



Missouri's Dental Hygiene Workforce-2015

Dental hygiene is the science and practice of the recognition, treatment, and prevention of oral diseases.³ Dental hygienists primarily remove calcified deposits from above and below the gum line, examine patients for signs of oral disease, and provide other forms of preventative dental care while working in a complementary partnership with dentists.⁵ In Missouri, dental hygienists receive licensure through the Department of Insurance, Financial Institutions, and Professional Registration, Dental Board. As a part of the licensing process, licensees are required to provide the general demographic information from which this analysis is based. Information on licensees is current as of 5/20/2015 and was obtained through the publicly reported records of the Missouri Dental Board.

Dental hygienists must obtain an associate's or bachelor's degree from an institution accredited by the Commission on Dental Accreditation (CODA).² Degree programs generally require between 84 (associate) and 118 (bachelor) credit hours. Education courses entail an average of 2,932 clock hours, including 659 supervised pre-clinical and clinical dental hygiene instruction. The candidate must then successfully complete the written National Board Dental Hygiene Exam, a clinical exam, and a jurisprudence test on Missouri laws to obtain a license as a Missouri dental hygienist.¹

*There are 8 accredited dental hygiene programs with 10 sites in Missouri:¹

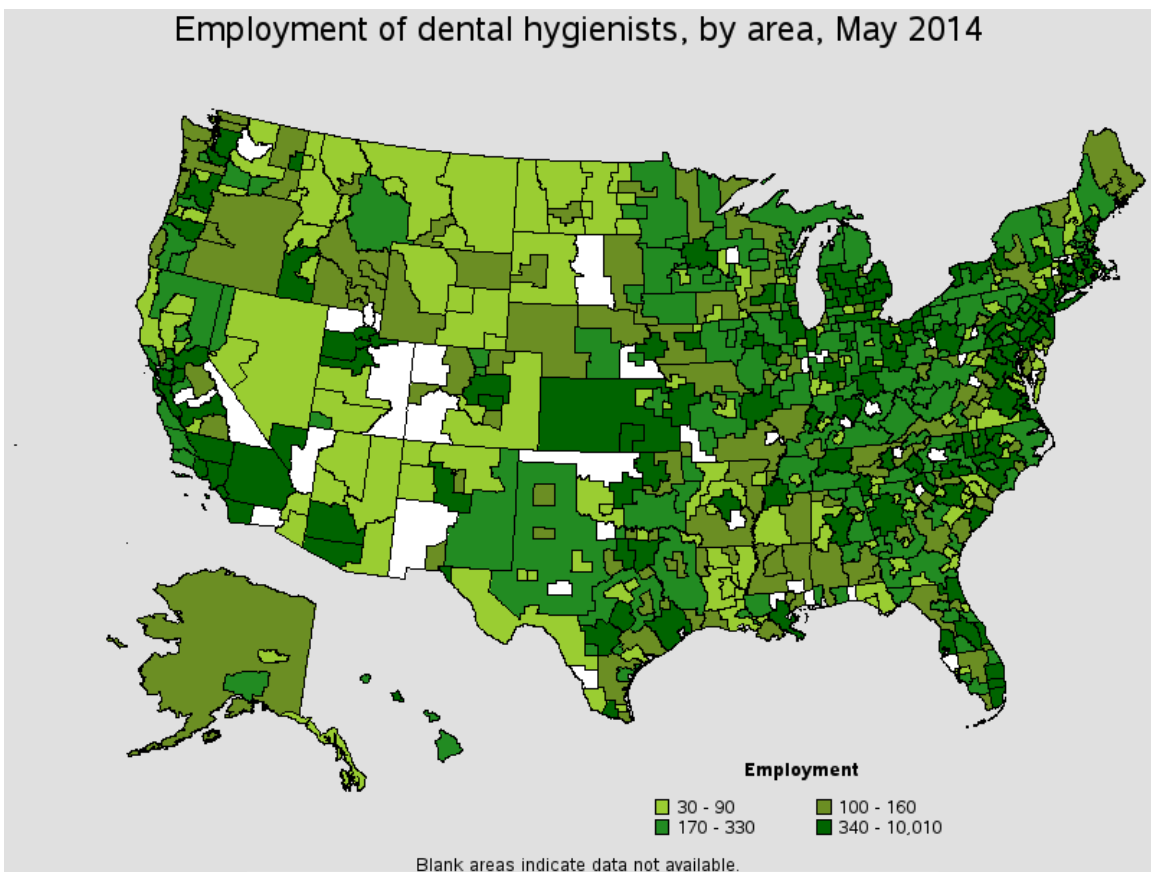
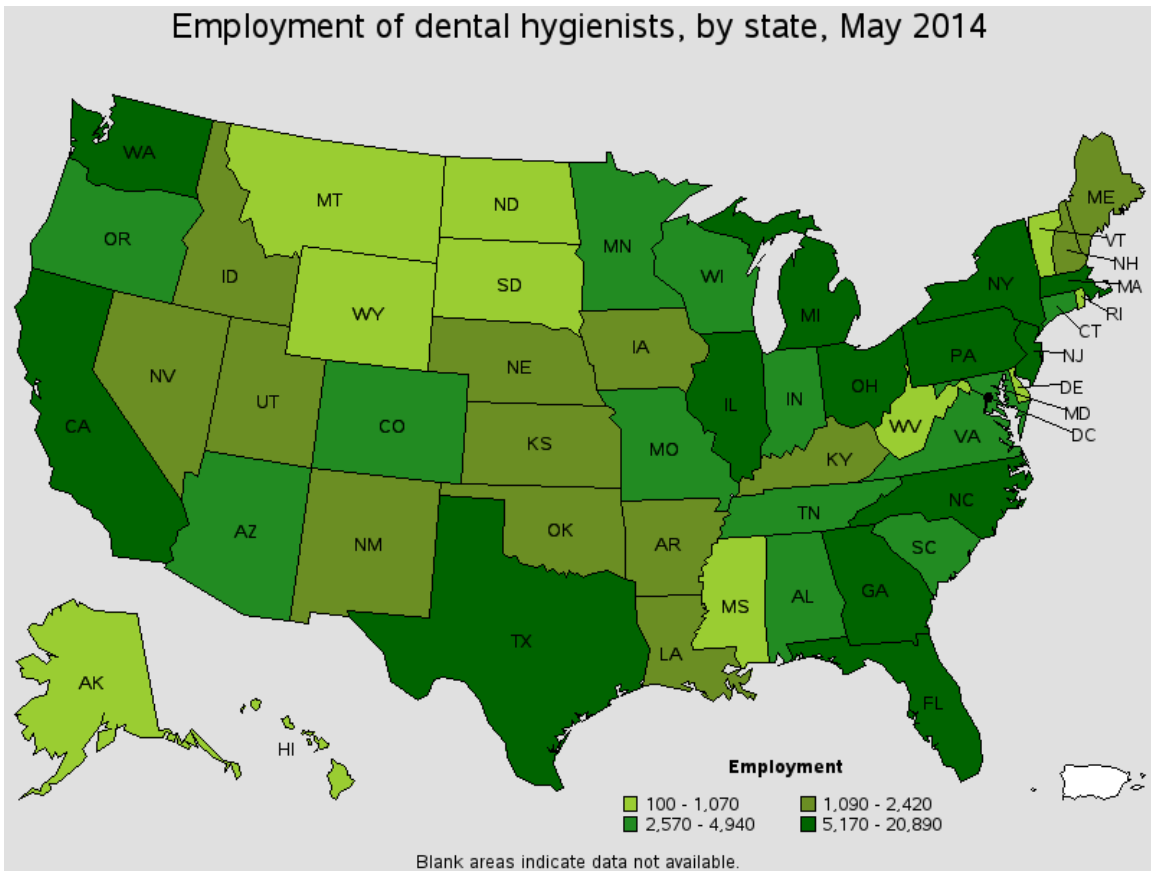
• Concorde Career Colleges, Inc.,	Kansas City	21students
• University of Missouri	Kansas City	30 students
• North Central Missouri College/ Hillyard Technical College	St. Joseph	12 students
• Ozark Technical Community College	Springfield	18 students
• Saint Louis Community College-Forest Park	St. Louis	32 students
• Missouri College	St. Louis	30 students
• State Fair Community College	Sedalia	10 students
• Missouri Southern State University	Joplin	30 students
	Rolla	10 students
	Sikeston	10 students

