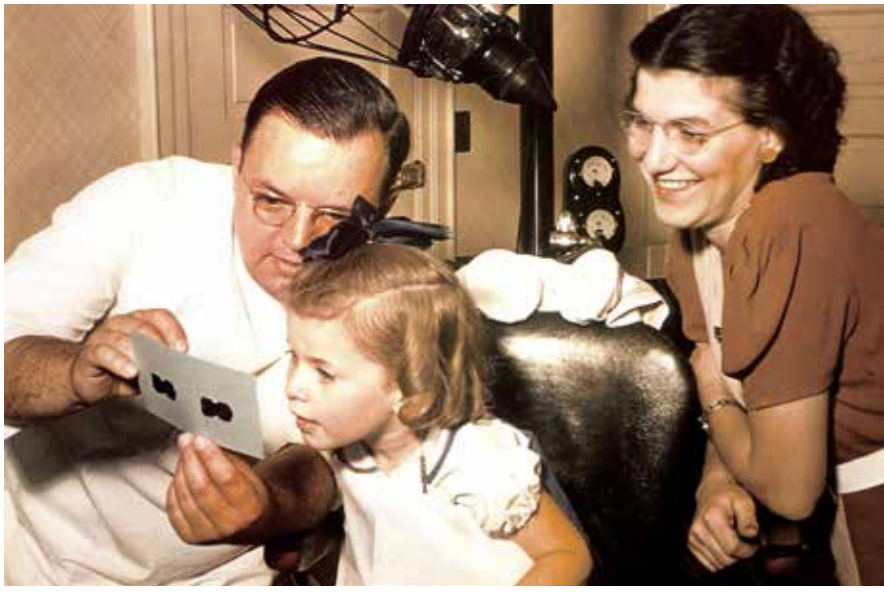
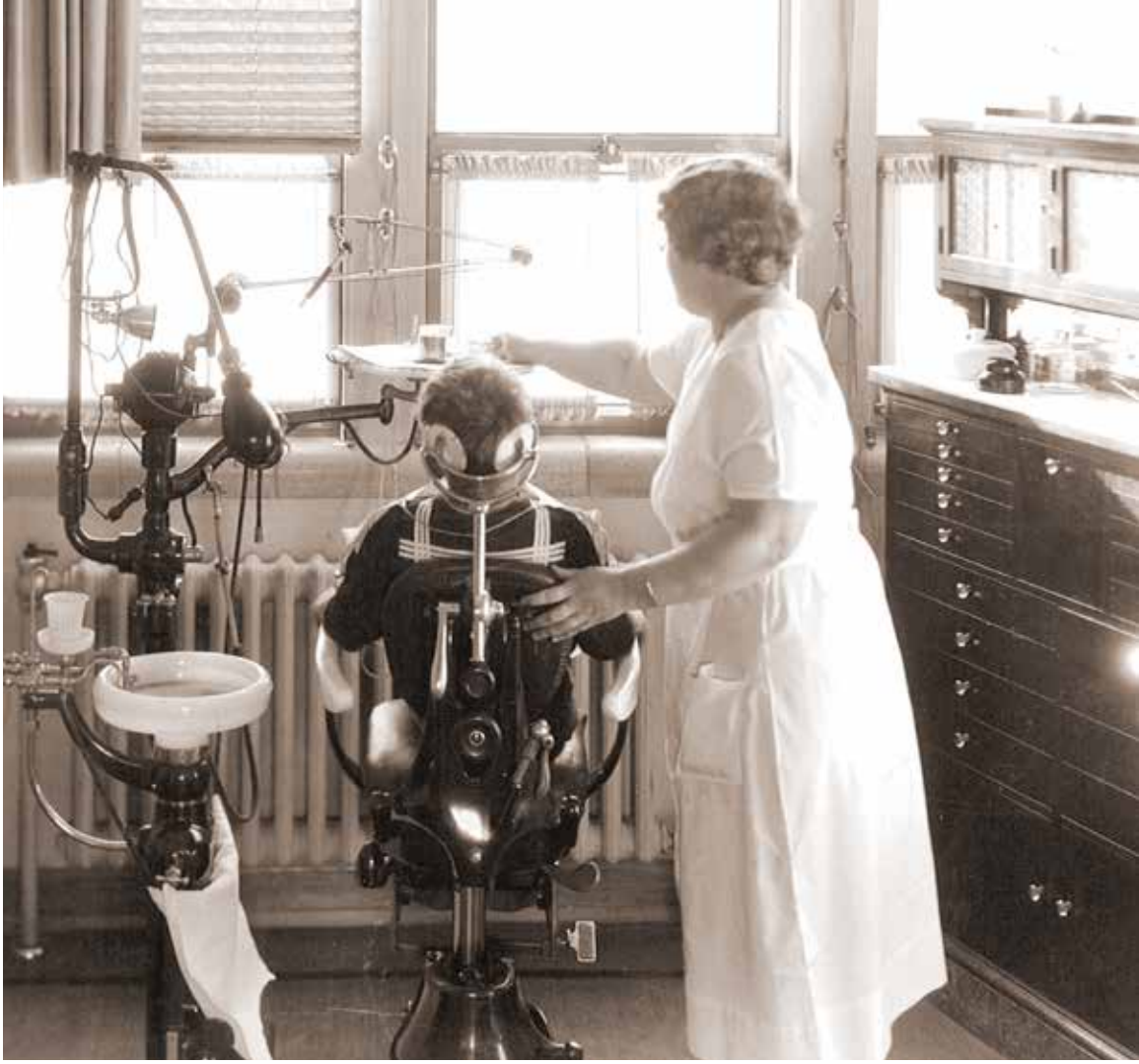
W.K. KELLOGG FOUNDATION™



