

RESEARCH REPORT

Still Searching

Meeting Oral Health Needs in Rural Settings

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Introduction

Approximately 15% of the United States (US) population, or [46 million people](#), reside in rural America. According to the United States Census Bureau, “[rural](#)” describes all population, housing, and territory not included within an urban area. “[Urban](#)” describes a core of census blocks that meet minimum housing unit density and/or population density requirements. Lastly, the US Department of Justice defines a [suburban](#) area as a type of urban area located in a Metropolitan Statistical Area (MSA) but not within a principal city in the MSA. Generally, rural areas are sparsely populated, have low housing density, and exist far from urban centers. While [97% of the country’s land mass is rural](#), only 46 million people live in rural areas as of 2023. Meanwhile, urban areas comprise only 3% of the entire US land area. Lastly, about 52% of US households describe their neighborhood as suburban — meaning that the majority of adults in the US live in the suburbs.

Where one lives plays an important role in their access to oral health care. According to the American Student Dental Association, [geographic location is one of the most common barriers to accessing dental care](#). Specifically, rural populations

have worse oral health care access, utilization, and outcomes in comparison with their urban counterparts. These disparities are likely related to factors such as low provider-to-population ratios; lack of transportation; inadequate numbers of dentists who accept Medicaid/CHIP or provide or offer discounted fee schedules; lack of, or insufficient, dental insurance benefits; lack of awareness or education about oral health; and poverty. It is important to reduce the oral health disparities related to geographic location by developing an equity-based strategy to drive forward equitable access to oral health care.

The nationally representative 2023 State of Oral Health Equity in America (SOHEA) survey was created by CareQuest Institute for Oral Health® and administered to adults (18+) by NORC at the University of Chicago in January to February 2022. Chi-squared analyses were used to assess differences in proportions across variables, and significance was identified at $p < 0.05$. Findings from the SOHEA survey highlight significant differences in oral health outcomes for individuals living in rural, suburban, and urban areas.

Characteristics of Rural, Suburban, and Urban Environments

Our nationally representative SOHEA survey results reveal the relationship between employment status, income level, and where one lives. For example, 31% of individuals living in rural environments have an income level of less than \$30,000, compared with 18% of those in suburban areas and 26% of those in urban environments. Additionally, 45% of rural residents are not working (retired, disabled, or other) compared with 40% of suburban and 29% of urban residents. Low-income individuals and families are at [greater risk for poor health outcomes](#) — suggesting the intersections of geographic location and oral health outcomes.

