

American Indian and Alaska Native Access to Oral Health Care: A Potential Solution

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Abstract: American Indians and Alaska Natives (AI/AN) experience significant health disparities relative to the general U.S. population. In particular, oral diseases affect the majority of the AI/AN population and their prevalence is significantly greater than observed in other demographic sectors of the U.S. population. The reasons for these disparities are multiple but lack of access to dental care is clearly a contributing factor. The dentist-to-population ratio in many AI/AN communities is less than half the U.S. average. A solution has been developed in Alaska by AI/AN leaders: dental therapists, i.e., local people trained for two years to provide basic dental services. This solution is being fought by organized dentistry that sees the approach as an economic threat, but AI/AN organizations are committed to implementing this Native solution to their access problem. The Alaska experience indicates that access to oral health services can be improved through the addition of dental therapists to the dental team.

Key words: American Indians and Alaska Natives, oral health disparities, diet, access, Indian Health Service, dental therapists.

American Indian and Alaska Native (AI/AN) communities in the United States face inequitable challenges (relative to the general population) in many parts of life, including rural isolation with limited access to health care, low socioeconomic status, and important risk factors related to psychosocial well-being. These facts of life for many AI/AN people put them at extraordinary risk for adverse health outcomes, creating health disparities relative to the general population.¹

According to the 2010 Census, 5.2 million people in the United States identified as American Indian or Alaska Native, either alone or in combination with one or more other races.² Out of this total, 2.9 million people identified as American Indian or Alaska Native alone.² The American Indian and Alaska Native alone-or-in-combination population experienced faster growth than the total U.S. population, growing by 27% from 4.1 million in 2000 to 5.2 million in 2010.² In the 2010 Census, 41% of the American Indian and Alaska Native alone-or-in-combination population lived in the West. The South had the second- largest proportion followed by the Midwest and the Northeast² [Figure 1].

The overall percentage of AI/AN people living below the federal poverty line is 29%.³ The AI/AN proportion on reservations living below poverty varies from one reserva-

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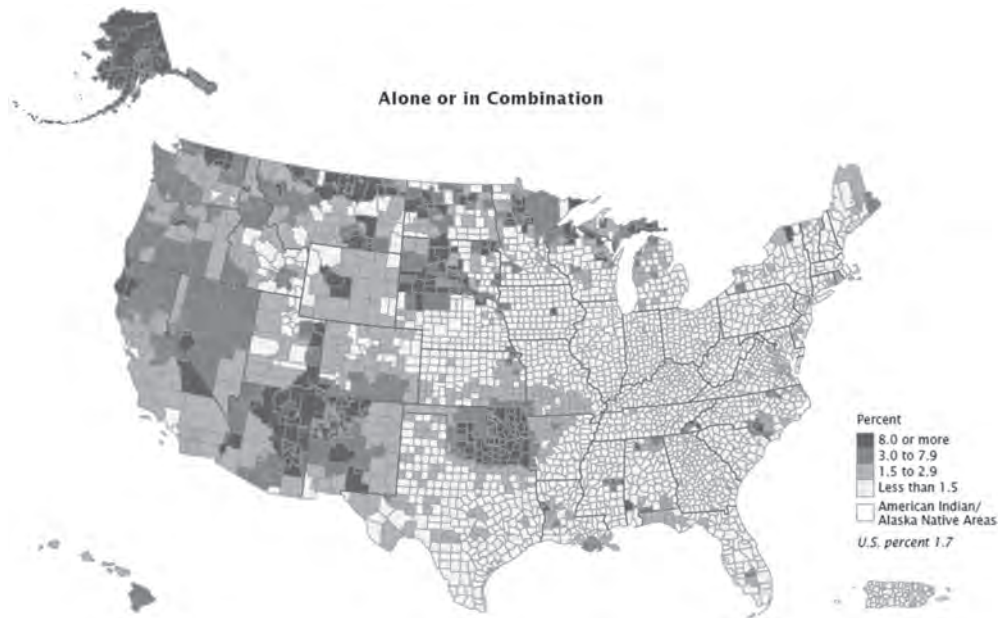


Figure 1.

