

Kentucky Dental Workforce Report 2023



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NON O T C U D O R T N

- According to the Centers for Disease Control and Prevention, in 2020:
 - 42.4% of adults age 18+ report **not** visiting a dentist or dental clinic in the past year
 - 44.9% of adults age 65+ report having lost six or more teeth due to tooth decay or gum disease
 - 23.4% of adults age 65+ report having lost all their natural teeth due to tooth decay or gum disease
- Cost of care, fear of the dentist, and inconvenience were cited as reasons for delaying a dental visit (American Dental Association, 2015).
- Kentucky counties with the lowest percentages of visiting a dentist in the past year and the counties with the highest percentage of senior citizens who have lost all their teeth are all located in rural Appalachian counties (Wymer, 2022).
- A strong association exists between oral health and chronic health conditions, stress, anxiety, and depression (Kentucky Oral Health Innovation Initiative, 2022).
- Kentucky ranks 9th out of 50 in oral cancer rates and 5th in the percentage of adults with tooth extractions (Kentucky Oral Health Innovation Initiative, 2022).
- Around half (53%) of Kentucky Kindergarteners received a dental screening or exam in 2018-2019 (Kentucky Department of Education, 2020).
- Kentucky has 120 counties: 86 rural and 34 urban (HRSA, n.d.)

Licensure data was requested through the Kentucky Board of Dentistry.

The following information is obtained within the licensure set:

- Full name
- Date of birth
- Degree
- License issue date
- Dental school
- Graduation year
- Specialty permit type
- Practice
 - Name
 - Address
 - County/counties
 - Type



Duplicate providers and out-of-state providers were removed from the data.

Responses with multiple practice counties were parsed into separate columns so all practice counties could be aggregated (the total number of counties will not equal the total number of dentists). The county listed first in the licensure data was assumed to be the primary county for county designation.

Frequencies were calculated using IBM SPSS Statistics Version 28. Rural and urban counties were coded on rural designation by Human Resources and Services Administration (HRSA). County-level population counts were obtained through the US Census.

Years of licensure were calculated using the current year (2023) and the original licensure date within the data.

KEY FINDINGS

- 2,546 dentists practicing in Kentucky
 - The majority of dentists are located within urban counties.
- Most counties with dentist provider shortages are in rural counties.

- According to the Kentucky Board of Dentistry Licensure data, 2,546 dentists practice in Kentucky.
 - Most dentists identify as male, possess a Doctor of Dentistry (DMD) degree, and attended either the University of Kentucky or the University of Louisville for dental school (80%).

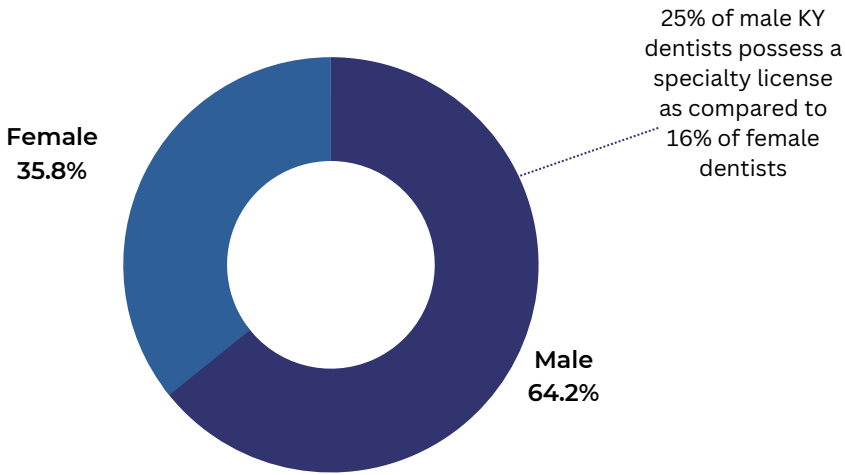


Figure 1. Percent of dentists' self-reported gender.

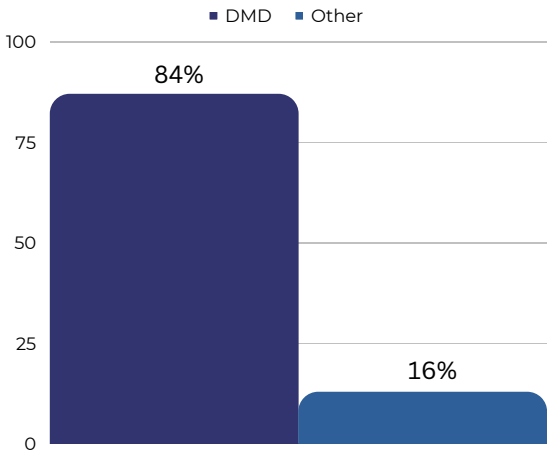


Figure 2. Percent of dentists' self-reported degree type.

