Dental Public Health Activity Descriptive Report

Practice Number: 02002
Submitted By: Alaska Native Tribal Health Consortium
Submission Date: February 2002
Last Reviewed: August 2017
Last Updated: August 2017

SECTION I: PRACTICE OVERVIEW

Name of the Dental Public Health Activity: Dental Health Aide Program

Public Health Functions:

"X"	Assessment
	1. Assess oral health status and implement an oral health surveillance system.
	2. Analyze determinants of oral health and respond to health hazards in the community
	3. Assess public perceptions about oral health issues and educate/empower them to achieve and maintain optimal oral health
	Policy Development
	4. Mobilize community partners to leverage resources and advocate for/act on oral health issues
	5. Develop and implement policies and systematic plans that support state and community oral health efforts
	Assurance
	6. Review, educate about and enforce laws and regulations that promote oral health and ensure safe oral health practices
X	7. Reduce barriers to care and assure utilization of personal and population-based oral health services
X	8. Assure an adequate and competent public and private oral health workforce
	9. Evaluate effectiveness, accessibility and quality of personal and population-based oral health promotion activities and oral health services
X	10. Conduct and review research for new insights and innovative solutions to oral health problems

Healthy People 2020 Objectives:

"X"	Healthy People 2020 Oral Health Objectives	
x	OH-1	Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth
x	OH-2	Reduce the proportion of children and adolescents with untreated dental decay
	OH-3	Reduce the proportion of adults with untreated dental decay
	OH-4	Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease
	OH-5	Reduce the proportion of adults aged 45 to 74 years with moderate or severe periodontitis
	OH-6	Increase the proportion of oral and pharyngeal cancers detected at the earliest stage
x	OH-7	Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year
x	OH-8	Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year

X	OH-9	Increase the proportion of school-based health centers with an oral health component
	OH-10	Increase the proportion of local health departments and Federally Qualified Health Centers (FQHCs) that have an oral health component
	OH-11	Increase the proportion of patients who receive oral health services at Federally Qualified Health Centers each year
x	OH-12	Increase the proportion of children and adolescents who have received dental sealants on their molar teeth
	OH-13	Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water
	OH-14	Increase the proportion of adults who receive preventive interventions in dental offices
	OH-15	Increase the number of States and the District of Columbia that have a system for recording and referring infants and children with cleft lips and cleft palates to craniofacial anomaly rehabilitative teams
	OH-16	Increase the number of States and the District of Columbia that have an oral and craniofacial health surveillance system
	OH-17	Increase health agencies that have a dental public health program directed by a dental professional with public health training
"X"	**Other national or state Healthy People 2020 Objectives: (list objective number and topic)**	

State:	**Key Words for Searches:**
AK	Dental Health Aide, Dental Therapist, Alaska

Abstract:

The Alaska Native Tribal Health Consortium (ANTHC) and Tribal Health Organizations in Alaska implemented the Dental Health Aide (DHA) Program in 2000 as a dental aspect of the Community Health Aide/Practitioner Program (CHA/P). The DHA program was developed with assistance from ANTHC dental consultants, Native health corporation dental programs and the CHA/P Directors. The Primary Dental Health Aide I (PDHA) provides dental education and application of topical fluorides. The PDHA II can provide a greater range of services with additional training – including films, sealants, interim therapeutic restorations (ITR) and dental assisting when itinerant dentists/ DHA Therapists (DHATs) are in the village. The Expanded Function DHA (EFDHA) levels I and II serve as expanded duty dental assistants in regional dental clinics. The DHA Hygienist (DHAH) is a dental hygienist model that, with appropriate training, can do local anesthetics and dental hygiene services under general supervision. The DHAT requires a 2-year full-time training and at this level performs oral exams, cleanings/scaling, fluoride treatments, sealants, films, restorations and simple extractions.

Initial funding for the DHA program came from an Indian Health Service grant with later support for the DHAT providers from philanthropic foundations. Medicaid reimbursement is a significant aspect of program sustainability.

The budget is about 1.5 million per year for 15 students. This includes expenses like rent stipends, living stipends, 2 round trip tickets to and from home per year, all books, materials and instruments, as well as facilities rent for the two clinical sights. The cost of business in Anchorage is about 25% higher than the lower 48 states; the cost in Bethel is another 28% higher than Anchorage.