Source: U.S. Census Bureau, *2010 Census Redistricting Data (Public Law 94-171) Summary File*, Table P1.

tion to another, with a low of 38% to a high of 53%.⁴ Among AI/AN people who are employed, many are earning below-poverty wages.⁵

Oral disease levels in AI/AN populations are very high; a recent study reported that 68.4% of preschool children had a history of dental caries, 45.8% had untreated dental caries, and the mean decayed and filled teeth (dft) score was 3.5, which was three times higher than the dft of their non-Native counterparts.⁶ An Indian Health Service (IHS) oral health survey reported that more than 20% of one-year old AI/AN children have decayed teeth, and that the percentage with decay rises significantly with age (Figure 2).⁷

Oral disease rates differ across reservations. A study on the Pine Ridge Reservation in South Dakota revealed that 84% of the children (3–18 years) participating in a study (n=157) had untreated decay and 40% had moderate to urgent dental care needs.⁸ Another study on the Navajo Nation (n=1,016) revealed that 69.5% of Head Start children in the study had untreated decay.⁹ Oral health data for AI/AN adults are scarce; however the Pine Ridge study revealed that 97% of the adult participants (n=135) had at least one untreated decayed tooth, 68% had some evidence of periodontal disease, and 16% had advanced periodontal disease.⁸ Another study conducted on the Santo Domingo Pueblo in New Mexico also revealed a high prevalence of untreated dental decay in adults age 20 to 65 (71%).¹⁰

A study conducted in a reservation in the Southwest U.S., which examined a representative sample of preschool children and their caregivers, demonstrated that parental education, income, and parental oral health behavior, attitudes, and beliefs were associated with the child's oral health. Parental attitudes and beliefs such as fatalistic beliefs, meaning parents believe their teeth and their children's teeth will inevitably become

Table 1.
MORTALITY DISPARITY RATES^a

	Ratio: AI/AN to U.S. All Races ^b
ALL CAUSES	1.2
Diseases of the heart	1.0
Malignant neoplasm	0.9
Unintentional injuries*	2.4
Chronic lower respiratory diseases	1.6
Diabetes mellitus	2.8
Chronic liver disease and cirrhosis	4.7
Cerebrovascular diseases	0.9
Influenza and pneumonia	1.4
Nephritis, nephrotic syndrome	1.5
Intentional self-harm (suicide)	1.6
Septicemia	1.4
Alzheimer's disease	0.6
Assault (homicide)	1.8
Essential hypertension and hypertensive renal disease	0.9
Parkinson's disease	0.7

^aIndian Health Service. Fact sheets: disparities. Rockville, MD: Indian Health Service, 2006. Available at <http://www.ihs.gov/newsroom/factsheets/disparities/>.

^bAmerican Indians and Alaska Natives (AI/AN) in the IHS Service Area 2006–2008 and U.S. All Races in 2007.

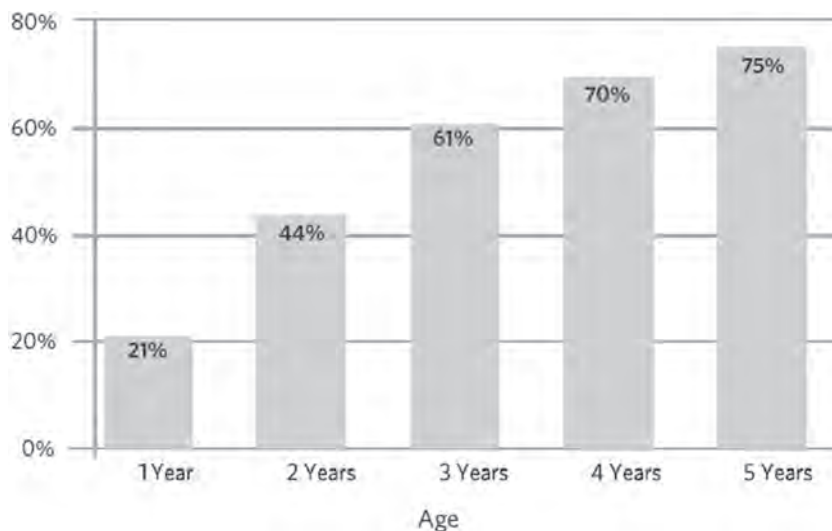


Figure 2. Percentage of AI/AN children that have a history of decay by Age, 2010.
Source: 2010 Indian Health Service Oral Health Survey of American Indian and Alaska Native Preschool Children

decayed, perceived susceptibility to caries and perceived barriers to oral health care were significantly associated with child's oral health status and these were also associated with participant's income and education. In all of these findings, the socioeconomic conditions of the AI/AN participants played an important role. Low socioeconomic conditions were associated with fatalistic beliefs and ultimately poor oral health¹¹.