Building a Better Future

Working with Communities to Improve Oral Health



From 1930 when rural children in Michigan first received dental care at school as a result of MCHP (top) to 2011 with dental therapists in Alaska (bottom), innovative approaches for improving dental health are rooted in partnership with communities.

The black-and-white images of kids in ancient dental chairs are grainy and faded today. But when the photos were taken, they represented state-of-the-art oral health care for schoolchildren in tiny, rural Michigan towns and villages. In W.K. Kellogg's time, that kind of care was hard to get. In fact, as he knew firsthand, for children in farming communities and surrounding townships, an appointment with a dentist was a once-in-a-blue-moon occurrence.

The notion that poor kids living in remote villages deserved the same health care as the sons and daughters of the wealthy was a radical one in 1930. But that conviction sparked the birth of the W.K. Kellogg Foundation. Mr. Kellogg had worked for decades building his company and amassing a fortune. Ultimately, he banked much of his wealth on the idea that society could—and should—do better by its children.

Mr. Kellogg also realized early on that improving the lives of children was best accomplished by actively engaging the adults in their communities—parents, teachers, elected officials, shopkeepers, doctors, lawyers, farmers and others—in a concerted effort to solve community problems. When brought together and presented with the opportunity to thoughtfully address local challenges, these people came up with smart, practical solutions that worked for their communities.

They did it in the 1930s and they are doing it today.

In the last 80 years, new discoveries, technological improvements and social, political and economic shifts have changed the ways in which the Kellogg Foundation conducts its work. But the goal itself—improving the lives of America's most vulnerable children and families—endures.

And the community orientation that made the Kellogg Foundation's work distinctive from the outset remains central to our work today. In oral health, as in virtually every other aspect of the foundation's work over the past eight decades, local communities have been the impetus for innovation and the drivers of change.

Practical Partnerships Change Communities, Institutions

In the midst of the Great Depression, Kellogg Foundation grantees were concentrated in the region surrounding Battle Creek, Mich. By modern standards, the seven-county focus of the Michigan Community Health Project (MCHP) seems miniscule. But the imprint of in-depth community work during those first 15 years runs deep. From early "pioneering ventures" came a broad definition of health and a pragmatic inclusiveness that yoked together unlikely partners.

The most unlikely of partners at the time were ordinary people. Imagine a handful of farmers, an out-of-work laborer or two and a shopkeeper sitting down with the town doctor, the dentist, maybe a banker or township supervisor and schoolteacher, along with a health department nurse who'd traveled from many miles away. In an era when few villages and townships had well-paved roads, the bare logistics of convening were a challenge. But for people from different social strata to join together in an organized effort to improve the health of their children was groundbreaking.

> Who better to determine what their children needed and how to provide it than local mothers and fathers, area leaders and professionals?

Part of the strategy to start with local resources was simple logistics. Telegraph lines and railroad tracks linked remote communities to cities, but other forms of connection were time-consuming and labor-intensive. Viewed another way, the ground-level community focus of the MCHP was intensely democratic. As voters participated in governing the country, the MCHP demonstrated how local men and women could be the architects of their children's futures. After all, they had the greatest stake in the outcome. Who better to determine what their children needed and how to provide it than local mothers and fathers, area leaders and professionals?