Thirty new, culturally competent dental providers are now working in rural Alaska providing care for people close to home, creating multiple levels of efficiency for the healthcare system. Over 40,000 now live in a community served by a DHAT where previously there had not been dental providers in those communities. Patients are very satisfied with the care they receive as noted in the Research Triangle Institute study performed in 2010.

Contact Person(s) for Inquiries:

Dr. Mary E. Williard, CDR USPHS/IHS, Chair DePAC Mentoring Work Group, Director, Alaska Dental Therapy Education Program, Ilisagvik College, Director, Oral Health Promotion, Alaska Native Tribal Health Consortium, 4200 Lake Otis Parkway, Suite 204, Anchorage, AK 99508 Phone: 907-729-5602, Fax: 907-729-5610, Email: mewilliard@anthc.org

SECTION II: PRACTICE DESCRIPTION

History of the Activity:
The Community Health Aide Program was developed to meet the health care needs of Alaska Natives in remote villages and dates back to the early 1960s when the focus was related to management of tuberculosis. The program evolved into a formal, federally funded program in 1968. Today over 500 Community Health Aides/Community Health Practitioners (CHA/P) provide emergency and primary health care in 178 rural communities.

In 1999, the Southeast Alaska Regional Health Consortium released a white paper entitled, "Crisis in access in dental care" highlighting the extent of dental caries in Alaska Native children, unmet need, dental vacancy rates in Tribal dental programs and dental access issues. Options to address these issues were discussed with the Alaska Native Health Board and ultimately it was decided to focus a CHA/P program function on addressing these dental concerns – a Dental Health Aide. Initial focus was on village-based primary health aides for education, cleanings and fluorides and expanded function dental health aides in regional hub communities (larger dental clinics). In 2002, the Alaska Native Tribal Health Consortium received funding from the Rasmuson Foundation to begin training Dental Health Aide Therapists (DHAT) in New Zealand (University of Otago) – three classes with 6 students from Alaska were initiated in the 2003-2005 period (two year coursework prior to returning to Alaska for a preceptorship with directly observed competency checks).

The DHAT aspect faced several legal challenges in implementation. In 2005, the Alaska Board of Dental Examiners asked the Alaska Department of Law to take action against DHATs for practicing dentistry without a license – the Alaska Attorney General issued an informal opinion concluding the application of the Alaska Dental Practice Act on DHATs was precluded by federal law. In January 2006, the American Dental Association (ADA), Alaska Dental Society (ADS) and an individual Alaska dentist filed suit against the Alaska Native Tribal Health Consortium and the practicing DHATs for the unlicensed practice of dentistry – in June 2007 the Alaska Superior Court ruled the DHAT program was authorized under federal law and Congressional intent under the Indian Self-Determination and Education Assistance Act and Indian Health Care Improvement Act for the program. The Court further noted the Supremacy Clause of the United States Constitution that state law not supersede federal law and the federal-Tribal relationship with "Indian Affairs" (including health care). The ADA decided not to pursue an appeal of the Alaska Superior Court decision.

In 2007, the DHAT training was implemented in Alaska under the University of Washington MEDEX training. The students complete the first year of training in Anchorage and the second year training in Bethel (Yuut Elitnaurviat Dental Training Clinic opened in 2009).

At this time there are over 57 Certified Dental Health Aides working through Alaska at twelve of Alaska's Tribal Health Organizations – 37 of those are DHATs.

Justification of the Activity:
Use this subsection to provide information such as the need of the activity/program/service/event specific to your state or setting and the evidence supporting the effectiveness/impact of the approach or method of the activity.

Traditional Native diets were rich in proteins and fats with an almost absence of fermentable carbohydrates resulting in very ow caries activity. Diets of the Native people of Alaska have largely switched to diets rich in processed foods, refined sugar, soda pop and other sugary drinks. These nutritional changes along with limited access to fluoridated water and dental services have contributed to rampant dental decay, including a high prevalence of early childhood caries. Itinerant dental visits have long focused on acute treatment needs with few opportunities for education and preventive dental services. Further, when education was provided there were limited opportunities for reinforcement/support activities for these messages or subsequent application of topical fluorides and dental sealant retention checks.

In regional hub communities, where children are often transported for dental treatment, wait lists for preventive dental services may exceed four months. Problems of access for dental visits in both reginal hub communities and rural villages are compounded by dental staff turnover, vacancy rates and recruitment issues.

Further, at this point at least three generations of Native people have suffered from high caries rates and the resulting loss of permanent teeth. There is a need in many areas to change adult attitudes/perceptions about teeth and home care for both themselves and as caregivers for their children.