Overall

There are 3,711 hygienists licensed by the State of Missouri. Of these, 2,875 list a current Missouri address. Kansas and Illinois continue to be the most frequently listed as an out-of-state contact address. Since the 2014 assessment, overall licensure figures have not changed significantly (3,707 in 2014) however, the number of Missouri contact addresses has increased slightly by 1.3% (2,837 in 2014) while both Kansas (350 in 2014 vs. 333 in 2015) and Illinois (303 in 2014 vs. 293 in 2015) contacts have decreased. This change may be attributed to Missouri offering higher wages: Missouri, \$68,900; Kansas, \$64,310; Illinois, \$61,110.^{6,7,13} Missouri currently has a population to dental hygienist ratio of 2,109:1.¹⁴

*Numbers are current as of 2015

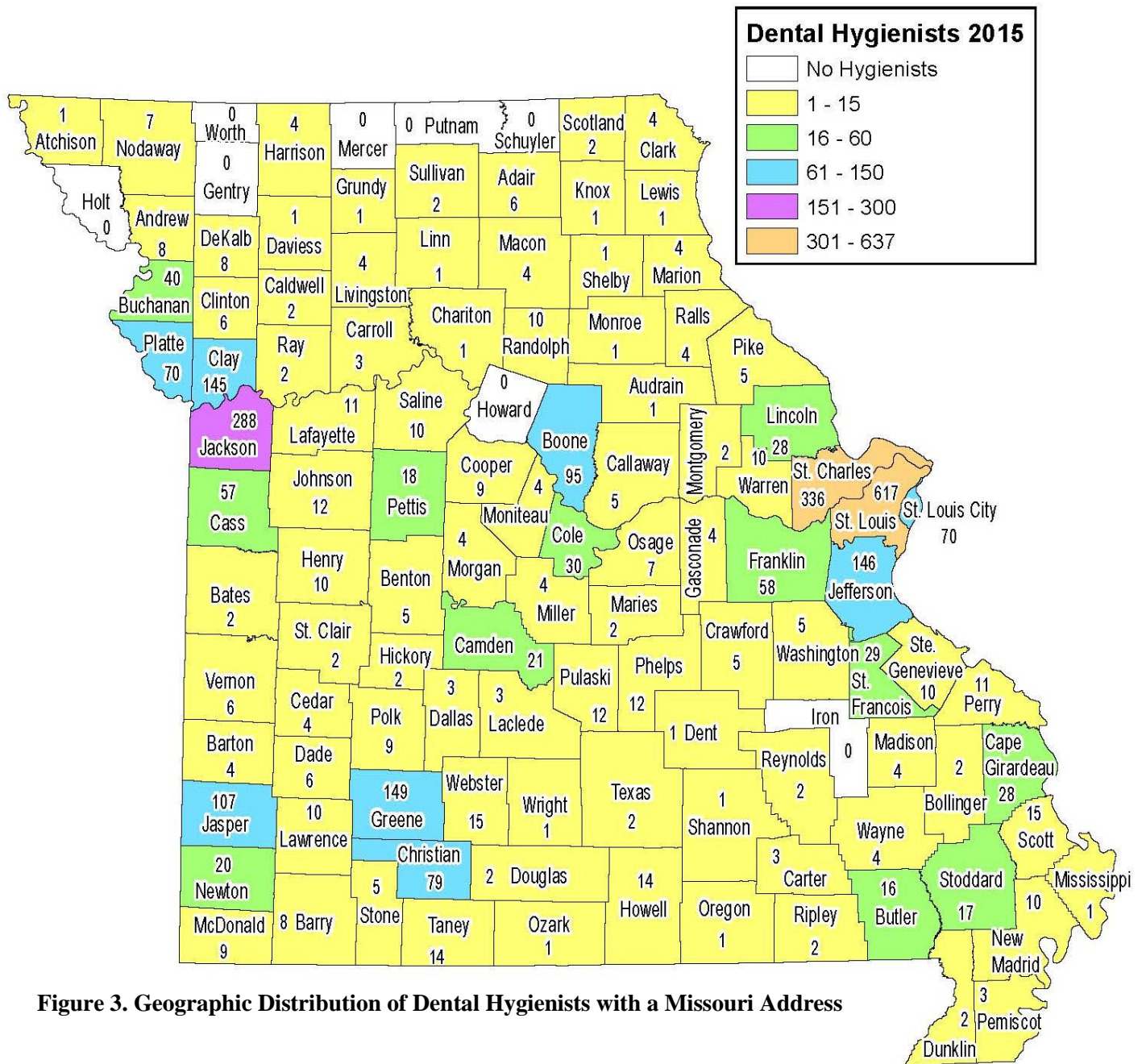
In comparison with the rest of the United States, Missouri employs a lower number of dental hygienists than the majority of states (Figure 1). Nationally, metropolitan (urban) areas have higher relative rates of dental hygienists with southern California having the highest rate (Figure 2).



Figures 1 and 2. Bureau of Labor Statistics ⁴

Geographic Distribution

The current location of resident dental hygienists in Missouri is displayed in Figure 3. The maldistribution of service between urban and rural areas remains even as the number of dental hygienists in Missouri grows. Areas classified as *urban contain 2,170 hygienists (75.5%), while those classified as rural contain 705 hygienists (24.5%). The urban population-to-dental hygienist ratio is 1,592:1, while the rural ratio is 3,699:1.¹⁴ St. Louis County is consistent in having the most dental hygienists (671) in Missouri with a 5% increase since the 2014 workforce analysis. St. Charles County has the second highest number at half the amount of St. Louis County (336). Both counties are classified as urban. Sixteen rural counties have only one dental hygienist and a total of 8 rural counties currently do not have a licensed dental hygienist, as compared with 11 counties in 2014, which shows slight improvement.



*Urban counties are defined as having a population density of over 150 persons per square mile and any county containing part of the central city of a census defined Metropolitan Statistical Area.¹²

Expansion of the Profession

The expansion of the dental hygiene profession within Missouri is demonstrated by two factors: the annual number of new licensees and the overall number of licensees in a year. Although not as significant as previous years, there continues to be an increase in the number of dental hygienists licensed in Missouri per year. In State Fiscal Year (SFY) 1999 Missouri licensed a total of 2,261 hygienists as compared with 3,711 in SFY 2014 (Figure 4).¹³ In calendar year 2003 there were 119 new dental hygiene licenses given by Missouri. This number increased over 50% by the year 2014 to 248 licenses (Figure 5). Although the numbers are significantly higher than 2003, there was a 6.25% decline in the number of new Missouri licensees between 2013 and 2014 (16 licenses). As of 5/12/2015, there were 72 new Missouri licensees.

