



# Trends

## *in Indian Health*

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Department of Health and Human Services

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# Preface

Since 1955, the Indian Health Service (IHS) has had the responsibility for providing comprehensive health services to American Indian and Alaska Native people in order to elevate their health status to the highest possible level. The mission of the IHS is to provide a comprehensive health services delivery system for American Indians and Alaska Natives with opportunity for maximum Tribal involvement in developing and managing programs to meet their health needs.

This publication presents tables and charts that describe the IHS program and the health status of American Indians and Alaska Natives. Information pertaining to the IHS structure and American Indian and Alaska Native demography, patient care, and community health are included. Current and trend information are presented, and comparisons with other population groups are made, when appropriate.



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# Overview

## *of the Indian Health Service Program*

The Indian Health Service (IHS), an agency within the Department of Health and Human Services (HHS), is responsible for providing federal health services to American Indians and Alaska Natives. The provision of health services to federally recognized Indians grew out of a special relationship between the federal government and Indian Tribes. This government-to-government relationship is based on Article I, Section 8, of the United States Constitution, and has been given form and substance by numerous treaties, laws, Supreme Court decisions, and Executive Orders.

The Indian Health program became a primary responsibility of the HHS under P.L. 83-568, the Transfer Act, on August 5, 1954. This Act provides “that all functions, responsibilities, authorities, and duties ... relating to the maintenance and operation of hospital and health facilities for Indians, and the conservation of Indian health... shall be administered by the Surgeon General of the United States Public Health Service.”

The IHS is the federal health care provider and health advocate for Indian people, and its goal is to raise their health status to the highest possible level. The mission is to provide a comprehensive health services delivery system for American Indians and Alaska Natives with opportunity for maximum Tribal involvement in developing and managing programs to meet their needs. It is also the responsibility of the IHS to work with the people involved in the health delivery programs so that they can be cognizant of entitlements of Indian people, as American citizens, to all federal, State, and local health programs, in addition to IHS and Tribal services. The IHS also acts as the principal federal health advocate for American Indian and Alaska Native people in the building of health coalitions, networks, and partnerships with Tribal nations and other government agencies as well as with non-federal organizations, e.g., academic medical centers and private foundations.



## Overview

The IHS has carried out its responsibilities through developing and operating a health services delivery system designed to provide a broad-spectrum program of preventive, curative, rehabilitative and environmental services. This system integrates health services delivered directly through IHS facilities, purchased by IHS through contractual arrangements with providers in the private sector, and delivered through Tribally operated programs and urban Indian health programs.

The 1975 Indian Self-Determination Act, P.L. 93-638 as amended, builds upon IHS policy by giving Tribes the option of manning and managing IHS programs in their communities, and provides for funding for improvement of Tribal capability to contract under the Act. The 1976 Indian Health Care Improvement Act, P.L. 94-437, as amended, was intended to elevate the health status of American Indians and Alaska Natives to a level equal to that of the general population through a program of authorized higher resource levels in the IHS budget. Appropriated resources were used to expand health services, build and renovate medical facilities, and step up the construction of safe drinking water and sanitary disposal facilities. It also established programs designed to increase the number of Indian health professionals for Indian needs and to improve health care access for Indian people living in urban areas.

The operation of the IHS health services delivery system is managed through local administrative units called service units. A service unit is the basic health organization for a geographic area served by the IHS program, just as a county or city health department is the basic health organization in a State health department.

A few service units cover a number of small reservations; some large reservations are divided into a number of service units. The service units are grouped into larger cultural-demographic-geographic management jurisdictions, which are administered by Area Offices.



## Purpose & Description

### *of Trends in Indian Health*

The IHS *Trends in Indian Health* attempts to fulfill the basic statistical information requirements of parties that are interested in the IHS. The tables and charts contained in the IHS *Trends in Indian Health* describe the IHS program and the health status of American Indians and Alaska Natives residing in the IHS service area. The IHS service area consists of counties on and near federal Indian reservations. The Indians residing in the service area comprise about 60 percent of all Indians residing in the U.S.

Information pertaining to the IHS structure and American Indian and Alaska Native demography, patient care, and community health are included. Historical trends are depicted, and comparisons to other population groups are made, when appropriate. Current regional differences information can be found in the IHS companion publication called *Regional Differences in Indian Health*.

The tables and charts are grouped into six major categories: 1) IHS Structure, 2) Population Statistics, 3) Natality and Infant/Maternal Mortality Statistics, 4) General Mortality Statistics, 5) Patient Care Statistics, and 6) Community Health Statistics. The tables provide detailed data, while the charts show significant relationships. A table and its corresponding chart appear next to each other. However, some charts that are self-explanatory do not have a corresponding table. Also, a few tables have more than one chart associated with them.



# Summary

## *of Data Shown*

### **Indian Health Service Structure**

The IHS is comprised of 12 regional administrative units called Area Offices. As of October 1, 1998, the Area Offices consisted of 151 basic administrative units called service units. Of the 151 service units, 85 were operated by Tribes.

The IHS operated 37 hospitals, 59 health centers, 4 school health centers, and 44 health stations. Tribes have two different vehicles for exercising their self-determination—they can choose to take over the operation of an IHS facility through a P.L. 93-638 self-determination contract (Title I) or a P.L. 93-638 self-governance compact (Title III). A distinction is made in this publication regarding these two Tribal modes of operation, i.e., Title I and Title III. Tribes operated 12 hospitals (Title I, 3 hospitals and Title III, 9 hospitals), 155 health centers (Title I, 98 and Title III, 57), 3 school health centers (Title I, 1 and Title III, 2), 76 health stations (Title I, 60 and Title III, 16), and 160 Alaska village clinics (Title I, 16 and Title III, 144).

There were 36 Urban Projects ranging from information referral and community health services to comprehensive primary health care services.

As of January 20, 1999, all IHS and Tribally-operated hospitals and eligible IHS-operated health centers were accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Since 1990, 9 of 13 (69 percent) of the Regional Youth Treatment Centers have become accredited by JCAHO or the Commission on Accreditation of Rehabilitation Facilities. The remaining 4 are preparing for accreditation.

IHS proficiency testing rating exceeded the requirements of the Clinical Laboratory Improvement Amendments of 1988 (CLIA '88) for all private and public sector laboratories. Overall proficiency rating for IHS laboratories is 98 percent. CLIA '88 requires 80 percent proficiency on all regulated analytes.

In FY 1995, there were nearly 97 million pharmacy workload units in IHS and Tribal direct facilities. Over 61 percent of these were associated with outpatient care.

### **Population Statistics**

In Fiscal Year 2000, the IHS service population (count of those American Indians and Alaska Natives who are eligible for IHS services) will be approximately 1.51 million. Since 1990, the IHS service population is increasing at a rate of about 2.3 percent per year, excluding the impact of new Tribes.

The Indian population residing in the IHS service area is younger than the U.S. All Races population, based on the 1990 Census. For Indians, 33 percent of the population was younger than 15 years, and 6 percent was older than 64 years. For the U.S. All Races population, the corresponding values were 22 and 13 percent respectively. The Indian median age was 24.2 years compared with 32.9 years for U.S. All Races.

## Summary

According to the 1990 census, there were over 605,000 Indians residing in the Urban Indian Health Program.

According to the 1990 Census, Indians have lower incomes than the general population. In 1989, Indians residing in the current Reservation States had a median household income of \$19,897 compared with \$30,056 for the U.S. All Races population. During this time period, 31.6 percent of Indians lived below the poverty level in contrast to 13.1 percent for the U.S. All Races population.

### **Nativity and Infant/Maternal Mortality Statistics**

The birth rate for American Indians and Alaska Natives residing in the IHS service area was 24.1 (rate per 1,000 population) in 1994-1996. It is 63 percent greater than the 1995 birth rate of 14.8 for the U.S. All Races population.

The maternal mortality rate for American Indians and Alaska Natives residing in the IHS service area dropped from 27.7 (rate per 100,000 live births) in 1972-1974 to 6.1 in 1994-1996, a decrease of 78 percent. These rates have been adjusted for

miscoding of Indian race on death certificates. In 1994-1996, there was only one maternal death, actual and adjusted.

The infant mortality rate for American Indians and Alaska Natives residing in the IHS service area dropped from 22.2 (rate per 1,000 live births) in 1972-1974 to 6.1 in 1994-1996, a decrease of 58 percent. These rates have been adjusted for miscoding of Indian race on death certificates. The 1994-1996 rate is 22 percent higher than the U.S. All Races rate of 7.6 for 1995.

### **General Mortality Statistics**

The leading cause of death for American Indians and Alaska Natives residing in the IHS service area (1994-1996) was diseases of the heart followed by malignant neoplasms (the same as for the total U.S. All Races population in 1995). However, the cause of death rankings differ by sex. For Indian males, the top two causes were diseases of the heart and accidents. For Indian females, the top two causes were diseases of the heart and malignant neoplasms.

In 1994-1996, the Indian (IHS service area) age-adjusted death rates for the following causes were considerably higher than those for the U.S. All Races population in 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

1. alcoholism—  
627 percent greater,
2. tuberculosis—  
533 percent greater,
3. diabetes mellitus—  
249 percent greater,
4. accidents—  
204 percent greater,
5. suicide—  
72 percent greater,
6. pneumonia and influenza—  
71 percent greater, and
7. homicide—  
63 percent greater.



## Summary

### Patient Care Statistics

In FY 1997 (provisional), there were about 85,000 admissions to IHS and Tribal direct and contract general hospitals. The leading cause of hospitalization was obstetric deliveries and complications of pregnancy and puerperium.

The total number of ambulatory medical visits (IHS and Tribal direct and contract facilities) was over 7.3 million in FY 1997 (provisional), an increase of over 1,500 percent since FY 1955. The leading cause of ambulatory medical visits in IHS and Tribal direct and contract facilities was supplementary classification conditions. The supplementary classification category includes such clinical impressions as other preventive health services, well child care, physical examination, tests only (lab, x-ray, screening), and hospital, medical, or surgical follow-up.

The number of direct and contract dental services provided (IHS, Tribal, and Urban), as reported to the IHS central database, increased nearly 1,100 percent (from under 0.2 million in FY 1955 to about 2.1 million in FY 1998).

### Community Health Statistics

For people accepted for treatment into the IHS substance abuse treatment program, most initial contacts are for alcohol addiction only. However, the number of initial contacts involving other drugs has been increasing. Also, the age-adjusted drug-related death rate for Indians residing in the IHS service area increased from 3.4 deaths per 100,000 population in 1979-1981 to 8.4 in 1994-1996. These rates have been adjusted for miscoding of Indian race on death certificates. The 1994-1996 rate is 65 percent higher than the U.S. All Races rate of 5.1 for 1995.

The IHS Injury Prevention (IP) program has a wide variety of projects in place in all IHS Areas to address this major health problem. Exemplary projects are: child passenger protection, roadway/roadside hazard identification, safety belt use promotion, deterring drinking and driving, drowning prevention, smoke detector usage, helmet use, and injury prevention campaign. The IHS IP program has contributed to a 32 percent decline in IHS and Tribal direct and contract hospitalizations for injuries and poisonings since FY 1987.

The nutrition and dietetics program reported over 87,000 patient/client contacts during FY 1998. Nearly one-half of the contacts were in the hospital setting (46 percent) followed by the contacts for ambulatory clinic (34 percent) and community (20 percent). Nearly three-fourths (73 percent) of the contacts were for clinical nutrition counseling and one-fifth (20 percent) were for health promotion. Of the clinical nutrition counseling contacts, the majority were for general nutrition (36 percent) and diabetes (32 percent).

The number of patient/client contacts reported by the nutrition and dietetics program has decreased 77 percent since FY 1993. However, this does not necessarily reflect a decrease in total workload. There have been many changes in the IHS nutrition and dietetics program during the mid to late 1990's that have been instrumental in contributing to a decrease in workload reporting by local nutrition personnel. Among them are loss of IHS Area and Headquarters nutritionists responsible for coordinating and orienting new staff to the IHS Nutrition and Dietetics Program Activity Reporting System, as well as the transition of many former IHS



## Summary

facilities to Tribally-operated and administered programs that no longer submit data to the IHS central database.

There were over 321,000 public health nursing visits recorded in the Headquarters reports for FY 1998. The most frequent program areas dealt with during these visits were health promotion/disease prevention (43 percent of the visits), morbidity (16 percent), and child health (8 percent). The visits were concentrated in two age groups, children under 5 years of age (20 percent) and adults over the age of 64 (16 percent). Female visits outnumbered male visits by 51 percent.

The community health representative (CHR) program reported nearly 2.3 million client contacts in FY 1998. Most of these contacts took place in the community (34 percent). The two leading detailed activities for CHR contacts in FY 1998 were case management (22 percent) and health education (20 percent). The reduction of reported CHR services in FY 1998 (from 4.1 million in FY 1993) reflects the transfer of resources to Tribes as part of the Self-Governance activity. Most Self-Governance Tribes elected not to use the national CHR program reporting system.

Since 1960, over 230,000 Indian homes were funded by IHS for the provision of sanitation facilities. These services included water and sewerage facilities, solid waste disposal systems and technical assistance to establish and equip operation and maintenance organizations for new, rehabilitated, and existing homes. Contributions to IHS sanitation facilities projects are received from numerous sources. In FY 1998, the largest source of funds (47 percent of the total) was attributable to Tribes. State governments contributed 35 percent and the Department of Housing and Urban Development (HUD) Infrastructure provided 9 percent of the funds for these cooperative projects.

The FY 1999 sanitation deficiencies to serve existing American Indian and Alaska Native homes and communities totals \$696 million. This amount is to provide first service sanitation facilities, to upgrade existing facilities, to provide solid waste facilities, and to provide assistance to operation and maintenance organizations.

Health education providers in FY 1998 spent the majority of their time in the office (43 percent of total provider hours) followed by Tribal worksite (14 percent) and hospital/clinic (12 percent). Twenty-seven percent of health education clients were served at a school location and 20 percent at a Tribal worksite. Health education providers devoted 27 percent of their time to support services and 23 percent to implementing/teaching. Over 90 percent of health education clients received services in one of two functional areas—implementing/teaching (61 percent) or design education objectives/materials (29 percent). These health education percentages are based on reporting from only some of the IHS Areas. See the “Sources and Limitations of Data” section that follows for a more complete discussion of the data qualifications.



# Initiative

## *to Eliminate Racial and Ethnic Disparities in Health*

### **Initiative**

The HHS is working on an Initiative to Eliminate Racial and Ethnic Disparities in Health. This is part of the President's Initiative on Race and is in response to the President's commitment of the nation to the goal of eliminating by the year 2010 racial and ethnic disparities in six areas. The six health focus areas are: infant mortality, diabetes mellitus, cardiovascular diseases, human immunodeficiency virus (HIV), deficits in breast and cervical cancer screening and management, and deficits in child and adult immunization rates.

The American Indian and Alaska Native population is being addressed, along with other racial/ethnic minority groups as part of this disparities initiative. There is information in this publication that relates to five of the six health focus areas.

### **Infant Mortality**

The American Indian and Alaska Native infant mortality rate has decreased 58 percent since 1972-74. Despite this improvement, the Indian rate in 1994-96 was still 22 percent greater than the U.S. All Races rate in 1995, i.e., 9.3 deaths per 1,000 live births compared to 7.6. The top two leading causes of Indian infant deaths were sudden infant death syndrome and congenital anomalies. For the All Races population, they were congenital anomalies and disorders related to short gestation and low birthweight. The Indian death data has been adjusted for miscoding of Indian race on death certificates.

Indian infants are more likely to die during the postneonatal period (28 days to under 1 year) than the neonatal period (under 28 days). The reverse is true for the U.S. All Races population. In 1994-96, the Indian postneonatal mortality rate was 7 percent greater than the Indian neonatal mortality rate, i.e., 4.8 versus 4.5. In contrast, the U.S. All Races neonatal mortality rate in 1995 was 81 percent greater than its postneonatal mortality rate, 4.9 to 2.7. The Indian rates have been adjusted for miscoding of Indian race on death certificates.

See Part 3 of this publication for tables and charts related to the infant mortality focus area. Additional information on this topic is provided in the *Regional Differences in Indian Health* publication.



## Initiative

### Diabetes Mellitus

The rate of diabetes deaths has been increasing in both the Indian and U.S. All Races populations. Since 1981-83, the Indian age-adjusted diabetes death rate has increased 93 percent. For the U.S. All Races population, the increase since 1982 has been 39 percent. Indians die from diabetes mellitus at a much greater rate than the U.S. All Races population. In 1994-96, the Indian age-adjusted rate (46.4 deaths per 100,000 population) was 3.5 times the 1995 All Races rate (13.3). The Indian rates have been adjusted for miscoding of Indian race on death certificates.

For both Indian females and males in 1994-96, the age-specific diabetes mellitus death rate generally increases with age. The Indian female rate (non-zero rates) was greater than Indian male rate, except for age groups 25 to 34 years and 35 to 44 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

See Charts and Tables 4.46 and 4.47. Additional information on this topic is provided in the *Regional Differences in Indian Health* publication.

### Cardiovascular Diseases

Deaths to cardiovascular diseases have been decreasing in the U.S. All Races population at a greater rate than in the Indian population. Since 1973, the age-adjusted heart disease death rate for the U.S. All Races population has decreased 43 percent and the cerebrovascular diseases death rate has decreased 58 percent. The comparable percentage decreases for the Indian population since 1972-74 are 4 and 35 percent, respectively. The current Indian death rates due to cardiovascular diseases are somewhat elevated compared to the rates for the U.S. All Races population. In particular, Indians died from diseases of the heart in 1994-96 at an age-adjusted rate 13 percent higher than that for the All Races population in 1995, i.e., 156.0 compared to 138.3. A similar relationship exists for deaths due to cerebrovascular diseases. The Indian rate of 30.5 in 1994-96 was 14 percent higher than the All Races rate of 26.7 in 1995. The Indian rates have been adjusted for miscoding of Indian race on death certificates.

Indian males are more likely to die from heart disease than Indian females, their age-specific death rate was higher for all age groups in 1994-96, except for age groups 1 to 4 and 15 to 24 years. However, for cerebrovascular diseases, the age-specific death rates were relatively close for Indian males and females. For both conditions for males, the death rate increased with age starting with age groups over 4 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

See Charts and Tables 4.48 through 4.51. Additional information on this topic is provided in the *Regional Differences in Indian Health* publication.



## Initiative

### Human Immunodeficiency Virus (HIV)

Indians deaths from HIV infection have not reached the level experienced in the general population. In 1994-96, the Indian age-adjusted death rate (6.2) was 60 percent less than the U.S. All Races rate in 1995 (15.6). The Indian age-adjusted death rate for HIV infection has been increasing at a somewhat higher rate than that for the All Races population. Since 1987-1989, the Indian rate has increased 417 percent, while since 1988, the All Races rate has increased 129 percent. The Indian rates have been adjusted for miscoding of Indian race on death certificates.

Indian males more often die from HIV infection than Indian females. The peak age-specific death rate for Indian males in 1994-96 (27.7 for 35-44 years) was 4.3 times the Indian female peak rate (6.5 for 25-34 years). These Indian rates have been adjusted for miscoding of Indian race on death certificates.

See Charts and Tables 4.53 and 4.54. Additional information on this topic is provided in the *Regional Differences in Indian Health* publication.

### Breast and Cervical Cancers

This publication does not have information on cancer screening rates. However, information is provided on leading sites for cancer deaths. For Indian decedents of all ages in 1994-96, female breast was the third leading cancer death site and cervix uteri was the fourteenth. When only Indian female sites for cancer deaths are ranked, female breast moves to second and cervix uteri moves to seventh. In 1994-96, there were 3.7 times as many deaths due to female breast than there were for cervix uteri (253 to 69). These Indian counts have been adjusted for miscoding of Indian race on death certificates. See Chart and Table 4.37, Chart 4.39, and Table 4.38. Additional information on this topic is provided in the *Regional Differences in Indian Health* publication.

### Immunization Rates

This publication does not have information on immunization rates. Information on immunization rates for children is provided in the *Regional Differences in Indian Health* publication.



## Sources & Limitations of Data

### Population Statistics

The IHS service population consists of American Indians and Alaska Natives identified to be eligible for IHS services. IHS service population estimates are based on official U.S. Census Bureau county data. The Census Bureau enumerates those individuals who identify themselves as being American Indian, Eskimo or Aleut. The IHS service population is estimated by counting those American Indians, Eskimos, and Aleuts (as identified during the Census) who reside in the geographic areas in which IHS has responsibilities (“on or near” reservations, i.e., contract health service delivery areas (CHSDAs)). The IHS service population comprises approximately 60 percent of all Indians residing in the U.S. These people may or may not use IHS services.

The IHS service population estimates, which are shown in this publication, need to be contrasted to the IHS user population estimates that are shown in the *Regional Differences in Indian Health* publication. IHS user population estimates are based on data from the IHS Patient Registration System. Patients who receive direct or contract health services from IHS or Tribally-operated programs are registered in the Patient Registration System. Those registered Indian patients that had at least one direct or contract inpatient stay, ambulatory medical visit, or dental visit during the last 3 years are defined as users. IHS user population figures are used for calculating IHS patient care rates. In contrast, IHS service population figures are used in calculating Indian vital event rates since State birth and death certificates do not provide information on use of IHS services.

IHS service populations between Census years (e.g., 1980 and 1990) are estimated by a smoothing technique in order to show a gradual transition between Census years. This normally results in upward revisions to service population figures projected prior to a Census, since each Census tends to do a better job in enumerating American Indians and Alaska Natives. For example, the American Indian and Alaska Native service population enumerated in 1990 was approximately 8 percent higher than that estimated by IHS for 1989. Therefore, after release of the 1990 enumeration figures, IHS smoothed the service population estimates for 1981-1989. That set of smoothed populations was used in the 1992 edition of this series. Subsequently, the Census Bureau issued revised 1990 Census American Indian and Alaska Native population counts by age and sex for all U.S. counties. They resulted in a 3.9 percent increase for the 1990 IHS service population using these “new” 1990 Census counts compared to the “old” 1990 Census counts. In order



## Sources & Limitations

to adjust for this 1990 increase, IHS again smoothed the service populations for 1981-1989. This second set of smoothed populations was used in the 1993 edition of the series. The Census Bureau then issued revised 1980 Census American Indian and Alaska Native population counts by age and sex for all U.S. counties, as was done for 1990. They resulted in a 2.8 percent increase for the 1980 IHS service population using these "new" 1980 Census counts compared with the "old" 1980 Census counts. In order to adjust for this 1980 increase, IHS for a third time smoothed the service populations for 1981-1989. This third set of smoothed populations was used for the first time in the 1994 edition of the series.

IHS service populations beyond the latest Census year (1990) are projected through linear regression techniques, using the most current 10 years of Indian birth and death data provided by the National Center for Health Statistics. The natural change (estimated number of births minus estimated number of deaths) is applied to the latest Census enumeration.

The IHS does not currently forecast changes in the service population distribution by age and sex. Rather, appropriate Indian age and sex distributions from Census years are applied to population estimates for non-Census years.

The social and economic data contained in this publication are from the 1990 Census. They reflect the characteristics of persons that self-identified as Indian during the Census.

### Vital Event Statistics

American Indian and Alaska Native vital event statistics are derived from data furnished annually to the IHS by the National Center for Health Statistics (NCHS). Vital event statistics for the U.S. population were derived from data appearing in various NCHS publications, as well as from some unpublished data from NCHS. NCHS obtains birth and death records for all U.S. residents from the State departments of health, based on information reported on official State birth and death certificates. The records NCHS provides IHS contain the same basic demographic items as the vital event records maintained by NCHS

for all U.S. residents, but with names, addresses, and record identification numbers deleted. It should be noted that Tribal identity is not recorded on these records. Tabulations of vital events for this publication are by place of residence.

The data are subject to the degree of accuracy of reporting by the States to NCHS. NCHS does perform numerous edit checks, and imputes values for non-responses.

It is known that there is miscoding of Indian race on State death certificates, especially in areas distant from traditional Indian reservations. In order to determine the degree and scope of the miscoding, IHS conducted a study utilizing the National Death Index (NDI) maintained by the NCHS. The study involved matching IHS patient records of those patients who could have died during 1986 through 1988 with all death records of U.S. residents for 1986 through 1988 as contained on the NDI. The results were published in a document entitled, *Adjusting for Miscoding of Indian Race on State Death Certificates*, November 1996. The study revealed that on 10.9 percent of the matched IHS-NDI records, the race reported for the decedent



## Sources & Limitations

was other than American Indian or Alaska Native. The percentage of records with inconsistent classification of race ranged from 1.2 percent in the Navajo Area to 28.0 and 30.4 percent in the Oklahoma and California Areas, respectively.

The results of the NDI study provide sufficient numbers to calculate adjustments for each IHS Area, IHS overall, and selected age groups. In addition to these adjustments based on the study findings, IHS assumed the following; a) the results from 1986-88 apply to other years, b) IHS age-group adjustments applied also to each Area, and c) the Area adjustments applied to the causes of death used in this publication (i.e., if an Area's total deaths needed to be increased by 10 percent, than the deaths for each cause of death would also increase by this same rate). These assumptions cannot be statistically supported by the results of the study. However, IHS felt that it was necessary to adjust all of the death rates in this publication to provide a meaningful and comprehensive look at health status. IHS also believes that they are reasonable adjustments.

These NDI adjustments were used for the first time in the 1997 edition of this publication. Both unadjusted and adjusted information is shown, as applicable. The adjustments were applied to the results obtained from using an unadjusted death file. In the 1997 edition, only the latest three years (1992-94 at that time) of death data were adjusted based on the study findings. Starting with this edition, the adjustments are extended to 1989 through 1995 data years.

IHS has more specific adjustment factors for the age group under 1 year. These are derived from the linked birth/infant death data sets produced by the NCHS. IHS now has sufficient years of this data set (1983-91 and 1995-96) to calculate adjusted infant mortality rates. In this edition (as was done for the first time in the 1997 edition with 1992-94 data), unadjusted and adjusted infant mortality rates will be shown for 1988 through 1995 data years. IHS is assuming that data years for which linked data sets were not produced (NCHS did not produce linked data sets prior to data year 1983 and for data years 1992-94) can be adjusted based on the results from other linked data sets, which is not statistically sound but reasonable. These adjustments based on the linked data sets take precedent over the NDI adjustments for the under 1 year age group, described above.

The vital event statistics in this publication pertain to only American Indians and Alaska Natives residing in the IHS service area. Editions of this publication before 1992 showed vital event statistics calculated on a Reservation State basis. Therefore, data were included for Indians residing outside the geographic areas for which IHS has responsibility. This was done in order to show trends starting in FY 1955, to correspond with the inception of the Indian Health Service (IHS) program. Prior to 1972, only total Reservation State data are available.

Now that there are sufficient vital event data available for the IHS service area to show meaningful trends, this publication shows vital event statistics for the IHS service population, starting with data for calendar year 1972. IHS service area data are more indicative of the health status of the Indians that IHS serves. Reservation State vital event rates tend to be lower in value (i.e., lower birth rates, lower death rates) than IHS service area rates. However, the vital event tables in this publication will still include the 1955 Reservation State figure as an historical benchmark.



## Sources & Limitations

The Indian population is considerably younger than the U.S. All Races population. Therefore, the death rates presented in this publication have been age-adjusted, where applicable, so that appropriate comparisons can be made between these population groups. Two exceptions are the information presented for leading causes of death and leading cancer sites. In order to determine the leading causes of death or cancer sites for a population group, it is necessary to rank without any adjustment for age. However, it should be kept in mind that the ranking of causes of death or cancer sites for a population group is affected by its age composition.

Beginning with the 1996 edition, the leading causes of death are shown for finer age groups in support of the IHS Director's initiatives on youth and elder care. In particular, the 1 to 14 year age group has been split into 1 to 4 and 5 to 14, and the 45 to 64 year age group has been split into 45 to 54 and 55 to 64.

The age-adjusted death rates presented in this publication were computed by the direct method, that is, by applying the age-specific death rate for a given cause of death to the standard population distributed by age. The total population as enumerated in 1940 was selected as the standard since this is the standard used by NCHS. The rates for the total population and for each race-sex group were adjusted separately, by using the same standard population. The age-adjusted rates were based on 10-year age groups. It is important not to compare age-adjusted death rates with crude rates.

Prior to the 1993 edition of this publication, alcoholism deaths were defined through the use of three ICD-9 cause of death code groups; 291—alcoholic psychoses; 303—alcohol dependence syndrome and; 571.0–571.3—alcoholic liver disease. Various IHS Area statisticians and epidemiologists believed this definition to be incomplete and suggested that it be expanded to include five additional ICD-9 code categories. These “new” categories were used for the first time in the 1993 edition. They include; 305.0—alcohol overdose; 425.5—alcoholic cardiomyopathy; 535.3—alcoholic gastritis; 790.3—elevated blood-alcohol level; and E860.0, E860.1—accidental poisoning by alcohol, not else-

where classified. This expanded definition results in about a 25 percent increase in the number of alcoholism deaths identified in comparison to the previous 3-group definition. NCHS is now publishing alcoholism deaths with a definition that includes codes that IHS had not used, i.e., 357.5—alcoholic polyneuropathy and all of E860 (not just E860.0 and E860.1)—accidental poisoning by alcohol. To be consistent with NCHS, these additional codes are now used by IHS starting with the 1996 edition. The NCHS definition includes all of the code groups previously used by IHS plus these new codes. This NCHS definition of alcoholism deaths is now used in all IHS publications, including *Regional Differences in Indian Health*.

NCHS is also now publishing drug-related deaths with a definition that includes codes that IHS had not used, i.e., 292—drug psychoses and E962.0—assaults from poisoning by drugs and medicaments. To be consistent with NCHS, this additional code was used by IHS for the first time in the 1996 edition. The NCHS definition includes all of the code groups previously used by IHS plus these two codes. This NCHS definition of drug-related deaths is now used in all IHS publications, including *Regional Differences in Indian Health*.



## Sources & Limitations

Injury and poisoning deaths are shown for various sub-groups in this publication, e.g., accidents, homicides, suicides. A new grouping, “injury by firearms,” was added starting with the 1996 edition because of its significance in the Indian community. It includes deaths with the following ICD-9 codes; E922—accident caused by firearm missile; E955.0-E955.4—suicide and self-inflicted injury by firearms; E965.0-E965.4 and E970—assault by firearms and legal intervention; E985.0-E985.4—injury by firearms, undetermined whether accidentally or purposely inflicted. Injury by firearm causes exclude explosives and other causes indirectly related to firearms.

### Patient Care Statistics

Patient care statistics are derived from IHS reporting systems. There are four main patient care reporting systems. The Monthly Inpatient Services Report is a patient census report that is prepared by each IHS hospital. It indicates the number of discharges and days by type of service (e.g., adult, pediatric, obstetric, newborn), and is used for the direct inpatient workload statistics. The Inpatient Care System is the source of IHS hospital inpatient data pertaining to various patient characteristics (age, sex, principal diagnoses,

other diagnoses, community of residence, etc.). The data are collected daily, one record per discharge. The Contract Care System is the source of similar contract hospital inpatient data.

The Ambulatory Patient Care System is the source of data pertaining to the number of ambulatory medical visits at IHS facilities by various patient characteristics (age, sex, clinical impression, community of residence, etc.). The data are collected daily, one record per ambulatory medical visit. The Contract Care System is the source of similar contract ambulatory medical visit data.

The data from the automated systems are subject to recording, inputting, and transmitting errors. However, the IHS Program Statistics Team monitors the reporting systems, and each one has a computer edit. In these ways, errors are kept to an acceptable level.

Starting with the 1996 edition, leading causes of hospitalization and ambulatory medical visits are shown for specific age groups. In prior editions, they were only shown for all ages and by sex.

There are seven other information systems that provide data, presented in this report, pertaining to patient care. The Clinical Laboratory Workload Reporting System is the source of laboratory services data. The Pharmacy System is the source of pharmacy workload data. The Contract Information System and Grants Data System are the sources for Tribal health contract and grant awards information. The Urban Projects Reporting System is the source for workload data for the Urban Projects. The Dental Data System is the source for dental services data. The Fluoridation Data System, managed by the IHS Dental Services Team, is the source for fluoridation systems information. The Pharmacy System and Urban Projects Reporting System are manual systems, the others are automated. The systems are monitored by IHS Headquarters personnel.



## Sources & Limitations

### Community Health Statistics

The source of alcoholism and substance abuse program data is the Chemical Dependency Management Information System (CDMIS). This is an automated system, with computer edits, that is monitored by IHS Headquarters personnel.

The nutrition and dietetics statistics are derived from the IHS Nutrition and Dietetics Program Activity Reporting System (NDPARS). This is an automated system, with computer edits, that is monitored by IHS Headquarters personnel. Starting with FY 1994, the data reported through NDPARS are incomplete. There have been many changes in the IHS nutrition and dietetics program during the mid to late 1990's that have been instrumental in contributing to a decrease in workload reporting by local nutrition personnel. Among them are loss of IHS Area and Headquarters nutritionists responsible for coordinating and orienting new staff to the NDPARS, as well as the transition of many former IHS facilities to Tribally-operated and administered programs that no longer submit data to the IHS central database.

The public health nursing data are collected through the IHS Community Health Activity Reporting System. This is an automated system, with computer edits, that is monitored by IHS Headquarters personnel.

Data on the IHS Community Health Representatives (CHR) Program were obtained from the IHS Community Health Representative Information System (CHRIS II). CHRIS II is an automated reporting system that is monitored by IHS CHR Program Headquarters personnel. This system was approved by the Office of Management and Budget on March 31, 1989, and has been operational since July 10, 1989. Data are collected during one week randomly selected from each month. At the start of FY 1992 minor changes in the CHRIS II activity code categories were implemented. Primarily, the service codes were simplified by consolidating administrative functions. This change improved the data quality by greatly reducing the incidence of inaccurately

reported persons served when administrative functions were performed by CHRs. In addition, the setting category, "radio/telephone," was added to allow the reporting of CHR services provided to individuals via these media. Health area category names were changed only to add greater specificity and clarity to the activity reporting system and its data (e.g., "substance abuse" was changed to "alcohol/substance abuse"). Data presented encompass 12 sample reporting weeks. These data have been expanded to represent estimated workload for a 12-month period. Starting with FY 1994, the data reported through CHRIS II are incomplete. This is because most Tribes who are participating in the Self-Governance activity have elected not to use the national CHR program reporting system.



## Sources & Limitations

The sanitation facilities statistics are derived from IHS reporting systems and financial systems. The IHS reporting systems are the Project Data System and the Sanitation Deficiency System. The Project Data System is the source of detailed data on P.L. 86-121 construction projects that provide water supplies and sewerage and waste disposal facilities to American Indians and Alaska Natives. It includes such data as community name, type and number of homes provided with services, the funds allocated and funds expended, completion dates and accomplishments. Data are collected quarterly. The Sanitation Deficiency System is the source of additional data on sanitation facilities serving American Indians and Alaska Natives. It includes such data as the number of homes served, water rates, fluoridation information, Safe Drinking Water Act Compliance, system reliability, and the unmet need for new or upgraded facilities. Data are collected annually. The systems are monitored by IHS Headquarters personnel.

The health education data are collected through the IHS Health Education Resource Management System (HERMS). This is an automated system, with computer edits, that is monitored by IHS Headquarters personnel. Currently, only some IHS Areas are reporting data using HERMS. The data have not been extrapolated to represent the totals of all IHS health education programs since the main purpose of the charts and tables is to show the distributions of provider hours and clients served. It is assumed that the distributions calculated from the data of the three to four Areas (depending on the chart/table) are similar to the distributions for all twelve Areas. It should be noted that the totals of provider hours and clients served are different for each chart/table due to specific report parameters. That is, different records may be excluded in the generation of the various reports because of screens specific to each report.



# Glossary

## **Age Adjustment**

The application of the age-specific rates in a population of interest to a standardized age distribution in order to eliminate the differences in observed rates that result from age differences in population composition. This adjustment is usually done when comparing two or more populations at one point in time or one population at two or more points in time.

## **Area**

A defined geographic region for Indian Health Service (IHS) administrative purposes. Each Area Office administers several service units.

## **Average Daily Patient Load**

The average number of patients occupying beds in a hospital on a daily basis. It is calculated by dividing total inpatient days for the year by 365.

## **Birthweight**

Weight of fetus or infant at time of delivery (recorded in pounds and ounces or grams).

## **Cause of Death**

For the purpose of national death statistics, every death is attributed to one underlying condition, based on information reported on the death certificate and utilizing the international rules for selecting the underlying cause of death from the reported conditions.

## **Community Health Representative (CHR)**

Indians selected, employed, and supervised by their Tribes and trained by IHS to provide specific health care services at the community level.

## **Contract Care**

Services not available directly from IHS or Tribes that are purchased under contract from community hospitals and practitioners.

## **Health Center**

A facility, physically separated from a hospital, with a full range of ambulatory services, including at least primary care physicians, nursing, pharmacy, laboratory, and x-ray, that are available at least 40 hours a week for ambulatory care.

## **Health Station**

A facility, physically separated from a hospital or health center, where primary care physician services are available on a regularly scheduled basis but for less than 40 hours a week.

## **High Birthweight**

Birthweight of 4,000 grams or more.

## **Infant Mortality**

Death of live-born children who have not reached their first birthday expressed as a rate (i.e., the number of infant deaths during a year per 1,000 live births reported in the year).

## **Life Expectancy**

The average number of years of life remaining to a person at a particular age and is based on a given set of age-specific death rates, generally the mortality conditions existing in the period mentioned.



## Glossary

### **Live Birth**

A live birth is the complete expulsion or extraction from its mother of a product of conception irrespective of the duration of pregnancy, which after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

### **Low Birthweight**

Birthweight of less than five pounds, eight ounces or 2,500 grams.

### **Maternal Death**

The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

### **Neonatal Mortality Rate**

The number of deaths under 28 days of age per 1,000 live births.

### **Occurrence**

Place where the event occurred.

### **Postneonatal Mortality Rate**

The number of deaths that occur from 28 days to 365 days after birth per 1,000 live births.

### **Race**

On death certificates, race is usually recorded by the funeral director who may or not query the family members of the decedent. The race of a newborn does not appear on the birth certificate. In this report if either the mother, the father, or both parents were recorded as American Indian or Alaska Native on the birth certificate, the birth is considered as an American Indian or Alaska Native birth.

### **Reservation State**

A State in which IHS has responsibilities for providing health care to American Indians or Alaska Natives.

### **Residence**

Usual place of residence of person to whom event occurred. For births and deaths, residence is defined as the mother's place of residence.

### **Service Area**

The geographic areas in which IHS has responsibilities—"on or near" reservations, i.e., contract health service delivery areas.

### **Service Population**

American Indians and Alaska Natives identified to be eligible for IHS services.

### **Service Unit**

The local administrative unit of IHS.

### **User Population**

American Indians and Alaska Natives eligible for IHS services who have used those services at least once during the last 3-year period.

### **Years of Productive Life Lost (YPLL)**

A mortality indicator that measures the burden of premature deaths. It is calculated by subtracting the age at death from age 65 and summing the result over all deaths.

# Sources

## *of Additional Information*

*Additional Indian health status information can be obtained from the IHS Program Statistics Team. Specific responsibilities are as follows:*

### **General Information**

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Copies of this and other statistical publications may be obtained from the Team Secretary.

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This publication, other IHS statistical publications, and links to IHS data files are available on the Program Statistics Web Site.

The address is:

[http://www.ihs.gov/NonMedicalPrograms/IHS\\_stats](http://www.ihs.gov/NonMedicalPrograms/IHS_stats)

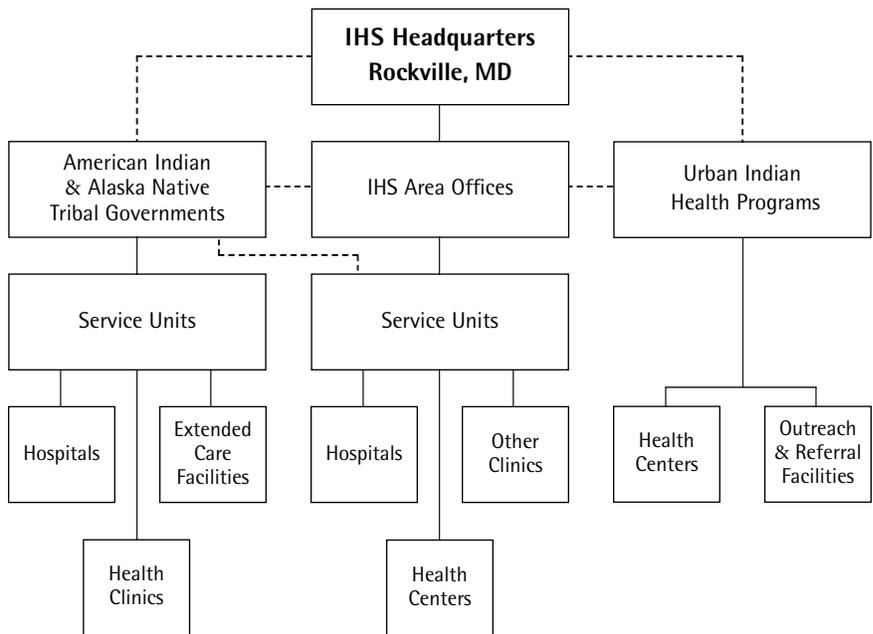
# Part 1

## Indian Health Service Structure

**Chart 1.1**

*Indian Health Service*

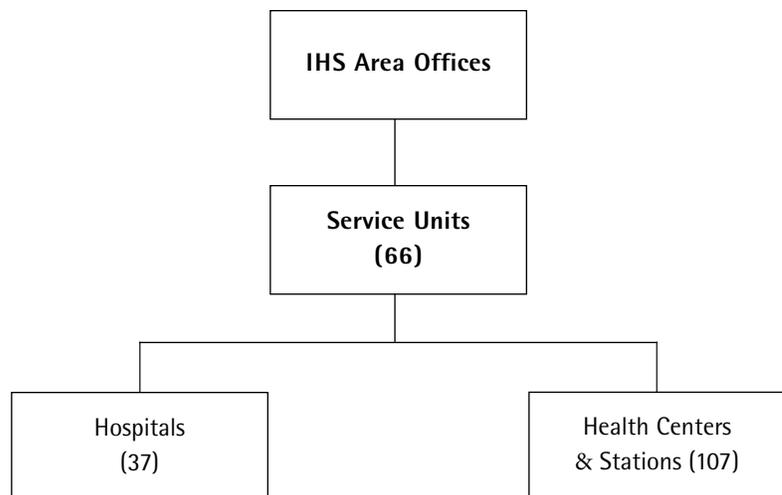
The Indian Health Service is composed of 12 regional administrative units called Area Offices. Some of the health programs are operated by Tribes, and there are a limited number of projects to serve Indians living in urban areas.



**Chart 1.2**

*Indian Health Service  
Area Offices*

There were 66 Indian Health Service-operated service units that administered 37 hospitals and 107 health centers, school health centers, and health stations as of October 1, 1998.

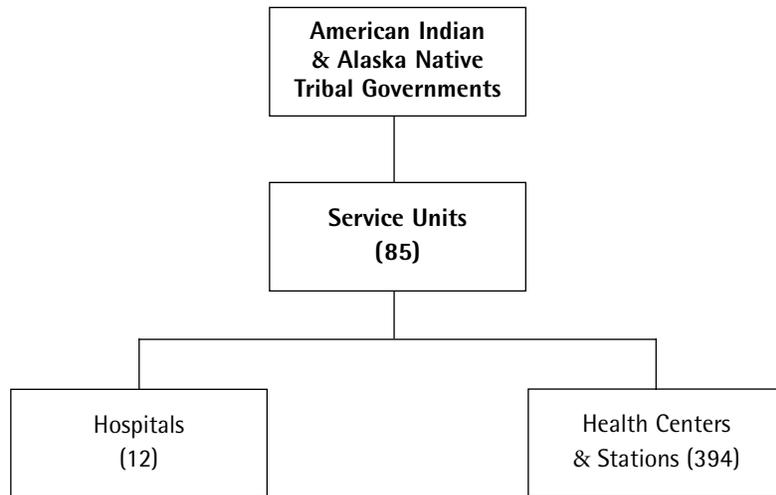


**Part 1** *Indian Health Service Structure*

**Chart 1.3**

*Indian and Alaska Native Tribal Governments*

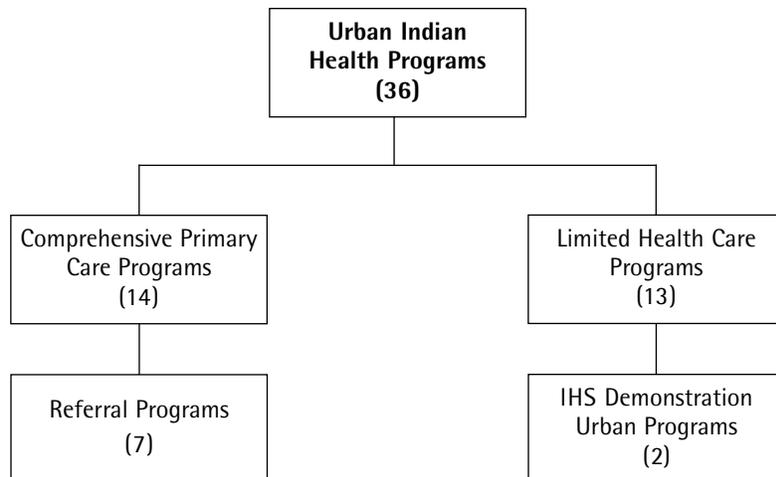
There were 85 Tribally operated service units that administered 12 hospitals and 394 health centers, school health centers, health stations, and Alaska village clinics as of October 1, 1998.



**Chart 1.4**

*Urban Indian Health Programs*

There were 36 Urban Indian Health Programs as of August 1, 2000. The Urban Indian programs include comprehensive primary health care, limited health care, referral, and demonstration programs.



**Part 1 Indian Health Service Structure**

**Chart 1.5**

*Number of Facilities Operated by Indian Health Service and Tribes as of October 1, 1998*

Indian Health Service operated 37 hospitals, 59 health centers, 4 school health centers, and 44 health stations as of October 1, 1998. Tribes can operate a facility under a P.L. 93-638 self-determination contract (Title I) or self-governance compact (Title III). Tribes operated 12 hospitals (Title I, 3 hospitals and Title III, 9 hospitals), 155 health centers (Title I, 98 and Title III, 57), 3 school health centers (Title I, 1 and Title III, 2), 76 health stations (Title I, 60 and Title III, 16), and 160 Alaska village clinics (Title I, 16 and Title III, 144).

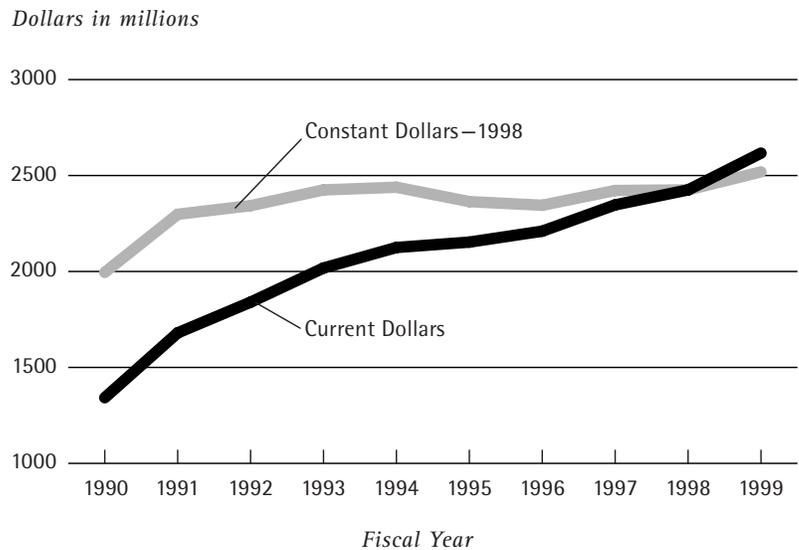
Type of Facility	Total	IHS	Tribal		
			Total	I	III
Hospitals	49	37	12	3	9
Ambulatory Facilities	501	107	394	175	219
Health Centers	214	59	155	98	57
School Health Centers	7	4	3	1	2
Health Stations	120	44	76	60	16
Alaska Village Clinics	160	—	160	16	144

*I—operated under Title I, P.L. 93-638 Self-Determination Contracts  
 III—operated under Title III, P.L. 93-638 Self-Governance Compacts*

**Chart 1.6**

*Trend in Indian Health Service Budget*

The Indian Health Service budget (appropriations and collections) has increased 95 percent from FY 1990 to FY 1999. However, in constant 1998 dollars, the budget has only increased 26 percent.



## Part 1 Indian Health Service Structure

**Table 1.6**

*Trend in Indian Health Service Budget*

(Dollars in thousands)

Category	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Clinical Services	1,031,072	1,235,481	1,276,185	1,251,660	1,325,462	1,370,421	1,417,641	1,368,639	1,476,854	1,542,326
Preventive Health Services	77,630	89,978	64,951	70,011	74,464	77,032	78,018	79,346	82,770	87,120
Other Services										
Urban Health	13,049	15,687	17,195	20,965	22,834	23,349	23,360	24,768	25,288	26,382
Indian Health Professions	9,540	13,380	19,205	26,092	27,406	27,479	26,271	28,270	28,720	29,623
Tribal Management	2,562	4,235	5,038	5,161	5,285	5,048	2,348	2,348	2,348	2,390
Direct Operations/ Agency Management	44,484	52,406	49,029	48,659	49,471	49,709	49,260	133,088	47,386	49,309
Self Governance	—	—	—	1,884	4,980	8,594	9,104	9,090	9,106	9,391
Contract Support Cost	—	—	—	100,558	136,186	145,460	154,840	161,202	168,702	203,781
Sub-Total Other	69,635	85,708	90,467	203,319	246,162	259,639	265,183	358,766	281,550	320,876
Total Services	1,178,337	1,411,167	1,431,603	1,524,990	1,646,088	1,707,092	1,760,842	1,806,751	1,841,174	1,950,322
Facilities	71,633	166,402	274,351	333,640	296,982	252,982	238,958	247,249	257,538	291,965
<b>Total Services &amp; Facilities<sup>1</sup></b>	1,249,970	1,577,569	1,705,954	1,858,630	1,943,070	1,960,074	1,999,800	2,054,000	2,098,712	2,242,287
Medicare/Medicaid Collections	88,097	94,301	121,628	140,805	159,605	162,066	176,536	260,913	288,927	334,576 <sup>2</sup>
Private Insurance Collections	3,500	8,326	12,350	18,184	22,700	31,233	33,784	32,335	37,448	39,960 <sup>2</sup>
<b>Total IHS<sup>3</sup> (Current \$s)</b>	1,341,567	1,680,196	1,839,932	2,017,619	2,125,375	2,153,373	2,210,120	2,347,248	2,425,087	2,616,823
<b>Total IHS<sup>3</sup> (Constant \$s)<sup>4</sup></b>	1,995,045	2,298,166	2,343,227	2,425,350	2,438,641	2,364,316	2,344,742	2,422,288	2,425,087	2,518,895

<sup>1</sup> Total IHS appropriations.

<sup>2</sup> Estimated collections.

<sup>3</sup> Total dollars available to spend.

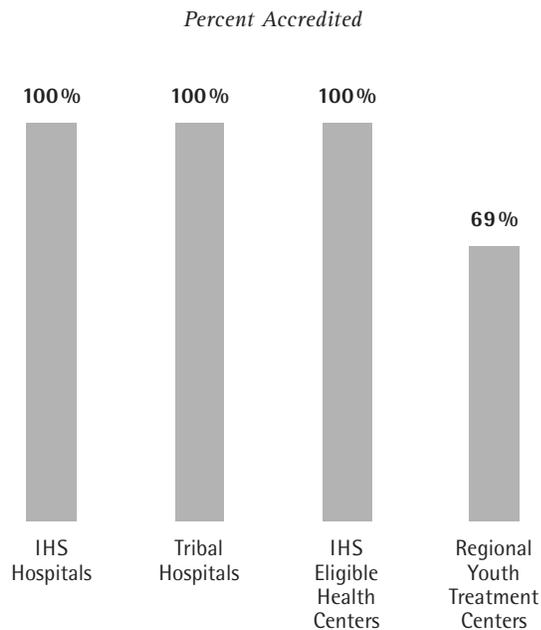
<sup>4</sup> Constant 1998 dollars based on consumer price index for medical care, 1990-98, and 1999 budget inflation factor of 3.9 percent.

**Part 1 Indian Health Service Structure**

**Chart 1.7**

*Accreditation Status of Selected Health Facilities, January 1, 1999*

As of January 20, 1999, all hospitals and eligible health centers were accredited by the Joint Commission on Accreditation of Healthcare Organizations. Since 1990, 9 of 13 Regional Youth Treatment Centers have become accredited, and the remaining 4 are preparing for accreditation.