The W.K. Kellogg Institute of Graduate and Postgraduate Dentistry at the University of Michigan was built in 1939.

The earliest accounts of the MCHP show that dentists and other health care providers were central to deliberations. "Ultimately a working solution must come from within the ranks of the professions concerned," one chronicler of the project explained.[1] Their active participation and leadership in response to community needs eventually reshaped dental practice and education. "When physicians and dentists were confronted with the roles they were to play … the professional men confessed frankly that they were in need of additional training," the same early account noted. "They asked for special postgraduate courses in preventive medicine and children's dentistry."

Funding soon established the W.K. Kellogg Institute of Graduate and Postgraduate Dentistry at the University of Michigan as a resource for delivering short, practical postgraduate courses to update the skills of working dentists. The interaction and exchange fostered consulting relationships with academic institutions, giving local providers a stronger professional network of peers and teachers. "Field training," a

novel teaching method at the time, became routine as bonds grew between MCHP communities, local providers and institutions. Once-isolated rural dentists assumed leadership roles both in their communities and in their profession.

In a few short years, local dentists who collectively had seen only a few hundred children a year were doing check-ups on thousands of young patients. As a group, providers refined professional practices, developed recommendations for pediatric dental care, piloted techniques for educating children and their parents and standardized methods of oral health care delivery. They also identified technologies—such as office X-ray machines—that would improve the level of care for local children and eventually developed cooperative plans for accessing equipment, often with assistance from the MCHP. Throughout, what was learned in one setting was shared widely through a network of publications, conferences and a steady stream of visitors from academia and government.

Dentists and dental practices in the seven-county region changed as a result of the MCHP's community orientation. But, in the process, community involvement also engaged academic institutions in local issues, informed dental curricula, changed the expectations of parents for their children's care, strengthened the public health infrastructure and seeded broader societal ideas about the value of health. The collaboration—within each community and across sectors to include public health departments, institutions of higher education, hospitals, schools and nonprofit organizations—forged ties that created a sturdier network of resources to improve children's health. Eventually, voters opted to help pay for the resulting programs—an outcome no one would have predicted in 1930.

The Community Dental Van

THE START OF A DREAM IN ROSWELL, NEW MEXICO

The MCHP succeeded in part because it took each community's "professional men" and their challenges seriously. But it also was the result of connecting health care professionals with their communities—and taking community challenges seriously. As decades of work with communities since illustrates, Kellogg Foundation leaders have taken these lessons to heart.

In the 1990s, community people in Roswell, N.M. illustrated the depth and relevance of that lesson in action. Steve Gonzales, a grandfather from the barrio known as "the devil's triangle," teamed up with an Eastern New Mexico University (ENMU) professor and a local doctor to fix up a donated dental van and bring oral health care to Roswell's schoolchildren.

At the time, low-income families were traveling hundreds of miles to receive dental care. Gonzales mobilized his neighbors, including "kids from every gang in Roswell," he noted. They collected 1,200 signatures from area residents; ENMU-Roswell's Jane Batson and Dr. Evan Nelson furnished local health data.

When the *Tres Locos*, as Gonzales, Batson and Nelson were called, stood before the Chavez County Commission, their call for a tangible community commitment to children was compelling and undeniable. "Health touches everything," Gonzales insisted. The commissioners agreed.

Steve Gonzales with a line of children awaiting dental services provided in Roswell's mobile dental van.

The Kellogg Foundation's Turning Point initiative first brought Gonzales, Batson and Nelson together. Working with a network of public health partners from 41 communities across the country, Turning Point targeted broad community participation in defining and assessing health, prioritizing local issues and taking collective action. In Roswell, the dental van became the most visible symbol of multi-layered collaboration. Thousands of area children at all 22 schools received oral health screenings each year. But getting the dental van on the road in 1999 was only the beginning for Roswell.