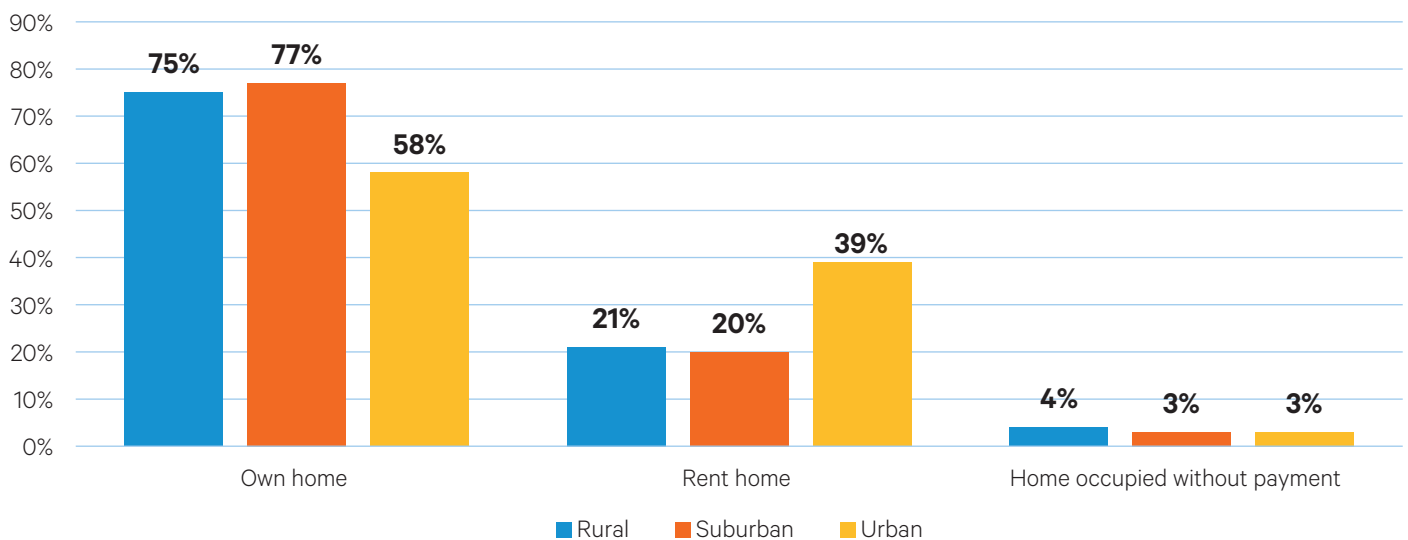
Housing type, a long-recognized social determinant of health, also plays an important role in oral health outcomes. Overall, our survey findings reveal that a greater proportion of rural and suburban residents own a home (75% and 77%, respectively, compared to 58% of urban residents). Homeowners are [more likely to rate their oral health as excellent, very good, or good](#) (78%) than those who rent their home or those who occupy a home without paying rent or a mortgage (63% for both). However, homeownership may be considered a proxy for higher socioeconomic status in terms of oral health outcomes.

Lastly, understanding food insecurity's effects on oral and overall health is important. Our 2023 CareQuest Institute Report, [Hunger Pains: How Food Insecurity Affects Oral Health](#), discusses the bidirectional relationship between nutrition and oral health. According to the American Dental Association,

our diet has a direct effect on our teeth and the tissues in our mouth. [A lack of access to nutritious foods can affect nearly every structure in the mouth](#) — contributing to enamel loss and bad breath. Proper nutrients, such as vitamins A, C, and D, as well as calcium, fluoride, and protein, are [critical for healthy dentition and oral tissues](#).

Findings from [Hunger Pains: How Food Insecurity Affects Oral Health](#) reveal that those living in rural environments experience significantly more food insecurity than suburban residents. Living in rural communities presents [unique challenges](#), such as a lack of transportation, low-paying jobs, and underemployment, that affect the ability to afford nutritious food. Additionally, many rural areas are [considered food deserts](#), or areas with limited offerings of fresh, affordable food. Our report finds that 9% of those living in rural environments said it was often true that they were worried their food would run out, compared with 6% living in urban environments and 6% of those in suburban areas. As previously stated, nutritional deficiencies can [impact nearly every structure in the mouth](#). Additionally, a [high-sugar diet is linked to a greater risk of cavities](#) — a problem that occurs more frequently and is more often left untreated in those experiencing food insecurity. Untreated dental disease can lead to [dental erosion](#) and advanced periodontal disease. Poor oral health outcomes linked to food insecurity highlight the importance of eliminating food deserts within all geographic locations, including rural areas.