**Table 1.7**

*Accreditation Status of Hospitals, Health Centers, and Regional Youth Treatment Centers, January 1, 1999*

Type of Facility	Total	Accredited <sup>1</sup>	Not Accredited	Percent Accredited
IHS Hospitals	37	37	0	100
Tribal Hospitals	12	12	0	100
IHS Eligible Health Centers	57 <sup>2</sup>	57	0	100
Regional Youth Treatment Centers <sup>3</sup>	13	9 <sup>4</sup>	4	69

<sup>1</sup> Accredited by the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO).  
<sup>2</sup> Excludes health centers not eligible for accreditation survey and those under Tribal management pursuant to P.L. 93-638.  
<sup>3</sup> Provide alcohol and substance abuse treatment.  
<sup>4</sup> Accreditation of these facilities is a combination of JCAHO and the Commission on Accreditation of Rehabilitation Facilities (CARF).

Part 1 Indian Health Service Structure

Chart 1.8

Accreditation Status of Indian Health Service Laboratories

Ninety-six percent of health center laboratories and 100 percent of hospital laboratories operated by the Indian Health Service were accredited as of January 1, 1999.

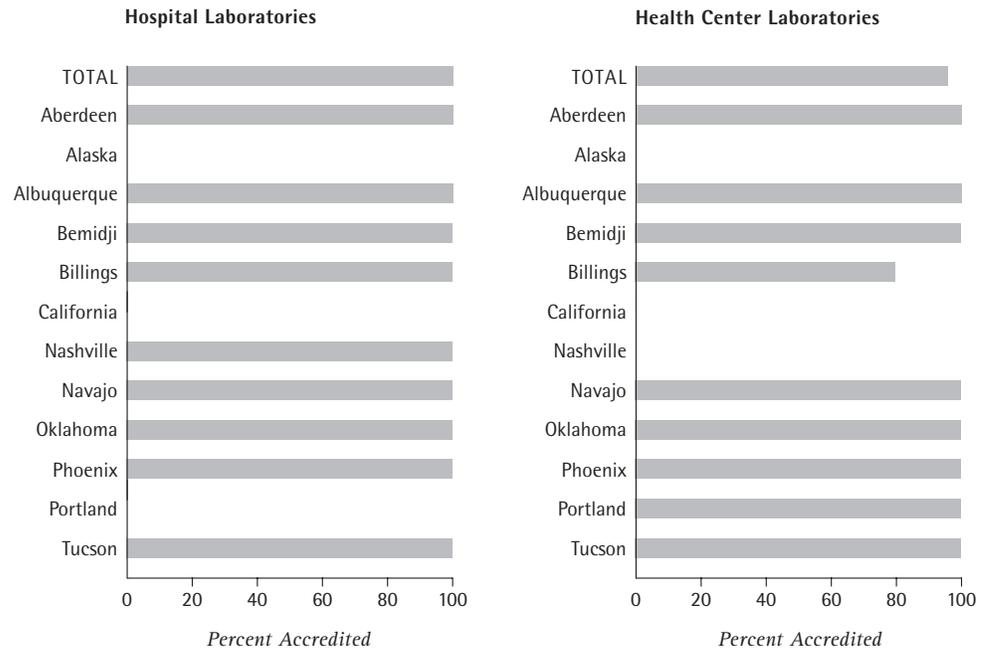


Table 1.8

Indian Health Service Laboratory Accreditation Status, January 1, 1999

Area	IHS Hospital Laboratories					IHS Health Center Laboratories				
	Total	Accredited <sup>1</sup>	Not Accredited	Percent Accredited	Percent in Proficiency Testing Program <sup>2</sup>	Total	Accredited <sup>1</sup>	Not Accredited	Percent Accredited	Percent in Proficiency Testing Program <sup>2</sup>
All Areas	35	35	0	100	100	48	46	2	96	100
Aberdeen	8	8	0	100	100	5	5	0	100	100
Alaska	—	—	—	—	—	—	—	—	—	—
Albuquerque	5	5	0	100	100	5	5	0	100	100
Bemidji	2	2	0	100	100	1	1	0	100	100
Billings	2	2	0	100	100	10	8	2 <sup>3</sup>	80	100
California	—	—	—	—	—	—	—	—	—	—
Nashville	1	1	0	100	100	—	—	—	—	—
Navajo	6	6	0	100	100	5	5	0	100	100
Oklahoma	4	4	0	100	100	11	11	0	100	100
Phoenix	6	6	0	100	100	3	3	0	100	100
Portland	—	—	—	—	—	7	7	0	100	100
Tucson	1	1	0	100	100	1	1	0	100	100

<sup>1</sup> Laboratories hold a certificate of accreditation from the College of American Pathologists, the Joint Commission on the Accreditation of Healthcare Organizations, or the Commission on Laboratory Accreditation as mandated under the Clinical Laboratory Improvement Amendments (CLIA) of 1988. Excludes laboratories under Tribal management pursuant to P.L. 93-638.

<sup>2</sup> Laboratories participating in a CLIA approved proficiency testing program.

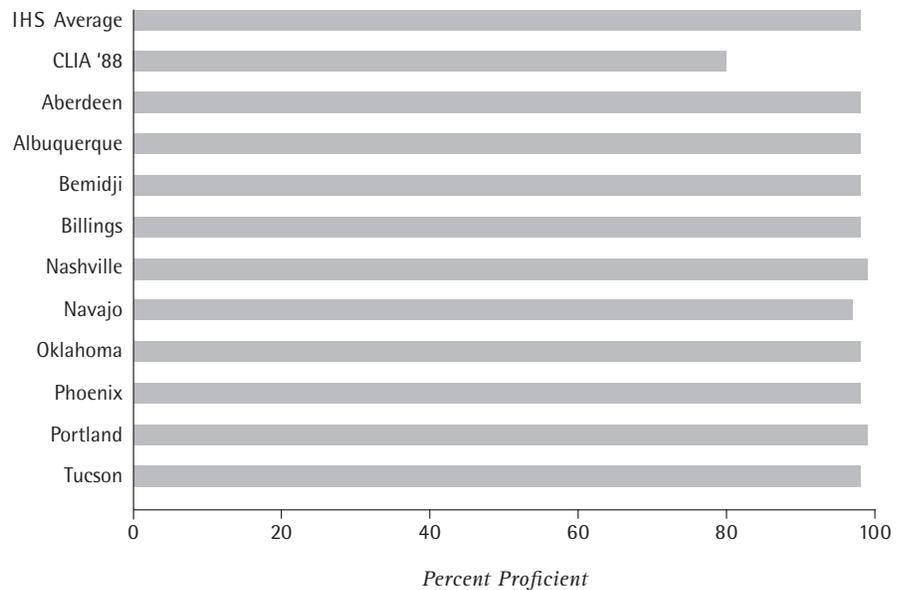
<sup>3</sup> Recently constructed facilities awaiting accreditation.

**Part 1** *Indian Health Service Structure*

**Chart 1.9**

*Proficiency Rating for Indian Health Service Laboratory Services, 1998*

IHS proficiency testing rating exceeded the requirements of the Clinical Laboratory Improvement Amendments of 1988 (CLIA '88) for all private and public sector laboratories. Overall proficiency rating for IHS laboratories is 98 percent. CLIA '88 requires 80 percent proficiency on all regulated analytes.



**Table 1.9**

*Proficiency Rating for Indian Health Service Laboratory Services, 1998*

Area	Percent Proficient
IHS Average	98
CLIA 1988 <sup>1</sup>	80
Aberdeen	98
Albuquerque	98
Bemidji	98
Billings	98
Nashville	99
Navajo	97
Oklahoma	98
Phoenix	98
Portland	99
Tucson	98

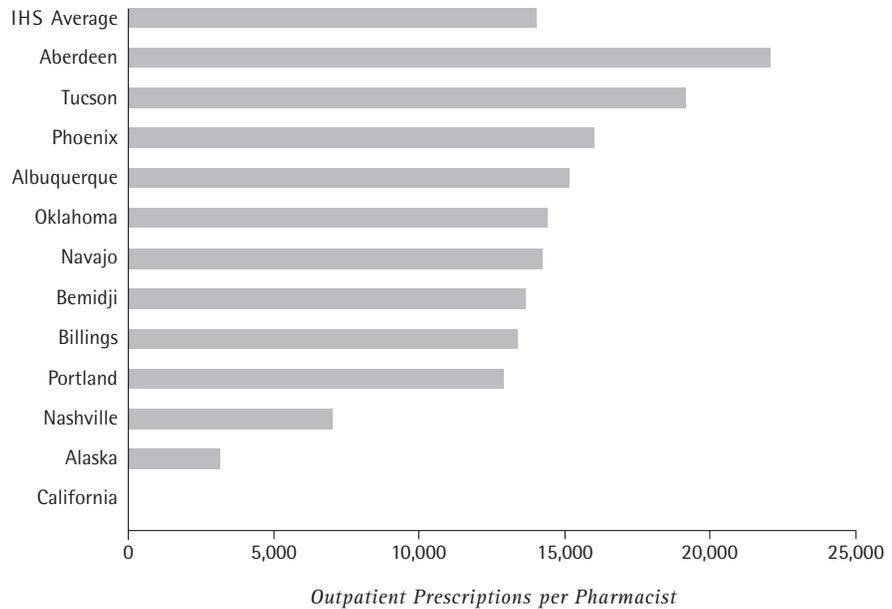
<sup>1</sup> Proficiency level required by Clinical Laboratory Improvement Amendments (CLIA) of 1988.

**Part 1 Indian Health Service Structure**

**Chart 1.10**

*Outpatient Prescriptions Filled per Pharmacist, IHS Direct Facilities, FY 1996*

The average number of outpatient prescriptions filled per pharmacist at Indian Health Service direct facilities in FY 1996 was 14,040. There was a wide variability among the Areas, ranging from 3,184 in Alaska to 22,060 in Aberdeen.



**Table 1.10**

*Outpatient Prescriptions Filled per Pharmacist, Indian Health Service Direct Facilities, FY 1996*

Area	Number of Outpatient Prescriptions Filled	Number of Pharmacists	Prescriptions Filled per Pharmacist
All Areas	5,812,532	414	14,040
Aberdeen	1,058,871	48	22,060
Alaska	133,718	42	3,184
Albuquerque	470,995	31	15,193
Bemidji	204,938	15	13,663
Billings	443,296	33	13,433
California	-	1	-
Nashville	77,245	11	7,022
Navajo	1,082,624	76	14,245
Oklahoma	1,025,704	71	14,447
Phoenix	785,976	49	16,040
Portland	375,628	29	12,953
Tucson	153,537	8	19,192

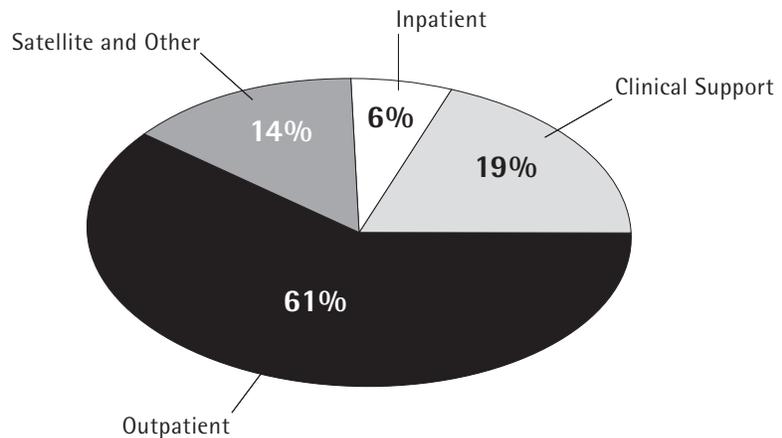
*Tribal direct facilities are excluded because the reporting of the number of prescriptions filled was incomplete.*

**Part 1 Indian Health Service Structure**

**Chart 1.11**

*Pharmacy Workload by Type of Activity, IHS and Tribal Direct Facilities, FY 1995*

Over 61 percent of pharmacy workload at Indian Health Service and Tribal direct facilities in FY 1995 was associated with outpatient activities, followed by clinical support activities at 19 percent.



**Table 1.11**

*Pharmacy Workload by Type of Activity, Indian Health Service and Tribal Direct Facilities, FY 1995*

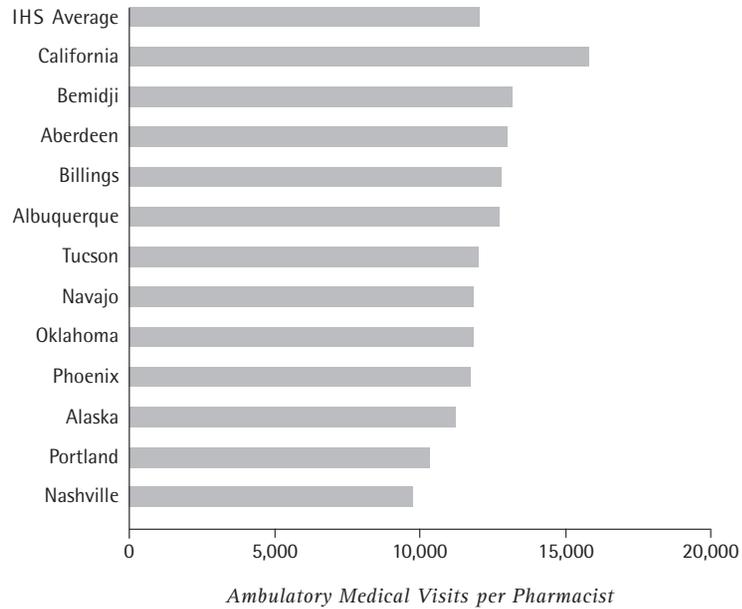
Type of Activity	Workload Units	Percent of Total
Total	96,805,303	100.0
Outpatient	59,435,251	61.4
Clinical Support	18,186,552	18.8
Inpatient	6,213,147	6.4
Satellite	1,218,622	1.3
Other	11,751,731	12.1

**Part 1 Indian Health Service Structure**

**Chart 1.12**

*Ambulatory Medical Visits per Pharmacist, IHS and Tribal Direct Facilities, FY 1996*

The average number of ambulatory medical visits per pharmacist at Indian Health Service and Tribal direct facilities in FY 1996 was 12,036. There was a wide variability among the Areas, ranging from 9,764 in Nashville to 15,767 in California.



**Table 1.12**

*Ambulatory Medical Visits per Pharmacist, Indian Health Service and Tribal Direct Facilities, FY 1996*

Area	Number of Ambulatory Medical Visits	Number of Pharmacists	Visits per Pharmacist
All Areas	6,342,744	527	12,036
Aberdeen	675,307	52	12,987
Alaska	603,767	54	11,181
Albuquerque	406,636	32	12,707
Bemidji	513,406	39	13,164
Billings	447,775	35	12,794
California	315,339	20	15,767
Nashville	205,043	21	9,764
Navajo	898,048	76	11,816
Oklahoma	1,157,019	98	11,806
Phoenix	622,154	53	11,739
Portland	402,280	39	10,315
Tucson	95,970	8	11,996

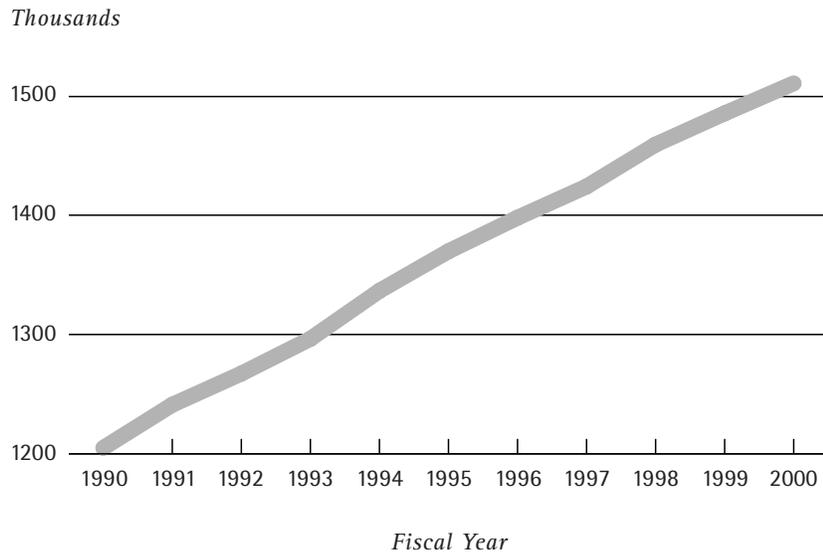
# Part 2

## Population Statistics

**Chart 2.1**

*Indian Health Service – Service Population*

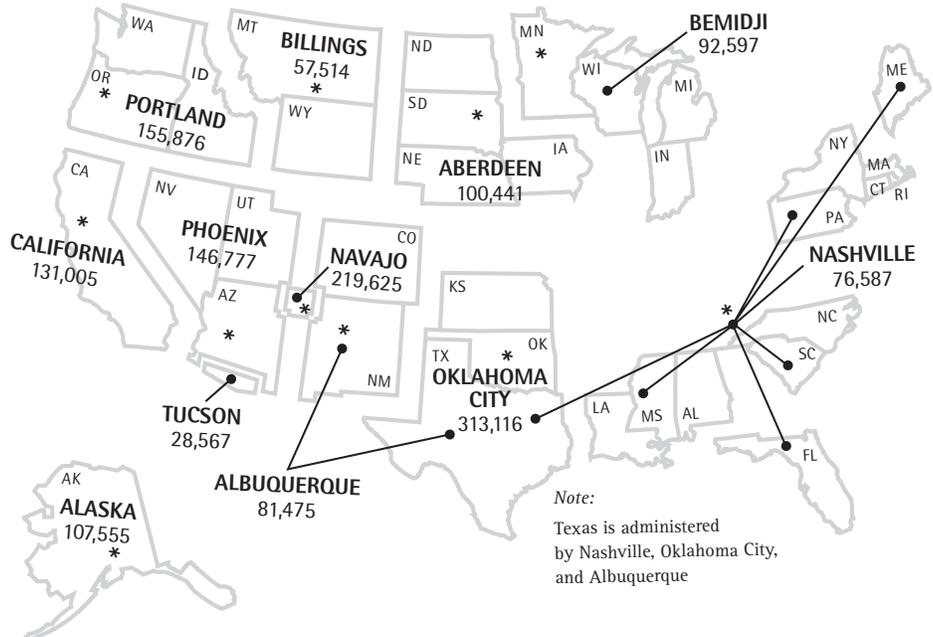
The IHS service population is increasing at a rate of about 1.8 percent per year, excluding the impact of new Tribes. It is estimated to be approximately 1.51 million in FY 2000.



**Chart 2.2**

*Indian Health Service – Service Population by Area*

The largest percentage of the FY 2000 service population, 21, is located in the Oklahoma City Area, followed by the Navajo Area with 15. The Tucson Area has the smallest percentage, 2.



## Part 2 Population Statistics

**Table 2.1**

*IHS Service Population by Area, 1990-2000*

Area	Census 1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All Areas	1,207,236	1,242,745	1,269,352	1,297,865	1,337,548	1,371,448	1,398,801	1,424,904	1,459,691	1,485,508	1,511,135
(Growth Factor)	—	(2.94)	(2.14)	(2.25)	(3.06)	(2.53)	(1.99)	(1.87)	(2.44)	(1.77)	(1.73)
Aberdeen	74,789	81,092	83,192	85,271	87,330	89,353	92,494	94,523	96,524	98,493	100,441
Alaska	86,251	88,599	90,901	93,154	95,357	97,513	99,620	101,676	103,688	105,644	107,555
Albuquerque	67,504	68,999	70,470	71,923	73,354	74,758	76,145	77,511	78,855	80,175	81,475
Bemidji	61,349	62,702	64,048	65,385	67,131	76,114	77,577	79,042	89,401	90,996	92,597
Billings	47,008	48,207	49,368	50,497	51,594	52,660	53,698	54,699	55,672	56,609	57,514
California	104,828	107,004	109,208	113,554	116,639	118,973	121,327	123,710	126,121	128,550	131,005
Nashville	48,943	54,281	55,172	56,067	69,233	70,383	71,563	72,784	74,017	75,289	76,587
Navajo	180,959	185,667	190,189	194,559	198,655	202,618	206,389	209,976	213,380	216,599	219,625
Oklahoma	262,517	267,295	272,100	276,964	281,912	286,920	292,018	297,200	302,443	307,745	313,116
Phoenix	120,707	123,493	126,249	128,493	131,231	133,888	136,519	139,126	141,705	144,256	146,777
Portland	127,774	130,372	133,001	136,132	138,840	141,596	144,387	147,207	150,055	152,950	155,876
Tucson	24,607	25,034	25,454	25,866	26,272	26,672	27,064	27,450	27,830	28,202	28,567

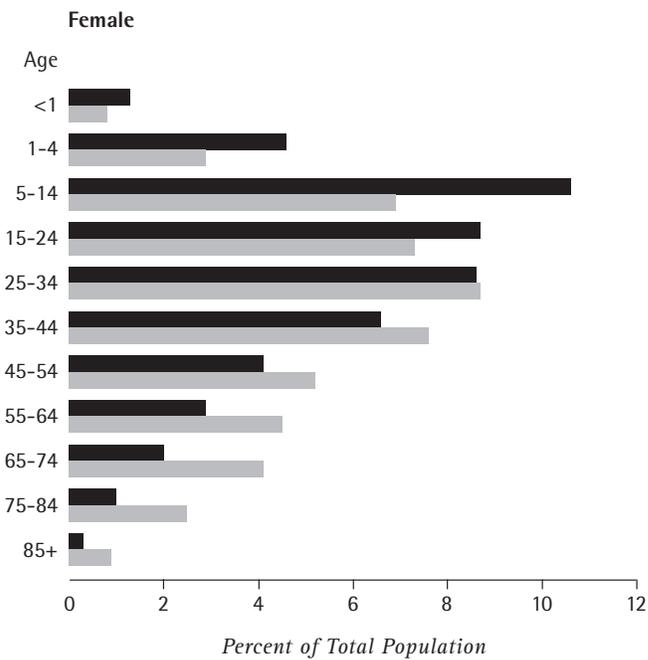
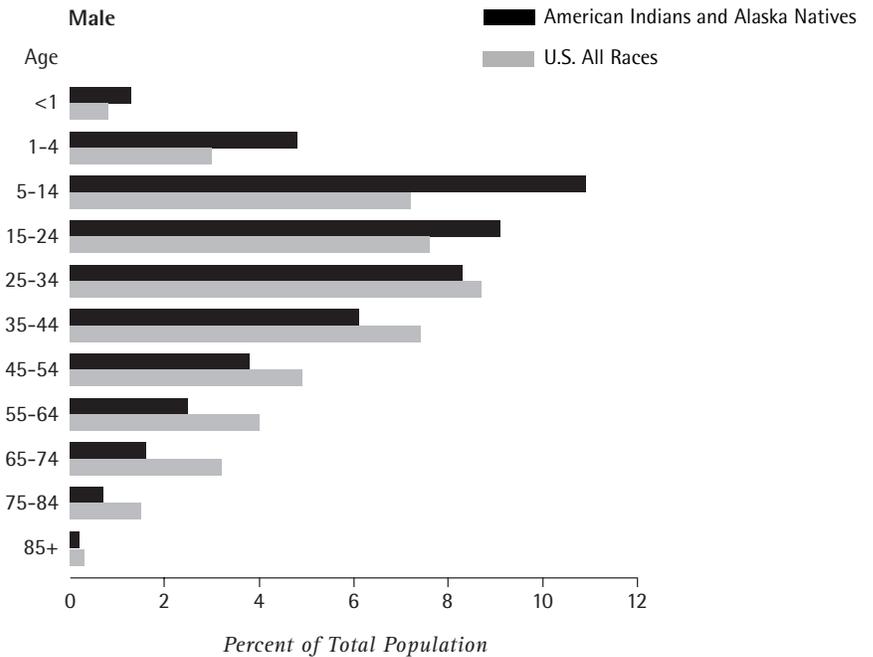
**Source:** Estimated American Indian and Alaska Native service population by Area based on 1987-1996 vital events and the 1990 Census modified age, race, and sex file.

Part 2 Population Statistics

**Chart 2.3**

*Population by Age and Sex, 1990 Census*

The Indian male and female populations were younger than the corresponding male and female populations for the U.S. All Races. Seventeen percent of Indian males were under age 15 and 16 percent of Indian females were in this age group. For U.S. All Races, this percentage was 11 for both sexes.



## Part 2 Population Statistics

**Table 2.3**

*Age and Sex Percent Distribution*

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1990 Census Data.

Age Group	American Indian & Alaska Native IHS Service Area <sup>1</sup>		U.S. All Races		U.S. White	
	Male	Female	Male	Female	Male	Female
<b>Percent of Both Sexes:</b>						
All Ages	49.274	50.726	48.747	51.253	48.941	51.059
Under 1 year	1.322	1.294	0.812	0.775	0.768	0.730
1-4 years	4.774	4.616	3.048	2.907	2.909	2.761
5-14 years	10.921	10.568	7.226	6.885	6.932	6.567
15-24 years	9.066	8.690	7.605	7.277	7.374	6.995
25-34 years	8.284	8.643	8.670	8.684	8.658	8.508
35-44 years	6.148	6.564	7.442	7.610	7.579	7.587
45-54 years	3.794	4.136	4.918	5.156	5.091	5.245
55-64 years	2.537	2.913	4.003	4.486	4.223	4.647
65-74 years	1.566	1.977	3.179	4.076	3.415	4.335
75-84 years	0.687	1.022	1.506	2.520	1.628	2.725
85 years and over	0.175	0.303	0.338	0.877	0.364	0.959
<b>Percent of Within Each Sex:</b>						
All Ages	100.000	100.000	100.000	100.000	100.000	100.000
Under 1 year	2.683	2.551	1.665	1.512	1.570	1.430
1-4 years	9.689	9.100	6.253	5.673	5.944	5.407
5-14 years	22.164	20.834	14.823	13.434	14.163	12.862
15-24 years	18.399	17.133	15.602	14.198	15.066	13.700
25-34 years	16.812	17.038	17.787	16.941	17.693	16.663
35-44 years	12.477	12.940	15.267	14.847	15.487	14.859
45-54 years	7.700	8.153	10.089	10.061	10.401	10.272
55-64 years	5.149	5.742	8.211	8.753	8.628	9.101
65-74 years	3.178	3.897	6.522	7.954	6.978	8.491
75-84 years	1.394	2.015	3.089	4.917	3.326	5.337
85 years and over	0.355	0.597	0.694	1.710	0.744	1.878

<sup>1</sup> Based upon data from the 1990 Census modified age, race, and sex file, and current IHS service area boundaries. Percentage point distributions were adjusted for error due to rounding. More recent population estimates for the American Indian and Alaska Native population by age and sex are unavailable at the county level. As a result, IHS service area estimates by age and sex, which need to be based on county level data, could not be prepared.

Part 2 Population Statistics

Chart 2.4

Population by Age, 1990

For Indians, 33 percent of the population was younger than 15 years and 6 percent was older than 64 years. For the U.S. All Races population, the corresponding percentages were 22 and 13, respectively.

Percent of Total

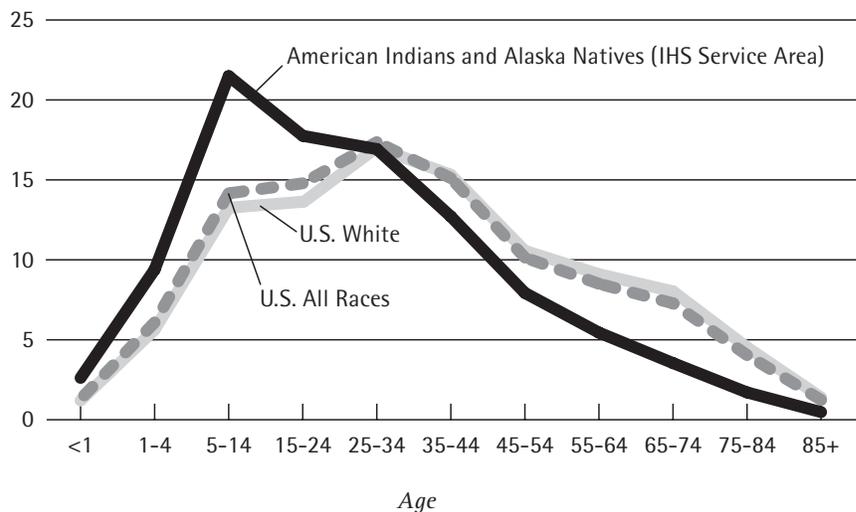


Table 2.4

Percent Age Distribution

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1990 Census Data

Age Group	American Indian and Alaska Native <sup>1</sup>	U.S. All Races	U.S. White
All Ages	100.000	100.000	100.000
Under 1 year	2.616	1.294	1.204
1-4 years	9.390	6.086	5.631
5-9 years	11.239	7.277	6.819
10-14 years	10.251	6.881	6.437
15-19 years	9.470	7.138	6.682
20-24 years	8.286	7.647	7.273
25-29 years	8.729	8.569	8.332
30-34 years	8.198	8.791	8.690
35-39 years	6.971	8.027	8.053
40-44 years	5.740	7.083	7.265
45-49 years	4.353	5.578	5.802
50-54 years	3.577	4.564	4.760
55-59 years	2.965	4.235	4.491
60-64 years	2.485	4.268	4.613
65-69 years	2.077	4.066	4.457
70-74 years	1.466	3.215	3.569
75-79 years	1.090	2.461	2.747
80-84 years	0.619	1.582	1.779
85 years & over	0.478	1.238	1.396
Median Age	24.2 years	32.9 years	34.4 years

<sup>1</sup> Based upon data from the 1990 Census modified age, race, and sex file, and current IHS service area boundaries. Percentage point distributions were adjusted for error due to rounding. More recent population estimates for the American Indian and Alaska Native population by age and sex are unavailable at the county level. As a result, IHS service area estimates by age and sex, which need to be based on county level data, could not be prepared.

Part 2 Population Statistics

Chart 2.5

*Educational Attainment, American Indians and U.S. All Races, 1990 Census*

According to the 1990 Census, 65.3 percent of Indians age 25 and older residing in the current Reservation States are high school graduates or higher, compared with 75.2 percent for the U.S. All Races population. For bachelor's degree or higher, these percentages are 8.9 and 20.3, respectively.

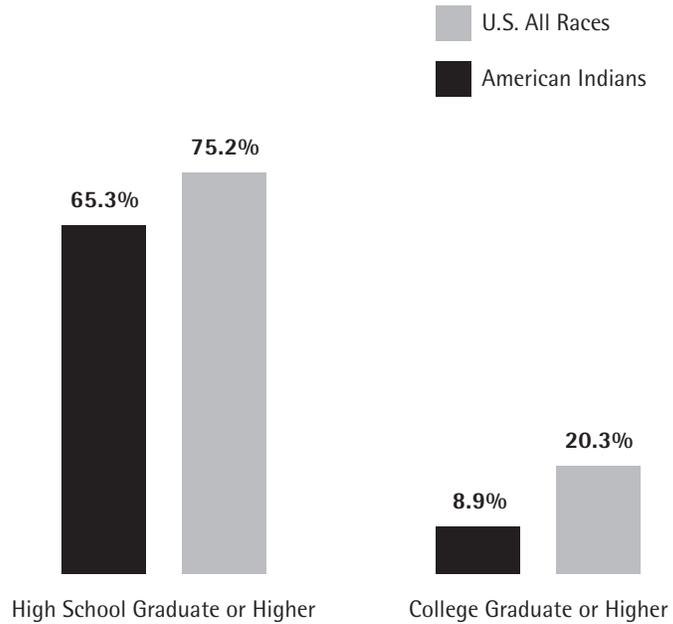
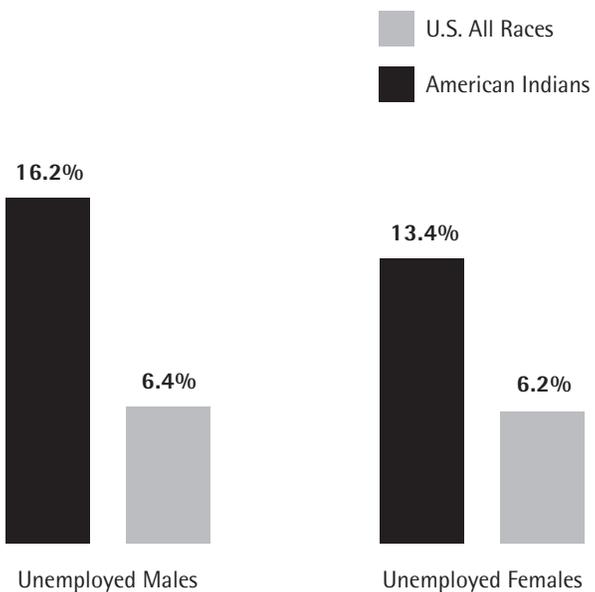


Chart 2.6

*Employment Status by Sex, American Indians and U.S. All Races, 1990 Census*

In 1990, 16.2 percent of Indian males age 16 and older residing in the current Reservation States were unemployed, compared with 6.4 percent for the U.S. All Races male population. For females, these percentages were 13.4 and 6.2, respectively.

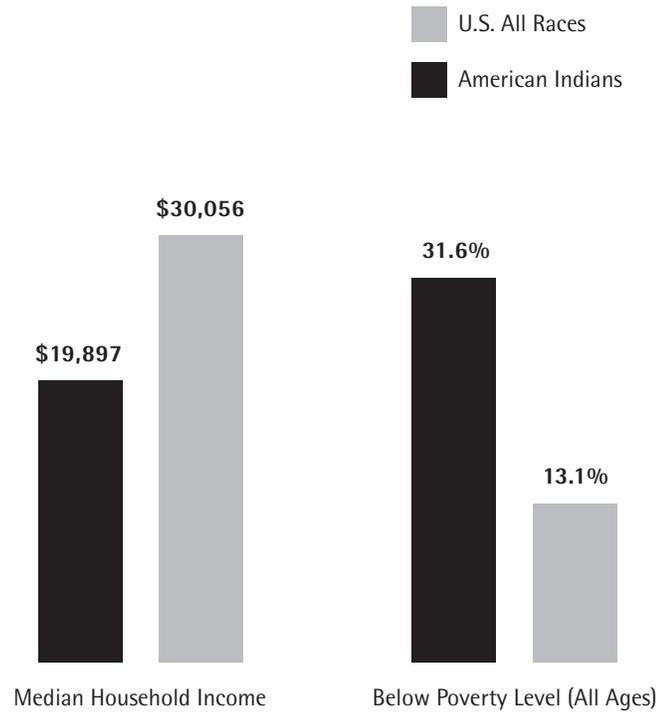


Part 2 Population Statistics

Chart 2.7

*Income Status in 1989,  
American Indians and  
U.S. All Races, 1990 Census*

According to the 1990 Census, the median household income in 1989 for Indians residing in the current Reservation States was \$19,897, compared with \$30,056 for the U.S. All Races population. During this period, 31.6 percent of Indians lived below the poverty level in contrast to 13.1 percent for the U.S. All Races population.



## Part 2 Population Statistics

**Table 2.5**

*Selected Economic Profiles for the United States, 1990 Census*

	American Indian & Alaska Native	All Races	White	Black	Asian & Pacific Islander	Hispanic
<b>Educational Attainment</b>						
<i>(Persons 25 years and older):</i>						
Percent less than 9th grade	14.1	10.4	8.9	13.8	12.9	30.7
Percent 9th to 12th grade, no diploma	20.6	14.4	13.1	23.2	9.5	19.5
Percent high school grad or higher	65.3	75.2	77.9	63.1	77.5	49.8
Percent bachelor's degree or higher	8.9	20.3	21.5	11.4	36.6	9.2
<b>Employment Status by Sex</b>						
<i>(Persons 16 years and older):</i>						
Percent unemployed, males	16.2	6.4	5.3	13.7	5.1	9.8
Percent unemployed, females	13.4	6.2	5.0	12.2	5.5	11.2
<b>Household Income in 1989</b>						
Median household income	\$ 19,897	\$ 30,056	\$ 31,435	\$ 19,758	\$ 36,784	\$ 24,156
<b>Percent Below the Poverty Level by Age</b>						
All ages	31.6	13.1	9.8	29.5	14.1	25.3
Under 5 years	43.1	20.1	13.8	44.0	17.5	33.4
5 years	41.6	19.7	13.6	42.8	18.0	33.9
6 to 11 years	37.7	18.3	12.5	39.8	17.3	32.6
12 to 17 years	33.1	16.3	11.0	35.5	16.3	30.3
18 to 64 years	27.7	11.0	8.5	23.4	13.0	21.3
65 to 74 years	26.9	10.4	8.4	28.6	11.3	21.9
75 years and older	33.3	16.5	14.6	37.3	13.5	27.8

**Note:** American Indian data are for residents of the 35 Reservation States.  
(South Carolina was added as a Reservation State in FY 1994. Indiana was added as a Reservation State in 1995.)

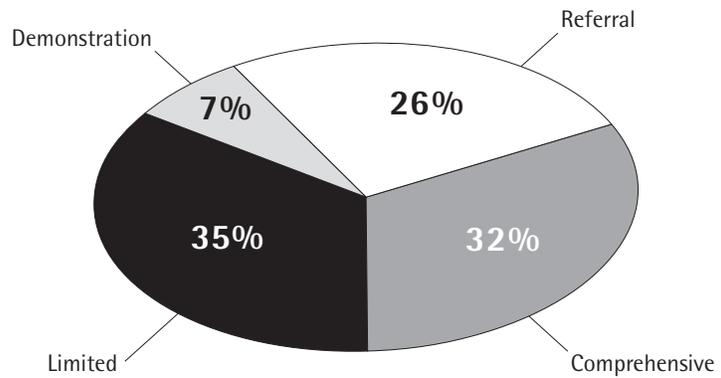
**Source:** U.S. Bureau of the Census, Minority Economic Profiles, July 24, 1992, Tables CPH-L-92, 93, 94, and unpublished data from the U.S. Bureau of the Census.

**Part 2 Population Statistics**

**Chart 2.8**

*Urban Indian Health Programs Service Area Population by Category*

According to the 1990 census, there were 605,000 Indians residing in the Urban Indian Health Programs service area. Of these, 35 percent resided within urban programs offering limited health care, 32 percent in comprehensive primary care programs, 26 percent in referral programs, and 7 percent in demonstration programs.



**Table 2.8**

*Urban Indian Health Programs Service Area Population by Category*

<b>Traditional Urban Indian Health Programs</b>	<b>Estimated FY 2000 Population</b>	<b>Percent of Total American Indians in Urban Projects</b>
Total	605,000	100.0
Limited	209,000	34.5
Comprehensive	192,500	31.8
Referral	159,500	26.4
Demonstration	44,000	7.3

## Part 3

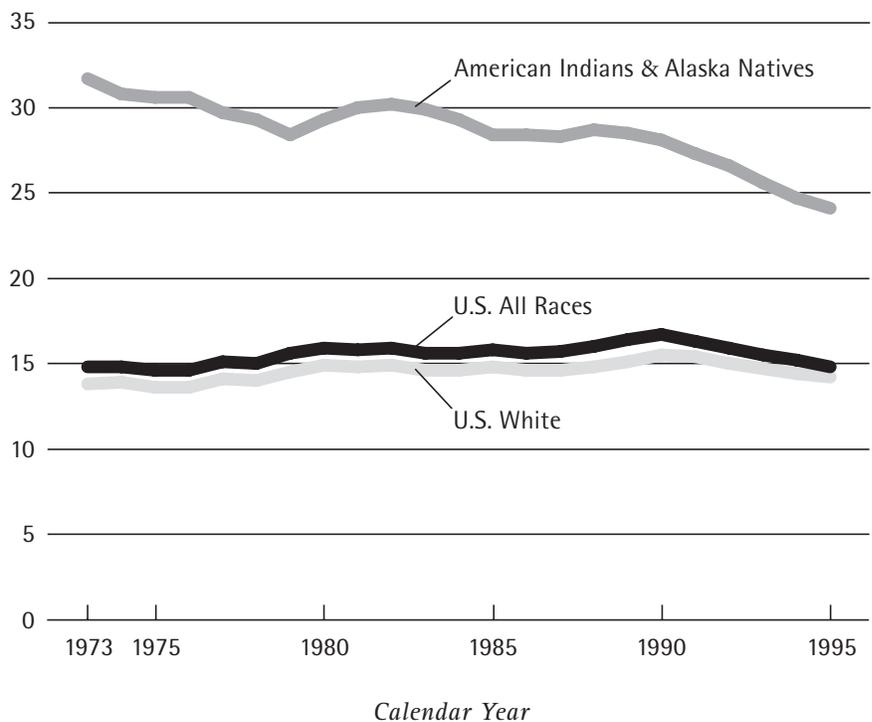
### *Natality and Infant/Maternal Mortality Statistics*

**Chart 3.1**

*Birth Rates*

The American Indian and Alaska Native birth rate for 1994-1996 of 24.1 births per 1,000 population was 63 percent greater than the U.S. All Races birth rate for 1995 of 14.8, and 70 percent greater than the rate for the U.S. White population (14.2).

*Per 1,000 Population*



### Part 3 *Natality and Infant/Maternal Mortality Statistics*

**Table 3.1**

*Number and Rate of Live Births*

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995.  
(Rate per 1,000 Population)

Calendar Year(s)	American Indian & Alaska Native		U.S. All Races		U.S. White
	Number	Rate	Number	Rate	Rate <sup>1</sup>
(1996)	33,599				
1994-1996 (1995)	32,548	24.1	3,899,589	14.8	14.2
1993-1995 (1994)	32,876	24.7	3,952,767	15.2	14.4
1992-1994 (1993)	33,429	25.6	4,000,240	15.5	14.7
1991-1993 (1992)	33,894	26.6	4,065,014	15.9	15.0
1990-1992 (1991)	34,083	27.3	4,110,907	16.3	15.4
1989-1991 (1990)	33,554	28.1	4,158,212	16.7	15.5
1988-1990 (1989)	34,143	28.5	4,040,958	16.4	15.1
1987-1989 (1988)	32,544	28.7	3,909,510	16.0	14.8
1986-1988 (1987)	31,133	28.3	3,809,394	15.7	14.6
1985-1987 (1986)	29,996	28.4	3,756,547	15.6	14.6
1984-1986 (1985)	30,194	28.4	3,760,561	15.8	14.8
1983-1985 (1984)	28,416	29.3	3,669,141	15.6	14.6
1982-1984 (1983)	29,352	29.9	3,638,933	15.6	14.6
1981-1983 (1982)	28,701	30.2	3,680,537	15.9	14.9
1980-1982 (1981)	25,595	30.0	3,629,238	15.8	14.8
1979-1981 (1980)	25,346	29.3	3,612,258	15.9	14.9
1978-1980 (1979)	23,252	28.4	3,494,398	15.6	14.5
1977-1979 (1978)	20,250	29.3	3,333,279	15.0	14.0
1976-1978 (1977)	19,458	29.7	3,326,632	15.1	14.1
1975-1977 (1976)	18,797	30.6	3,167,788	14.6	13.6
1974-1976 (1975)	17,852	30.6	3,144,198	14.6	13.6
1973-1975 (1974)	17,099	30.8	3,159,958	14.8	13.9
1972-1974 (1973)	16,662	31.7	3,136,965	14.8	13.8
(1972)	16,801		3,258,411		
1954-1956 (1955)	17,028	37.5	4,097,000	25.0	23.8

<sup>1</sup> Starting in 1991 birth data for the U.S. White population are shown for the race of the mother, rather than the race of the child (as is shown for years prior to 1991).

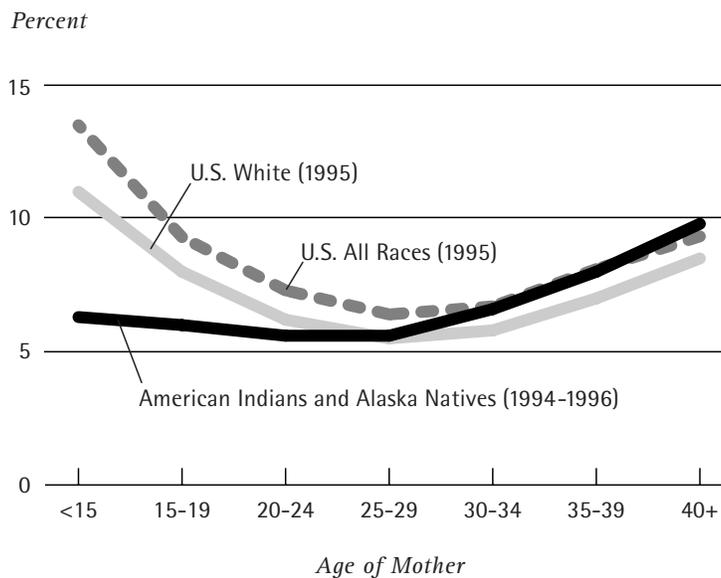
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 3 *Natality and Infant/Maternal Mortality Statistics*

**Chart 3.2**

*Births of Low Weight  
(Under 2,500 Grams) as a  
Percent of Total Live Births  
by Age of Mother*

6.0 percent of reported American Indian and Alaska Native live births in 1994-1996 were of low birthweight, essentially the same as the White population (6.2 in 1995). The U.S. All Races population was significantly higher at 7.3 percent in 1995.



Part 3 *Nativity and Infant/Maternal Mortality Statistics*

**Table 3.2**

*Births of Low Birthweight  
(Under 2,500 Grams)  
by Age of Mother*

American Indians and  
Alaska Natives, IHS  
Service Area, 1994-1996,  
and U.S. All Races and  
White Populations, 1995

American Indian and Alaska Native			
Age of Mother	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	98,808 <sup>1</sup>	5,962	6.0
Under 20 years	20,905	1,249	6.0
Under 15 years	477	30	6.3
15-19 years	20,428	1,219	6.0
20-24 years	32,022	1,779	5.6
25-29 years	22,946	1,283	5.6
30-34 years	15,134	1,000	6.6
35-39 years	6,448	519	8.0
40 years and over	1,353	132	9.8

U.S. All Races			
Age of Mother	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	3,895,532 <sup>1</sup>	285,152	7.3
Under 20 years	511,561	48,158	9.4
Under 15 years	12,219	1,647	13.5
15-19 years	499,342	46,511	9.3
20-24 years	964,574	70,578	7.3
25-29 years	1,062,519	68,302	6.4
30-34 years	903,730	60,439	6.7
35-39 years	383,269	31,007	8.1
40 years and over	69,879	6,668	9.5

U.S. White			
Age of Mother	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	3,096,063 <sup>1</sup>	192,594	6.2
Under 20 years	355,159	28,427	8.0
Under 15 years	5,845	642	11.0
15-19 years	349,314	27,785	8.0
20-24 years	742,502	45,890	6.2
25-29 years	872,281	47,898	5.5
30-34 years	753,957	43,478	5.8
35-39 years	315,813	22,139	7.0
40 years and over	56,351	4,762	8.5

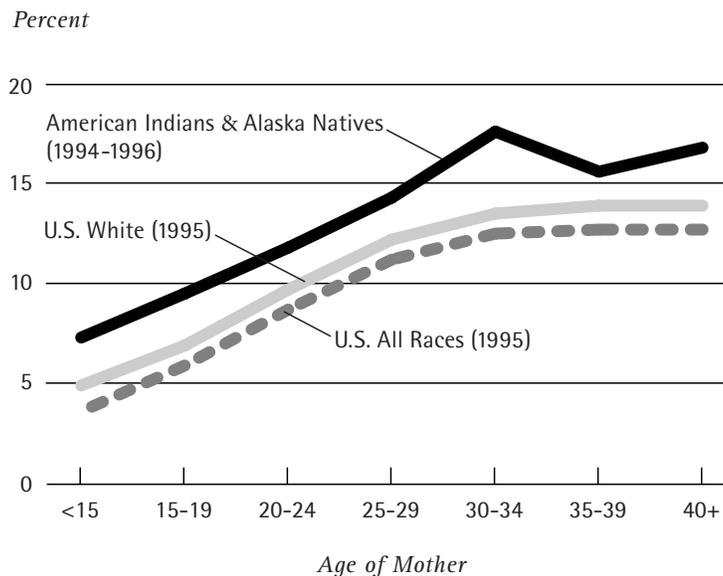
<sup>1</sup> Excludes 215 American Indian and Alaska Native live births, 4,057 U.S. All Races live births, and 2,822 U.S. White live births with birthweight not stated.

Part 3 *Nativity and Infant/Maternal Mortality Statistics*

**Chart 3.3**

*Births of High Weight (4,000 Grams or More) as a Percent of Total Live Births by Age of Mother*

High birthweight births (4,000 grams or more) are a relatively greater problem for Indian women than low weight births. High birthweights are a complication of diabetic pregnancies and should be of concern. For Indian women, 12.7 percent of reported live births were of high birthweight in 1994-1996 compared to 10.3 percent for the U.S. All Races population in 1995.



Part 3 *Nativity and Infant/Maternal Mortality Statistics*

**Table 3.3**

*Births of High Birthweight  
(4,000 Grams or More)  
by Age of Mother*

American Indian and Alaska Native			
Age of Mother	Total Live Births	Number High Weight	Percent High Weight
All Ages	98,808 <sup>1</sup>	12,530	12.7
Under 20 years	20,905	1,966	9.4
Under 15 years	477	35	7.3
15-19 years	20,428	1,931	9.5
20-24 years	32,022	3,785	11.8
25-29 years	22,946	3,280	14.3
30-34 years	15,134	2,665	17.6
35-39 years	6,448	1,007	15.6
40 years and over	1,353	227	16.8

U.S. All Races			
Age of Mother	Total Live Births	Number High Weight	Percent High Weight
All Ages	3,895,532 <sup>1</sup>	402,533	10.3
Under 20 years	511,561	29,903	5.8
Under 15 years	12,219	442	3.6
15-19 years	499,342	29,461	5.9
20-24 years	964,574	83,712	8.7
25-29 years	1,062,519	118,557	11.2
30-34 years	903,730	112,636	12.5
35-39 years	383,269	48,842	12.7
40 years and over	69,879	8,883	12.7

U.S. White			
Age of Mother	Total Live Births	Number High Weight	Percent High Weight
All Ages	3,096,063 <sup>1</sup>	356,535	11.5
Under 20 years	355,159	24,402	6.9
Under 15 years	5,845	285	4.9
15-19 years	349,314	24,117	6.9
20-24 years	742,502	72,256	9.7
25-29 years	872,281	106,398	12.2
30-34 years	753,957	101,903	13.5
35-39 years	315,813	43,759	13.9
40 years and over	56,351	7,817	13.9

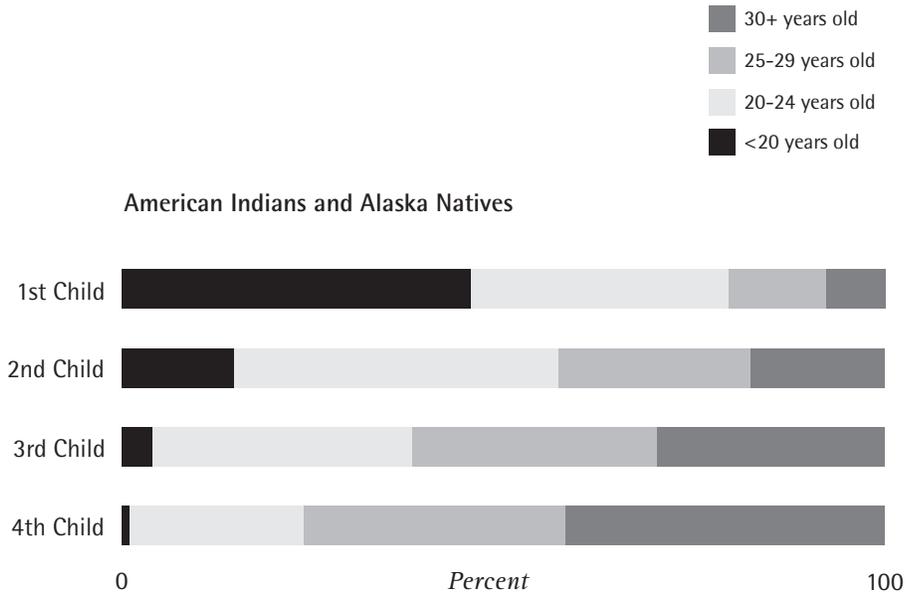
<sup>1</sup> Excludes 215 American Indian and Alaska Native live births, 4,057 U.S. All Races live births, and 2,822 U.S. White live births with birthweight not stated.