A five-room dental facility at the New Mexico Rehabilitation Center followed. ENMU also developed a dental assistant program to draw local students into oral health care. And in December 2010, Steve Gonzales helped cut the ribbon on the new ENMU-Roswell Health Science Center Dental Clinic—a 16,720-square-foot addition to the health science center with 11 dental "operatories" and an auditorium and classrooms equipped for distance learning. Funding for the $5.8 million project came from a bond issue approved by voters in 2006.[2]

Today, Roswell residents have more options for oral health care, in part because Turning Point fostered working partnerships communitywide—not only among individuals with a common passion, but also among academic and civic institutions. Those collaborations sparked state-level discussions, as county commissioners, academic leaders and area providers connected with peers in other communities. Over time, those exchanges laid the groundwork for state-level support for improving the public's health.

As important as the new facilities are for bringing care to the region's most vulnerable, Jane Batson, who is now dean of health at ENMU, believes that the implications of oral health workforce expansion are even more significant. "The official opening of this facility signifies educational opportunities for students from southeastern New Mexico who are interested in dental careers and service to their communities," Batson said when the dental clinic opened. "It brings increased access to dental services for low-income children and adults without a pay source for dental care. It signifies the effectiveness of partnerships to stretch valuable funding through shared resources. Finally, it makes the dream from that first mobile dental van a reality for Southeastern New Mexico."

But another crucial layer of the Roswell story, as Dean Batson suggests, is the attention to pressing oral health workforce challenges in light of community needs. It is an element that mirrors Michigan grantee experiences almost 70 years earlier.

Strengthening the Oral Health Care Workforce

In rural 2000 New Mexico, as in rural 1930 Michigan, no amount of goodwill and collaboration could compensate for the shortages of skilled providers needed to deliver services. Communities have bumped up against this barrier again and again, and each generation brings a new approach to addressing these shortages.

In the 1930s, the Kellogg Foundation funded efforts by academic institutions to update the skills of working dentists. But by the 1940s, the dental care workforce needed strengthening. In an effort to "expand the dentists' hands," the "dental assistant" position was developed. Again, with Kellogg Foundation funding, universities made this option a reality by adapting curricula and teaching to hasten the training of skilled dental assistants. During and after World War II, as demand for oral health personnel continued to outstrip available supply, academic institutions with Kellogg Foundation grants developed a curriculum for dental hygienists—a new auxiliary health professional.

In 1950, dental hygienists were trained at the University of Alabama, with curriculum developed for this new auxiliary health professional.

The role of the dental hygienist in oral health care hardly needs explanation now. But when it was conceived, the idea generated some controversy in the professional community and among the general public. To address that skepticism, Kellogg Foundation grantees—including public and private colleges and universities, and professional associations—rigorously evaluated the effectiveness of new oral health providers and established standards. Respected institutions (Massachusetts Institute of Technology, Columbia University, University of Michigan) also took the lead in preparing dental teachers. In the late 1950s, with funding from the Kellogg Foundation, the American Council on Education undertook a national survey of dental education.

Partnerships with institutions helped map dental education at a time of tremendous technological growth and increasing demand. With Kellogg Foundation grants, academic and professional institutions set forth needed national standards and strengthened the infrastructure for preparing oral health providers. Foundation support for postgraduate education and scholarship programs to draw more students into oral health professions continued during this era. Grants to establish new dental schools (at the University of Connecticut and the University of Colorado) helped increase the number of dentists to meet community needs. As the roles of dental assistant and dental hygienist became established, Kellogg Foundation grantees gave the new educational programs an academic home at 123 community colleges. Even so, workforce shortages persisted and projections for population growth and related demand foreshadowed a larger gap.

An estimated **17 MILLION** low-income children in America go without dental care each year.[3]

During the 1970s, governments and academic institutions outside the United States responded to workforce shortages by establishing robust dental auxiliary programs. Meanwhile, in the U.S., the medical care profession expanded to include nurse practitioners, associate degree nurses, medical technologists, X-ray technicians and other allied health providers. Later, communities "grew their own" providers with community health workers, *promotoras* and *doulas*. The Kellogg Foundation actively assisted in these efforts to broaden community health care options and promote similar grantee innovation in oral health care.

In the early 1970s, a handful of dental practices in Kentucky participated in a statewide demonstration that introduced the expanded duty dental assistant (EDDA), a specialized auxiliary to take on more direct care of patients under a dentist's direction. With Kellogg Foundation funding, the University of Kentucky undertook a study to determine whether EDDAs could help meet community needs. But even with encouraging data, and despite growing evidence of workforce shortages, the impetus from academic institutions and professional associations to develop new forms of dental care delivery fell short.

