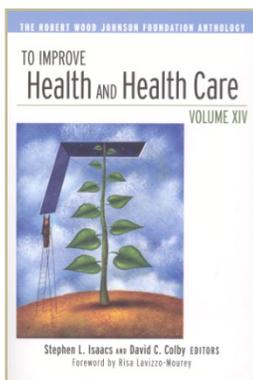


Dental Health Aides and Therapists in Alaska

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Editors' Introduction

How to deliver health care services to people living in remote areas has long been a challenge to health policy planners. One way, of course, is to offer incentives so that highly trained professionals will locate in remote places. Another is to train health professionals from rural areas in the expectation that they will return home or to another rural location after completing their training. A third way is to train less highly qualified health professionals who are more likely to settle and work in a remote area. This is the approach that the Robert Wood Johnson Foundation adopted in the 1970s to develop the professions of nurse practitioners and physicians' assistants who would then be expected to practice in underserved, especially rural, areas. A fourth approach is to give a limited amount of training to members of the community, who then can provide basic services to their neighbors. This model is used widely in underdeveloped countries, most famously with China's barefoot doctors, and more sparingly in the United States.

Alaska is a huge state with inhospitable terrain. Many of its villages are accessible only by planes flown by bush pilots (and even then, only when the villages are not snowed in). Moreover, the health of its inhabitants, particularly of Alaska Natives, ranks among the very lowest in the nation. Tooth decay, which is a very serious problem among poor people generally, is an especially critical problem in Alaska, and it is exacerbated by a lack of dentists who live in or visit remote communities.

To remedy the problem, the Rasmuson Foundation, and later the W.K. Kellogg Foundation, instituted a program to train a new class of health personnel, dental therapists. Students received two years of training in New Zealand, which had pioneered the concept of dental therapists, and then returned to their communities to provide basic dental services. This aroused the ire of the Alaska Dental Society and the American Dental Association, who sued to put a stop to what they considered to be inadequately trained individuals practicing dentistry. The aftereffects of the conflict between

organized dentistry and those promoting the idea of midlevel personnel offering basic dental services reverberates today.

In this chapter, award-winning journalist Sara Solovitch chronicles the history of dental therapists and dental aides in Alaska. The chapter is unlike most others in the *Anthology* series in that the Robert Wood Johnson Foundation played only a small role in the story. In 2004, the Foundation, through its Local Initiative Funding Partners program, awarded the Alaska Native Tribal Health Consortium a grant to train a new category of dental practitioners called *dental health aides*. Dental health aides would receive two weeks of training and be able to offer very basic services, such as patient education and fluoride rinses. The Foundation later made a small grant to enable officials of the American Dental Association to fly to rural Alaska to see the dental health aides and dental health therapists in action.

Even though the Robert Wood Johnson Foundation's role was tangential, the story is still an important one. As recently as the health reform debate of 2009 and 2010, Congress was wrestling with the question of whether people without dentistry degrees should be permitted to offer oral health services in communities not served by dentists.

Jackson is only eight years old, but he works like a little man, packing water and hauling wood each day at home in Kiana, a village of four hundred people just north of the Arctic Circle. When his family go out on their boat—they are Inupiats, whose life on the Alaskan tundra revolves around hunting, fishing, and berry picking—Jackson is always first to reach for the anchor. Come evening, he is the one who prepares the kindling for his great-grandmother’s morning fire—a good boy whose worth is already evident, as his grandmother notes, by the calluses on his hands.

But on a recent mild September morning, those small, calloused hands are cradling a badly bulged-out cheek, swollen to twice its size from a tooth blackened with decay. Jackson sits in the single dentist’s chair at Kiana’s health clinic, staring straight ahead at the cinderblock walls, plainly willing himself not to cry.

Toothache is no stranger to Jackson; it has been an unwelcome and intermittent presence as long as he can remember. At the age of two, he was airlifted 550 miles to a hospital in Anchorage, where his four front baby teeth were extracted under general anesthesia. Just three months ago in July, he sat in this very chair as three of his permanent molars—black and rotted—were removed. And now this.

“It started hurting the other night,” says his grandmother, Janet, who had been outside her house cutting caribou when Jackson’s teacher called to report that he was in too much pain to stay in school. “He was chewing on some dried meat when it started hurting.”

“Must have been some good paniqtaq, eh?” commiserates Kimberly Baldwin, the dental therapist who just a few months ago took out Jackson’s molars. Jackson gives a slight uplift of the eyebrows—a quintessential Alaska Native way of saying yes—and Baldwin tries looking in his mouth, past his few remaining baby teeth, all capped with stainless

steel. No luck. The infection is too far gone. The boy can't open wide enough to let her see inside. He'll need an antibiotic to reduce the inflammation before anyone can poke around and pull another tooth.

Baldwin herself isn't authorized to prescribe antibiotics; she is part of a small cadre of Alaskan dental therapists who have been trained to drill and fill cavities, extract teeth, perform X-rays, apply fluoride varnishes and sealants, and give instruction to prevent tooth decay. She works under the supervision of a dentist who regularly reviews her patient charts and, in cases like Jackson's, orders the necessary prescriptions. That dentist is usually based at the Maniilaq Health Center, the hub hospital in Kotzebue that is about sixty miles away, and is available via telemedicine hookup.