**Part 3** *Nativity and Infant/Maternal Mortality Statistics*

**Chart 3.4**

*Birth Order by Age of Mother, Percent Within Birth Order, American Indians and Alaska Natives*

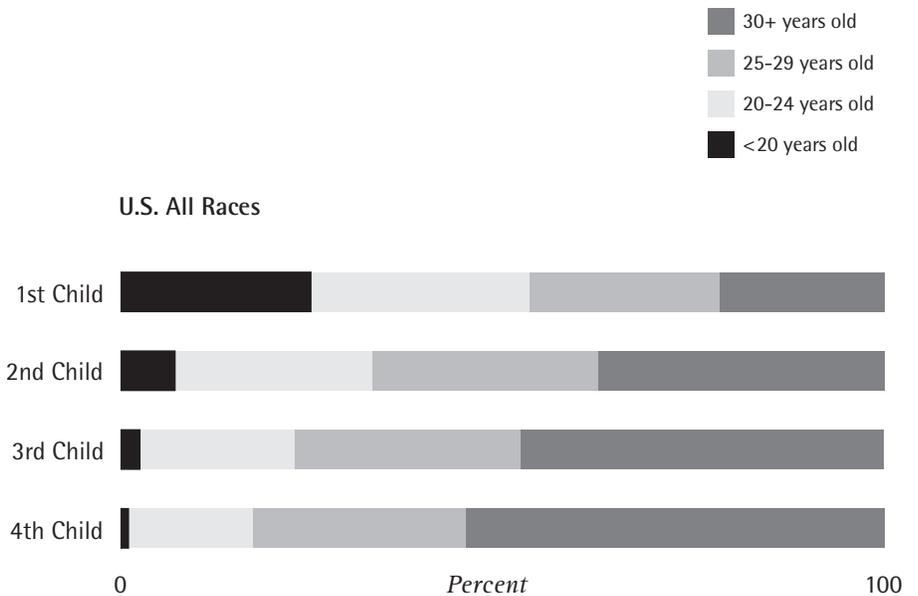
For the Indian population, 46 percent of mothers were under age 20 when they had their first child while 21 percent were at least age 25.



**Chart 3.5**

*Birth Order by Age of Mother, Percent Within Birth Order, U.S. All Races*

For the U.S. All Races population, 25 percent of mothers were under age 20 when they had their first child while 47 percent were at least age 25.



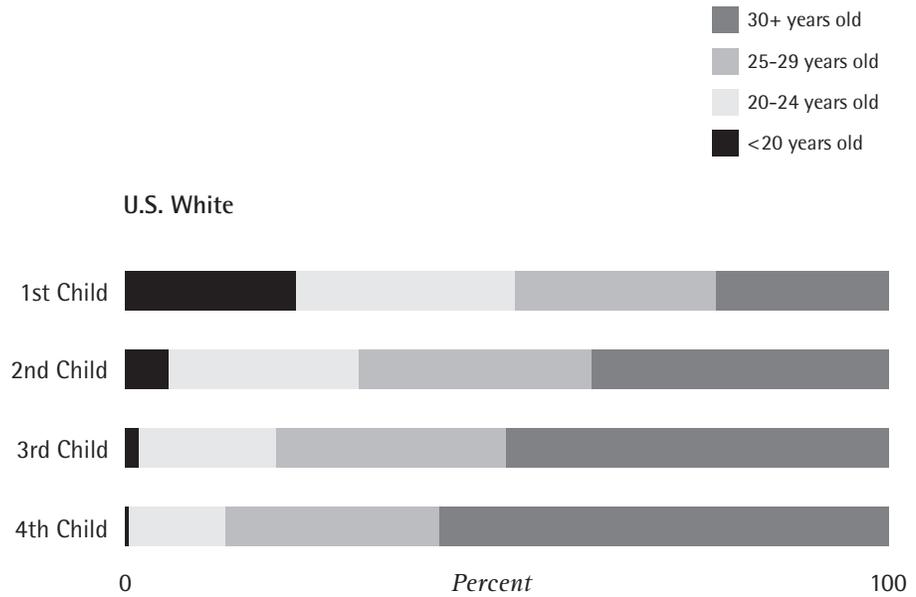


**Part 3** *Nativity and Infant/Maternal Mortality Statistics*

**Chart 3.6**

*Birth Order by Age of Mother, Percent Within Birth Order, U.S. White*

For the U.S. White population, 22 percent of mothers were under age 20 when they had their first child while 49 percent were at least age 25.



### Part 3 *Natality and Infant/Maternal Mortality Statistics*

**Table 3.4**

*Number and Percent Distribution of Live Births*

By Age of Mother Within Birth Order

Age Group	Live Birth Order						
	Total Live Births	1st Child	2nd Child	3rd Child	4th Child	5th Child	6th+ Child
<b>American Indian and Alaska Native, IHS Service Area, 1994–1996</b>							
All Ages	98,683 <sup>1</sup>	35,422	26,166	17,182	9,675	5,179	5,059
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	21.2	45.7	14.7	4.0	1.0	0.3	0.0
20–24 years	32.4	33.8	42.5	34.0	22.8	12.8	4.3
25–29 years	23.2	12.8	25.2	32.1	34.3	34.1	23.7
30–34 years	15.3	5.6	12.8	20.8	27.7	32.5	36.9
35–39 years	6.5	1.8	4.1	7.7	12.1	16.5	27.3
40–49 years	1.4	0.3	0.7	1.4	2.1	3.8	7.8
<b>U.S. All Races, 1995</b>							
All Ages	3,871,709 <sup>2</sup>	1,610,453	1,243,433	617,755	237,647	89,463	72,958
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	13.1	24.9	7.1	2.5	1.0	0.3	0.1
20–24 years	24.8	28.6	25.8	20.3	16.2	11.9	5.1
25–29 years	27.3	24.9	29.6	29.5	28.0	26.1	19.7
30–34 years	23.2	15.5	26.2	31.0	32.6	33.2	33.0
35–39 years	9.8	5.2	9.8	14.4	18.6	22.8	30.1
40–49 years	1.8	0.9	1.5	2.3	3.6	5.7	12.0
<b>U.S. White, 1995</b>							
All Ages	3,076,929 <sup>3</sup>	1,287,470	1,008,994	491,536	179,355	62,725	46,849
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	11.5	22.3	5.7	1.7	0.5	0.2	0.1
20–24 years	24.0	28.7	24.8	18.1	12.6	7.8	3.0
25–29 years	28.1	26.3	30.6	30.0	27.9	24.5	15.7
30–34 years	24.4	16.3	27.4	32.8	35.0	35.8	32.9
35–39 years	10.2	5.5	10.0	15.1	20.2	25.4	34.2
40–49 years	1.8	0.9	1.5	2.3	3.8	6.3	14.1

<sup>1</sup> Excludes 340 American Indian and Alaska Native births (0.3 percent) with birth order not reported.

<sup>2</sup> Excludes 27,880 U.S. All Races births (0.7 percent) with birth order not reported.

<sup>3</sup> Excludes 21,956 U.S. All Races White births (0.7 percent) with birth order not reported.

**Note:** 0.0 Rounds to zero. Where needed percents were adjusted to sum to 100.0 due to rounding

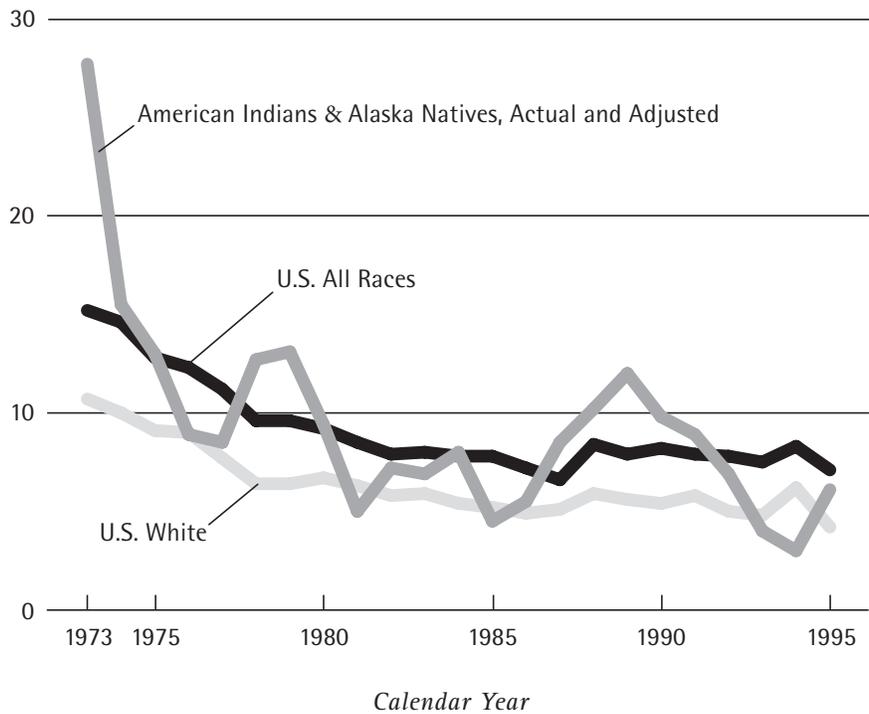
Part 3 *Natality and Infant/Maternal Mortality Statistics*

Chart 3.7

*Maternal Death Rates*

The maternal mortality rate for American Indians and Alaska Natives dropped from 27.7 (rate per 100,000 live births) in 1972-1974 to 6.1 in 1994-1996, a decrease of 78 percent. These rates have been adjusted for miscoding of Indian race on death certificates. In 1994-1996, there was only one maternal death, actual and adjusted.

*Per 100,000 Live Births*



**Note:** IHS actual rates and rates adjusted for race miscoding are the same.

### Part 3 *Natality and Infant/Maternal Mortality Statistics*

**Table 3.7**

*Maternal Deaths and Death Rates*

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1958-1995  
(Rate per 100,000 Live Births)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	<i>Actual</i>	<i>Adjusted</i>	<i>Actual</i>	<i>Adjusted</i>			<i>Actual</i>	<i>Adjusted</i>	<i>Actual</i>	<i>Adjusted</i>
(1996)	5	5								
1994-1996 (1995)	1	1	6.1	6.1	7.1	4.2	0.9	0.9	1.5	1.5
1993-1995 (1994)	0	0	3.0	3.0	8.3	6.2	0.4	0.4	0.5	0.5
1992-1994 (1993)	2	2	4.0	4.0	7.5	4.8	0.5	0.5	0.8	0.8
1991-1993 (1992)	2	2	6.9	6.9	7.8	5.0	0.9	0.9	1.4	1.4
1990-1992 (1991)	3	3	8.9	8.9	7.9	5.8	1.1	1.1	1.5	1.5
1989-1991 (1990)	4	4	9.8	9.8	8.2	5.4	1.2	1.2	1.8	1.8
1988-1990 (1989)	3	3	12.0	12.0	7.9	5.6	1.5	1.5	2.1	2.1
1987-1989 (1988)	5	5	10.2	10.2	8.4	5.9	1.2	1.2	1.7	1.7
1986-1988 (1987)	2		8.5		6.6	5.1	1.3		1.7	
1985-1987 (1986)	1		5.5		7.2	4.9	0.8		1.1	
1984-1986 (1985)	2		4.5		7.8	5.2	0.6		0.9	
1983-1985 (1984)	1		8.0		7.8	5.4	1.0		1.5	
1982-1984 (1983)	4		6.9		8.0	5.9	0.9		1.2	
1981-1983 (1982)	1		7.2		7.9	5.8	0.9		1.2	
1980-1982 (1981)	1		5.0		8.5	6.3	0.6		0.8	
1979-1981 (1980)	2		9.4		9.2	6.7	1.0		1.4	
1978-1980 (1979)	4		13.1		9.6	6.4	1.4		2.0	
1977-1979 (1978)	3		12.7		9.6	6.4	1.3		2.0	
1976-1978 (1977)	1		8.5		11.2	7.7	0.8		1.1	
1975-1977 (1976)	1		8.9		12.3	9.0	0.7		1.0	
1974-1976 (1975)	3		13.0		12.8	9.1	1.0		1.4	
1973-1975 (1974)	3		15.5		14.6	10.0	1.1		1.6	
1972-1974 (1973)	2		27.7		15.2	10.7	1.8		2.6	
(1972)	9									
1957-1959 (1958)	16		82.6		37.6	26.3	2.2		3.1	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

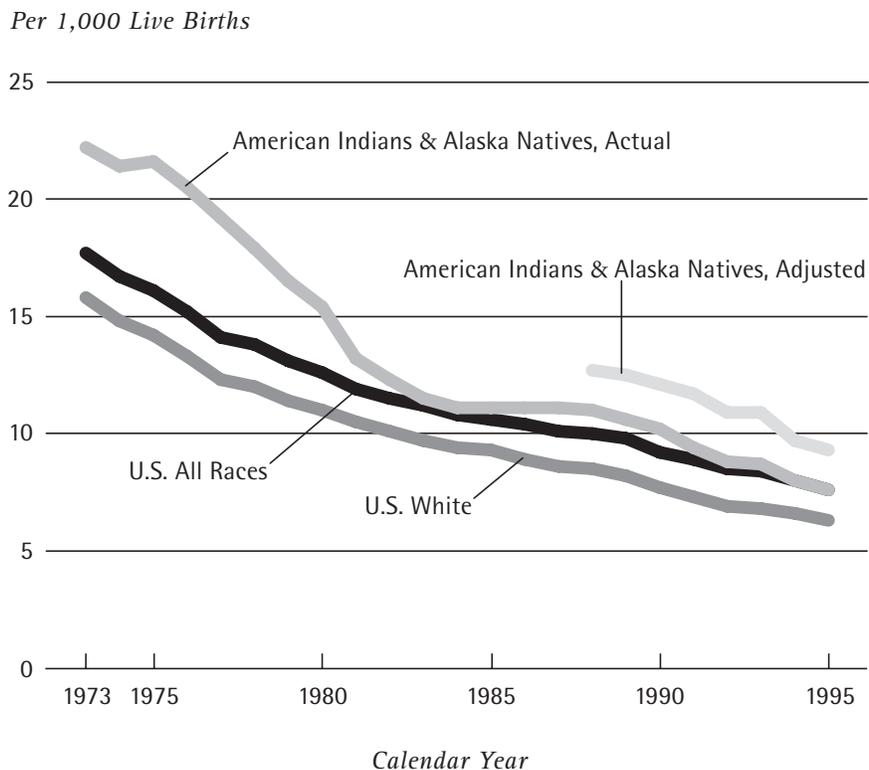
**Note:** Data are presented above for the year in which maternal death data were first collected (1958) and as close to the year in which IHS was established (1955) as is possible. For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native maternal death rates are for the 3-year periods specified. Number of deaths and rates for U.S. populations are for the single year specified. IHS actual numbers of maternal deaths and numbers of maternal deaths adjusted for race miscoding are the same.

Part 3 *Natality and Infant/Maternal Mortality Statistics*

**Chart 3.8**

*Infant Mortality Rates*

The infant mortality rate for American Indians and Alaska Natives dropped from 22.2 (rate per 1,000 live births) in 1972-1974 to 9.3 in 1994-1996, a decrease of 58 percent. The 1994-1996 rate is 22 percent higher than the U.S. All Races rate of 7.6 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



### Part 3 *Nativity and Infant/Maternal Mortality Statistics*

**Table 3.8**

*Infant Mortality Rates*

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Rate per 1,000 Live Births)

Calendar Year(s)	American Indian & Alaska Native		U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native to:			
					U.S. All Races		U.S. White	
	<i>Actual</i>	<i>Adjusted</i>			<i>Actual</i>	<i>Adjusted</i>	<i>Actual</i>	<i>Adjusted</i>
1994-1996 (1995)	7.6	9.3	7.6	6.3	1.0	1.2	1.2	1.5
1993-1995 (1994)	8.0	9.7	8.0	6.6	1.0	1.2	1.2	1.5
1992-1994 (1993)	8.7	10.9	8.4	6.8	1.0	1.3	1.3	1.6
1991-1993 (1992)	8.8	10.9	8.5	6.9	1.0	1.3	1.3	1.6
1990-1992 (1991)	9.4	11.7	8.9	7.3	1.1	1.3	1.3	1.6
1989-1991 (1990)	10.2	12.1	9.2	7.7	1.1	1.3	1.3	1.6
1988-1990 (1989)	10.6	12.5	9.8	8.2	1.1	1.3	1.3	1.5
1987-1989 (1988)	11.0	12.7	10.0	8.5	1.1	1.3	1.3	1.5
1986-1988 (1987)	11.1		10.1	8.6	1.1		1.3	
1985-1987 (1986)	11.1		10.4	8.9	1.1		1.2	
1984-1986 (1985)	11.1		10.6	9.3	1.0		1.2	
1983-1985 (1984)	11.1		10.8	9.4	1.0		1.2	
1982-1984 (1983)	11.5		11.2	9.7	1.0		1.2	
1981-1983 (1982)	12.3		11.5	10.1	1.1		1.2	
1980-1982 (1981)	13.2		11.9	10.5	1.1		1.3	
1979-1981 (1980)	15.4		12.6	11.0	1.2		1.4	
1978-1980 (1979)	16.5		13.1	11.4	1.3		1.4	
1977-1979 (1978)	17.9		13.8	12.0	1.3		1.5	
1976-1978 (1977)	19.2		14.1	12.3	1.4		1.6	
1975-1977 (1976)	20.5		15.2	13.3	1.3		1.5	
1974-1976 (1975)	21.6		16.1	14.2	1.3		1.5	
1973-1975 (1974)	21.4		16.7	14.8	1.3		1.4	
1972-1974 (1973)	22.2		17.7	15.8	1.3		1.4	
1954-1956 (1955)	62.7		26.4	23.6	2.4		2.7	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

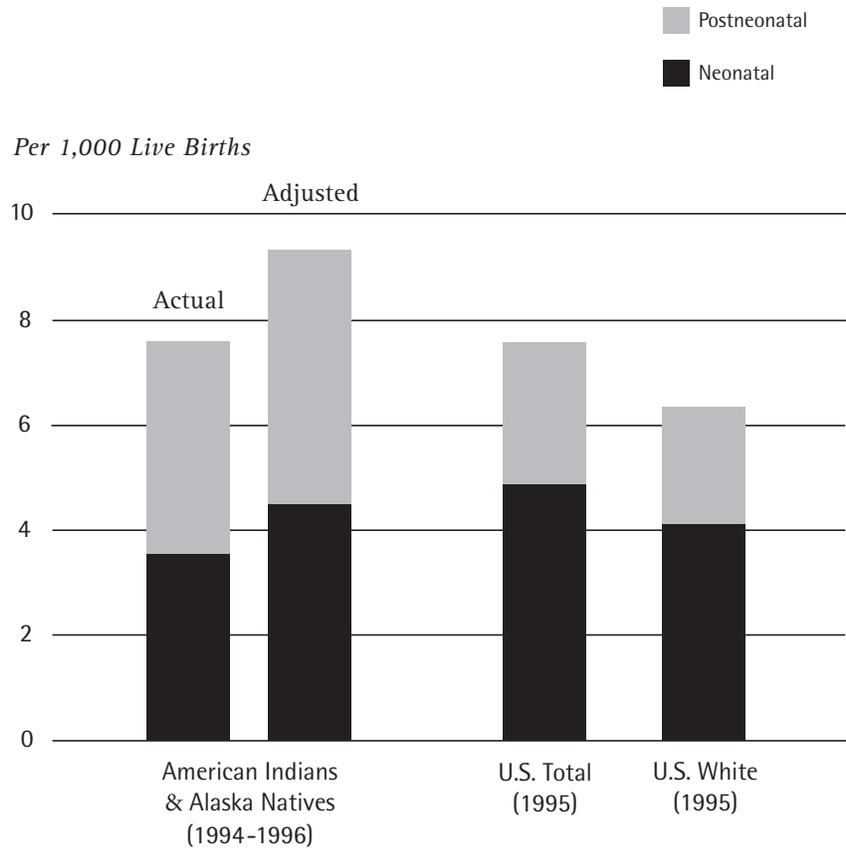
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Rates for U.S. populations are for the single year specified.

**Part 3** *Natality and Infant/Maternal Mortality Statistics*

**Chart 3.9**

*Infant Mortality Rates  
by Age*

The neonatal mortality rate for American Indians and Alaska Natives in 1994-1996 (4.5 deaths per 1,000 live births) was 8 percent lower than the U.S. All Races rate (4.9) and 10 percent higher than the U.S. White rate (4.1) for 1995. Indians fare much worse in comparison during the postneonatal period. The postneonatal rate for Indians (4.8) was 1.8 and 2.2 times the U.S. All Races (2.7) and White (2.2) populations rates, respectively. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



### Part 3 *Nativity and Infant/Maternal Mortality Statistics*

**Table 3.9**

*Infant Mortality Rates by Age*

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1973-1995  
(Rate per 1,000 Live Births)

American Indian & Alaska Native							
Calendar Years	Infant Mortality Rates		Neonatal Under 28 Days		Postneonatal 28 Days-11 Months		
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted	
1994-1996	7.6	9.3	3.6	4.5	4.0	4.8	
1993-1995	8.0	9.7	3.8	4.6	4.2	5.1	
1992-1994	8.7	10.9	4.1	5.2	4.6	5.8	
1991-1993	8.8	10.9	4.0	4.9	4.9	6.0	
1990-1992	9.4	11.7	4.3	5.3	5.1	6.4	
1989-1991	10.2	12.1	4.7	5.4	5.5	6.7	
1988-1990	10.6	12.5	4.8	5.6	5.8	7.0	
1987-1989	11.0	12.7	5.1	5.5	5.9	7.1	
1986-1988	11.1		5.2		5.9		
1985-1987	11.1		5.3		5.9		
1984-1986	11.1		5.0		6.0		
1983-1985	11.1		5.1		6.0		
1982-1984	11.5		5.1		6.4		
1981-1983	12.3		5.3		7.0		
1980-1982	13.2		5.9		7.3		
1979-1981	15.4		7.2		8.1		
1978-1980	16.5		8.2		8.4		
1977-1979	17.9		8.9		9.0		
1976-1978	19.2		9.3		9.9		
1975-1977	20.5		10.0		10.5		
1974-1976	21.6		10.4		11.2		
1973-1975	21.4		10.4		11.1		
1972-1974	22.2		10.2		12.0		

U.S. All Races				U.S. White			
Calendar Year	Infant Mortality Rates	Neonatal Under 28 Days	Postneonatal 28 Days-11 Months	Infant Mortality Rates	Neonatal Under 28 Days	Postneonatal 28 Days-11 Months	
1995	7.6	4.9	2.7	6.3	4.1	2.2	
1994	8.0	5.1	2.9	6.6	4.2	2.4	
1993	8.4	5.3	3.1	6.8	4.3	2.5	
1992	8.5	5.4	3.1	6.9	4.3	2.6	
1991	8.9	5.6	3.4	7.3	4.5	2.8	
1990	9.2	5.8	3.4	7.7	4.9	2.8	
1989	9.8	6.2	3.6	8.2	5.2	3.0	
1988	10.0	6.3	3.7	8.5	5.4	3.1	
1987	10.1	6.5	3.6	8.6	5.5	3.1	
1986	10.4	6.7	3.6	8.9	5.8	3.1	
1985	10.6	7.0	3.7	9.3	6.1	3.2	
1984	10.8	7.0	3.8	9.4	6.2	3.3	
1983	11.2	7.3	3.9	9.7	6.4	3.3	
1982	11.5	7.7	3.8	10.1	6.8	3.3	
1981	11.9	8.0	3.9	10.5	7.1	3.4	
1980	12.6	8.5	4.1	11.0	7.5	3.5	
1979	13.1	8.9	4.2	11.4	7.9	3.5	
1978	13.8	9.5	4.3	12.0	8.4	3.6	
1977	14.1	9.9	4.2	12.3	8.7	3.6	
1976	15.2	10.9	4.3	13.3	9.7	3.6	
1975	16.1	11.6	4.5	14.2	10.4	3.8	
1974	16.7	12.3	4.4	14.8	11.1	3.7	
1973	17.7	13.0	4.7	15.8	11.8	4.0	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

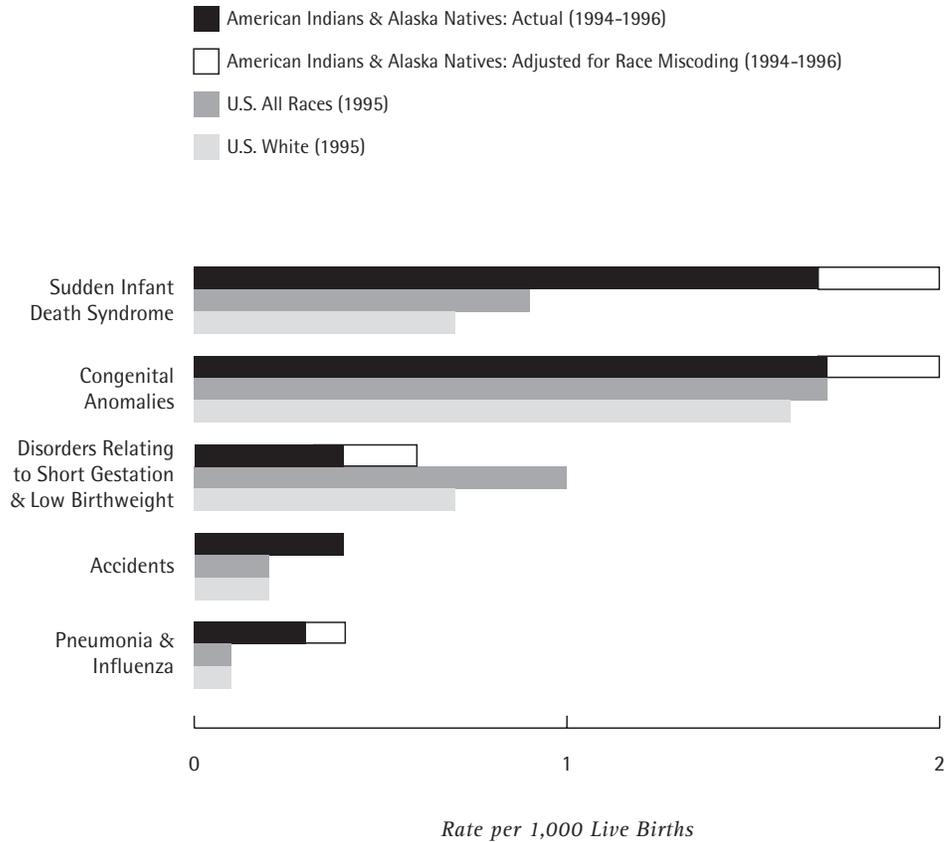
Note: Starting in 1972 data on infant mortality by age are first available, and are shown above, for the specific counties in the IHS service area.

**Part 3** *Nativity and Infant/Maternal Mortality Statistics*

**Chart 3.10**

*Leading Causes of Infant Deaths (Birth to Under 1 Year)*

The two leading causes of infant deaths for American Indians and Alaska Natives (1994–1996) were sudden infant death syndrome (SIDS) and congenital anomalies. For the U.S. All Races population (1995), they were congenital anomalies and disorders related to short gestation and low birthweight. For the U.S. White population, they were congenital anomalies and tied for the second leading causes were sudden infant death syndrome and disorders related to short gestation and low birthweight.

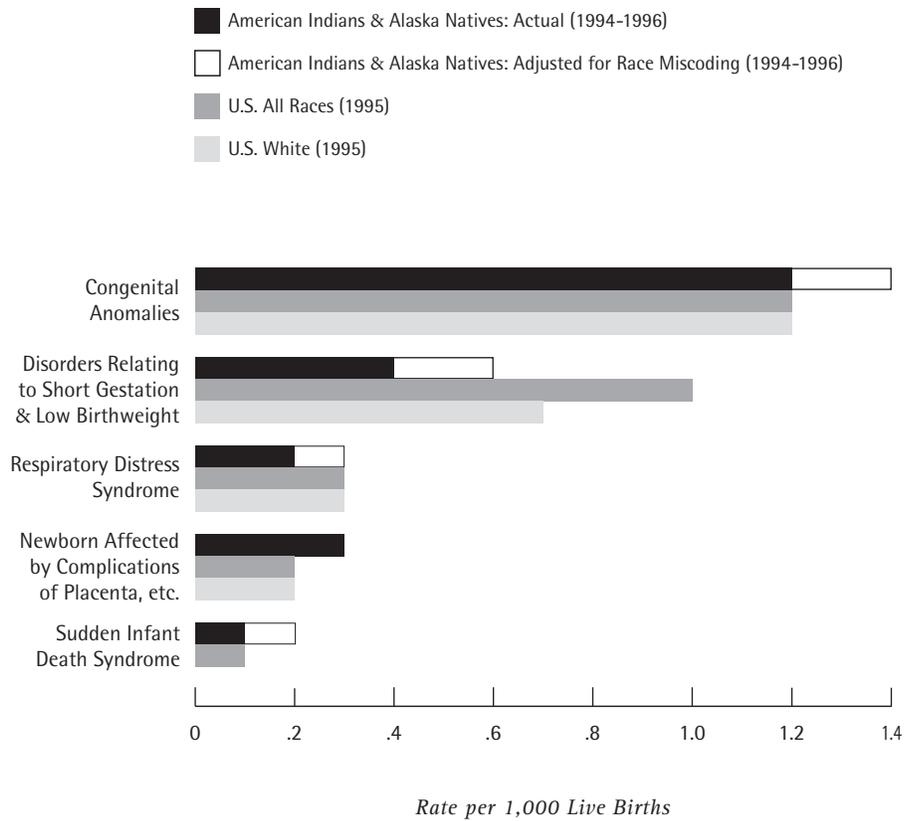


Part 3 *Nativity and Infant/Maternal Mortality Statistics*

Chart 3.11

*Leading Causes of Neonatal Deaths (Under 28 Days)*

The two leading causes of neonatal deaths for American Indians and Alaska Natives (1994-1996) and the U.S. All Races and White populations (1995) were congenital anomalies and disorders related to short gestation and low birthweight.

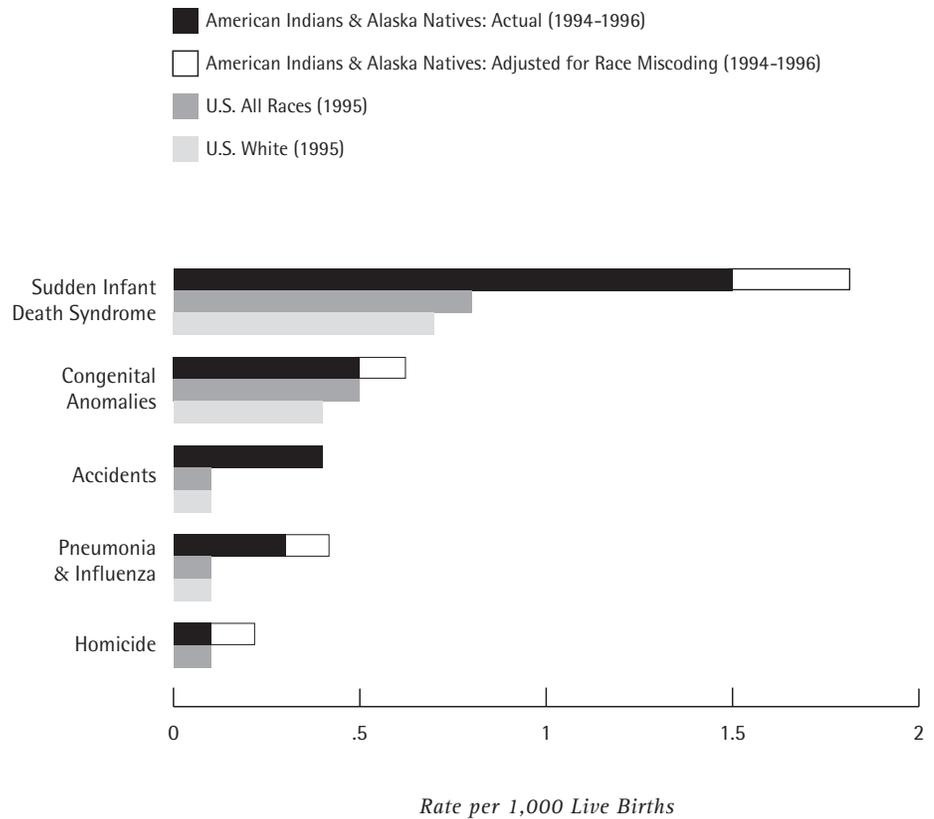


**Part 3** *Natality and Infant/Maternal Mortality Statistics*

**Chart 3.12**

*Leading Causes of Postneonatal Deaths (28 Days to Under 1 Year)*

The two leading causes of postneonatal deaths for American Indians and Alaska Natives (1994-1996) and the U.S. All Races and White populations (1995) were sudden infant death syndrome (SIDS) and congenital anomalies.



### Part 3 *Natality and Infant/Maternal Mortality Statistics*

**Table 3.10**

*Leading Causes of Infant Deaths by Age*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
Rate per 1,000 Live Births

Cause of Death	American Indian & Alaska Native		U.S.		U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:		
	Number Actual	Rate Adj <sup>1</sup>	Number Actual	Rate Adj <sup>1</sup>		U.S. All Races	U.S. White	
<b>Total Infant Deaths</b>								
All Causes	753	922	7.6	9.3	7.6	6.3	1.2	1.5
Sudden infant death syndrome	166	202	1.7	2.0	0.9	0.7	2.2	2.9
Congenital anomalies	168	196	1.7	2.0	1.7	1.6	1.2	1.3
Disorders relating to short gestation and low birth weight	43	57	0.4	0.6	1.0	0.7	0.6	0.9
Accidents	39	43	0.4	0.4	0.2	0.2	2.0	2.0
Pneumonia and influenza	32	39	0.3	0.4	0.1	0.1	4.0	4.0
Respiratory distress syndrome	24	35	0.2	0.4	0.4	0.3	1.0	1.3
Newborn affected by complications of placenta, cord, & membranes	28	30	0.3	0.3	0.2	0.2	1.5	1.5
Newborn affected by maternal complications of pregnancy	12	19	0.1	0.2	0.3	0.3	0.7	0.7
Homicide	11	16	0.1	0.2	0.1	0.1	2.0	2.0
Infections specific to the perinatal period	10	14	0.1	0.1	0.2	0.2	0.5	0.5
All other causes	220	271						
<b>Neonatal Deaths</b>								
All Causes	360	449	3.6	4.5	4.9	4.1	0.9	1.1
Congenital anomalies	118	134	1.2	1.4	1.2	1.2	1.2	1.2
Disorders relating to short gestation and low birth weight	43	57	0.4	0.6	1.0	0.7	0.6	0.9
Respiratory distress syndrome	21	32	0.2	0.3	0.3	0.3	1.0	1.0
Newborn affected by complications of placenta, cord, & membranes	28	30	0.3	0.3	0.2	0.2	1.5	1.5
Sudden infant death syndrome	13	20	0.1	0.2	0.1	0.0	2.0	*
Newborn affected by maternal complications of pregnancy	12	19	0.1	0.2	0.3	0.3	0.7	0.7
Infections specific to the perinatal period	10	14	0.1	0.1	0.2	0.2	0.5	0.5
Intrauterine hypoxia and birth asphyxia	7	11	0.1	0.1	0.1	0.1	1.0	1.0
Newborn affected by maternal conditions which may be unrelated to present pregnancy	7	6	0.1	0.1	0.0	0.0	*	*
Pneumonia and influenza	4	4	0.0	0.0	0.0	0.0	*	*
All other causes	97	122						
<b>Postneonatal Deaths</b>								
All Causes	393	473	4.0	4.8	2.7	2.2	1.8	2.2
Sudden infant death syndrome	153	182	1.5	1.8	0.8	0.7	2.3	2.6
Congenital anomalies	50	62	0.5	0.6	0.5	0.4	1.2	1.5
Accidents	37	41	0.4	0.4	0.1	0.1	4.0	4.0
Pneumonia and influenza	28	35	0.3	0.4	0.1	0.1	4.0	4.0
Homicide	10	15	0.1	0.2	0.1	0.0	2.0	*
Septicemia	9	10	0.1	0.1	0.1	0.0	1.0	*
Bronchitis and bronchiolitis	7	8	0.1	0.1	0.0	0.0	*	*
Meningitis	5	5	0.1	0.1	0.0	0.0	*	*
Respiratory distress syndrome	3	3	0.0	0.0	0.0	0.0	*	*
Viral diseases	3	3	0.0	0.0	0.0	0.0	*	*
All other causes	88	109						

<sup>1</sup>Adjusted to compensate for miscoding of Indian race on death certificates.

**Note:** 0.0 Rounds to zero. \*Not applicable. Causes of death are listed based upon the order of adjusted number of deaths

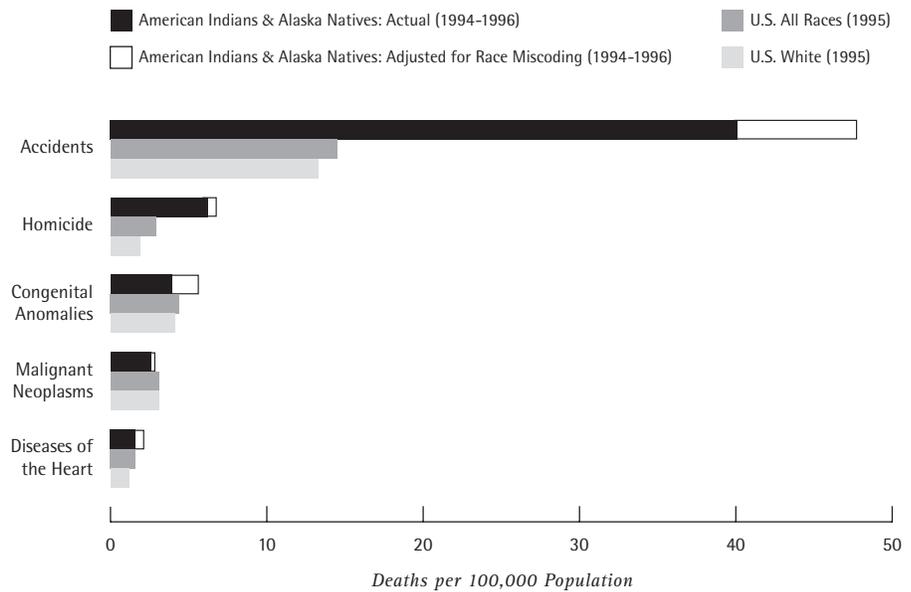
# Part 4

## General Mortality Statistics

**Chart 4.1**

*Death Rates,  
Leading Causes:  
Ages 1 to 4 Years*

The two leading causes of death for American Indians and Alaska Natives, ages 1 to 4 (1994-1996), were accidents and homicide. For the U.S. All Races and White populations (1995), they were accidents and congenital anomalies.



**Table 4.1**

*Ten Leading Causes of Death for Decedents 1 to 4 Years of Age*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995 (Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native Number		American Indian & Alaska Native Rate		U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	297	353	76.8	91.3	40.6	35.1	2.2	2.6
Accidents	155	183	40.1	47.4	14.5	13.3	3.3	3.6
Motor vehicle	69	76	17.9	19.7	5.2	4.9	3.8	4.0
Other accidents	86	107	22.3	27.7	9.2	8.4	3.0	3.3
Homicide and legal intervention	24	25	6.2	6.5	2.9	1.9	2.2	3.4
Congenital anomalies	15	22	3.9	5.7	4.4	4.1	1.3	1.4
Malignant neoplasms	10	11	2.6	2.8	3.1	3.1	0.9	0.9
Diseases of the heart	6	8	1.6	2.1	1.6	1.2	1.3	1.8
Pneumonia and influenza	6	7	1.6	1.8	1.0	0.7	1.8	2.6
Certain conditions originating in the perinatal period	5	7	1.3	1.8	0.6	0.4	3.0	4.5
Chronic obstructive pulmonary diseases and allied conditions	3	3	0.8	0.8	0.2	0.2	4.0	4.0
Acute bronchitis and bronchiolitis	2	3	0.5	0.8	0.2	0.1	4.0	8.0
Cerebrovascular diseases	2	3	0.5	0.8	0.4	0.3	2.0	2.7
All other causes	69	81						

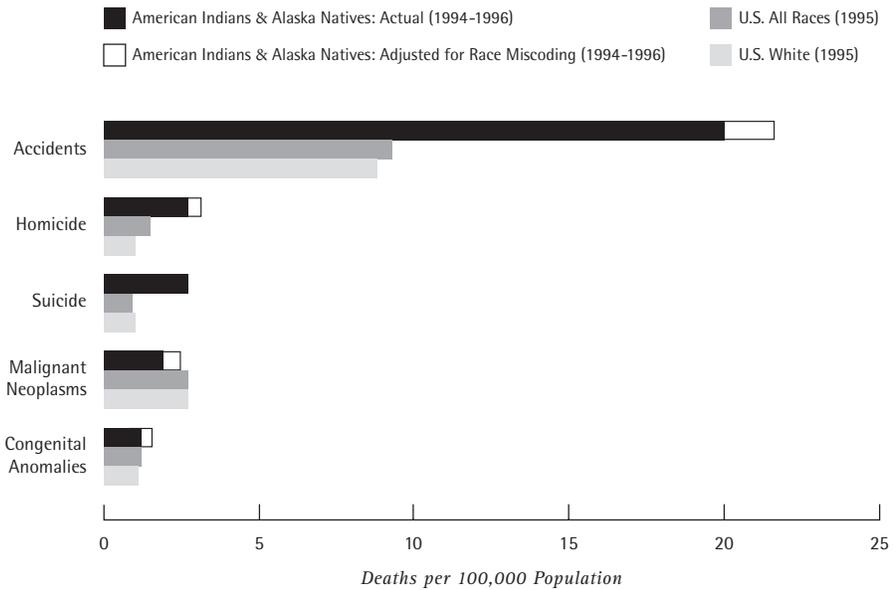
<sup>1</sup>Adjusted to compensate for miscoding of Indian race on death certificates. **Note:** Causes of death are listed based upon the order of adjusted number of deaths.

**Part 4 General Mortality Statistics**

**Chart 4.2**

*Death Rates,  
Leading Causes:  
Ages 5 to 14 Years*

The two leading causes of death for American Indians and Alaska Natives, ages 5 to 14 (1994-1996), were accidents and homicide. For the U.S. All Races and White populations (1995), they were accidents and malignant neoplasms.



**Table 4.2**

*Ten Leading Causes of Death for Decedents 5 to 14 Years of Age*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995 (Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native Number		American Indian & Alaska Native Rate		U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	329	366	37.2	41.4	22.5	20.6	1.8	2.0
Accidents	177	191	20.0	21.6	9.3	8.8	2.3	2.5
Motor vehicle	94	103	10.6	11.7	5.4	5.3	2.2	2.2
Other accidents	83	88	9.4	10.0	3.9	3.5	2.6	2.9
Homicide and legal intervention	24	29	2.7	3.3	1.5	1.0	2.2	3.3
Suicide	24	24	2.7	2.7	0.9	1.0	3.0	2.7
Malignant neoplasms	17	22	1.9	2.5	2.7	2.7	0.9	0.9
Congenital anomalies	11	14	1.2	1.6	1.2	1.1	1.3	1.5
Diseases of the heart	6	9	0.7	1.0	0.8	0.6	1.3	1.7
Pneumonia and influenza	6	9	0.7	1.0	0.3	0.3	3.3	3.3
Septicemia	4	4	0.5	0.5	0.1	0.1	5.0	5.0
Chronic obstructive pulmonary diseases and allied conditions	3	4	0.3	0.5	0.4	0.2	1.3	2.5
Meningococcal infection	3	3	0.3	0.3	0.1	0.1	3.0	3.0
All other causes	54	57						

<sup>1</sup>Adjusted to compensate for miscoding of Indian race on death certificates.

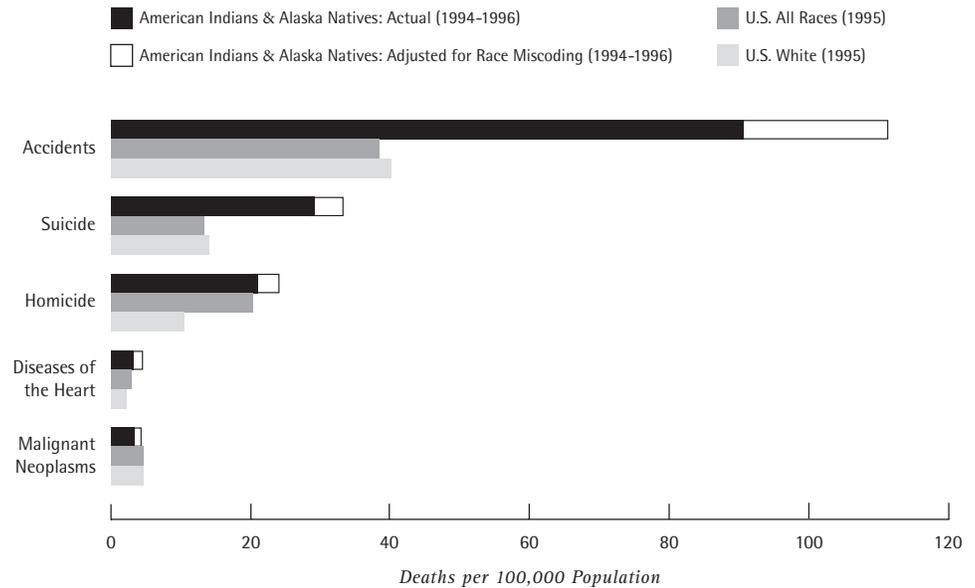
**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

**Part 4 General Mortality Statistics**

**Chart 4.3**

*Death Rates,  
Leading Causes:  
Ages 15 to 24 Years*

The two leading causes of death for American Indians and Alaska Natives, ages 15 to 24 years (1994-1996), and U.S. Whites (1995) were accidents and suicide. For the U.S. All Races (1995), they were accidents and homicide.



**Table 4.3**

*Ten Leading Causes of Death for Decedents 15 to 24 Years of Age*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995 (Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native		Rate		U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual Number	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	1,191	1,433	163.3	196.5	95.3	84.3	2.1	2.3
Accidents	661	817	90.6	112.0	38.5	40.2	2.9	2.8
Motor vehicle	500	629	68.6	86.2	29.5	31.1	2.9	2.8
Other accidents	161	188	22.1	25.8	9.0	9.1	2.9	2.8
Suicide	212	247	29.1	33.9	13.4	14.0	2.5	2.4
Homicide and legal intervention	153	176	21.0	24.1	20.3	10.5	1.2	2.3
Diseases of the heart	23	31	3.2	4.3	2.9	2.2	1.5	2.0
Malignant neoplasms	25	28	3.4	3.8	4.6	4.6	0.8	0.8
Congenital anomalies	6	7	0.8	1.0	1.3	1.2	0.8	0.8
Cerebrovascular diseases	5	5	0.7	0.7	0.5	0.4	1.4	1.8
Pneumonia and influenza	4	5	0.5	0.7	0.6	0.5	1.2	1.4
Human immunodeficiency virus (HIV) infection	4	5	0.5	0.7	1.8	1.0	0.4	0.7
Septicemia	4	4	0.5	0.5	0.2	0.2	2.5	2.5
All other causes	94	108						

<sup>1</sup>Adjusted to compensate for miscoding of Indian race on death certificates.

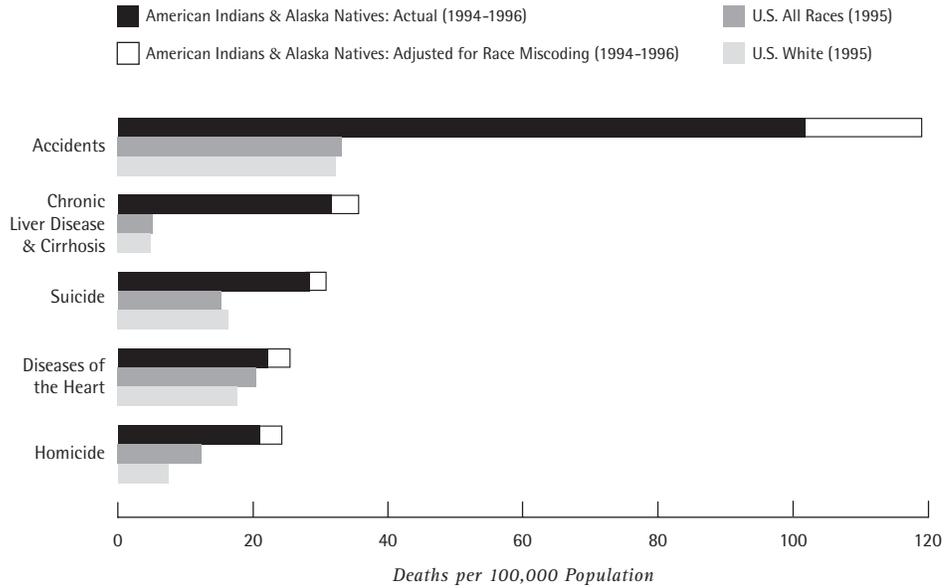
**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

**Part 4 General Mortality Statistics**

**Chart 4.4**

*Death Rates,  
Leading Causes:  
Ages 25 to 44 Years*

The two leading causes of death for American Indians and Alaska Natives, ages 25 to 44 years (1994-1996), were accidents and chronic liver disease and cirrhosis. For the U.S. All Races population (1995) and the U.S. White population (1995) they were accidents and human immunodeficiency virus (HIV) infection. HIV infection was seventh for Indians.



**Table 4.4**

*Ten Leading Causes of Death for Decedents 25 to 44 Years of Age*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995 (Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native Number		American Indian & Alaska Native Rate		U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	3,848	4,435	316.2	364.4	192.0	165.5	1.9	2.2
Accidents	1,239	1,439	101.8	118.2	33.2	32.3	3.6	3.7
Motor vehicle	745	881	61.2	72.4	17.5	17.3	4.1	4.2
Other accidents	494	558	40.6	45.8	15.6	15.0	2.9	3.1
Chronic liver disease and cirrhosis	384	437	31.6	35.9	5.2	4.9	6.9	7.3
Suicide	346	387	28.4	31.8	15.3	16.4	2.1	1.9
Diseases of the heart	270	310	22.2	25.5	20.5	17.7	1.2	1.4
Homicide and legal intervention	256	293	21.0	24.1	12.4	7.5	1.9	3.2
Malignant neoplasms	238	280	19.6	23.0	26.4	25.2	0.9	0.9
Human immunodeficiency virus (HIV) infection	160	191	13.1	15.7	36.9	26.6	0.4	0.6
Pneumonia and influenza	89	99	7.3	8.1	2.5	2.0	3.2	4.1
Diabetes mellitus	81	92	6.7	7.6	3.0	2.6	2.5	2.9
Cerebrovascular diseases	76	88	6.2	7.2	4.2	3.2	1.7	2.3
All other causes	709	819						

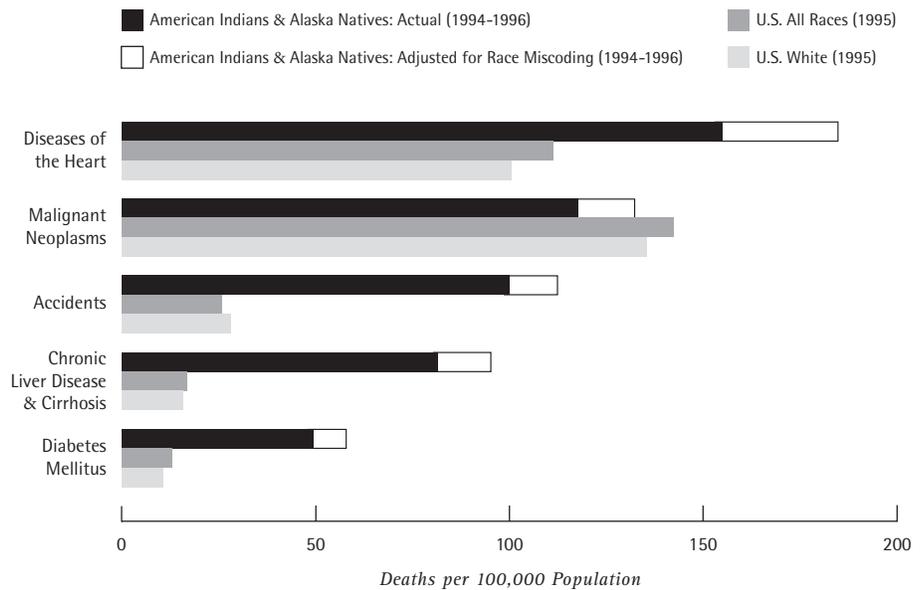
<sup>1</sup>Adjusted to compensate for miscoding of Indian race on death certificates. **Note:** Causes of death are listed based upon the order of adjusted number of deaths.

**Part 4 General Mortality Statistics**

**Chart 4.5**

*Death Rates,  
Leading Causes:  
Ages 45 to 54 Years*

The two leading causes of death for American Indians and Alaska Natives, ages 45 to 54 years (1994-1996), were diseases of the heart and malignant neoplasms. This ranking was in reverse order for the U.S. All Races and White populations (1995).



