

programs. Nevertheless, the IHS estimated in 1993 that "sanitation deficiencies" totaling nearly \$600 million still needed to be alleviated before all Indian homes would have adequate facilities.

To provide comprehensive medical care for Native Americans, the Indian Health Service had to overcome several major difficulties. Although its budget was steadily increasing, the IHS continued to suffer from inadequate funding and chronic shortages of qualified medical personnel. Also, its "service population" included peoples of many distinct languages and cultures scattered in remote and isolated locations across the country. To meet these challenges the IHS developed several innovative programs, the most successful of which was the training and supervision of paraprofessionals. The program began on an experimental basis in 1955 with the creation of the Navajo-Cornell Field Health Project. Teams of Indian "health visitors" were trained to provide first-contact health care, health education, and disease prevention services. The visitors extended the reach of the IHS professional staff and helped overcome cultural and linguistic differences between physicians and patients.

One of the many dedicated IHS health visitors was Annie Wanneka, a member of the Navajo Nation tribal council who had been involved in local health care programs since the late 1940s. As head of the council Health Committee, she conducted an active campaign to convince Navajos suffering from tuberculosis to undergo treatment. She also inspected Navajo labor camps and, with council support, persuaded local employers to improve sanitary conditions for their workers. As part of the health visitor program, Wanneka assisted in the introduction of antituberculosis drug therapy and regularly visited tubercular patients to encourage them to stay under medical care.

The paraprofessional program became a permanent part of the Indian Health Service in 1968 with the establishment of a national training and research center in Tucson, Arizona. Known as Desert Willow, the center trained Community Health Representatives (CHRs) in basic health skills, home nursing, nutrition, and environmental health services. The CHRs were all Native Americans, trained by the IHS but employed and supervised by their own tribes. Because they were familiar with local cultures and customs, the CHRs served as specialists in "cross-cultural health delivery." They advised IHS physicians on ways to accommodate their medical practice to meet the cultural expectations of Native people, and they explained to patients the impor-

tance of modern medical procedures. By 1993, more than 1,400 CHRs were serving 250 tribes in 400 rural communities.

The Indian Health Service also developed innovative technologies to improve its delivery of medical services. Using the most advanced telemetry, the IHS in the mid-1970s inaugurated its STARPAHC program (Space Technology Applied to Rural Papago Advanced Health Care). This remarkable program allowed physicians in a central location to communicate by radio and television with paraprofessionals in mobile health centers. Physicians thus could assess medical problems and make recommendations for further care of patients in remote locations. The IHS also developed a high-tech information retrieval system in the 1980s called the Resource and Patient Management System (RPMS). Computers at 200 IHS and tribal health offices facilitated the confidential collection and output of a broad range of health data on individual patients, including such items as immunization records, dental charts, and allergies. This centralized health database was an important resource as Native Americans became increasingly mobile and sought medical care at IHS facilities across the country.

Native Americans living in urban areas benefited not only from improved medical care from the Indian Health Service, but also from a growing number of Indian outpatient and social service programs in the cities. The IHS sanitation program, originally conceived as an on-reservation service, was later extended to serve off-reservation communities as well. Indian clinics in cities such as Chicago, Minneapolis, Seattle, San Francisco, and Los Angeles provided a wide array of medical and health services. Many of the clinics started out as volunteer programs, but were later taken over by state or federal agencies. The staffs of many such urban clinics were predominantly Native American, often attracting from the reservations the few highly skilled professionals.

The most chronic health problem affecting urban and rural Native Americans in the twentieth century was alcohol abuse. The IHS Task Force on Alcoholism reported in 1972 that alcohol abuse was a contributing factor to four of the top ten causes of Indian deaths: accidents, cirrhosis of the liver, homicide, and suicide. Alcohol-related accidents were an especially severe problem for Native Americans. Indians were twice as likely to die from accidents as were non-Indians, and 75 percent of all fatal accidents involving Indians were alcohol related. In addition, alcohol was a factor in 80 percent of all Indian suicides and 90 percent of all homicides committed by Indians. The arrest rate of Indians for alcohol-related offenses was ten times higher

than for whites and three or four times the rate for other ethnic groups.