- Five Kentucky counties have no practicing dentists (Ballard, Edmonson, Fulton, Jackson, and Robertson).
 - All five counties are rural, excluding Edmonson.

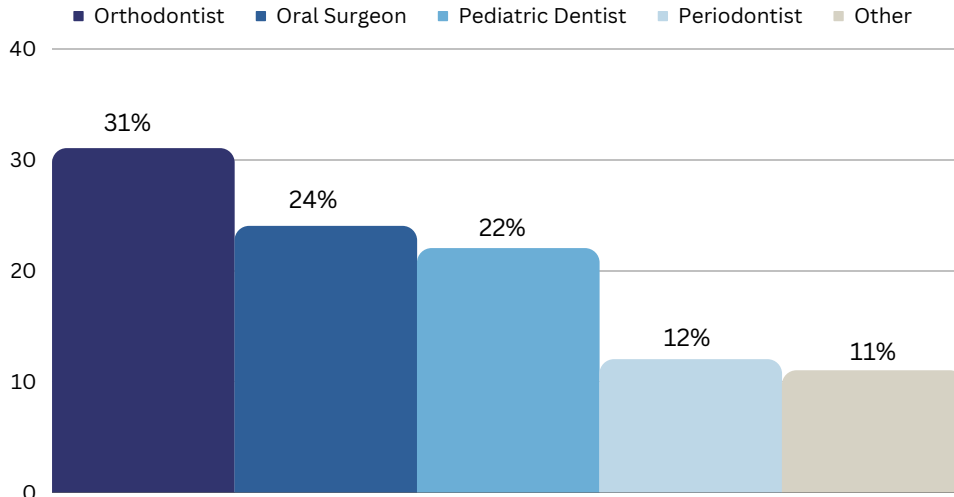


Figure 3. Percent of dentists self-reported specialty type.

- 77% of dentists report practicing general dentistry.
- 23% report a specialty, the most common being orthodontics.

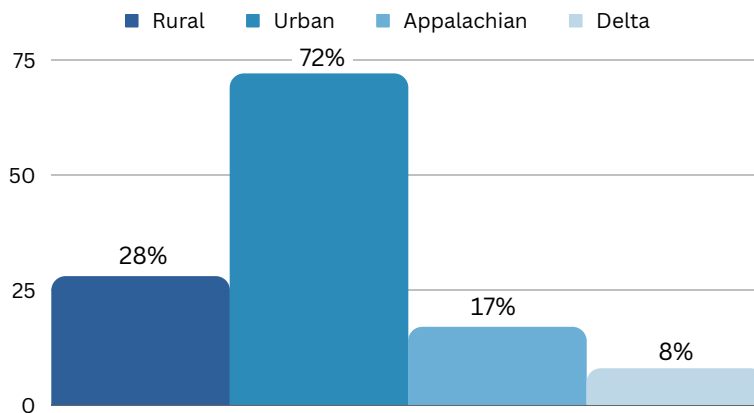


Figure 4. Percent of dentists by geographic designation.

- The geographical designation of Kentucky dentists was self-reported.
 - Dentists were able to report practicing in more than one county.
 - Those with multiple locations were analyzed separately, as there was no way to determine a primary location.
- Most (72.4%) of Kentucky dentists practice in urban counties compared to rural counties (27.7%).
- 134 Kentucky dentists reported practicing in multiple counties; one dentist reported practicing in nine counties.

Table 1. The following table illustrates the county-level ratio of providers to population. Counties with provider-to-population ratios at or greater than 1:5,000 are considered shortage areas or have no dentists and are highlighted in red.