Housing Type by Urbanicity



Oral Health of Rural, Suburban, and Urban Residents

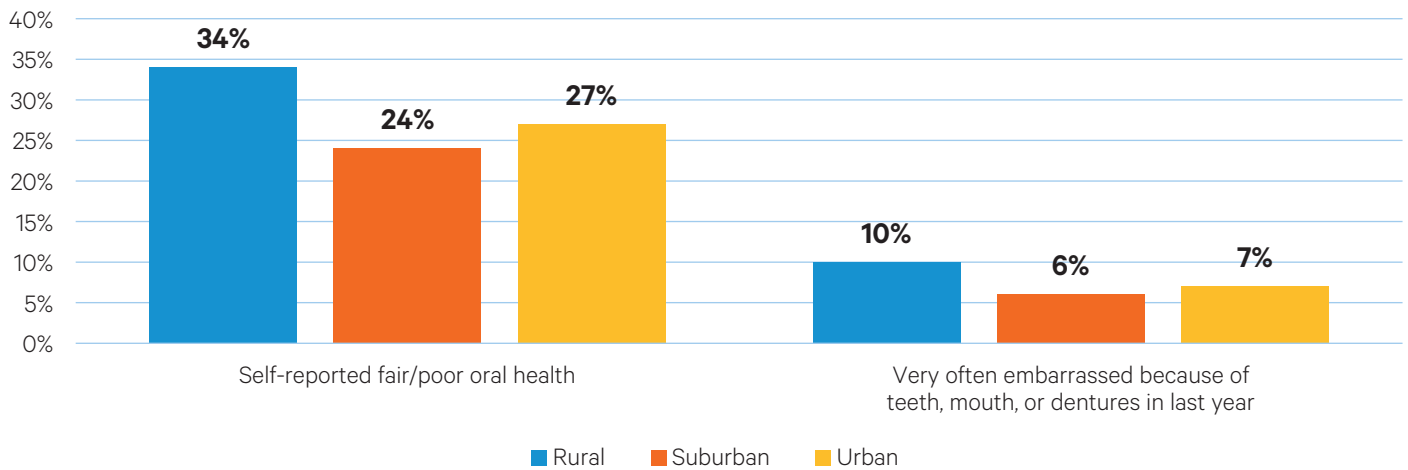
Rural residents often report poorer oral health outcomes compared with individuals living in other areas. For example, 34% of individuals living in a rural environment rate their oral health as fair or poor, compared with 27% of urban residents and 24% of suburban residents. Similarly, 10% of rural residents said they “very often” feel self-conscious or embarrassed because of their teeth, mouth, or dentures, in comparison with 7% of urban residents and 6% of suburban residents.

Rural residents report less-than-optimal oral health habits in greater proportions than residents living in other areas. For example, among rural residents, 59% say they brush twice per day or more, in comparison with 67% of both suburban and

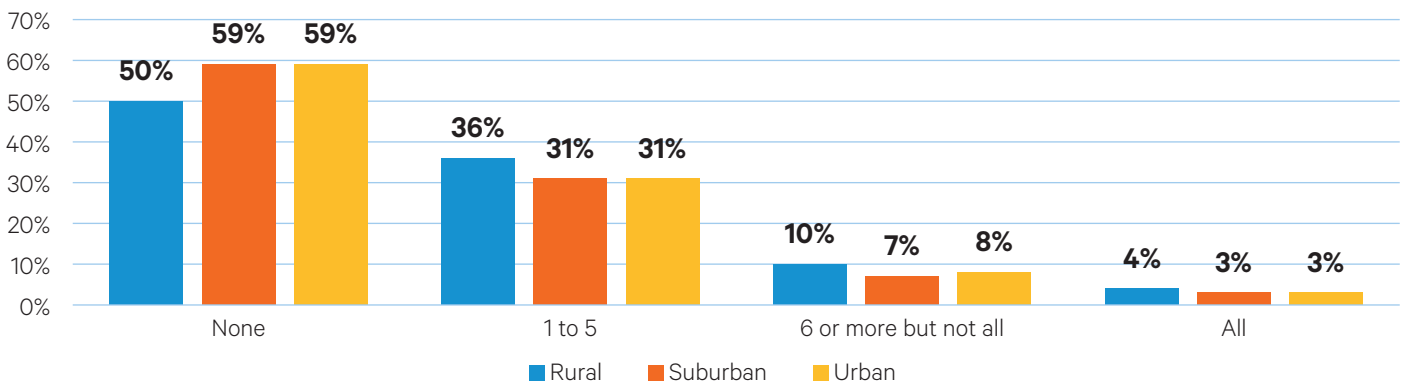
urban residents. Forty-one percent of rural residents say they brush once per day or less frequently. A lack of proper oral hygiene can lead to [oral infections such as tooth decay and gum disease](#).