**Table 4.5**

*Ten Leading Causes of Death for Decedents 45 to 54 Years of Age*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995 (Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native		U.S. All Races		U.S. White		Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number	Rate	Number	Rate	Number	Rate	U.S. All Races	U.S. White
All Causes	2,453	2,798	754.1	860.1	460.1	413.0	1.9	2.1
Diseases of the heart	504	594	154.9	182.6	111.3	100.4	1.6	1.8
Malignant neoplasms	383	425	117.7	130.7	142.3	135.4	0.9	1.0
Accidents	325	366	99.9	112.5	25.8	28.1	4.4	4.0
Motor vehicle	171	194	52.6	59.6	10.0	13.6	6.0	4.4
Other accidents	154	172	47.3	52.9	15.9	14.5	3.3	3.6
Chronic liver disease and cirrhosis	265	308	81.5	94.7	16.9	15.8	5.6	6.0
Diabetes mellitus	161	192	49.5	59.0	12.9	10.7	4.6	5.5
Cerebrovascular diseases	88	100	27.1	30.7	17.7	13.8	1.7	2.2
Pneumonia and influenza	53	57	16.3	17.5	6.7	5.5	2.6	3.2
Suicide	51	54	15.7	16.6	14.6	15.9	1.1	1.0
Homicide and legal intervention	38	42	11.7	12.9	6.2	4.4	2.1	2.9
Septicemia	31	34	9.5	10.5	3.1	2.4	3.4	4.4
All other causes	554	626						

<sup>1</sup>Adjusted to compensate for miscoding of Indian race on death certificates.

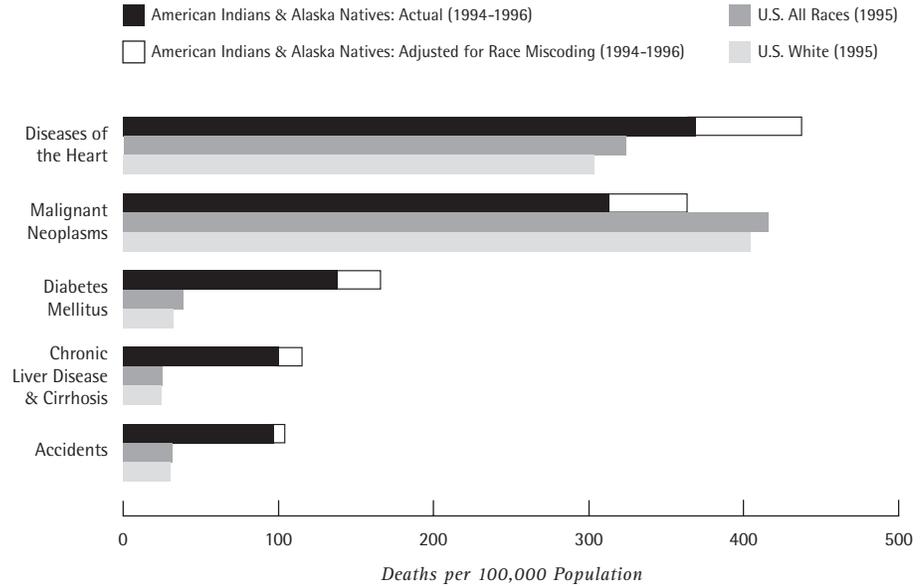
**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

**Part 4 General Mortality Statistics**

**Chart 4.6**

*Death Rates,  
Leading Causes:  
Ages 55 to 64 Years*

The two leading causes of death for American Indians and Alaska Natives, ages 55 to 64 years (1994-1996), were diseases of the heart and malignant neoplasms. This ranking was in reverse order for the U.S. All Races and White populations (1995).



**Table 4.6**

*Ten Leading Causes of Death for Decedents 55 to 64 Years of Age*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995 (Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native		U.S. All Races		U.S. White		Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number	Rate	Number	Rate	Number	Rate	U.S. All Races	U.S. White
All Causes	3,132	3,616	1,401.0	1,617.5	1,114.5	1,049.1	1.5	1.5
Diseases of the heart	826	982	369.5	439.2	324.1	303.9	1.4	1.4
Malignant neoplasms	701	815	313.6	364.5	416.4	404.7	0.9	0.9
Diabetes mellitus	309	375	138.2	167.7	38.8	32.6	4.3	5.1
Chronic liver disease and cirrhosis	225	257	100.6	115.0	25.4	24.5	4.5	4.7
Accidents	217	234	97.0	104.7	31.9	30.4	3.3	3.4
Motor vehicle	95	104	42.5	46.5	14.6	14.4	3.2	3.2
Other accidents	122	130	54.6	58.2	17.3	16.0	3.4	3.6
Cerebrovascular diseases	106	117	47.4	52.3	46.2	39.0	1.1	1.3
Chronic obstructive pulmonary diseases and allied conditions	75	85	33.5	38.0	47.3	48.6	0.8	0.8
Pneumonia and influenza	70	74	31.3	33.1	9.9	14.7	3.3	2.3
Nephritis, nephrotic syndrome, and nephrosis	45	47	20.1	21.0	8.2	6.4	2.6	3.3
Septicemia	32	34	14.3	15.2	8.2	6.8	1.9	2.2
All other causes	526	596						

<sup>1</sup>Adjusted to compensate for miscoding of Indian race on death certificates.

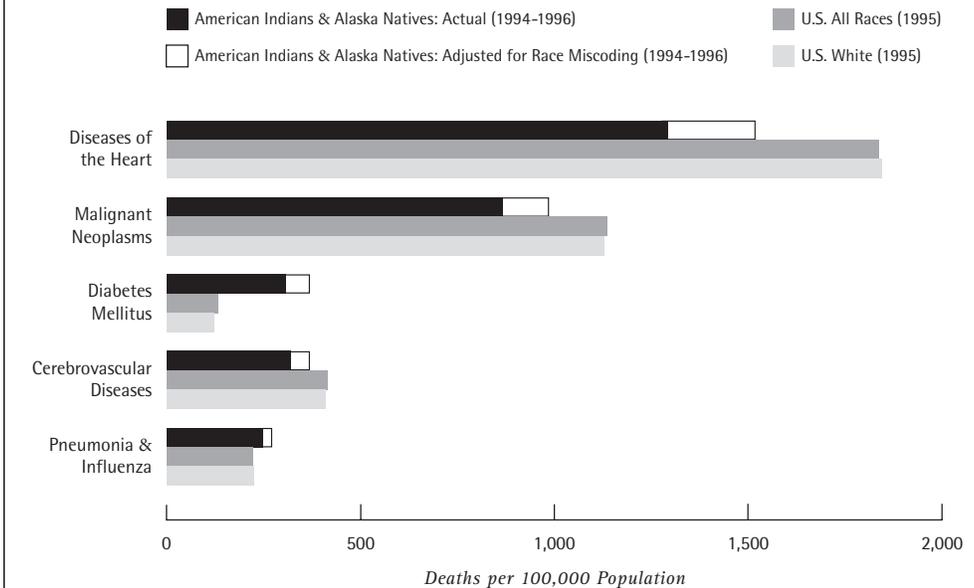
**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

**Part 4 General Mortality Statistics**

**Chart 4.7**

*Death Rates, Leading Causes: Ages 65+ Years*

The two leading causes of death for American Indians and Alaska Natives, ages 65 and over (1994-1996), were diseases of the heart and malignant neoplasms. For the U.S. All Races and White populations (1995), they were also diseases of the heart and malignant neoplasms.



**Table 4.7**

*Ten Leading Causes of Death for Decedents 65 Years Old and Older*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995 (Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native		U.S. All Races		U.S. White		Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number	Rate	Number	Rate	Number	Rate	U.S. All Races	U.S. White
All Causes	10,127	11,368	4,313.6	4,842.2	5,052.8	5,049.3	1.0	1.0
Diseases of the heart	3,036	3,527	1,293.2	1,502.3	1,837.4	1,843.7	0.8	0.8
Malignant neoplasms	2,036	2,296	867.2	978.0	1,137.2	1,129.4	0.9	0.9
Diabetes mellitus	722	831	307.5	354.0	132.7	122.5	2.7	2.9
Cerebrovascular diseases	750	829	319.5	353.1	414.2	410.0	0.9	0.9
Pneumonia and influenza	580	622	247.1	264.9	221.7	224.5	1.2	1.2
Chronic obstructive pulmonary diseases and allied conditions	451	495	192.1	210.8	263.9	276.0	0.8	0.8
Accidents	277	289	118.0	123.1	86.8	87.0	1.4	1.4
Motor vehicle	80	83	34.1	35.4	22.7	22.8	1.6	1.6
Other accidents	197	206	83.9	87.7	64.0	64.1	1.4	1.4
Nephritis, nephrotic syndrome, and nephrosis	197	216	83.9	92.0	60.2	56.3	1.5	1.6
Chronic liver disease and cirrhosis	162	177	69.0	75.4	30.5	31.2	2.5	2.4
Septicemia	140	149	59.6	63.5	50.4	46.9	1.3	1.4
All other causes	1,776	1,937						

<sup>1</sup>Adjusted to compensate for miscoding of Indian race on death certificates.

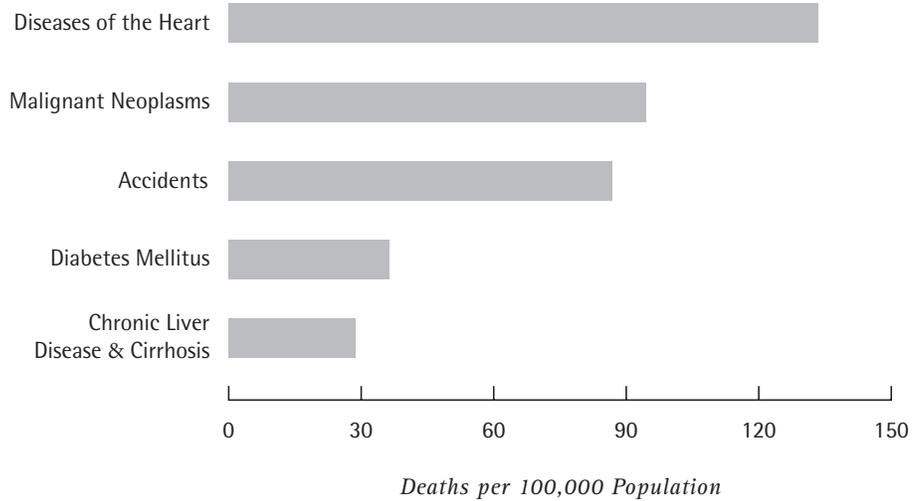
**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

**Part 4** *General Mortality Statistics*

**Chart 4.8**

*Death Rates for Leading Causes, Indians and Alaska Natives (1994-1996)*

The two leading causes of death for American Indians and Alaska Natives (1994-1996) and the U.S. All Races and White populations (1995) were diseases of the heart and malignant neoplasms.



**Table 4.8**

*Ten Leading Causes of Death for Decedents of All Ages*

American Indians and Alaska Natives, IHS Service Area, 1994-1996 (Rate per 100,000 Population)

Cause of Death	Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Causes	22,143	25,304	539.1	616.0
Diseases of the heart	4,688	5,482	114.1	133.5
Malignant neoplasms	3,413	3,879	83.1	94.4
Accidents	3,093	3,565	75.3	86.8
Motor vehicle	1,767	2,083	43.0	50.7
Other accidents	1,326	1,482	32.3	36.1
Diabetes mellitus	1,274	1,491	31.0	36.3
Chronic liver disease and cirrhosis	1,040	1,183	25.3	28.8
Cerebrovascular diseases	1,029	1,143	25.1	27.8
Pneumonia and influenza	840	912	20.4	22.2
Suicide	672	753	16.4	18.3
Chronic obstructive pulmonary diseases	574	632	14.0	15.4
Homicide and legal intervention	535	610	13.0	14.9
All other causes	4,985	5,654		

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

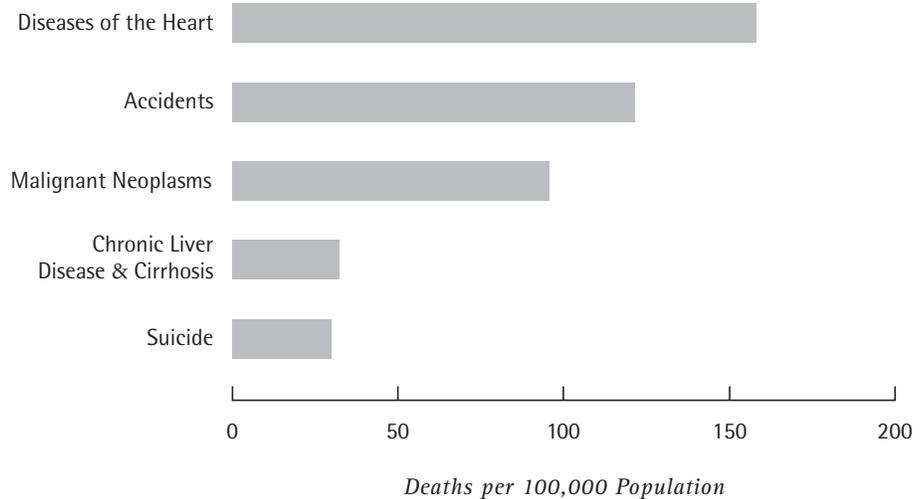
**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

**Part 4** *General Mortality Statistics*

**Chart 4.9**

*Death Rates for Leading Causes: Males, Indians and Alaska Natives (1994-1996)*

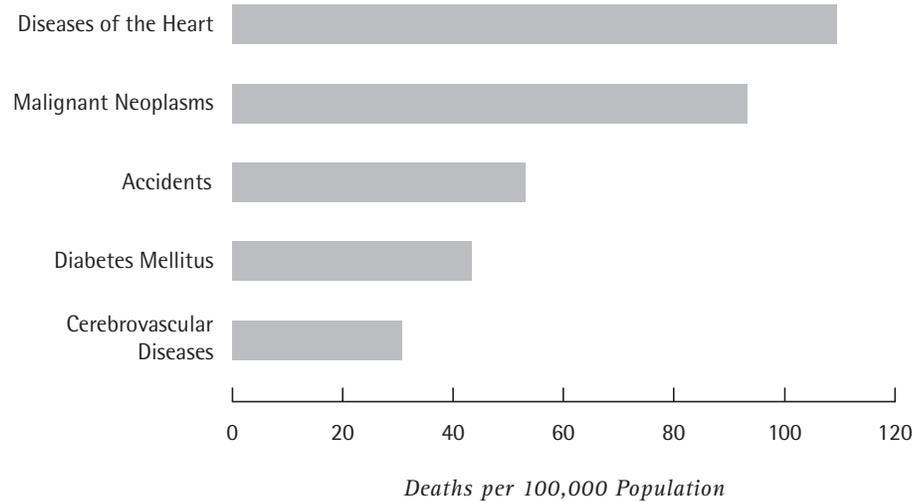
The two leading causes of death for Indian males (1994-1996) were diseases of the heart and accidents. For U.S. All Races and White males (1995), they were diseases of the heart and malignant neoplasms.



**Chart 4.10**

*Death Rates for Leading Causes: Females, Indians and Alaska Natives (1994-1996)*

The two leading causes of death for Indian females (1994-1996) were diseases of the heart and malignant neoplasms. The same was true for U.S. All Races and White females in 1995.



Part 4 General Mortality Statistics

Table 4.9

Leading Causes of Death by Sex

American Indians and Alaska Natives, IHS Service Area, 1994-1996  
(Rate per 100,000 Population)

MALE

Cause of Death	Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Causes	12,452	14,185	615.2	700.9
Diseases of the heart	2,704	3,202	133.6	158.2
Accidents	2,172	2,460	107.3	121.5
Motor vehicle	1,186	1,361	58.6	67.2
Other accidents	986	1,099	48.7	54.3
Malignant neoplasms	1,709	1,936	84.4	95.7
Chronic liver disease and cirrhosis	582	654	28.8	32.3
Suicide	548	604	27.1	29.8
Diabetes mellitus	514	587	25.4	29.0
Cerebrovascular diseases	454	501	22.4	24.8
Pneumonia and influenza	458	500	22.6	24.7
Homicide and legal intervention	415	468	20.5	23.1
Chronic obstructive pulmonary diseases and allied conditions	299	332	14.8	16.4
All other causes	2,597	2,941		

FEMALE

Cause of Death	Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Causes	9,691	11,119	465.1	533.6
Diseases of the heart	1,984	2,280	95.2	109.4
Malignant neoplasms	1,704	1,943	81.8	93.2
Accidents	921	1,105	44.2	53.0
Motor vehicle	581	722	27.9	34.6
Other accidents	340	383	16.3	18.4
Diabetes mellitus	760	904	36.5	43.4
Cerebrovascular diseases	575	642	27.6	30.8
Chronic liver disease and cirrhosis	458	529	22.0	25.4
Pneumonia and influenza	382	412	18.3	19.8
Chronic obstructive pulmonary diseases and allied conditions	275	300	13.2	14.4
Nephritis, nephrotic syndrome, and nephrosis	150	160	7.2	7.7
Suicide	124	149	6.0	7.2
All other causes	2,358	2,695		

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths. During 1994-1996 there were 158 male deaths and 46 female deaths (adjusted counts) due to HIV infection among the American Indian and Alaska Native population residing in the IHS service delivery area.

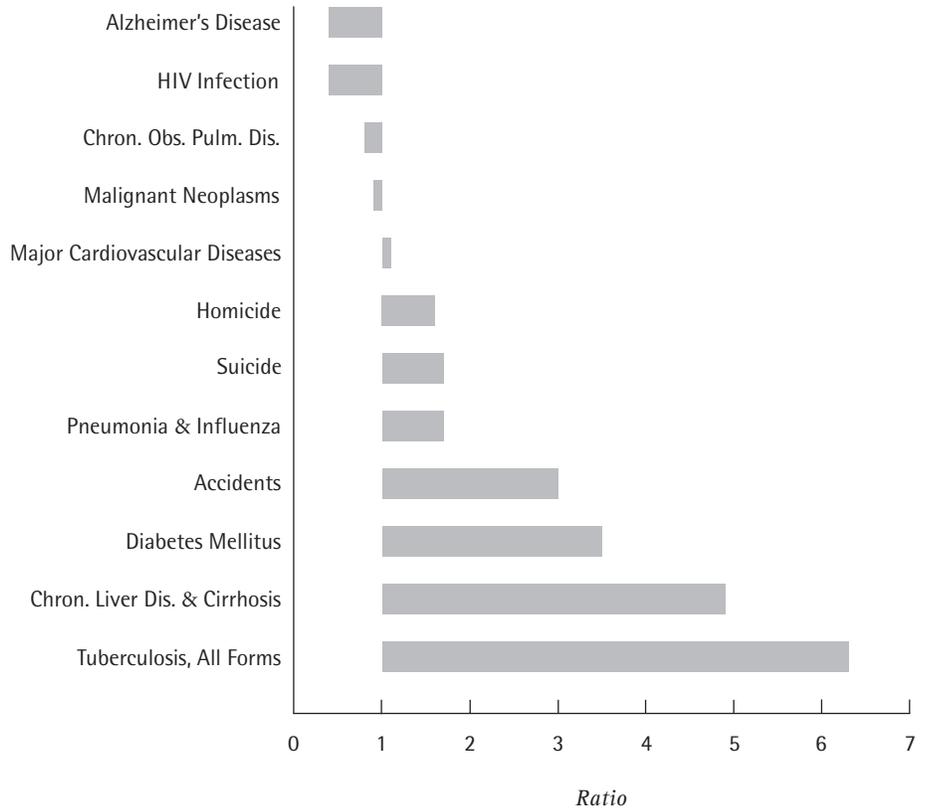
**Part 4** *General Mortality Statistics*

**Chart 4.11**

*Selected Age-Adjusted Death Rates, Ratio of Indians (1994-96) to U.S. All Races (1995)*

The American Indian and Alaska Native age-adjusted death rates for 1994-1996 were more than triple those of the U.S. All Races (1995) for tuberculosis (6.3 times), chronic liver disease and cirrhosis (4.9 times), diabetes (3.5 times), and accidents (3.0 times). Indian rates were below those of the U.S. All Races for Alzheimer's Disease (.4 times), HIV infection (.4 times), chronic obstructive pulmonary diseases (.8 times), and malignant neoplasms (.9 times).

These Indian rates have been adjusted for miscoding of Indian race on death certificates.



## Part 4 General Mortality Statistics

**Table 4.11**

### Age-Adjusted Death Rates

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native		U.S. All Races	U.S. White	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	609.8	699.3	503.9	476.9	1.4	1.5
Major cardiovascular diseases	168.3	195.7	174.9	167.2	1.1	1.2
Diseases of the heart	132.4	156.0	138.3	133.1	1.1	1.2
Cerebrovascular diseases	27.2	30.5	26.7	24.7	1.1	1.2
Atherosclerosis	2.6	2.8	2.3	2.3	1.2	1.2
Hypertension	2.1	2.1	2.3	1.8	0.9	1.2
Accidents	80.6	92.6	30.5	29.9	3.0	3.1
Motor vehicle	45.9	54.0	16.3	16.4	3.3	3.3
All other	34.7	38.6	14.2	13.5	2.7	2.9
Malignant neoplasms	102.1	116.6	129.9	127.0	0.9	0.9
Chronic liver disease and cirrhosis	32.6	37.2	7.6	7.4	4.9	5.0
Diabetes mellitus	39.4	46.4	13.3	11.7	3.5	4.0
Pneumonia and influenza	20.2	22.0	12.9	12.4	1.7	1.8
Suicide	17.3	19.3	11.2	11.9	1.7	1.6
Homicide	13.5	15.3	9.4	5.5	1.6	2.8
Chronic obstructive pulmonary diseases and allied conditions	15.6	17.3	20.8	21.3	0.8	0.8
Tuberculosis, all forms	1.9	1.9	0.3	0.2	6.3	9.5
Human immunodeficiency virus (HIV) infection	5.3	6.2	15.6	11.1	0.4	0.6
Alzheimer's disease	1.0	1.2	2.7	2.8	0.4	0.4

<sup>1</sup>Adjusted to compensate for miscoding of Indian race on death certificates.

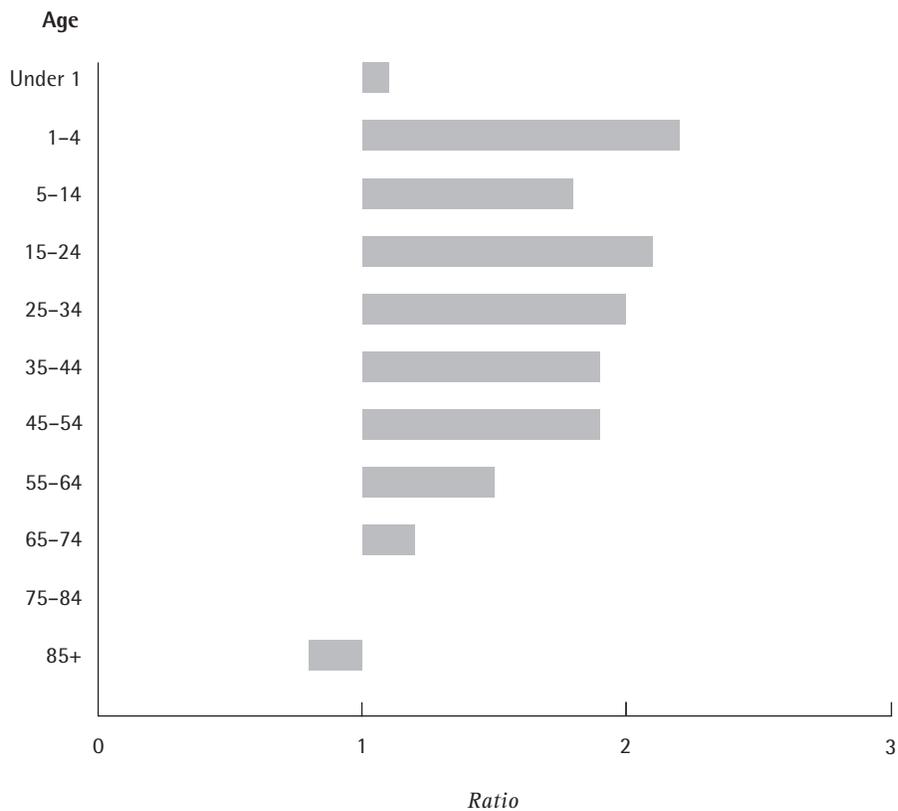
**Source:** U.S. Mortality Rates: Monthly Vital Statistics Report, NCHS, DHHS, Advance Report of Final Mortality Statistics, 1995, Vol. 45, No. 11, Supplement 2, June 12, 1997, Table 12.

Part 4 General Mortality Statistics

Chart 4.12

*Age-Specific Death Rates, Ratio of Indians and Alaska Natives (1994-1996) to U.S. All Races (1995)*

The age-specific death rate for American Indians and Alaska Natives (1994-1996) was more than double the U.S. All Races rate (1995) for age groups 1 to 4 and 15 through 34. The Indian rate was less than the U.S. All Races rate for only one age group, 85 years and older. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

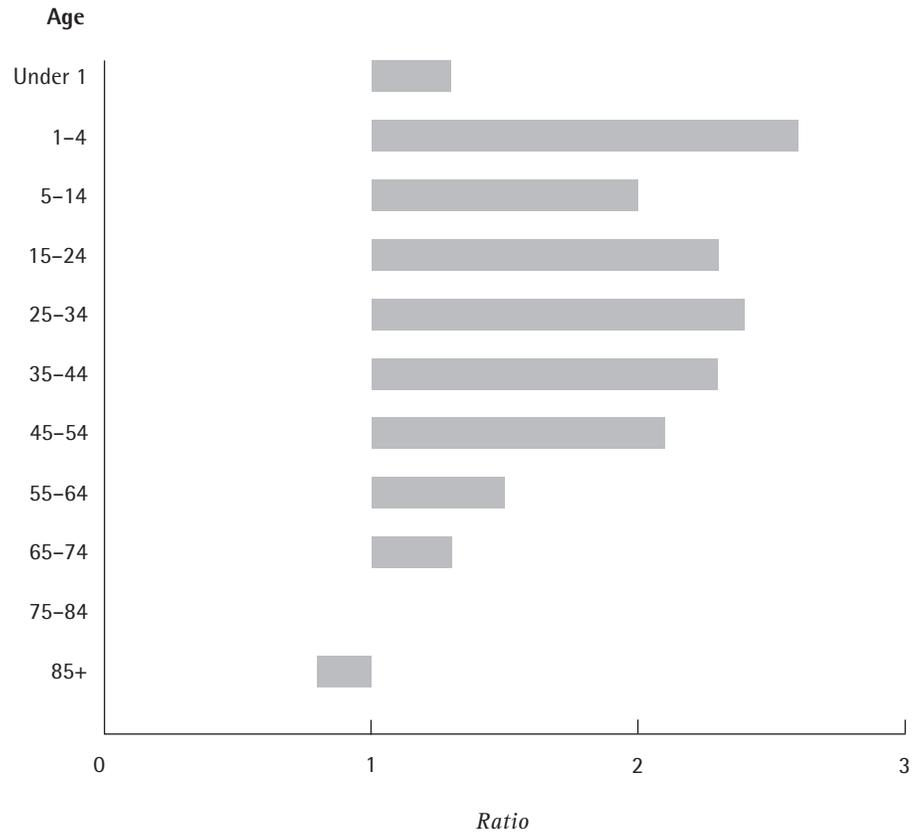


Part 4 General Mortality Statistics

Chart 4.13

*Age-Specific Death Rates, Ratio of Indians and Alaska Natives (1994-1996) to U.S. White (1995)*

The age-specific death rate for American Indians and Alaska Natives (1994-1996) was more than double the U.S. White rate (1995) for age groups 1 to 4 and 15 through 54. The Indian rate was less than the U.S. White rate for only one age group, 85 years and older. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.12**

*Age-Specific Death Rates*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and Selected U.S. Populations, 1995  
(Rate per 100,000 Population)

Age Group	American Indian & Alaska Native				U.S. Rate			Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number		Rate		All Races	White	Black	U.S. All Races	U.S. White
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>					
Under 1	753	922	699.1	856.0	768.8	646.5	1,467.9	1.1	1.3
1-4	297	353	76.8	91.3	40.6	35.1	70.3	2.2	2.6
5-14	329	366	37.2	41.4	22.5	20.6	33.4	1.8	2.0
15-24	1,191	1,433	163.3	196.5	95.3	84.3	159.8	2.1	2.3
25-34	1,712	2,003	246.2	288.0	141.3	121.5	284.9	2.0	2.4
35-44	2,136	2,432	409.4	466.2	240.8	207.0	511.3	1.9	2.3
45-54	2,453	2,798	754.1	860.2	460.1	413.0	915.3	1.9	2.1
55-64	3,132	3,616	1,400.9	1,617.4	1,114.5	1,049.1	1,823.2	1.5	1.5
65-74	4,032	4,629	2,777.2	3,188.5	2,563.5	2,495.3	3,568.2	1.2	1.3
75-84	3,705	4,252	5,291.6	6,072.9	5,851.8	5,801.4	6,911.1	1.0	1.0
85+	2,390	2,487	12,207.0	12,702.4	15,469.5	15,616.3	14,413.3	0.8	0.8

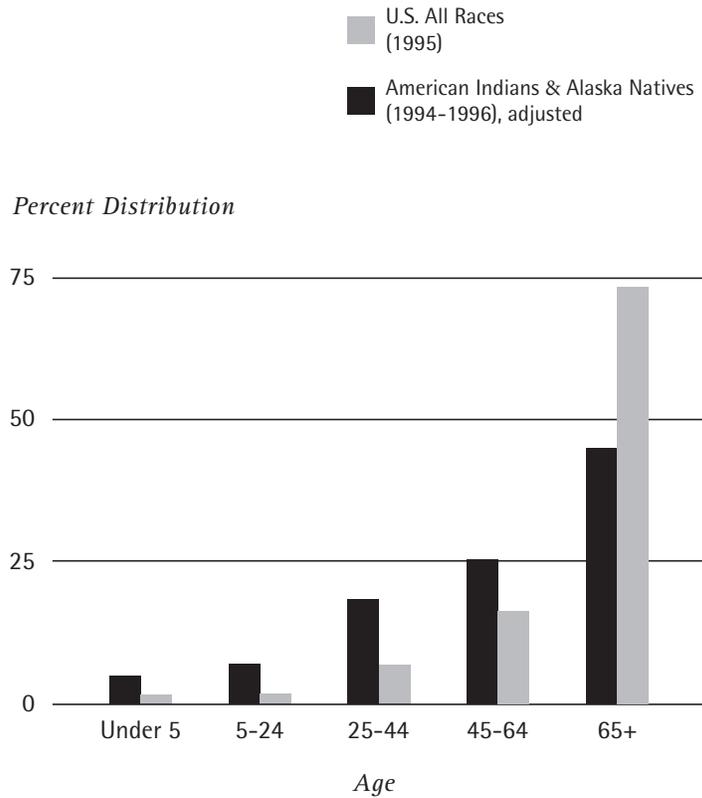
<sup>1</sup>Adjusted to compensate for miscoding of Indian race on death certificates.

Part 4 General Mortality Statistics

Chart 4.14

Deaths by Age

Of all American Indian and Alaska Native people who died during 1994-1996, 30 percent were under 45 years of age. This Indian death count has been adjusted for miscoding of Indian race on death certificates. This compared to 10 percent for the U.S. All Races population (1995).

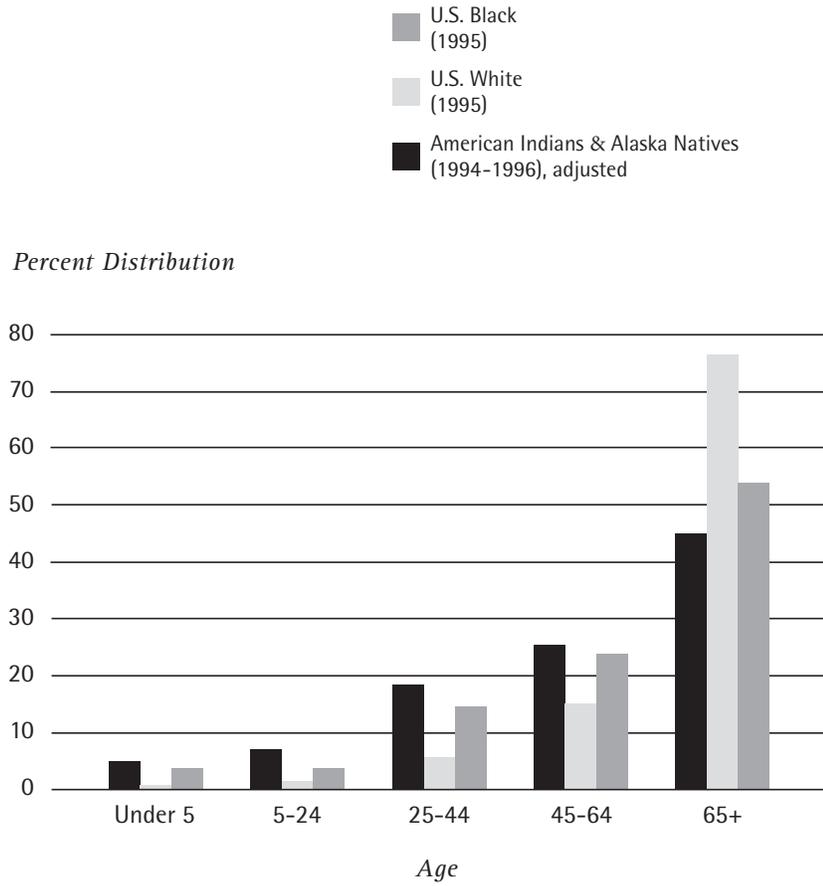


Part 4 General Mortality Statistics

Chart 4.15

Deaths by Age and Race

Twenty-two (22) percent of Black decedents and 8 percent of White decedents in 1995 were under 45 years of age.

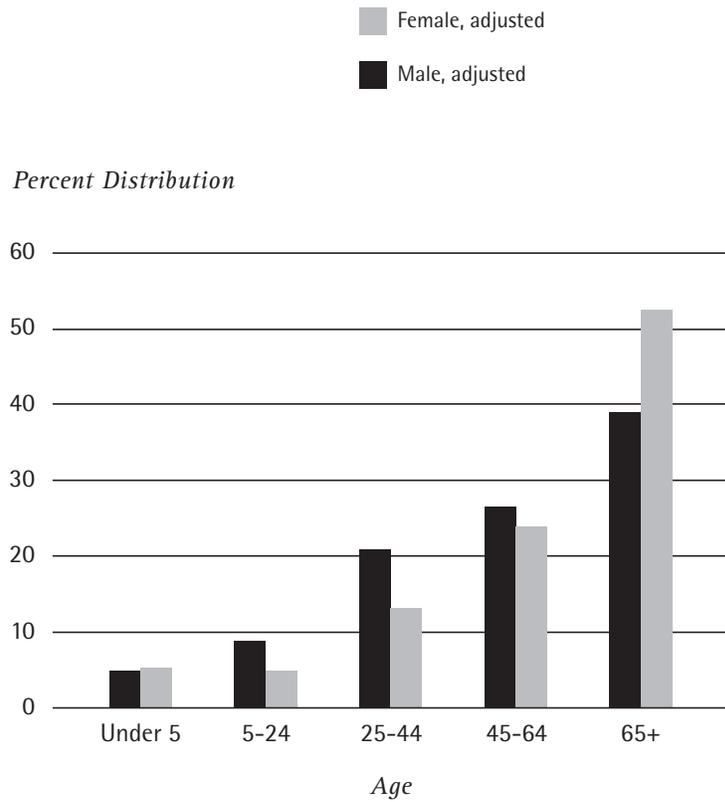


Part 4 General Mortality Statistics

Chart 4.16

*Deaths by Age and Sex,  
Indians and Alaska Native  
(1994-1996)*

Thirty-five (35) percent of Indian male deaths (1994-1996) pertained to ages under 45. This compared with 23 percent for Indian female deaths. These Indian death counts have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.14**

*Number and Percent Distribution of Deaths by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and Selected U.S. Populations, 1995

Age Group	American Indian and Alaska Native											
	Both Sexes				Male				Female			
	Number		Percent		Number		Percent		Number		Percent	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Ages	22,143	25,304	100.0	100.0	12,452	14,185	100.0	100.0	9,691	11,119	100.0	100.0
Under 1 year	753	922	3.4	3.6	395	492	3.2	3.5	358	430	3.7	3.9
1 to 4	297	353	1.3	1.4	166	197	1.3	1.4	131	156	1.4	1.4
5 to 14	329	366	1.5	1.4	195	216	1.6	1.5	134	150	1.4	1.3
15 to 24	1,191	1,433	5.4	5.7	895	1,029	7.2	7.3	296	404	3.1	3.6
25 to 34	1,712	2,003	7.7	7.9	1,208	1,368	9.7	9.6	504	635	5.2	5.7
35 to 44	2,136	2,432	9.6	9.6	1,436	1,597	11.5	11.3	700	835	7.2	7.5
45 to 54	2,453	2,798	11.1	11.1	1,496	1,683	12.0	11.9	957	1,115	9.9	10.0
55 to 64	3,132	3,616	14.1	14.3	1,807	2,072	14.5	14.6	1,325	1,544	13.7	13.9
65 to 74	4,032	4,629	18.2	18.3	2,164	2,489	17.4	17.5	1,868	2,140	19.3	19.2
75 to 84	3,705	4,252	16.7	16.8	1,781	2,079	14.3	14.7	1,924	2,173	19.9	19.5
85 and over	2,390	2,487	10.8	9.8	900	954	7.2	6.7	1,490	1,533	15.4	13.8
Age not stated	13	13	0.1	0.1	9	9	0.1	0.1	4	4	0.0	0.0

United States			
Age Group	All Races	White	Black
Number of Deaths, All Ages	2,312,132	1,987,437	286,401
Percent Distribution, All Ages	100.0	100.0	100.0
Under 1	1.3	0.6	3.2
1 to 4	0.3	0.2	0.6
5 to 14	0.4	0.3	0.7
15 to 24	1.5	1.2	3.0
25 to 34	2.5	2.0	5.4
35 to 44	4.4	3.7	9.2
45 to 54	6.2	5.5	10.3
55 to 64	10.2	9.6	13.5
65 to 74	20.8	20.9	20.1
75 to 84	28.2	29.5	20.0
85 and over	24.3	26.0	13.8
Age not stated	0.0	0.0	0.0

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

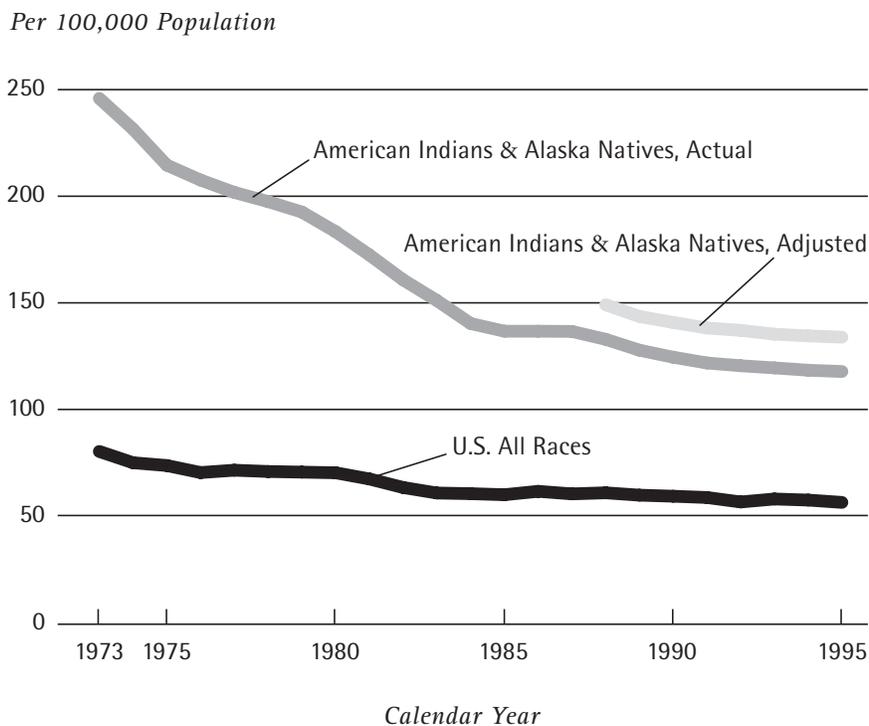
**Note:** 0.0 rounds to zero.

Part 4 General Mortality Statistics

Chart 4.17

Age-Adjusted Injury and Poisoning Death Rates

The American Indian and Alaska Native age-adjusted death rate due to injury and poisoning (accidents, suicide, homicide, and other injuries) in 1994-1996 (129.7 deaths per 100,000 population) is more than half of what it was in 1972-1974 (241.7). The 1994-1996 rate is 2.5 times the U.S. All Races rate of 52.2 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4 General Mortality Statistics**

**Table 4.17**

*Injury and Poisoning<sup>1</sup> Deaths and Death Rates*

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian & Alaska Native Number		Rate		U.S. All Races Rate	U.S. White Rate	Ratio of American Indian & Alaska Native to:			
	Actual	Adj	Actual	Adj			U.S. All Races		U.S. White	
							Actual	Adj	Actual	Adj
(1996)	1,470	1,686								
1994-1996 (1995)	1,450	1,669	113.6	129.7	52.2	49.0	2.2	2.5	2.3	2.6
1993-1995 (1994)	1,464	1,665	114.2	130.3	53.3	48.4	2.1	2.4	2.4	2.7
1992-1994 (1993)	1,403	1,609	115.3	131.1	53.8	48.9	2.1	2.4	2.4	2.7
1991-1993 (1992)	1,369	1,564	116.3	132.9	52.4	48.0	2.2	2.5	2.4	2.8
1990-1992 (1991)	1,397	1,610	117.6	134.0	54.5	49.8	2.2	2.5	2.4	2.7
1989-1991 (1990)	1,349	1,532	120.3	136.6	55.1	50.8	2.2	2.5	2.4	2.7
1988-1990 (1989)	1,367	1,548	123.6	139.4	55.6	50.9	2.2	2.5	2.4	2.7
1987-1989 (1988)	1,391	1,567	128.7	144.9	56.7	52.7	2.3	2.6	2.4	2.7
1986-1988 (1987)	1,390	1,568	132.4		56.2	52.8	2.4		2.5	
1985-1987 (1986)	1,375		132.5		57.4	54.1	2.3		2.4	
1984-1986 (1985)	1,275		132.5		55.8	53.0	2.4		2.5	
1983-1985 (1984)	1,254		136.1		56.3	53.7	2.4		2.5	
1982-1984 (1983)	1,280		146.9		56.6	53.6	2.6		2.7	
1981-1983 (1982)	1,351		156.6		59.2	55.9	2.6		2.8	
1980-1982 (1981)	1,344		168.3		63.2	59.5	2.7		2.8	
1979-1981 (1980)	1,418		179.2		66.1	61.9	2.7		2.9	
1978-1980 (1979)	1,472		188.4		66.4	62.1	2.8		3.0	
1977-1979 (1978)	1,383		193.3		66.7	62.6	2.9		3.1	
1976-1978 (1977)	1,346		197.6		67.3	62.8	2.9		3.1	
1975-1977 (1976)	1,321		203.4		66.2	63.8	3.1		3.2	
1974-1976 (1975)	1,283		210.4		69.5	63.8	3.0		3.3	
1973-1975 (1974)	1,229		227.3		70.8	64.6	3.2		3.5	
1972-1974 (1973)	1,381		241.7		76.1	69.4	3.2		3.5	
(1972)	1,241									
1954-1956 (1955)	2,273		200.3		69.2	51.9	2.9		3.9	

Adj—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

<sup>1</sup>Includes the following deaths and ICD9 codes: Motor vehicle accidents, E810-E825. Other accidents, E800-E807, E826-E949. Suicide, E950-E959. Homicide, E960-E978. Injury undetermined whether accidentally or purposely inflicted, E980-E989 and Injury resulting from operations of war, E990-E999.

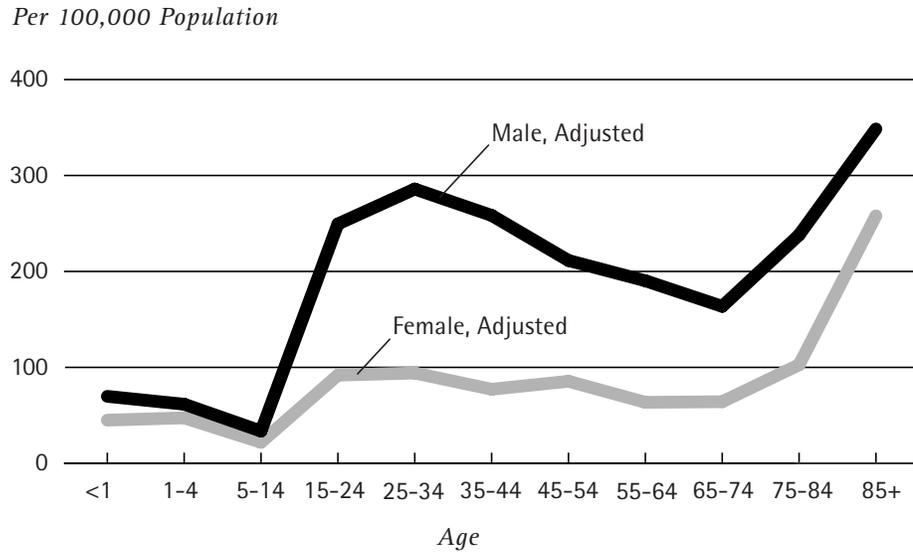
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.18

*Injury and Poisoning Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific death rate due to injury and poisoning for Indian males (1994-1996) was higher for all age groups in comparison with Indian females. The Indian male rate was over 200 deaths per 100,000 population for all age groups except under 15 and 55 to 74 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.18**

*Injury and Poisoning Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	50.1	57.6	55.1	69.8	45.0	45.0
1-4 years	46.8	54.6	52.9	61.6	40.5	47.4
5-14 years	25.7	27.8	31.0	33.6	20.3	21.9
15-24 years	142.5	172.3	216.0	249.5	65.8	91.9
25-34 years	161.4	188.0	251.0	285.9	75.5	94.1
35-44 years	146.3	164.8	231.9	258.4	66.1	77.2
45-54 years	131.0	145.7	193.4	211.4	73.7	85.5
55-64 years	114.5	122.6	114.5	190.3	59.4	63.6
65-74 years	104.7	108.1	104.7	163.6	64.2	64.2
75-84 years	145.7	157.1	145.7	238.0	97.9	102.7
85 years +	291.1	291.1	291.1	348.5	258.0	258.0

U.S. All Races			
Age Group	Both Sexes		Female
	Actual	Adj <sup>1</sup>	Actual
Under 1 year	30.1		28.3
1-4 years	18.3		14.9
5-14 years	11.8		8.3
15-24 years	73.6		30.4
25-34 years	65.7		28.0
35-44 years	61.3		28.7
45-54 years	52.3		25.8
55-64 years	50.6		27.5
65-74 years	64.6		40.8
75-84 years	123.2		86.6
85 years +	294.9		238.7

U.S. White			
Age Group	Both Sexes		Female
	Actual	Adj <sup>1</sup>	Actual
Under 1 year	24.7		22.1
1-4 years	15.5		13.1
5-14 years	10.9		7.7
15-24 years	65.9		29.7
25-34 years	59.8		25.8
35-44 years	57.5		26.9
45-54 years	49.6		25.1
55-64 years	48.7		26.9
65-74 years	63.1		40.2
75-84 years	123.2		86.7
85 years +	301.0		244.2

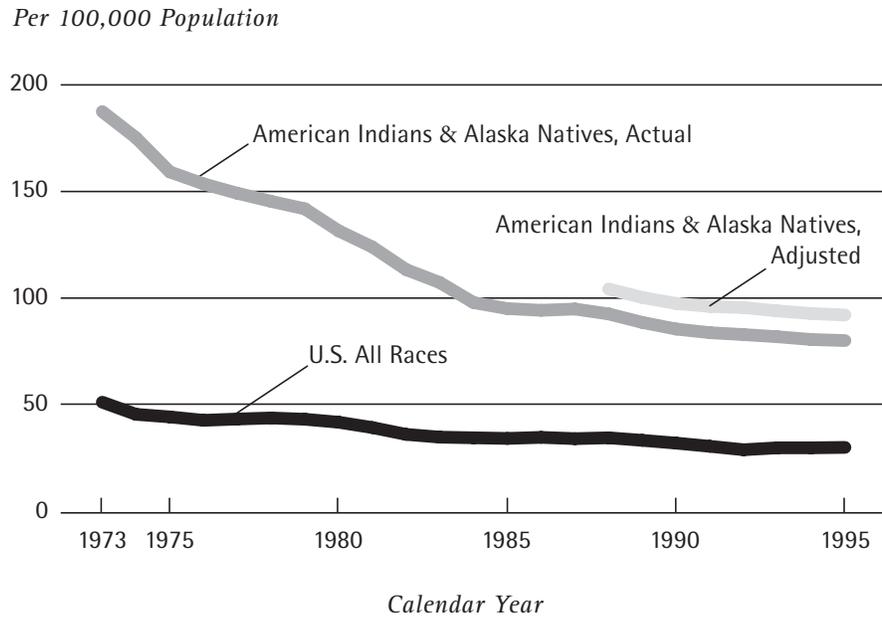
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

Part 4 General Mortality Statistics

Chart 4.19

Age-Adjusted  
Accident Death Rates

The age-adjusted accident death rate for American Indians and Alaska Natives has decreased over 51 percent since 1972-1974, 188.0 to 92.6. However, during the last ten years the decline has slowed to about 2 percent. The 1994-1996 rate is more than triple the U.S. All Races rate of 30.5 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



## Part 4 General Mortality Statistics

**Table 4.19**

### Accident Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	Total Deaths		American Indian & Alaska Native All Accidents		Motor Vehicle		U.S. All Races All Accidents		U.S. White All Accidents	
	Actual	Adj	Actual	Adj	Actual	Adj	All Accidents	Motor Vehicle	All Accidents	Motor Vehicle
(1996)	1,055	1,212								
1994-1996 (1995)	1,016	1,180	80.6	92.6	45.9	54.0	30.5	16.3	29.9	16.4
1993-1995 (1994)	1,022	1,173	81.1	93.3	45.4	53.4	30.3	16.1	29.5	16.2
1992-1994 (1993)	1,007	1,168	82.4	94.5	45.5	53.3	30.3	16.0	29.6	16.1
1991-1993 (1992)	977	1,126	83.4	96.1	47.0	55.4	29.4	15.8	28.8	15.9
1990-1992 (1991)	988	1,154	84.3	96.6	47.5	55.8	31.0	17.0	30.3	17.2
1989-1991 (1990)	970	1,101	86.0	98.0	48.4	56.3	32.5	18.5	31.8	18.6
1988-1990 (1989)	969	1,097	89.1	100.8	49.6	57.2	33.8	18.9	32.9	19.1
1987-1989 (1988)	1,012	1,148	93.1	104.8	52.2	59.9	35.0	19.7	34.1	20.0
1986-1988 (1987)	1,000	1,135	95.4		54.3		34.6	19.5	33.9	19.8
1985-1987 (1986)	983		94.8		54.2		35.2	19.4	34.5	19.8
1984-1986 (1985)	912		95.6		53.0		34.7	18.8	34.1	19.1
1983-1985 (1984)	920		98.4		53.2		35.0	19.1	34.6	19.6
1982-1984 (1983)	905		107.8		57.0		35.3	18.5	34.7	19.0
1981-1983 (1982)	999		113.9		62.1		36.6	19.3	36.1	19.8
1980-1982 (1981)	972		124.5		69.4		39.8	21.8	39.3	22.5
1979-1981 (1980)	1,058		132.1		75.2		42.3	22.9	41.5	23.4
1978-1980 (1979)	1,095		142.4		80.4		43.7	23.7	42.9	24.3
1977-1979 (1978)	1,070		145.9		82.4		44.3	23.4	43.3	23.8
1976-1978 (1977)	1,004		149.7		85.0		43.8	22.4	42.5	22.5
1975-1977 (1976)	994		154.1		86.9		43.2	21.5	41.8	21.5
1974-1976 (1975)	999		159.7		87.8		44.8	21.3	43.1	21.2
1973-1975 (1974)	921		175.7		97.3		46.0	21.8	44.3	21.7
1972-1974 (1973)	1,089		188.0		104.8		51.7	26.4	49.5	26.0
(1972)	987									
1954-1956 (1955)	714		184.0		97.6		54.3	24.6	52.2	24.3