| County | Ratio (Dentist:Population) | County | Ratio (Dentist:Population) |
|--------------|----------------------------|------------|----------------------------|
| Adair | 1:6310 | Clay | 1:4041 |
| Allen | 1:5199 | Clinton | 1:3088 |
| Anderson | 1:4006 | Crittenden | 1:4474 |
| Ballard | 0:7695 | Cumberland | 1:1960 |
| Barren | 1:2121 | Daviess | 1:1494 |
| Bath | 1:3195 | Edmonson | 0:12291 |
| Bell | 1:1835 | Elliott | 1:2460 |
| Boone | 1:1402 | Estill | 1:2013 |
| Bourbon | 1:1686 | Fayette | 1:740 |
| Boyd | 1:1597 | Fleming | 1:3806 |
| Boyle | 1:992 | Floyd | 1:1216 |
| Bracken | 1:4220 | Franklin | 1:1261 |
| Breathitt | 1:6777 | Fulton | 0:6512 |
| Breckinridge | 1:4130 | Gallatin | 1:8775 |
| Bullitt | 1:2591 | Garrard | 1:8681 |
| Butler | 1:2459 | Grant | 1:3156 |
| Caldwell | 1:3156 | Graves | 1:3662 |
| Calloway | 1:2209 | Grayson | 1:3316 |
| Campbell | 1:1756 | Green | 1:2258 |
| Carlisle | 1:4791 | Greenup | 1:4456 |
| Carroll | 1:3621 | Hancock | 1:1813 |
| Carter | 1:8804 | Hardin | 1:1378 |
| Casey | 1:15866 | Harlan | 1:3738 |
| Christian | 1:2584 | Harrison | 1:1895 |
| Clark | 1:1418 | Hart | 1:3243 |

Table continued on next page.

Continued The following table illustrates the county-level ratio of providers to population. Counties with provider-to-population ratios at or greater than 1:5,000 are considered shortage areas or have no dentists are highlighted in red.

| County | Ratio (Dentist:Population) | County | Ratio (Dentist:Population) |
|------------|----------------------------|------------|----------------------------|
| Henderson | 1:2771 | Marshall | 1:11833 |
| Henry | 1:7829 | Martin | 1:5749 |
| Hickman | 1:4424 | Mason | 1:1793 |
| Hopkins | 1:2376 | McCracken | 1:454 |
| Jackson | 0:12984 | McCreary | 1:1591 |
| Jefferson | 1:1123 | McLean | 1:16931 |
| Jessamine | 1:2063 | Meade | 1:10043 |
| Johnson | 1:5639 | Menifee | 1:6194 |
| Kenton | 1:2354 | Mercer | 1:2856 |
| Knott | 1:4684 | Metcalfe | 1:5175 |
| Knox | 1:2492 | Monroe | 1:2247 |
| Larue | 1:5009 | Montgomery | 1:1411 |
| Laurel | 1:1604 | Morgan | 1:6910 |
| Lawrence | 1:4073 | Muhlenberg | 1:2790 |
| Lee | 1:1863 | Nelson | 1:1884 |
| Leslie | 1:3426 | Nicholas | 1:7712 |
| Letcher | 1:7084 | Ohio | 1:3384 |
| Lewis | 1:3427 | Oldham | 1:1561 |
| Lincoln | 1:4849 | Owsley | 1:3953 |
| Livingston | 1:8959 | Pendleton | 1:7304 |
| Logan | 1:4629 | Perry | 1:1330 |
| Lyon | 1:8803 | Pike | 1:1913 |
| Madison | 1:1435 | Powell | 1:13133 |
| Magoffin | 1:5631 | Pulaski | 1:1487 |
| Marion | 1:1820 | Robertson | 0:2257 |

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Continued The following table illustrates the county-level ratio of providers to population. Counties with provider-to-population ratios at or greater than 1:5,000 are considered shortage areas or have no dentists are highlighted in red.

| County | Ratio (Dentist:Population) |
|------------|----------------------------|
| Rockcastle | 1:1791 |
| Rowan | 1:1912 |
| Russell | 1:2594 |
| Scott | 1:1295 |
| Shelby | 1:2551 |
| Simpson | 1:2465 |
| Spencer | 1:2213 |
| Taylor | 1:2385 |
| Simpson | 1:2465 |
| Spencer | 1:2213 |
| Taylor | 1:2385 |
| Simpson | 1:2465 |
| Spencer | 1:2213 |
| Taylor | 1:2385 |
| Todd | 1:12285 |
| Trigg | 1:7096 |
| Trimble | 1:2843 |
| Union | 1:2257 |
| Warren | 1:1577 |
| Washington | 1:4024 |
| Wayne | 1:3257 |
| Webster | 1:12813 |
| Whitley | 1:2639 |
| Wolfe | 1:3253 |
| Woodford | 1:2083 |

Table 2. Number of counties within geographical designations with dentist shortage.

| Geographical Designation | Number of Counties with Dentist Shortage |
|--------------------------|--|
| Rural | 20 |
| Urban | 7 |
| Appalachian | 15 |
| Delta | 9 |

- The following map illustrates the number of dentists by Kentucky county. These counts reflect the first county self-reported from the dentists on the licensure form.
- Five Kentucky counties have no dentists: Ballard, Edmonson, Fulton, Jackson, and Robertson.
 - Four of the five counties with no dentists are designated rural (Ballard, Fulton, Jackson, and Robertson), and three of the five counties designated as Appalachian have no dentists (Edmonson, Jackson, and Robertson).