Additionally, 16% of rural residents report smoking every day, compared with 13% of urban residents and 10% of suburban residents. Tobacco use [increases the risk of periodontal disease and oral cancer](#). These poor oral health practices may contribute to the disparities in oral health outcomes between rural residents and residents of other areas. For example, 36% of rural residents have lost between one and five teeth, in comparison with 31% of both suburban and urban residents.

Self-Reported Oral Health Outcomes by Urbanicity



Number of permanent teeth removed because of tooth decay or gum disease, not including teeth lost due to injury, wisdom teeth extraction, or orthodontics





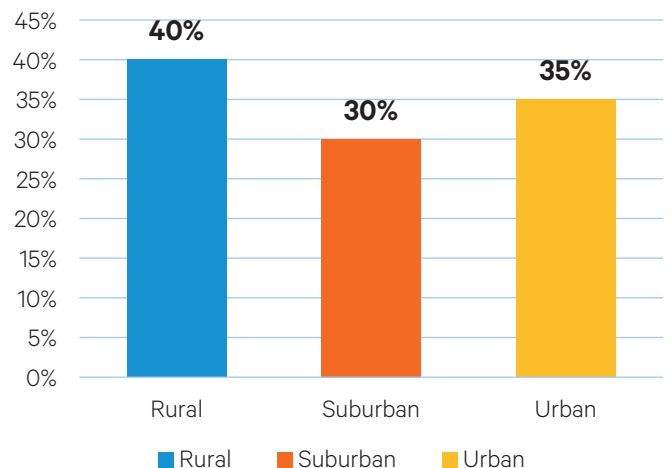
Barriers to Care:

Access to Dental Care for Rural, Suburban, and Urban Residents

Access to dental care services can vary greatly depending on where one lives. Four in 10 adults living in rural environments (40%) have not visited the dentist in over one year, in comparison with 35% of urban and 30% of suburban residents. This may be due to the greater need for rural residents to travel long distances to access care, as [fewer dental health professionals practice in rural areas](#). Our survey findings reveal that 20% of rural residents travel 45 minutes or more to visit their dentist, compared with 10% of suburban and 10% of urban residents. In the United States, only [14% of dentists practice in rural areas](#), and [67% of rural areas](#) are designated as Dental Health Professional Shortage Areas. Additionally, [public transportation and taxis are rarely available in rural counties](#), and the [majority of rural residents rely on a private vehicle to travel, often shared by the entire household](#).

Policies and programs are needed to [increase the number of dentists and other oral health professionals in low-supply areas](#), such as rural communities. Additional efforts to improve other dimensions, such as transportation, are necessary to improve the oral health of underserved populations.

More than One Year Since Last Dental Visit, By Urbanicity





Barriers to Care:

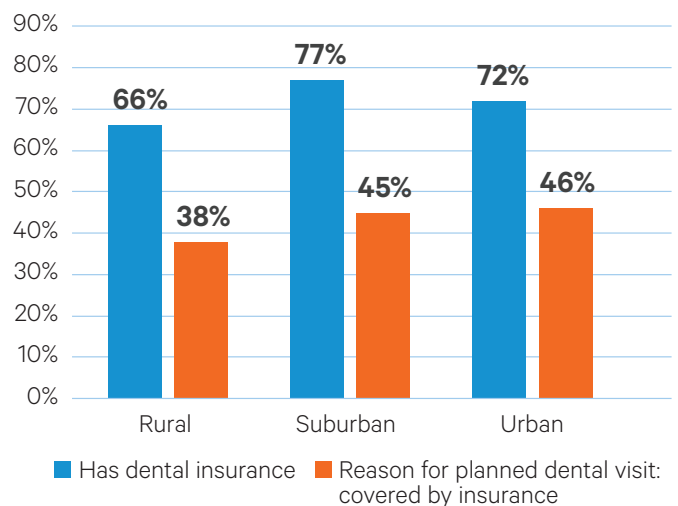
Insurance Status among Rural, Suburban, and Urban Residents

