



Wisconsin Dentist Workforce Report

Wisconsin Oral Health Program • 2020

Authors

Lexi Davis, MPH
Mai Ka Hang, MPH

Acknowledgments

This project was funded by Delta Dental of Wisconsin Foundation. The Oral Health Program would like to thank the University of Wisconsin Survey Center for survey administration support and the Wisconsin Department of Safety and Professional Services for providing dentist licensure data.

Contact

For questions regarding this report, contact [Mai Ka Hang](#).

For additional information on the Wisconsin Oral Health Program, please visit this [website](#).

Suggested Citation

Davis L, Hang M. Wisconsin Dentist Workforce Report, 2/23/2022. Wisconsin Oral Health Program, Wisconsin Department of Health Services. Publication number P-03204.

Table of Contents

| | |
|---|----|
| Executive Summary | 4 |
| Introduction | 5 |
| Methods | 6 |
| Findings | 7 |
| Discussion | 14 |
| References | 16 |
| Appendices | |
| Data Tables | 17 |
| Wisconsin Dental Workforce Survey | 25 |

Executive Summary

While Wisconsin has made significant progress in improving the oral health status of Wisconsinites, oral disease continues to be a key health concern for the state. Oral health disparities exist throughout Wisconsin varying by race or ethnicity, gender, socioeconomic status, and geographic location. As we explore ways to improve access for underserved areas and provide culturally competent oral health care, it is helpful to examine access to providers. The American Dental Association estimates that nationally, there are 61 dentists working in dentistry per 100,000 population and 57 per 100,000 in Wisconsin (2020). This indicates that Wisconsin has lower than average overall supply of dentists. Understanding the characteristics of Wisconsin's dentists, including their practice patterns and perspectives on access, is essential to determining whether oral health needs are being met and likely to be met in the future.

This report summarizes findings from a 2018 workforce survey of Wisconsin licensed dentists administered by the Wisconsin Department of Health Services and Delta Dental of Wisconsin Foundation. The survey consisted of questions related to demographics, practice characteristics, retention and attrition, and services to vulnerable populations.

Key Findings

- Key demographics:

The majority of dentist respondents are white (89%) and male (71%). Findings indicate **the dentist workforce is not representative of Wisconsin's racial and ethnic minority or female populations.** The majority (75%) of dentists are aged 40 or older. Nearly 35% are aged 60 or older.

- Retention and attrition forecast:

Nearly 30% of the workforce is leaving in the next five years, including 34% of Medicaid/BadgerCare+ (MA/BC+) providers. **Over 50% of MA/BC+ providers plan on leaving the workforce within the next 10 years.**

- Practice settings:

The majority of dentist respondents provide care in private practices (89%) compared to Federally Qualified Health Centers (4%) and other non-traditional settings (e.g., government or Tribal health setting, safety-net clinic, etc.)

- Service to vulnerable populations:

Fewer dentists serve vulnerable populations with MA/BC+, **only 29% of dentists report serving MA/BC+ patients.** Populations with other special health care needs are accepted by more dentists than the MA/BC+ population, but less than the general population.

Introduction

A variety of oral health workforce challenges have led to disparities in access to oral health care for those living in certain geographic locations, and for people of color and low socioeconomic status populations. Wisconsin's population is about 5.8 million people, making it the 20th most populous state (U.S. Census Bureau, 2019). The total population, however, does not tell the whole story. Wisconsin has several urban centers, but also substantial rural areas, thus different approaches to optimizing the oral health workforce are needed in different parts of the state. While the majority of Wisconsin residents identify as White, there are multiple other races and ethnicities represented within the state, many of whom may never have had the opportunity to see a dentist who looks like them or understands their cultural practices. The history of oppression of Wisconsin's 11 federally-recognized American Indian tribes further complicates the meeting of oral health needs among these communities.

In 2017, there were about 4,300 total dentists with current licenses to practice in Wisconsin. The number of newly-licensed dentists has been increasing annually from 132 in 2007 to 266 in 2017. A limitation in the state's oral health workforce data is that Wisconsin Department of Safety and Professional Services (DSPS) collected a single address for dentists, without specifying practice location. Thus, it is unknown how many dentists licensed to practice in Wisconsin are actually doing so; in fact, only 3,431 of the licensees report addresses in the state. Furthermore, because workforce data are not available with a practice address, it is unclear which counties or transit areas truly have dental professional shortages, since people may live and practice in different places. In addition, the workforce data are missing demographics for almost 40% of the workforce. These data deficits contribute to a lack of understanding of which professionals are available to meet specific community needs. For example, Wisconsin is home to several concentrations of Hmong populations. Without knowing if there are dentists available to meet the language and cultural needs of these individuals, there is a lack of situational awareness about access for such populations. There is a further concern regarding the capacity of Wisconsin's oral health workforce to adequately meet the needs of low-income populations in many communities across the state.

Because no comprehensive data regarding the attributes of Wisconsin's oral health workforce were available at that time, the Oral Health Program in the Division of Public Health developed a survey to identify relevant trends and developments. This report summarizes findings from this survey (Appendix B), which was made available in 2018 to all Wisconsin-licensed dentists. The report highlights a number of workforce-related issues such as personal demographics, practice settings, patient populations served, and geographic distribution.

Methods

The Wisconsin Oral Health Program and Delta Dental Foundation of Wisconsin developed survey questions, and the University of Wisconsin Survey Center (UWSC) provided technical review and formatting of the survey. A list of licensed dentists for 2017 was obtained from DSPS containing dentist licenses and addresses in Wisconsin. The UWSC administered the survey in June 2018 to 3,431 dentists with active licenses in Wisconsin (3,300 of those cases had an email address), via both postal mail and internet.

Respondents completed the survey online, or mailed completed surveys to the UWSC in the postage paid envelope provided, where trained data entry operators entered the responses into the programmed web instrument, Qualtrics. The survey included questions on the individual dentist's demographics, practice characteristics, services to vulnerable populations, and intention to continue practicing in Wisconsin. The Wisconsin Dental Association helped promote the survey via their electronic newsletter.

The oral health epidemiologist completed analysis in the statistical software, SAS 9.4, which included counts, frequencies, and cross-tabulation analyses. Overall, the survey had a 61% response rate. When possible, survey data was compared to known DSPS and Wisconsin Medicaid data.

Limitations

Although the list of licensed dentists from DSPS had addresses in-state, dentists were able to provide any address, which means for some, it was their practice address and for others it was their home address. The DSPS renewal process did not specifically ask for practice location. Therefore, the survey data may not represent true availability and access of care. When asked about number of hours worked, some respondents reported clinical hours only instead of all hours worked in the dental field. Time spent on administrative duties and other non-patient related duties may not have been reported.

Collecting information through self-report surveys has its limitations. Surveys are often subject to biases that affect how respondents answer certain questions. In this case, it is possible answers to certain questions may not absolutely reflect a provider's availability and future intent. Additionally, not all questions were answered by all respondents; therefore, the number of responses may vary for each question.

Data were not collected for other dental health professionals, such as dental hygienists and dental assistants, thus a comprehensive review of the dental workforce was not completed. Additionally, the survey did not include questions related to dental specialty practice. These data limitations may result in an incomplete picture of the evolving workforce and the educational and training needs across the state.

Comparisons were made when possible to a previous dentist survey report by Byck et al. (2002). However, the ability to analyze trends over these two surveys was limited due to changes in survey questions and limited access to data sets.

Findings

The dentist workforce survey had a 61% response rate (2,093 surveys completed out of the 3,428 surveys delivered). The following analyses focus on the 1,848 respondents that hold an active Wisconsin license, and file their licenses with a Wisconsin address.

Demographics of Respondents

Data on the characteristics and trends of the current dentist workforce in Wisconsin is essential to inform initiatives and improvements related to the expansion of oral health care access and dental workforce planning. Data on the demographics of the current dentist workforce, including race or ethnicity, gender, and age follows.

Race and Ethnicity

The majority of respondents reported as White (89%), which is comparable to U.S. Census Bureau data on Wisconsin’s White population (87%). Figure 2 provides an overview of Wisconsin’s overall population broken down by race or ethnicity. The survey results indicate that the dentist workforce does not entirely reflect the diversity of the state’s populations. Due to a small number of responses from dentists that reported being from a racial or ethnic minority group, the data are paired down to four groups—Hispanic, Asian or Hmong, White, and Other (American Indian or Alaskan Native, Black or African American, Native Hawaiian or other Pacific Islander, multiple races, and respondents whom prefer not to answer) in the latter portion of the report.