Baldwin herself grew up a few miles downriver from Kiana in a village called Noorvik and was raised on a traditional diet and a subsistence way of life. A petite thirty-one year old who could easily pass for twenty-one, she sprinkles her conversation with Inupiat words the way a New Yorker uses Yiddish. She and her husband, a zinc miner, are determined to pass on the old ways to their two young daughters.

Kiana is home, and Baldwin is quick to point out its natural beauty. It's a rough and beautiful spot on the Kobuck River, a place that catches the winds whipping off the Chukchi Sea just ten miles distant. The houses are built on pilings to separate them from the permafrost, permanently frozen ground. By September, the caribou migration has begun and all through town the animals' butchered legs hang drying from house beams. The land, seen from the air, is the color of toasted wheat; at ground level, the hues are subtle and rich. The tundra is bursting with blackberries, cranberries, and a low-growing shrub called tundra tea, which is reputed to be filled with healthful properties. Baldwin knows all the best picking spots.

Less than a block from the clinic, several small boys crouch in silence as a seventy-four-year-old woman, dressed in an aitikluk, the traditional Inupiat woman's smock, bends over a freshly shot wolf. "There's a lot of fat," the woman remarks, flaying open the

wolf's belly under Baldwin's critical eye. The animal, killed by the woman's grandson at the village dump, is lying flat on its back on a pallet, its legs distended to the endless sky, its enormous white teeth locked in a perfect bite. "He's been eating a lot of caribou."

Members of the high school cross country team run past in pairs, indifferent to the wolf skinning. A small electric coil sends up a whiff of smoke; it's intended to keep flies off the carcass, but they're congregating in ever-greater numbers. The little boys still haven't moved from their perch.

When, after about twenty minutes, the grandmother, or ana, as Baldwin calls her, complains that her back is aching, Baldwin offers to finish the job. Immediately, it's apparent that here is someone who knows how to skin a wolf. Under her knife, the thick fur slides off the femur; the bushy tail pulls away from its muscle. And all the while the wolf's blood is silently dripping off the pallet, drenching her pants legs. At last, the skinning is complete, and Baldwin stands up and looks at her watch. It's time to clean up, go back to the clinic, and see her next patient.

Oral Health in Alaska

Dental therapists like Kim Baldwin are a relatively new addition to Alaskan health care. Midlevel providers, they operate under the auspices of the Community Health Aide Program (CHAP), which was authorized by Congress in 1968 to train villagers to provide medical care in remote Alaska. The impetus was the 1950s tuberculosis epidemic, when TB was at its peak (morbidity rates from TB in the 1950s were the highest ever reported in the medical literature),¹ and the mortality rate of Native children was more than one hundred times that of children in the Lower 48.² Today there are approximately 550 health aides working in more than 170 villages across the state, acting essentially like the legendary barefoot doctors of China—mending broken legs, delivering vaccinations, assisting in childbirth, and responding to all matter of trauma, from suicide to fire to snowmobile accidents. They form the backbone of rural Alaska Native health care and

provide more than 350,000 patient visits each year.

Today's oral health crisis in Alaska has sparked numerous comparisons with the TB epidemic of the 1950s, but it is hardly unique to Alaska. A "silent epidemic of oral diseases" is a national problem, first brought to light in a 2000 landmark report by the United States Surgeon General titled *Oral Health in America*.³ Among the findings: Tooth decay is the most common chronic childhood disease, interfering with daily activities for an estimated four million to five million children and adolescents each year.⁴

Still, the problem is far grimmer in Alaska than anywhere else in the United States, except perhaps on Indian reservations. In Alaska, the real measure for disease is untreated lesions, cavities that go untreated for months or longer for lack of oral care. According to a 1999 survey by the Indian Health Service, untreated lesions exist in 68 percent of American Indian and Alaska Native adolescents, compared to 24 percent of other children in the United States.⁵

Anecdotally, the number today is believed to be even greater. One-third of Alaska Native children report missing some days of school each year because of dental pain. Half of all kids under three undergo general anesthesia for extraction of their baby teeth, and it is commonplace to see schoolchildren with mouths full of metal.

In the Kiana health clinic, Baldwin keeps a plastic bag filled with the hundreds of teeth she has extracted—Jackson's among them. And one doesn't have to be a dentist to see at a glance that all of the teeth are seriously diseased; one after the other is marked with large black and brown grooves and holes. As Baldwin puts it, "The abnormal is normal here. Things we saw in the textbook that we were told were rare, that we'd never see, we see all the time."

This wasn't always the case. Physical anthropologists of the last century rhapsodized over the perfect, healthy teeth they discovered in that remote part of the world. In a 1939 classic text, *Nutrition and Physical Degeneration*, dentist Weston A. Price, who has been

called the “Charles Darwin of Nutrition,” declared oral health in Alaska to be among the best in the world. Recent archaeological digs confirm that dental caries simply didn’t exist among the Inupiat and Yupik of a thousand years ago. If anything, those coastal people had teeth worn down to the gum line—a result of a lifetime of chewing tough, dried meat. But the wear and tear also came from using their teeth as a tool. Inupiat women chewed the skin of bearded seals to soften boots and crimp the toes and heels, and men used their teeth to bend wood to form the interior ribs of kayaks.

