



**Current Research:
American Indian and Alaska Native Oral Health**

The **Center for Native American Youth (CNAY)** at the Aspen Institute, founded by former US Senator Byron Dorgan, is dedicated to improving the health, safety and overall well-being of Native American youth through communication, policy development, and advocacy. In our outreach to over 4,000 Native youth, CNAY consistently hears that lack of access to health care, including oral health care needs is a serious issue for Indian Country. As part of a collaborative initiative to address the dental care needs of Native youth and their communities, CNAY is highlighting current scientific research about Native oral health, access to care and the power of tribally-driven solutions.

Purpose: This document identifies recent research involving American Indians/Alaska Natives and oral health access solutions.

Citation	Key Findings and Potential Use
<p>Braun P, Lind K, Henderson W, Brega A, Quissell D, Albino J. (01/15). “Validation of a pediatric oral health-related quality of life scale in Navajo children.” Quality of Life Research. Volume 24, Issue 1.</p>	<p>Key Findings: A preschool version of the pediatric oral health-related quality of life (POQL) scale was confirmed as a reliable and valid measure of oral health-related quality of life in a preschool, rural, reservation-based American Indian population.</p> <p>Potential Use: This study describes a tool Tribal Nation communities can use to quickly measure the impact of Early Childhood Caries (ECC) on children’s oral health-related quality of life including social, psychological, and physical well-being. This measure assists in demonstrating the need for enhanced oral health care services for Native youth.</p> <p>Tribal Nation involved: Navajo Nation.</p>
<p>Braun P, Lind K, Batliner T, Brega A, Henderson W, Nadeau K, Wilson A, Albino J. (10/14) “Caregiver reported oral health-related quality of life in young American Indian children.” Journal of Immigrant and Minority Health. Volume 16, Issue 5.</p>	<p>Key Findings: A worse measure of pediatric oral health-related quality of life (POQL) was associated with poorer oral health status in this study. A worsened POQL score was also associated with increased reported use of urgent dental services.</p> <p>Potential Use: This study explains how Tribal Nation communities can easily determine association between children’s oral health-related quality of life and factors including child’s age, oral health status, dental service utilization, and dental insurance. This measure shows how the relationship between children’s oral health and well-being changes over time and how access to dental care plays a role in that relationship.</p> <p>Tribal Nation involved: Oglala Lakota Nation.</p>

<p>Tiwari T, Quissell D, Henderson W, Thomas J, Bryant L, Braun P, Albino J. (09/14). “Factors Associated with Oral Health Status in American Indian Children.” Journal of Racial and Ethnic Health Disparities. Volume 1, Issue 3.</p>	<p>Key Findings: Age, gender, and caregiver’s behaviors on behalf of their children were significantly associated with high dental caries in a Tribal Nation community. The number of decayed, missing, filled, and sealed teeth (dmfs) was higher in older children; in males; and in children with male parents/caregivers.</p> <p>Potential Use: This study examines sociodemographic characteristics of children and their parents/caregivers and psychosocial characteristics of parents/caregivers as risk factors for oral health status. These observations assist to better understand dental disease patterns in Tribal Nation communities and support families to engage in preventative behaviors.</p> <p>Tribal Nation involved: Navajo Nation.</p>
<p>Friedman J, Mathu-Muju K. (06/14). “Dental therapists: improving access to oral health care for underserved children.” American Journal of Public Health. Volume 104, No. 6.</p>	<p>Key Findings: This review defines an effective and economical utilization model of dental therapists as salaried employees in school-based programs, beginning in underserved rural areas and inner-cities.</p> <p>Potential Use: This report supports the effectiveness of implementation of dental therapy providers, especially for children and youth.</p>
<p>Albino J, Tiwari T, Henderson W, Thomas J, Bryant L, Batliner T, Braun P, Wilson A, Quissell D. (06/14). “Learning from caries-free children in a high-caries American Indian population.” Journal of Public Health Dentistry. Volume 74, Issue 4.</p>	<p>Key Findings: Parent/caregiver characteristics associated with the absence of Early Childhood Caries (ECC), or caries free status, in American Indian children are described. These attributes include: lower levels of personal distress and community-related stress and perceiving fewer barriers to prevention among others.</p> <p>Potential Use: This study identifies a number of psychosocial and behavioral factors that are associated with, and may protect against, caries development that can be supported in prevention interventions.</p> <p>Tribal Nation involved: Navajo Nation.</p> <p><i>“We would be well served by paying more attention to those who seem to be succeeding in helping to keep their children healthy and free from dental caries.”</i></p>
<p>Batliner T, Wilson A, Tiwari T, Glueck D, Henderson W, Thomas J, Braun P, Cudeii D, Quissell D, Albino J. (06/14). “Oral health status in Navajo Nation Head Start children.” Journal of Public Health Dentistry. Volume 74, Issue 4.</p>	<p>Key Findings: Dental caries in preschool-aged Navajo children is extremely high compared with the general US population, and decayed, missing, filled, and sealed teeth (dmfs) has not appreciably changed for more than a decade. 70% of preschool Navajo children have untreated tooth decay.</p> <p>Potential Use: This study identifies tribal-specific data and demonstrates the importance of having tribal-specific oral health data so Tribal leadership can make informed policy and programming decisions. This case highlights the need for increased access to oral health care for Tribal citizens.</p> <p>Tribal Nation involved: Navajo Nation.</p>