Perhaps the most heart-rending problem of all was the high incidence of fetal alcohol syndrome (FAS) among Native Americans. Rates of FAS varied widely for different tribes and regions, but generally were high on reservations and in urban enclaves across America. The condition is caused by mothers who consume large amounts of alcohol during their pregnancy, and its symptoms include varying degrees of physical deformity and mental retardation. With prevention the only "cure" for FAS, tribal leaders were eager to warn their people of its dangers. The Navajo Nation tribal council in 1982 conducted a workshop on FAS during which one participant observed, "Some Navajo elders used to say years back that if a woman about to bear a child drinks crazy water, the newborn will be crazy in the body and the mind." Roberta Ferron (Rosebud Sioux) put the matter more forcefully: "I am convinced that we [must] . . . halt Fetal Alcohol Syndrome among our Indian people or we will cease to exist as Indians." Public understanding of the tragic effects of FAS increased in 1989 following the publication of *The Broken Cord* by Native writer Michael Dorris (Modoc). This moving firsthand account told the story of one family's ongoing struggle to care for an adopted child afflicted with FAS. "Here is a book so powerful it will not only break your heart," wrote one critic, "it will restore your faith."

No one has ever been able to determine, for certain, why Native Americans were unusually susceptible to alcohol abuse. By the late twentieth century, most scholars had abandoned the theory that Indians were genetically or physiologically inclined to alcoholism; the more favored explanations were those that emphasized cultural or social factors. Professor Theodore D. Graves of the University of California, Los Angeles, concluded that the status of Indians as "marginal men," ill-equipped to handle the stresses of modern life, caused them to "seek release from frustration and failure in drunken stupor."

For many Native American alcoholics, the origins of their problem seemed clear enough. Alcohol abuse was already so prevalent among their family and peers that they began drinking without giving it a second thought. "It seems now almost as though I was taught to drink, like children are taught anything by the example of the grown-ups around them," observed one forty-three-year-old Indian alcoholic in Chicago, who further remarked:

I can remember sitting around the kitchen on weekends, and everyone would come in Friday after work, with beer and sometimes liquor, and they'd start drinking. Me and my little brother, we'd just sit and watch them. I never thought about it, but I guess it always seemed to me the thing to do. Start drinking on weekends. And then, I guess, I just drank other times, too, until it was just out of my control.

The Indian Health Service devoted a great deal of its attention to the reduction of alcohol abuse among Native people, not only because it was such a serious health problem but also because it drained needed resources from the treatment of other diseases. By the early 1990s, 70 percent of all treatment services provided by the IHS were alcohol related. The IHS funded more than 200 alcoholism programs serving urban areas and reservations, often with the full cooperation of tribal officials. One of the most promising new programs, initiated by the Indian Alcohol and Substance Abuse Prevention and Treatment Act of 1986, authorized the establishment of youth treatment centers within each of the IHS service areas. In 1994 fifteen Native American alcohol-treatment programs joined forces, in a project called Healthy Nations, to develop culturally relevant prevention programs for Native people.

Native Americans also took the lead in developing innovative programs to combat the spread of the human immunodeficiency virus (HIV) and the acquired immunodeficiency syndrome (AIDS). Between 1987 and 1991 the number of AIDS cases among American Indians increased nearly sixfold, but remained relatively low compared with other ethnic groups. One noteworthy example of local initiative was the San Diego American Indian Health Center's HIV education and prevention program. The center provided comprehensive services for Indians infected with HIV and published an illustrated AIDS prevention booklet, *Coyote's Penis* (1990), by Native writer Clifford E. Trafzer (Wyandot). In 1994 a Navajo elder, Daniel Freeland, blessed seventeen HIV-infected Native people at a conference in Albuquerque. "You are warriors," said Freeland, lighting a bundle of sage. "Go that way. Don't let anyone else tell you otherwise."

The health care available to Native Americans during the late twentieth century was powerfully affected by the movement in federal policy toward self-determination. Two complementary pieces of federal legislation, passed in the mid-1970s, permitted tribal governments to take greater responsibility for providing health-care services for their people. The Indian Self-Determination and Education Assistance Act