Figure 1. Race or Ethnicity of Responding Dentists

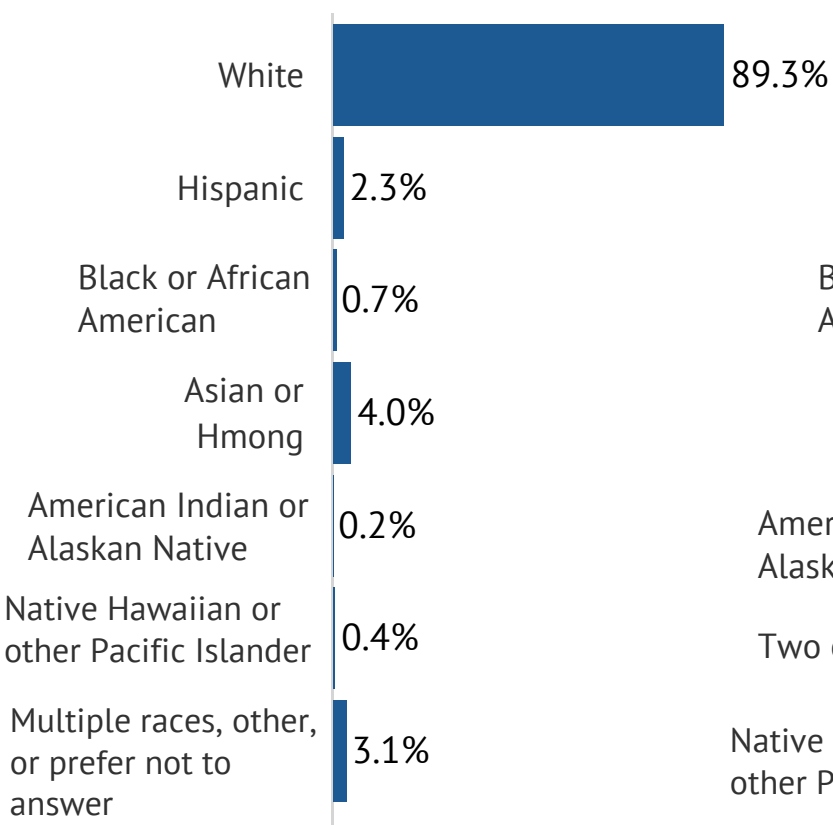
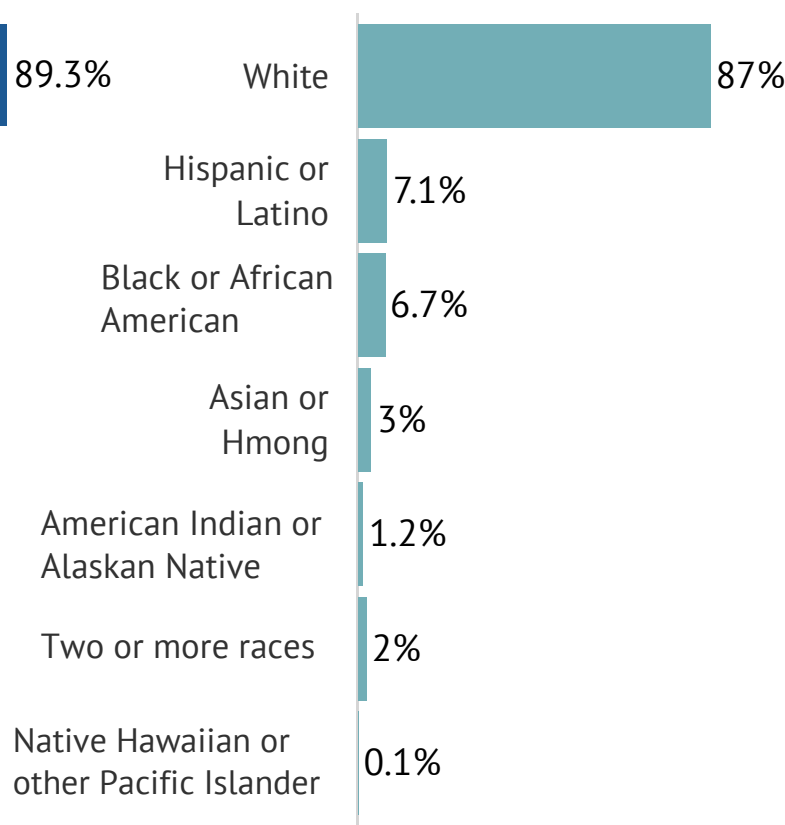


Figure 2. Race or Ethnicity of Wisconsin Residents

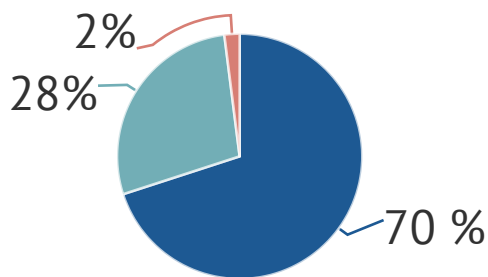


Compared to the Byck et al. (2002) dentist survey, small increases were seen in the number of dentists in most of the racial and ethnic categories, but the total percentage of the workforce by race and ethnicity is largely unchanged.

Gender

Of the respondents, 70% were male, 28% were female, and 2% identified as "other" or preferred not to answer. Females make up 50% of Wisconsin's current population. Compared to 2001 survey responses, the total percentage of the workforce by gender is largely unchanged (Byck, et al., 2002).

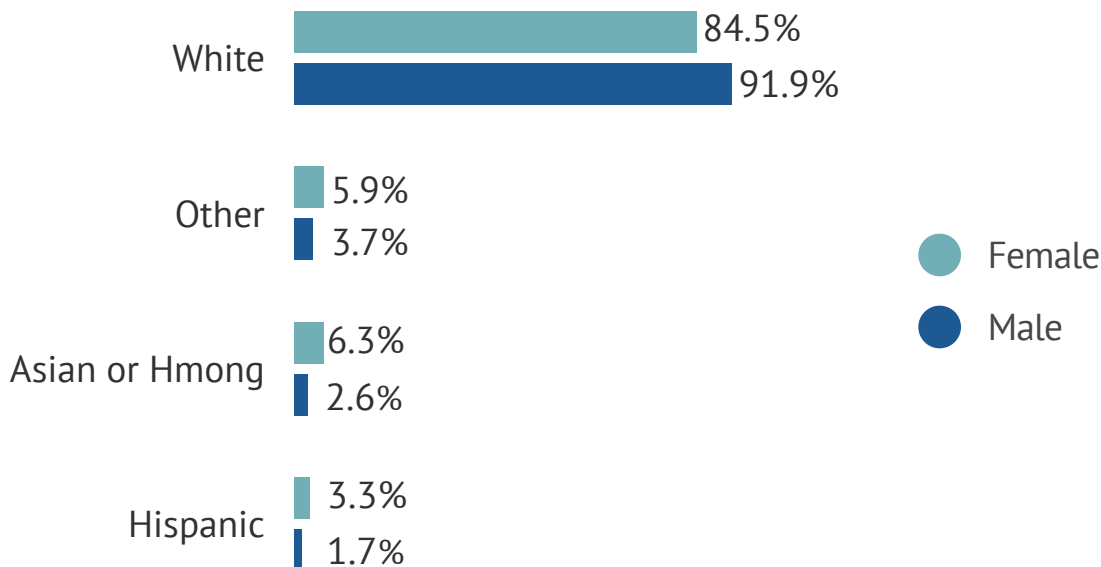
Figure 3. Gender of Wisconsin Dentists



● Male ● Female ● Other or prefer not to answer

When looking at gender and the race or ethnicity of responding dentists, there were slightly more females than males in the racial and ethnic minority groups.

Figure 4. Gender of Wisconsin Dentists by Race or Ethnicity

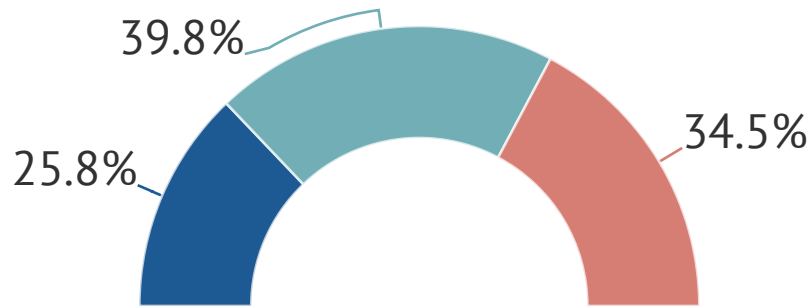


Note: Other includes American Indian or Alaskan Native, Black or African American, Native Hawaiian or other Pacific Islander, and Other race or ethnicity.

