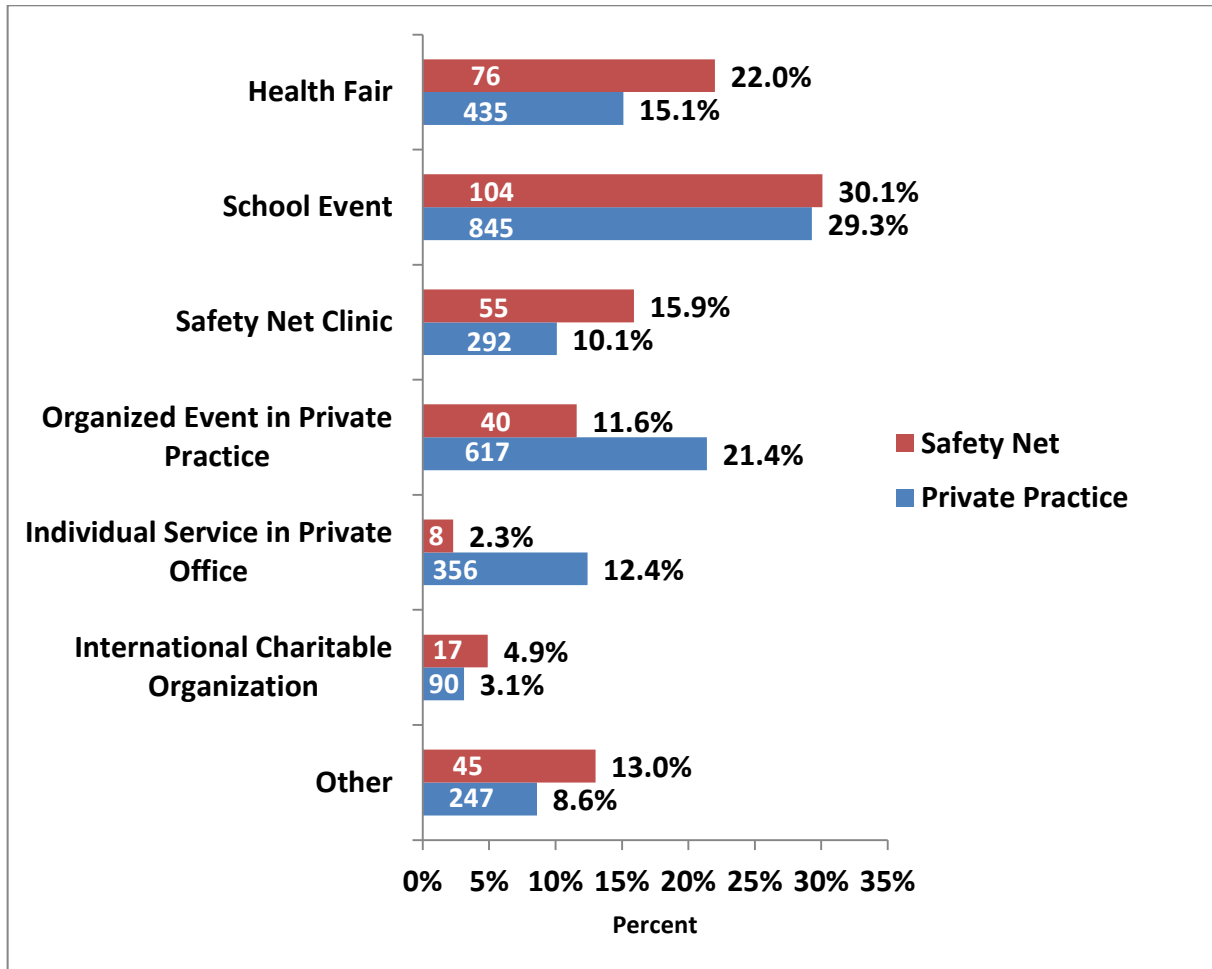
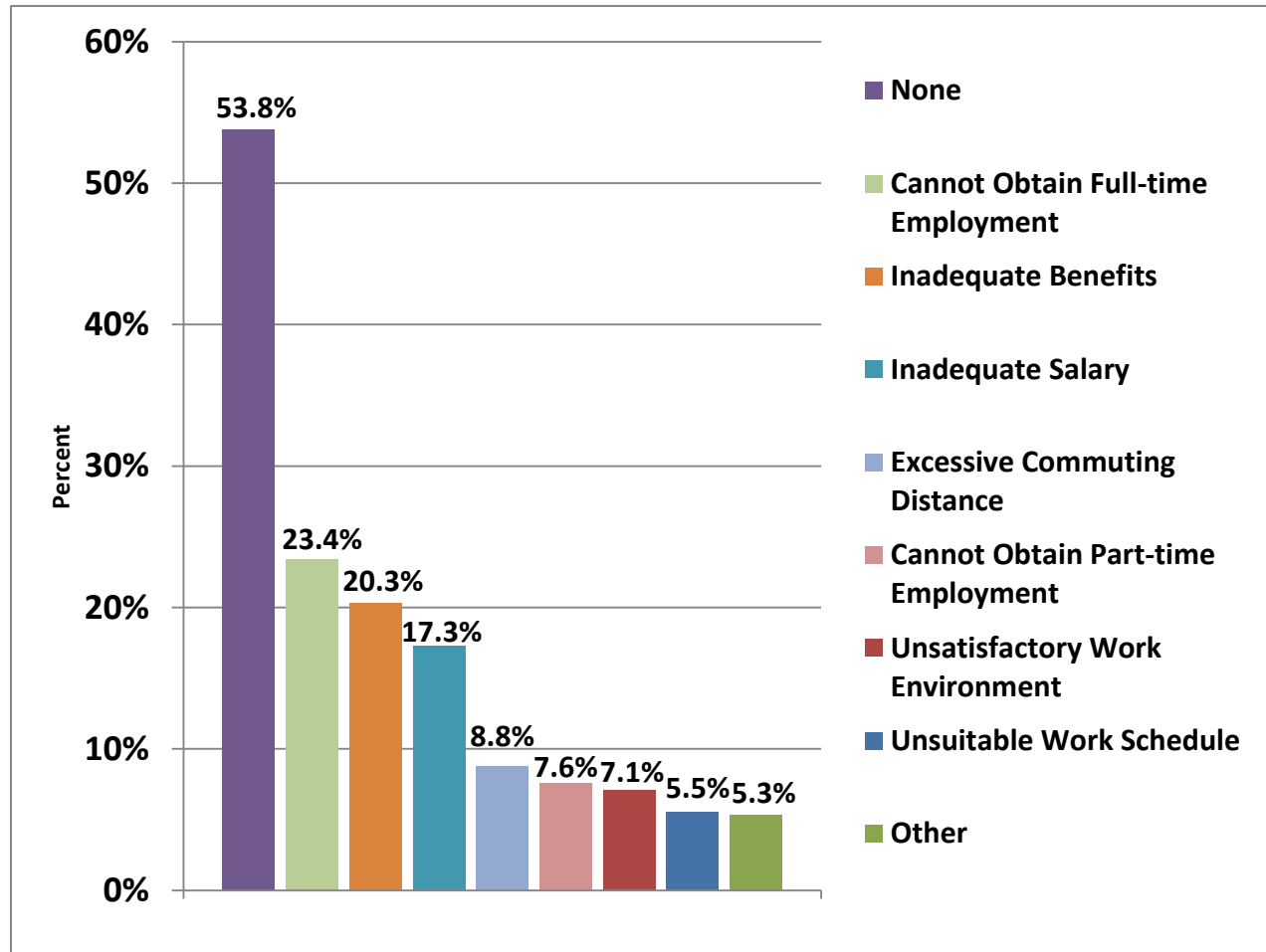