Those ways mostly stopped after World War II, as supply lines opened and a Western diet gradually supplanted the traditional Native foods. By the 1950s, a ship called the *North Star* sailed yearly up the Alaskan coast, carrying supplies and boxes of candy, along with a doctor and a dentist on board.

“Elders would row the kids out to the boat and there would be one line on deck to get inoculations and another line for the dentist to take out your teeth,” recounts Mark Kelso, a public health dentist with the Norton Sound Health Corporation who still speaks with a Texan twang, although he has been practicing twenty-three years in Nome. “That established a regional concept of dentistry in some families that still exists today, that was thoroughly ingrained when I came here. . . . You don’t see a dentist till you’re in pain.”

Today a high-sugar diet has become so entrenched that many public health nurses, doctors, dentists, and therapists recall being bumped off a bush plane on its way to a remote village to make room for a shipment of soda pop, candy, and Pop-Tarts. Soda pop is a village staple. A survey by dentists of the Norton Sound Health Corporation in the mid-1980s determined average soda consumption in that northern coastal region to be six cans per person per day.⁶ “And I can tell you from observation that that’s still the case,” Kelso says.

Even villagers who know better—dental therapists in training, for example—say they find it hard to withstand the sugar onslaught. Fredella Sharp, a dental therapist in training,

says she breastfed her older daughter for a year in Fairbanks before moving back to the village, where the child's grandparents spoiled her with unlimited soda. "All her teeth are silver," Sharp says shyly. "We went to Dillingham and she was tied down in the dentist's office and had her teeth pulled. I was really mad at their dad. I told him the next time one of our kids had to go through this he was going to go with them. 'Cause I wasn't going to do it again."

The effects of poor diet are exacerbated by a bacterium, *Streptococcus mutans*, which has been identified in Alaska Natives at levels many times that of the general population. *S. mutans* lives in the mouth, thrives on sugar, and gives off an acid that wears away tooth enamel and causes caries. Widely recognized as a primary cause of tooth decay, it is transmitted directly by mother or primary caregiver—often by blowing on the child's food. In Alaskan tribal culture, mothers and grandmothers customarily chew food before passing it directly into the child's mouth—a surefire way of spreading this mouth-borne bacterium.

Making matters worse is the lack of access to care. In 1998, a white paper by Tom Bornstein, dental director of the SouthEast Alaska Regional Health Consortium in Juneau, revealed that only twenty or so dentists served the state's more than two hundred far-flung villages inhabited by a total of 85,000 people. That's a ratio of one dentist to every 4,250 people. Bornstein presented his paper the following year at a meeting of the dental directors of the recently formed Alaska Native Tribal Health Consortium (ANTHC). His paper is generally credited as the original impulse behind the dental therapy program.

In the past decade, the Denali Commission, an independent federal agency charged with building medical and municipal infrastructure across Alaska, has partnered with entities throughout the state to build nearly one hundred state-of-the-art health clinics, including the one in Kiana. Many of the state's remaining one hundred or so villages are not large enough to sustain their own independent clinic. So, for example, when dentists from the

Southcentral Foundation, a Native-owned health care organization based in Anchorage, make their twice-yearly pilgrimage by bush plane to each of the twenty-four villages in their jurisdiction, they carry thousands of pounds of gear: drills, X-ray machine and processor, chairs, lights, and compressor. They set up shop wherever they can find the space, sometimes in the school gym, sometimes in a storage space. Occasionally they manage to find a bed for the night, but just as often they sleep on a table or on the floor.

Volunteer dentists have also been flying up to Alaska for years—interspersing patient visits with time out for hunting and fishing.

Tribal leaders say that’s all very nice, but hardly a long-term solution for an oral care crisis of Alaskan proportions. So in 2001 the ANTHC—the nation’s largest tribal health organization—came up with something called the Dental Health Aide Program. Based upon the principles of the community health aide program, the idea was to identify high school graduates who had grown up in these remote villages and train them to perform basic dental care. They would be people like Kim Baldwin, who already possessed the cultural and linguistic fluency of village life and would, after two years of intense training, return gladly to their hometowns with newfound skills and knowledge. The goal proved harder to accomplish than anyone had ever thought.

The Dental Health Aides and Therapists Programs

To begin with, Alaska was starting at ground zero. There was no training program for midlevel dental providers anywhere in the United States. This came as no surprise, since every attempt to introduce such a position had been steadfastly resisted for nearly a century by organized American dentistry. But a 2003 survey by the World Health Organization (WHO) showed that forty-two countries around the world—among them Canada, Great Britain, Australia, and New Zealand—had relied for years on such midlevel providers to educate patients, apply sealants, and perform basic dental procedures, from fillings to extractions, and even root canals.⁷

The Dental Health Therapist Program

This discovery gave the ANTHC the grounds to proceed, and in 2003 it sent the first of three student cohorts—six in each class—to the University of Otago in New Zealand for a two-year training program. Upon graduation, the students would be denominated as “dental health therapists.” The ANTHC chose New Zealand because it had more than eighty-five years of experience with this practice model, and Otago is an internationally recognized school of dentistry. The program was funded with a \$1 million grant from the Rasmuson Foundation, a private family foundation based in Anchorage devoted to promoting the arts and health-related services throughout Alaska.

The tribes were underwriting the students’ scholarships, and expectations were high. When, in the middle of her first year in New Zealand, Kim Baldwin gave birth to her second daughter, she found herself alone with two small children and a demanding academic workload. Her husband had stayed behind in Alaska to work and support the family. She grew worn out and sick, but felt she couldn’t take the time out to see a doctor. She eventually developed strep throat and possibly pneumonia, but pressed on, determined to graduate with her peers. She returned to Alaska to take up practice in January 2006.

The Dental Associations Weigh In

It was almost immediately upon her return that the American Dental Association (ADA) and the Alaska Dental Society (ADS) filed a joint lawsuit in state court against the ANTHC, the state of Alaska, and eight “John Does” (unnamed dental therapists). The dental organizations accused the dental therapists of practicing dentistry without a license, charged the state with failing to enforce the State Dentistry Act, and mounted a no-holds-barred public relations campaign, bombarding the state with ads in newspapers and on radio and TV. One especially arresting ad in the *Juneau Empire* newspaper depicted an openmouthed grizzly bear and bore the caption “Gov. Murkowski—2nd class

dental care for Alaska Natives deserves a ferocious reaction!”

In fact, it *was* a ferocious campaign, marshaled to intimidate and distract. The dental organizations lobbied the state’s congressional delegation in Washington, D.C., urging them to introduce legislation that would kill the nascent program. They tried to interrupt the state’s ability to bill Medicaid for services provided by the new therapists. Hoping to contain any and all midlevel providers to Alaska, they demanded the insertion of specific language in the Indian Health Care Improvement Act to prohibit tribal reservations in the Lower 48 states from using dental therapists. All told, the ADA and the ADS reportedly spent more than \$1 million on legal fees, public relations, and lobbyists.⁸

“It was the biggest fight of my life,” says Paul Sherry, who spent his teens surfing in Northern California, graduated from Yale University, and in 1974 went to Alaska for a summer as a VISTA volunteer. He never left. In 1976, he married a woman from the village of Minto, northwest of Fairbanks, and twenty-two years later he was the ANTHC’s chief executive officer when the lawsuit was filed. In that capacity, he helped lead the group’s response. “We didn’t expect a lawsuit,” he says. “We didn’t really have the resources to handle it. We spent half a million dollars to fight it off, and mostly what we had to fight was a public relations campaign.” The “public relations campaign” consisted mainly of tribal leaders arguing the merits of the dental therapy program.

If anything, the dental associations’ public relations campaign backfired spectacularly. Alaskans took offense at the style and the content of the sledgehammer ad campaign. “It was the condescension more than anything,” Sherry says. “The ‘we know what’s good for you; you don’t know what’s good for you’ attitude.” In addition, the dental associations’ decision to sue the new, mostly young therapists vexed many in the Native community and struck observers as culturally inept.

“The Inupiat and Yupik cultures are very non-confrontational,” says Richard Monkman, the Juneau lawyer who represented the ANTHC. “We felt the only reason they [named specific individuals] was to scare these young people. Instead of going back to their

communities, they were going to Anchorage giving depositions. The Native community rallied strongly. They saw this as a real attack.” Organized dentistry’s main argument—that Native people were receiving “second-rate” care—carried little weight among Alaskans who weren’t receiving *any* care.

“We objected on constitutional grounds,” says Mike Boothe, an Anchorage dentist who helped spearhead the state battle against the therapists. “It was about states’ rights. That’s why we took on the tribes. The issue of who controls professional licensing—whether in law or medicine—has always been a matter for the states.”

“We were defending a legal principle, and legal principles are often difficult to defend,” agrees James Towle, executive director of the Alaska Dental Society. “But, yes,” he concedes, “we lost the PR battle.”

They also lost the lawsuit. In June 2007, Alaskan Superior Court Judge Mark Rindner ruled that dental health therapists were legal under federal statute. The ADA could have filed an appeal but decided to accept the decision—and even paid the ANTHC’s legal fees.

To many, it was like a modern-day tale of David and Goliath, a Native nonprofit entity pitted against a powerful lobby bent on resisting any change in the status quo. Medical professionals saw it as a replay of the struggle of nurse practitioners and physician assistants more than forty years earlier.

“They’re all the same arguments, and, of course, they all proved inaccurate,” says Ruth Ballweg, director of MEDEX Northwest, a University of Washington program that trains physician assistants. “There was a concern that people who weren’t doctors couldn’t possibly perform primary care procedures such as laceration repair and reduction of simple fractures. In fact, those things are commonly done by nurse practitioners and physician assistants.”

There were, however, a few important differences between the two professional bureaucracies that had a role in how the two struggles played out. Doctors have numerous national organizations, especially organizations in their specialty, to choose from besides the American Medical Association; indeed, fewer than 30 percent of all doctors in the United States belong to the AMA. In contrast, the vast majority of dentists are in general practice, and nearly 80 percent of dentists in private practice belong to the American Dental Association. As a result, organized dentistry presents a highly unified and formidable force.