<p>Batliner T, Fehringer K, Tiwari T, Henderson W, Wilson A, Brega A, Albino J. (04/14). “Motivational interviewing with American Indian mothers to prevent early childhood caries: study design and methodology of a randomized control trial” Trials. Volume 15, Issue 1.</p>	<p>Key Findings: An assessment of the effectiveness of motivational interviewing (MI) to encourage behavior change in new mothers relating to caries prevention is identified. This methodology aims to produce robust evidence that supports use of MI to effectively reduce Early-Childhood Caries (ECC) in the first three years of life in American Indian children.</p> <p>Potential Use: This study analyzes a promising method for Tribal Nations to better serve the health needs of their citizens with community service providers and culturally-appropriate education materials.</p> <p>Tribal Nation involved: Oglala Lakota Nation.</p> <p><i>“An effective methodology is needed to stop the generational repetition observed with Early Childhood Caries.”</i></p>
<p>Quissell D, Bryant L, Braun P, Cudeii D, Johs N, Smith V, George C, Henderson W, Albino J. (03/14). “Preventing caries in preschoolers: Successful initiation of an innovative community-based clinical trial in Navajo Nation Head Start.” Contemporary Clinical Trials. Volume 38, Issue 1.</p>	<p>Key Findings: The cost-effectiveness of Community Oral Health Specialists providing a behavioral intervention and fluoride varnish application to Head Start children is undergoing analysis. The sustainability and health care savings from reducing Early-Childhood Caries greater than cost of the intervention are studied.</p> <p>Potential Use: This study evaluates a community-based oral health promotion and preventive service delivery model for Head Start children of Tribal Nations. Final analysis of this cost-effective prevention program aims to demonstrate its sustainability and ability to reduce oral health disparities in Native children.</p> <p>Tribal Nation involved: Navajo Nation.</p>
<p>Minnesota Department of Health, Minnesota Board of Dentistry. (02/14). “Early Impacts of Dental Therapists in Minnesota.” Report to the Minnesota Legislature 2014.</p>	<p>Key Findings: The Minnesota Legislature-directed evaluation of dental therapists’ impact on the delivery of and access to dental services in Minnesota explains preliminary findings that suggest dental therapists expand capacity at dental clinics serving vulnerable populations.</p> <p>Potential Use: This report lists detailed knowledge of dental therapy provider usage including practice safety and quality, patient satisfaction, direct cost savings, increased dental team productivity, improved patient satisfaction and lower appointment fail rates. This report supports use of dental therapists to enhance the dental delivery system.</p>
<p>Drake D. (09/13). “OST Smiles Study: Microbiology of Severe Early Childhood Caries in American Indian Children.” The Impact of Policy on Oral Health Care Delivery. Institute for Oral Health.</p>	<p>Key Findings: This study formulates preliminary data finding American Indian children to have earlier first tooth eruption than the general US population, more virulent Streptococcus mutans (bacteria associated with dental caries) causing rapid progression of disease, mothers as a contributing factor to the oral health status of American Indian children, and two variants of disease present in American Indian children and mothers.</p> <p>Potential Use: This study names biological knowledge of Early Childhood Caries (ECC), identifies behavioral, environmental, growth, and dietary risk factors for cavities. The need for enhanced oral health services and access for Tribal Nations is supported with this data.</p> <p>Tribal Nation involved: Oglala Lakota Nation.</p>

<p>Shoffstall-Cone S, Williard M. (07/13). “Alaska Dental Health Aide Program.” International Journal of Circumpolar Health. Volume 72.</p>	<p>Key Findings: The dental therapy workforce model of the Dental Health Aide-Therapists (DHATs) in Alaska that increases oral health care access to over 45,000 Alaska Natives is discussed.</p> <p>Potential Use: This report describes the evidence-based and tribally-driven dental therapy model that is improving the oral health status and delivery of oral health services to Native communities, especially children. Tribal Nations can use this report to support the effectiveness of DHAT providers and their expansion throughout Indian Country.</p> <p>Tribal Nations involved: 229 Alaska Native nations.</p>
<p>Chi, D. (08/13). “Reducing Alaska Native pediatric oral health disparities: a systematic review of oral health interventions and a case study on multilevel strategies to reduce sugar-sweetened beverage intake.” International Journal of Circumpolar Health. Volume 72.</p>	<p>Key Findings: Oral health interventions for Alaska Native children are explained and a case study and conceptual strategies aimed at reducing sugar-sweetened beverage intake among Alaska Native children are defined.</p> <p>Potential Use: This report lists examples of community-centered interventions that are promising approaches to improve the oral and systemic health of Alaska Native children that can be implemented abroad in Indian Country.</p>
<p>Kim F. (05/13) “Economic Viability of Dental Therapists.” Community Catalyst.</p>	<p>Key Findings: Dental therapy providers are treating underserved populations that are not being served by the traditional US dental delivery system, the majority of care dental therapists provide is preventive and routine, and dental therapists are a cost-effective addition to the dental team.</p> <p>Potential Use: This report provides an overview of the types of procedures carried out and revenue (total net reimbursement) generated by three dental therapy provider types and examines the economic viability of these providers as part of the dental team.</p>
<p>Phipps K, Ricks T, Blahut P. (03/13). “Permanent first molar eruption and caries patterns in American Indian and Alaska Native children: challenging the concept of targeting second grade for school-based sealant programs.” Journal of Public Health Dentistry. Volume 73, Issue 3.</p>	<p>Key Findings: A description of first permanent molar eruption and caries patterns of American Indian and Alaska Native children within the Indian Health Service system is provided.</p> <p>Potential Use: This report demonstrates the need for increased access to oral health care services and support for school-based sealant programs targeting kindergarten and first grade with follow-up programs for second-grade children. This beneficial methodology for reducing oral health disparities of Native youth can highlight need for increased Indian Health Service funding and expansion of successful oral health initiatives.</p> <p>Tribal Nation involved: Indian Health Service sample.</p>

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