Just over one-third of rural residents (34%) do not have dental insurance coverage, in comparison with 29% of urban and 24% of suburban residents. [The rate of poverty is higher](#) in rural areas than in urban areas. Low-income status creates barriers for rural residents to access routine preventive care, purchase insurance, and invest in dental care services. A study performed by Manski et al. finds employers in rural areas to be [less likely to offer dental insurance](#) than employers in more populated areas. Of those who said they did not plan to see a dentist in the coming year, approximately 35% of rural

residents cited “no insurance” as their reason, compared with 29% of urban and 24% of suburban residents. These findings reinforce the disproportionate challenge experienced by rural communities in accessing routine or preventive care.

Employers in rural areas are less likely to offer dental insurance than employers in more populated areas.

Dental Insurance Coverage and Planned Dental Visit





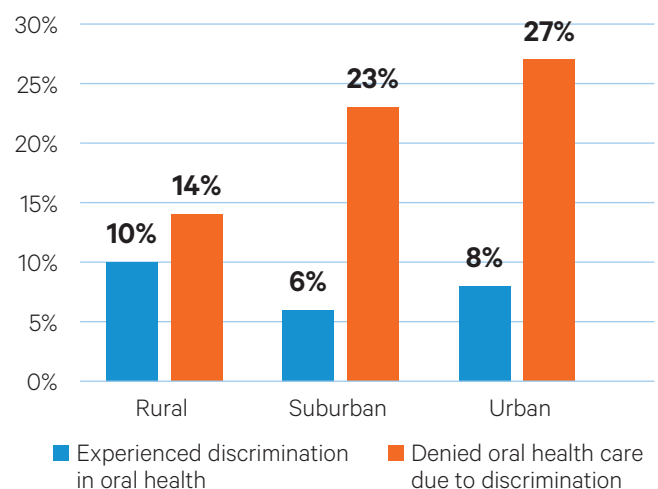
Barriers to Care:

Discrimination Experienced by Rural, Suburban, and Urban Residents

Discrimination serves as a significant barrier to accessing oral health care. One in 10 rural residents (10%) report experiencing discrimination in oral health care, compared with 8% of urban residents and 6% of suburban residents. Conversely, 27% of urban residents say they have been denied oral health care due to discrimination, compared with 23% of suburban and 14% of rural residents. Although these findings may seem inconsistent, the important takeaway is that people from all areas experience discrimination. Additionally, these results align with the findings that 8% of urban residents planned to avoid dental care in the coming year because they did not trust the dental team would act in their best interest, compared with 7% of suburban and 2% of rural residents. Overall, these findings call attention to the importance of cultural responsiveness among oral health professionals. An inability to manage or understand social and cultural differences can severely affect health outcomes, particularly among minority communities. [The Cultural Competency Program for Oral Health Professionals](#) is a course offered by the Office of Minority Health at the US Department of Health and Human Services. Increased engagement

in cultural responsiveness education and training among oral health professionals is an important step to eliminate discrimination as a barrier to oral health care.

Discrimination Experience and Denial of Oral Health Care Due to Discrimination by Urbanicity





Call to Action:

Equity Strategies to Reduce Oral Health Disparities

Teledentistry

Teledentistry offers a strategy to mitigate the challenges imposed on less populated areas. Specific services often include face-to-face consultation between oral health providers and patients via video (synchronous) and sharing of images and records with providers (asynchronous or store-and-forward). Among rural residents, 7% report that their oral health providers offer some types of care through teledentistry, in comparison with 9% of suburban and 13% of urban residents. Teledentistry use [continues to grow, but several implementation challenges exist](#). These include variation in laws and regulations between states, limited reimbursement, limited availability of telehealth services among providers, and logistical issues such as internet inaccessibility. In 2020, the [National Rural Health Association](#) identified the teledentistry model as a “recommended best practice” for rural oral health delivery. Increasing the use of teledentistry, particularly among rural populations, can increase patient access to oral health providers and improve oral health outcomes. Our SOHEA survey findings indicate that of the 185 respondents who had