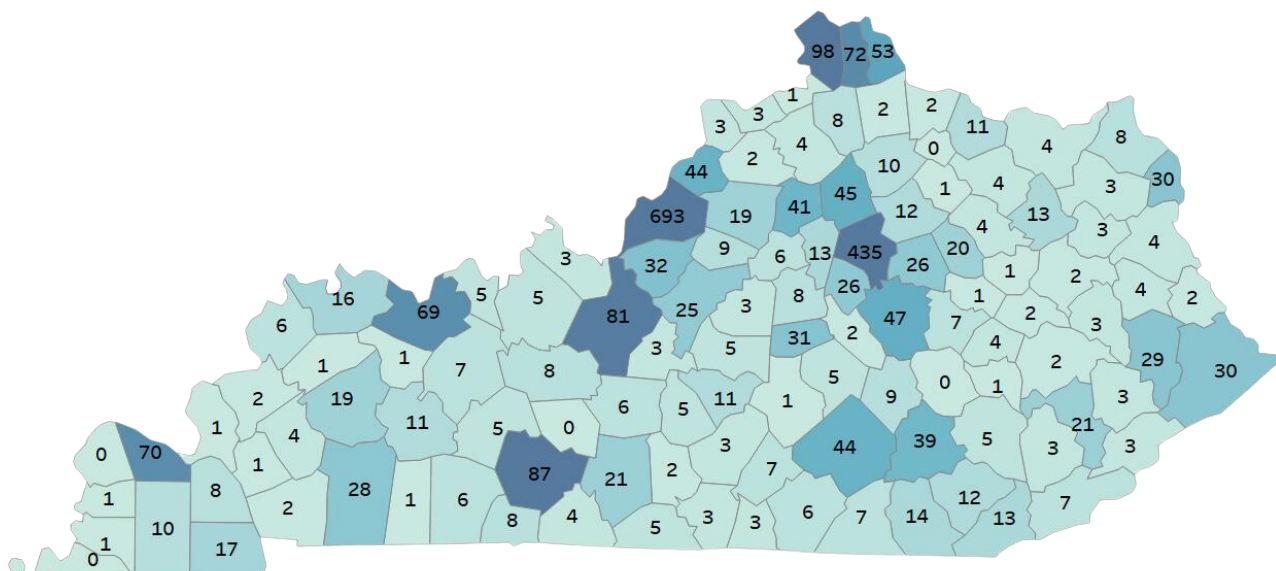


Figure 5. Dentist counts by county.

- 75 of 120 Kentucky counties (63%) have between one and 10 dentists.
- 41% of all Kentucky dentists practice in Fayette County (16%) and in Jefferson County (25%).
- 27% (n=37) of dentists reporting multiple practice counties listed Fayette or Jefferson as a second practice location.
- 76% of all Kentucky specialty dentists work in urban counties, compared to 24% in rural counties.
 - Of specialty dentists in Kentucky, 45% practice in Fayette (19%) or Jefferson (26%) county.

NOSSURS DIS

- Kentucky ranks bottom of the United States (49th) on oral health indicators such as dentist visits (America's Health Rankings, 2022).
- Poor oral health can be linked to developing other health conditions, such as endocarditis, and worsening health conditions like diabetes (Mayo Clinic, 2021).
- Kentucky, especially rural and Appalachian Kentucky, has high levels of chronic health conditions which may impact oral health (RHHub, 2022).
- Analysis of the dental workforce grants stakeholders a deeper understanding of the issues that plague the dental care system.
- A maldistribution of dental providers exists in Kentucky, as most providers are employed in urban counties.
- Around 5% of dentists in the licensure data report working in multiple counties, which suggests a need for dentists in the workforce.

RECOMMENDATIONS

- The expansion and sustainability of the Commonwealth's Healthcare Worker Loan Relief Program and the National Student Loan Repayment Program are imperative to attract and retain dentists in rural areas.
- Expansion of dental schools, specifically in the rural region, will give providers experience with the population and may encourage providers to continue working there.
- Increasing knowledge surrounding the importance of oral health and issues with the dental workforce may motivate individuals to pursue a dental career.



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