Forging New Relationships between Communities and Academic Institutions

During the late 1960s and 70s, the needs of vulnerable communities contrasted starkly with the pursuits of institutions and systems. Changes enacted during the civil rights movement highlighted—particularly in communities—the importance of addressing racial and ethnic disparities of every type, in order to achieve racial equity. Riots in many major cities during this period illustrated the social consequences of marginalizing and ignoring underserved communities.

Beginning in 1968, the Kellogg Foundation initiated a partnership with historically black colleges and universities to strengthen the capacity of these unique institutions to prepare students to lead and serve their communities. Other grantee institutions, such as Harvard University, developed learning opportunities for medical, dental and public health students in predominantly African-American and Hispanic neighborhoods so that their professional training would include firsthand experience in communities.

In order to get at the underlying health care issues that affected vulnerable children and families, real relationships, built on trust, were needed.

Yet the Foundation recognized that placing students in underserved communities could accomplish only so much. People who had been sidelined or overlooked by powerful academic and health care institutions were simply more likely to seek care from providers who came from the same world, spoke their language and understood their issues. In order to get at the underlying health care issues that affected vulnerable children and families, real relationships, built on trust, were needed, so that local people had a voice at the table with academic leaders making decisions about the education and training of health care professionals.

As the Kellogg Foundation deepened its partnerships with underserved communities—both rural and urban—through the 1980s and into the 90s, it sought ways to bring "everyday people" into conversations with these leaders.

That's how Annie McIntosh, a West Virginia farmer in her later years, ended up sitting with the deans of West Virginia University's medical, dental, nursing and pharmacy schools. "I had never been to a board meeting in my life," McIntosh said later.

But after learning about the Kellogg Foundation's Community Partnerships with Health Professions Education initiative, McIntosh realized that she and her neighbors could help the university do a better job of educating providers to meet local needs. "Most of the community people, including me, were kind of afraid to open our mouths," she admitted. "But we knew about community and what we needed. Most of [the deans] had never lived on a farm out in the boondocks and I don't think they would have ever understood."

In West Virginia, Community Partnerships became a model for adapting health professions education to respond more effectively to rural needs. When the Kellogg Foundation funded the project in 1991, state leaders allocated funds to expand its scope, launching the state's Rural Health Initiative. By 1995, Community Partnerships like the one in Annie McIntosh's area were making an important impact on health professional education, research, and practice, ensuring that new providers—including oral health professionals—would do a better job of addressing the needs of rural populations.

> "It's not the big university coming in and doing a study that's going to sit on the shelf. The community people see that out of this experience, they're going to learn something."
>
> *– Associate vice president of rural health at West Virginia University*

In 2002, West Virginia University took on a National Institutes of Health study to explore potential links between oral health and premature birth, heart disease and other conditions. Thanks to recruitment by the local Community Partnership, 400 families participated. As the associate vice president of rural health at West Virginia University at the time remarked, "It's not the big university coming in and doing a study that's going to sit on the shelf. The community people see that out of this experience, they're going to learn something."

In the 1990s, Kellogg Foundation grantees consistently showed that when people in traditionally underserved communities actively partnered with powerful institutions, education and care were transformed. For example, Columbia University's College of Dental Medicine piloted a model for community-based dental education and service

delivery in some of New York City's poorest neighborhoods. In effect, the Columbia Community DentCare program upended the usual dynamic between community and university—reorienting dental clinics to seriously address community oral health issues and bringing dental care to school-based venues.

Allan J. Formicola, D.D.S., M.P.H., and dean of Columbia's dental school at the time, would later say that a Washington Heights elementary school principal's letter provided the catalyst.[4] Children sat outside her office with toothaches, Phyllis Williams wrote the dean. How could they study when they were in pain? With no place in the community for children to get treatment, she was powerless to help. As he considered the principal's situation, Dean Formicola saw a bigger picture.

Washington Heights, the Upper West Side home to immigrants for a century, was now peopled with poor families from the Dominican Republic and Central America. Dentists were scarce, yet the university's dental teaching clinics were not convenient to the families of children who needed care. By the time the parents brought in their suffering children, dental students found themselves looking at advanced dental disease. Without access to routine prevention, children in Washington Heights and other impoverished neighborhoods were far more likely to experience dental emergencies, school absences, tooth extractions and severe dental disease. And when they left Columbia, newly minted dentists were more likely to believe that the challenges of impoverished communities were insurmountable.