Increasing the use of teledentistry, particularly among rural populations, can increase patient access to oral health providers and improve oral health outcomes.

a teledentistry experience, 77% were satisfied or very satisfied, and 72% were very likely or somewhat likely to use teledentistry again if it were offered. These findings highlight a positive consumer response to teledentistry’s implementation. Overall, teledentistry is well-positioned to triage, address patient needs, and benefit patients with less access to care. [Public and private payors](#) should enable coverage for teledentistry services, train

network providers, and educate patients about the availability of this care modality. Additionally, [resources should be provided to these communities](#) to increase awareness of teledentistry care options.

Expand Dental Coverage/Eliminate Coverage Gaps

Oral health disparities disproportionately affect rural residents who, compared with urban residents, have lower incomes, are less likely to have dental insurance, and are more likely to receive dental coverage through Medicaid and Medicare. However, Medicaid and Medicare offer limited dental coverage, particularly to adults. Adult Medicaid oral health benefits vary state by state, and Medicare only offers limited dental services under Part A. Our CareQuest Institute 2023 SOHEA report, [Uninsured and in Need: 68.5 Million Lack Dental Insurance, More May Be Coming](#), issues a critical call to action to increase broad dental coverage for both government programs.

Expand Access to Dental Services

An estimated [50 million people](#) reside in Dental Health Professional Shortage Areas. With most dentists located in urban areas, dental shortages often exist in rural areas, where a lack of access to dental services poses a barrier to equitable oral health. Increasing the supply of dentists within these communities is critical. This may require a shift in [recruitment strategies](#) in dental school admissions processes, curricula, mentorship, and incentives. For example, dental schools can create “rural tracks” such as the [University of Washington School of Dentistry’s Regional Initiatives in Dental Education \(RIDE\) program](#) to attract, enroll, and mentor students who are interested in pursuing rural practice, and create residency programs targeted to the skills required of rural

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practice. Additional efforts, such as expanding the workforce to include mid-level practitioners or dental therapists, may also contribute to increased access. [New categories of oral health practitioners](#), such as dental therapists, were originally developed with the intent of filling unmet needs of rural and underserved children. Expanding the dental workforce and recruitment of dentists to underserved areas are important strategies to consider in effort to reduce oral health disparities.

Medical-Dental Integration

Integrating oral health care into primary care can mitigate some barriers to access. Survey findings reveal that 9% of rural residents, 11% of suburban residents, and 15% of urban residents strongly agree they would be more likely to seek dental care if their dentist and doctor were located in the same office. Primary care clinicians, particularly family medicine physicians, are widely distributed across the United States, including in rural areas — highlighting the potential of medical-dental integration. [The Medical Oral Expanded Care \(MORE Care\)](#) program developed by CareQuest Institute trains rural primary care clinicians in oral health preventive services, and provides technical assistance to integrate the work of medical and dental teams.

In the US, rural residents are disproportionately burdened by limited access to dental care, provider shortages, and lower dental insurance rates. Innovative strategies to mitigate these barriers to access, and the consequent oral health burdens for rural residents, are critical. Equity strategies include but are not limited to teledentistry, expansion of dental coverage, workforce expansion, and medical-dental integration. CareQuest Institute for Oral Health has partnered with the [National Rural Oral Health Initiative](#) to reduce oral health disparities between rural Americans and residents of other areas. We are calling on all oral health and health care professionals as well as policymakers to continue efforts to identify strategies to improve access to oral health services, particularly among rural residents.

CareQuest Institute for Oral Health

CareQuest Institute for Oral Health® is a national nonprofit championing a more equitable future where every person can reach their full potential through excellent health. We do this through our work in grantmaking, research, health improvement programs, policy and advocacy, and education as well as our leadership in dental benefits and innovation advancements. We collaborate with thought leaders, health care providers, patients, and local, state, and federal stakeholders to accelerate oral health care transformation and create a system designed for everyone. To learn more, visit carequest.org.

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