The population size of these rural, remote communities and geographic isolation of many of these communities speak to the need to have a local provider to provide dental education and preventive dental services, yet the small sizes make it financially unfeasible for dentists or dental hygienists to establish practices and/or routine visits to these areas. The same dynamics led to the development of the CHA/P program originally to augment services provided by physicians, mid-level practitioners and Public Health Nurses. It was felt the Dental Health Aides under the CHA/P program could similarly augment Tribal Health Organization dental services provided in rural Alaska.

Dental Therapists have practiced as a successful provider model in other parts of the world to address similar dental access and provider feasibility issues seen in Alaska (in New Zealand since 1921). In Canada, to address dental access and treatment needs in serving remote First Nation peoples dental therapists were recruited from New Zealand to serve remote areas. Later this resulted in the establishment of a training program for dental nurses at the University of Toronto in 1972.

Inputs, Activities, Outputs and Outcomes of the Practice:

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	OUTCOMES

- What resources were needed to carry out the activity? (e.g., staffing, volunteers, funding, partnerships, collaborations with various organizations, etc.)

    - Academic home is Ilisagvik College in Barrow, AK. The Alaska Native Tribal Health Consortium in Anchorage, AK provides the financial and facilities support. There are two classroom/clinical locations- one in Anchorage and one in Bethel, Alaska. Staffing includes 2 full time administrative support persons, 3 full time dentists, 1 full time DHAT, 8 part time instructors. Funding comes from multiple sources including: ANTHC Board of directors, private philanthropy, the Indian Health Service, tuition, and Medicaid billing.

    - Each DHAT working in rural Alaska saves the Medicaid $40,000 per year in avoided travel costs for covered patients. Each DHAT/ dental assistant team grosses $145,000-$245,000 per year after paying for their salaries, equipment, rent, and supplies. Supervision of a DHAT who has practiced over 1 year requires about 10 minutes a day of a dentist's time.

    - The sustainability of the program has been borne out over the last 17 years. All types of DHAs are able to bill out services to Alaska Medicaid and the reimbursement aspects have been quite favorable. PDHAs more than pay for their salaries, benefits and other costs of delivering services within their scope of practice. They often provide additional income for dental programs to support other oral health initiatives beyond the DHA program. DHATs also provide a good revenue stream for the Tribal Health Organizations and DHA Program – generating $125,000-$245,000 more than the cost to employ them and their dental assistants. Another added benefit is that on average, having a DHAT providing services in remote communities saves Medicaid about $40,000 in travel services for Medicaid recipients. Medicaid reimbursement is the primary factor addressing program sustainability.

    - The program has illustrated a successful partnership of the Indian Health Service, Alaska Tribal Health Organizations, the Alaska Native Tribal Health Consortium and Alaska Department of Health and Social Services (Medicaid reimbursement for services). The Denali Commission and Rasmuson Foundation provided funding support for updating village clinics to include space for two-chair dentistry and in some cases portable dental equipment to be stored on-site. The Dental Health Aide Program was an aspect of review in the village clinic construction. Rasmuson Foundation and the W.K. Kellogg Foundation provided funds for DHAT program implementation and evaluation of the program.

INPUTS	**PROGRAM ACTIVITIES**	OUTPUTS	OUTCOMES

- Please provide a detailed description the key aspects of the activity, including the following aspects: administration, operations, and services.

    - Didactic, pre-clinical, and clinical instruction in dental therapy. Student support including: tutoring, remediation, academic counseling, and mentoring. The program also provides community outreach in the form of designing, implementing and evaluating community-based dental disease prevention programs. Additional activities are mentoring of past graduates, lecturing about the program around the country, and providing continuing education courses for practicing dental therapists.

INPUTS	PROGRAM ACTIVITIES	**OUTPUTS**	OUTCOMES

- What outputs or direct products resulted from program activities? (e.g., number of clients served, number of services units delivered, products developed, accomplishments, etc.)

    - 44 DHAT graduates, 30 certified practicing DHATs.

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	**OUTCOMES**

- What outcomes did the program achieve? (e.g., health statuses, knowledge, behavior, care delivery system, impact on target population, etc.) Please include the following aspects:
    a. How outcomes are measured
    b. How often they are/were measured
    c. Data sources used
    d. Whether intended to be short-term (attainable within 1-3 years), intermediate (achievable within 4-6 years), or long-term (impact achieved in 7-10 years)

    - Evaluation of the ways DHAT practicing have improved the oral health of the populations served are ongoing and preliminary data is very favorable. Look for published reports in early 2018.