Figure 14 displays the difficulties respondents experience when searching for a dental hygienist position. Although 53.8% of respondents report experiencing no difficulty in finding a position as a dental hygienist, 23.4% indicate that they cannot obtain full-time work in the field. Nearly 8% of dental hygienists report that they are unable to obtain part-time employment in their profession. Other difficulties dental hygienists experience include inadequate benefits (20.3%) and salary (17.3%), unsatisfactory work environment (7.1%) and an unsuitable work schedule (5.5%).

Figure 14. Difficulties Dental Hygienists Practicing in Florida Experience in Finding a Position as a Dental Hygienist

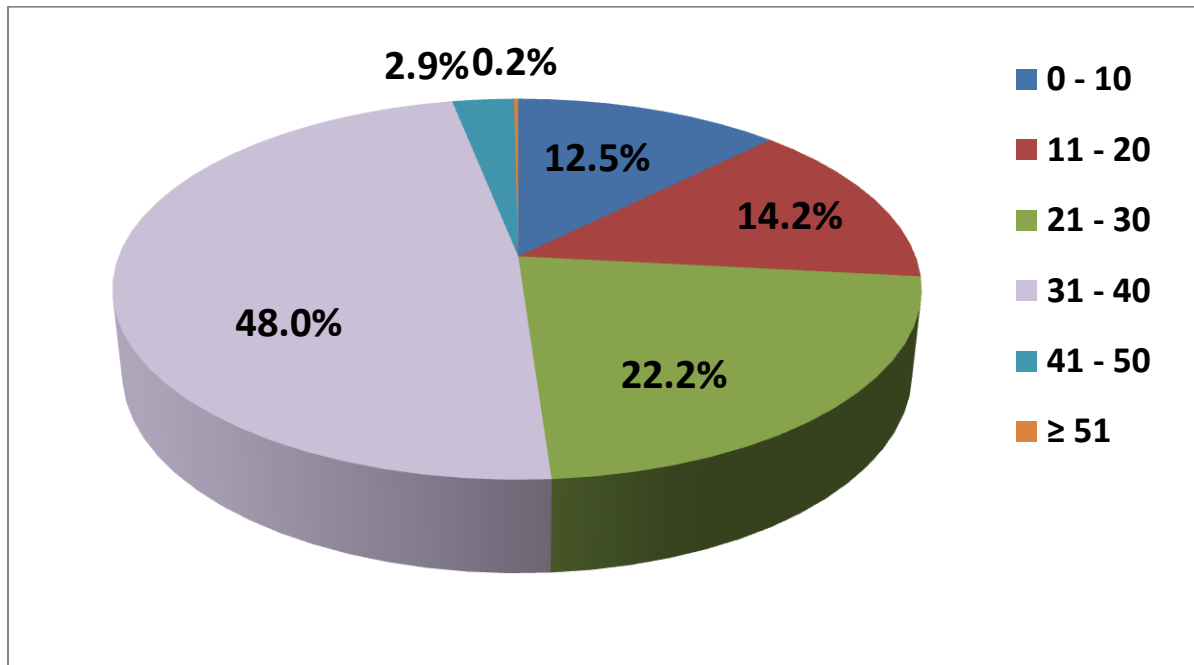


About two-thirds of respondents with an active license working in Florida report practicing in the county in which they reside. Approximately 18% of respondents report that they do not practice dental hygiene in their county of residence; 15% indicate that they occasionally practice in their county of residence.