Age

Age is a critical factor in the analysis of the state's dental workforce. Figure 5 lists the distribution of respondents by age group. Over one third of respondents are 60 years and older.

Figure 5. Age Distribution of Wisconsin Dentists



● 18 to 39 years ● 40 to 59 years ● 60 years and over

Additional findings by age:

- Non-white dentists fall primarily within 18–39 and 40–59 age ranges.
- The majority of dentists in the 40–59 and 60+ age ranges identify as white and male.
- Females make up just over half (53%) of providers in the youngest age group.

Retention and Attrition

Among the respondents, about 30% planned to leave the profession in the next five years. This result aligns closely with the aging workforce described in Figure 5 (34.5%). When looking at responses by dentist race or ethnicity and gender:

- A higher percentage of white dentists (32%) are planning to leave the workforce in five years or less compared to Hispanic (12%), Asian or Hmong (10%), and other race or ethnicity (26%).
- The majority of Hispanic (67%) dentists plan to remain in the workforce for more than 10 years.
- The majority of female dentists (64%) plan to remain in the workforce for more than 10 years.

Of those planning to leave the workforce, retirement was the top reason (91%) followed by planning to relocate, health reasons, and other family considerations.

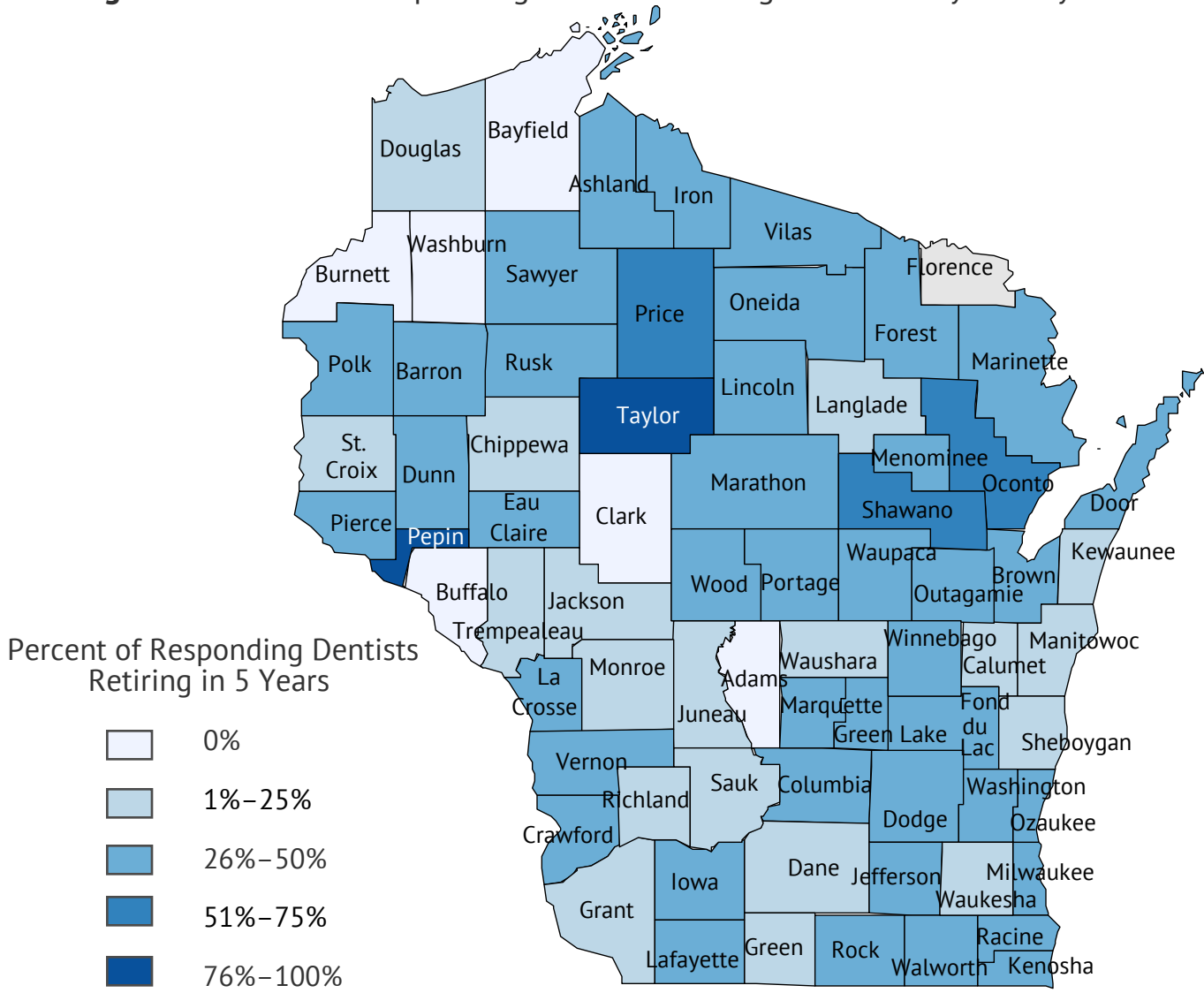
The majority of respondents planning to leave the workforce in the next 5 years work in a solo office practice (54%) or group office practice (32%).

About 29% of the total respondents serve MA/BC+ patients. Out of that group, 34% plan to retire or leave practice within the next five years, and over 50% of providers plan to leave within the next 10 years.

Based on the survey findings, two counties, Taylor and Pepin, would potentially lose their dentists upon the dentist's retirement. However, it is important to note that not all

dentists responded to the survey, resulting in an inaccurate representation of the actual number of providers in each county.

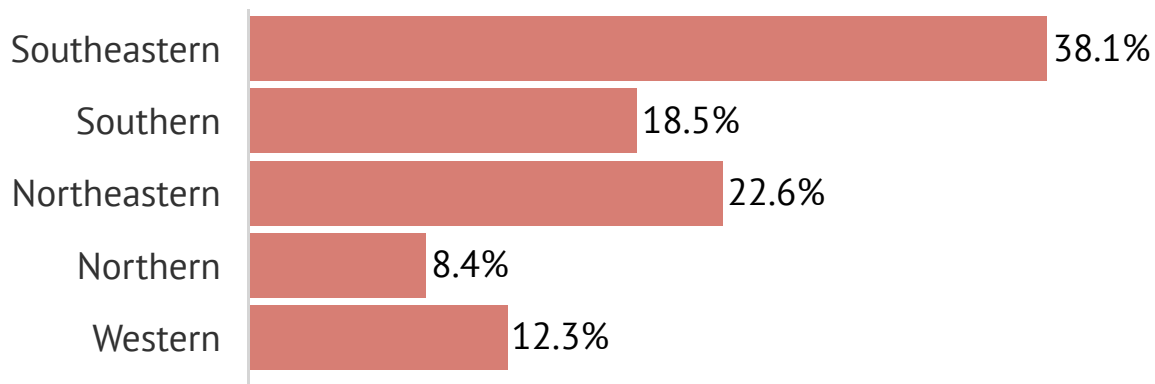
Figure 6. Percent of Responding Dentists Retiring in 5 Years by County of Practice



Geographic Distribution of Dentists

The majority of respondents reported practicing in the southeastern and northeastern regions of the state. The fewest dentists reported practicing in the northern and western regions. A majority of dentists (77%) report working in primarily urban counties.

Figure 7. Geographic Distribution of Responding Dentists by Division of Public Health Regions



Qualitative comments in survey responses indicated geographic-specific workforce issues:

- There is a lack of incentive for dentists to work and live in remote, rural, underserved areas.
- The northern region of the state will see a shortage of providers due to eventual retirements.

Practice Characteristics

Practice Arrangement

The most common practice arrangement reported by surveyed dentists was sole owner (41%), followed by employee (29%), co-owner (25%), independent contractor (3%), and other (2%).

Practice Type

The majority of respondents (89%) reported working in an office practice, which includes solo practice, group single specialty, or group multi-specialty. Nearly 4 percent of respondents reported working for a Federally Qualified Health Center (FQHC).

Very few respondents indicated working in a non-traditional dental practice such as local health department (0.05%), tribal health department (1%), or other state government setting (0.2%). A higher percentage of non-White dentists (20% of Asian or Hmong and 24% of Black or African American, American Indian or Alaska Native, and other) are more likely to work in a safety-net, public health, or other non-traditional setting compared to their counterparts.

Practice Location

Practice location is an important factor in considering the distribution of dentists practicing in Wisconsin and patients' access to care. Similar results are seen when evaluating responses across dentists' reported gender and race or ethnicity. The three most common influences in deciding where to practice are:

- Family considerations (31%)
- Geographic location (29%)
- Desire to work in their own community (14%)

One difference seen among Asian or Hmong dentists is that the opportunity to serve vulnerable, low-income populations, second only to family considerations, is an important factor in their selected practice location.

Hours Worked

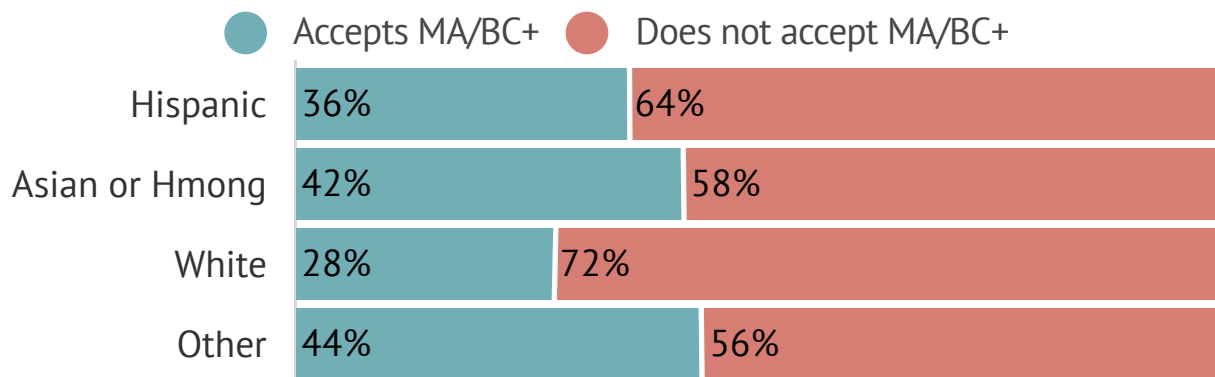
The majority of respondents (50%) reported working between 30–39 hours per week, and 30% reported working 40 or more hours per week. However, this may not be an accurate representation of the amount of dentists working full time. It is possible that some dentists only reported clinical hours (30–32 clinical hours is considered full time in dentistry). In the qualitative responses, many reported they spend remaining hours on administrative duties.

Dentist Enrollment in Medicaid

Of the responding dentists, only 29% are MA/BC+ providers. This number is down from a previous survey conducted in 2001, when 42% of responding dentists reported treating MA/BC+ patients (Byck et al., 2002). Wisconsin Medicaid data from 2018 finds approximately 1100 dentists (26%) in the state are enrolled as MA/BC+ providers.

There was not a significant difference in percentage of dentists who are MA/BC+ providers between gender, but a higher percentage of non-white dentists are MA/BC+ providers. Wisconsin Medicaid provider data does not include detail on race or ethnicity of enrolled MA/BC+ providers.

Figure 8. MA/BC+ Enrollment Status of Providers by Race or Ethnicity



Note: Other includes American Indian or Alaskan Native, Black or African American, Native Hawaiian or other Pacific Islander, and Other race or ethnicity.

Of the responding dentists who serve MA/BC+ patients, 58% are accepting new MA/BC+ patients. The main reason for not accepting MA/BC+ patients is **low compensation** (reported by 68% of dentists). The other three most common reasons included:

- Other (12%)
- Concerned about no shows (5%)
- Too much paperwork (5%)

Similar results on the main reasons for not accepting MA/BC+ patients are seen when responses are broken down by reported gender and race or ethnicity.

Some respondents provided additional comments about the selection of low compensation as the main reason for not accepting MA/BC+ patients. Challenges related to low compensation included:

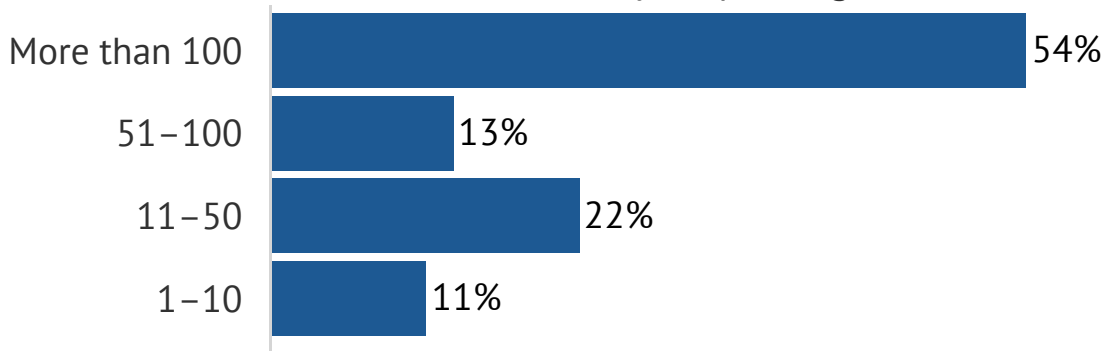
- Payment denials
- Issues with pre-authorization
- Compensation not covering overhead, operating, or technology costs

Qualitative responses also indicated many dentists had difficulty selecting only one reason for why they do not serve MA/BC+ patients, and multiple factors contributed to the decision. Many respondents who do not accept MA/BC+ patients reported that they used to, but do not any longer due to many of the barriers listed above.

While dentists were not specifically asked about whether they do volunteer or charity care, many who indicated that they do not accept MA/BC+ patients noted in the comments that they do some volunteer or charity care.

Of the dentists who served MA/BC+ patients within the last year, just over half saw more than 100 patients. This result is close to 2018 Wisconsin Medicaid data finding that 47% of enrolled dentists saw more than 100 patients.

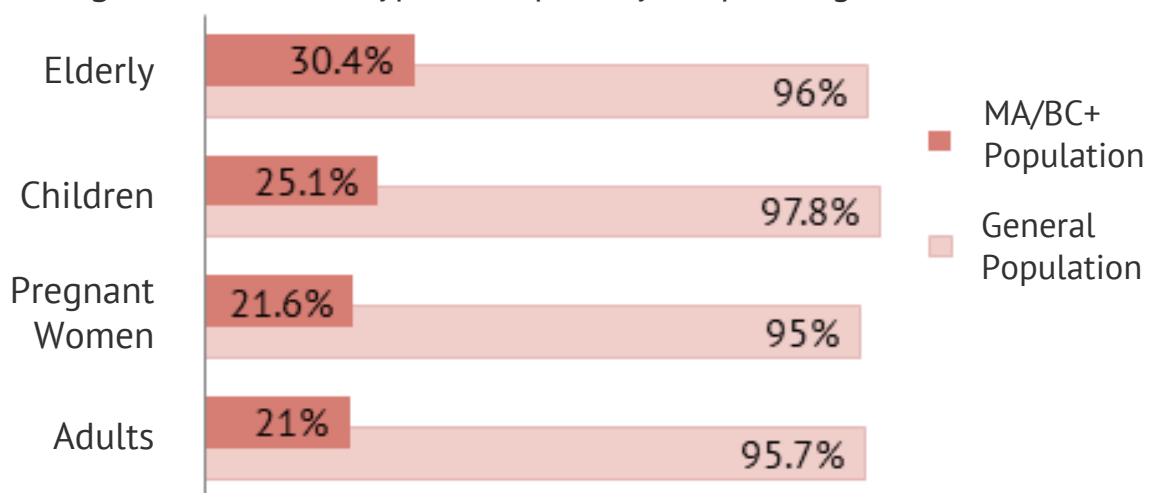
Figure 9. Number MA/BC+ Patients Served by Responding Dentists in the Last Year