According to Bureau of Labor Statistics, employment of dental hygienists is projected to grow by 33% by the year 2022, significantly faster than the average for all occupations. This can be partially attributed to the growing body of research linking general health and oral health.⁵

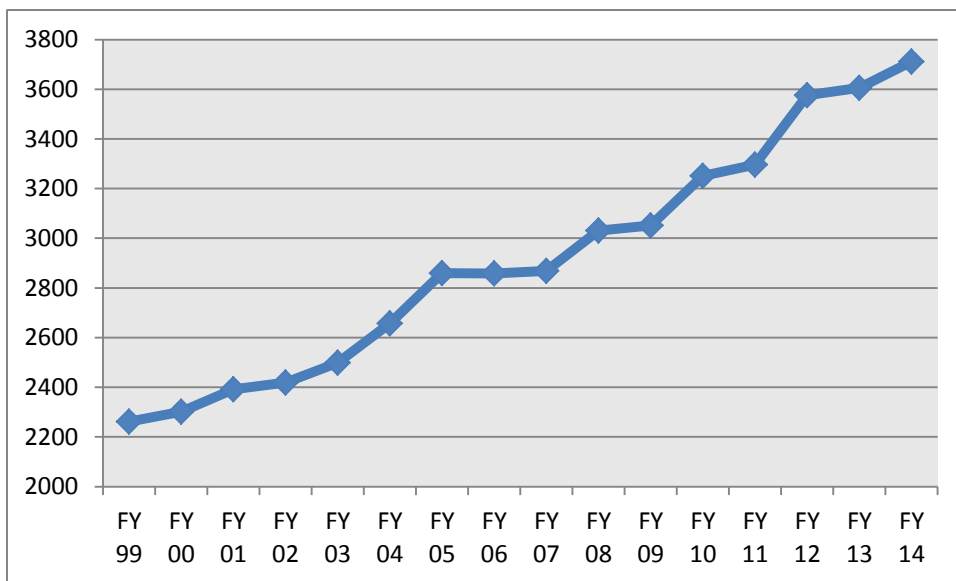


Figure 4. Number of Total Dental Hygiene Licensees by Fiscal Year⁵

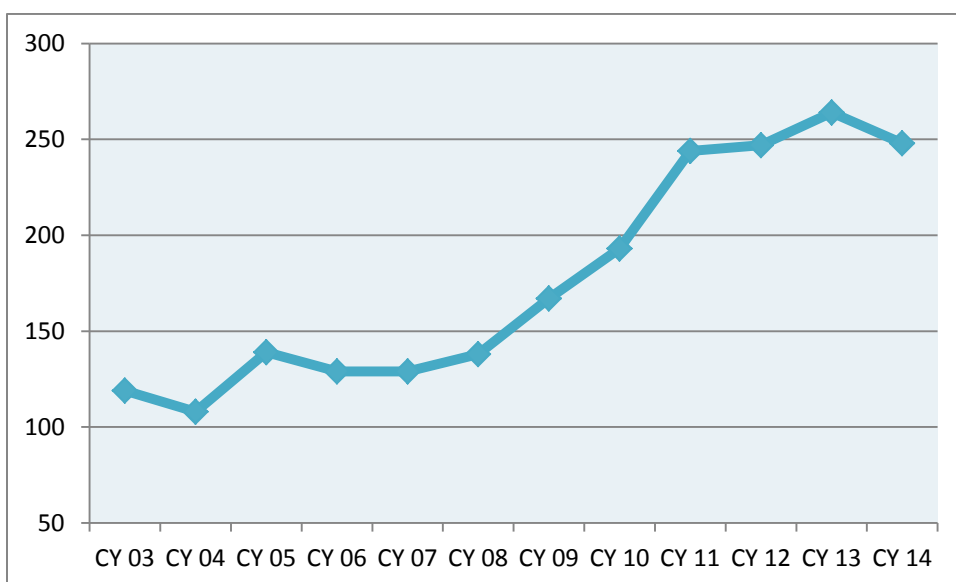


Figure 5. Number of New Dental Hygienists by Calendar Year⁵

Looking at the number of years of licensure in Missouri shows a fairly linear decrease in total licensees as the number of years of licensure increases, with the most pronounced decrease in total licensees occurring between the <5 years and 5-9 years groups (Figure 6).¹³