Licensed Dental Hygienists Practicing in Florida – Productivity

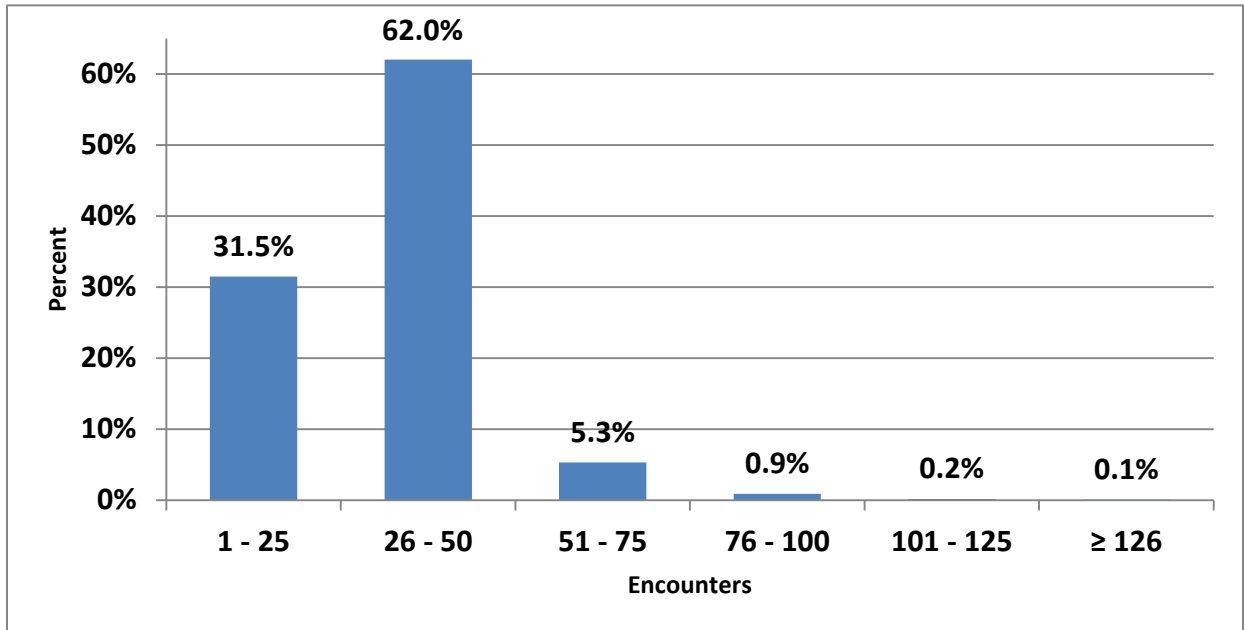
Figure 15 displays the distribution of respondents who practice in Florida by the number of hours they worked in a given week. Approximately 48.0% of respondents work 31-40 hours weekly, while only 2.9% work between 41 and 50 hours. Approximately 49.1% practiced dental hygiene part-time (less than 31 hours per week), including 26.7% who worked 20 hours per week or less.

Figure 15. Distribution of Dental Hygienists Practicing in Florida by Hours of Practice per Week



Among survey respondents who work in Florida full-time (greater than 30 hours per week), nearly a third report that they have 25 or fewer patient encounters per week. However, the majority of respondents indicate that on average they have 26 or more patient encounters per week: 62.0% reported seeing an average of 26-50 patients per week, 5.3% reported seeing an average of 51-75 patients per week and 1.2% reported seeing 76 or more patients per week (Figure 16).