    - The DHA Program addresses the following HP2020 objectives:
        OH-1 Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth
        OH-2 Reduce the proportion of children and adolescents with untreated dental decay
        OH-7 Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year
        OH-8 Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year
        OH-12 Increase the proportion of children and adolescents who have received dental sealants on their molar teeth

Budgetary Information:

- The budget is about 1.5 million per year for 15 students. This includes expenses like rent stipends, living stipends, 2 round trip tickets to and from home per year, all books, materials and instruments, as well as facilities rent for the two clinical sights. The cost of business in Anchorage is about 25% higher than the lower 48 states; the cost in Bethel is another 28% higher than Anchorage. The largest expense is the dentists' salaries.

Lessons Learned and/or Plans for Addressing Challenges:

There have been examples of emotion and fear surrounding new dental providers, especially when the provider is licensed or certified to provide services which have only been in the scope of practice of dentists previously. There is a cost of time and money trying to negotiate through the political issues arising from organized dentistry's concerns.

40,000 people now live in a community served by a DHAT. The communities are very satisfied with the care they receive and are especially pleased to be able to see so many Alaska Native dental care providers. The DHA Program was developed with flexibility in mind. As the program has matured, there have been many different configurations of providers in the various regions of the state. Some DHATs work remotely from their supervisor, while others are part of a team of dentists, hygienist, assistants, and primary dental health aides working in larger regional hub clinics. Some areas have their DHAs working outside of dental clinics to expand their reach and to bring care to where the patients are. Non-dental work settings for DHAs include; WIC offices, Operating Rooms where ECC full mouth rehabilitation takes place, elders homes, elder community centers, Early Head Start and Head Start Centers, Schools, parenting group meetings, and individual community members' homes. The flexibility of working remotely from your supervising dental provider under general supervision has allowed programs to get very creative about how these new providers are engaging individuals and communities. The result is further outreach, better access to the most vulnerable populations, and inter-professional collaboration.

The sustainability of the programs has been borne out over the last 17 years. All types of DHAs are able to bill out services to Alaska Medicaid and the reimbursement has been quite favorable- PDHAs more than pay for their salaries, benefits and other costs of delivering their scope of practice, often providing additional income for the dental programs to support other initiatives beyond the DHAs. For DHATs we are seeing the same good revenue outcomes with DHAT generating collections that average $125,000-$245,000 more than the cost to employee them and their assistants. Another added benefit is that on average, having a DHAT in a remote community will save Medicaid $40,000 in avoided travel costs because patients can be treated at home.

The retention rate of DHATs over the past 10 years is about 73%, a remarkably high retention rate for the HPSA areas where they work.

The Research Triangle International, Inc. evaluation of the implementation of dental health aide therapist demonstrated positive outcomes. However, there were no benchmarks with which to compare the findings to private practice dentistry. It is important for dentistry to start evaluating care delivered in all settings and work towards improvements. While the data set was small, only 5 DHAT evaluated, the findings are consistent with those from studies of dental therapists around the world. Follow up studies are being conducted which show some very promising preliminary data, such as much improved access, improved oral health status, and decreases in invasive and traumatic dental services when DHAT are utilized.

In 2017 Alaska is starting to see the benefits of a well-established program. As DHAT the number of certified DHAT reached 37, the ability to successfully implement the PDHA and EFDHA models has improved. PDHAs once had trouble getting patients to see them for their preventive services because these patients were suffering from dental disease that needed higher level care than the PDHA could provide. Now that DHAT and Dentists are able to cover remote communities more effectively, the role of the PDHA as the "prevention coach" is expanding. Patients are ready to learn more about prevention since they have had the chance to get their acute needs met. The typical scenario in a region where a DHAT has been newly employed is that they spend the first 6 months to a year addressing longstanding oral health issues such as extractions and large restorations. Once the DHAT has been able to stabilize the community, then we start seeing an increase in prevention services and an increase in oral health literacy in the community. This is exactly what the people who developed this program had hoped for. Another trend that we are seeing is that having DHATs and PDHAs working on a dental team allows the dentist to increase the number of high level services they can provide, including crown and bridge, endodontics, implants, and dentures. This leads to a higher level of care for the patients and dentists feeling more satisfied with their practice. All this means improved care and satisfaction for the patients.

Available Information Resources: