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Eight Ways to Mitigate US Rural Health Inequity

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Abstract

Rural residents in the United States are less likely to have dental insurance and more likely to face environmental and geographic barriers to oral health and dental care. This article discusses oral health inequity, evidence of oral health's influence on overall health, and why the primary care workforce is well positioned to provide prevention, screening, and referrals for oral health and dental care. Six strategies by which oral health and dental care are integrated into primary care delivery streams can help mitigate rural health inequity.

Oral Health, Overall Health

Poor oral health has significant consequences for overall health and quality of life. Poor dental coverage and poor oral health care access have led to a high prevalence of preventable dental diseases that affect health and quality of life for millions of Americans. For example, periodontitis affects 46% of US adults and dental caries affect 92%.¹ In the last several decades, the effect of oral health on overall health and quality of life has been increasingly recognized. The 2000 US Surgeon General's Report described the linkage between periodontal disease and metabolic syndrome, adverse pregnancy outcomes, coronary artery disease, stroke, and bacterial pneumonia.² Since then, several studies have demonstrated the negative impact of dental disease on quality of life.^{3,4}

Despite the recognition of the importance of oral health for population health, there are 2 unsolved challenges to the delivery of oral health care: cost of care and access to care. In this paper, we review these challenges and highlight a proposed solution to integrate oral health care into primary care.

Dental Coverage Gaps

In the United States, there are large **disparities in oral health**, particularly for children, by socioeconomic status and race/ethnicity.⁵ Oral health disparities are exacerbated in rural populations. Compared to urban populations, rural populations are older, lower income, less likely to have dental insurance, and more likely to rely on Medicaid and Medicare.⁶ Medicaid and Medicare offer limited dental coverage: for children, states are now—after the passage of the Patient Protection and Affordable Care Act (ACA) of 2010—required to include dental care in their Medicaid and Children's Health Insurance programs (CHIP).¹ Adult Medicaid oral health benefits are highly variable from state to

state,⁷ and only 19 states offer extensive coverage.⁸ Medicare covers only very limited dental services under Part A.⁹

Fewer Dentists, Less Access

Coverage alone is likely not sufficient to increase access to care, as only an estimated 43% of dentists accept Medicaid or CHIP.¹⁰ The dental care safety net was saturated prior to the passage of the ACA and now has millions more potential patients.¹¹ An estimated 50 million people reside in dental health professional shortage areas.¹¹ Most dentists are located in urban areas; only 14% of dentists practice in rural areas, where 20% of the US population resides.¹² Of those 14%, the majority practice in large rural areas compared to small or isolated areas.¹² Although the supply of dentists increased nationally by about 9.7% between 2008 and 2015, with both urban and rural locations sharing in the per-capita gain, between 2015 and 2018, the per-capita gain has been entirely in urban locations (B. Munson, Health Policy Institute, oral communication, July 2019). Private practice dentists are more likely to locate in larger communities and communities with higher-income levels.¹³

People residing in rural areas have trouble accessing dental care due to long travel distances, as dental care is often located prohibitively far for routine preventive care. And avoidance of preventive health care leads to worse dental outcomes. In comparison to urban adults, rural adults have fewer dental visits, less frequent cleanings, and more extractions of permanent teeth.¹³ Rural residents whose water supplies are not fluoridated lack the benefit that fluoridated water systems afford urban residents. Moreover, rural residents use more tobacco products—both smoked and smokeless—than urban residents do,¹⁴ and use of tobacco products increases risk of periodontal disease and oral cancer.¹⁵ The lack of preventive care and delayed disease care leads to advanced disease, tooth loss, and secondary complications.^{2,13}

For rural patients, the value of integrating oral health care into primary care is particularly great because primary care clinicians—particularly, family medicine physicians—are widely distributed across the United States, including rural areas.¹⁶ Primary care is designed to offer preventive care, early diagnosis of disease, and prompt referral when subspecialty care is indicated. Primary care clinicians are therefore well positioned to screen for dental disease and to work with dentists to co-manage diseases with known oral-systemic disease connections (eg, diabetes and periodontitis). However, oral health training exceeding 4 hours is not common in primary care professional training.¹⁷ Integration relies on bolstering successful initiatives to train the primary care workforce.