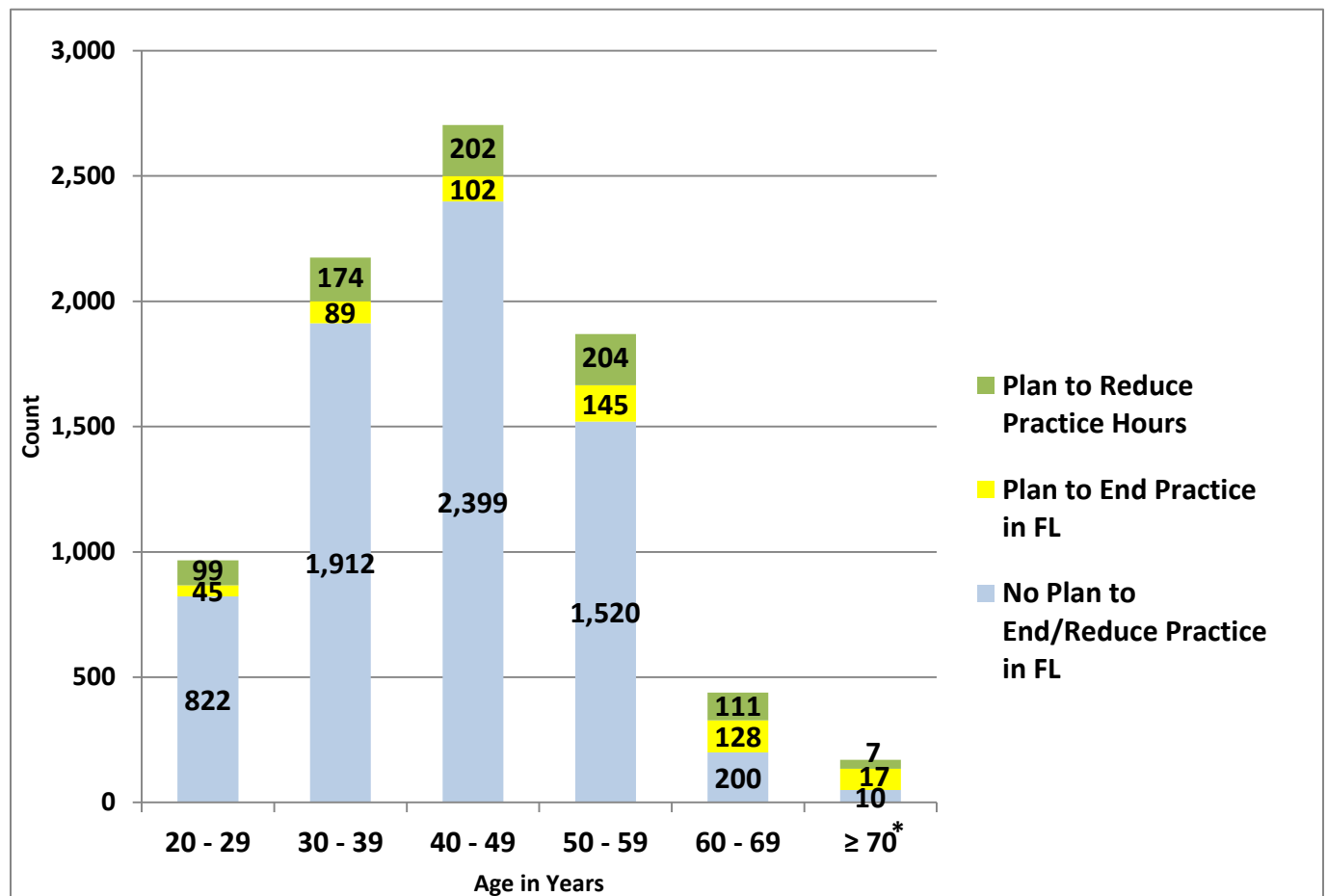
Figure 16. Average Number of Patient Encounters per Week among Dental Hygienists Practicing in Florida



Licensed Dental Hygienists Practicing in Florida -Retention and Attrition

Figure 17 shows career plans of respondents practicing in Florida over the next five years by age group. Overall, 526 respondents (6.4%) report that they plan to end their practice of dental hygiene in Florida within the next five years. Across most age groups, a much larger number of respondents 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 their practice in the state 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=145) and 60–69 years (n=128). Twenty-four respondents 70 years of age or older (of 34 total) indicate that they either plan to end their practice in Florida or plan to reduce their practice hours with the next five years.

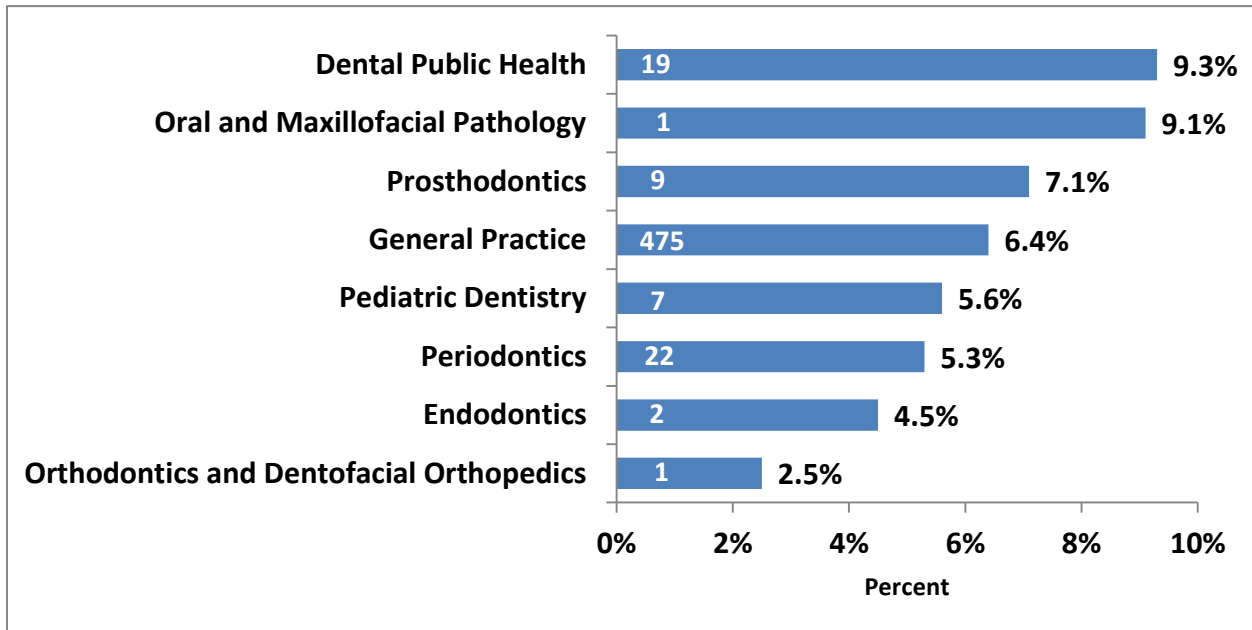
Figure 17. Career Plans of Dental Hygienists Practicing in Florida over the Next Five Years by Age Group



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

Figure 18 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 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 dental public health (9.3%), oral and maxillofacial pathology, (9.1%), and prosthodontics (7.1%).

Figure 18. Number and Percentage of Dental Hygienists Practicing in Florida Who Plan to Retire within the Next Five Years by Dental Practice Type



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, 24.7% do not practice in this state.

Differences between respondents who practice in Florida and those who do not are presented in Table 2. Nearly 54% of respondents who do not practice in Florida reside in another state compared to 1.1% of respondents who practice in Florida. Slightly more than half (50.8%) of respondents who do not practice in Florida report holding an out-of-state license compared to 15.5% of respondents who practice in Florida. Nearly three-quarters of respondents who received their dental hygiene degree from a Florida school practice in the state, as compared with about half 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 (13.0% vs. 18.0%) and have received a dental hygiene degree from a Florida school (51.6% vs. 72.0%).

Table 2. Profile of Dental Hygienists with an Active Florida License by Practice Status

CHARACTERISTIC	PRACTICE IN FLORIDA	DOES NOT PRACTICE IN FLORIDA
Average Age	43.0	45.3
% White	73.0	76.9
% Hispanic	18.0	13.0
% Currently resides out of state	1.1	53.6
% Licensed in another state	15.5	50.8
% Received dental hygiene degree from Florida school	72.0	51.6

Figure 19 presents the primary reasons for not practicing in Florida as reported by survey respondents with an active Florida license. Each respondent was asked to choose her/his main reason for not practicing in the state. The most frequently cited reason is practice of dental hygiene in another state (37.9%), followed by unemployed and seeking employment related to dental hygiene (15.8%). Six percent of respondents reported that they are retired, and 8.2% indicated that they are employed or self-employed in a position unrelated to dental hygiene. Unspecified reasons and reasons cited by less than one percent of respondents were grouped into the “Other” category (28.6%).

Figure 19. Main Reason Dental Hygienists with an Active Florida License Do Not Practice in the State

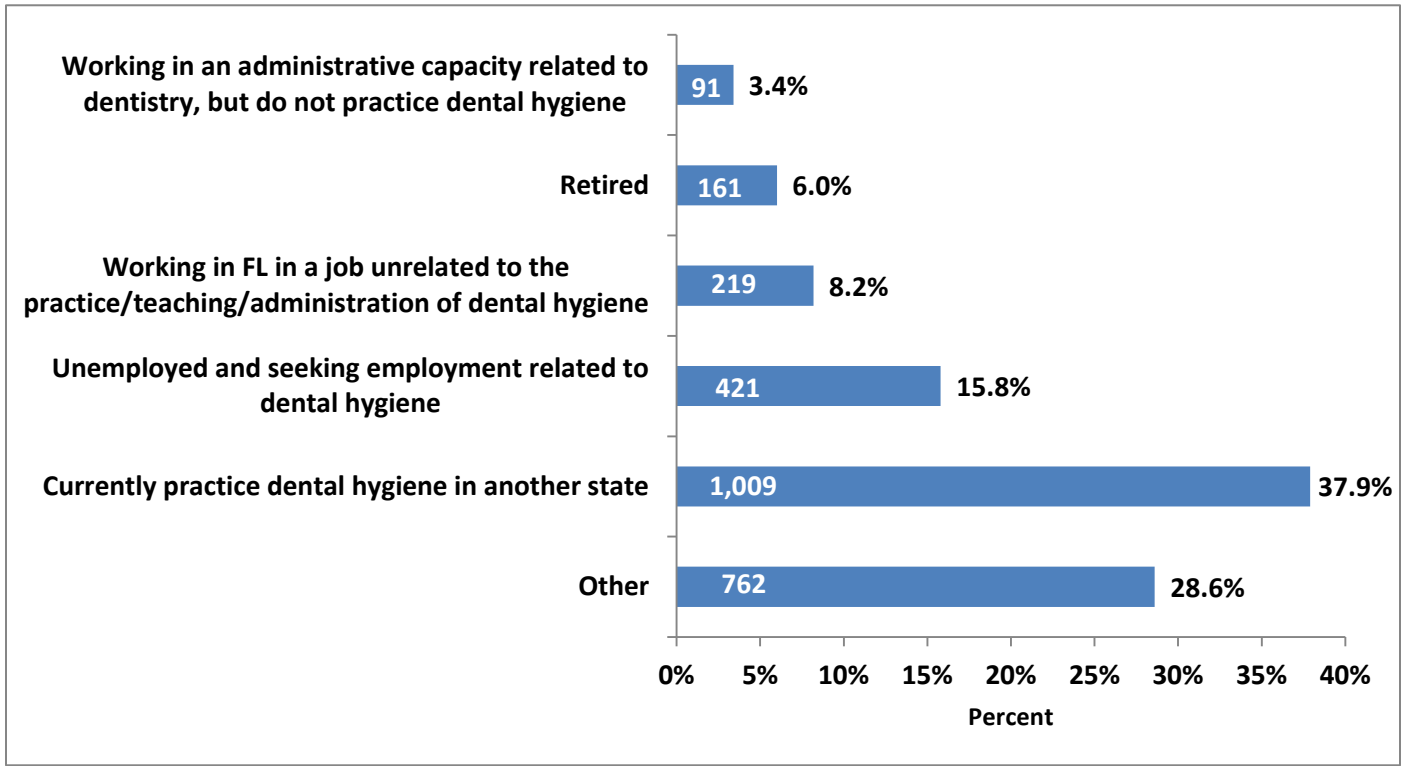
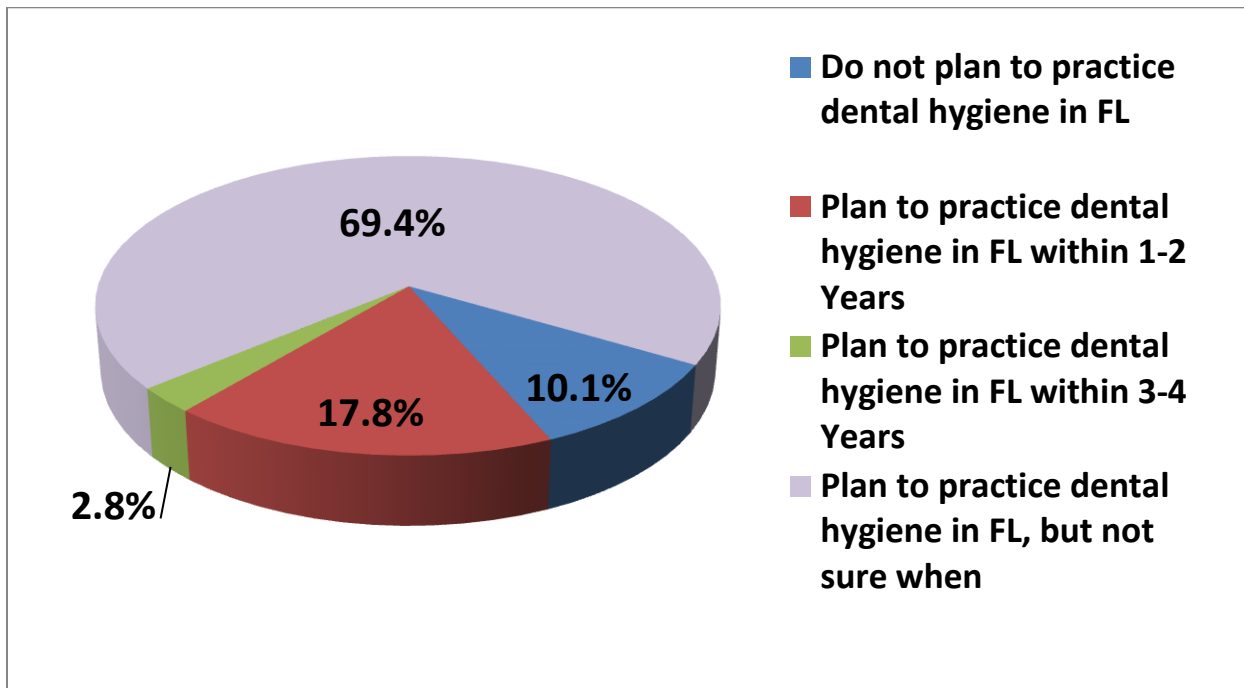


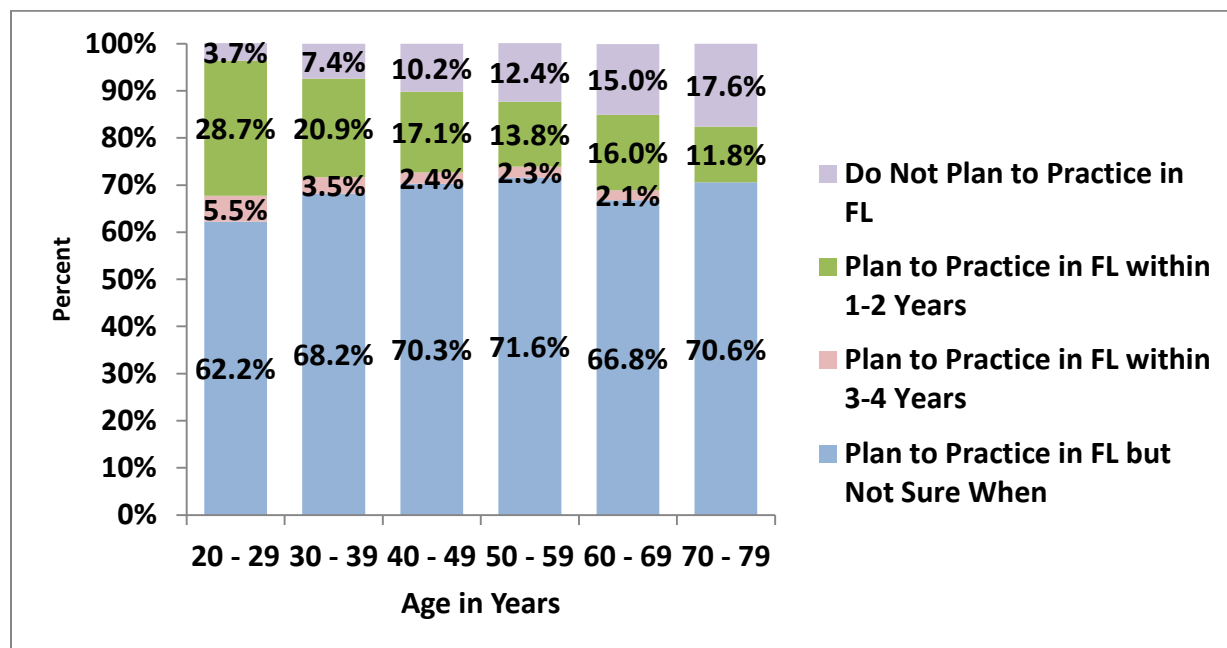
Figure 20 depicts future plans to practice in Florida among dental hygienists not currently practicing in the state. Nearly 70% of respondents with an active Florida license who do not currently practice in the state report that they intend to practice here at some time in the future. Among those with reported plans for future practice in Florida, 17.8% plan to practice in one to two years and 2.8% plan to practice in three to four years. About 10% of survey respondents indicate no future plans to practice dental hygiene in Florida.