Physicians, furthermore, are accustomed to sharing power from their earliest training in hospitals, where tasks are delegated among a wide array of assistants, including nurses, phlebotomists, and radiologists. That kind of culture does not exist to the same degree in dentistry. “The concept of writing an order and having someone else carry out a task is common in medicine,” says Ron Nagel, a dentist who was brought to Alaska in 1999 by the ANTHC to develop a dental aide program. “Not in dentistry. It’s protectionism: if they give up those services, they think it erodes their monopoly.”

It’s easy to dismiss the dentists’ concerns as an economic turf war, since dentists rank among the highest paid medical professionals. In Alaska, a first-year dentist can expect to earn \$130,000 a year. But the resistance goes deeper. “The American Dental Association wants to promote dentistry as a cottage industry rather than a corporate model,” says Ballweg, citing prohibitions in most states against group dental practices and community dental health centers. By going outside individual private practices, the dental therapy movement “brings into question the whole design of how dental care is provided in this country. It’s the first crack.”

Whatever the reason, the fight in Alaska quickly assumed a negative tone—one that in retrospect prefigured the rancor of the nationwide debate on health care reform in the summer of 2009. Many public health dentists in the state would recount a history of personal vendettas against their careers as a result of their support for dental therapists.

Several say their licenses came under scrutiny from the state organization, and many for a time believed their licenses were under threat. Robert Allen, a respected public health dentist in Bethel, was summarily dismissed as secretary of the Alaska Dental Society after declaring at one meeting that dental therapists were “the wave of the future.”

The Dental Health Aide Program

From the start, the therapists were intended as part of a larger, tiered program of oral health providers—the goal being to tackle Alaska’s oral health crisis on many levels. The first of those levels is the “primary dental health aide I,” a position requiring two weeks of training to apply varnishes, give fluoride rinses, and perform patient education. Then there is “primary dental health aide II,” with additional responsibilities. At the next level, the “expanded function primary dental health aide” can apply sealants, take X-rays, and perform dental assistance. The highest position is “dental health aide therapist.”⁶ According to the original vision, the aides would act as a kind of “advance guard” of the whole dental armada.

“It’s a really critical niche,” explains Bornstein, whose 1998 white paper inspired the program. “If we only have dental health therapists filling holes, that wouldn’t do the job. That’s what dentists have been doing for years—just filling holes. We need to address the bacterial component of the disease. That’s what the dental health aides are there for.”

In 2004, the Robert Wood Johnson Foundation’s Local Initiative Funding Partners

⁶ The hierarchy is somewhat confusing, especially the distinction between *dental health aide therapists*, who have two years of training, and *dental health aides*, who can have as little as two weeks of training. To reduce potential confusion, dental health aide therapists are referred to as *dental therapists* or *dental health therapists* in this chapter.

program (now called the Local Funding Partnerships program) awarded the ANTHC a two-part grant of \$495,000 to train primary dental health aides. The two weeks of training was to take place in Bethel, a city of roughly 5,500 inhabitants located on the western coast of Alaska. From the beginning, however, there were problems. The dropout rate was high. The pay was low. The ANTHC was distracted by the lawsuit. And the concept itself was questionable. “It was evident that the level of care needed was way beyond the very basic level we were supporting,” says Polly Seitz, the director of the Local Funding Partnerships program.

Consequently, when program officers from the Robert Wood Johnson Foundation arrived in Bethel for a site visit in July 2006, they wrote a report critical of the project and expressing unhappiness with the lack of progress. Shortly after, the Foundation decided to rescind the second half of the grant. “The reason is obvious,” says Joel Neimeyer, then a program officer for the Rasmuson Foundation. “You need to address the high levels of oral health disease and intense pain. Afterward, you may want to have a conversation about prevention. It seems simple now, but it wasn’t until hundreds of thousands of dollars were spent.”

Neimeyer is a civil engineer who worked many years for the U.S. Public Health Service, an independent federal agency, setting up water and sewage facilities around the state. His mother was an Alaska Native from Akiak, a small village on the Kuskokwim River forty miles from Bethel. His father was a Minnesotan of Norwegian stock; he was a commissioned officer in the Air Force who moved the family every year or two, so that Neimeyer attended four different elementary schools and traveled the world before graduating from high school. As a result, he has always had one foot in both worlds. “I learned a long time ago that even though I may not be from the culture, the culture is within me—my speech patterns, the way I treat people, my sense of humor. I’ll be in meetings with folks, the typical graduates from the typical diploma mills around the country, and we’ll show up at a meeting and the Native people speak to me.” That dual cultural citizenship proved a strong benefit when it came to negotiating between the

conflicting interests in the primary dental aide program. Neimeyer says that in hindsight it would have been better to build the dental therapy model before pushing ahead with the primary dental aide model.

Although recently named a federal co-chair of the Denali Commission, Neimeyer maintains an active interest in the dental therapy program. He acknowledges that what happened in Bethel was partly the responsibility of ANTHC and its regional partner; neither met the Foundation's grant conditions, and neither was able to account for how the money was spent. Part of the explanation was that the program and finance arms of the two different organizations—each separated by more than three hundred miles, with no roads between them—needed to come together at a time when the lawsuit was consuming almost all of ANTHC's attention.