Access to Care for Underserved Populations

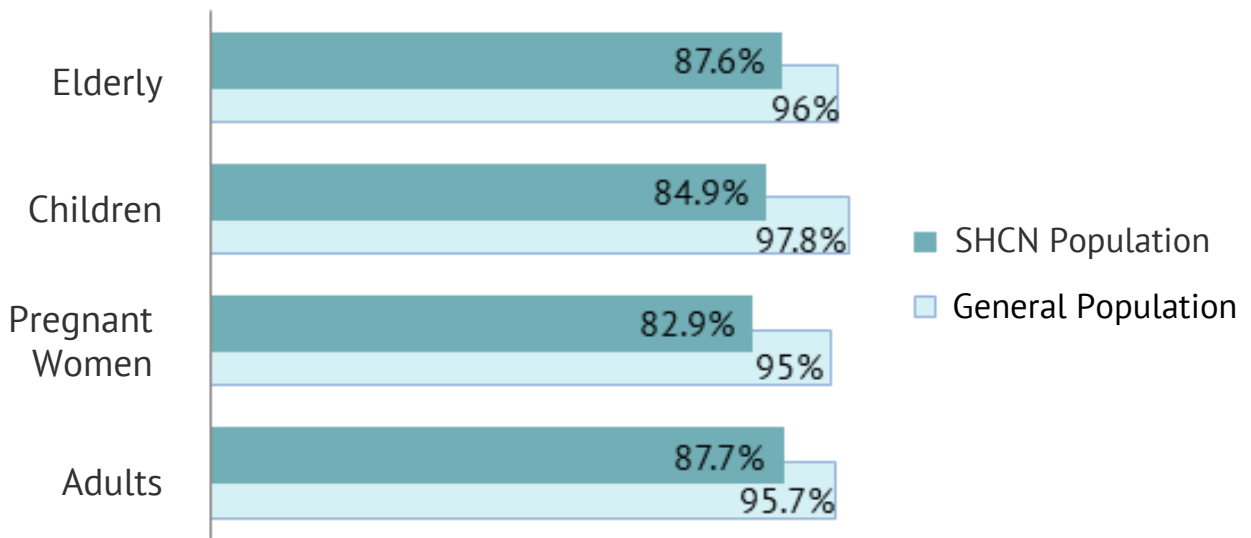
Access to oral health care is an increasing concern in Wisconsin, especially among underserved populations. Wisconsin Medicaid data from 2018 shows only 36% of MA/BC+ members received at least one dental service. Additionally, Wisconsin has 67 low-income population dental health professional shortage areas (DHPSAs) and 80 facility DHPSAs (Wisconsin Office of Rural Health, 2020). The low-income DHPSAs are widely distributed throughout the state, in 57 of 72 counties, and are located in both urban and rural areas. The facilities are comprised of correctional facilities, Federally Qualified Health Centers (FQHCs), tribal health centers, and rural health clinics. The lack of utilization among those with MA/BC+ is a reflection of a lack of access to dentists who are continuously enrolled MA/BC+ providers.

Figure 10. Patient Types Accepted by Responding Dentists



Dentists report accepting patients with special health care needs (SHCN) such as physical or mental disabilities at a much higher rate, about 86 percent, compared to MA/BC+ patients, about 36 percent. However, there is a possibility for overlap in the data as some patients with SHCN may also be enrolled in MA/BC+.

Figure 11. Patient Types Accepted by Responding Dentists



Discussion

This report analyzed information gathered from Wisconsin licensure data and a survey of dentists. Data on the characteristics, trends, and motivations of the dentist workforce is essential to inform priorities related to oral health care access and can be used to develop workforce-related initiatives (e.g., training and recruitment of providers in underserved areas of the state).

This report can additionally provide policymakers and other stakeholders with relevant data regarding provider demographics, clinical practice, geographic location, and service to underserved populations (MA/BC+ and SHCN).

Demographic data from survey results indicates that the dentist workforce does not reflect the demographic diversity of the population of Wisconsin, particularly among women and minority providers. Racial/ethnic diversity in the health care workforce is an effective strategy in reducing health disparities and positively impacts quality of care among minority populations (Jackson and Gracia, 2014).

Recommendation: Support better data collection and monitoring. Although Wisconsin is working towards a system to collect comprehensive data on its dental workforce, some data continue to be optional. DSPS should consider a requirement for all applicants to provide information such as demographics (race or ethnicity, gender), practice setting, and practice address when applying for a new or renewed Wisconsin license. The quality of data collected would serve as a resource to monitor workforce trends over time.

Survey results also provide evidence that much of the current workforce will be retiring or leaving practice within the next 5 years, including a significant number of MA/BC+ providers. Very few dentists indicated working in non-traditional dental practices. This is significant because many underserved populations, including racial and ethnic minority groups, those with low socioeconomic status, or those without health and/or dental insurance coverage, rely on Federally Qualified Health Centers and other non-traditional dental practice locations for their oral health care needs.

Recommendation: Invest in targeted workforce and recruitment.

Diversity in the oral health workforce plays a critical role in improved health care access and patient outcomes. Less than 11% of dental respondents are of racial and ethnic minority groups. Reaching children early is key in helping them see dentistry as a career option. A strategy is partnering with minority community organizations to introduce oral health careers to students at a young age through education and mentorships.

Low compensation and other issues related to reimbursement surfaced as top reasons most dentists (or their employers) will not accept MA/BC+ patients. As of July 2021, the Wisconsin state budget recently passed a statewide increase in Medicaid reimbursement for dental providers. Results assessing the impact of the increase in Medicaid reimbursement rates in Wisconsin on access to care will be important to learn from and inform future changes to the program in the state.

Data from this study can inform workforce development efforts related to investments in the current workforce, incentives to work in rural, underserved communities,

and recruitment of recent Marquette University School of Dentistry graduates. In April 2021, the Wisconsin State Senate approved a bill that currently awaits action by the Assembly, which would allow dental therapists to practice in Wisconsin. Dental therapists are mid-level dental professionals who perform certain preventive and restorative procedures under the supervision of a dentist. The addition of dental therapists can be one strategy to counteract the issues seen in the oral health workforce by increasing the number of providers for underserved populations and creating a more culturally diverse workforce. Recommendations for future studies of the dental workforce should include data collection around other dental health professionals, such as dental hygienists and dental therapists if licensed, to better inform efforts to meet the current and future dental workforce needs of the state.

References

Byck, G.R., Russinof, H.J., & Cooksey, J.A. (2002). Wisconsin Dental Workforce Report 2001. University of Illinois at Chicago, Illinois Regional Health Workforce Center. Retrieved from <https://www.ihrp.uic.edu/files/WI%20Dentist%20Workforce20Report.pdf>.

Jackson, C. S., & Gracia, J. N. (2014). Addressing health and health-care disparities: the role of a diverse workforce and the social determinants of health. *Public health reports (Washington, D.C.: 1974)*, 129 Suppl 2(Suppl 2), 57–61. <https://doi.org/10.1177/00333549141291S211>

United States Census Bureau (2019). QuickFacts Wisconsin. Retrieved from <https://www.census.gov/quickfacts/WI>.

Wisconsin Department of Health Services, Division of Medicaid Services and Oral Health Program (2018). Retrieved from the WI Environmental Public Health Tracker, <https://dhsgis.wi.gov/DHS/EPHTracker/#/map>.

Wisconsin Office of Rural Health (2020). Health Professional Shortage Area: Dental Health Care. Retrieved from <http://worh.org/library/health-professional-shortage-area-dental-health-care-0>.

Appendix A. Data Tables. All data tables refer to dentists responding to this survey.

Table 1. Race or ethnicity, gender, and age distribution

| Variable | Percent |
|--------------------------|---------|
| Race or Ethnicity | |
| Hispanic | 2.1 |
| Asian or Hmong | 4.0 |
| White | 89.3 |
| Other | 4.4 |
| Gender | |
| Male | 71.0 |
| Female | 27.3 |
| Age | |
| 18 to 39 | 25.8 |
| 40 to 59 | 39.8 |
| 60 and over | 34.5 |

Note: Other includes American Indian or Alaskan Native, Black or African American, Native Hawaiian or other Pacific Islander, Other.

Table 2: Race or ethnicity by gender

| Race or ethnicity | Female | | Male | |
|-------------------|--------|---------|-------|---------|
| | Count | Percent | Count | Percent |
| Hispanic | 18 | 3.3 | 26 | 1.7 |
| Asian/Hmong | 34 | 6.3 | 39 | 2.6 |
| White | 459 | 84.5 | 1377 | 91.9 |
| Other | 32 | 5.9 | 56 | 3.7 |

Table 3: Race or ethnicity by age

| Race or ethnicity | Age 18 to 39 | | Age 40 to 59 | | Age 60 and over | |
|-------------------|--------------|---------|--------------|---------|-----------------|---------|
| | Count | Percent | Count | Percent | Count | Percent |
| Hispanic | 11 | 26.2 | 27 | 64.3 | 4 | 9.5 |
| Asian/Hmong | 31 | 42.5 | 34 | 46.6 | 8 | 11 |
| White | 406 | 25.1 | 620 | 38.3 | 595 | 36.7 |
| Other | 24 | 30.4 | 39 | 49.4 | 16 | 20.3 |

Table 4: Age by gender

| Age | Female | | Male | |
|-------------|--------|---------|-------|---------|
| | Count | Percent | Count | Percent |
| 18-39 | 256 | 53 | 227 | 47 |
| 40-59 | 216 | 29.1 | 527 | 70.9 |
| 60 and over | 70 | 8.5 | 753 | 91.5 |

Table 5: Years left in workforce

| Years left in workforce | Count | Percent |
|-------------------------|-------|---------|
| 5 years or less | 558 | 30.2 |
| 6 to 10 years | 364 | 19.7 |
| More than 10 years | 801 | 43.4 |
| Don't know | 123 | 6.7 |

Table 6: Race or ethnicity by years left in workforce

| Race or ethnicity | 5 years or less | | 6 to 10 years | | More than 10 years | | Don't know | |
|-------------------|-----------------|---------|---------------|---------|--------------------|---------|------------|---------|
| | Count | Percent | Count | Percent | Count | Percent | Count | Percent |
| Hispanic | 5 | 11.9 | 6 | 14.3 | 28 | 66.7 | 3 | 7.1 |
| Asian or Hmong | 7 | 9.6 | 13 | 17.8 | 37 | 50.7 | 16 | 21.9 |
| White | 514 | 31.7 | 326 | 20.1 | 693 | 42.8 | 87 | 5.4 |
| Other | 21 | 26.3 | 13 | 16.3 | 34 | 42.5 | 12 | 15 |

Note: Other includes American Indian or Alaskan Native, Black or African American, Native Hawaiian or other Pacific Islander, Other.

Table 7: Gender by years left in workforce

| Gender | 5 years or less | | 6 to 10 years | | More than 10 years | | Don't know | |
|-------------------------------|-----------------|---------|---------------|---------|--------------------|---------|------------|---------|
| | Count | Percent | Count | Percent | Count | Percent | Count | Percent |
| Female | 73 | 14.3 | 72 | 14.2 | 325 | 63.9 | 39 | 7.7 |
| Male | 477 | 36.6 | 284 | 21.8 | 465 | 35.7 | 78 | 6 |
| Other or prefer not to answer | 6 | 25 | 4 | 16.7 | 10 | 41.7 | 4 | 16.7 |

Table 8: Dentists leaving practice in 5 years or fewer by practice type

| Practice Type | Count | Percent |
|---|-------|---------|
| Office practice—solo | 300 | 54 |
| Office practice—group, single specialty | 115 | 20.7 |
| Office practice—group, multi-specialty | 64 | 11.5 |
| Academic institution | 17 | 3.1 |
| Federally qualified health center | 15 | 2.7 |
| Tribal health department | 6 | 1.1 |
| State or Federal Correctional Facility clinic | 6 | 1.1 |
| Safety-net dental clinic | 3 | 0.5 |
| Other state government setting | 2 | 0.4 |
| Other | 27 | 4.9 |

Table 9: Medicaid providers planning to retire or leave practice

| Years left in workforce | Count | Percent |
|-------------------------|-------|---------|
| 5 years or fewer | 186 | 34.4 |
| 6 to 10 years | 110 | 20.3 |
| More than 10 years | 210 | 38.8 |
| Don't know | 35 | 6.5 |

Table 10: Geographic location –Division of Public Health (DPH) region

| DPH Region | Count | Percent |
|--------------|-------|---------|
| Southern | 347 | 18.5 |
| Southeastern | 715 | 38.1 |
| Western | 231 | 12.3 |
| Northern | 158 | 8.4 |
| Northeastern | 424 | 22.6 |

Table 11: Geographic location (rural or non-rural counties)

| Classification | Count | Percent |
|----------------|-------|---------|
| Non-rural | 1289 | 70.7 |
| Rural | 536 | 29.3 |

Table 12: Primary practice arrangement

| Primary arrangement | Count | Percent |
|------------------------|-------|---------|
| Sole owner | 755 | 40.94 |
| Co-owner | 469 | 25.43 |
| Employee | 527 | 28.58 |
| Independent contractor | 55 | 2.98 |
| Other | 38 | 2.06 |

Table 13: Primary practice type

| Primary practice type | Count | Percent |
|---|-------|---------|
| Office practice –solo | 898 | 48.67 |
| Office practice –group single specialty | 523 | 28.35 |
| Office practice –group multi-specialty | 222 | 12.03 |
| Federally qualified health center | 71 | 3.85 |
| Academic institution | 39 | 2.11 |
| Tribal health department | 19 | 1.03 |
| State or federal correctional facility clinic | 14 | 0.76 |
| Safety-net dental clinic | 7 | 0.38 |
| Veteran Affairs clinic | 6 | 0.33 |
| Local health department | 1 | 0.05 |
| Other state government setting | 3 | 0.16 |
| Other | 42 | 2.28 |

Table 14: Race or ethnicity by primary practice type

| Race or ethnicity | Office practice-solo | | Office practice-group single specialty | | Office practice-group multi-specialty | | Other (safety-net, public health, government, academic, etc) | |
|--------------------------|-----------------------------|---------|---|---------|--|---------|---|---------|
| | Count | Percent | Count | Percent | Count | Percent | Count | Percent |
| Hispanic | 23 | 54.8 | 8 | 19.1 | 7 | 16.7 | 4 | 9.5 |
| Asian or Hmong | 32 | 43.8 | 18 | 24.7 | 9 | 12.3 | 14 | 19.2 |
| White | 808 | 50 | 468 | 28.9 | 183 | 11.3 | 163 | 10.1 |
| Other | 26 | 32.5 | 20 | 25 | 15 | 18.8 | 19 | 23.8 |

Note: Other includes American Indian or Alaskan Native, Black or African American, Native Hawaiian or other Pacific Islander, Other.

Table 15: Number of practice locations

| Number of practice locations | Count | Percent |
|-------------------------------------|--------------|----------------|
| One | 1472 | 79.87 |
| Two | 260 | 14.11 |
| Three or more | 111 | 6.02 |

Table 16: Main factor for choosing location of employment

| Main factor | Count | Percent |
|--|--------------|----------------|
| Geographic location | 526 | 28.8 |
| Income potential | 179 | 9.8 |
| Family considerations | 573 | 31.3 |
| Opportunity to serve vulnerable and low-income populations | 86 | 4.7 |
| Desire to work in their own community | 259 | 14.2 |
| First came to Wisconsin for dental school | 66 | 3.6 |
| Other | 140 | 7.7 |

Table 17: Race or ethnicity by main factor for choosing location of employment

| Race or ethnicity | Geographic location | | Income potential | | Family considerations | | Serve vulnerable/low income | | Desire to work in own community | | First came to Wisconsin for dental school | | Other (reason) | |
|-------------------|---------------------|---------|------------------|---------|-----------------------|---------|-----------------------------|---------|---------------------------------|---------|---|---------|----------------|---------|
| | Count | Percent | Count | Percent | Count | Percent | Count | Percent | Count | Percent | Count | Percent | Count | Percent |
| Hispanic | 13 | 31 | 7 | 16.7 | 14 | 33.3 | 1 | 2.4 | 1 | 2.4 | 2 | 4.8 | 4 | 9.5 |
| Asian/Hmong | 12 | 16.4 | 7 | 9.6 | 22 | 30.1 | 16 | 22 | 5 | 6.9 | 6 | 8.2 | 5 | 6.9 |
| White | 477 | 29.7 | 151 | 9.4 | 513 | 32 | 56 | 3.5 | 239 | 14.9 | 49 | 3.1 | 119 | 7.4 |
| Other | 18 | 22.8 | 9 | 11.4 | 18 | 22.8 | 11 | 13.9 | 8 | 10.1 | 8 | 10.1 | 7 | 8.9 |

Note: Other includes American Indian or Alaskan Native, Black or African American, Native Hawaiian or other Pacific Islander, Other.

