

Rural dentists

Does growing up in a small community matter?

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The “graying” of America is occurring in many professions, including dentistry. The median age of dentists practicing in the United States is approximately 50 years.¹ The results of workforce studies have indicated that for every one dentist who graduates from dental school, two dentists will retire.¹⁻⁵ According to dental education reports, approximately 5,000 dentists graduate from dental school annually.^{6,7} These demographic changes may have a significant impact on retiring dentists, especially those practicing in rural or underserved areas, and the patients they serve.

The U.S. Census Bureau defines rural areas as all territories outside of Census Bureau–defined urban areas and urban clusters.⁸ An urban area consists of a central city and surrounding areas in which population is greater than 50,000 people. Although most states have urban centers, many also have rural areas in which the population is 50,000 or fewer people.⁷

Approximately 20 percent of the U.S. population lives in rural areas, whereas only 14 percent of dentists practice in rural locations.^{8,9} Of

ABSTRACT

Background. The aging of the dental workforce has implications for both patients and dentists, especially those in rural and underserved areas. Anecdotal information regarding dental workforce trends indicates that students from rural communities are more likely to practice in rural communities than are students from urban areas. Although the medical literature supports this premise relative to physicians, there are no data to verify this statement relative to dentistry. Therefore, the authors decided to study whether this premise applies to dentistry.

Methods. The authors conducted a retrospective analysis of dental student records from a Midwestern dental school for the years 1980 through 2010 to determine if there was a statistical correlation between the size of a dental student’s town of origin and the size of the community where he or she practiced after graduation. They also examined what role, if any, the student’s sex played.

Results. Dentists from rural areas were approximately six times more likely to practice in a rural area than were dentists from urban areas. Female dentists were only slightly less likely to practice in a rural community than were male dentists.

Conclusion. Dentists from rural communities were more likely to practice in rural communities than were dental students from urban areas.

Practice Implications. To ensure future access to care in rural communities, rural dentists may want to recruit actively or work closely with dental students from rural areas when hiring associates or seeking purchasers for their dental practices.

Key Words. Dentists; rural health; women dentists; private practice; retirement; students.

JADA 2012;143(9):1013-1019.



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these dentists, 8 percent practice in large rural areas, 4 percent in small rural areas and 2 percent in isolated rural areas.¹⁰ Of the 2,050 rural counties in the United States, 1,221 (60 percent) are designated as dental Health Professional Shortage Areas (HPSAs).¹¹ Approximately 47 million people live in federally designated dental HPSAs.¹² Considering the aging dental workforce and projections that large numbers of dentists plan to retire, states with significant rural populations have reason to be concerned.^{2,13} To address these concerns, several dental schools have opened recently.⁷ The new schools' effect on access to care in rural communities, however, is unknown.

In Nebraska, Wyoming, South Dakota and Kansas, the effects of rural dentists' retiring may be especially significant. In 2007 in Nebraska, there were approximately 63 dentists per 100,000 people.¹⁴ The more telling data, however, are that in 2007 in Nebraska, approximately 5 percent of the practicing dentists were 70 years or older and 17 percent were 60 to 69 years.¹⁵ In 2007 in Nebraska, 20 of the 93 counties had no dentists and 22 counties had only one or two dentists. In 2007 in Wyoming, there were approximately 48 dentists per 100,000 people,¹⁶ and 16 percent of the dentists were 65 years or older.¹⁷ In 2007 in South Dakota¹⁸ and Kansas,¹⁹ there were approximately 50 and 52 dentists per 100,000 people, respectively, and 25 and 20 percent of the dentists were 60 years or older, respectively.^{20,21} The aging of dentists in rural communities may have significant consequences unless efforts are made to replace these retiring dentists with new dentists.

To address these concerns, various approaches to encourage dental students to practice in rural and underserved areas have been used. They include, but are not limited to, recruitment of rural applicants, rural health education rotations and student loan repayment programs for dentists who practice in rural and underserved areas.²²⁻²⁴ Although schools have found these approaches to be helpful, the real significance of recruiting dental students from rural communities has not been studied.

The medical literature indicates that medical students who come from rural areas are more likely to practice in rural communities.²⁵⁻²⁷ No studies exist regarding dental students. However, anecdotal information from senior faculty members at the College of Dentistry (COD) at the University of Nebraska Medical Center (UNMC) who have served on the admissions committee indicated that students who graduated from rural high schools were more likely to

practice in a rural community.

The COD is a public dental school that accepts students from all 50 states and all U.S. territories and has been educating dentists since 1899 (Curtis G. Kuster, DDS, MS, admissions director, College of Dentistry, University of Nebraska Medical Center, oral communication, May 25, 2011). Approximately 40 percent of the students accepted at the COD are from states other than Nebraska. The COD promotes programs specifically designed to attract rural applicants. UNMC has incorporated summer medical and dental student enrichment programs, state college programs with guaranteed admission to doctoral programs, and rural education requirements into the curriculum. Generally, 800 to 1,000 students apply annually for the 45 dental student positions at the COD, and approximately 50 percent of the applicants to the COD are from rural communities (Merlyn Vogt, DDS, admissions director, College of Dentistry, University of Nebraska Medical Center, oral communication, March 12, 2012). Eighty-seven percent of the dentists in rural Nebraska are graduates of the COD.¹⁵ Historically, COD graduates have practiced primarily in Nebraska, South Dakota, North Dakota, Wyoming and Kansas. However, COD graduates currently practice in 49 states.

The results of dental workforce studies have indicated that male dentists are more likely than are female dentists to practice in rural communities.^{28,29} Similarly, the results of medical studies indicated that male physicians are more likely to practice in rural communities than are female physicians.³⁰⁻³² The ratio of male to female physicians practicing in rural areas is 7.6:1.0.³¹ Although female dentists and physicians are a small percentage of the workforce, their numbers are increasing. In 1982, female dentists were 3 percent of the workforce.³³ In 2009, female dentists were 20 percent of the dental workforce.¹

We conducted a study to test the hypothesis that dental students from small communities are more likely than students from urban areas to practice in small communities. If the hypothesis is valid, how significant is the size of a community from which a dental student comes in determining where he or she practices? In addition, what role, if any, does the student's sex play in determining whether he or she practices in rural communities?

ABBREVIATION KEY. COD: College of Dentistry. HPSA: Health Professional Shortage Area. UNMC: University of Nebraska Medical Center.

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