After reading Principal Williams' letter, Dr. Formicola challenged dental school administrators to reconsider Columbia's teaching mission in light of pressing community needs. And he charged three colleagues trained in both dentistry and public health to come up with a plan. An assessment of dental care resources in the community led to the designation of both Washington Heights/Inwood and Harlem as dental Manpower Shortage Areas by the federal government. The application process brought African-American and Latino community leaders together with Columbia dental school faculty and administrators to review data and discuss oral health issues. So when Columbia's Community DentCare plan for prevention services in public schools and treatment in neighborhood clinics rolled out, its allies included leaders from civic and advocacy organizations, public schools and public health departments. A pivotal grant from the Kellogg Foundation launched Columbia's Community DentCare. And when the first school programs opened, principals were their most ardent and vocal supporters.

Data, Oral Health Disparities and the Dental Pipeline

The 1990s gave rise to a marketplace orientation in health care policy that pushed many people—rural residents, uninsured, working poor, immigrants and people of color among them—further to the fringes of the health care system. The patchwork safety net of clinics, health departments and public hospitals that served vulnerable populations was stretched thin. The results: greater sickness, suffering and premature death for people in underserved communities and higher health care costs for society as a whole.

In 1998, Community Voices: HealthCare for the Underserved enjoined 13 communities in 10 states and the District of Columbia in a multi-year initiative to explore whether people and the systems that served them could craft more durable, equitable and effective health practices and policies. Community Voices was groundbreaking in its size, scope and potential reach. But its bedrock principle echoed that of the earliest Kellogg Foundation initiatives. Lasting change begins with people. But people need resources, access to tools and the opportunity to come together in order to change systems.

Lasting change begins with people.

By explicitly identifying access to oral health as a focal point for health improvement, Community Voices gave communities and health system partners a rare opportunity. A grantee in North Carolina said at the outset: "Dental care was the Number One unmet need for low-income children in the region. An estimated 12,000 children were medically underserved with no dental coverage and no access to dental care."[5]

Questions concerning oral health care needs abounded. Community Voices grantees articulated gaps in data at the local level and then worked through partner organizations to fill them.

At the national level, Community Voices asked policy centers and think tanks to address the same broad questions. The resulting data exposed oral health disparities in a changing population and fueled advocacy efforts across a wide range of sectors.

Signature publications, such as *Oral Health for All: Policy for Available, Accessible and Acceptable Care,*[6] galvanized thought leaders in dentistry, health policy research and public health. The release of *Oral Health in America*, the first-ever Surgeon General's report on the subject,[7] raised public awareness about the "silent epidemic"

of oral disease and placed oral health on the radar for many institutional and public policymakers. Many other publications followed, as well as stories, expert panels and articles in professional journals. By spotlighting data that underscored disparities, oral health researchers injected new energy and urgency into the movement to expand oral health care access. Before long, organizations like the Children's Dental Health Project emerged to press the case for action on behalf of all children lacking access to dental care.

Community Voices partners made use of oral health data to generate support and expand dental care access. Today, eight Community Voices learning laboratories continue to gather data, address access barriers for underserved populations and elevate the experience of individual communities as practical models for improving health practices and policy. In North Carolina, dental clinics were opened to serve thousands of children to begin reducing unmet needs. In New Mexico, a network of dentists offering school-based and other services are blunting chronic dental workforce shortages and creating the basis for a system of care to reach neglected populations. And in Northern Manhattan, the Community DentCare program expanded to reach more schools and established a mobile dental clinic. The program logs 44,000 patient visits a year.

Compelling data widely disseminated lent credibility to community-level collaboration at Community Voices sites. But shining a spotlight on oral health disparities also created opportunities for national collaboration around workforce pipeline issues—specifically, putting health professionals where they're needed most and having the health workforce more reflective of the general population.

With funding from the Kellogg Foundation, the American Dental Education Association (ADEA) made grants for direct educational support of underrepresented minority and low-income students at 11 schools of dentistry participating in a major Robert Wood Johnson Foundation pipeline program. The California Endowment provided funding to draw four additional California dental schools into the program. The intent was to develop a model for increasing services at dental clinics while connecting senior dental students with communities to broaden their knowledge and cultural competence in addressing access issues. In the process, the program sought to bolster recruitment of underrepresented minority and low-income students at participating schools.