New Training Initiatives

In the last 20 years, several successful initiatives have filled the oral health knowledge gap in medical education by training health care personnel to provide oral hygiene and dietary counseling and to screen for oral disease. Smiles for Life: A National Oral Health Curriculum is a free, open-access resource that has been available since 2005.¹⁸ The curriculum covers oral health across the life span and offers educational credit for both medical and dental professionals. It is the most widely used curriculum for primary care oral health training in the United States and is endorsed by 20 professional organizations.¹⁹

Another initiative, the Medical Oral Expanded (MORE) Care Program, trains rural primary care clinicians in oral health preventive services and provides technical assistance to

integrate the work of medical teams and their oral health counterparts.²⁰ Oral hygiene counseling, dietary advice, and fluoride varnish application fit well into the well-child primary care conducted by rural family physicians, physician assistants, and nurse practitioners, if the additional time is built into their schedules or other clinical staff are trained to help. Mechanisms already exist to reimburse primary care clinicians for their time: in all 50 states and the District of Columbia, Medicaid pays medical professionals for child oral health services, including fluoride varnish application.²¹

Five More Equity Strategies

Several strategic actions can help reduce rural oral health disparities and assist in integrating oral health into primary care.

Implement teledentistry. As rural areas acquire increased bandwidth, telemedicine and teledentistry can provide virtual expertise and save patients the time and expense of travel. Teledentistry allows dentists to supervise dental hygienists as they **treat caries** in underserved children, where permitted by state law.²² The COVID-19 pandemic has accelerated the adoption of both telemedicine and teledentistry,^{23,24} setting the stage for its continued use and expansion.

Expand access to dental insurance. If integration of oral health care into primary care is to be successful, dental coverage will need to be expanded. Universal dental insurance and expansion of oral health care benefits under Medicare and Medicaid have both been proposed but not passed.^{25,26} In addition to legislative solutions, grants could be used to offer free or sliding-scale services in areas with rural oral health disparities. Coverage, payment, and delivery innovations, such as **accountable care organizations** (ACOs) and Patient-Centered Medical Homes, have historically not included dental care.¹ Policies that include oral health in ACOs should be explored. Incentivizing dentists to accept Medicaid may also be necessary.

Offer oral health services in school-based health centers. The approximately 2000 **school-based health centers** in the United States serve an important role in public health and disease prevention.^{27,28} Some school-based health centers have started to offer preventive dental services to children and may be uniquely positioned to provide these services for lower-income and rural children.²⁹ School-based programs in rural areas also increase the exposure of dental professional students to rural areas, which may be an important recruitment tool.²⁹ Services could be offered at the discretion of the school district, and national funding could be allocated explicitly for dental programs.²⁷

Create new categories of dental practitioners. Dental therapists, mid-level practitioners similar to physician assistants, are now licensed in 12 states.³⁰ They are also licensed in the tribal lands of Alaska, Idaho, Montana, Oregon, and Washington, and 8 other states are pursuing dental therapy licensure.³¹ The original goal in developing this new category of oral health practitioner was to fill the unmet needs of rural and underserved children.^{32,33} Dental therapists, if willing to locate in rural areas, could help meet the needs of the rural elderly with limited transportation and in extended care facilities.³⁴ Some states allow independent practice of dental hygienists.³⁵

Encourage dentists to locate in rural areas. Shifting the distribution of dentists from urban areas to rural communities is a longer-term solution to improving rural access to oral health care. Recruiting more rural dentists may require a combination of changes in dental school admission preferences and curricula, mentorship, and incentives.^{12,36}

Dental schools could employ a strategy that some medical schools have successfully implemented to create “rural tracks” to attract, admit, and mentor students who are interested in rural practice and to create residency programs targeted to the skills required for rural practice.^{37,38,39} Another option might be to incentivize young dentists and dental professionals to **move to rural areas** through, for example, increased funding for the National Health Service Corps with dedicated dental positions. This strategy aims to increase the number of dentists and other dental health professionals who have access to loan repayment and requires a commitment of several years of providing care to Medicaid patients.

Conclusion

The primary care workforce is well positioned to provide preventive oral care, dental screening, and referral to oral health care specialists and, by extension, to dental care specialists. Integration of oral health services into primary care will require interprofessional practice, dedicated medical curricula, expanded dental licensing, recruitment of dentists, improved access to dental insurance, and teledentistry. With these strategies, primary care has great potential to reduce rural oral health disparities.

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