Figure 20. Future Plans to Practice in Florida among Dental Hygienists Not Currently Working in the State



Age is closely related to plans for future practice in Florida (Figure 21). Among respondents having an active Florida dental hygiene license but not currently practicing in Florida, more than 60 percent of dental hygienists in all age groups report that they plan to practice in Florida at some undetermined time in the future. Over 20% of respondents aged 20-39 years and about 14-17% of respondents aged 40-69 years indicate that they plan to practice dental hygiene in Florida within 1-2 years. The percentage of respondents reporting that they do not plan to practice dental hygiene within Florida in the future rises across increasing age groups, from 3.7% for 20-29 year-olds to 17.6% for 70-79 year-olds.

Figure 21. Future Plans to Practice in Florida among Respondents Having an Active Florida License, but Not Currently Working in the State, by Age Group



Conclusions

The Florida Department of Health renews its commitment to review, assess, and critique health care access for all Floridians and will continue to support the efforts of the Public Health Dental Program. As detailed in the Health Practitioner Oral Healthcare Workforce Ad Hoc Committee Report (2009), efforts include an expanded capacity for graduate dental education, the recruitment and retention of Florida dental hygienists, and an increase in the diversity of the dental hygiene education application pipeline, which will lead to a more diverse workforce in underserved communities.

The successful implementation of dental workforce assessment and planning in this state has resulted in new information for policymakers on clinical practice, geographic location, and scope of practice for Florida dental hygienists. The continuing refinement, evaluation, and reporting of this data will assist in the state's effort to meet current and future dental workforce needs. Further, the department will continue to work with all health professional organizations to develop innovative patient-centered healthcare delivery systems.

Appendix A: Dental Workforce Survey for Dental Hygienists (2011-2012)

Governor Rick Scott, State Surgeon General Frank Farmer, and the Florida Legislature recognize the importance of assessing Florida's current and future dental workforce. Your responses, which constitute a public record, will be instrumental in shaping Florida's healthcare policies. We appreciate your time and effort in completing the questions below.

License Number _____

1. Do you hold an active dental hygiene license in any state or states **other than Florida**?

- Yes. Please specify all applicable states (drop-down list) _____
- No.

2. Please indicate the type of program qualifying you for a Florida dental hygiene license.

- Florida dental hygiene program. (Please answer 2a.)
- Out-of-state dental hygiene program. (Please answer 2b.)
- Foreign dental program. (Please answer 2c and 2d.)

2a. Please indicate the school(s) or program(s) from which you received your dental hygiene degree(s).

- Brevard Community College
- Broward 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 Florida (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

2b. If your training was in another state, please indicate the state(s) where you received your dental hygiene education. (Check all that apply.)

_____ (drop-down list)

2c. If you are a foreign-trained dental provider, please check the box which best describes your highest foreign degree.

- Dentist
- Medical Doctor
- Nurse
- Dental Hygienist
- Dental Technician
- Other

2d. If you are a foreign-trained provider, please indicate the country or countries where you received your dental hygiene education. (Check all that apply.)

(drop-down list)

- Argentina
- Australia
- Bahamas
- Brazil
- Canada
- China
- Colombia
- Cuba
- Egypt
- England
- France
- Germany
- Haiti
- India
- Ireland
- Israel
- Italy
- Japan
- Korea
- Mexico
- Nigeria
- Philippines
- Poland
- Portugal
- Russia
- Saudi Arabia
- Scotland
- South Africa
- Spain
- Ukraine

- Venezuela
- Vietnam
- Other Central or South American country
- Other African country
- Other Asian country
- Other European country
- Other Middle Eastern country
- Other country (unspecified)

3. Please indicate your highest level of dental hygiene education

- a. Certificate in Dental Hygiene
- b. Associate degree
- c. Baccalaureate degree
- d. Master's degree
- e. Other

4. Please indicate your highest degree or level of education

- a. Associate degree or equivalent
- b. Baccalaureate
- c. Masters
- d. Doctoral
- e. Other

5. How many years of active dental hygiene practice do you have?

_____ (Drop-down list of individual hours 1 through 20, "more than 20," and "not applicable.")

6. At present, do you practice dental hygiene in Florida or have you accepted employment for practicing dental hygiene in Florida?

- Yes. (If yes, proceed to question 7.)
- No. (If no, please answer 6a, 6b, and 6c.)

6a. The main reason you are not using your Florida license to practice dental hygiene in Florida is: (Choose only one.)

- I currently practice dental hygiene in another state.
- I currently practice 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 dental hygiene.

- I work outside Florida in an administrative capacity related to dentistry but do not practice dental hygiene.
- I am employed or self-employed in FL, unrelated to the practice, teaching, or administration of dental hygiene.
- I am employed or self-employed outside FL, unrelated to the practice, teaching, or administration of dental hygiene.
- I am currently unemployed and seeking employment related to dental hygiene.
- I am currently unemployed and seeking employment outside dental hygiene.
- I am currently retired.
- Other

6b. Do you currently reside in Florida?

- Yes.
- No.

6c. If you do not currently practice in Florida, do you plan to practice dental hygiene in Florida in the future?

- Yes, in 1-2 years
- Yes, in 3-4 years
- Yes, but I am not sure when.
- I do not plan to practice dental hygiene in Florida.

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

If you currently practice dental hygiene in Florida, please continue with the survey.

