low-paying jobs. More than half of all houses occupied by California Indians failed to meet minimum standards for safety and sanitation. Sixty-five percent of the Indians' homes had unsatisfactory sewage disposal facilities, and 45 percent used contaminated water. The majority of diseases attacking the state's Native people were gastrointestinal or respiratory, diseases closely related to deficiences in shelter, sanitation, and diet.

Five years after the appearance of this grim report on the conditions of the California Indians, University of Michigan anthropologist Joseph G. Jorgensen offered the startling observation that the Indians of California "are *much* better off than their counterparts in other states." Drawing upon evidence compiled by the President's Task Force on American Indians, Jorgensen published his own survey of what he called "the endemic poverty of contemporary Indians" in 1971. He found that unemployment rates on almost all reservations were between 40 and 50 percent, and that the average family income of American Indians was $1,500 per year, $2,000 below the federal poverty line. Houses were "grossly dilapidated" on many reservations, with 83 percent having unsatisfactory facilities for the disposal of sewage. Whereas 48 percent of California Indians had to haul their domestic water, the national average for Indians was 81 percent. Gastrointestinal and respiratory diseases among Native Americans were

FIGURE 4.1

NATIVE AMERICAN AMENITIES IN 1990

Native American Communities	Percentage without Complete Plumbing	Percentage without Telephone	Percentage without Motor Vehicle
White Mountain Apache	13.1	64.5	41.1
San Carlos Apache	16.6	83.9	29.5
Pima and Maricopa	15.2	77.8	34.5
Hopi	30.6	49.3	24.0
Navajo	44.3	81.6	27.2
Tohono O'odham	24.8	55.9	47.6
Zuni Pueblo	5.2	32.6	19.4

Source: 1990 United States Census

seven or eight times the national average, while Indian life expectancy was only two-thirds the national average. Educational levels of Indians also fell short of national standards: fully one-third of all adult Indians were illiterate.

Signs of economic progress among Native Americans were evident in the 1970s and 1980s, but severe problems remained. Unemployment among Native people remained at levels considerably higher than those for other ethnic groups, and income levels remained significantly lower. The overall Indian unemployment rate of 40 percent masked the extent of the problem on many reservations where seasonal unemployment was far higher. During the winter months, unemployment averaged 75 percent among the Fort Berthold Mandans in North Dakota, the San Carlos Apaches in Arizona, and the various Pueblos in New Mexico. Wintertime unemployment often reached 90 percent among the Choctaws of Mississippi and the Sioux of Pine Ridge, South Dakota. On and off the reservation, a lack of education and training meant that employed Indians were locked into low-skilled and low-paying positions. During the 1980s, almost 40 percent of all Native American workers were employed in unskilled or semiskilled jobs, in contrast to a national average of less than 15 percent. According to the 1990 census, the median income for reservation Indians was $13,700, compared to $19,000 for the general population.

Housing and health conditions remained seriously deficient, with more than one-third of all Native American homes having fewer than three rooms. The 1990 census reported that 20 percent of all reservation households lacked complete plumbing facilities and more than half did not have telephones. Poor sanitation and diet contributed to rates of tuberculosis and dysentery among Indians many times higher than the national average. Native Americans also had the highest alcoholism and suicide rates. Historians James S. Olson and Raymond Wilson concluded their survey of Indian poverty in 1984 with a formulation that was by then all too familiar: "Taken together, Native American employment, education, income, and health problems make them the poorest people in the United States."

HEALTH PROBLEMS

One of the most devastating consequences of poverty for Native Americans in the twentieth century was the persistence of severe health problems. The tragic irony is that in the millennia before Europeans

arrived on this continent, the people of North America enjoyed excellent health. Native physicians maintained individual and communal health through sacred ritual and the knowledge of an extensive pharmacopoeia. Exposure to diseases and ecological changes introduced by European Americans took a heavy toll on the Native people. The Indian population of what is now the United States plummeted from a high of five million (or possibly far more) before white contact to fewer than 250,000 in 1890.

The government of the United States was slow to acknowledge its responsibility for protecting the health of Native Americans. In dozens of treaties negotiated in the nineteenth century, the federal government promised to provide health services to tribes as partial payment for rights and property ceded to the United States. Unfortunately, few services were provided. Following the transfer of the Bureau of Indian Affairs (BIA) from the War Department to the Department of the Interior in 1849, civilian physicians were assigned to reservations and Indian agencies. But by 1880 a total of just four hospitals and seventy-five physicians were serving the nation's entire Indian population.

Only in the early twentieth century did the federal government begin to provide meaningful health services to Native Americans. The Public Health Service conducted the first comprehensive survey of the health of American Indians in 1909. The resulting Trachoma Survey confirmed widespread reports of an unusually high number of cases of blindness among Indians and also found high levels of other infectious diseases such as tuberculosis. Two years later, in 1911, Congress made the first (and one-time-only) appropriation of federal funds specifically earmarked for Indian health services. The Snyder Act, passed by Congress in 1921, authorized regular appropriation of funds for "the relief of distress and conservation of health" of American Indians. To provide such "relief and conservation," the act created an Indian Health Division within the BIA and established district medical directors throughout the country.

Native Americans serving in the armed forces during World War II received extensive medical care from military physicians. This wartime experience raised expectations for the level of care available when they returned to civilian life. A major step toward fulfilling those expectations was taken on August 5, 1954, when Congress removed the Health Division from the Bureau of Indian Affairs and made it part of the Public Health Service within the Department of Health, Education, and Welfare (later known as the Department of Health and Human Services). This so-called Transfer Act created the Indian Health Service (IHS), under the supervision of the Surgeon General of the United States, charging it with providing all services "relating to the maintenance and operation of hospital and health facilities for Indians, and the conservation of Indian health." The quality of services available to Indians was significantly improved because young physicians could now fulfill their military obligation as commissioned public health officers serving in the IHS.

The creation of the Indian Health Service was motivated not only by a desire to improve health care for Native Americans, it also was related to the termination policy of the 1950s. As Bureau of Indian Affairs official Raymond Butler (Blackfeet) observed, the removal of health services from the BIA was part of the larger plan "to dismantle the bureau" by transferring its separate functions to other executive departments. Congressional proponents of termination hoped that such transfers would result in greater efficiency and lower costs. Expenditures for Indian health dramatically increased, however, following the creation of the IHS. During its first year of operations, the IHS had a budget of $34 million and a staff of 2,900 employees; twenty years later, its budget had grown to more than $200 million and its staff had increased to 7,400.

The Indian Health Service wisely concentrated its attention, at first, on preventive measures. Only by attacking the underlying conditions of poverty among Native Americans could the incidence of infectious diseases such as tuberculosis and trachoma be reduced. Teams of IHS civil engineers, sanitarians, medical social workers, and health educators were sent out to reservations to improve existing conditions. Congress initially authorized the IHS to provide water and waste disposal systems for existing Indian homes; subsequent legislation expanded that authority through cooperative programs with the Bureau of Indian Affairs and the Department of Housing and Urban Development for the construction of new homes as well.

The Indian Health Service initiated more than 4,000 projects, beginning in 1959, to upgrade Native American homes and communities. Over the next thirty years, more than 182,000 individual Indian homes (new and existing) were provided with sanitation facilities funded by the IHS. These facilities included running water, sewage disposal, and solid waste disposal systems. By the early 1990s, approximately 85 percent of all American Indian and Alaska Native homes had been provided with improved sanitation through various IHS