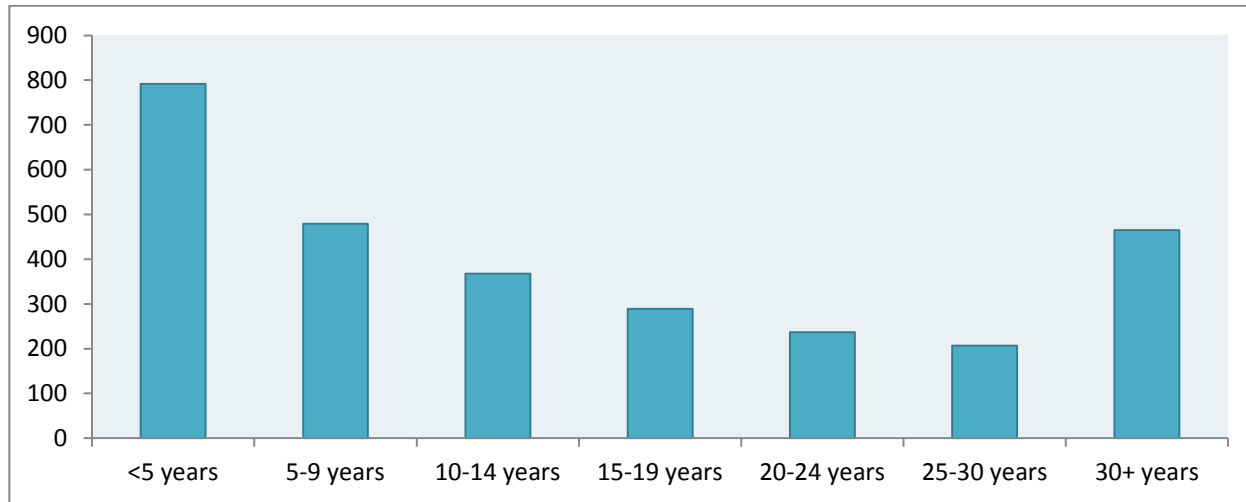


Figure 6. Total Years of Experience of Current Dental Hygiene Licensees in Missouri¹³

Permits

Of the varying types of permits that a hygienist can obtain in Missouri, infiltration anesthesia, block anesthesia, and nitrous oxide (N₂O), 88.5% have obtained either one or a combination of multiple permits (Figure 7). The most widely held permit is for infiltration/block/N₂O (68.8% of total permits).¹³

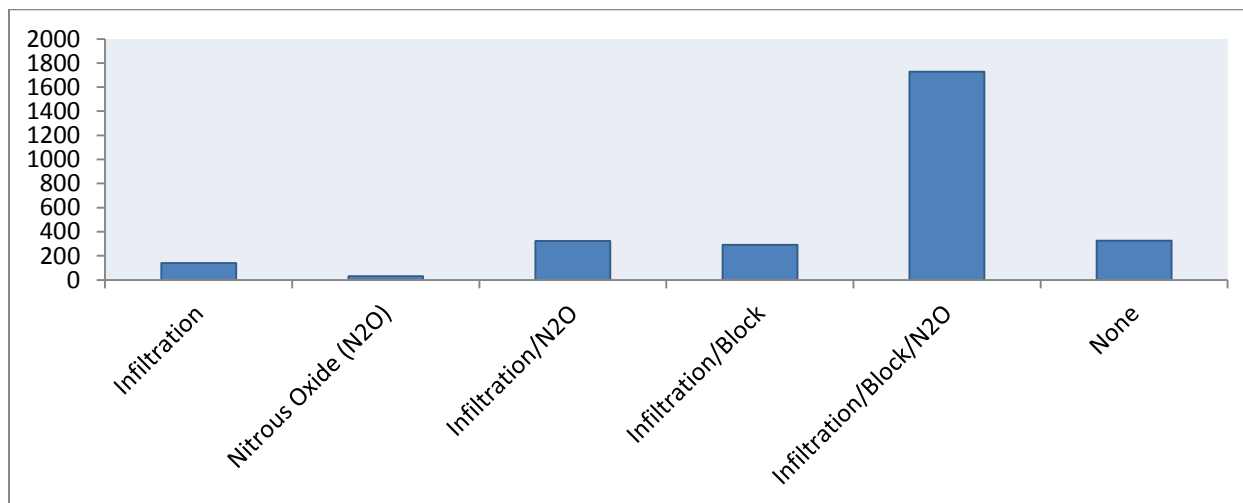


Figure 7. Dental Hygiene Permits¹³

Income

Nationally, the annual median income for dental hygienists in 2012 was \$70,210 and more than half of those employed worked part time.⁵ The average annual salary for hygienists in Missouri in 2012 was \$68,900.³ Average annual salaries for Kansas (\$64,310) and Illinois (\$61,110) are lower compared with Missouri, which may explain the increase in resident dental hygienists in Missouri (Figure 8).^{6,7} The top paying area as of 2014 was the District of Columbia with an annual mean salary of \$95,570.³ Metropolitan regions, both nationally and in Missouri continue to be the top paying areas for this occupation (Figures 10 and 11).⁴

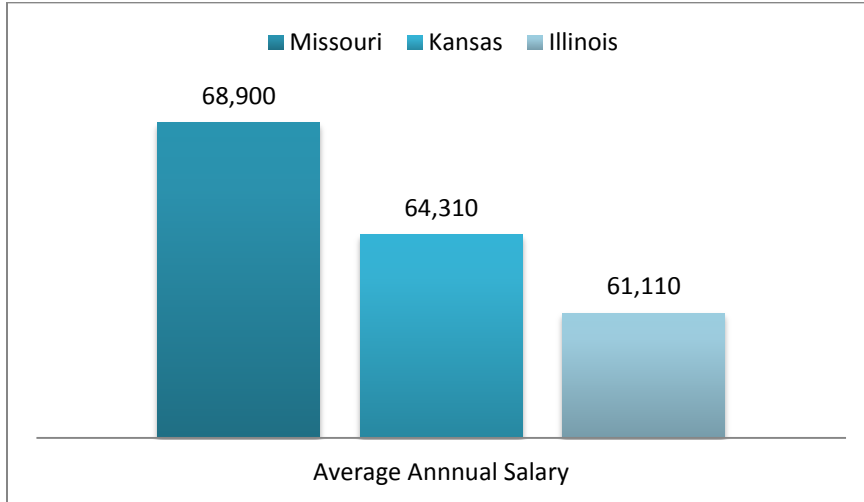


Figure 8. Average Annual Salary for Dental Hygienists, Missouri Compared with Surrounding States⁴