“Ultimately, it would have been better if the tribal system hadn't got the grant. The ADA was coming down hard, and the ANTHC was in under-siege mentality. All they were trying to do is succeed, and in the middle of it they're bickering because the Robert Wood Johnson Foundation is mad at them. When what they really needed was to be free to focus on the dental therapy program.”

Bringing Top Dental Association Officials to Alaska

Neimeyer's boss at the Rasmuson Foundation, Diane Kaplan, the organization's president and chief executive officer, had an idea. She suggested inviting a small group of state and national dental representatives to Alaska so they could see the extent of the oral health problem with their own eyes.

To help cover the expense of the trip, Neimeyer, at Kaplan's recommendation, called David Morse, the vice president for communications at the Robert Wood Johnson Foundation, who approved \$15,000 in discretionary funds to cover two trips of local and national dentistry leaders to see the problems firsthand. (The Rasmuson Foundation provided matching funds.) A few weeks later, a contingent of dentists, including

Kathleen Roth, then the president of the ADA, flew to Bethel and then by bush plane to the village of Toksook Bay. They attended a *potlatch* in the high school gym, at which tribal elders spoke in Yupik. They met a dental therapist, flew to another village, and met with a local dentist Sarda Shoftfall about the crisis in oral care. (Today Dr. Shoftfall is part of the team that trains dental therapists.) In a meeting between the ADA team and the health staff in Bethel, one of the ADA officials stated he realized he wouldn't last more than two days in that frozen environment. To Niemeyer's satisfaction, the visiting dentists *got* it.

The Word Gets Out

By this time, interest in the dental therapy model also was starting to build around the foundation world. "I had some healthy skepticism," acknowledges Albert Yee, a physician who was, at the time, a program director of the W.K. Kellogg Foundation in Battle Creek, Michigan. "I knew that dentists had four years of training after college, and when I saw this program was training high school graduates to do what was then being called 'irreversible procedures,' it raised some eyebrows.

"But then we saw the research. It showed that because they were doing limited scope procedures over and over again they were quite adept at doing those procedures. And as a result, the quality of care by therapists was as good as or better than that of the dentists. That was a bit of an epiphany for us." In mid-2006, the Kellogg Foundation approved an investment of \$2.7 million in what would become the DENTEX program.

The DENTEX Program

Because of the great distance to New Zealand, the high cost of training students there, and the desire to find a U.S.-based training site, the ANTHC looked for a training site in the United States. It found one at the University of Washington, which in 1969 had played an important role in the creation of MEDEX Northwest, a pioneering program that trained physician assistants. Now the university was offering to do it again with a

program called DENTEX, to replace the one in New Zealand. To the Alaskan and MEDEX leaders alike, it appeared a done deal—until a backlash from dentists affiliated with the Washington State Dental Association led the university’s dental school to cancel its participation in the program.

After some last-minute scrambling, the program opened its doors to first-year students in an Anchorage office building a couple of miles from the ANTHC’s headquarters. More than 1,400 miles away in Seattle, Louis Fiset, a professor of dentistry, was hired by the University of Washington Medical School to oversee the Alaska program’s first-year curriculum and the training of first-year students. (DENTEX provides the curriculum for the second year, but the actual training is done by the ANTHC.) From his perch in the medical school, Fiset developed curriculum, supervised the Anchorage oral health program, evaluated student performance, and coordinated the twenty-three or so dental professors who took turns flying to Alaska from various schools around the United States, teaching one- or two-week modules.

“It was no small thing to put a dental program in the medical school,” Ballweg, the director of MEDEX, says. “There were a lot of negotiations behind the scenes, and ultimately the two schools [medical and dental] ended up working together.”

In its early days, the program was so controversial that Ballweg and Fiset flat-out refused to identify publicly the dental professors hired to teach the courses, out of fear that they might suffer a backlash. “It just was not safe,” Ballweg says. That judgment proved farsighted after a member of the Washington State Dental Association called Ballweg, who is certified as a physician assistant and holds a master’s degree in public administration, and demanded that she release the professors’ names. “I told her I would not do that. And she said she would ruin my career. Of course, she could not do that. I am not a dentist.”

The new DENTEX classroom opened in April 2007, as the first students—all seven of them—arrived at the new Anchorage location for the first in a series of demanding four-

week tutorials in anatomy, physiology, infection control, and other subjects. Nominated by their respective tribes, each had received a full scholarship from Alaska's regional health corporations—worth \$60,000 a year—to study and, as one Aleutian Islander jokingly put it, “save Alaska one tooth at a time.” Students are urged to put their lives on hold for the duration of the two-year program.

Which is just what Bonnie Johnson has done. At nineteen, she shyly allows that she has a good memory and thrives on the challenges posed by the program. But she misses her village of Unalakleet, a close-knit community of about 750 people, most of them related, on the edge of Norton Sound (an inlet of the Bering Sea). Mostly, she misses the traditional foods of home. To keep her spirits up, she has lugged suitcases full of berries, seal oil, dried fish, and dried seal meat, down to Anchorage, enough to last her until her next trip back.

“I grew up in a big, loving family,” Johnson says. “I have lots of relatives there. My aunt, Aurora Johnson, was one of the original therapists who went to New Zealand. She told me how difficult the training would be, but she had faith in me.”

Today the first-year students are led by clinical site director Mary Williard, an idealistic dentist from Ohio who arrived in Bethel nine years earlier almost on a lark (“I didn't like the cold, but I thought it would look good on my résumé”) and fell in love with the town. “There's so much need. You can pick your cause, whatever you want to do. You can be mayor if you want to.”

Williard, for her part, took on foster care, providing emergency placement for medically compromised children. One day, while she was on duty at the Bethel hospital, a three-year-old girl was admitted with an oral infection; the right side of her mouth massively swollen. Williard oversaw the girl's medical care, which required intravenous antibiotics and resulted in several teeth being extracted in the operating room. Williard ended up adopting the girl and her two siblings. Today the family lives in Anchorage, where

Williard has plans to build the dental therapy program into a national model.

The Lingering Controversy

A multitude of peer-reviewed studies over the years has shown that dental therapists improve access, help reduce costs, and provide excellent care. In 1992, a double-blind Canadian study found that the quality of tooth restorations by dental therapists was equal to and often better than that of those performed by dentists.⁹ A 2007 study by Kenneth Bolin, an assistant professor at Baylor College of Dentistry in Dallas, examined charts from five dental clinics in Alaska and found no statistical difference in the number of complications resulting from treatment delivered by dentists versus therapists.¹⁰ “I’ve talked with many public health dentists who have supervised the work of therapists, and invariably I’ve heard the same thing: that the therapists receive more intensive training in their limited scope of training than dentists ever get, and that their skills, when they come out, are better than that of many dentists,” says Ron Nagel, the dentist who has been advising the program.

One such therapist is Conan Murat, who maintains a grueling circuit of fourteen villages around the Yukon-Kuskokwim Delta, lugging his portable, back-breakingly heavy operatory (dental chair, air compressor, and equipment) most places he goes. Murat graduated in the first year’s class in New Zealand, and he says the school gave him a solid education. But it hardly prepared him for the kind of oral devastation, the “bombed-out teeth,” he would routinely see upon his return home. “We really had to adapt when we got back from New Zealand,” Murat says. “Like strapping kids into a papoose. I was teaching some new dentists how to do that. They don’t practice *that* in dental school. Sometimes parents are crying right in front of you because they realize it’s their fault. We’re pulling out their kids’ teeth and they’re crying, ‘I’m sorry, I’m sorry.’”

Organized dentistry’s opposition to alternative providers has hardly let up. The Patient Protection and Affordable Care Act that was signed into law in March 2010 restricts the dental therapist model to those states where it is already accepted within the scope of

practice. But it also funds up to \$4 million each for fifteen demonstration sites that will train “alternative dental providers” over a five-year period.

Meanwhile, a groundswell of midlevel providers is gaining traction around the country. In late 2009, a Connecticut State Dental Association task force approved a two-year training program for dental therapists to work in public health settings. The dental association stated that it was not endorsing the model but was willing to study it. Dental delegations from more than a dozen states are now studying workforce issues. One of those is the Washington State Dental Association, which, under new leadership, recently approached Fiset for advice. “Four years ago, they were ready to put a contract out on us,” Fiset quips. “Now they’re coming to us as the experts.”

California, too, is interested. In 2007, the most common reason for emergency room visits in California was for preventable dental conditions—more common than diabetes, according to the California HealthCare Foundation. “I don’t think it’s going to be as big a battle in California as it was in Alaska,” Fiset predicts. “I think the ADA realizes what a disaster befell them [in Alaska]. I don’t believe they’re going to draw a line in the sand and bring suit against their own kind again. California is too powerful.”

Access to oral health care is poised to become part of a larger discussion. Although the national debate on health care reform regularly zeros in on the forty-six million medically uninsured Americans, lack of dental insurance receives less attention. As it happens, for every child without medical insurance, there are at least 2.6 without dental insurance.¹¹

These are just statistics. But in February 2007, a twelve-year-old Maryland boy named Deamonte Driver died from an infected tooth for want of simple dental care. His single mother didn’t have dental insurance, and few dentists accept Medicaid, with its low reimbursement rates and convoluted bureaucracy. Before Driver’s tooth could be extracted, bacteria from the abscess spread to his brain, and the boy died.

That tragedy was cited by Ann Lynch, a Minnesota state senator, as the impetus for choosing dental care as her first issue after getting elected in 2006. She proposed the creation of a new midlevel provider. The response to Lynch's bill resembled the backlash in Alaska. Full page ads attacked Lynch's credibility. Then came a radio campaign and the retention of a public relations company by the Minnesota Dental Association.

In May 2009, Minnesota enacted a law creating a new midlevel provider, but one that fell far short of that in Alaska. In fact, most advocates around the country viewed it as a failure, a concession to organized dentistry. Graduates of the Minnesota program will practice under a more limited scope than their Alaskan counterparts and will be restricted to the direct supervision of a dentist. As a result, advocates charge, they will be relegated to areas of the state where there is in fact no dental shortage.