Many AI/AN people rely exclusively on the Indian Health Service (IHS), an agency of the federal government, for health care. About 57% of AI/AN population, or 1.9 million people, are provided health services through the Indian Health Service (Figure 3).¹² The Indian health care system is delivered through direct care services provided by IHS employees, tribally operated health care services, and urban Indian health care services funded, usually in part, through arrangements with the IHS.

The Indian Health Care Improvement Act (IHCIA) was enacted in 1976 and is considered the cornerstone legal authority for the provision of health care to AI/AN people.⁵ The IHCIA builds on the Snyder Act of 1921, which was the first legislative authority for Congress to appropriate funds specifically for health care for AI/AN people.⁵ Despite the importance of IHS, it has consistently been underfunded compared with other public health care programs, such as Medicare and Medicaid. In 2005, the

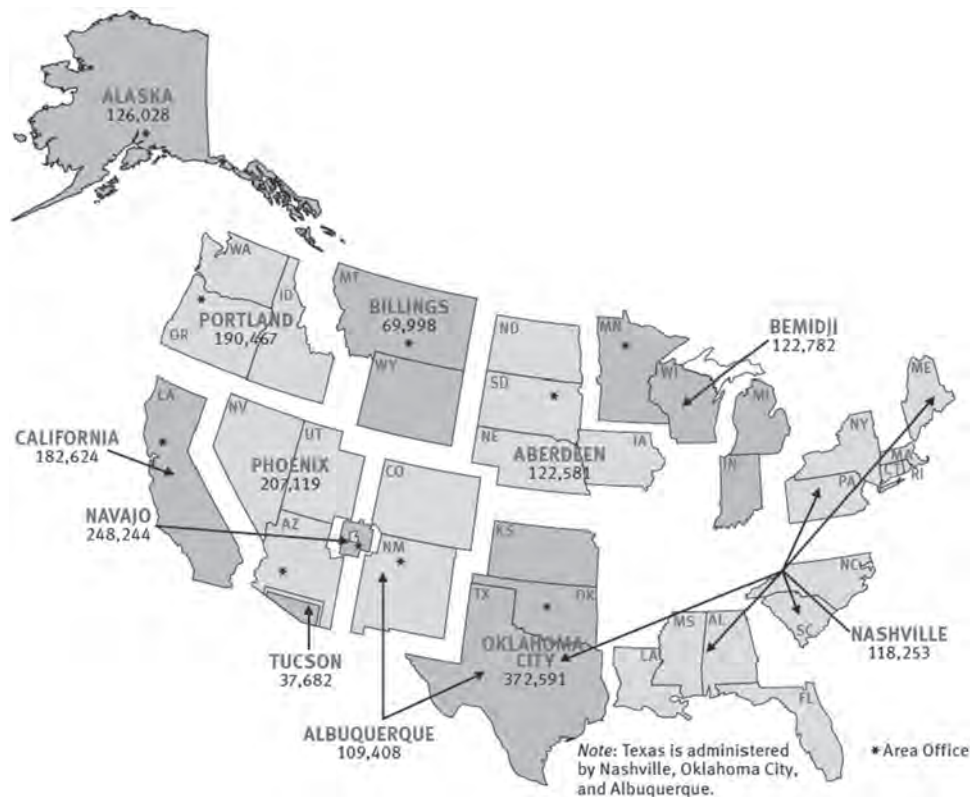


Figure 3. Indian Health Service, Service population by area, 2009.
Source: Indian Health Services, Division of program statistics, Population statistics