Based on the success of early collaborations, with an endowment from the Kellogg Foundation, the ADEA established the Center for Equity and Diversity as another resource for communities, dental schools and thought leaders. Promoting sustainable programs for oral health care in vulnerable populations and bolstering the dental faculty pipeline are among the Center's goals.

A Tribal-Led Approach to Improving Oral Health

Building oral health workforce capacity is a challenge that extends beyond the walls of academia. For communities in oral health crisis, like the tiny villages scattered across the immense Alaskan tundra, lack of access to regular dental care is a very real and very pressing source of illness and pain every day. Some of the world's highest dental disease rates are found in Alaska, where emergency dental care and tooth loss are a way of life, starting at an early age. Three-fourths of all children ages 2 to 5 have dental caries, and half of toddlers before age 3 undergo general anesthetic to remove infected baby teeth.

In 2011, there were approximately unserved individuals living in dental Health Professional Shortage Areas.[8]

In the late 1990s, with data showing that only a handful of dentists were available to handle 85,000 people in more than 200 remote villages,[9] tribal leaders took matters into their own hands.

The Alaska Native Tribal Health Consortium (ANTHC) sought resources, ideas and allies to develop a sustainable oral health workforce for Alaska Native communities. Since recruitment and retention of oral health providers had been a persistent barrier to dental care access, the solution they settled on depended on recruiting from their own villages. In 2003, ANTHC leaders partnered with a local foundation and state-level philanthropy to send the first cohort of Alaska Native students to New Zealand for the internationally recognized two-year dental therapist program. When the students returned, their shared culture and language smoothed the way for community acceptance of services from new providers.

In a few years, as demand for dental therapists in Alaska Native tribal communities increased, tribal leaders moved to establish a U.S.-based home for dental therapist education and approached the Kellogg Foundation. The resulting partnership reflects a shared respect for community innovation, dedication to children and a steadfast commitment to removing barriers to equitable oral health access.

Interest in this innovative approach began to grow outside of Alaska, and more states began to look at this program. Dental health inequities and workforce shortages are not exclusive to Alaska. In 2010, the Kellogg Foundation began working with tribes and states across the country to build awareness of oral health access issues and to end dental care shortages that disproportionately afflict low-income communities and communities of color by bringing quality dental care to every community.

Our Challenge for the Future

In 80 years, the Kellogg Foundation and its partners have covered tremendous ground in oral health. We have made a place for communities in crafting solutions, given dentists a leadership role in addressing community needs, built a compendium of data and resources to support system change, forged partnerships around education and services and explored alternate models of care.

But the end point of these collective efforts is not in sight. Dental workforce shortages persist. Enrollment in dental schools has yet to reflect the growing diversity of the population as a whole. And far too many vulnerable children and families go without regular oral health care. Many of these children live in rural areas. Many more live in neglected pockets of thriving cities. They are often children of color, from poor families struggling to get the care they need from a safety net that's full of holes.

Despite 80 years of technological advancements, they are the children who will end up sitting outside the principal's office with toothaches. They are the reason we all keep working. Mr. Kellogg believed that society could—and should—do better by its children. So do we—the Kellogg Foundation and its partners, together.

Endnotes

1 Excerpts from *The First Eleven Years*, 1942, Trustees of the W.K. Kellogg Foundation, beginning on page 17.

2 ENMUR *Eastern Clips*, January/February 2011.

3 *The Cost of Delay: State Dental Policies Fail One in Five Children*, February 2010, Pew Center on the States.

4 Chapter 11 - Columbia Community DentCare Program, by Stephen Marshall, David Albert and Dennis Mitchell in *Mobilizing the Community for Better Health: What the Rest of America Can Learn from Northern Manhattan* (2011).

5 pp. 70-71 in *More than a Market: Making Sense of Health Care Systems*, 2002, W.K. Kellogg Foundation.

6 A 1999 Center for Policy Alternatives brief by Rueben C. Warren.

7 A 2000 U.S. Department of Health and Human Services publication.

8 *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*, July 2011, Institute of Medicine and National Research Council.

9 A ratio of 1 dentist to 4,250 patients, or almost three times the U.S. average. Data from a 1998 report by Tom Bornstein, dental director of SouthEast Alaska Regional Health Consortium, as reported by Sara Solovich in the Robert Wood Johnson Foundation Anthology *To Improve Health and Healthcare*, Volume XIV; excerpt entitled "Dental Health Aides and Therapists in Alaska."

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