Perhaps most critical, the legislation prescribes a four-year program. "The kind of student who's attracted to a two-year program is very different from the student who's willing to commit to a four-year program," the ANTHC's Neimeyer says. "What's going to happen to folks who spend four years going to college in the big city? Are they really going to want to go back home to rural Minnesota?"

In the next few years, such questions will assume new urgency as a pending dentist shortage pushes access to care into the forefront of national attention. A study by the American Dental Education Association predicts a significant shortage of practicing dentists as early as 2014, when more dentists will be retiring than entering the profession.

A sense of urgency has spread throughout the foundation world. At the Robert Wood Johnson Foundation, Denise Davis, a program officer in the health care group, says she has engaged in a series of long conversations with the Kellogg Foundation about the dental therapy program and other possible ways of broadening access to oral care.

"We're interested in reducing disparities in dentistry in a very real way," says Davis, who nonetheless noted that as of September 2010, the Foundation would have no program

investment in dentistry. That is when its longstanding investment in the Dental Pipeline program comes to a close. The Foundation has invested \$25 million in that program, which encourages dental schools to boost minority admissions and move their clinical rotations outside their institutions and into rural communities.

“These foundations are trying to support each other without getting in each others’ way, to think strategically about what they might invest in going forward,” says Davis, adding that such cooperation is an unanticipated product of a bad economy. “We are making fewer investments and the investment sizes are smaller,” she continues. “So we have to think how best we can leverage what’s out there, rather than creating something new.”

The future of Alaska’s program could well ride on an evaluation of the dental therapist program. The Rasmuson Foundation has committed \$526,000 toward it, with Kellogg contributing \$1,000,000, and the Bethel Community Services Foundation \$93,000. Conducted by RTI International, the evaluation will use independent dental examiners to investigate the quality of the therapists’ work, the program’s administration, and its ultimate effectiveness.

The Future of Dental Therapists and Dental Aides

The RTI report is expected in October 2010. With a positive result in hand, the ANTHC will be equipped to advance its program. For now, however, the tribal corporation is struggling against an economy of scale. Three years into the program, only twenty dental therapists are working across the state, and Nagel, who retired and moved to Florida in late 2009, estimates that rural Alaska could easily use fifty or sixty therapists.

Meanwhile, the presumptive obituary for primary dental health aides—those assistants trained in prevention, education, and the application of fluoride rinses—may have been premature. In 2008, changes in Medicaid reimbursement allowed providers to charge on an encounter basis. It took a couple of years before administrators and dentists recognized the potential benefit of these new regulations. A primary dental health aide

in Alaska can now charge a flat rate of \$28.80 for a child's topical fluoride application. As dental clinics around the state become aware of the new rules, there is renewed interest in the training of more aides.

Whether the subject is dental aides or dental therapists, the value of training is partly measured in cost-effectiveness—and Alaska's hard-won expertise could prove a valuable commodity. But until July 2010, as the result of a provision in the settlement of the lawsuit brought by the major dental organizations, ANTHC was enjoined from promoting its program beyond Alaska's borders. In any event, Alaska's own program still has growing pains. Its administrators struggle with such basic issues as how to identify and recruit strong students, nurture them through the program, and inculcate in them the values of the profession.

In September 2009, twenty-five people responded to the call for applications from the Yukon-Kuskokwim Health Corporation in Bethel, the location of the Robert Wood Johnson Foundation-funded dental aides program. The organization had four dental therapist scholarships to disburse and a hard time giving them away. Many of the initial applicants lost interest once they realized they would be required to move out of their villages for two years of training, according to Troy Wiscombe, manager of the Yukon-Kuskokwim Health Corporation Dental Clinic. Nobody wanted to commit. Two years seemed like a long time, even though the first year's average salary of \$60,000 was high by village standards.

In addition, Bethel has had a hard time retaining its dental therapists, leading some administrators to question the investment. As of September 2009, Conan Murat was the only working dental therapist in the region. Technical skills are easier to impart than professional commitment, says Edwin Allgair, a Bethel-based public health dentist who has stood by in frustration as students time and again chose the traditional, subsistence way of life over the demands of career and academics. "My family's cutting fish right now, I have to go home. It's time for berry picking, my family needs me."

“We can teach the academics, no question about that,” Allgair says. “It’s attitude and professionalism that we can’t teach. That means we have to select for it—identify those student coming into the program beforehand.”

Bethel isn’t the only hub struggling with these issues, and the reasons are often more complex than first recognized. Stephanie Woods, a dental therapist who half-jokingly calls herself “the queen of extractions,” decided to leave her husband’s village of Shungnak, population 270, just a couple of years after returning from New Zealand—largely because of its rampant alcoholism. It was everywhere, she says, and she had a child to think about. Today she manages the dental clinic in Kotzebue.

And now, just two years after returning to Kiana, Kim Baldwin and her family have moved to Fairbanks, where life is less expensive and she can give her girls at least one opportunity she never had. “Both my kids want to play piano,” she offers in explanation. “I don’t play piano. But I think things like that open them up so much.”

Baldwin insists she is not quitting her job. She says she loves the work and intends to return to Kiana at least one week out of each month to continue seeing patients. On a recent trip back, she meanders through the village, down to the river to see the fishing haul, and out onto the tundra. Everywhere she goes, she is greeted like a celebrity. “Kim, you’re back!”

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