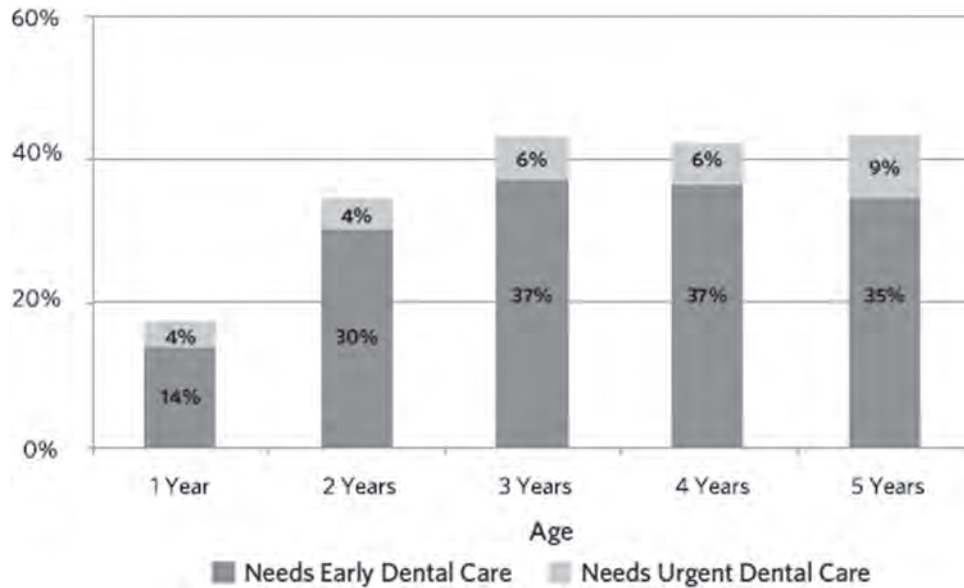


Figure 4. Percentage of AI/AN children screened needing early or urgent dental care, 2010.

Source: 2010 Indian Health Service Oral Health Survey of American Indian and Alaska Native Preschool Children

federal government spent only \$2,130 per capita for IHS beneficiaries, compared with \$5,010 for Medicaid and \$7,631 for Medicare beneficiaries, respectively.¹³

Dental services provided through IHS are severely underfunded as well. Approximately 90% of the dental services that IHS provides are basic, emergency care services, with restorative and preventive care provided primarily for children. Because of this, AI/AN people are often denied dental services such as endodontic care, crowns, bridges, dentures, and surgical extractions.¹³ More specifically, there are about 141,000 children ages one to five years who are eligible for care, 36% of these children need dental care, with about 6% needing urgent dental care because of pain or infection (Figure 4). This means that more than 50,000 AI/AN preschool children served by IHS need dental care, of which about 8,400 may be in pain or have an oral infection.⁷

Apart from being underfunded, IHS struggles with other issues such as the relative geographic isolation of tribal populations and the inability to attract physicians/dentists to practice in IHS or tribal health facilities in rural areas. Despite intense recruitment efforts and significant financial incentives, the IHS and the tribes continue to have difficulty in attracting dentists. It is, however, important to understand that even if all the positions serving eligible AI/AN people were filled, the dentist-to-population ratio would still be inadequate due to the large burden of disease occurring in multiple diffusely populated groups.

Potential Solution. To reduce the oral health disparities faced by the AI/AN population, a model of oral health care delivery relatively new to the U.S. is being discussed

and implemented by the tribal leaders: the dental therapist. The Alaska Native Tribal Health Consortium (ANTHC) introduced dental therapists based on the New Zealand model in 2004 to provide basic oral health care in the context of the Community Health Aide program.¹⁴ The therapists in Alaska are officially called Dental Health Aide Therapists (DHAT). The DHATs, nearly all of whom are Alaska Natives, provide culturally sensitive and technically competent care to people living in remote villages.¹⁴ The DHATs work under the general supervision of dentists at regional offices and provide basic dental services such as restorations, uncomplicated extractions and preventive services. In 2008, the Research Triangle International evaluated the DHAT workforce model and concluded that the therapists are performing well and operating safely within their scope of practice. When first deployed to a village, the therapist's major emphasis is typically relieving pain, but as the burden of acute disease is brought under control, their role is generalized to include preventive measures such as education activities for their communities.¹⁵ The report also indicates that dental therapists are well accepted in the villages and serve as role models for the AN children they serve.¹⁵

The American Dental Association (ADA) and several other organized dental groups oppose the concept of DHAT, citing concern for patient safety.¹⁶ In fact, the ADA and the Alaska Dental Society filed lawsuits against the ANTHC and the first group of dental therapists while they were in training. That lawsuit was settled, and dental therapists have been working in Alaska for 10 years providing care to 40,000 people.