Table 18: Gender by main factor for choosing location of employment

| Gender | Geographic location | | Income potential | | Family considerations | | Serve vulnerable/low income | | Desire to work in own community | | First came to Wisconsin for dental school | | Other (reason) | |
|----------------------------|---------------------|---------|------------------|---------|-----------------------|---------|-----------------------------|---------|---------------------------------|---------|---|---------|----------------|---------|
| | Count | Percent | Count | Percent | Count | Percent | Count | Percent | Count | Percent | Count | Percent | Count | Percent |
| Female | 117 | 23.1 | 37 | 7.3 | 188 | 37.2 | 34 | 6.7 | 69 | 13.6 | 23 | 4.6 | 38 | 7.5 |
| Male | 401 | 31.1 | 139 | 10.8 | 375 | 29.1 | 51 | 4 | 187 | 14.5 | 40 | 3.1 | 97 | 7.5 |
| Other or prefer not to say | 6 | 25 | 3 | 12.5 | 7 | 29.2 | 1 | 4.2 | 1 | 4.2 | 3 | 12.5 | 3 | 12.5 |

Table 19: Hours worked per week

| Hours worked | Count | Percent |
|--------------|-------|---------|
| Less than 20 | 129 | 7 |
| 20–29 | 241 | 13 |
| 30–39 | 924 | 50 |
| 40 or more | 553 | 30 |

Table 20: Accepting MA/BC+ patients

| MA/BC+ Provider | Count | Percent |
|-----------------|-------|---------|
| Yes | 545 | 29.7 |
| No | 1290 | 70.3 |

Table 21: Accepting MA/BC+ by race or ethnicity

| Race or ethnicity | Accepts MA/BC+ | | Does not accept MA/BC+ | |
|-------------------|----------------|---------|------------------------|---------|
| | Count | Percent | Count | Percent |
| Hispanic | 15 | 35.6 | 27 | 64.3 |
| Asian/Hmong | 30 | 41.7 | 42 | 58.3 |
| White | 457 | 28.3 | 1158 | 71.7 |
| Other | 35 | 44.3 | 44 | 55.7 |

Note: Other includes American Indian or Alaskan Native, Black or African American, Native Hawaiian or other Pacific Islander, Other.

Table 22: Accepting MA/BC+ by gender

| Gender | Accepts MA/BC+ | | Does not accept MA/BC+ | |
|----------------------------|----------------|---------|------------------------|---------|
| | Count | Percent | Count | Percent |
| Female | 148 | 29.2 | 359 | 70.8 |
| Male | 389 | 29.9 | 911 | 70.1 |
| Other or prefer not to say | 7 | 30.4 | 16 | 69.6 |

Table 23: Reasons for not accepting MA/BC+ patients

| Reasons | Count | Percent |
|--|-------|---------|
| Low compensation | 1027 | 67.8 |
| Billing requirements | 36 | 2.4 |
| Too much paperwork | 74 | 4.9 |
| Practice is at full capacity | 55 | 3.6 |
| Concerned about fraud issues | 5 | 0.3 |
| Concerned about liability issues | 6 | 0.4 |
| Concerned about no shows | 73 | 4.8 |
| Specialty or adult primary practice services not covered by MA/BC+ | 56 | 3.7 |
| Other | 182 | 12 |

Table 24: Reasons for not accepting MA/BC+ patients by race or ethnicity

| Race or ethnicity | Low compensation | | Billing requirements | | Too much paperwork | | Practice at full capacity | | Concerned about fraud issues | | Concerned about liability issues | | Concerned about no shows | | Specialty/ other services not covered by MA | | Other | |
|-------------------|------------------|------|----------------------|-----|--------------------|-----|---------------------------|-----|------------------------------|-----|----------------------------------|-----|--------------------------|-----|---|-----|-------|------|
| | Count | % | Count | % | Count | % | Count | % | Count | % | Count | % | Count | % | Count | % | Count | % |
| Hispanic | 22 | 62.9 | 0 | 0 | 1 | 2.9 | 2 | 5.7 | 1 | 2.9 | 0 | 0 | 0 | 0 | 1 | 2.9 | 8 | 22.9 |
| Asian/Hmong | 29 | 61.7 | 0 | 0 | 2 | 4.3 | 2 | 4.3 | 0 | 0 | 0 | 0 | 3 | 6.4 | 3 | 6.4 | 8 | 17 |
| White | 940 | 69.2 | 33 | 2.4 | 64 | 4.7 | 48 | 3.5 | 3 | 0.2 | 6 | 0.4 | 67 | 4.9 | 47 | 3.5 | 151 | 11.1 |
| Other | 28 | 54.9 | 3 | 5.9 | 3 | 5.9 | 3 | 5.9 | 1 | 2 | 0 | 0 | 1 | 2 | 3 | 5.9 | 9 | 17.7 |

Note: Other race or ethnicity includes American Indian or Alaskan Native, Black or African American, Native Hawaiian or other Pacific Islander, Other.

Table 25: Reasons for not accepting MA/BC+ patients by gender

| Gender | Low compensation | | Billing requirements | | Too much paperwork | | Practice at full capacity | | Concerned about fraud issues | | Concerned about liability issues | | Concerned about no shows | | Specialty/ other services not covered by MA | | Other | |
|--------------------------------|------------------|------|----------------------|-----|--------------------|-----|---------------------------|-----|------------------------------|-----|----------------------------------|-----|--------------------------|-----|---|-----|-------|------|
| | Count | % | Count | % | Count | % | Count | % | Count | % | Count | % | Count | % | Count | % | Count | % |
| Female | 284 | 69.3 | 11 | 2.7 | 18 | 4.4 | 15 | 3.7 | 2 | 0.5 | 2 | 0.5 | 11 | 2.7 | 9 | 2.2 | 58 | 14.2 |
| Male | 728 | 67.4 | 24 | 2.2 | 53 | 4.9 | 40 | 3.7 | 3 | 0.3 | 4 | 0.4 | 62 | 5.7 | 46 | 4.3 | 120 | 11.1 |
| Other/ prefer not to say | 13 | 72.2 | 1 | 5.6 | 1 | 5.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 16.7 |

Table 26: Patient types accepted by dentists

| Patient type | Count | Percent |
|-----------------------------------|-------|---------|
| <i>Children</i> | 1720 | 97.8 |
| Children enrolled in MA/BC+ | 433 | 25.1 |
| Children with SHCN | 1474 | 84.9 |
| <i>Adults</i> | 1682 | 95.7 |
| Adults enrolled in MA/BC+ | 359 | 21 |
| Adults with SHCN | 1520 | 87.7 |
| <i>Pregnant women</i> | 1667 | 95 |
| Pregnant women enrolled in MA/BC+ | 370 | 21.6 |
| Pregnant women with SHCN | 1431 | 82.9 |
| <i>Elderly</i> | 1689 | 96 |
| Elderly enrolled in MA/BC+ | 520 | 30.4 |
| Elderly with SHCN | 1517 | 87.6 |

Appendix B. Wisconsin Dentist Workforce Survey

1. The first questions are about your work status.

Are you currently working in a paid position as a dentist?

- Yes → Go to question 3
 No



2. Which of the following best describes your current work status?

- Working in an unpaid position as a dentist
 Seeking a position as a dentist
 Not seeking a position as a dentist, such as retired or working in another field
 Temporarily not working due to medical, family, seasonal, or other reasons
→ Go to question 39

3. How long have you worked as a dentist?

- Less than 1 year
 1 to 5 years
 6 to 15 years
 16 years or more

4. Do you currently work as a dentist in Wisconsin?

- Yes → Go to question 6
 No



5. In what state are you currently working as a dentist?

State

→ Go to question 39

6. When answering the following questions, please consider only the current, paid position or positions you hold as a dentist.

Approximately how many hours do you work as a dentist in a typical week?