Compared to all other professions in Missouri dental hygienists were earning a significantly higher annual income, as of 2010 (Figure 9).⁸

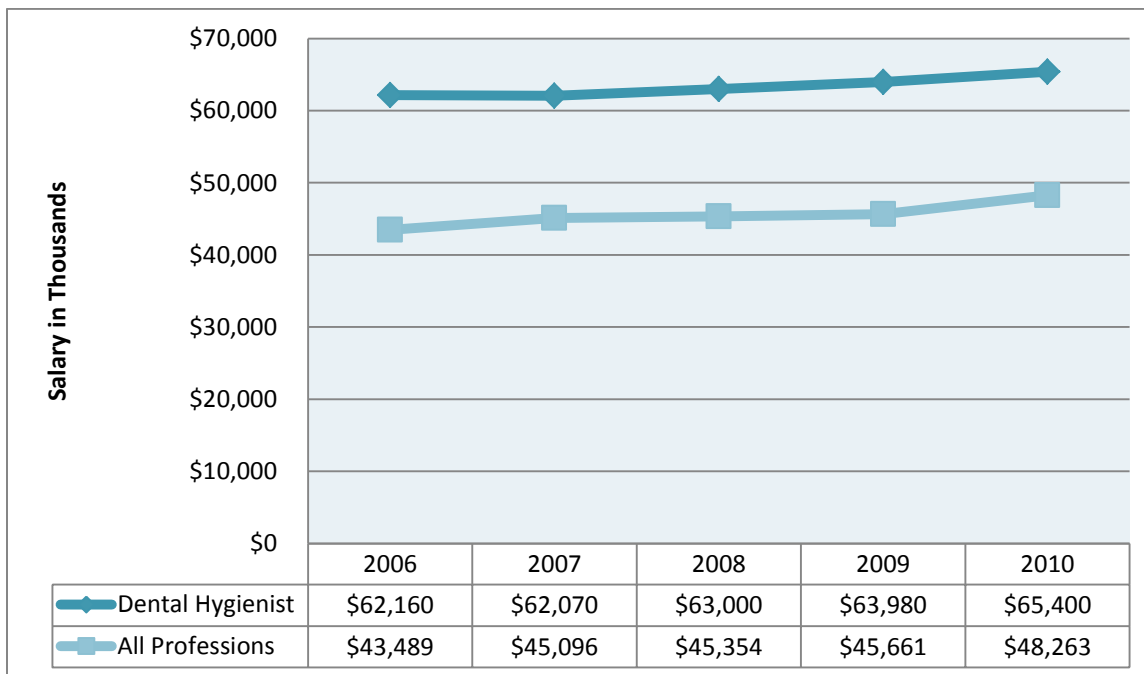


Figure 9. Dental Hygienists Salaries compared with all Professions in Missouri⁸

Annual mean wage of dental hygienists, by state, May 2014

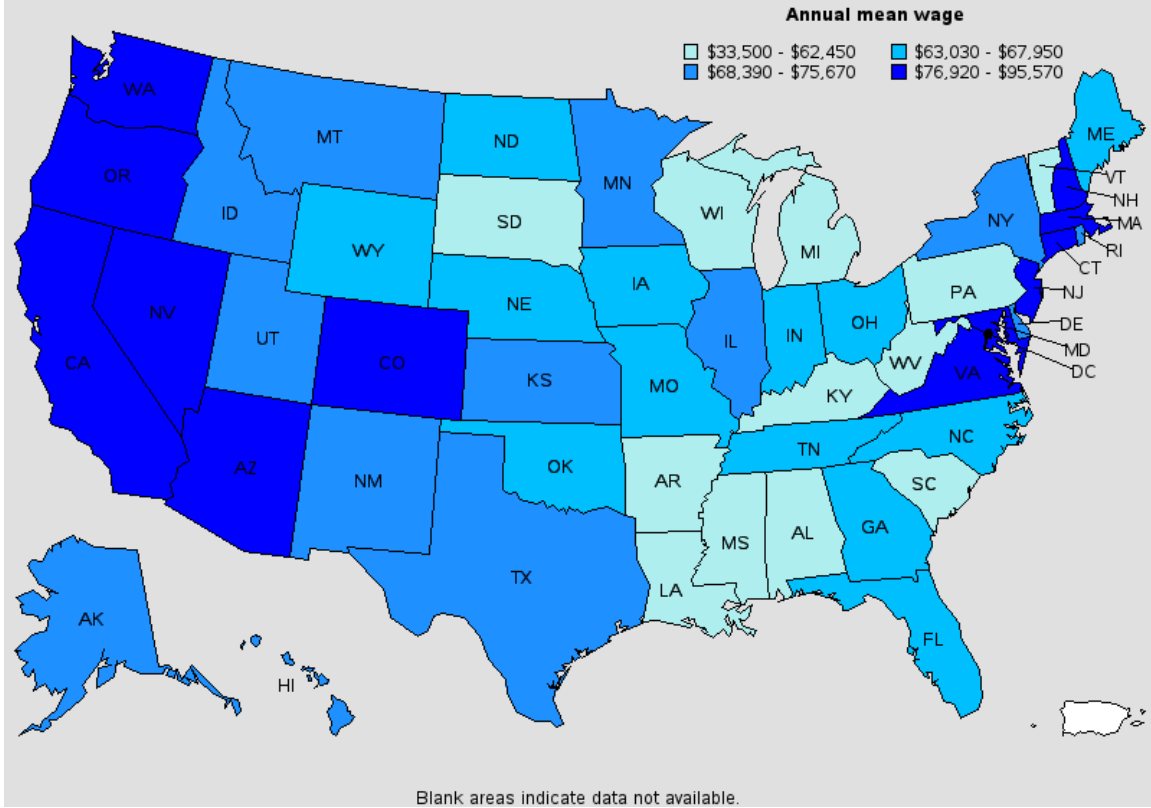


Figure 10. Bureau of Labor Statistics ⁴

Annual mean wage of dental hygienists, by area, May 2014

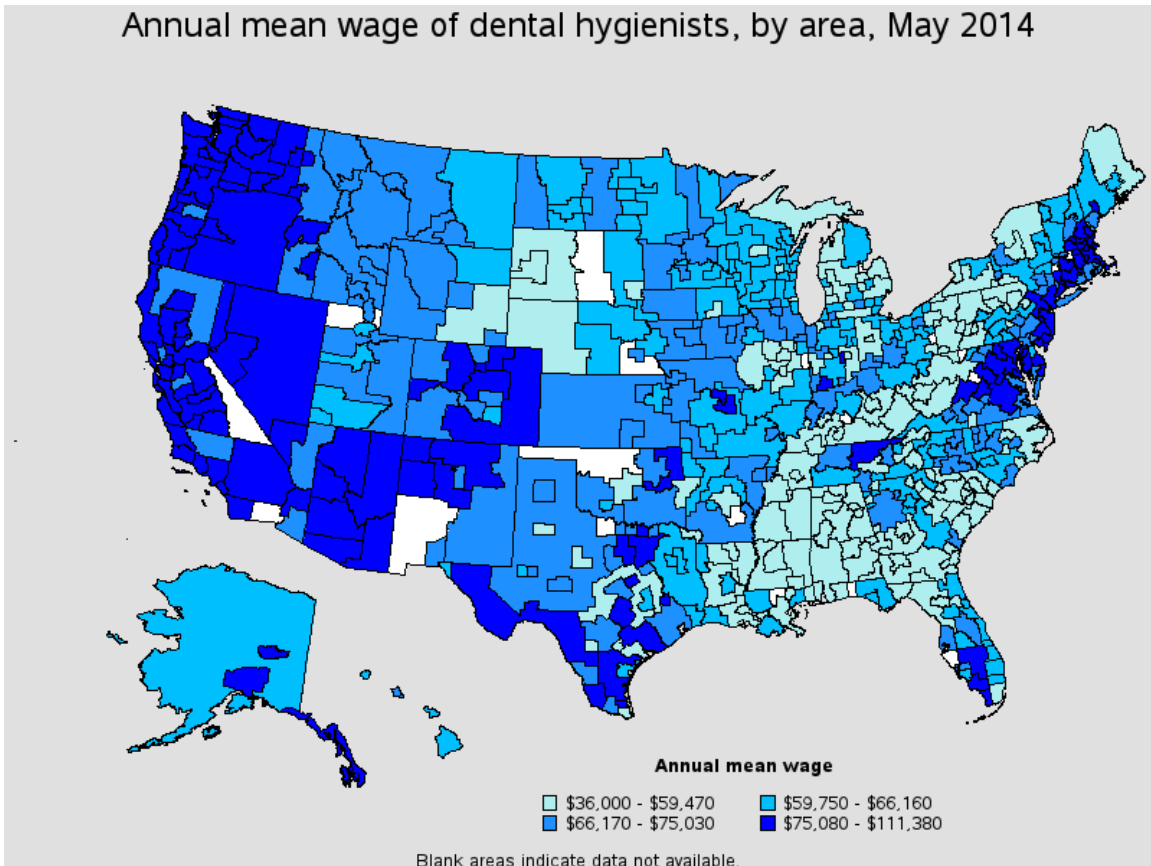


Figure 11. Bureau of Labor Statistics ⁴

Dental Assistants Compared to Dental Hygienists

Dental hygienists often work with dental assistants. Dental assistants provide patient care, take x-rays, schedule appointments and assist with recordkeeping. Formal education requirements vary by state. Missouri does not require education or training requirements unless the dental assistant assists in administering and monitoring nitrous oxide analgesia. An Expanded-Functions Dental Assistant permit is available through the Missouri Dental Board.⁹

Nationally, as of 2012, the median annual wage for dental assistants was \$34,500, less than half of the median annual dental hygienist salary. The annual mean wage in Missouri is comparable at \$33,740 (Figure 12). Seventy-five percent of dental assistants work full-time.¹⁰ Employment of dental assistants is projected to grow as much as 25% by the year 2022 (Figure 13). There is no licensee data on dental assistants in Missouri due to the fact that licensing is not a requirement for employment.⁹