Adj—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

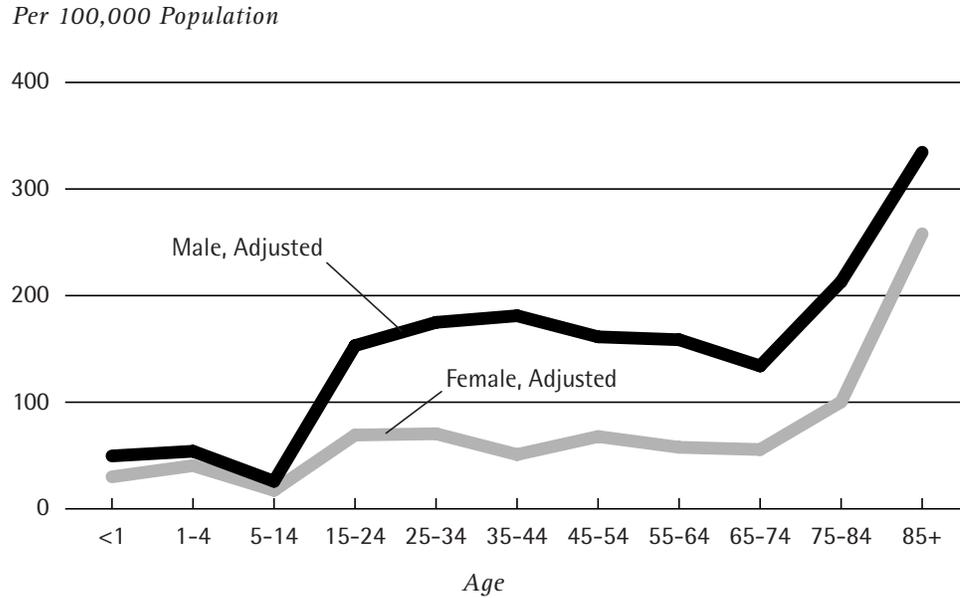
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.20

*Accident Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific death rate for accidents for Indian males (1994-1996) was higher for all age groups in comparison with Indian females. The Indian male rate was 2.4 to 3.6 times the Indian female rate for age groups 25 through 74 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.20**

*Accident Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	36.2	39.9	42.3	49.6	30.0	30.0
1-4 years	40.1	47.4	45.3	54.0	34.7	40.5
5-14 years	20.0	21.6	23.8	25.8	16.1	17.3
15-24 years	90.6	112.0	131.4	153.1	48.2	69.2
25-34 years	103.3	121.5	152.2	174.9	56.0	70.4
35-44 years	99.9	113.9	159.7	181.1	43.8	50.9
45-54 years	99.9	112.5	145.2	161.3	58.4	67.8
55-64 years	97.1	104.7	147.1	158.6	53.5	57.7
65-74 years	87.5	90.2	127.7	134.0	55.6	55.6
75-84 years	134.3	145.7	191.8	213.1	95.6	100.3
85 years +	286.0	286.0	334.5	334.5	258.0	258.0

U.S. All Races			
Age Group	Both Sexes		Female
	Actual	Adj <sup>1</sup>	Actual
Under 1 year	20.6	21.5	19.5
1-4 years	14.5	16.9	12.1
5-14 years	9.4	11.8	6.8
15-24 years	38.9	56.8	20.2
25-34 years	33.2	51.0	15.4
35-44 years	33.7	51.4	16.2
45-54 years	30.0	45.3	15.4
55-64 years	32.1	46.0	19.5
65-74 years	45.0	60.1	32.9
75-84 years	98.6	131.0	78.0
85 years +	268.4	368.9	229.2

U.S. White			
Age Group	Both Sexes		Female
	Actual	Adj <sup>1</sup>	Actual
Under 1 year	17.4	19.0	15.8
1-4 years	13.3	15.4	11.1
5-14 years	8.8	11.1	6.4
15-24 years	40.6	58.7	21.4
25-34 years	33.0	50.6	15.1
35-44 years	32.2	48.9	15.3
45-54 years	28.1	42.0	14.4
55-64 years	30.4	42.9	18.9
65-74 years	43.5	57.3	32.3
75-84 years	98.0	129.1	78.2
85 years +	274.1	374.0	235.6

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

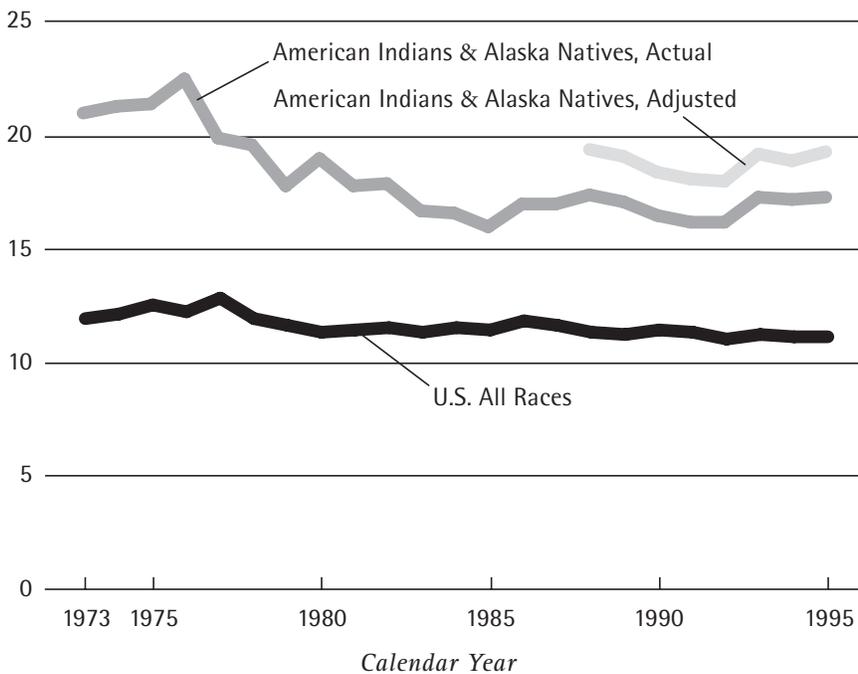
Part 4 General Mortality Statistics

Chart 4.21

Age-Adjusted  
Suicide Death Rates

The age-adjusted suicide death rate for American Indians and Alaska Natives decreased 29 percent from a high (22.5) in 1975-1977 to a low (16.0) in 1984-1986. Since then, it has increased 21 percent to 19.3 in 1994-1996. The 1994-1996 rate is 72 percent higher than the U.S. All Races rate of 11.2 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

Per 100,000 Population



## Part 4 General Mortality Statistics

**Table 4.21**

### *Suicide Deaths and Death Rates*

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	<i>Actual</i>	<i>Adjusted</i>	<i>Actual</i>	<i>Adjusted</i>			<i>Actual</i>	<i>Adjusted</i>	<i>Actual</i>	<i>Adjusted</i>
(1996)	225	262								
1994-1996 (1995)	205	228	17.3	19.3	11.2	11.9	1.5	1.7	1.5	1.6
1993-1995 (1994)	242	263	17.2	18.9	11.2	11.9	1.5	1.7	1.4	1.6
1992-1994 (1993)	204	226	17.3	19.2	11.3	12.0	1.5	1.7	1.4	1.6
1991-1993 (1992)	193	219	16.2	18.0	11.1	11.8	1.5	1.6	1.4	1.5
1990-1992 (1991)	184	200	16.2	18.1	11.4	12.1	1.4	1.6	1.3	1.5
1989-1991 (1990)	195	218	16.5	18.4	11.5	12.2	1.4	1.6	1.4	1.5
1988-1990 (1989)	192	217	17.1	19.1	11.3	12.0	1.5	1.7	1.4	1.6
1987-1989 (1988)	185	206	17.4	19.4	11.4	12.2	1.5	1.7	1.4	1.6
1986-1988 (1987)	187	206	17.0		11.7	12.5	1.5		1.4	
1985-1987 (1986)	158		17.0		11.9	12.7	1.4		1.3	
1984-1986 (1985)	172		16.0		11.5	12.3	1.4		1.3	
1983-1985 (1984)	148		16.6		11.6	12.4	1.4		1.3	
1982-1984 (1983)	161		16.7		11.4	12.2	1.5		1.4	
1981-1983 (1982)	154		17.9		11.6	12.4	1.5		1.4	
1980-1982 (1981)	157		17.8		11.5	12.2	1.5		1.5	
1979-1981 (1980)	146		19.0		11.4	12.1	1.7		1.6	
1978-1980 (1979)	162		17.8		11.7	12.4	1.5		1.4	
1977-1979 (1978)	117		19.6		12.0	12.7	1.6		1.5	
1976-1978 (1977)	161		19.9		12.9	13.6	1.5		1.5	
1975-1977 (1976)	143		22.5		12.3	12.9	1.8		1.7	
1974-1976 (1975)	139		21.4		12.6	13.3	1.7		1.6	
1973-1975 (1974)	122		21.3		12.2	12.8	1.7		1.7	
1972-1974 (1973)	116		21.0		12.0	12.6	1.8		1.7	
(1972)	113									
1954-1956 (1955)	39		11.9		9.9	10.4	1.2		1.1	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

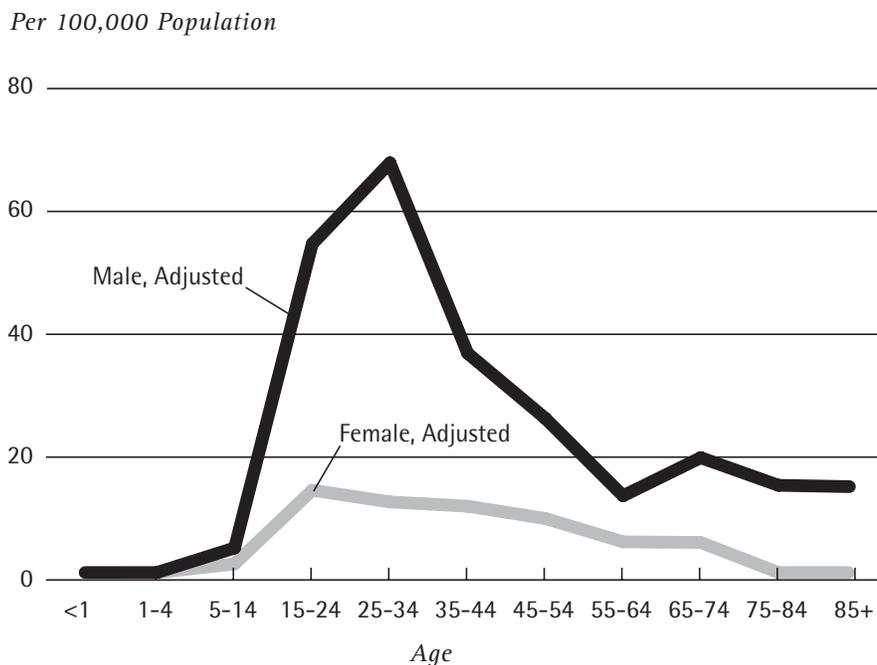
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.22

*Suicide Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific suicide death rate (1994-1996) for Indian males was higher for all age groups in comparison with Indian females. The Indian male rate peaked at 66.7 deaths per 100,000 population for age group 25 to 34 years. These Indian rates have been adjusted for mis-coding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.22**

*Suicide Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	2.7	2.7	4.0	4.0	1.4	1.4
15-24 years	29.1	33.9	46.7	53.5	10.6	13.4
25-34 years	33.9	38.5	59.7	66.7	9.3	11.5
35-44 years	21.1	22.8	34.1	35.7	8.9	10.8
45-54 years	15.7	16.6	24.4	25.1	7.7	8.8
55-64 years	8.1	8.5	11.5	12.5	5.0	5.0
65-74 years	10.3	11.0	17.1	18.7	4.9	4.9
75-84 years	5.7	5.7	14.2	14.2	—	—
85 years +	5.1	5.1	13.9	13.9	—	—

U.S. All Races				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—
1-4 years	—	—	—	—
5-14 years	0.9	—	0.4	—
15-24 years	13.4	—	3.7	—
25-34 years	15.4	—	5.2	—
35-44 years	15.3	—	6.5	—
45-54 years	14.6	—	6.7	—
55-64 years	13.3	—	5.3	—
65-74 years	15.8	—	5.4	—
75-84 years	20.8	—	5.5	—
85 years +	21.6	—	5.5	—

U.S. White				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—
1-4 years	—	—	—	—
5-14 years	1.0	—	0.4	—
15-24 years	14.0	—	3.9	—
25-34 years	16.3	—	5.5	—
35-44 years	16.5	—	7.2	—
45-54 years	15.9	—	7.4	—
55-64 years	14.4	—	5.8	—
65-74 years	16.7	—	5.7	—
75-84 years	22.1	—	5.8	—
85 years +	23.0	—	5.6	—

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

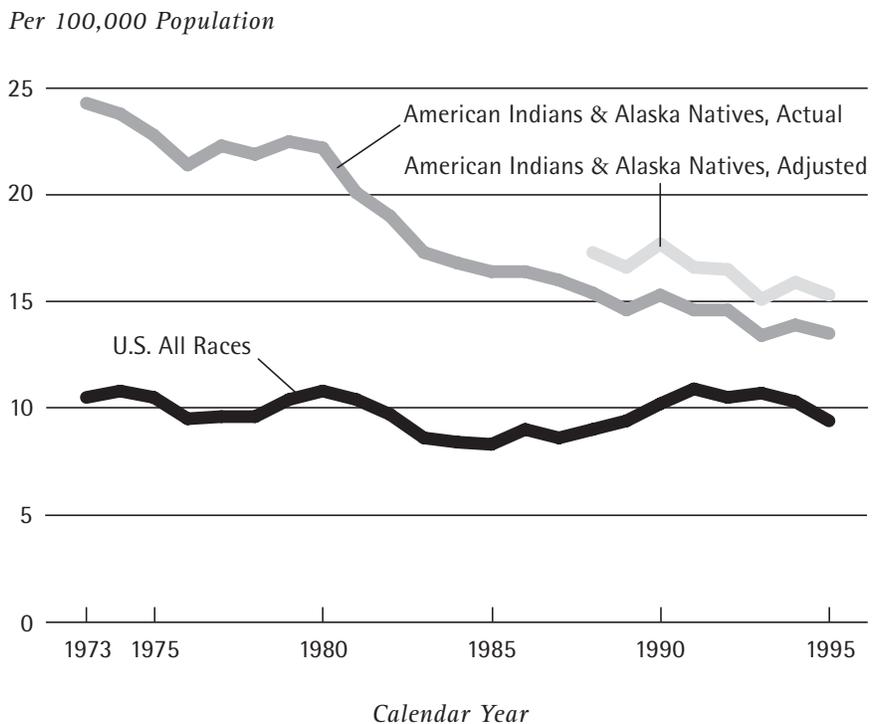
Note: — Represents zero.

Part 4 General Mortality Statistics

Chart 4.23

Age-Adjusted  
Homicide Death Rates

The age-adjusted homicide death rate for American Indians and Alaska Natives has decreased 37 percent since 1972-1974 from 24.3 to 15.3. The 1994-1996 rate (15.3 deaths per 100,000 population) is 63 percent higher than the U.S. All Races rate of 9.4 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Part 4 General Mortality Statistics

Table 4.23

Homicide Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:				
	Number		Rate				U.S. All Races		U.S. White		
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted	
(1996)	161	178									
1994-1996 (1995)	198	231	13.5	15.3	9.4	5.5	1.4	1.6	2.5	2.8	
1993-1995 (1994)	176	201	13.9	15.9	10.3	5.8	1.3	1.5	2.4	2.7	
1992-1994 (1993)	168	190	13.4	15.1	10.7	6.0	1.3	1.4	2.2	2.5	
1991-1993 (1992)	168	185	14.6	16.5	10.5	6.1	1.4	1.6	2.4	2.7	
1990-1992 (1991)	199	229	14.6	16.6	10.9	6.2	1.3	1.5	2.4	2.7	
1989-1991 (1990)	153	180	15.3	17.7	10.2	5.9	1.5	1.7	2.6	3.0	
1988-1990 (1989)	177	205	14.6	16.6	9.4	5.4	1.6	1.8	2.7	3.1	
1987-1989 (1988)	160	178	15.4	17.3	9.0	5.3	1.7	1.9	2.9	3.3	
1986-1988 (1987)	161	185	16.0		8.6	5.3	1.9		3.0		
1985-1987 (1986)	184		16.4		9.0	5.6	1.8		2.9		
1984-1986 (1985)	151		16.4		8.3	5.4	2.0		3.0		
1983-1985 (1984)	146		16.8		8.4	5.5	2.0		3.1		
1982-1984 (1983)	171		17.3		8.6	5.6	2.0		3.1		
1981-1983 (1982)	145		19.0		9.7	6.3	2.0		3.0		
1980-1982 (1981)	165		20.1		10.4	6.6	1.9		3.0		
1979-1981 (1980)	172		22.2		10.8	6.9	2.1		3.2		
1978-1980 (1979)	164		22.5		10.4	6.5	2.2		3.5		
1977-1979 (1978)	158		21.9		9.6	6.0	2.3		3.7		
1976-1978 (1977)	139		22.3		9.6	5.9	2.3		3.8		
1975-1977 (1976)	144		21.4		9.5	5.5	2.3		3.9		
1974-1976 (1975)	115		22.8		10.5	6.1	2.2		3.7		
1973-1975 (1974)	136		23.8		10.8	6.0	2.2		4.0		
1972-1974 (1973)	139		24.3		10.5	5.7	2.3		4.3		
(1972)	93										
1954-1956 (1955)	77		23.8		4.8	2.4	5.0		9.9		

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

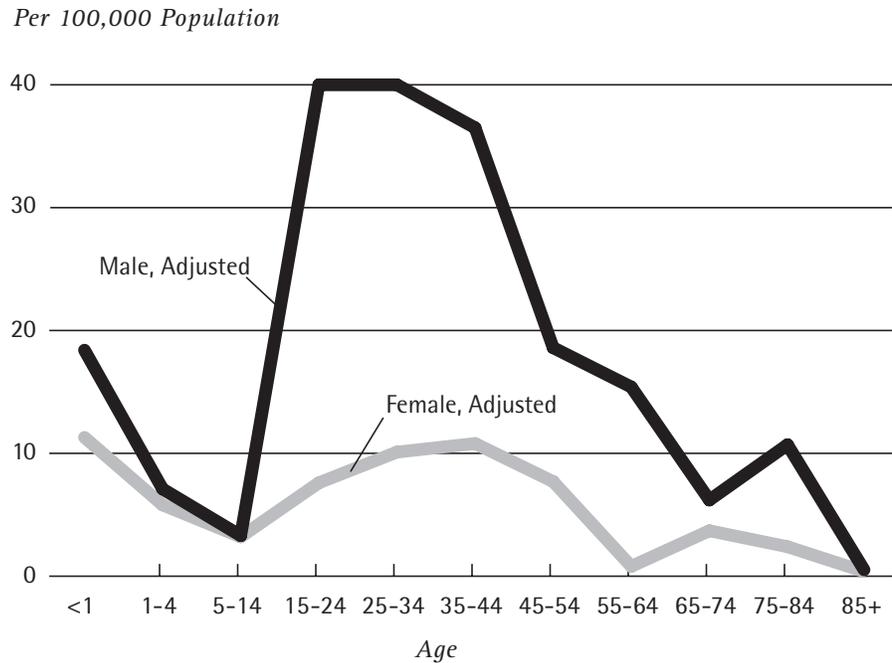
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.24

*Homicide Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific homicide death rate (1994-1996) for Indian males was higher for all age groups except 85 years and older (there were no homicide deaths for either sex for this age group) in comparison with Indian females. The Indian male rate was 40.0 deaths per 100,000 population for age groups 15 through 34. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.24**

*Homicide Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	10.2	14.9	11.0	18.4	9.4	11.3
1-4 years	6.2	6.5	7.1	7.1	5.3	5.8
5-14 years	2.7	3.3	2.7	3.3	2.8	3.2
15-24 years	21.0	24.1	35.2	40.0	6.2	7.6
25-34 years	21.4	24.7	35.0	40.0	8.4	10.1
35-44 years	20.5	23.2	32.9	36.5	8.9	10.8
45-54 years	11.7	12.9	17.3	18.6	6.5	7.7
55-64 years	7.6	7.6	15.4	15.4	0.8	0.8
65-74 years	4.8	4.8	6.2	6.2	3.7	3.7
75-84 years	5.7	5.7	10.7	10.7	2.4	2.4
85 years +	—	—	—	—	—	—

U.S. All Races				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	8.1	8.9	7.2	7.2
1-4 years	2.9	3.1	2.6	2.6
5-14 years	1.5	1.9	1.0	1.0
15-24 years	20.3	34.0	6.1	6.1
25-34 years	15.1	23.8	6.5	6.5
35-44 years	9.7	14.6	4.9	4.9
45-54 years	6.2	9.7	3.0	3.0
55-64 years	4.5	7.2	2.1	2.1
65-74 years	3.3	4.6	2.2	2.2
75-84 years	3.1	3.7	2.7	2.7
85 years +	3.3	4.3	2.9	2.9

U.S. White				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	6.1	7.1	5.0	5.0
1-4 years	1.9	2.1	1.8	1.8
5-14 years	1.0	1.3	0.8	0.8
15-24 years	10.5	16.6	4.1	4.1
25-34 years	8.7	13.0	4.2	4.2
35-44 years	6.3	9.2	3.4	3.4
45-54 years	4.4	6.4	2.5	2.5
55-64 years	3.3	5.0	1.7	1.7
65-74 years	2.4	3.2	1.9	1.9
75-84 years	2.4	2.5	2.3	2.3
85 years +	2.5	3.6	2.1	2.1

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

Note: — Represents zero.

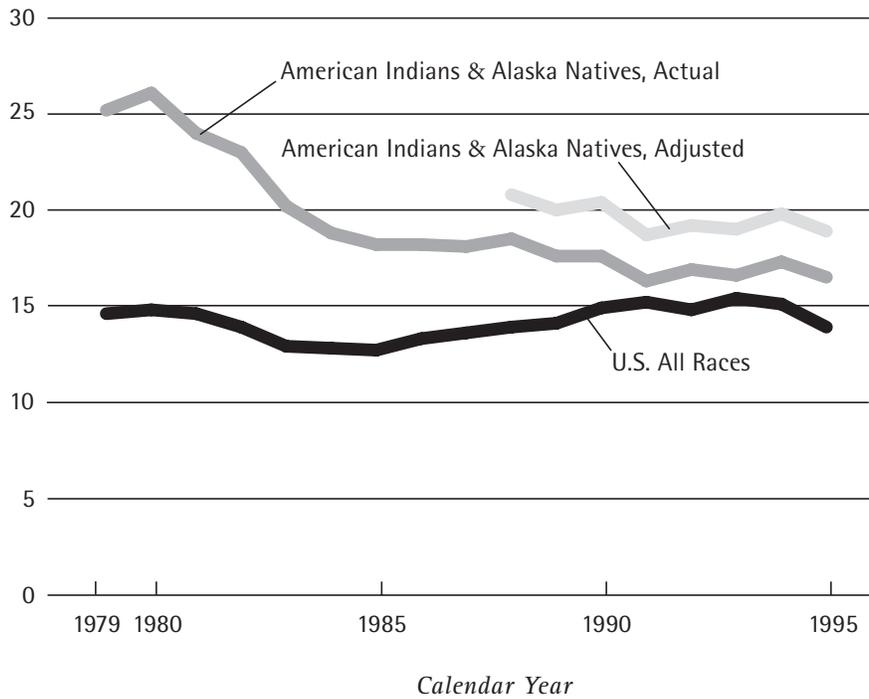
Part 4 General Mortality Statistics

Chart 4.25

Age-Adjusted Firearm Injury Death Rates

The age-adjusted firearm injury death rate for American Indians and Alaska Natives has decreased 25 percent since 1978-1980 from 25.2 to 18.9. The 1994-1996 rate (18.9 deaths per 100,000 population) is 36 percent higher than the U.S. All Races rate of 13.9 for 1995. These Indian rates have been adjusted for mis-coding of Indian race on death certificates.

Per 100,000 Population



Part 4 General Mortality Statistics

Table 4.25

Firearm Injury<sup>1</sup> Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1979-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted		
(1996)	188	214								
1994-1996 (1995)	227	261	16.5	18.9	13.9	11.3	1.2	1.4	1.5	1.7
1993-1995 (1994)	230	264	17.3	19.8	15.1	11.9	1.1	1.3	1.5	1.7
1992-1994 (1993)	204	232	16.6	19.0	15.4	12.5	1.1	1.2	1.3	1.5
1991-1993 (1992)	181	204	16.9	19.2	14.8	12.3	1.1	1.3	1.4	1.6
1990-1992 (1991)	221	253	16.3	18.7	15.2	12.5	1.1	1.2	1.3	1.5
1989-1991 (1990)	172	200	17.6	20.4	14.9	12.6	1.2	1.4	1.4	1.6
1988-1990 (1989)	215	252	17.6	20.0	14.1	12.1	1.2	1.4	1.5	1.7
1987-1989 (1988)	205	227	18.5	20.8	13.9	12.1	1.3	1.5	1.5	1.7
1986-1988 (1987)	182	203	18.1		13.6	12.1	1.3		1.5	
1985-1987 (1986)	186		18.2		13.3	11.7	1.4		1.6	
1984-1986 (1985)	186		18.2		12.7	11.4	1.4		1.6	
1983-1985 (1984)	169		18.8		12.8	11.6	1.5		1.6	
1982-1984 (1983)	185		20.2		12.9	11.5	1.6		1.8	
1981-1983 (1982)	210		23.0		13.9	12.2	1.7		1.9	
1980-1982 (1981)	210		24.0		14.6	12.5	1.6		1.9	
1979-1981 (1980)	195		26.1		14.8	12.4	1.8		2.1	
1978-1980 (1979)	229		25.2		14.6	12.2	1.7		2.1	
(1978)	176									

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

<sup>1</sup> Includes death with ICD-9 codes; Accident caused by firearm missile-E922, Suicide and self-inflicted injury by firearms-E955.0-E955.4, Assault by firearms and legal intervention-E965.0-E965.4, E970, and Injury by firearms, undetermined whether accidentally or purposely inflicted-E985.0-E985.4. Injury by firearms causes exclude explosive and other causes indirectly related to firearms. Includes ICD-8 codes; E922, E955, E965, E970 and E985 (1978 only).

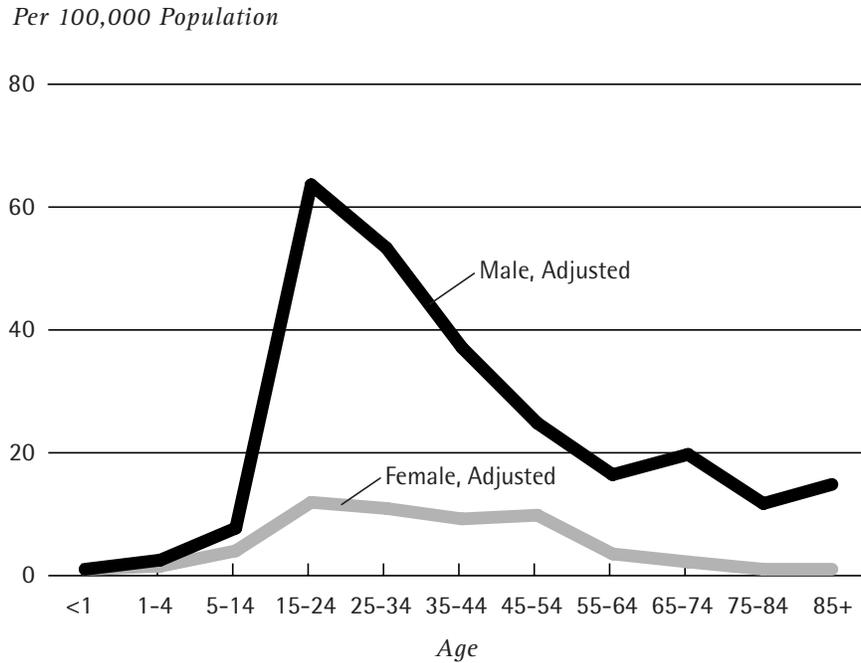
Source: U.S. All Races and White Mortality Data: Advance Report on Final Mortality Statistics, 1993, NCHS, DHHS, Report Vol.44, No. 7, Supplement, February 29, 1996, Table 11. Data not published for the U.S. populations prior to 1979.

Part 4 General Mortality Statistics

Chart 4.26

*Firearm Injury Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific firearm injury death rate (1994-1996) for Indian males was higher for all age groups except under 1 year (there were no homicide deaths for either sex for this age group) in comparison with Indian females. The Indian male rate peaked at 62.6 deaths per 100,000 population for the 15 to 24 year age group. This was also the age group in the 1995 U.S. All Races male population that had the highest rate (47.7). However for the 1995 U.S. White population, the highest rate occurred for the male group 85 years and over (50.8). These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.26**

*Firearm Injury<sup>1</sup> Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	1.0	1.0	1.5	1.5	0.5	0.5
5-14 years	4.3	4.9	6.0	6.7	2.5	3.0
15-24 years	31.9	37.3	54.5	62.6	8.4	10.9
25-34 years	26.6	30.6	45.8	52.3	8.2	9.9
35-44 years	19.9	22.6	32.5	36.1	8.2	8.2
45-54 years	14.1	16.0	21.8	23.8	7.1	8.8
55-64 years	8.1	8.5	14.4	15.4	2.5	2.5
65-74 years	8.3	9.0	17.1	18.7	1.2	1.2
75-84 years	4.3	4.3	10.7	10.7	—	—
85 years +	5.1	5.1	13.9	13.9	—	—

U.S. All Races				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
Under 1 year	0.2	0.2	0.3	0.3
1-4 years	0.6	0.6	0.5	0.5
5-14 years	2.0	2.0	0.9	0.9
15-24 years	27.3	27.3	6.0	6.0
25-34 years	20.2	20.2	5.9	5.9
35-44 years	14.4	14.4	5.3	5.3
45-54 years	12.2	12.2	4.3	4.3
55-64 years	11.4	11.4	3.5	3.5
65-74 years	12.9	12.9	3.0	3.0
75-84 years	16.4	16.4	2.8	2.8
85 years +	14.6	14.6	1.8	1.8

U.S. White				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
Under 1 year	1.0	1.0	1.0	1.0
1-4 years	0.4	0.4	0.4	0.4
5-14 years	1.7	1.7	0.8	0.8
15-24 years	18.4	18.4	4.6	4.6
25-34 years	15.7	15.7	5.1	5.1
35-44 years	13.1	13.1	4.9	4.9
45-54 years	11.9	11.9	4.4	4.4
55-64 years	11.4	11.4	3.6	3.6
65-74 years	13.4	13.4	3.1	3.1
75-84 years	17.3	17.3	3.0	3.0
85 years +	15.4	15.4	1.8	1.8

<sup>1</sup> Includes deaths with ICD-9 codes; Accident caused by firearm missile-E922, Suicide and self-inflicted injury by firearms-E955.0-E955.4, Assault by firearms and legal intervention-E965.0-E965.4, E970, and injury by firearms, undetermined whether accidentally or purposely inflicted-E985.0-E985.4. Injury by firearms causes exclude explosive and other causes indirectly related to firearms.

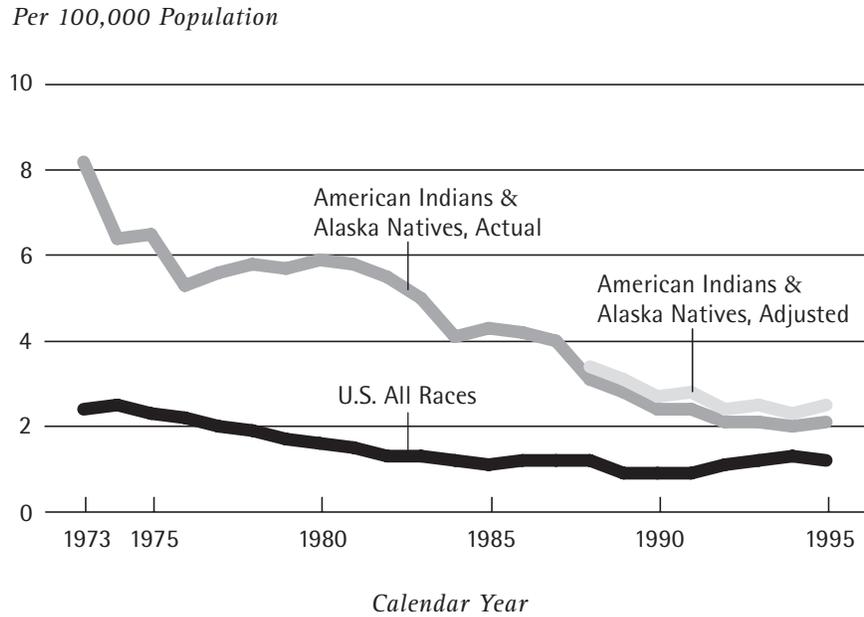
<sup>2</sup> Adjusted to compensate for miscoding of Indian race on death certificates. **Note:** — Represents zero.

Part 4 General Mortality Statistics

Chart 4.27

Age-Adjusted  
Other Injury Death Rates

The age-adjusted death rate due to other injuries (undetermined injury and war injury) has decreased 71 percent since 1972-1974 from 8.3 to 2.4. The 1994-1996 rate (2.4 deaths per 100,000 population) is twice the U.S. All Races rate of 1.2 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



## Part 4 General Mortality Statistics

**Table 4.27**

### *Other Injury<sup>1,2</sup> Deaths and Death Rates*

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted		
(1996)	29	34								
1994-1996 (1995)	30	31	2.2	2.4	1.2	1.1	1.8	2.0	2.0	2.2
1993-1995 (1994)	24	28	2.1	2.2	1.3	1.2	1.6	1.7	1.8	1.8
1992-1994 (1993)	24	25	2.2	2.4	1.2	1.1	1.8	2.0	2.0	2.2
1991-1993 (1992)	31	34	2.2	2.3	1.1	1.0	2.0	2.1	2.2	2.3
1990-1992 (1991)	26	27	2.5	2.7	0.9	0.8	2.8	3.0	3.1	3.4
1989-1991 (1990)	31	33	2.5	2.6	0.9	0.8	2.8	2.9	3.1	3.3
1988-1990 (1989)	28	29	2.9	3.0	0.9	0.8	3.2	3.3	3.6	3.8
1987-1989 (1988)	34	35	3.2	3.3	1.2	1.0	2.7	2.8	3.2	3.3
1986-1988 (1987)	41	42	4.1		1.2	1.0	3.4		4.1	
1985-1987 (1986)	50		4.3		1.2	1.1	3.6		3.9	
1984-1986 (1985)	39		4.4		1.1	1.0	4.0		4.4	
1983-1985 (1984)	39		4.2		1.2	1.1	3.5		3.8	
1982-1984 (1983)	40		5.1		1.3	1.1	3.9		4.6	
1981-1983 (1982)	52		5.6		1.3	1.2	4.3		4.7	
1980-1982 (1981)	46		5.9		1.5	1.3	3.9		4.5	
1979-1981 (1980)	39		6.0		1.6	1.4	3.8		4.3	
1978-1980 (1979)	49		5.8		1.7	1.5	2.4		2.7	
1977-1979 (1978)	37		5.9		1.9	1.6	3.1		3.7	
1976-1978 (1977)	38		5.7		2.0	1.6	2.9		3.6	
1975-1977 (1976)	39		5.4		2.2	1.8	2.5		2.2	
1974-1976 (1975)	29		6.6		2.3	1.9	2.9		3.5	
1973-1975 (1974)	50		6.5		2.5	2.1	2.6		3.1	
1972-1974 (1973)	35 <sup>3</sup>		8.3		2.4	2.0	3.5		4.2	
(1972)	46									
1954-1956 (1955)	NA		NA		NA	NA	NA		NA	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

<sup>1</sup> Includes deaths with ICD-9 codes E980-E989; Injury undetermined whether accidentally or purposely inflicted.

<sup>2</sup> Includes deaths with ICD-9 codes E990-E999; Injury resulting from operations of war.

<sup>3</sup> In 1973 there was one American Indian injury death resulting from operations of war.

For each of the other years shown above there were no American Indian injury deaths due to this cause.

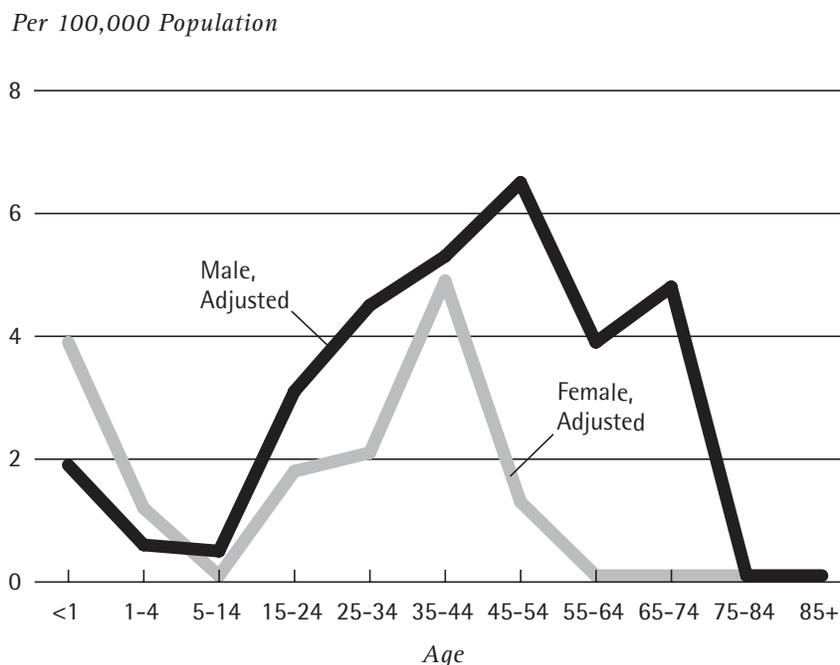
**Note:** NA denotes data not available. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.28

*Other Injury Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific death rate due to other injuries (1994-1996) for Indian males was higher for all age groups from 5 through 74 years in comparison with Indian females (for 75 years and older the rates were both 0.0). Female age-specific death rates due to other injuries (1994-1996) were higher for age groups under 1 year through 4 years in comparison to Indian males. The highest age and sex-specific rates occurred for males in age groups 25 through 54 years, 4.4 to 6.4 deaths per 100,000 population. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.28**

*Other Injury Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	3.7 <sup>2</sup>	2.8 <sup>2</sup>	1.8	1.8	5.6 <sup>2</sup>	3.8 <sup>2</sup>
1-4 years	0.5	0.8	0.5	0.5	0.5	1.1
5-14 years	0.2	0.2	0.4	0.4	—	—
15-24 years	1.8	2.3	2.7	3.0	0.8	1.7
25-34 years	2.7	3.2	3.8	4.4	1.7	2.0
35-44 years	4.8	5.0	5.2	5.2	4.5	4.8
45-54 years	3.7	3.7	6.4	6.4	1.2	1.2
55-64 years	1.8	1.8	3.8	3.8	—	—
65-74 years	2.1	2.1	4.7	4.7	—	—
75-84 years	—	—	—	—	—	—
85 years +	—	—	—	—	—	—

U.S. All Races				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	1.5	1.4	1.5	1.5
1-4 years	0.3	0.4	0.2	0.2
5-14 years	0.1	0.2	0.0	0.0
15-24 years	1.0	1.7	0.3	0.3
25-34 years	1.9	2.8	1.0	1.0
35-44 years	2.7	4.2	1.1	1.1
45-54 years	1.5	2.2	0.8	0.8
55-64 years	0.7	0.9	0.5	0.5
65-74 years	0.5	0.8	0.4	0.4
75-84 years	0.8	1.3	0.4	0.4
85 years +	1.6	3.0	1.0	1.0

U.S. White				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	1.1	1.0	1.2	1.2
1-4 years	0.2	0.2	0.2	0.2
5-14 years	0.1	0.2	0.0	0.0
15-24 years	0.9	1.5	0.3	0.3
25-34 years	1.8	2.7	0.9	0.9
35-44 years	2.4	3.8	1.0	1.0
45-54 years	1.3	1.8	0.7	0.7
55-64 years	0.7	0.8	0.5	0.5
65-74 years	0.5	0.6	0.4	0.4
75-84 years	0.8	1.3	0.4	0.4
85 years +	1.4	2.5	1.0	1.0

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

<sup>2</sup> The actual file contained 3 female infant deaths, while the adjusted file (linked birth/infant death file) contained 2 female infant deaths for this cause of death group.

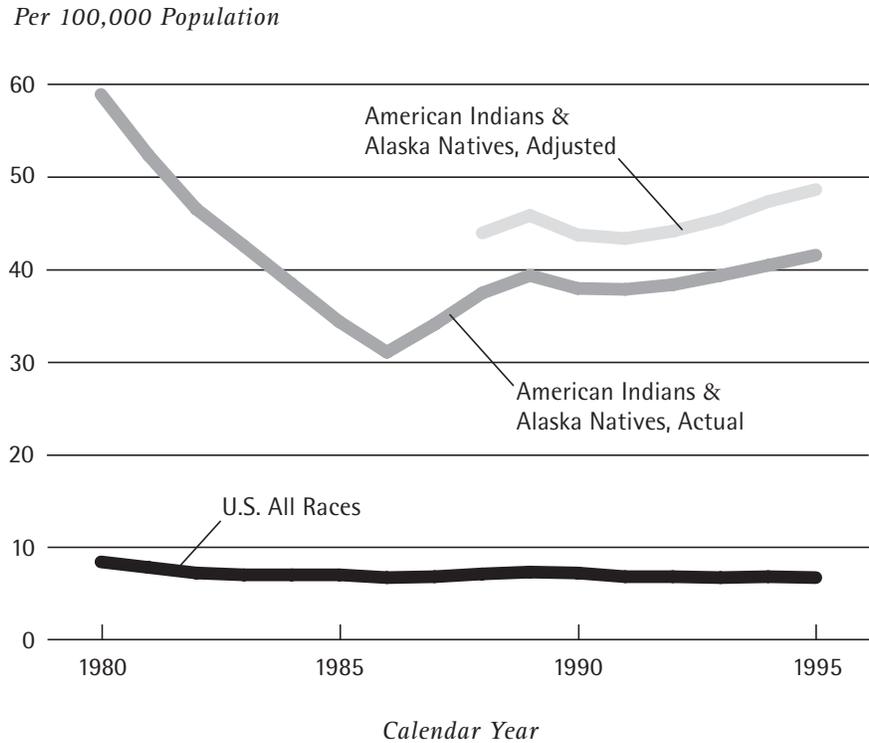
**Note:** — Represents zero. 0.0 rounds to zero.

Part 4 General Mortality Statistics

Chart 4.29

Age-Adjusted  
Alcoholism Death Rates

The age-adjusted alcoholism death rate for American Indians and Alaska Natives decreased 47 percent (from 59.0 to 31.1) between 1979-1981 and 1985-1987. Since then, it has increased 57 percent. The 1994-1996 rate (48.7 deaths per 100,000 population) is over 7 times the U.S. All Races rate of 6.7 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Part 4 General Mortality Statistics

Table 4.29

Alcoholism Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1979-1995  
Age-Adjusted Rate per 100,000 Population

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	456	527								
1994-1996 (1995)	460	543	41.6	48.7	6.7	6.2	6.2	7.3	6.7	7.9
1993-1995 (1994)	427	494	40.5	47.4	6.8	6.2	6.0	7.0	6.5	7.6
1992-1994 (1993)	395	458	39.4	45.5	6.7	6.1	5.9	6.8	6.5	7.5
1991-1993 (1992)	402	458	38.4	44.2	6.8	6.1	5.6	6.5	6.3	7.2
1990-1992 (1991)	367	417	37.9	43.4	6.8	6.0	5.6	6.4	6.3	7.2
1989-1991 (1990)	350	403	38.0	43.8	7.2	6.2	5.3	6.1	6.1	7.1
1988-1990 (1989)	376	436	39.4	45.9	7.3	6.2	5.4	6.3	6.4	7.4
1987-1989 (1988)	375	441	37.5	44.0	7.1	5.9	5.3	6.2	6.4	7.5
1986-1988 (1987)	264	310	34.1		6.8	5.8	5.0		5.9	
1985-1987 (1986)	264		31.1		6.7	5.7	4.6		5.5	
1984-1986 (1985)	274		34.4		7.0	5.8	4.9		5.9	
1983-1985 (1984)	302		38.5		7.0	5.9	5.5		6.5	
1982-1984 (1983)	295		42.6		7.0	6.0	6.1		7.1	
1981-1983 (1982)	293		46.6		7.2	6.2	6.5		7.5	
1980-1982 (1981)	344		52.4		7.8	6.6	6.7		7.9	
1979-1981 (1980)	369		59.0		8.4	6.9	7.0		8.6	
(1979)	377									

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

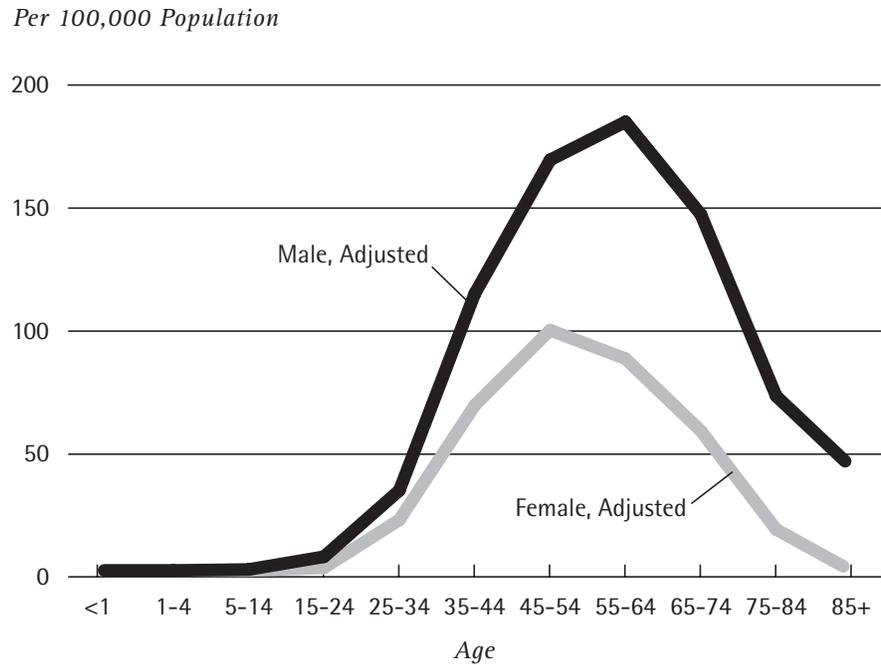
**Note:** For all years presented above, the causes of death that define alcoholism deaths have been expanded to include alcoholic polyneuropathy-357.5 and the entire code group for accidental poisoning by alcohol-E860, as defined by the National Center for Health Statistics, DHHS, for all years in which ICD-9 codes are employed (1979 to the present). For a complete description of the causes of death that define deaths due to alcoholism, refer to the Glossary of ICD-9 Codes. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths for the Indian population and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.30

*Alcoholism Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

Drinking has taken a greater toll on Indian males compared to Indian females as evidenced by alcoholism death rates. The age-specific alcoholism death rate (1994-1996) for Indian males was higher for all age groups, with a non-zero rate, in comparison with Indian females. However, the Indian female rate is much higher than the rate for females in the U.S. All Races population. The U.S. female rate never reached 10.0 for an age group in 1995, whereas the Indian female rate ranged from 20.6 to 97.8 for age groups 25 through 74 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.30**

*Alcoholism Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	0.2	0.2	0.4	0.4	—	—
15-24 years	3.2	3.4	5.4	5.6	0.8	1.1
25-34 years	24.0	26.5	30.9	32.6	17.5	20.6
35-44 years	76.7	89.1	99.9	112.6	54.9	67.2
45-54 years	109.8	131.0	143.9	167.1	78.4	97.8
55-64 years	109.6	131.1	151.9	182.6	72.8	86.2
65-74 years	84.0	95.7	126.2	144.9	50.6	56.8
75-84 years	34.3	38.6	60.4	71.0	16.7	16.7
85 years +	15.3	15.3	41.8	41.8	—	—

U.S. All Races				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	0.1	0.1	0.1	0.1
1-4 years	—	—	—	—
5-14 years	0.0	0.0	0.0	0.0
15-24 years	0.3	0.5	0.1	0.1
25-34 years	2.1	3.0	1.1	1.1
35-44 years	9.8	14.8	4.9	4.9
45-54 years	17.5	27.9	7.5	7.5
55-64 years	22.3	36.4	9.5	9.5
65-74 years	19.0	32.6	8.1	8.1
75-84 years	11.1	20.8	4.9	4.9
85 years +	5.3	12.7	2.4	2.4

U.S. White				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	0.1	0.1	0.2	0.2
1-4 years	—	—	—	—
5-14 years	0.0	0.0	—	—
15-24 years	0.3	0.4	0.1	0.1
25-34 years	1.9	2.8	1.0	1.0
35-44 years	8.9	13.6	4.1	4.1
45-54 years	15.7	25.0	6.6	6.6
55-64 years	20.4	33.1	8.6	8.6
65-74 years	17.9	30.6	7.6	7.6
75-84 years	10.9	20.5	4.8	4.8
85 years +	5.0	12.0	2.3	2.3

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

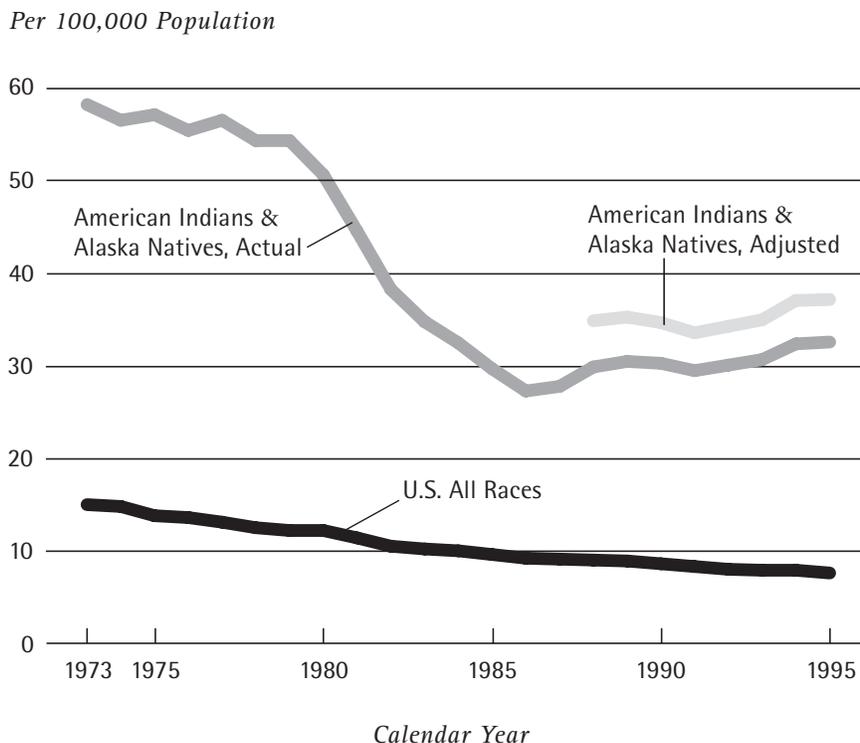
**Note:** — Represents zero. 0.0 rounds to zero.