Hours per week

If you work as a dentist fewer than 40 hours per week → Go to question 7

If you work as a dentist 40 hours or more per week → Go to question 8

7. Are each of the following reasons for why you routinely work fewer than 40 hours a week as a dentist?

| | Yes | No |
|---|-----------------------|-----------------------|
| a. Limited work hours are my personal preference | <input type="radio"/> | <input type="radio"/> |
| b. Limited hours allow time for other compensated work | <input type="radio"/> | <input type="radio"/> |
| c. Limited hours allow time for volunteer, uncompensated work | <input type="radio"/> | <input type="radio"/> |
| d. Health-related issues limit my work hours | <input type="radio"/> | <input type="radio"/> |
| e. I am phasing in retirement | <input type="radio"/> | <input type="radio"/> |
| f. I adjust my hours to fit the patient workload | <input type="radio"/> | <input type="radio"/> |
| g. My position is part-time | <input type="radio"/> | <input type="radio"/> |
| h. Other reason → Please tell us: | <input type="text"/> | |

8. What was the main factor when you chose the location of your place of employment?

- Geographic location
- Income potential
- Family considerations
- Opportunity to serve vulnerable and low-income populations
- Desire to work in my own community
- First came to Wisconsin to go to dental school and decided to remain in the state
- Other factor → Please tell us:

9. About how many more years do you plan to work as a dentist in the State of Wisconsin?

- 5 years or less
- 6 to 10 years → Go to question 11
- More than 10 years → Go to question 11
- Don't know → Go to question 11

10. What is the main reason you plan to stop working as a dentist in Wisconsin within the next five years?

- Retirement
- Other reason → Please tell us:

11. The next questions are about the place or places where you work. When answering the following questions, please consider only the current, paid position or positions you hold as a dentist.

At how many different physical locations do you work?

- One
- Two
- Three or more

12. We would like to learn more about the place or places you work. First, please answer the following questions thinking of your primary location. If you split your time evenly between 2 or more locations, choose one as your primary location.

In what city, state, zip code and county is your primary location? *(This information is very important to the State in identifying gaps in Wisconsin dental services providers)*

City

State

Zip

County

13. Which one of the following options best describes your arrangement at this practice?

- Sole owner
- Co-owner
- Employee
- Independent contractor
- Other arrangement → Please tell us:

14. Which one of the following options best describes this practice setting?

- Office Practice-Solo Practice
- Office Practice-Group Practice-Single Specialty
- Office Practice-Group Practice-Multi Specialty
- Local Health Department
- Tribal Health Department
- Federally Qualified Health Center
- Safety-net Dental Clinic
- State or Federal Correctional Facility Clinic
- Other State Government Clinical Setting
- Military Facility Clinic
- Veterans Affairs Clinic
- Academic Institution
- Other setting → Please tell us:

15. Please answer the following questions still thinking about your primary location.

How many chairs are at this location?

 Chairs

16. How many dentist full time equivalents, to the tenths, are at this location? *(If unsure, please provide your best estimate)*

 Dentist FTEs

17. How many hygienist full time equivalents, to the tenths, are at this location? (If unsure, please provide your best estimate)

Hygienist FTEs

18. How many chairside assistant full time equivalents, to the tenths, are at this location? (If unsure, please provide your best estimate)

Chairside assistant FTEs

If you work as a dentist at more than one location → Go to question 19

If you work as a dentist at only one location → Go to question 33

19. Please answer the following questions thinking of your second location.

In what city, state, zip code and county is your second location? (This information is very important to the State in identifying gaps in Wisconsin dental services providers)

City

State

Zip

County

20. Which one of the following options best describes your arrangement at this practice?

- Sole owner
- Co-owner
- Employee
- Independent contractor
- Other arrangement → Please tell us:

21. Which one of the following options best describes this practice setting?

- Office Practice-Solo Practice
- Office Practice-Group Practice-Single Specialty
- Office Practice-Group Practice-Multi Specialty
- Local Health Department
- Tribal Health Department
- Federally Qualified Health Center
- Safety-net Dental Clinic
- State or Federal Correctional Facility Clinic
- Other State Government Clinical Setting
- Military Facility Clinic
- Veterans Affairs Clinic
- Academic Institution
- Other setting → Please tell us:

22. Please answer the following questions still thinking about your second location.

How many chairs are at this location?

Chairs

23. How many dentist full time equivalents, to the tenths, are at this location? *(If unsure, please provide your best estimate)*

Dentist FTEs

24. How many hygienist full time equivalents, to the tenths, are at this location? *(If unsure, please provide your best estimate)*

Hygienist FTEs

25. How many chairside assistant full time equivalents, to the tenths, are at this location? *(If unsure, please provide your best estimate)*

Chairside assistant FTEs

If you work as a dentist at more than two locations → Go to question 26

If you work as a dentist at only two locations → Go to question 33

26. Please answer the following questions thinking of your third location.

In what city, state, zip code and county is your third location? *(This information is very important to the State in identifying gaps in Wisconsin dental services providers)*

City

State

Zip

County

27. Which one of the following options best describes your arrangement at this practice?

- Sole owner
- Co-owner
- Employee
- Independent contractor
- Other arrangement → Please tell us:

28. Which one of the following options best describes this practice setting?

- Office Practice-Solo Practice
- Office Practice-Group Practice-Single Specialty

- Office Practice-Group Practice-Multi Specialty
- Local Health Department
- Tribal Health Department
- Federally Qualified Health Center
- Safety-net Dental Clinic
- State or Federal Correctional Facility Clinic
- Other State Government Clinical Setting
- Military Facility Clinic
- Veterans Affairs Clinic
- Academic Institution
- Other setting → Please tell us:

29. Please answer the following questions still thinking about your third location.

How many chairs are at this location?

Chairs

30. How many dentist full time equivalents, to the tenths, are at this location? (*If unsure, please provide your best estimate*)

Dentist FTEs

31. How many hygienist full time equivalents, to the tenths, are at this location? (*If unsure, please provide your best estimate*)

Hygienist FTEs

32. How many chairside assistant full time equivalents, to the tenths, are at this location? (*If unsure, please provide your best estimate*)

Chairside assistant FTEs

33. The next questions are about the patient populations you serve at your primary practice.

Thinking about your primary dental practice, are you currently accepting new patients?

- Yes → Go to question 34
- No → Go to question 35

34. Are you currently accepting...

| | Yes | No |
|---|-----------------------|-----------------------|
| a. ...children ages 0 to 20? | <input type="radio"/> | <input type="radio"/> |
| b. ...children ages 0 to 20 enrolled in Medicaid/BadgerCare+? | <input type="radio"/> | <input type="radio"/> |
| c. ...children ages 0 to 20 with special healthcare needs such as a physical or mental disability? | <input type="radio"/> | <input type="radio"/> |
| d. ...pregnant women of any age? | <input type="radio"/> | <input type="radio"/> |

- e. ...pregnant women of any age enrolled in Medicaid/BadgerCare+?
- f. ...pregnant women of any age with special healthcare needs such as a physical or mental disability?
- g. ...adults ages 21 to 64?
- h. ...adults ages 21 to 64 enrolled in Medicaid/BadgerCare+?
- i. ...adults ages 21 to 64 with special healthcare needs such as a physical or mental disability?
- j. ...elderly ages 65 and over?
- k. ...elderly ages 65 and over enrolled in Medicaid?
- l. ...elderly ages 65 and over with special healthcare needs such as a physical or mental disability?

35. Are you currently enrolled as a Medicaid/BadgerCare+ provider?

- Yes
- No → **Go to question 38**

36. In the last 12 months, approximately how many Medicaid/BadgerCare+ patients did you see?

- None
- 1 to 10
- 11 to 50
- 51 to 100
- More than 100

37. Are you currently accepting new Medicaid/BadgerCare+ patients?

- Yes → **Go to question 39**
- No

38. Which one of the following reasons best explains why you are not enrolled in Medicaid/BadgerCare+ or are not accepting new Medicaid/BadgerCare+ patients?

- Low compensation
- Billing requirements
- Too much paperwork
- Practice is at full capacity
- Concerned about fraud issues
- Concerned about liability issues
- Concerned about no shows
- Specialty or adult primary practice services not covered by Medicaid/BadgerCare+
- Other reason → Please tell us:

39. The last questions are about your background.

Are you of Hispanic or Latino origin?

- Yes
- No

40. Which of the following describe your race? Please check all that apply.

- American Indian or Alaskan Native
- Asian or Hmong
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- Other race → Please tell us:

41. What is your gender identity?

- Female
- Male
- Other gender identity → Please tell us:
- Prefer not to answer

42. What is your age?

- 18 to 29
- 30 to 39
- 40 to 49
- 50 to 59
- 60 to 69
- 70 and over

43. Please provide any additional comments you would like to share with us:

Thank you for participating in this survey! We appreciate your time.

**Please put your completed questionnaire in the postage-paid envelope provided,
and place it in the mail today.**