However, organized dentistry has continued its opposition despite substantial evidence supporting DHAT safety and effectiveness. During the negotiations to pass the Patient Protection and Affordable Care Act (Public Law 111-148, widely known as the ACA or ObamaCare) there was pressure from organized dentistry that resulted in language in Title X of the law. Title X is the Indian Health Care Improvement Act section. That language places restrictions on the expenditure of federal dollars to support dental therapists working in tribal communities outside of Alaska unless the state in which the tribe resides licenses dental therapists. Since most care in AI/AN communities is provided directly or funded by the IHS, it has been effective in reducing the expansion of dental therapy. This language is troubling from two perspectives: It subverts tribal sovereignty by making state law supersede the will of tribal government, and it has allowed a trade group with a financial interest in opposing dental therapists to inhibit the dissemination of a solution that has been shown in Alaska and elsewhere around the world to be successful.

Organizations on the right and left of the political spectrum—those with libertarian views such as Grover Norquist as well as philanthropic organizations such as the WK Kellogg Foundation and the Pew Charitable Trusts—support adding dental therapists to the dental team.^{17,18,19} The National Congress of American Indians and the National Indian Health Board have passed resolutions in support of dental therapists and the Swinomish Tribe of Washington state, in a courageous example of leadership in the face of highly funded opposition from organized dentistry, announced that they are hiring a dental therapist to work in their clinic using non-federal funds. They also announced that they have selected a tribal member who started training as a dental therapist in Alaska in the summer of 2015.^{20,21,22}

The ADA and other organized dental organizations are becoming increasingly



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Figure 5. Examining a study participant at the Pine Ridge Reservation.

isolated in their opposition to dental therapist. In fact, the ADA's own Council on Dental Accreditation, the organization that accredits dental education programs in the U.S., established and approved standards for dental therapist training programs in 2015.²³ Dental therapy as a profession is becoming more wide spread. Maine passed a law making the practice of dental therapy legal and New Mexico and Vermont could pass similar laws in the near future.²⁴ The profession of dental therapy, brought to this country by the Alaska Native Tribal Health Consortium, is making inroads and many people stand to benefit.

As access expands, all dental programs serving U.S. populations should adhere to the following tenets:

1. Early treatment of oral disease is the goal. Care and treatment of small lesions is less complicated and less expensive than care provided later, but this type of care can only be provided if people are seen regularly by providers who can diagnose and treat problems when they arise. Additionally, this care must be acceptable to patients. The IHS is being urged to consider the use of silver compounds that can arrest decay but also turn the lesions on the teeth black. It is reasonable to assume that most parents in the U.S. would not want their children to have black teeth and the same holds true for AI/AN people.
2. Preventive care and restorative care must both be available. Some solutions proposed by well meaning people and groups provide preventive services without ready access to restorative care. People with lesions need restorations. Once the existing lesions are restored, future lesions and problems must be prevented. Only solutions that provide reasonable access to both preventive and restorative care make sense.

- Care must be available throughout a lifetime. Many programs are directed at the young. The IHS has often prioritized care to children because they are underfunded and cannot provide care to everyone. Prioritizing care for children does not result in good oral health for adults. Restorative and preventive care must be available throughout the lifespan of a person to ensure acceptable oral health.

Conclusion. Oral health disparities are severe for many AI/AN groups. There is, however, reason to be optimistic. If the use of dental therapists in the U.S. continues to expand to AI/AN communities outside of Alaska, more providers could be hired for the same amount of money now spent. Those providers, preferably local people trained in programs similar to the Alaska DHAT program, may be able to stabilize the oral health work force and improve the health of their communities through the provision of restorative care, preventive services, educational programs, and by their function as role models.

Dental therapists are not the only solution to oral health problems in AI/AN communities. Efforts to increase oral health literacy, alter oral health behaviors and improve dietary habits are needed. The oral health status of AI/AN people has remained poor for decades. More research into effective interventions is needed and the training and deployment of dental therapists should be expanded.

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