Part 4 General Mortality Statistics

Chart 4.31

Age-Adjusted  
Chronic Liver Disease  
and Cirrhosis  
Death Rates

The age-adjusted chronic liver disease and cirrhosis death rate for American Indians and Alaska Natives has decreased 36 percent (from 58.3 to 37.2) since 1972-1974. The 1994-1996 rate (37.2 deaths per 100,000 population) is 4.9 times the U.S. All Races rate of 7.6 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.31**

*Chronic Liver Disease and Cirrhosis Deaths and Death Rates*

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:				
	Number		Rate				U.S. All Races		U.S. White		
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted	
(1996)	339	386									
1994-1996 (1995)	372	420	32.6	37.2	7.6	7.4	4.3	4.9	4.4	5.0	
1993-1995 (1994)	329	377	32.4	37.1	7.9	7.5	4.1	4.7	4.3	4.9	
1992-1994 (1993)	312	358	30.7	35.0	7.9	7.6	3.9	4.4	4.0	4.6	
1991-1993 (1992)	299	336	30.1	34.3	8.0	7.7	3.8	4.3	3.9	4.5	
1990-1992 (1991)	288	326	29.5	33.6	8.3	7.8	3.6	4.0	3.8	4.3	
1989-1991 (1990)	267	307	30.3	34.7	8.6	8.0	3.5	4.0	3.8	4.3	
1988-1990 (1989)	299	344	30.5	35.3	8.9	8.3	3.4	4.0	3.7	4.3	
1987-1989 (1988)	267	314	29.9	34.9	9.0	8.4	3.3	3.9	3.6	4.2	
1986-1988 (1987)	224	264	27.8		9.1	8.4	3.1		3.3		
1985-1987 (1986)	224		27.3		9.2	8.6	3.0		3.2		
1984-1986 (1985)	237		29.7		9.6	8.9	3.1		3.3		
1983-1985 (1984)	243		32.5		10.0	9.3	3.3		3.5		
1982-1984 (1983)	236		34.8		10.2	9.5	3.4		3.7		
1981-1983 (1982)	230		38.3		10.5	9.8	3.6		3.9		
1980-1982 (1981)	284		44.6		11.4	10.5	3.9		4.2		
1979-1981 (1980)	324		50.7		12.2	11.0	4.2		4.6		
1978-1980 (1979)	305		54.4		12.2	11.1	4.5		4.9		
1977-1979 (1978)	308		54.4		12.5	11.3	4.4		4.8		
1976-1978 (1977)	281		56.6		13.1	11.8	4.3		4.8		
1975-1977 (1976)	296		55.5		13.6	12.3	4.1		4.5		
1974-1976 (1975)	249		57.2		13.8	12.6	4.1		4.5		
1973-1975 (1974)	257		56.6		14.8	13.4	3.8		4.2		
1972-1974 (1973)	238		58.3		15.0	13.7	3.9		4.3		
(1972)	222										
1954-1956 (1955)			26.9		9.4	9.4					

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

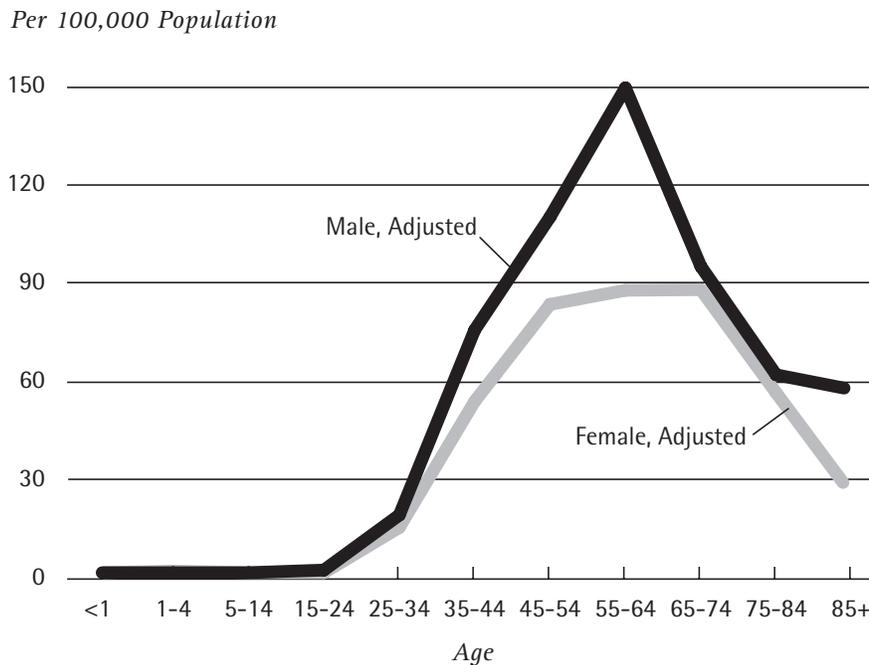
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.32

*Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

Other than for age groups under 15 years, the age-specific chronic liver disease and cirrhosis death rate (1994-1996) for Indian males was higher for all age groups in comparison with Indian females. The Indian male rate exceeded 108.0 deaths per 100,000 population for age groups 45 through 64 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.32**

*Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	0.3	0.3	—	—	0.5	0.5
5-14 years	—	—	—	—	—	—
15-24 years	0.4	0.4	0.8	0.8	—	—
25-34 years	14.4	15.7	16.5	17.6	12.4	13.8
35-44 years	54.4	62.9	65.8	74.1	43.8	52.3
45-54 years	81.5	94.7	96.4	108.6	67.8	81.9
55-64 years	100.6	115.0	100.6	148.0	77.0	86.2
65-74 years	81.3	89.5	81.3	93.5	77.8	86.4
75-84 years	52.9	57.1	52.9	60.4	52.6	54.9
85 years +	35.8	35.8	35.8	55.8	24.2	24.2

U.S. All Races			
Age Group	Both Sexes		Female
	Actual	Adj <sup>1</sup>	Actual
Under 1 year	0.6	0.6	0.5
1-4 years	0.0	0.0	0.1
5-14 years	0.0	0.0	0.0
15-24 years	0.1	0.1	0.0
25-34 years	1.5	1.5	0.9
35-44 years	8.7	8.7	4.7
45-54 years	16.9	16.9	8.6
55-64 years	25.4	25.4	15.2
65-74 years	31.5	31.5	21.5
75-84 years	31.4	31.4	25.4
85 years +	22.9	22.9	18.3

U.S. White			
Age Group	Both Sexes		Female
	Actual	Adj <sup>1</sup>	Actual
Under 1 year	0.5	0.5	0.3
1-4 years	0.0	0.0	0.0
5-14 years	0.0	0.0	0.0
15-24 years	0.1	0.1	0.0
25-34 years	1.4	1.4	0.8
35-44 years	8.2	8.2	4.2
45-54 years	16.0	16.0	7.7
55-64 years	24.5	24.5	14.4
65-74 years	32.1	32.1	21.9
75-84 years	32.2	32.2	25.8
85 years +	23.4	23.4	18.7

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

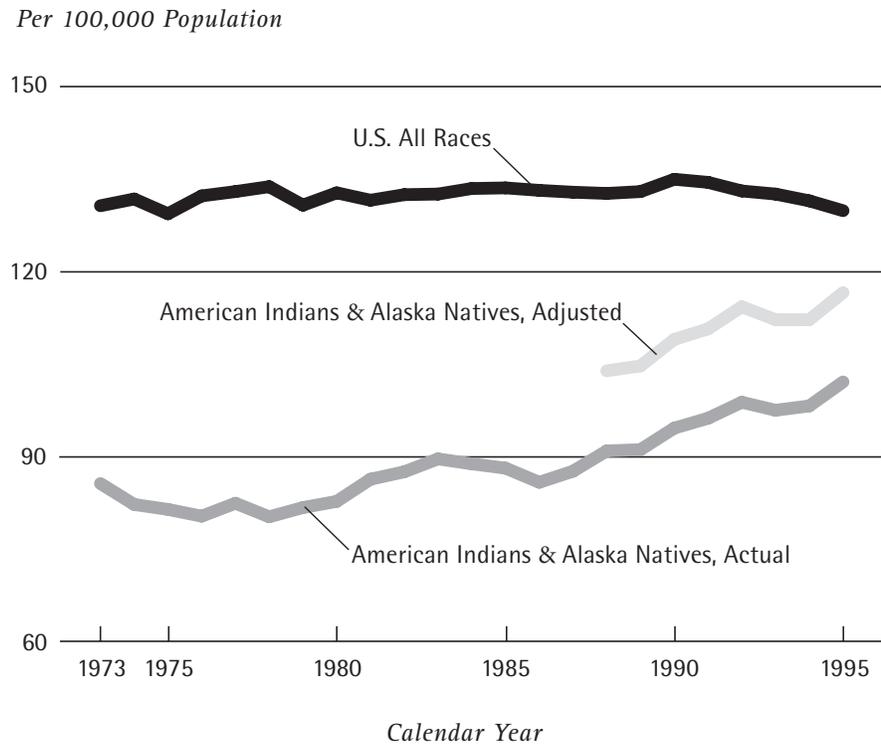
**Note:** — Represents zero. 0.0 rounds to zero.

Part 4 General Mortality Statistics

Chart 4.33

Age-Adjusted Malignant Neoplasm Death Rates

The age-adjusted malignant neoplasm death rate for American Indians and Alaska Natives hit a low in 1977-1979 of 80.2 deaths per 100,000 population, but has increased 45 percent since then to 116.6 in 1994-1996. The Indian rate is lower than the U.S. All Races rate, but the gap between the two rates has been decreasing. The 1994-1996 Indian rate (116.6 deaths per 100,000 population) is only 10 percent less than the All Races rate of 129.9 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Part 4 General Mortality Statistics

Table 4.33

Malignant Neoplasm Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted		
(1996)	1,226	1,400								
1994-1996 (1995)	1,141	1,278	102.1	116.6	129.9	127.0	0.8	0.9	0.8	0.9
1993-1995 (1994)	1,046	1,201	98.2	112.2	131.5	128.6	0.7	0.9	0.8	0.9
1992-1994 (1993)	1,025	1,169	97.5	112.2	132.6	129.4	0.7	0.8	0.8	0.9
1991-1993 (1992)	1,026	1,174	98.8	114.3	133.1	129.9	0.7	0.9	0.8	0.9
1990-1992 (1991)	1,021	1,175	96.2	110.7	134.5	131.3	0.7	0.8	0.7	0.8
1989-1991 (1990)	859	969	94.6	109.0	135.0	131.5	0.7	0.8	0.7	0.8
1988-1990 (1989)	913	1,049	91.1	104.7	133.0	130.2	0.7	0.8	0.7	0.8
1987-1989 (1988)	831	954	90.9	103.9	132.7	130.0	0.7	0.8	0.7	0.8
1986-1988 (1987)	768	863	87.6		132.9	130.1	0.7		0.7	
1985-1987 (1986)	756		85.8		133.2	130.4	0.6		0.7	
1984-1986 (1985)	714		88.1		133.6	130.7	0.7		0.7	
1983-1985 (1984)	712		88.8		133.5	130.2	0.7		0.7	
1982-1984 (1983)	662		89.6		132.6	129.4	0.7		0.7	
1981-1983 (1982)	617		87.5		132.5	129.4	0.7		0.7	
1980-1982 (1981)	578		86.3		131.6	128.5	0.7		0.7	
1979-1981 (1980)	567		82.7		132.8	129.6	0.6		0.6	
1978-1980 (1979)	480		81.7		130.8	130.2	0.6		0.6	
1977-1979 (1978)	503		80.2		133.8	130.8	0.6		0.6	
1976-1978 (1977)	456		82.4		133.0	130.0	0.6		0.6	
1975-1977 (1976)	441		80.3		132.3	129.5	0.6		0.6	
1974-1976 (1975)	395		81.4		129.4	128.1	0.6		0.6	
1973-1975 (1974)	403		82.2		131.8	129.0	0.6		0.6	
1972-1974 (1973)	385		85.6		130.7	127.7	0.7		0.7	
(1972)	354									
1954-1956 (1955)	296		95.0		125.8	125.8	0.8		0.8	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

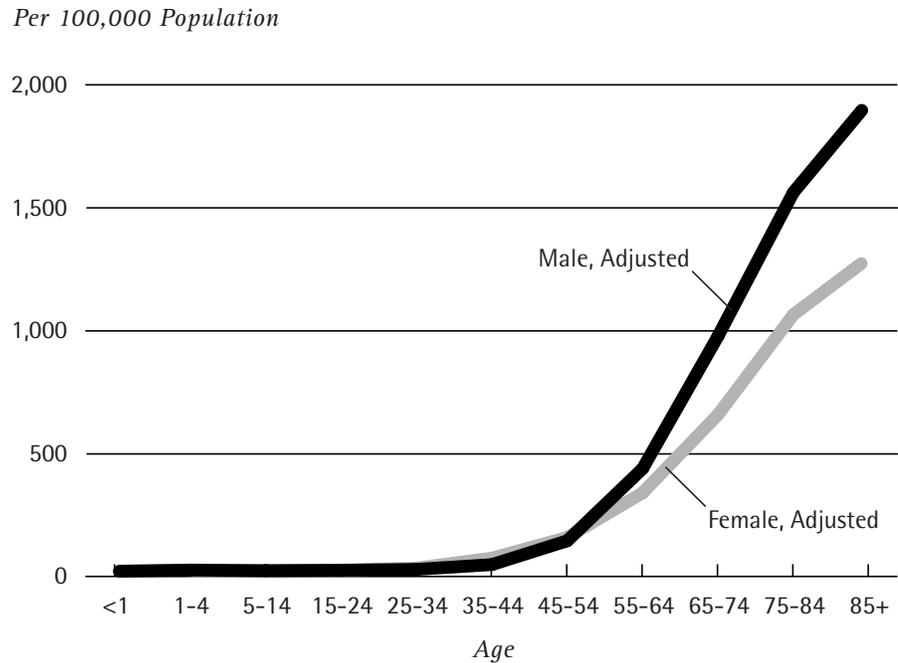
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.34

*Malignant Neoplasm Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific malignant neoplasm death rate (1994-1996) for Indian males was fifty percent greater than that for Indian females for age groups over 64 years. However, for the age group 35 to 44 years, the female rate was twice the male rate. The rate for Indian females increased with age, and for Indian males the rate increased beginning with age 5. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.34**

*Malignant Neoplasm Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

<b>American Indian and Alaska Native</b>						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	1.9	0.9	3.7	1.8	—	—
1-4 years	2.6	2.8	4.1	4.6	1.1	1.1
5-14 years	1.9	2.5	1.8	2.0	2.1	3.0
15-24 years	3.4	3.8	3.5	3.8	3.4	3.9
25-34 years	8.5	10.1	6.8	7.3	10.1	12.7
35-44 years	34.3	40.3	25.4	26.6	42.7	53.1
45-54 years	117.7	130.7	112.4	123.4	122.6	137.3
55-64 years	313.6	364.5	360.5	417.2	272.7	318.7
65-74 years	675.7	778.3	825.7	956.5	556.9	637.1
75-84 years	1,096.9	1,244.0	1,353.2	1,541.5	924.5	1,043.9
85 years +	1,465.9	1,506.7	1,812.1	1,909.7	1,265.6	1,273.7

<b>U.S. All Races</b>				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	1.8	—	1.8	—
1-4 years	3.1	—	2.6	—
5-14 years	2.7	—	2.4	—
15-24 years	4.6	—	3.6	—
25-34 years	12.0	—	12.3	—
35-44 years	40.4	—	44.1	—
45-54 years	142.3	—	140.9	—
55-64 years	416.4	—	357.9	—
65-74 years	868.7	—	691.0	—
75-84 years	1,365.3	—	1,061.8	—
85 years +	1,824.2	—	1,429.4	—

<b>U.S. White</b>				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	1.8	—	1.7	—
1-4 years	3.1	—	2.4	—
5-14 years	2.7	—	2.3	—
15-24 years	4.6	—	3.5	—
25-34 years	11.4	—	11.5	—
35-44 years	38.2	—	42.1	—
45-54 years	135.4	—	136.3	—
55-64 years	404.7	—	353.0	—
65-74 years	858.1	—	689.8	—
75-84 years	1,353.3	—	1,060.5	—
85 years +	1,811.5	—	1,428.4	—

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

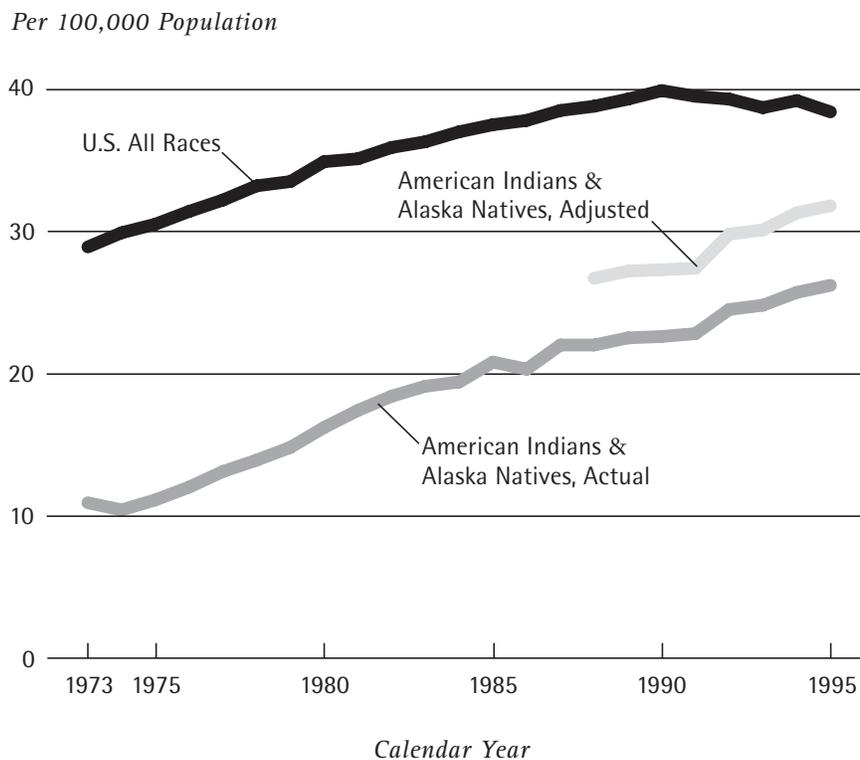
**Note:** — Represents zero.

Part 4 General Mortality Statistics

Chart 4.35

Age-Adjusted Lung Cancer Death Rates

The age-adjusted lung cancer (this category has been expanded to also include trachea and bronchus) death rate for American Indians and Alaska Natives hit a low in 1973-1975 of 10.4 deaths per 100,000 population, but has increased 206 percent since then to 31.8 in 1994-1996. The Indian rate is lower than the U.S. All Races rate, but the gap between the two rates has been decreasing. The 1994-1996 Indian rate (31.8 deaths per 100,000 population) is only 17 percent less than the All Races rate of 38.4 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.35**

*Lung Cancer<sup>1</sup> Deaths and Death Rates*

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted		
(1996)	290	351								
1994-1996 (1995)	286	342	26.2	31.8	38.4	38.0	0.7	0.8	0.7	0.8
1993-1995 (1994)	264	321	25.7	31.3	38.7	38.4	0.7	0.8	0.7	0.8
1992-1994 (1993)	260	316	24.8	30.1	39.2	38.8	0.6	0.8	0.6	0.8
1991-1993 (1992)	233	278	24.5	29.8	39.3	38.8	0.6	0.8	0.6	0.8
1990-1992 (1991)	235	284	22.8	27.4	39.5	39.0	0.6	0.7	0.6	0.7
1989-1991 (1990)	188	220	22.6	27.3	39.9	39.3	0.6	0.7	0.6	0.7
1988-1990 (1989)	207	251	22.5	27.2	39.3	38.6	0.6	0.7	0.6	0.7
1987-1989 (1988)	209	253	22.0	26.7	38.8	38.3	0.6	0.7	0.6	0.7
1986-1988 (1987)	152	181	22.0		38.5	37.8	0.6		0.6	
1985-1987 (1986)	194		20.3		37.8	37.2	0.5		0.5	
1984-1986 (1985)	155		20.8		37.5	36.8	0.6		0.6	
1983-1985 (1984)	146		19.4		37.0	36.4	0.5		0.5	
1982-1984 (1983)	134		19.1		36.3	35.7	0.5		0.5	
1981-1983 (1982)	124		18.4		35.9	35.2	0.5		0.5	
1980-1982 (1981)	113		17.4		35.1	34.4	0.5		0.5	
1979-1981 (1980)	103		16.2		34.9	34.2	0.5		0.5	
1978-1980 (1979)	89		14.8		33.5	32.9	0.4		0.4	
1977-1979 (1978)	79		13.9		33.2	32.6	0.4		0.4	
1976-1978 (1977)	73		13.1		32.2	31.5	0.4		0.4	
1975-1977 (1976)	63		12.0		31.4	30.9	0.4		0.4	
1974-1976 (1975)	47		11.1		30.5	29.9	0.4		0.4	
1973-1975 (1974)	49		10.4		29.9	29.3	0.3		0.4	
1972-1974 (1973)	44		10.9		28.9	28.4	0.4		0.4	
(1972)	43									
1954-1956 (1955)	NA		NA		NA	NA	NA		NA	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

<sup>1</sup> Lung cancer deaths includes deaths due to cancers of the trachea, bronchus and lung, ICD-9 codes and ICD-8 codes 162.0 to 162.9.

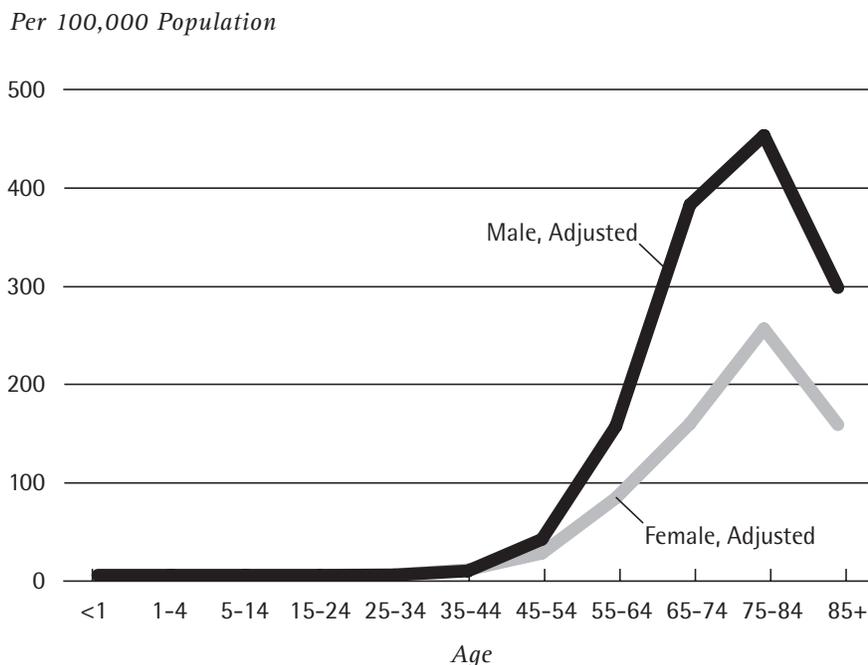
**Note:** NA denotes data not available. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.36

*Lung Cancer Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific lung cancer (this category has been expanded to also include trachea and bronchus) death rate (1994-1996) for Indian males and females was fairly similar for age groups 1 through 44 years. The rate for Indian females increased with age, and for Indian males the rate increased beginning with age 25. The rate decreased at age 85 for both Indian males and females. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



## Part 4 General Mortality Statistics

**Table 4.36**

### *Lung Cancer<sup>1</sup> Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	—	—	—	—	—	—
15-24 years	—	—	—	—	—	—
25-34 years	0.3	0.4	0.3	0.3	0.3	0.6
35-44 years	4.0	5.0	4.0	4.4	4.1	5.6
45-54 years	25.2	29.2	32.8	36.6	18.3	22.4
55-64 years	90.8	112.7	124.0	151.9	61.9	78.6
65-74 years	207.3	252.8	308.5	377.0	127.2	154.3
75-84 years	274.2	329.9	362.3	447.5	215.0	250.8
85 years +	199.2	204.3	278.8	292.7	153.2	153.2

Age Group	U.S. All Races		
	Both Sexes	Male	Female
	Under 1 year	0.1	0.1
1-4 years	0.0	—	0.0
5-14 years	0.0	0.0	0.0
15-24 years	0.1	0.1	0.1
25-34 years	0.7	0.8	0.6
35-44 years	6.0	7.1	5.0
45-54 years	38.0	47.1	29.4
55-64 years	143.0	187.5	102.7
65-74 years	297.2	417.2	201.1
75-84 years	361.5	552.2	240.4
85 years +	284.1	544.0	182.8

Age Group	U.S. White		
	Both Sexes	Male	Female
	Under 1 year	0.0	0.1
1-4 years	0.0	—	0.0
5-14 years	0.0	0.0	0.0
15-24 years	0.1	0.1	0.1
25-34 years	0.7	0.7	0.6
35-44 years	5.6	6.3	4.9
45-54 years	36.5	43.7	29.5
55-64 years	141.2	180.5	104.8
65-74 years	297.5	411.5	205.0
75-84 years	364.2	548.9	246.2
85 years +	283.7	542.6	283.7

<sup>1</sup> Lung cancer deaths includes deaths due to cancers of the trachea, bronchus and lung, ICD-9 codes 162.0 to 162.9.

<sup>2</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

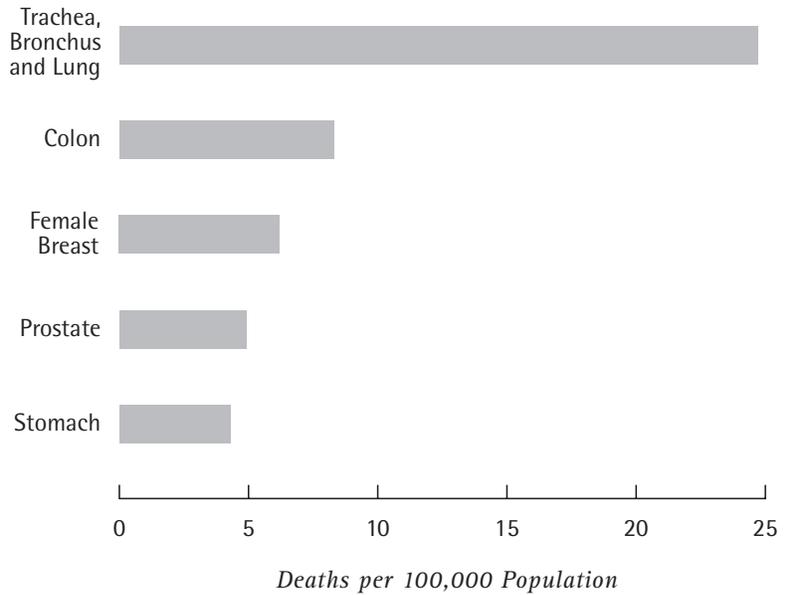
**Note:** — Represents zero. 0.0 rounds to zero.

Part 4 General Mortality Statistics

Chart 4.37

*Death Rates for Leading Cancer Sites, American Indians and Alaska Natives (1994-1996)*

The leading site for cancer deaths among Indians in 1994-1996 was trachea, bronchus, and lung. Three times as many Indian people died of this type of cancer than the next leading site, colon. The third and fourth leading sites were female breast and prostate, respectively. These Indian counts have been adjusted for miscoding of Indian race on death certificates.



## Part 4 General Mortality Statistics

**Table 4.37**

*Leading Sites for Cancer Deaths for Decedents of All Ages*

American Indians and Alaska Natives, IHS Service Area, 1994-1996  
(Rate per 100,000 Population)

Site of Cancer Death	Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Sites	3,413	3,879	83.1	94.4
Trachea, bronchus and lung	840	1,014	20.4	24.7
Colon	286	341	7.0	8.3
Female breast	222	253	5.4	6.2
Prostate	184	203	4.5	4.9
Stomach	157	177	3.8	4.3
Liver	154	167	3.7	4.1
Pancreas	145	162	3.5	3.9
Kidney	141	146	3.4	3.6
Leukemia	110	120	2.7	2.9
Ovary	84	92	2.0	2.2
Multiple myeloma	81	86	2.0	2.1
Rectum, rectosigmoid junction and anus	76	85	1.9	2.1
Esophagus	55	70	1.3	1.7
Cervix uteri	60	69	1.5	1.7
Gallbladder	58	60	1.4	1.5
Brain	52	56	1.3	1.4
Bladder	28	32	0.7	0.8
Connective and other soft tissue	26	30	0.6	0.7
Pharynx	29	29	0.7	0.7
Melanoma of skin	19	22	0.5	0.5
Larynx	21	21	0.5	0.5
Bone and articular cartilage	13	17	0.3	0.4
Thyroid gland	12	13	0.3	0.3
Tongue	9	11	0.2	0.3
Hodgkin's disease	8	9	0.2	0.2
Testis	6	6	0.1	0.1
Small intestine	4	4	0.1	0.1
Lymphosarcoma and reticulosarcoma	3	3	0.1	0.1
Male breast	2	2	0.1	0.1
Penis	2	2	0.1	0.1
All other sites	526	577		

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

**Note:** See appendix titled "Method Used to Rank Leading Sites of Cancer Deaths."  
Causes of death are listed based upon the order of adjusted number of deaths.

Part 4 General Mortality Statistics

Chart 4.38

*Death Rates, Leading Cancer Sites: Males, American Indians and Alaska Natives (1994-1996)*

The leading site for cancer deaths among Indian males in 1994-1996 was trachea, bronchus, and lung. Three times as many Indian males died of this type of cancer than the next leading site, prostate. In turn, the likelihood of dying from prostate cancer was about 22 percent greater than the next leading type of cancer, colon. These Indian counts have been adjusted for miscoding of Indian race on death certificates.

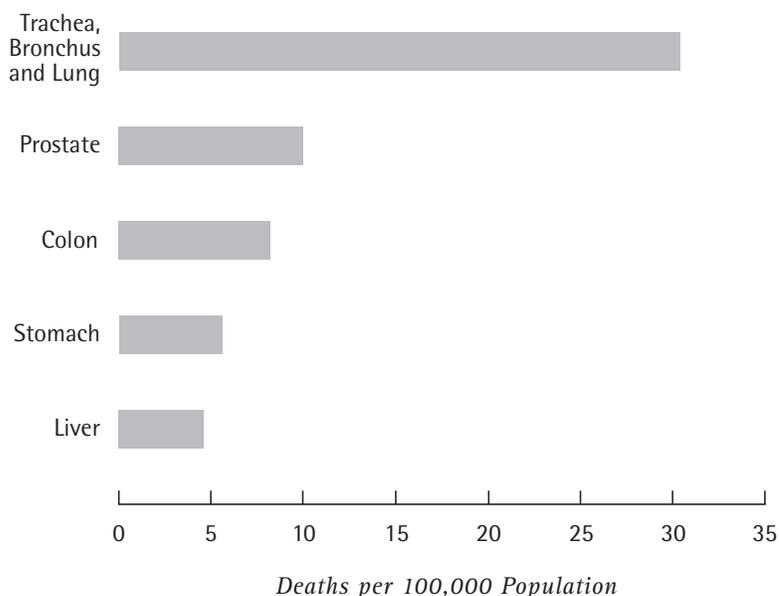
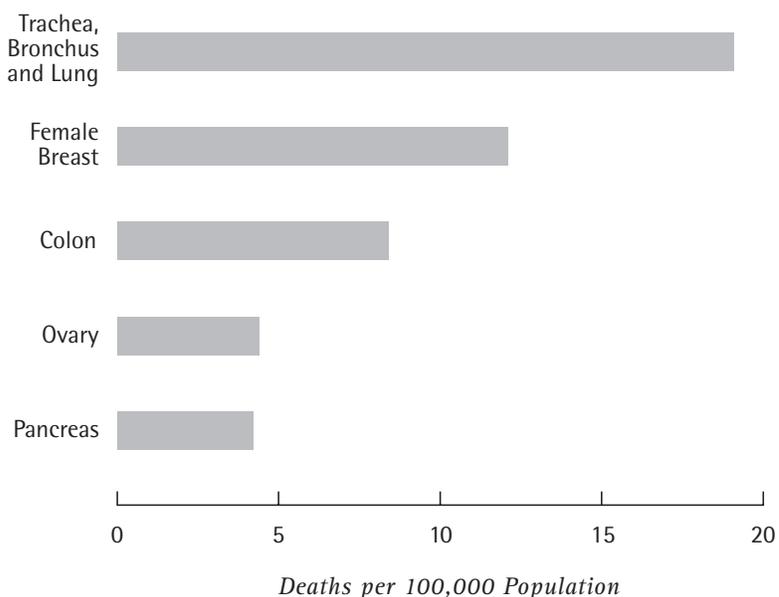


Chart 4.39

*Death Rates, Leading Cancer Sites: Females, American Indians and Alaska Natives (1994-1996)*

The leading site for cancer deaths among Indian females in 1994-1996 was trachea, bronchus, and lung. About 57 percent more Indian females died of this type of cancer than the next leading site, breast. In turn, the likelihood of dying from breast cancer was about 46 percent greater than the next leading type of cancer, colon. These Indian counts have been adjusted for miscoding of Indian race on death certificates.



## Part 4 General Mortality Statistics

**Table 4.38**

### Leading Sites for Cancer Deaths by Sex

American Indians and Alaska Natives, IHS Service Area, 1994-1996  
(Rate per 100,000 Population)

MALE					FEMALE				
Site of Cancer Death	Number		Rate		Site of Cancer Death	Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>		Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Sites	1,709	1,936	84.4	95.7	All Sites	1,703	1,943	81.7	93.2
Trachea, bronchus and lung	511	616	25.2	30.4	Trachea, bronchus and lung	329	398	15.8	19.1
Prostate	184	203	9.1	10.0	Female breast	222	253	10.7	12.1
Colon	137	166	6.8	8.2	Colon	149	175	7.2	8.4
Stomach	102	113	5.0	5.6	Ovary	84	92	4.0	4.4
Liver	85	93	4.2	4.6	Pancreas	78	88	3.7	4.2
Kidney	84	88	4.2	4.3	Liver	69	74	3.3	3.6
Pancreas	67	74	3.3	3.7	Cervix uteri	60	69	2.9	3.3
Esophagus	48	60	2.4	3.0	Leukemia	61	69	2.9	3.3
Leukemia	49	51	2.4	2.5	Stomach	55	64	2.6	3.1
Rectum, rectosigmoid junction and anus	42	45	2.1	2.2	Kidney	57	58	2.7	2.8
Brain	33	35	1.6	1.7	Multiple myeloma	48	51	2.3	2.4
Multiple myeloma	33	35	1.6	1.7	Gallbladder	40	42	1.9	2.0
Pharynx	22	22	1.1	1.1	Rectum, rectosigmoid junction and anus	34	40	1.6	1.9
Gallbladder	18	18	0.9	0.9	Brain	19	21	0.9	1.0
Larynx	16	16	0.8	0.8	Connective and other soft tissue	15	19	0.7	0.9
Bladder	16	16	0.8	0.8	Melanoma of skin	13	16	0.6	0.8
Connective and other soft tissue	11	11	0.5	0.5	Bladder	12	16	0.6	0.8
Melanoma of skin	6	6	0.3	0.3	Bone and articular cartilage	8	11	0.4	0.5
Bone and articular cartilage	5	6	0.2	0.3	Esophagus	7	10	0.3	0.5
Testis	6	6	0.3	0.3	Thyroid gland	7	8	0.3	0.4
Thyroid gland	5	5	0.2	0.2	Pharynx	7	7	0.3	0.3
Tongue	4	5	0.2	0.2	Tongue	5	6	0.2	0.3
Hodgkin's disease	3	3	0.1	0.1	Hodgkin's disease	5	6	0.2	0.3
Male breast	2	2	0.1	0.1	Larynx	5	5	0.2	0.2
Penis	2	2	0.1	0.1	Small intestine	3	3	0.1	0.1
Small intestine	1	1	0.1	0.1	Lymphosarcoma and reticulosarcoma	2	2	0.1	0.1
Lymphosarcoma and reticulosarcoma	1	1	0.1	0.1					
All other sites	216	237			All other sites	309	340		

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

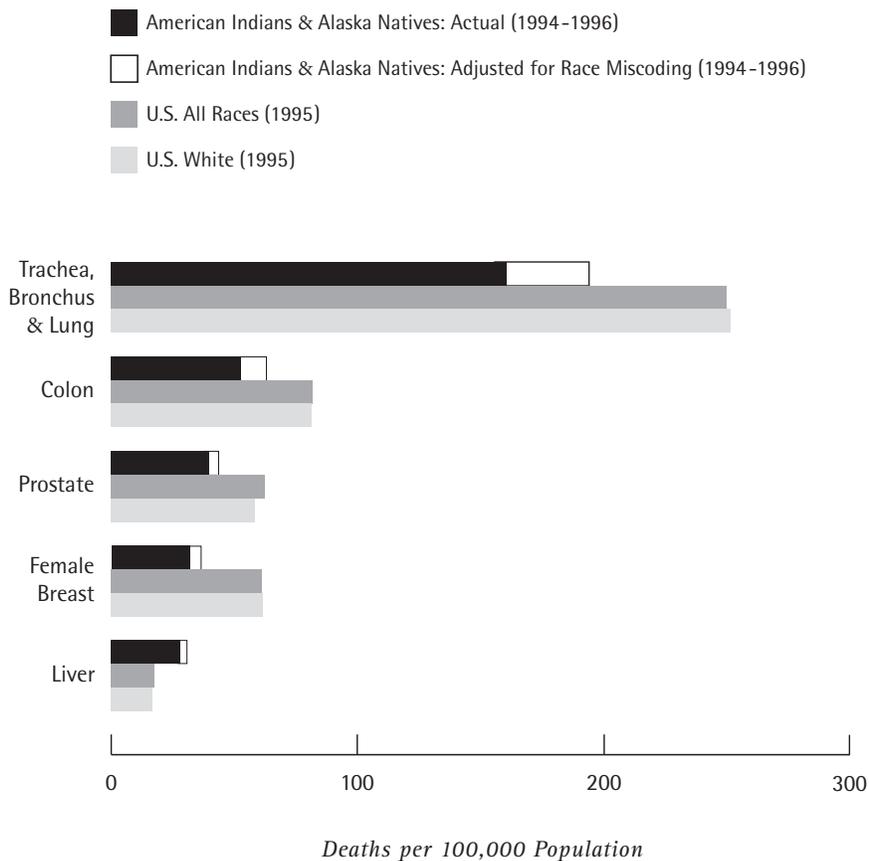
**Note:** See appendix titled "Method Used to Rank Leading Sites of Cancer Deaths." Causes of death are listed based upon the order of adjusted number of deaths.

**Part 4** *General Mortality Statistics*

**Chart 4.40**

*Death Rates,  
Leading Cancer Sites:  
Ages 55+ Years*

The leading site for cancer deaths among Indians, 55 years and older, in 1994-1996 was trachea, bronchus, and lung. About 3 times as many Indian people in this age group died of this type of cancer than the next leading site, colon. The third and fourth leading sites were prostate and female breast, respectively. These Indian counts have been adjusted for miscoding of Indian race on death certificates.



## Part 4 General Mortality Statistics

**Table 4.40**

*Leading Sites for Cancer Deaths for Decedents, 55 Years Old and Older*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Site of Cancer Death	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian and Alaska Native to:	
	Number		Rate				U.S. All Races	U.S. White
	Actual	Adjusted <sup>1</sup>	Actual	Adjusted <sup>1</sup>				
All Sites	2,728	2,963	595.2	646.5	858.6	855.5	0.8	0.8
Trachea, bronchus and lung	735	890	160.4	194.2	249.8	251.4	0.8	0.8
Colon	241	286	52.6	62.4	81.8	81.4	0.8	0.8
Prostate	182	201	39.7	43.9	62.4	58.4	0.7	0.8
Female breast	146	165	31.9	36.0	61.3	61.7	0.6	0.6
Liver	129	139	28.2	30.3	17.7	16.6	1.7	1.8
Pancreas	122	139	26.6	30.3	44.5	44.0	0.7	0.7
Stomach	120	137	26.2	29.9	21.9	19.7	1.4	1.5
Kidney	118	121	25.8	26.4	18.1	18.6	1.5	1.4
Multiple myeloma	70	75	15.3	16.4	17.3	16.2	0.9	1.0
Rectum, rectosigmoid junction and anus	59	65	12.9	14.2	13.6	13.7	1.0	1.0
Leukemia	59	62	12.9	13.5	30.1	31.2	0.4	0.4
Esophagus	45	58	9.8	12.7	17.5	16.5	0.7	0.8
Ovary	53	56	11.6	12.2	21.0	21.8	0.6	0.6
Gallbladder	51	52	11.1	11.4	6.5	6.6	1.8	1.7
Cervix uteri	28	31	6.1	6.8	4.6	3.9	1.5	1.7
Bladder	27	31	5.9	6.8	19.4	20.1	0.4	0.4
Brain	27	29	5.9	6.3	14.8	15.7	0.4	0.4
Pharynx	19	19	4.2	4.2	5.7	5.2	0.7	0.8
Larynx	19	19	4.2	4.2	6.1	5.7	0.7	0.7
Connective and other soft tissue	13	15	2.8	3.3	4.7	4.7	0.7	0.7
Melanoma of skin	11	11	2.4	2.4	8.9	9.9	0.3	0.2
Thyroid gland	10	11	2.2	2.4	1.8	1.9	1.3	1.3
Tongue	7	8	1.5	1.8	2.7	2.7	0.7	0.7
Bone and articular cartilage	4	6	0.9	1.3	1.3	1.3	1.0	1.0
Small intestine	2	2	0.4	0.4	1.7	1.6	0.2	0.3
Male breast	2	2	0.4	0.4	0.6	0.5	0.7	0.8
Penis	2	2	0.4	0.4	0.4	0.4	1.0	1.0
Lymphosarcoma and reticulosarcoma	2	2	0.4	0.4	1.5	1.6	0.3	0.3
Hodgkin's disease	1	1	0.2	0.2	1.4	1.4	0.1	0.1
All other sites	424	328						

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

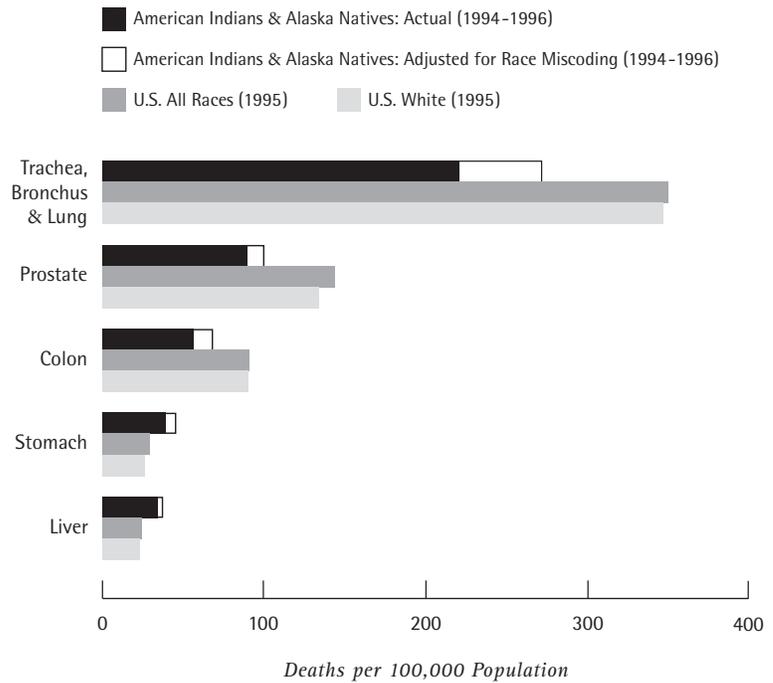
**Note:** See appendix "Method Used to Rank Leading Sites of Cancer Deaths."  
Causes of death are listed based upon the order of adjusted number of deaths.

**Part 4** *General Mortality Statistics*

**Chart 4.41**

*Death Rates, Leading Cancer Sites: Males, 55+ Years*

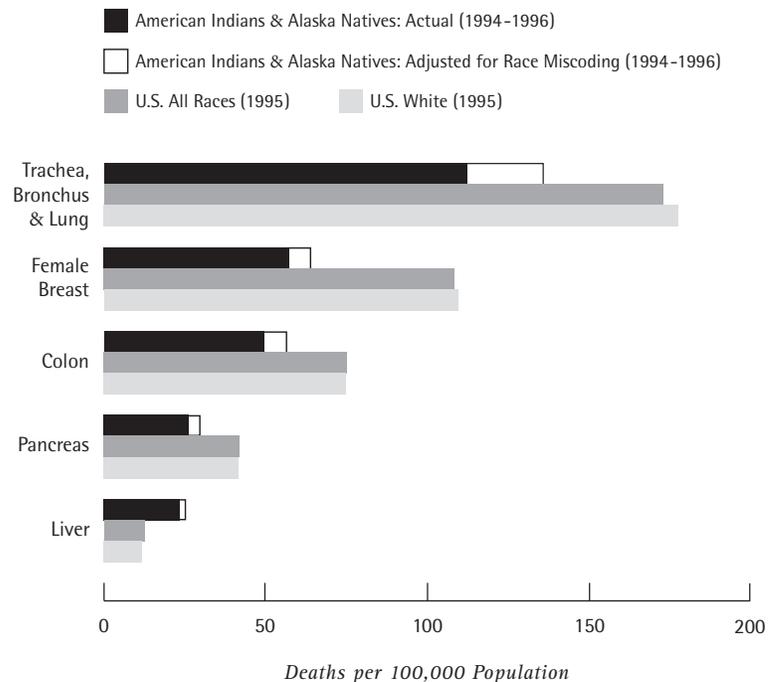
The leading site for cancer deaths among Indian males, 55 years and older, in 1994-1996 was trachea, bronchus, and lung. About 2.7 times as many Indian males in this age group died of this type of cancer than the next leading site, prostate. In turn, the likelihood of dying from prostate cancer was about 45 percent greater than the next leading type of cancer, colon. These Indian counts have been adjusted for miscoding of Indian race on death certificates.



**Chart 4.42**

*Death Rates, Leading Cancer Sites: Females, 55+ Years*

The leading site for cancer deaths among Indian females, 55 years and older, in 1994-1996 was trachea, bronchus, and lung. About 2.1 times as many Indian females in this age group died of this type of cancer than the next leading site, breast. In turn, the likelihood of dying from breast cancer was about 12 percent greater than the next leading type of cancer, colon. These Indian counts have been adjusted for miscoding of Indian race on death certificates.



## Part 4 General Mortality Statistics

**Table 4.41**

*Leading Sites for Cancer Deaths by Sex, 55 Years Old and Older*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Site of Cancer Death	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio <sup>1</sup> of American Indian and Alaska Native to:	
	Number		Rate				U.S. All Races	U.S. White
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Rate	Rate		
<b>MALE</b>								
All Sites	1,416	1,619	695.6	795.4	1,044.8	1,028.9	0.8	0.8
Trachea, bronchus and lung	449	547	220.6	268.7	350.1	346.8	0.8	0.8
Prostate	182	201	89.4	98.8	143.8	133.9	0.7	0.7
Colon	115	139	56.5	68.3	90.6	89.9	0.8	0.8
Stomach	79	89	38.8	43.7	29.2	26.4	1.5	1.7
Liver	69	76	33.9	37.3	24.3	22.8	1.5	1.6
Kidney	67	69	32.9	33.9	24.5	25.0	1.4	1.4
Pancreas	55	62	27.0	30.5	47.7	47.2	0.6	0.6
Esophagus	40	50	19.7	24.6	30.2	28.4	0.8	0.9
Rectum, rectosigmoid junction and anus	32	34	15.7	16.7	16.6	16.6	1.0	1.0
Multiple myeloma	28	30	13.8	14.7	39.3	18.6	0.4	0.8
Leukemia	27	27	13.3	13.3	38.2	39.5	0.3	0.3
Brain	17	18	8.4	8.8	17.5	18.6	0.5	0.5
Gallbladder	17	17	8.4	8.4	5.5	5.5	1.5	1.5
Bladder	15	15	7.4	7.4	30.2	31.8	0.2	0.2
Pharynx	14	14	6.9	6.9	8.9	8.0	0.8	0.9
Larynx	14	14	6.9	6.9	11.2	10.4	0.6	0.7
Connective and other soft tissue	6	7	3.0	3.4	5.2	5.3	0.7	0.6
Melanoma of skin	5	5	2.5	2.5	12.7	14.1	0.2	0.2
Tongue	3	4	1.5	2.0	4.0	3.9	0.5	0.5
Thyroid gland	3	3	1.5	1.5	1.6	1.7	0.9	0.9
Bone and articular cartilage	2	3	1.0	1.5	1.6	1.5	0.9	1.0
Penis	2	2	1.0	1.0	0.8	0.8	1.3	1.3
Male breast	2	2	1.0	1.0	1.3	1.2	0.8	0.8
Small intestine	1	1	0.5	0.5	2.1	2.1	0.2	0.2
All other sites	172	190						
<b>FEMALE</b>								
All Sites	1,321	1,492	518.5	585.6	715.6	721.1	0.8	0.8
Trachea, bronchus and lung	286	343	112.3	134.6	172.9	177.6	0.8	0.8
Female breast	146	165	57.3	64.8	108.4	109.5	0.6	0.6
Colon	126	147	49.5	57.7	75.1	74.8	0.8	0.8
Pancreas	67	77	26.3	30.2	42.1	41.6	0.7	0.7
Liver	60	63	23.6	24.7	12.6	11.9	2.0	2.1
Ovary	53	56	20.8	22.0	37.2	38.8	0.6	0.6
Kidney	51	52	20.0	20.4	13.3	13.5	1.5	1.5
Stomach	41	48	16.1	18.8	16.2	14.5	1.2	1.3
Multiple myeloma	42	45	16.5	17.7	29.5	14.3	0.6	1.2
Gallbladder	34	35	13.3	13.7	7.2	7.3	1.9	1.9
Leukemia	32	35	12.6	13.7	23.8	24.8	0.6	0.6
Cervix uteri	28	31	11.0	12.2	8.1	6.9	1.5	1.8
Rectum, rectosigmoid junction and anus	27	31	10.6	12.2	11.4	11.5	1.1	1.1
Bladder	12	16	4.7	6.3	11.1	11.1	0.6	0.6
Brain	10	11	3.9	4.3	12.6	13.5	0.3	0.3
Connective and other soft tissue	7	8	2.8	3.1	4.4	4.3	0.7	0.7
Thyroid gland	7	8	2.8	3.1	2.0	2.0	1.6	1.6
Esophagus	5	8	2.0	3.1	7.8	7.3	0.4	0.4
Melanoma of skin	6	6	2.4	2.4	6.0	6.7	0.4	0.4
Pharynx	5	5	2.0	2.0	3.3	3.1	0.6	0.6
Larynx	5	5	2.0	2.0	2.3	2.2	0.9	0.9
Tongue	4	4	1.6	1.6	1.7	1.7	0.9	0.9
Bone and articular cartilage	2	3	0.8	1.2	1.1	1.1	1.1	1.1
Lymphosarcoma and reticulosarcoma	2	2	0.8	0.8	1.3	1.4	0.6	0.6
Small intestine	1	1	0.4	0.4	1.3	1.3	0.3	0.3
Hodgkin's disease	1	1	0.4	0.4	1.2	1.3	0.3	0.3
All other sites	261	286						

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

**Note:** See appendix "Method Used to Rank Leading Sites of Cancer Deaths." Causes of death are listed based upon the order of adjusted number of deaths.