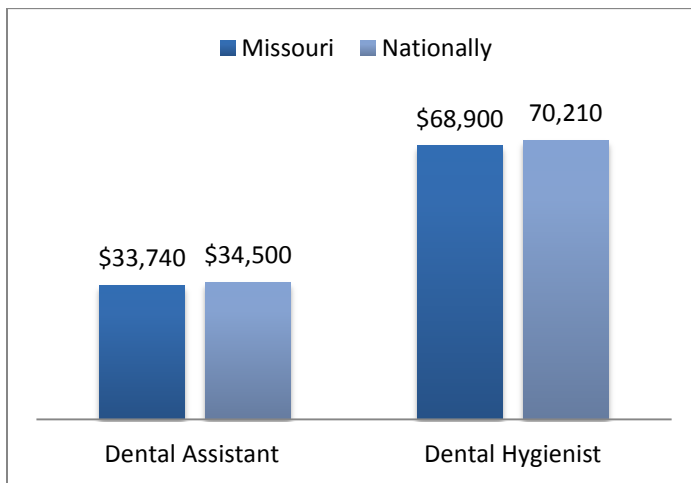


Figure 12. Mean Annual Salary of Dental Assistants compared with Dental Hygienists^{4,9}

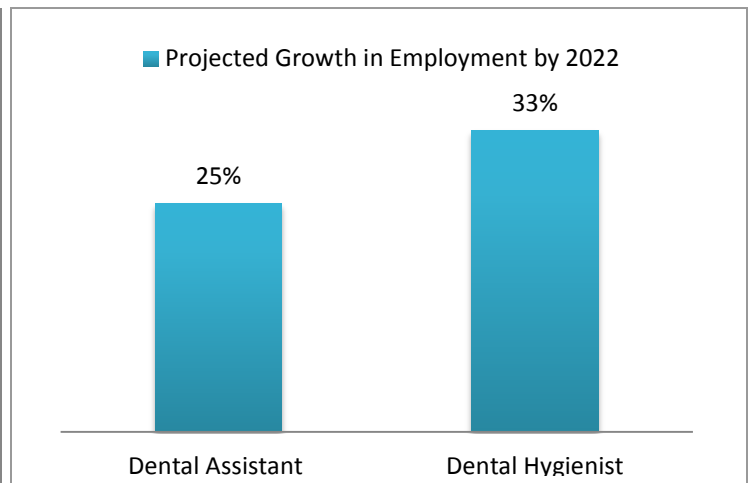


Figure 13. Projected Growth of Employment for Dental Assistants compared with Dental Hygienists⁵

¹ American Dental Hygienists' Association. 2015 Facts about 2015 Missouri Dental Hygienists.

² American Dental Hygienists' Association. *Education and Careers*. Licensure. Accessed May 2015 at <http://www.adha.org/licensure>.

³ American Dental Hygienists' Association. *Standards for Clinical Dental Hygiene Practice*, March 10, 2008.

⁴ Bureau of Labor Statistics. *Occupational Employment and Wages*, May 2014. Dental Hygienists. Accessed May 2015 at <http://www.bls.gov/oes/current/oes292021.htm#st>.

⁵ Bureau of Labor Statistics. *Occupational Outlook Handbook*. Dental Hygienists. Accessed May 2015 at <http://www.bls.gov/ooh/healthcare/dental-hygienists.htm#tab-1>.

⁶ Career Index. Dental Hygienist Schools in Illinois. Accessed June 2015 at <http://www.educationnews.org/career-index/dental-hygienist-schools-in-illinois/>.

⁷ Career Index. Dental Hygienist Schools in Kansas. Accessed June 2015 at <http://www.educationnews.org/career-index/dental-hygienist-schools-in-kansas/>.

⁸ Career Index. Dental Hygienist Schools in Missouri. Accessed May 2015 at <http://www.educationnews.org/career-index/dental-hygienist-schools-in-missouri/>.

⁹ Dental Assisting National Board, Inc. *Missouri State Requirements*. Accessed May 2015 at <http://www.danb.org/en/Meet-State-Requirements/State-Specific-Information/Missouri.aspx>.

¹⁰ Dental Career Guide. *Dental Assistant Salary*. Accessed May 2015 at <http://www.dentalcareerguide.com/dental-assistant/dental-assistant-salary.html>.

¹¹ Missouri Dental Hygienists' Association. *Dental Hygiene Programs Located in Missouri*. Accessed June 2015 at <http://www.mdha.org/dentalhygieneprograms.html>.

¹² Missouri Department of Health and Senior Services. Office of Primary Care and Rural Health. *Health in Rural Missouri Biennial Report 2012-2013*.

¹³ Missouri Department of Health and Senior Services. Office of Primary Care and Rural Health. *Missouri's Dental Hygiene Workforce- 2014*. Accessed at <http://health.mo.gov/living/families/primarycare/pdf/DentalHygieneWorkforceAnalysis2014.pdf>.

¹⁴ U.S. Census Bureau. *State and County Quick Facts*, 2015. Accessed May 2015 at <http://quickfacts.census.gov/qfd/states/29000.html>.