7. How many months did you practice 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

8. Approximately how many hours do you practice in a typical week? If you are employed to practice but have not yet started, select “not applicable.”

_____ (Drop-down list of individual hours 1 through 60, “more than 60,” and “not applicable.”)

- 8a. If you routinely practice fewer than 35 hours per week, please select the reason or reasons from the list below. Choose all that apply. Do not answer this question if you practice 35 or more hours per week.

- 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

9. 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 begun, select “not applicable.”

- 1 – 25
- 26 – 50
- 51 – 75
- 76 – 100
- 101 – 125
- More than 125
- Not applicable

10. Please indicate the primary type of practice where you are employed.

- General practice.
- Specialty practice. (Please answer 10a.)

10a. If you work in a specialty practice, please select the specialty type(s). (Check all that apply.)

- Dental Public Health
- Endodontics
- Oral and Maxillofacial Pathology
- Oral and Maxillofacial Radiology
- Oral and Maxillofacial Surgery
- Orthodontics and Dentofacial Orthopedics
- Pediatric Dentistry
- Periodontics
- Prosthodontics

11. Which of the following best describes your primary practice setting? (Select only one.)

- Office Practice-Solo Practice.
- Office Practice-Group Practice-Single Specialty.
- Office Practice-Group Practice-Multi Specialty.
- County Health Department.
- Community Health Center.
- Federally Qualified Health Center.
- State or Federal Correctional Facility Clinic.
- Other State Government Clinical Setting.
- Military Facility Clinic.
- VA clinic.
- Academic Institution.
- Indian Health Service
- Other

12. 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

13. Do you work for more than one employer or in more than one practice setting?

- Yes.
- No.

14. Are you currently seeking additional dental hygiene employment?

- Yes. (If yes, please answer 14a.)
- No.

14a. How many additional hours a week are you seeking?

- 1 – 4
- 5 - 8
- 9 - 12
- 13 - 16
- 17 - 20
- 21 - 24
- 25 or more

15. What kind(s) of difficulty (if any) have you experienced in finding a position as a 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
- Excessive commuting distance

- Other

16. Do you practice in the county where you reside?

- Yes, some of the time
- Yes, all of the time
- No

17. In what Florida county or counties do you practice dental hygiene? (You may select up to five counties.) Please indicate the number of hours typically dedicated to each location.

County _____ Hours _____ (0-10 Hrs Per Week, 11-20 Hrs Per Week, 21-30 Hrs Per Week, 31-40 Hrs Per Week, 41-50 Hrs Per Week, More than 50 Hrs Per Week)

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

- None. (Proceed to question 19.)
- 1-8 hours
- 9-16 hours
- 17-24 hours
- 25-30 hours
- 31-60 hours
- 61-120 hours
- More than 120 hours

18a. Where did you provide volunteer dental hygiene services in the past 24 months? (Check all that apply).

- In private office, on my own
- In private office, 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 event
- International charitable organization
- Other

19. Regarding your practice of dental hygiene in Florida in the next five years, which of the following apply? (Choose only one.)

- I plan to end my practice in Florida. (Please answer 19a.)
- I plan to reduce my practice hours but continue practicing in Florida.
- I have no plans to end or reduce my Florida practice within the next five years.

19a. If you plan to end your Florida practice in the next five years, what is your main reason? (Check only one):

- Retirement
- Non-hygienist employment in Florida
- Employment as a hygienist in another state or country
- Non-hygienist employment in another state or country
- Other

20. Do you speak any language other than English?

- Yes. If yes, please answer 20a.
- No.

20a. What foreign language(s) do you speak? (Select all that apply.)

- Spanish
- Portuguese
- French
- German
- Italian
- Russian
- Polish
- Creole
- Chinese (Mandarin or Cantonese)
- Japanese
- Korean
- Vietnamese
- Tagalog

- Arabic
- Hebrew
- Other Asian language
- Other European language
- Other African language
- Other Middle Eastern language
- Other language (unspecified)

Thank you for completing this survey.

APPENDIX B: METHODOLOGY

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, 2012. The Florida Department of Health (DOH) 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 a census of Florida's dental workforce to better inform and shape public healthcare policy and plan for future workforce needs. To supplement information obtained from the survey, additional information from the Florida Legislature's Office of Economic and Demographic Research and the Florida Department of Health, Division of Medical Quality Assurance, was incorporated into the analysis. 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 DOH helps to screen respondents by identifying dental hygienists who are ineligible to practice. Only three categories represent individuals who responded to the survey and were eligible for active practice in Florida: Clear, Delinquent and Obligations. At the time of this survey there were 8,337 dental hygienists with Clear Active Status, two with Delinquent Active Status and one with Obligations Active status. The remainder are dental hygienists with a license status that has changed since the survey (*e.g.*, because of death) or those with renewal of non-active licenses (*e.g.*, inactive licenses, which also are subject to renewal requirements). 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 represent approximately 89% of all Florida dental hygienists with active licenses as of the time of this report.

Survey respondents with an active Florida license constitute a large representation of the population of Florida dental hygienists. The survey's overall high response rate (89%) for active licensed Florida practitioners, however, does not imply a high completion rate. The actual number of required questions varies 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 focused on 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 20 items regarding the education and practice characteristics of respondents. Additional demographic information was obtained from the DOH Division of Medical Quality Assurance. Descriptive statistical techniques were used to provide the characteristic profiles of respondents using SPSS Version 21. Marginal tabulations are reported for the summary descriptions and relationships presented throughout the report.