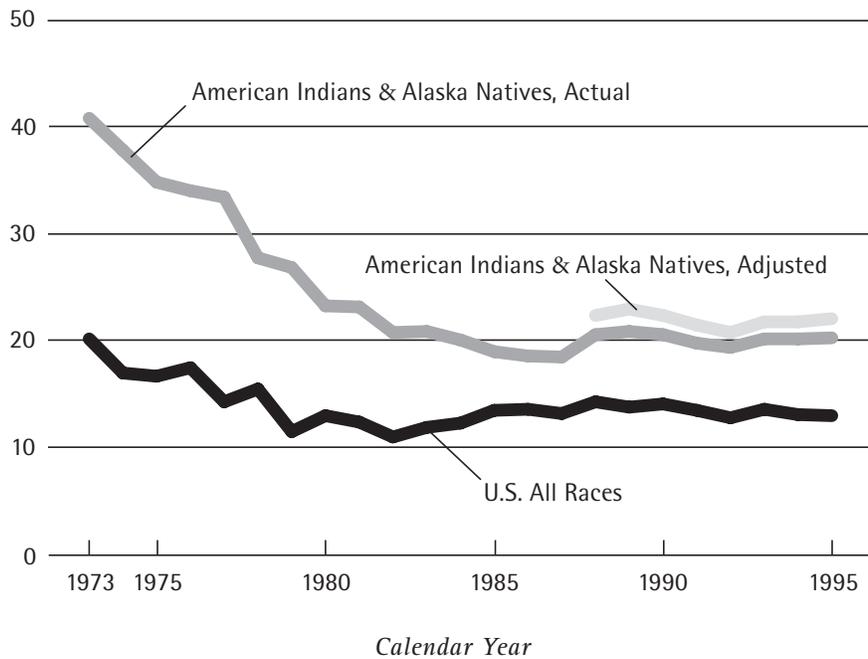
Part 4 General Mortality Statistics

Chart 4.43

Age-Adjusted Pneumonia and Influenza Death Rates

The age-adjusted pneumonia and influenza death rate for American Indians and Alaska Natives varied between 40.8 and 22.0 between 1972-1974 and 1994-1996. In 1986-1988, it rose to 18.4 and in 1994-1996 to 22.0. The 1994-1996 rate is 1.7 times the U.S. All Races rate of 12.9 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

Per 100,000 Population



Part 4 General Mortality Statistics

Table 4.43

Pneumonia and Influenza Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted		
(1996)	278	309								
1994-1996 (1995)	265	282	20.2	22.0	12.9	12.4	1.6	1.7	1.6	1.8
1993-1995 (1994)	297	321	20.1	21.7	13.0	12.5	1.5	1.7	1.6	1.7
1992-1994 (1993)	265	286	20.1	21.7	13.5	12.9	1.5	1.6	1.7	1.7
1991-1993 (1992)	241	256	19.3	20.7	12.7	12.1	1.5	1.6	1.6	1.7
1990-1992 (1991)	237	257	19.7	21.4	13.4	12.8	1.5	1.6	1.5	1.7
1989-1991 (1990)	259	286	20.5	22.3	14.0	13.4	1.5	1.6	1.5	1.7
1988-1990 (1989)	248	242	20.8	22.9	13.7	13.0	1.5	1.7	1.6	1.8
1987-1989 (1988)	221	238	20.5	22.3	14.2	13.6	1.4	1.6	1.5	1.6
1986-1988 (1987)	220		18.4		13.1	12.5	1.4		1.5	
1985-1987 (1986)	174		18.5		13.5	12.9	1.4		1.4	
1984-1986 (1985)	206		18.9		13.4	12.8	1.4		1.5	
1983-1985 (1984)	200		20.0		12.2	11.6	1.6		1.7	
1982-1984 (1983)	170		20.8		11.8	11.3	1.8		1.8	
1981-1983 (1982)	202		20.7		10.9	10.3	1.9		2.0	
1980-1982 (1981)	181		23.1		12.3	11.6	1.9		2.0	
1979-1981 (1980)	215		23.2		12.9	12.2	1.8		1.9	
1978-1980 (1979)	174		26.8		11.4	10.7	2.4		2.5	
1977-1979 (1978)	241		27.7		15.4	14.5	1.8		1.9	
1976-1978 (1977)	193		33.4		14.2	13.2	2.4		2.5	
1975-1977 (1976)	259		34.0		17.4	16.3	2.0		2.1	
1974-1976 (1975)	225		34.8		16.6	15.6	2.1		2.2	
1973-1975 (1974)	187		37.8		16.9	15.7	2.2		2.4	
1972-1974 (1973)	269		40.8		20.1	18.5	2.0		2.2	
(1972)	234				20.8	19.2				
1954-1956 (1955)	384		64.4		21.0	18.4	3.1		3.5	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

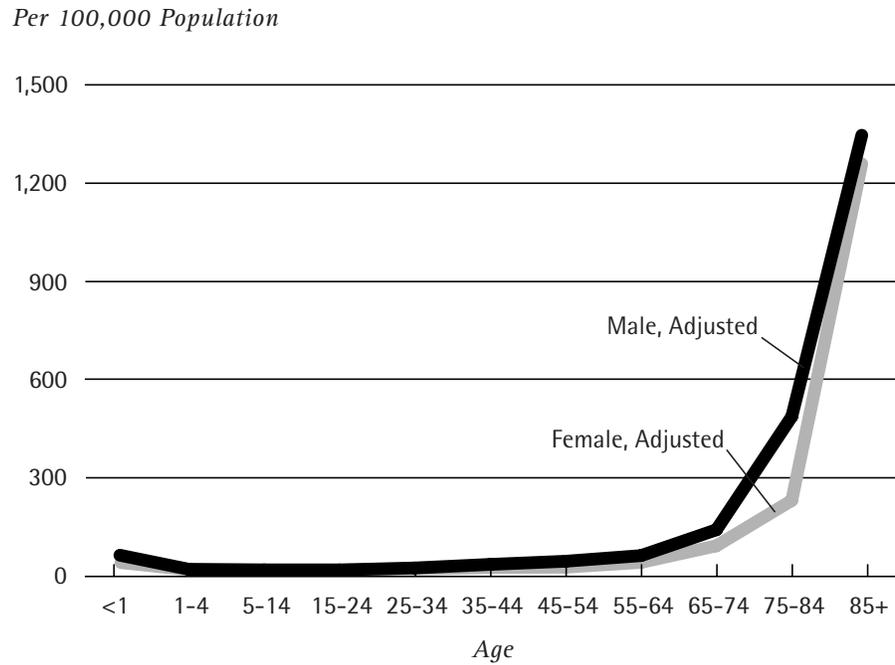
**Note:** Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.44

*Pneumonia and Influenza Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific pneumonia and influenza death rate (1994-1996) for Indian males and females increased sharply with age starting with age 15. The Indian male rate was greater than the Indian female rate for all age groups except 5 to 24 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.44**

*Pneumonia and Influenza Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996 and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

<b>American Indian and Alaska Native</b>						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	29.7	36.2	42.3	47.8	16.9	24.4
1-4 years	1.6	1.8	2.0	2.5	1.1	1.1
5-14 years	0.7	1.0	0.4	0.4	0.9	1.4
15-24 years	0.5	0.7	0.3	0.5	0.8	0.8
25-34 years	4.2	5.0	5.9	6.5	2.5	3.7
35-44 years	11.5	12.3	16.3	17.4	7.1	7.4
45-54 years	16.3	17.5	25.1	27.0	8.3	8.8
55-64 years	31.3	33.1	41.3	44.2	22.6	23.4
65-74 years	87.5	95.7	112.2	123.1	67.9	74.1
75-84 years	282.8	315.6	419.1	468.8	191.1	212.6
85 years +	1,302.4	1,338.2	1,324.2	1,380.0	1,289.8	1,314.0

<b>U.S. All Races</b>			
Age Group	Both Sexes	Male	Female
Under 1 year	12.8	14.3	11.3
1-4 years	1.0	0.9	1.1
5-14 years	0.3	0.3	0.4
15-24 years	0.6	0.6	0.5
25-34 years	1.5	1.9	1.2
35-44 years	3.5	4.4	2.6
45-54 years	6.7	8.7	4.8
55-64 years	16.4	20.8	12.4
65-74 years	57.2	75.1	43.0
75-84 years	233.2	305.4	187.5
85 years +	1,035.7	1,287.3	937.9

<b>U.S. White</b>			
Age Group	Both Sexes	Male	Female
Under 1 year	10.1	11.1	9.0
1-4 years	0.7	0.6	0.8
5-14 years	0.3	0.3	0.3
15-24 years	0.5	0.7	0.4
25-34 years	1.2	1.5	1.0
35-44 years	2.8	3.5	2.1
45-54 years	5.5	6.9	4.2
55-64 years	14.7	18.3	11.4
65-74 years	55.0	71.3	41.8
75-84 years	232.1	302.3	187.3
85 years +	1,055.5	1,307.5	958.4

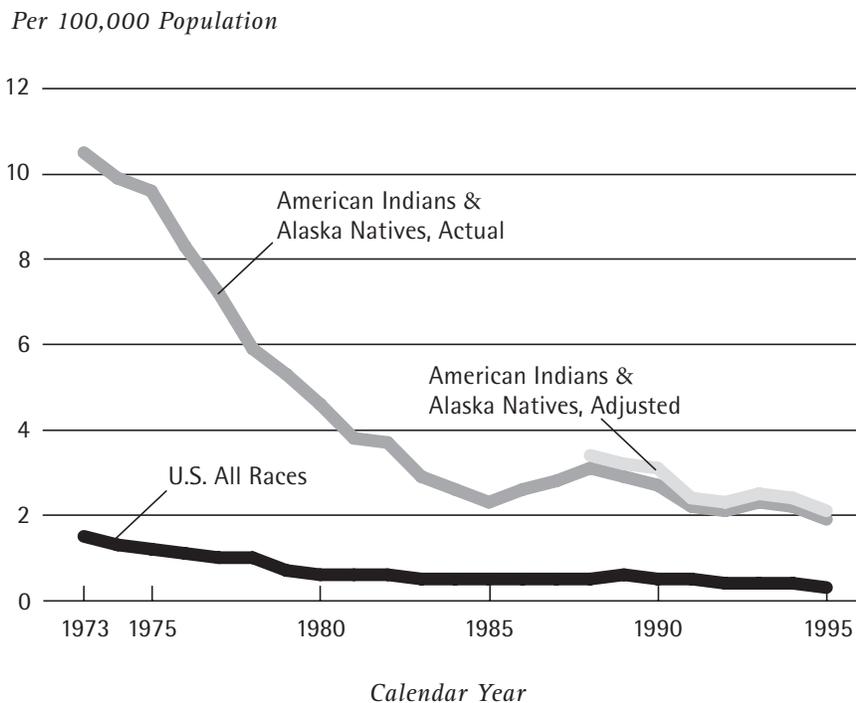
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

Part 4 General Mortality Statistics

Chart 4.45

Age-Adjusted Tuberculosis Death Rates

The age-adjusted tuberculosis death rate for American Indians and Alaska Natives has dropped from 10.5 deaths per 100,000 population in 1972-1974 to 1.9 in 1994-1996, a decrease of 82 percent. The 1994-1996 rate is over 6 times the U.S. All Races rate of 0.3 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Part 4 General Mortality Statistics

Table 4.45

Tuberculosis Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted		
(1996)	14	14								
1994-1996 (1995)	18	19	1.9	1.9	0.3	0.2	6.3	6.3	9.5	9.5
1993-1995 (1994)	30	30	2.2	2.2	0.4	0.2	5.5	5.5	5.5	11.0
1992-1994 (1993)	24	24	2.3	2.3	0.4	0.3	5.8	5.8	7.7	7.7
1991-1993 (1992)	19	19	2.1	2.1	0.4	0.3	5.3	5.3	7.0	7.0
1990-1992 (1991)	25	25	2.2	2.2	0.5	0.3	4.4	4.4	7.3	7.3
1989-1991 (1990)	24	25	2.7	2.9	0.5	0.3	5.4	5.8	9.0	9.7
1988-1990 (1989)	33	36	2.9	3.0	0.6	0.3	4.8	5.0	9.7	10.0
1987-1989 (1988)	25	25	3.1	3.2	0.5	0.3	6.2	6.4	10.3	10.7
1986-1988 (1987)	28	28	2.8		0.5	0.3	5.6		9.3	
1985-1987 (1986)	24		2.6		0.5	0.3	5.2		8.7	
1984-1986 (1985)	18		2.3		0.5	0.3	4.6		7.7	
1983-1985 (1984)	17		2.6		0.5	0.3	5.2		8.7	
1982-1984 (1983)	30		2.9		0.5	0.3	5.8		9.7	
1981-1983 (1982)	22		3.7		0.6	0.4	6.2		9.3	
1980-1982 (1981)	30		3.8		0.6	0.4	6.3		9.5	
1979-1981 (1980)	31		4.6		0.6	0.4	7.7		11.5	
1978-1980 (1979)	33		5.3		0.7	0.4	7.6		13.3	
1977-1979 (1978)	40		5.9		1.0	0.7	5.9		8.4	
1976-1978 (1977)	33		7.2		1.0	0.7	7.2		10.3	
1975-1977 (1976)	48		8.3		1.1	0.8	7.5		10.4	
1974-1976 (1975)	53		9.6		1.2	0.9	8.0		12.0	
1973-1975 (1974)	48		9.9		1.3	0.9	7.6		11.0	
1972-1974 (1973)	45		10.5		1.5	1.1	7.0		9.5	
(1972)	50									
1954-1956 (1955)	253		57.9		8.4	6.2	6.9		9.3	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

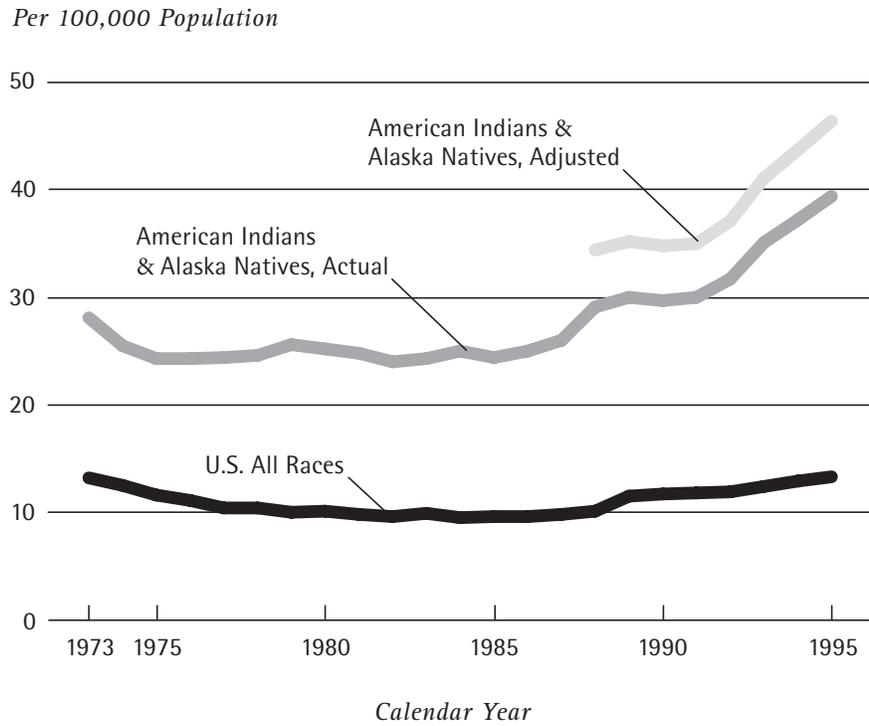
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation States data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.46

Age-Adjusted  
Diabetes Mellitus  
Death Rates

The age-adjusted diabetes mellitus death rate for American Indians and Alaska Natives varied between 28.1 and 35.0 between 1972-1974 and 1990-1992. In 1991-1993, it rose to 31.7 and in 1994-1996 to 46.4. The 1994-1996 rate is 3.5 times the U.S. All Races rate of 13.3 for 1995. This is the highest U.S. rate since 1974, when the rate was 13.2. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Part 4 General Mortality Statistics

Table 4.46

Diabetes Mellitus Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	449	527								
1994-1996 (1995)	426	497	39.4	46.4	13.3	11.7	3.0	3.5	3.4	4.0
1993-1995 (1994)	399	467	37.2	43.7	12.9	11.5	2.9	3.4	3.2	3.8
1992-1994 (1993)	354	412	35.1	41.1	12.4	11.0	2.8	3.3	3.2	3.7
1991-1993 (1992)	324	373	31.7	37.1	11.9	10.5	2.7	3.1	3.0	3.5
1990-1992 (1991)	275	320	30.0	35.0	11.8	10.5	2.5	3.0	2.9	3.3
1989-1991 (1990)	285	330	29.7	34.8	11.7	10.4	2.5	3.0	2.9	3.3
1988-1990 (1989)	301	349	30.0	35.2	11.5	10.3	2.6	3.1	2.9	3.4
1987-1989 (1988)	260	303	29.1	34.4	10.1	9.0	2.9	3.4	3.2	3.8
1986-1988 (1987)	227	274	26.0		9.8	8.7	2.7		3.0	
1985-1987 (1986)	195		25.0		9.6	8.5	2.6		2.9	
1984-1986 (1985)	208		24.4		9.6	8.6	2.5		2.8	
1983-1985 (1984)	189		25.0		9.5	8.5	2.6		2.9	
1982-1984 (1983)	179		24.3		9.9	8.9	2.5		2.7	
1981-1983 (1982)	164		24.0		9.6	8.7	2.5		2.8	
1980-1982 (1981)	156		24.8		9.8	8.8	2.5		2.8	
1979-1981 (1980)	173		25.2		10.1	9.1	2.5		2.8	
1978-1980 (1979)	153		25.6		10.0	9.0	2.6		2.8	
1977-1979 (1978)	147		24.6		10.4	9.4	2.4		2.6	
1976-1978 (1977)	133		24.4		10.4	9.4	2.3		2.6	
1975-1977 (1976)	125		24.3		11.1	10.0	2.2		2.4	
1974-1976 (1975)	123		24.3		11.6	10.4	2.1		2.3	
1973-1975 (1974)	110		25.5		12.5	11.4	2.0		2.2	
1972-1974 (1973)	117		28.1		13.2	11.8	2.1		2.4	
(1972)	129									
1954-1956 (1955)	64		17.0		13.0	12.6	1.3		1.3	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

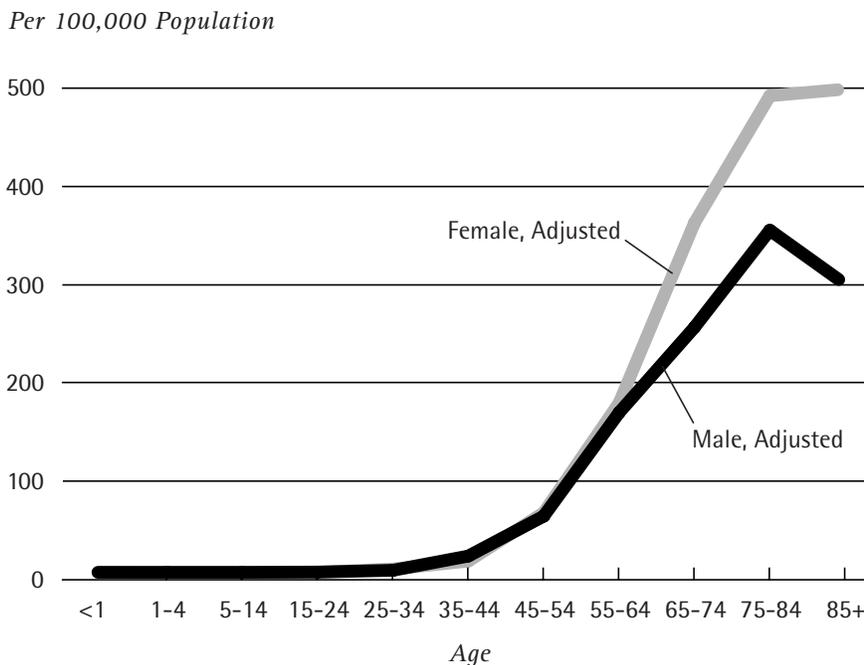
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation States data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.47

*Diabetes Mellitus Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific diabetes mellitus death rate (1994-1996) for Indian females increased sharply with age. The same was true for Indian males until the 85 years and over age group. Starting with age groups over 44 years, the Indian female rate was greater than the Indian male rate. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.47**

*Diabetes Mellitus Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996 and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	—	—	—	—	—	—
15-24 years	0.1	0.1	0.3	0.3	—	—
25-34 years	2.3	2.7	2.1	2.1	2.5	3.4
35-44 years	12.5	14.0	15.9	16.6	9.3	11.5
45-54 years	49.5	59.0	50.1	57.2	48.9	60.7
55-64 years	138.2	167.7	138.4	162.5	138.0	172.3
65-74 years	263.8	308.6	221.2	249.3	297.6	355.6
75-84 years	368.5	429.9	287.7	348.1	422.8	484.9
85 years +	413.7	418.8	292.7	292.7	483.7	491.7

U.S. All Races				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—
1-4 years	0.0	—	0.0	—
5-14 years	0.0	—	0.0	—
15-24 years	0.4	—	0.3	—
25-34 years	1.5	—	1.3	—
35-44 years	4.3	—	3.6	—
45-54 years	12.9	—	10.7	—
55-64 years	38.8	—	36.3	—
65-74 years	86.6	—	83.3	—
75-84 years	162.8	—	154.1	—
85 years +	278.0	—	273.1	—

U.S. White				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—
1-4 years	0.0	—	—	—
5-14 years	0.0	—	0.0	—
15-24 years	0.3	—	0.2	—
25-34 years	1.3	—	1.1	—
35-44 years	3.8	—	3.1	—
45-54 years	10.7	—	8.7	—
55-64 years	32.6	—	29.2	—
65-74 years	77.3	—	71.9	—
75-84 years	150.9	—	139.5	—
85 years +	264.1	—	258.1	—

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

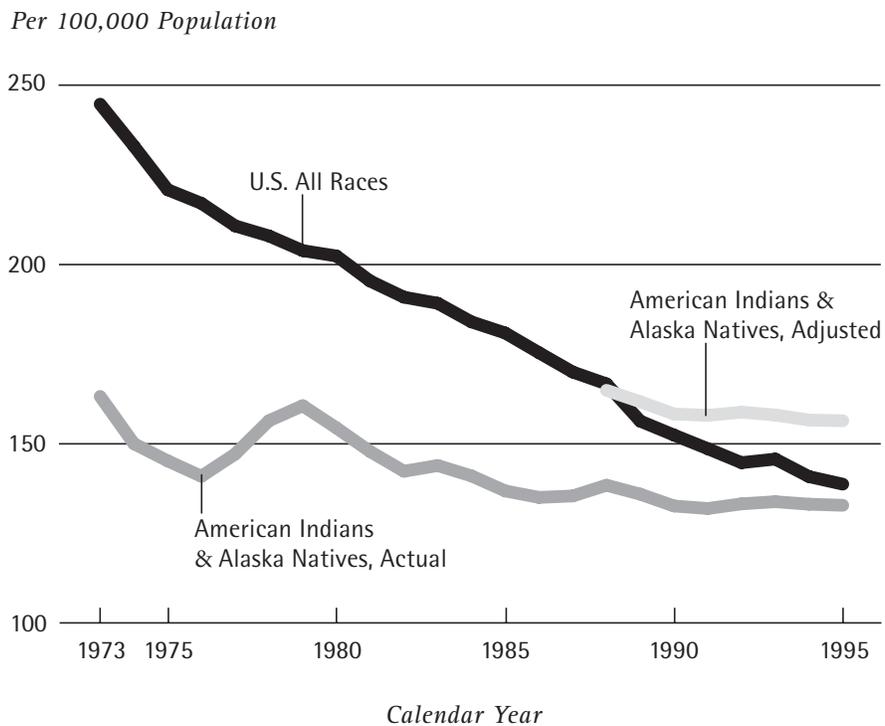
**Note:** — Represents zero. 0.0 rounds to zero.

Part 4 General Mortality Statistics

Chart 4.48

Age-Adjusted Heart Disease Death Rates

The age-adjusted heart disease death rate for American Indians and Alaska Natives has been relatively stable since 1987-1989. During this same time period, the U.S. All Races rate decreased 17 percent. The 1994-1996 Indian rate (156.0 deaths per 100,000 population) is 13 percent higher than the U.S. All Races rate of 138.3 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Part 4 General Mortality Statistics

Table 4.48

Heart Disease Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S.	U.S.	Ratio of American Indian and Alaska Native to:			
	Number		Rate		Rate	Rate	U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	1,600	1,877								
1994-1996 (1995)	1,573	1,852	132.4	156.0	138.3	133.1	1.0	1.1	1.0	1.2
1993-1995 (1994)	1,515	1,754	132.7	156.2	140.4	135.4	0.9	1.1	1.0	1.2
1992-1994 (1993)	1,524	1,779	133.4	157.6	145.3	139.9	0.9	1.1	1.0	1.1
1991-1993 (1992)	1,484	1,764	132.8	158.4	144.3	139.2	0.9	1.1	1.0	1.1
1990-1992 (1991)	1,416	1,682	131.5	157.5	148.2	143.1	0.9	1.1	0.9	1.1
1989-1991 (1990)	1,349	1,599	132.2	157.9	152.0	146.9	0.9	1.0	0.9	1.1
1988-1990 (1989)	1,408	1,661	135.5	161.3	155.9	151.0	0.9	1.0	0.9	1.1
1987-1989 (1988)	1,359	1,600	138.0	164.5	166.3	161.5	0.8	1.0	0.9	1.0
1986-1988 (1987)	1,312	1,553	135.0		169.6	165.0	0.8		0.8	
1985-1987 (1986)	1,190		134.6		175.0	170.4	0.8		0.8	
1984-1986 (1985)	1,223		136.4		180.5	176.1	0.8		0.8	
1983-1985 (1984)	1,206		140.6		183.6	179.5	0.8		0.8	
1982-1984 (1983)	1,117		143.5		188.8	184.6	0.8		0.8	
1981-1983 (1982)	1,102		141.9		190.5	186.8	0.7		0.8	
1980-1982 (1981)	1,000		147.4		195.0	191.1	0.8		0.8	
1979-1981 (1980)	1,096		154.0		202.0	197.6	0.8		0.8	
1978-1980 (1979)	1,096		160.2		203.5	199.8	0.8		0.8	
1977-1979 (1978)	965		156.0		207.6	204.0	0.8		0.8	
1976-1978 (1977)	873		146.7		210.4	206.8	0.7		0.7	
1975-1977 (1976)	798		140.5		216.7	213.5	0.6		0.7	
1974-1976 (1975)	729		144.8		220.5	217.2	0.7		0.7	
1973-1975 (1974)	796		149.6		232.7	228.8	0.6		0.7	
1972-1974 (1973)	716		162.8		244.4	239.9	0.7		0.7	
(1972)	763									
1954-1956 (1955)			223.0		291.3	285.6	0.8		0.8	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

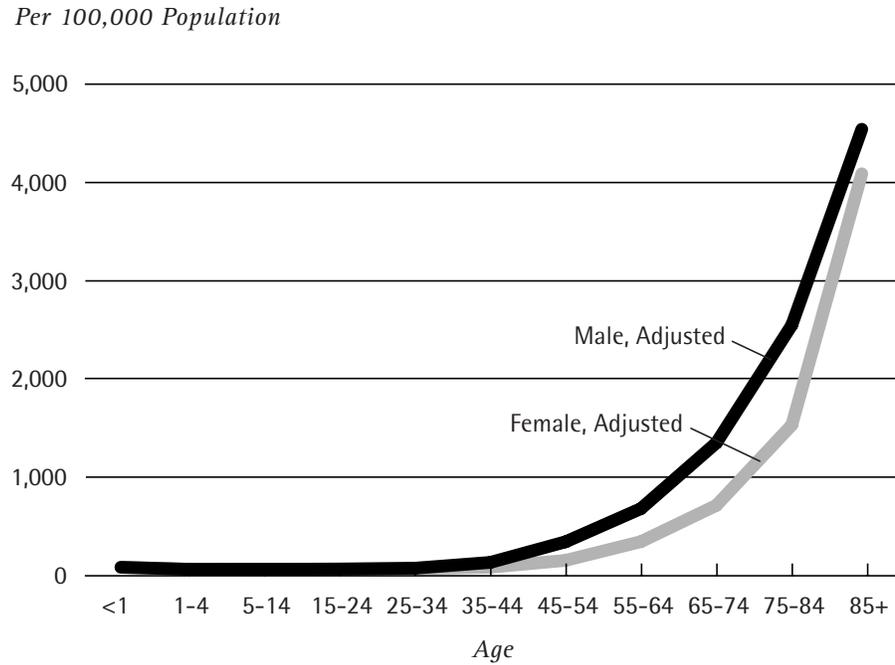
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation States data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.49

*Heart Disease Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific heart disease death rate (1994-1996) for Indian males was greater for all age groups in comparison to Indian females, except for age groups 1 to 4 and 15 to 24 years. The rate for both Indian males and females increased with age starting with age groups over 4 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.49**

*Heart Disease Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	15.8	19.5	16.5	23.9	15.0	15.0
1-4 years	1.6	2.1	1.5	1.5	1.6	2.6
5-14 years	0.7	1.0	1.1	1.8	0.2	0.2
15-24 years	3.2	4.3	3.5	3.8	2.8	4.8
25-34 years	9.1	10.1	11.8	12.6	6.5	7.6
35-44 years	39.7	46.0	62.2	71.3	18.6	22.3
45-54 years	154.9	182.6	238.4	281.4	78.4	92.0
55-64 years	369.5	439.2	523.9	619.0	235.1	282.8
65-74 years	785.2	933.3	1,079.6	1,288.3	551.9	651.9
75-84 years	1,569.6	1,878.1	2,021.0	2,486.2	1,266.1	1,469.2
85 years +	4,070.7	4,377.1	4,167.8	4,627.8	4,014.5	4,232.2

U.S. All Races				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	17.2		17.6	16.8
1-4 years	1.6		1.7	1.5
5-14 years	0.8		0.8	0.7
15-24 years	2.9		3.6	2.2
25-34 years	8.5		11.4	5.6
35-44 years	32.1		47.4	17.1
45-54 years	111.3		169.2	56.1
55-64 years	324.1		467.1	194.4
65-74 years	801.8		1,105.1	558.9
75-84 years	2,067.0		2,618.5	1,716.6
85 years +	6,486.5		7,043.8	6,269.5

U.S. White				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	15.0		15.4	14.6
1-4 years	1.2		1.3	1.2
5-14 years	0.6		0.7	0.6
15-24 years	2.2		2.8	1.6
25-34 years	7.0		9.5	4.4
35-44 years	27.9		42.5	13.1
45-54 years	100.4		156.2	46.0
55-64 years	303.9		444.7	173.6
65-74 years	776.3		1,083.3	527.3
75-84 years	2,053.0		2,619.5	1,691.2
85 years +	6,581.1		7,169.8	6,354.3

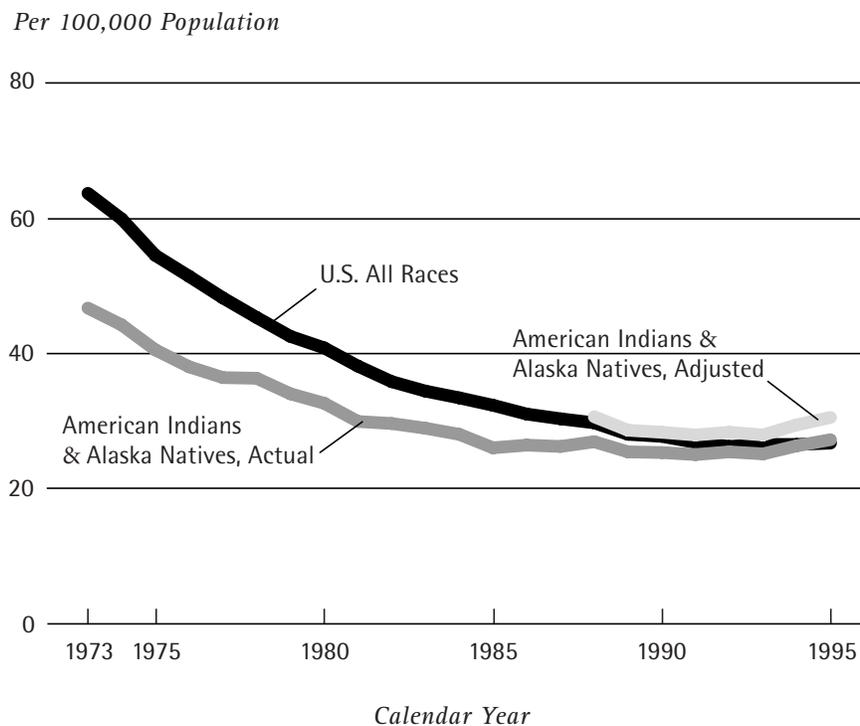
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

Part 4 General Mortality Statistics

Chart 4.50

Age-Adjusted Cerebrovascular Diseases Death Rates

The age-adjusted cerebrovascular diseases death rate for American Indians and Alaska Natives has been relatively stable since 1987-1989. During this same time period, the U.S. All Races rate decreased 10 percent. The 1994-1996 Indian rate (30.5 deaths per 100,000 population) is 14 percent higher than the U.S. All Races rate of 26.7 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Part 4 General Mortality Statistics

Table 4.50

Cerebrovascular Diseases Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted		
(1996)	366	404								
1994-1996 (1995)	358	402	27.2	30.5	26.7	24.7	1.0	1.1	1.1	1.2
1993-1995 (1994)	305	337	26.3	29.4	26.5	24.5	1.0	1.1	1.1	1.2
1992-1994 (1993)	305	335	25.1	27.9	26.5	24.5	0.9	1.1	1.0	1.1
1991-1993 (1992)	288	320	25.4	28.3	26.2	24.2	1.0	1.1	1.0	1.2
1990-1992 (1991)	294	329	25.0	27.9	26.8	24.7	0.9	1.0	1.0	1.1
1989-1991 (1990)	275	307	25.3	28.3	27.7	25.5	0.9	1.0	1.0	1.1
1988-1990 (1989)	270	301	25.4	28.6	28.0	25.9	0.9	1.0	1.0	1.1
1987-1989 (1988)	275	310	26.9	30.6	29.7	27.5	0.9	1.0	1.0	1.1
1986-1988 (1987)	282	327	26.2		30.3	28.1	0.9		0.9	
1985-1987 (1986)	232		26.4		31.0	28.8	0.9		0.9	
1984-1986 (1985)	254		26.0		32.3	30.1	0.8		0.9	
1983-1985 (1984)	245		28.0		33.4	31.1	0.8		0.9	
1982-1984 (1983)	236		28.9		34.4	32.0	0.8		0.9	
1981-1983 (1982)	237		29.6		35.8	33.4	0.8		0.9	
1980-1982 (1981)	241		29.9		38.1	35.6	0.8		0.8	
1979-1981 (1980)	225		32.6		40.8	38.0	0.8		0.9	
1978-1980 (1979)	259		34.0		42.5	39.8	0.8		0.9	
1977-1979 (1978)	227		36.3		45.3	42.5	0.8		0.9	
1976-1978 (1977)	234		36.4		48.2	45.3	0.8		0.8	
1975-1977 (1976)	226		38.0		51.4	48.5	0.7		0.8	
1974-1976 (1975)	215		40.5		54.5	51.3	0.7		0.8	
1973-1975 (1974)	233		44.2		59.9	56.4	0.7		0.8	
1972-1974 (1973)	239		46.7		63.7	59.6	0.7		0.8	
(1972)	209									
1954-1956 (1955)	NA		NA		NA	NA				

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

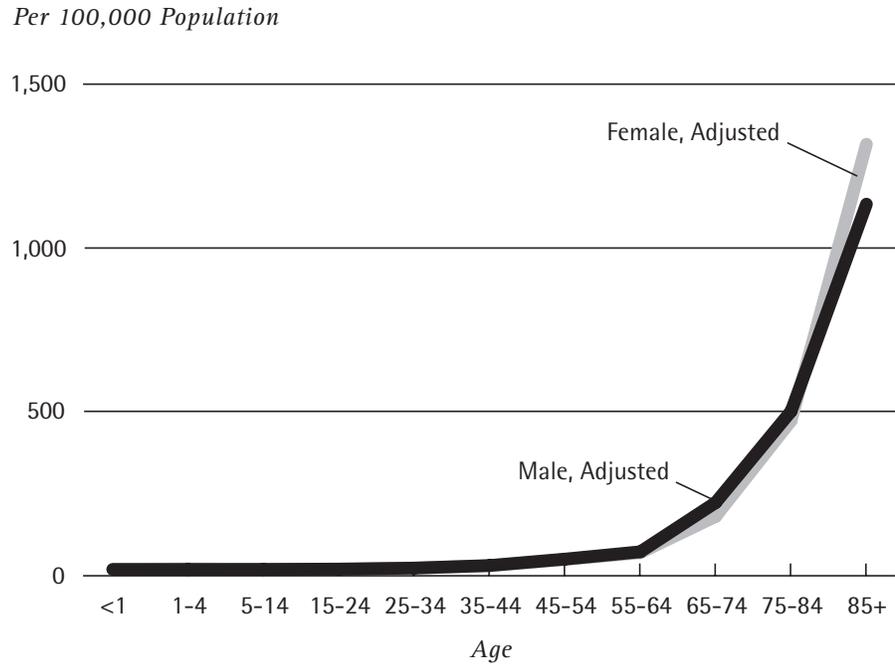
**Note:** NA denotes not available. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

Part 4 General Mortality Statistics

Chart 4.51

*Cerebrovascular Diseases Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific cerebrovascular diseases death rate (1994-1996) was relatively close for Indian males and females at each age group. The rate for both Indian males and females increased with age starting with age groups over 25 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.51**

*Cerebrovascular Diseases Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	0.9	—	—	—	1.9	—
1-4 years	0.5	0.8	—	—	1.1	1.6
5-14 years	0.1	0.1	0.2	0.2	—	—
15-24 years	0.7	0.7	1.1	1.1	0.3	0.3
25-34 years	3.0	4.0	3.5	4.1	2.5	3.9
35-44 years	10.5	11.5	11.1	11.9	10.0	11.1
45-54 years	27.1	30.7	29.6	31.5	24.8	30.1
55-64 years	47.4	52.3	49.0	53.8	46.0	51.0
65-74 years	157.7	180.5	177.6	204.1	142.0	161.8
75-84 years	411.3	465.6	429.8	483.0	398.9	453.9
85 years +	1,190.1	1,230.9	1,073.3	1,115.1	1,257.6	1,297.9

Age Group	U.S. All Races		
	Both Sexes	Male	Female
	Under 1 year	5.8	6.3
1-4 years	0.4	0.4	0.3
5-14 years	0.2	0.2	0.2
15-24 years	0.5	0.5	0.4
25-34 years	1.8	1.9	1.7
35-44 years	6.5	7.1	6.0
45-54 years	17.7	19.8	15.6
55-64 years	46.2	53.5	39.6
65-74 years	137.5	156.2	122.5
75-84 years	481.8	517.5	459.2
85 years +	1,637.1	1,538.4	1,675.5

Age Group	U.S. White		
	Both Sexes	Male	Female
	Under 1 year	5.3	6.0
1-4 years	0.3	0.3	0.2
5-14 years	0.2	0.2	0.1
15-24 years	0.4	0.5	0.4
25-34 years	1.5	1.6	1.4
35-44 years	4.8	5.2	4.5
45-54 years	13.8	14.9	12.8
55-64 years	39.0	44.8	33.8
65-74 years	126.7	143.8	112.8
75-84 years	470.7	503.4	449.9
85 years +	1,651.7	1,550.9	1,690.6

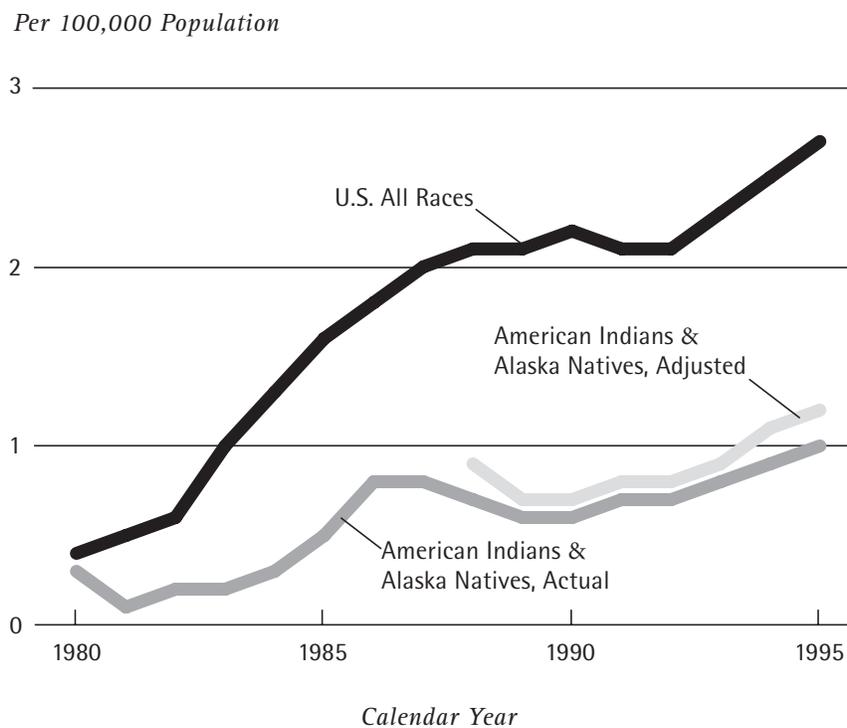
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates. **Note:** — represents zero

Part 4 General Mortality Statistics

Chart 4.52

Age-Adjusted  
Alzheimer's Disease  
Death Rates

The age-adjusted alzheimer's disease death rate for American Indians and Alaska Natives increased from 0.3 deaths per 100,000 population in 1979-1981 to 1.2 in 1994-1996, an increase of 300 percent. The U.S. All Races rate of 2.7 in 1995 is over 2 times the 1994-1996 American Indian and Alaska Native rate. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Part 4 General Mortality Statistics

Table 4.52

Alzheimer's Disease Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1980-1995  
(Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted		
(1996)	18	24								
1994-1996 (1995)	18	19	1.0	1.2	2.7	2.8	0.4	0.4	0.4	0.4
1993-1995 (1994)	13	15	0.9	1.1	2.5	2.6	0.4	0.4	0.3	0.4
1992-1994 (1993)	12	14	0.8	0.9	2.3	2.4	0.3	0.4	0.3	0.4
1991-1993 (1992)	12	13	0.7	0.8	2.1	2.2	0.3	0.4	0.3	0.4
1990-1992 (1991)	8	9	0.7	0.8	2.1	2.2	0.3	0.4	0.3	0.4
1989-1991 (1990)	8	9	0.6	0.7	2.2	2.3	0.3	0.3	0.3	0.3
1988-1990 (1989)	8	8	0.6	0.7	2.1	2.2	0.3	0.3	0.3	0.3
1987-1989 (1988)	7	9	0.7	0.9	2.1	2.2	0.3	0.4	0.3	0.4
1986-1988 (1987)	10	13	0.8		2.0	2.1	0.4		0.4	
1985-1987 (1986)	9		0.8		1.8	1.9	0.4		0.4	
1984-1986 (1985)	3		0.5		1.6	1.7	0.3		0.3	
1983-1985 (1984)	2		0.3		1.3	1.4	0.2		0.2	
1982-1984 (1983)	4		0.2		1.0	1.1	0.2		0.2	
1981-1983 (1982)	—		0.2		0.6	0.7	0.3		0.3	
1980-1982 (1981)	2		0.1		0.5	0.5	0.2		0.2	
1979-1981 (1980)	1		0.3		0.4	0.4	0.8		0.8	
(1979)	2									

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

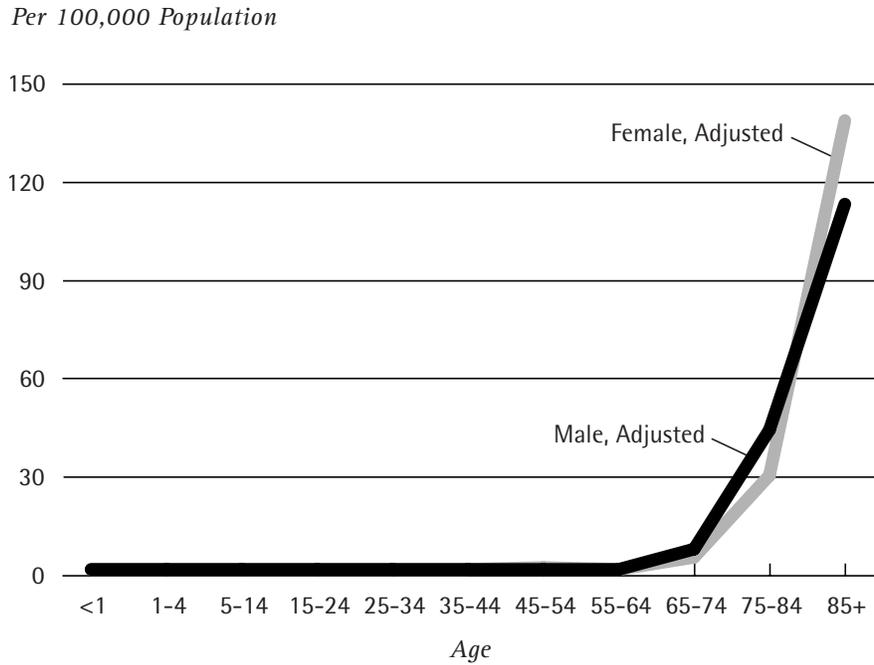
Note: — represents zero

Part 4 General Mortality Statistics

Chart 4.53

*Alzheimer's Disease  
Death Rates by  
Age and Sex*

The age-specific alzheimer's death rate (1994-1996) for Indian males were higher than Indian females in age groups 65 to 84 years. For age group 85 years and over, the Indian female rate was greater than the Indian male rate. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.53**

*Alzheimer's Disease Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	—	—	—	—	—	—
15-24 years	—	—	—	—	—	—
25-34 years	—	—	—	—	—	—
35-44 years	—	—	—	—	—	—
45-54 years	0.3	0.3	—	—	0.6	0.6
55-64 years	—	—	—	—	—	—
65-74 years	4.1	4.8	4.7	6.2	3.7	3.7
75-84 years	25.7	34.3	28.4	42.6	23.9	28.7
85 years +	122.6	132.8	111.5	111.5	129.0	137.0

U.S. All Races				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—
1-4 years	—	—	—	—
5-14 years	—	—	—	—
15-24 years	—	—	—	—
25-34 years	—	—	—	—
35-44 years	0.0	0.0	0.0	0.0
45-54 years	0.1	0.1	0.1	0.1
55-64 years	1.6	1.4	1.7	1.7
65-74 years	11.1	11.7	10.6	10.6
75-84 years	73.4	76.1	71.7	71.7
85 years +	274.7	252.6	283.2	283.2

U.S. White				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—
1-4 years	—	—	—	—
5-14 years	—	—	—	—
15-24 years	—	—	—	—
25-34 years	—	—	—	—
35-44 years	—	—	—	—
45-54 years	0.1	0.1	0.1	0.1
55-64 years	1.6	1.5	1.8	1.8
65-74 years	11.6	12.1	11.2	11.2
75-84 years	75.9	78.5	74.3	74.3
85 years +	286.2	264.8	294.5	294.5

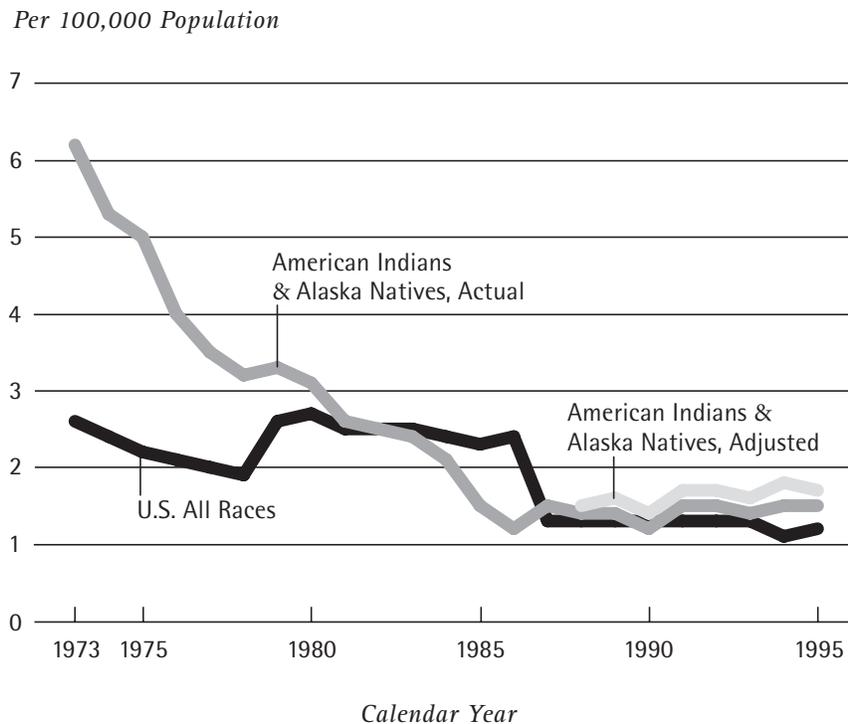
<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates. **Note:** — represents zero. 0.0 rounds to zero.

Part 4 General Mortality Statistics

Chart 4.54

Age-Adjusted  
Gastrointestinal Disease  
Death Rates

The age-adjusted gastrointestinal disease death rate for American Indians and Alaska Natives has decreased 73 percent since the 1972-1974 rate of 6.2 deaths per 100,000 population. The 1994-1996 rate (1.7 deaths per 100,000 population) is 42 percent higher than the U.S. All Races rate of 1.2 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Part 4 General Mortality Statistics

Table 4.54

Gastrointestinal Disease Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:				
	Number		Rate				U.S. All Races		U.S. White		
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted	
(1996)	17	20									
1994-1996 (1995)	25	28	1.5	1.7	1.2	1.1	1.3	1.4	1.4	1.4	1.5
1993-1995 (1994)	14	16	1.5	1.8	1.1	1.0	1.4	1.6	1.4	1.4	1.6
1992-1994 (1993)	17	20	1.4	1.6	1.3	1.2	1.1	1.2	1.2	1.2	1.3
1991-1993 (1992)	18	20	1.5	1.7	1.3	1.2	1.2	1.3	1.3	1.3	1.4
1990-1992 (1991)	18	20	1.5	1.7	1.3	1.2	1.2	1.3	1.3	1.3	1.4
1989-1991 (1990)	17	20	1.2	1.4	1.3	1.2	0.9	1.1	1.0	1.0	1.2
1988-1990 (1989)	9	10	1.4	1.6	1.3	1.2	1.1	1.2	1.2	1.2	1.3
1987-1989 (1988)	24	26	1.4	1.5	1.3	1.5	1.1	1.2	0.9	0.9	1.0
1986-1988 (1987)	14	15	1.5		1.3	1.5	1.2		1.0		
1985-1987 (1986)	15		1.2		2.4	1.2	0.5		1.0		
1984-1986 (1985)	13		1.5		2.3	1.3	0.7		1.2		
1983-1985 (1984)	21		2.1		2.4	1.4	0.9		1.6		
1982-1984 (1983)	25		2.4		2.5	1.4	1.0		1.9		
1981-1983 (1982)	18		2.5		2.5	1.2	1.0		2.2		
1980-1982 (1981)	20		2.6		2.5	1.2	1.0		2.2		
1979-1981 (1980)	29		3.1		2.7	1.6	1.2		2.0		
1978-1980 (1979)	29		3.3		2.6	1.8	1.4		2.0		
1977-1979 (1978)	26		3.2		1.9	1.8	1.8		1.9		
1976-1978 (1977)	28		3.5		2.0	1.8	2.1		2.3		
1975-1977 (1976)	37		4.0		2.1	1.9	2.3		2.5		
1974-1976 (1975)	36		5.0		2.2	2.1	2.6		2.8		
1973-1975 (1974)	44		5.3		2.4	2.3	2.5		2.7		
1972-1974 (1973)	37		6.2		2.6	2.4	2.7		2.9		
(1972)	43										
1954-1956 (1955)	165		15.4		3.6	3.1	4.3		5.0		

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

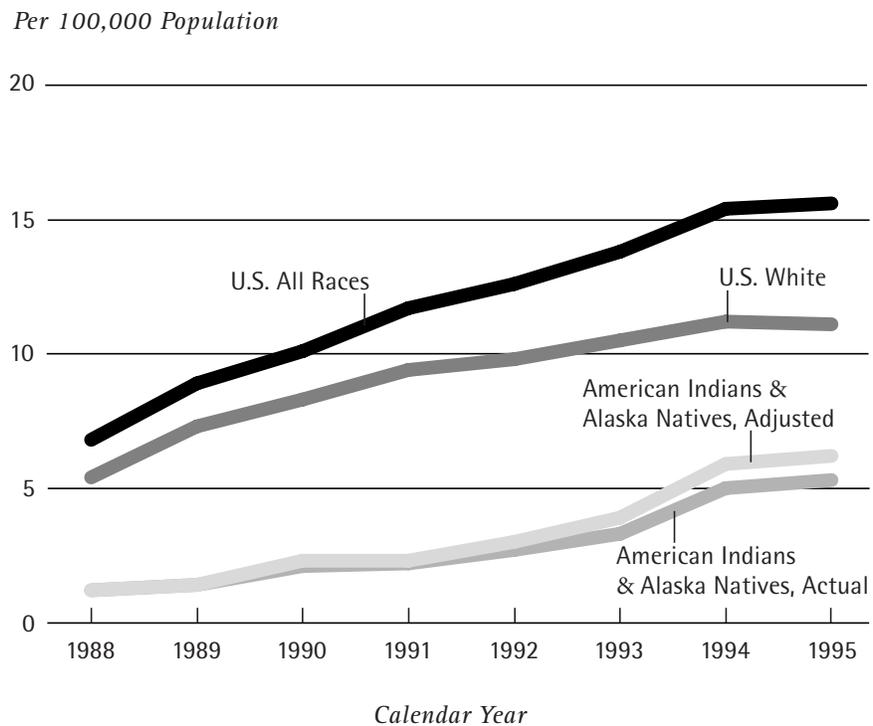
**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Number of deaths and rates for U.S. populations are for the single year specified. Starting in 1979 cause of death codes which define gastrointestinal deaths were revised to exclude ICD-9 code 557 (vascular insufficiency of intestine). Currently ICD-9 codes that define gastrointestinal disease death includes: 004, 006, 007, 008, 009 535, 555, 556, 558 and 562.

Part 4 General Mortality Statistics

Chart 4.55

Human Immunodeficiency Virus (HIV) Infection Death Rates

The number of HIV deaths for American Indians and Alaska Natives residing in the entire U.S. in 1996 (96) is 5 times the number in 1987 (20). A somewhat higher relationship (a ratio of 6.5 to 1) exists for Indians residing in the IHS service area, i.e., there were 52 deaths in 1996 compared to 8 in 1987. However, IHS service area Indians comprise about 60 percent of all U.S. Indians, but in 1996 had only 54 percent of total Indian HIV deaths. When the 1996 IHS service area number is adjusted for miscoding of Indian race on death certificates, it increases to 61 percent. An adjustment factor is not available for All U.S. Indians, but it is expected that the rate of miscoding for All U.S. Indians is greater than the rate for just IHS service area Indians. In this case, IHS service area Indians would have even less than 54 percent of total Indian HIV deaths.



Part 4 General Mortality Statistics

Table 4.55

Human Immunodeficiency Virus (HIV) Infection Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1988-1995  
(Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native						U.S. All Races Rate	U.S. White Rate
	Entire U.S.		IHS Service Area					
	Number	Rate	Number		Rate			
		Actual	Adjusted	Actual	Adjusted			
(1996)	96		52	59				
1994-1996 (1995)	154	5.5	84	100	5.3	6.2	15.6	11.1
1993-1995 (1994)	120	5.7	62	75	5.0	5.9	15.4	11.2
1992-1994 (1993)	101	4.2	39	45	3.3	3.9	13.8	10.5
1991-1993 (1992)	57	3.7	20	21	2.7	3.0	12.6	9.8
1990-1992 (1991)	76	2.7	38	42	2.2	2.3	11.7	9.4
1989-1991 (1990)	36	2.5	16	17	2.1	2.3	10.1	8.3
1988-1990 (1989)	36	1.7	16	16	1.4	1.4	8.9	7.3
1987-1989 (1988)	26	1.4	13	13	1.2	1.2	6.8	5.4
(1987)	20		8	10			5.5	4.5

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

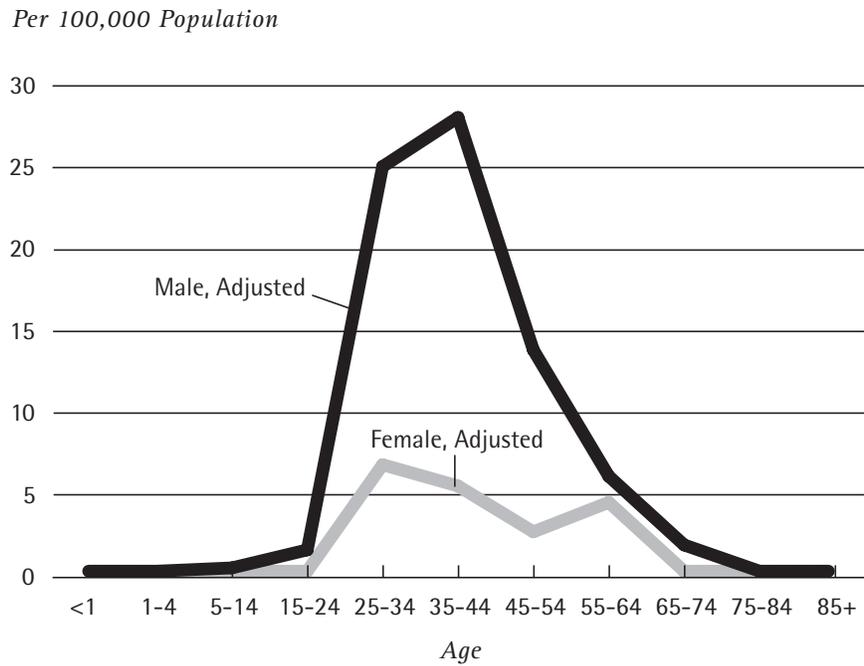
**Note:** Includes cause of death with ICD-9 codes 042-044, first classified in 1987. American Indian and Alaska Native rates are for the 3-year periods specified. Number of deaths and rates for U.S. populations are for the single year specified. American Indian and Alaska Native numbers and rates for the entire United States (shown above) are based on actual (not adjusted) numbers of deaths, since adjustment factors are only available for the American Indian and Alaska Native population residing in the IHS service area.

Part 4 General Mortality Statistics

Chart 4.56

*Human Immunodeficiency Virus (HIV) Infection Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific HIV death rate (1994-1996) for Indian males was greater for all age groups in which there were reported deaths in comparison to Indian females. The rate for Indian males was highest (over 24.0) in age groups from 25 to 44 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.56**

*Human Immunodeficiency Virus (HIV) Infection Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	0.1	0.1	0.2	0.2	—	—
15-24 years	0.5	0.7	1.1	1.3	—	—
25-34 years	12.7	15.4	20.6	24.7	5.1	6.5
35-44 years	13.8	16.1	23.4	27.7	4.8	5.2
45-54 years	6.8	7.7	11.6	13.5	2.4	2.4
55-64 years	4.5	4.9	4.8	5.8	4.2	4.2
65-74 years	0.7	0.7	1.6	1.6	—	—
75-84 years	—	—	—	—	—	—
85 years +	—	—	—	—	—	—

U.S. All Races			
Age Group	Both Sexes		Female
	Actual	Adj <sup>1</sup>	Actual
Under 1 year	1.5	1.7	1.2
1-4 years	1.3	1.2	1.5
5-14 years	0.5	0.5	0.5
15-24 years	1.8	2.1	1.4
25-34 years	29.1	47.1	11.1
35-44 years	44.5	76.0	13.4
45-54 years	26.3	46.9	6.7
55-64 years	11.0	19.9	2.9
65-74 years	3.6	6.4	1.4
75-84 years	0.7	1.3	0.3
85 years +	0.3	0.5	0.2

U.S. White			
Age Group	Both Sexes		Female
	Actual	Adj <sup>1</sup>	Actual
Under 1 year	0.7	0.8	0.6
1-4 years	0.7	0.6	0.8
5-14 years	0.3	0.3	0.2
15-24 years	1.0	1.4	0.5
25-34 years	21.3	36.7	5.5
35-44 years	31.6	56.8	6.4
45-54 years	18.6	34.4	3.2
55-64 years	7.5	14.2	1.3
65-74 years	2.4	4.5	0.6
75-84 years	0.4	0.7	0.2
85 years +	0.2	0.2	0.2

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

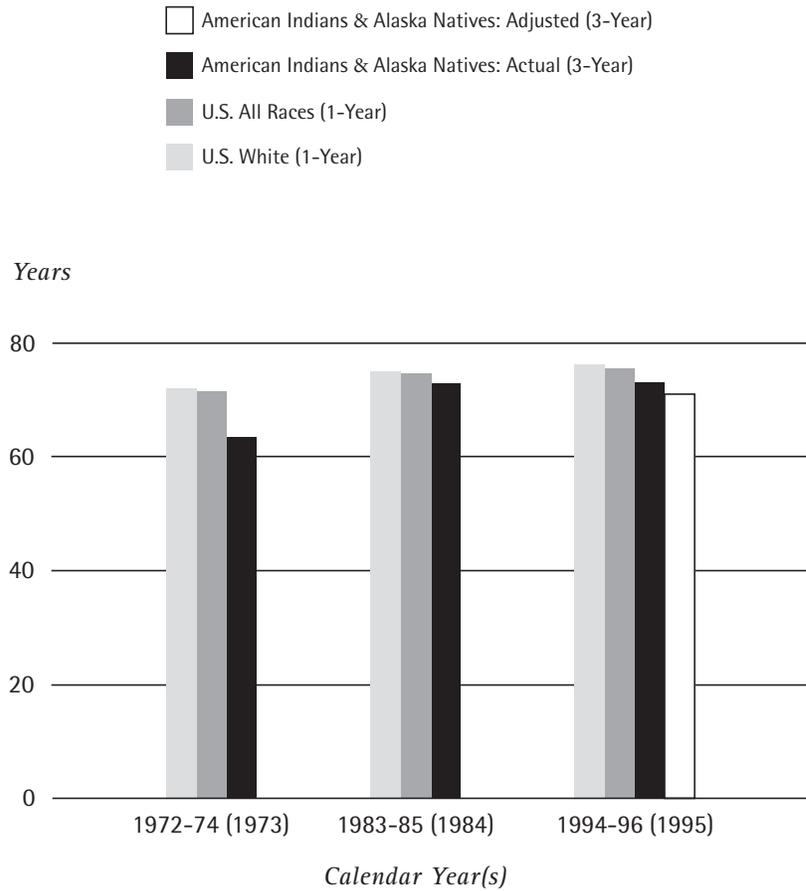
**Note:** — Represents zero.

Part 4 General Mortality Statistics

Chart 4.57

*Life Expectancy at Birth*

Life expectancy at birth for American Indians and Alaska Natives in 1972-1974 was 63.5 years. By 1994-1996, it increased to 71.1 years. This is 4.7 years less than the U.S. All Races life expectancy of 75.8 for 1995 and 5.4 years less than that for U.S. Whites (76.5, 1995). These Indian life expectancies have been adjusted for miscoding of Indian race on death certificates.

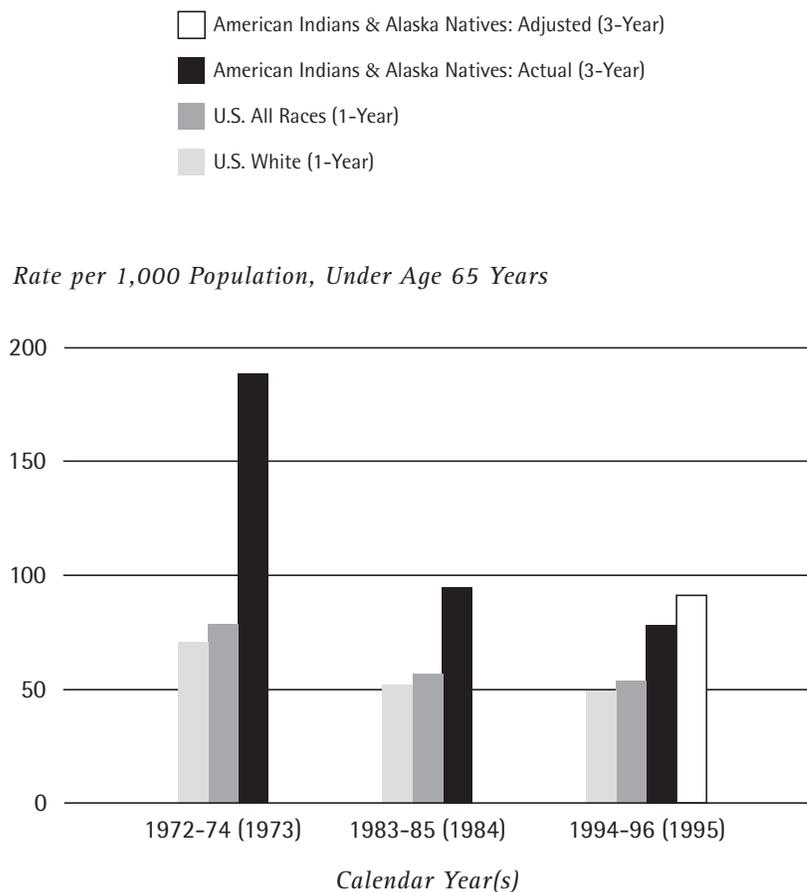


**Part 4** *General Mortality Statistics*

**Chart 4.58**

*Years of Potential  
Life Lost*

The years of potential life lost (YPLL) rate for American Indians and Alaska Natives in 1994-1996 (91.5 per 1,000 population) is less than half of what it was in 1972-1974 (188.3). The 1994-1996 Indian YPLL rate is 70 percent greater than the U.S. All Races YPLL rate of 53.7 for 1995 and 94 percent greater than that for U.S. Whites (47.2, 1995). These Indian rates have been adjusted for miscoding of Indian race on death certificates.

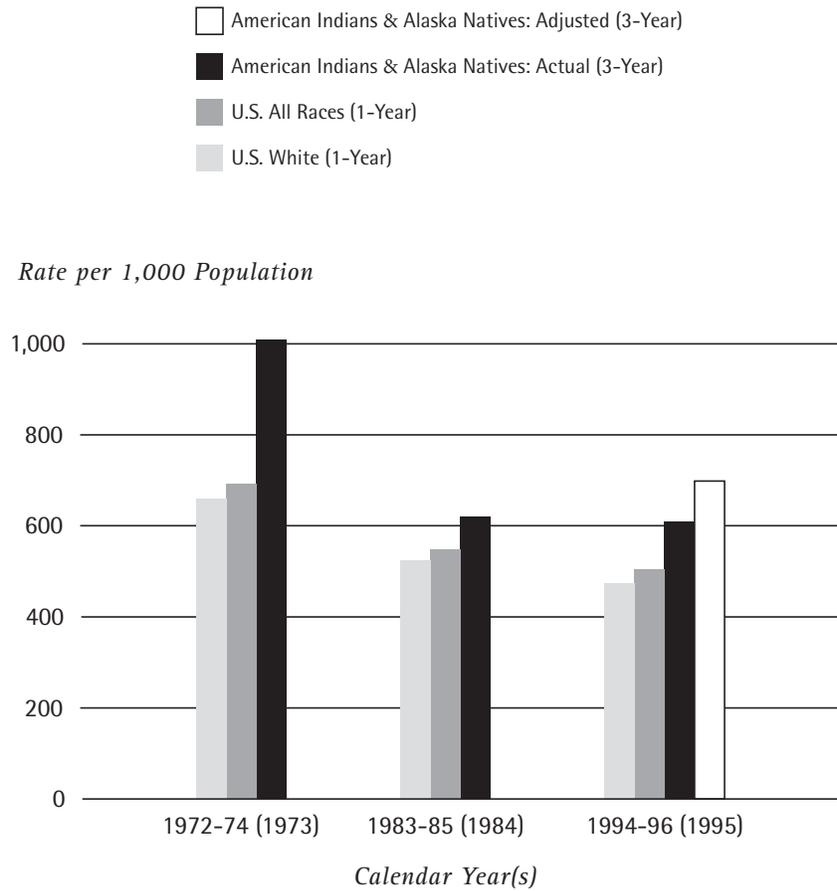


**Part 4** *General Mortality Statistics*

**Chart 4.59**

*Age-Adjusted Death Rates*

The age-adjusted death rate (all causes) for American Indians and Alaska Natives has decreased 31 percent from 1972-1974 (1,007.4 per 100,000 population) to 1994-1996 (699.3). From 1973 to 1995, the U.S. All Races rate decreased 27 percent (692.9 to 503.3) and the U.S. White rate also decreased 28 percent (659.3 to 476.9). The 1994-1996 Indian rate is 39 percent higher than the All Races rate for 1995 and 47 percent higher than the 1995 White rate. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



**Part 4** *General Mortality Statistics*

**Table 4.57**

*Overall Measures of Indian Health*

IHS Service Area Population Compared with the U.S. All Races and White Populations

	Life Expectancy At Birth (Years)		Years of Potential Life Lost (Rate per 1,000 Population <sup>1</sup> )		Age-Adjusted Death Rate (per 100,000 Population)	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
IHS Service Area:						
1994-1996	73.2	71.1	78.1	91.5	609.8	699.3
1983-1985	72.9	NA	94.9	NA	620.9	NA
1972-1974	63.5	NA	188.3	NA	1,007.4	NA
U.S. All Races						
1995	75.8		53.7		503.9	
1984	74.7		56.6		545.9	
1973	71.4		78.9		692.9	
U.S. White						
1995	76.5		47.2		476.9	
1984	75.3		51.4		523.6	
1973	72.2		70.8		659.3	
Ratio: IHS to U.S. All Races:						
1994-1996 (1995)	0.97	0.94	1.45	1.70	1.21	1.39
1983-1985 (1984)	0.98	NA	1.67	NA	1.14	NA
1972-1974 (1973)	0.85	NA	2.39	NA	1.45	NA
Ratio: IHS to U.S. White:						
1994-1996 (1995)	0.96	0.93	1.65	1.94	1.28	1.47
1983-1985 (1984)	0.97	NA	1.84	NA	1.19	NA
1972-1974 (1973)	0.84	NA	2.66	NA	1.53	NA

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

<sup>1</sup> Sum of years of age below age 65 that decedents died divided by the total resident population younger than 65 years of age.

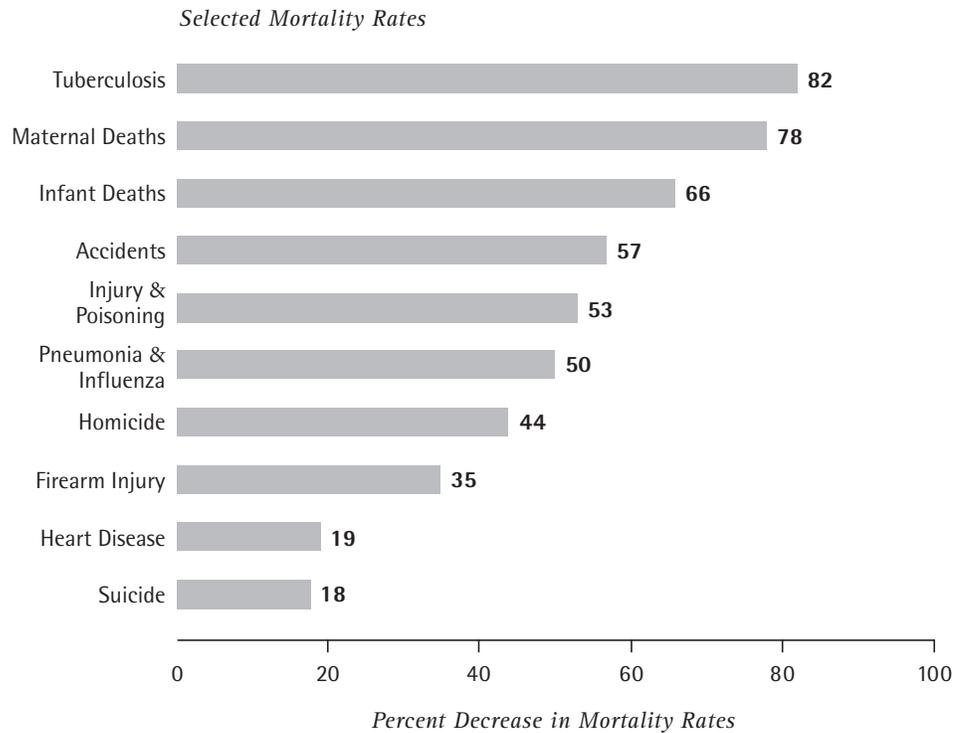
**Note:** NA—Adjusted mortality data for the IHS Service Area population not available for 1972-1974 or for 1983-1985.

Part 4 General Mortality Statistics

Chart 4.60

*Indian Health Service  
Program  
Accomplishments  
Since 1973  
(Actual Mortality Data)*

The health status of American Indians and Alaska Natives has experienced major improvements since 1972-1974. Some of these positive changes are evident from lower death rates. For example, maternal and infant mortality rates have declined 78 percent and 66 percent, respectively. Likewise, age-adjusted death rates have been reduced for tuberculosis (82 percent), accidents (57 percent), injuries and poisonings (53 percent), and pneumonia and influenza (50 percent).

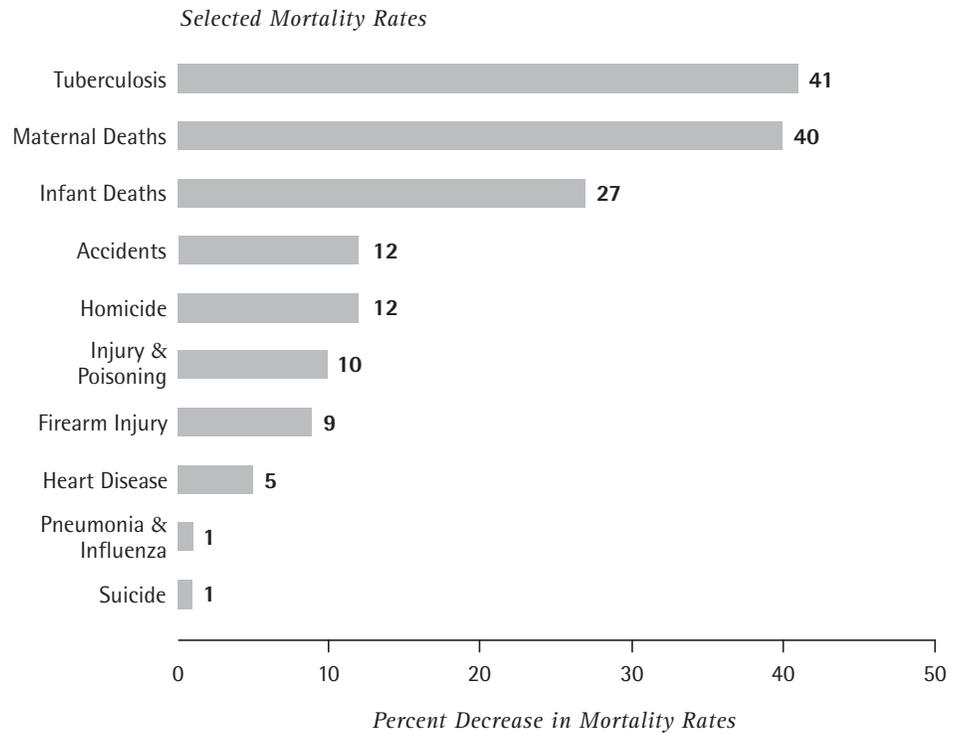


Part 4 General Mortality Statistics

Chart 4.61

*Indian Health Service  
Program  
Accomplishments  
Since 1987  
(Actual Mortality Data)*

The health status of American Indians and Alaska Natives has experienced major improvements since 1982-1989. Some of these positive changes are evident from lower death rates. For example, maternal and infant mortality rates have declined 40 percent and 27 percent, respectively. Likewise, age-adjusted death rates have been reduced 41 percent for tuberculosis and 12 percent each for accidents and homicides.



## Part 4 General Mortality Statistics

**Table 4.60**

### *Program Accomplishments*

#### IHS Service Area

Health Improvements	Rate	Rate	1994-96 Rate		Percent Decrease to 1994-96	
	Actual (1972-74)	Adjusted (1987-89)	Actual	Adjusted	Actual (from 1972-74)	Adjusted (from 1987-89)
Death Rates						
Infant <sup>1</sup>	22.2	12.7	7.6	9.3	66	27
Maternal <sup>2</sup>	27.7	10.2	6.1	6.1	78	40
Pneumonia and Influenza <sup>3</sup>	40.8	22.3	20.2	22.0	50	1
Tuberculosis, all forms <sup>3</sup>	10.5	3.2	1.9	1.9	82	41
Accidents <sup>3</sup>	188.0	104.8	80.6	92.6	57	12
Suicide <sup>3</sup>	21.0	19.4	17.3	19.3	18	1
Homicide <sup>3</sup>	24.3	17.3	13.5	15.3	44	12
Heart Disease	162.8 <sup>4</sup>	164.5	132.4	156.0	19	5
Injury and Poisoning	241.7	144.9	113.6	129.7	53	10
Firearm Injury <sup>4</sup>	25.2	20.8	16.5	18.9	35	9

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

<sup>1</sup>Rate per 1,000 births

<sup>2</sup>Rate per 100,000 live births

<sup>3</sup>Age-adjusted rate per 100,000 population

<sup>4</sup>1979-80 age-adjusted firearm injury mortality rate

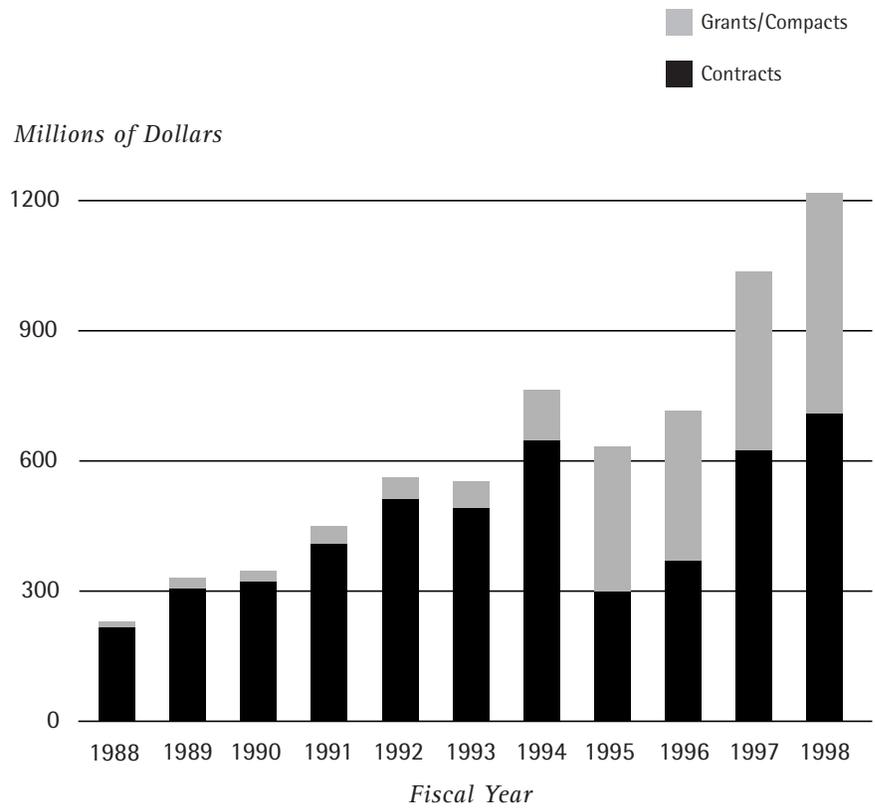
# Part 5

## Patient Care Statistics

**Chart 5.1**

*Indian Health Service  
Tribal Health  
Contract and Grant/  
Compact Awards*

Indian Health Service contract and grant/compact awards for Tribal health in FY 1998 are more than five times what they were in FY 1988, \$1,216.2 million compared to \$230.3 million.



Part 5 Patient Care Statistics

**Table 5.1**

*IHS Tribal Health  
Contract and Grant/  
Compact Awards,  
FY 1975-1998  
(Millions of dollars)*

Fiscal Year	Total	Contracts <sup>1</sup>	Grants/Compacts <sup>2</sup>
1998	\$1,216.2	\$ 709.7	\$ 506.5
1997	1,037.0	624.7	412.3
1996	716.1	371.2	344.9
1995	632.5	297.5	335.0
1994	762.6	648.1	114.5
1993	551.4	491.5	59.9
1992	562.5	511.6	50.9
1991	450.2	410.1	40.1
1990	348.1	320.7	27.4
1989	330.1	306.6	23.5
1988	230.3	217.2	13.1
1987	210.7	200.9	9.8
1986	209.1	199.0	10.1
1985	234.0	218.1	15.9
1984	194.0	177.5	16.5
1983	157.7	143.1	14.6
1982	141.1	126.5	14.6
1981	142.8	130.7	12.1
1980	121.9		
1979	74.0		
1978	70.1		
1977	57.9		
1976	32.6		
1975	17.4		

<sup>1</sup> Starting in 1989, contracts issued to Tribal organizations for the construction of health facilities by the Office of Engineering Services are included in the contracts category. Contracts awards also include those issued by IHS Area Offices and IHS Headquarters and exclude purchase orders below \$25,000. Includes new contracts and contract modifications.

<sup>2</sup> Project grant obligations shown for first time in FY 1981. During 1987 and 1988, IHS Scholarship Program funding was reported under contracts rather than grants. The IHS Loan Repayment Program was initiated as a contract program starting in 1988. Both the IHS Scholarship and the IHS Loan Repayment programs were converted to grant programs in 1989. Includes Urban Indian Health Program grants that were first awarded in 1991. Includes Tribal self-governance compact planning grants that were first awarded in 1993. Includes self-governance cooperative agreements and self-governance compacts starting in 1994. Diabetes grants to tribal organizations, Urban Indian health programs, and IHS facilities were funded beginning in 1998.

Part 5 Patient Care Statistics

Chart 5.2

Indian Health Service  
Tribal Health Contract and  
Grant/Compact Awards  
by Type, FY 1998

The \$432 million reported under the P.L. 93-638 Project Grants/Compacts category for FY 1998 comprised 36 percent of the total Indian Health Service contract and grant/compact awards for Tribal health. P.L. 93-638 contracts amounted to \$410 million or 34 percent of the total.

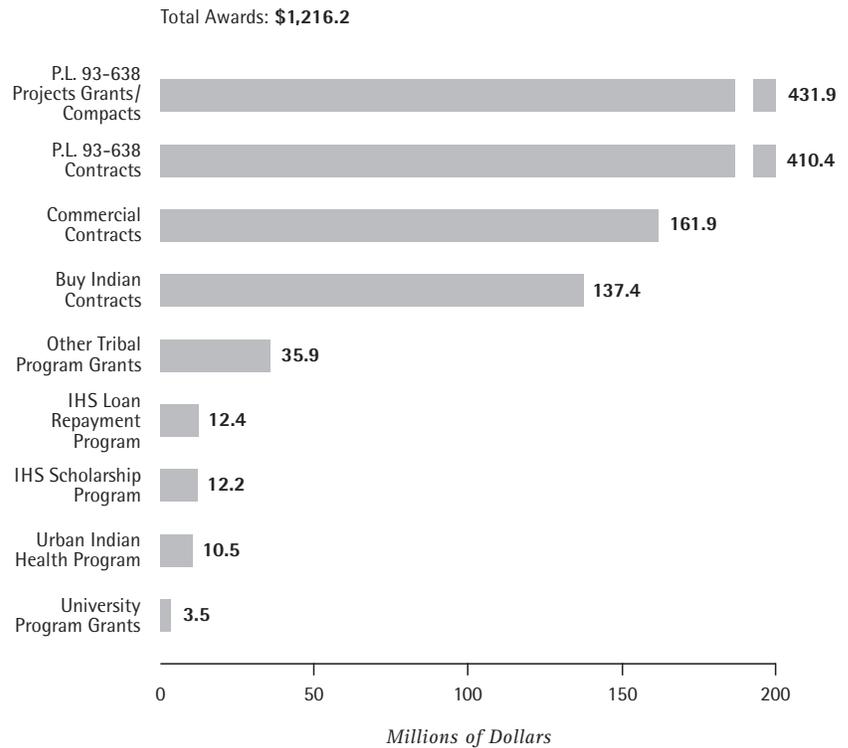


Table 5.2

IHS Tribal Health Contract and Grant/Compact Awards by Type, FY 1998

Type of Contract or Grant	Total \$ Awarded (Millions)	Percent Distribution
Contract and Grant Total	\$1,216.2	100.0
Contract, Total <sup>1</sup>	709.7	58.4
P.L. 93-638 Contracts	410.4	33.7
Commercial Contracts	161.9	13.3
Buy Indian Contracts	137.4	11.3
Grant/Compact, Total	506.5	41.6
P.L. 93-638 Project Grants/Compacts <sup>2</sup>	431.9	35.5
Other Tribal Program Grants <sup>3</sup>	35.9	3.0
IHS Loan Repayment Program	12.4	1.0
IHS Scholarship Program	12.2	1.0
Urban Indian Health Programs <sup>4</sup>	10.5	0.9
University Program Grants <sup>5</sup>	3.5	0.3

<sup>1</sup> Contract awards include those of IHS Area Offices, IHS Headquarters and the Office of Engineering Services. They include new contracts and contract modifications, indirect costs, and exclude purchase orders below \$25,000.

<sup>2</sup> Includes Tribal management grants, health service delivery grants, self-governance cooperative agreements, self-governance grants/compacts, and injury prevention.

<sup>3</sup> Includes grants for tribal mental health, child abuse, tribal matching scholarships, tribal recruitment/retention, epidemiology, Alaska Area grants, diabetes, and other special projects.

<sup>4</sup> Urban Indian Health program grants for alcohol/substance abuse, mental health, HP/DP, immunization, and diabetes prevention and treatment.

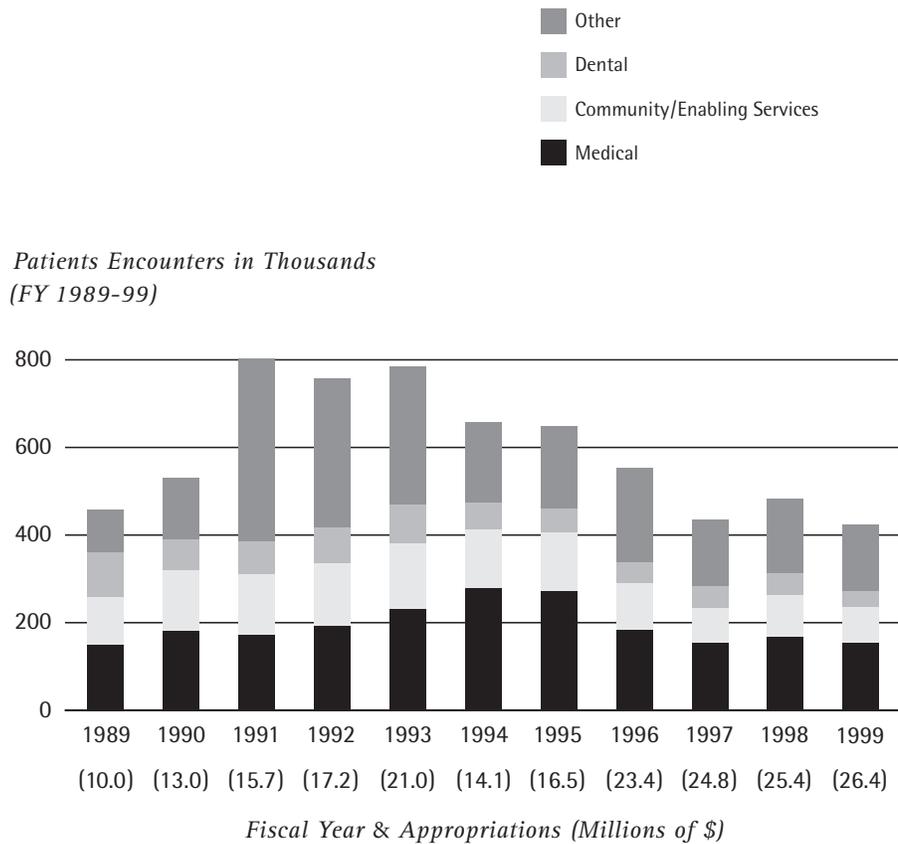
<sup>5</sup> Includes grants to universities that conduct recruitment and training program.

**Part 5 Patient Care Statistics**

**Chart 5.3**

*Urban Indian Health Program Workload and Appropriation*

The appropriation for the Urban Indian Health Program has increased 165 percent since FY 1989, but only 58 percent when inflation is taken into account. The workload reported decreased 8 percent during this time period. In FY 1999, the appropriation for this program was \$26.4 million, and there were nearly 423,000 patient encounters.



## Part 5 Patient Care Statistics

**Table 5.3**

*Urban Indian Health Program Workload and Appropriation, FY 1985-1999*

Fiscal Year	Total Workload	Medical	Community and Enabling Services	Dental	Other <sup>1</sup>	Appropriation (\$ Thousands)
1999	423,049	153,876	82,777	36,291	150,105	26,382
1998	482,919	166,649	96,387	48,823	171,060	25,379
1997	435,019	153,616	80,056	50,455	150,892	24,800
1996	553,029	182,552	106,680	47,624	216,173	23,360
1995	649,611	271,397	134,828	55,128	188,258	16,450
1994	657,150	277,984	135,952	60,748	182,466	14,112
1993 <sup>2</sup>	784,581	229,737	151,139	88,845	314,860	20,965
1992	757,606	192,921	142,658	82,076	339,951	17,195
1991	802,335	172,297	138,204	76,028	415,806	15,687
1990	530,228	181,974	137,200	72,470	138,584	13,049
1989	459,684	150,472	106,940	102,886	99,386	9,962
1988	370,943	128,000	102,481	64,609	75,853	9,624
1987	451,988	146,228	116,898	62,377	126,485	9,000
1986	471,757	163,004	124,783	57,663	126,307	9,644
1985	504,799	170,913	153,761	60,956	119,169	9,800

<sup>1</sup> The Other category includes the following types of services: nutrition education, health education, mental health, optometric services, and other allied health services which includes substance abuse counseling.

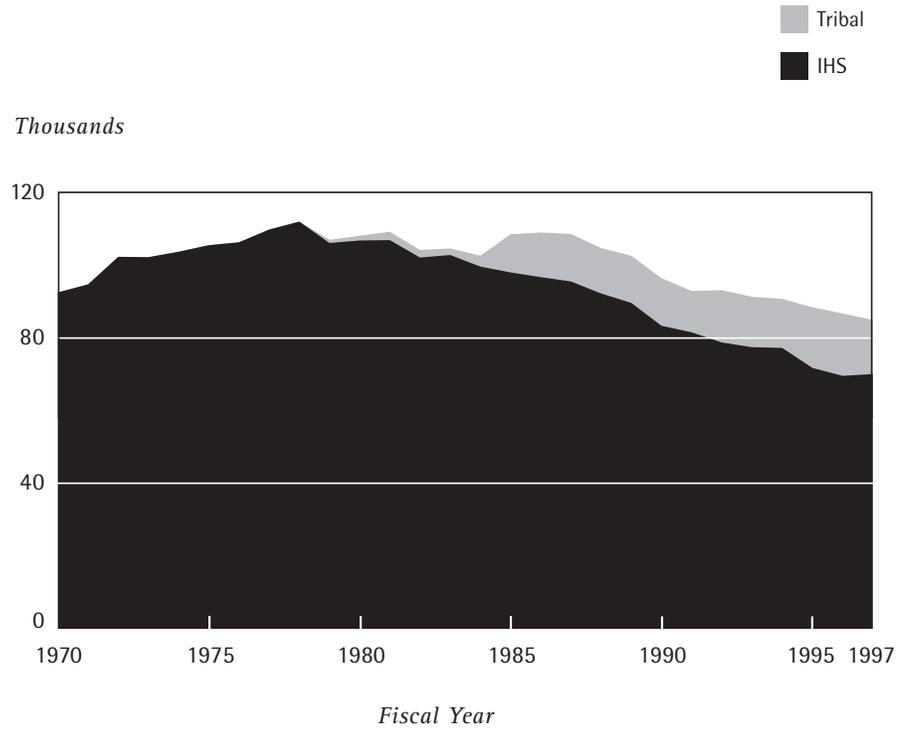
<sup>2</sup> Includes \$2.0 million in urban alcohol programs transferred to the IHS Urban Program Branch from the IHS Alcohol and Substance Abuse Program Branch.

Part 5 Patient Care Statistics

**Chart 5.4**

*Number of Hospital Admissions, IHS and Tribal Direct and Contract General Hospitals*

Total hospital admissions peaked in FY 1978 at 112,000. In FY 1997 (provisional), there were about 85,000 total admissions.



## Part 5 Patient Care Statistics

**Table 5.4**

*Number of Admissions*

IHS and Tribal Direct and Contract General Hospitals, Fiscal Years 1955-1998

Fiscal Year	Total IHS and Tribal Admissions	Indian Health Service			Tribal		
		Total	Direct	Contract <sup>1</sup>	Total	Direct	Contract
1998	NA	NA	57,114	NA	NA	11,539	NA
1997 (Prov.)	85,086	70,151	56,219	13,932	14,935	12,188	2,747
1996	86,898	69,725	55,656	14,069	17,173	11,908	5,265
1995	88,549	71,898	56,796	15,102	16,651	11,034	5,617
1994	90,921	77,408	60,950	16,458	13,513	8,411	5,102
1993	91,542	77,646	60,575	17,071	13,896	8,443	5,453
1992	93,271	78,897	61,992	16,905	14,374	9,017	5,357
1991	93,180	81,746	64,312	17,434	11,434	6,924	4,510
1990	96,539	83,462	65,972	17,490	13,077	7,022	6,055
1985	108,777	98,245	78,423	19,822	10,532	3,678	6,854 <sup>2</sup>
1980	108,242	106,992	77,798	29,194	1,250	1,250	
1975	105,735	105,735	74,594	31,141			
1970	92,710	92,710	67,877	24,833			
1965	91,744	91,744	67,744	24,000			
1960	76,674	76,674	56,874	19,800			
1955	50,143	50,143	42,762	7,381			

<sup>1</sup> Number of discharges used as estimate for number of admissions.

<sup>2</sup> Comparable Tribal contract health services data not available prior to FY 1985.

**Note:** NA denotes data not available.

**Source:** IHS Direct: Monthly Report of Inpatient Services (Form IHS-202-1)

IHS Contract: Annual Report 31

Tribal Direct: Monthly Report of Inpatient Services

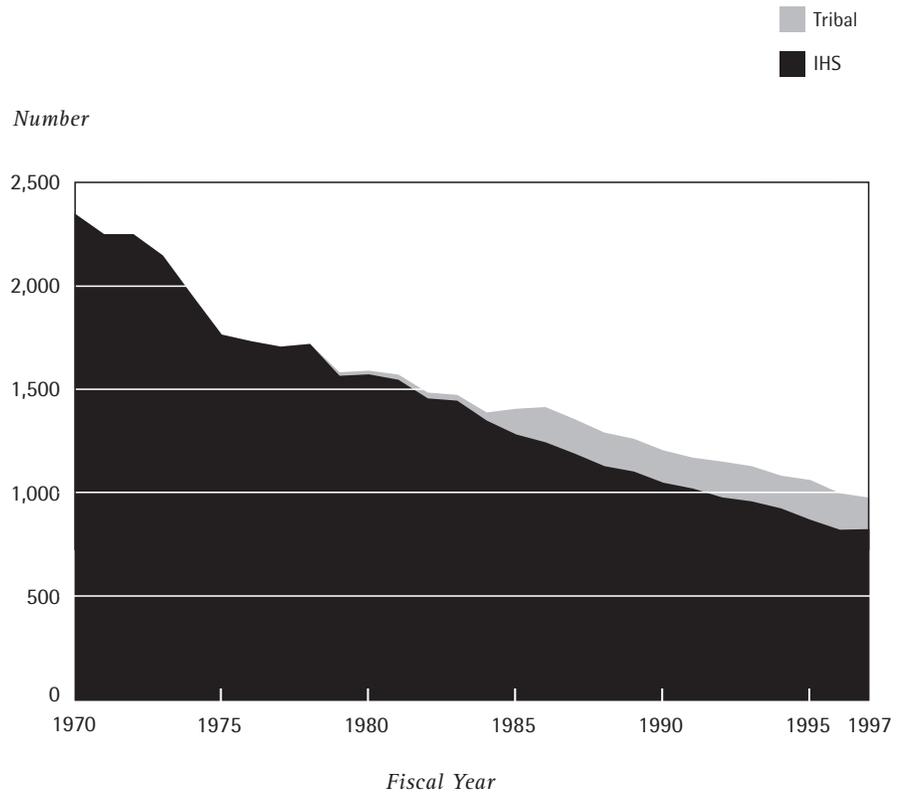
Tribal Contract: IHS Area Submissions

Part 5 Patient Care Statistics

Chart 5.5

*Average Daily Hospital Patient Load, IHS and Tribal Direct and Contract General Hospitals*

The average daily hospital patient load in Indian Health Service and Tribal direct and contract general hospitals has decreased 58 percent since FY 1970. In FY 1997 (provisional), the average patient load was 981.



## Part 5 Patient Care Statistics

**Table 5.5**

*Average Daily Patient Load*

IHS and Tribal Direct and Contract General Hospitals, Fiscal Years 1955-1998

Fiscal Year	Total IHS and Tribal Admissions	Indian Health Service			Tribal		
		Total	Direct	Contract	Total	Direct	Contract <sup>1</sup>
1998	NA	NA	634	NA	NA	120	NA
1997 (Prov.)	981	829	641	188	152	123	29
1996	1,002	826	636	190	176	121	55
1995	1,066	874	672	202	192	127	65
1994	1,087	929	709	220	158	100	58
1993	1,133	963	735	228	170	108	62
1992	1,155	982	758	224	173	112	61
1991	1,174	1,025	794	231	149	96	53
1990	1,209	1,053	825	228	156	90	66
1985	1,410	1,286	1,052	234	124	47	77
1980	1,594	1,576	1,178	398	18	18	
1975	1,768	1,768	1,330	438			
1970	2,353	2,353	1,729	624			
1965	3,127	3,127	2,244	883			
1960	3,142	3,142	2,232	910			
1955	3,711	3,711	2,531	1,180			

<sup>1</sup>Tribal contract data not available prior to FY 1985.

**Note:** NA denotes data not available.

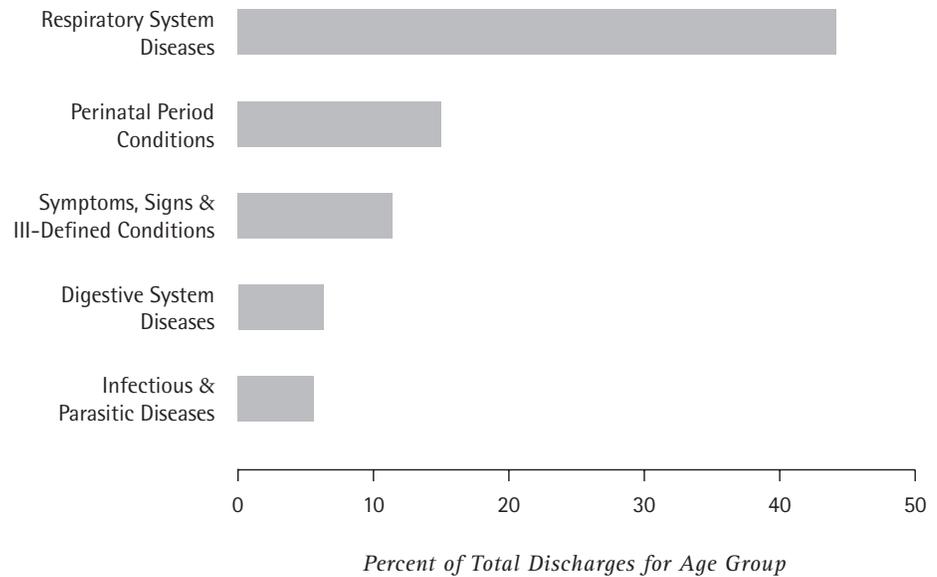
**Source:** IHS Direct: Monthly Report of Inpatient Services (Form IHS-202-1)  
 IHS Contract: Annual Report 31  
 Tribal Direct: Monthly Report of Inpatient Services  
 Tribal Contract: IHS Area Submissions

Part 5 Patient Care Statistics

Chart 5.6

*Leading Causes of Hospitalization: Ages Under 1 year, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

In FY 1997 (provisional), 44.2 percent of all discharges for patients under 1 year of age from Indian Health Service and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by perinatal period conditions at 15.0 percent.



**Part 5 Patient Care Statistics**

**Table 5.6**

*Ten Leading Causes of Hospitalization for GM&S Patients Under 1 Year of Age*

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional)

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	4,638	2,623	2,015	100.0	56.6	43.4
				100.0	100.0	100.0
Respiratory system diseases	2,051	1,197	854	44.2	45.6	42.4
Perinatal period conditions	694	397	297	15.0	15.1	14.7
Symptoms, signs & ill-defined conditions	529	285	244	11.4	10.9	12.1
Digestive system diseases	291	178	113	6.3	6.8	5.6
Infectious and parasitic diseases	261	148	113	5.6	5.6	5.6
Genitourinary system diseases	173	87	86	3.7	3.3	4.3
Supplementary classification	158	72	86	3.4	2.7	4.3
Nervous system & sense organ diseases	123	67	56	2.7	2.6	2.8
Endocrine, nutritional & metabolic diseases	104	64	40	2.2	2.4	2.0
Congenital anomalies	94	58	36	2.0	2.2	1.8
All other	160	70	90	3.4	2.7	4.5

**Sources:** Direct: On-request Report 21

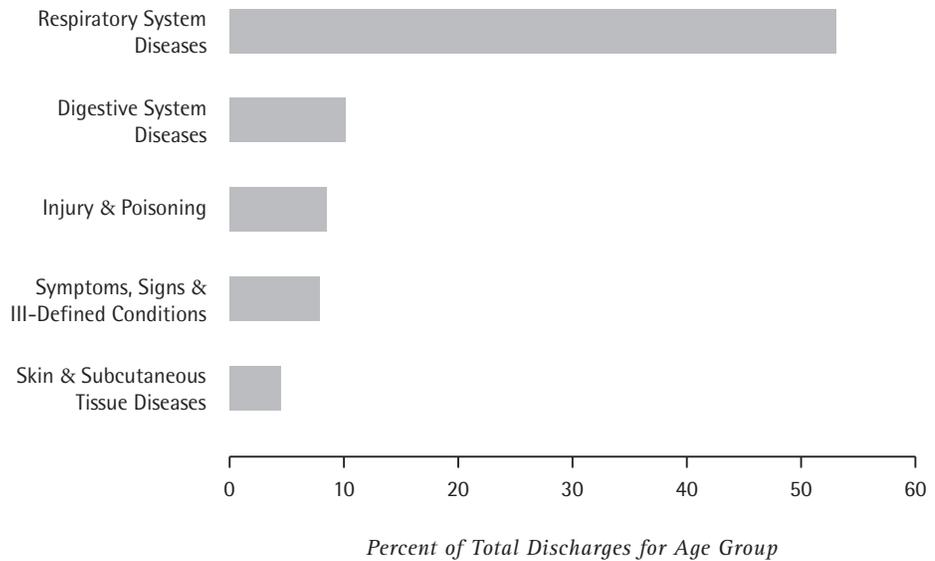
Contract: On-request Report 19

Part 5 Patient Care Statistics

Chart 5.7

*Leading Causes of Hospitalization: Ages 1 to 4 years, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

In FY 1997 (provisional), 53.1 percent of all discharges for patients 1 to 4 years of age from Indian Health Service and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by digestive system diseases at 10.1 percent.



**Part 5 Patient Care Statistics**

**Table 5.7**

*Ten Leading Causes of Hospitalization for GM&S Patients 1 to 4 Years of Age*

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional)

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	3,525	1,841	1,684	100.0	52.2	47.8
				100.0	100.0	100.0
Respiratory system diseases	1,872	991	881	53.1	53.8	52.3
Digestive system diseases	356	177	179	10.1	9.6	10.6
Injury & Poisoning	300	174	126	8.5	9.5	7.5
Symptoms, signs & ill-defined conditions	277	154	123	7.9	8.4	7.3
Skin and subcutaneous tissue diseases	158	77	81	4.5	4.2	4.8
Infectious and parasitic diseases	135	69	66	3.8	3.7	3.9
Nervous system & sense organ diseases	101	58	43	2.9	3.2	2.6
Endocrine, nutritional & metabolic disorders	99	55	44	2.8	3.0	2.6
Genitourinary system diseases	98	22	76	2.8	1.2	4.5
Blood and blood-forming organ diseases	36	19	17	1.0	1.0	1.0
All other	93	45	48	2.6	2.4	2.9

**Sources:** Direct: On-request Report 21

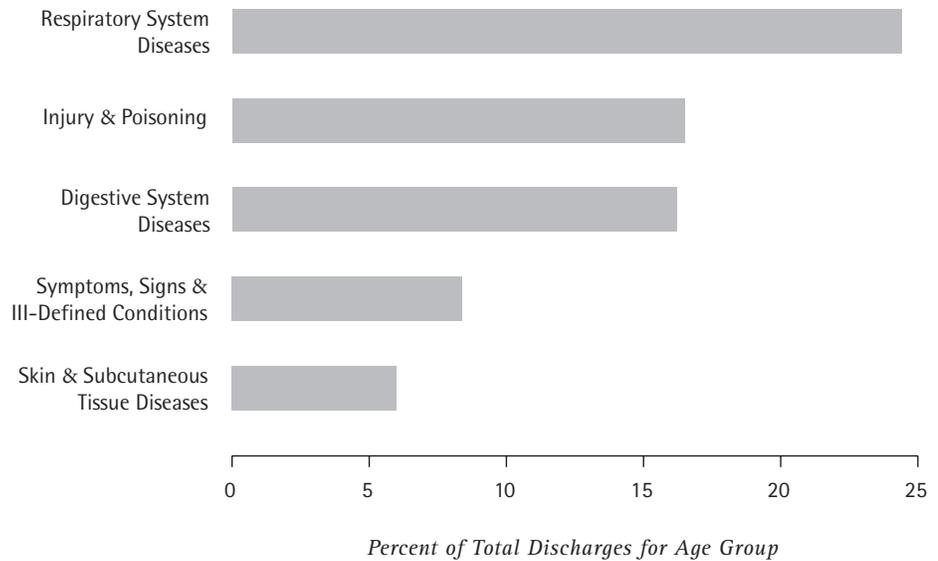
Contract: On-request Report 19

Part 5 Patient Care Statistics

Chart 5.8

*Leading Causes of Hospitalization: Ages 5 to 14 years, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

In FY 1997 (provisional), 24.4 percent of all discharges for patients 5 to 14 years of age from Indian Health Service and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by injury and poisoning at 16.5 percent.



**Part 5 Patient Care Statistics**

**Table 5.8**

*Ten Leading Causes of Hospitalization for GM&S Patients 5 to 14 Years of Age*

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional)

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	3,995	2,078	1,917	100.0	52.0	48.0
				100.0	100.0	100.0
Respiratory system diseases	973	518	455	24.4	24.9	23.7
Injury & Poisoning	659	391	268	16.5	18.8	14.0
Digestive system diseases	646	363	283	16.2	17.5	14.8
Symptoms, signs & ill-defined conditions	334	171	163	8.4	8.2	8.5
Skin and subcutaneous tissue diseases	240	137	103	6.0	6.6	5.4
Infectious and parasitic diseases	205	112	93	5.1	5.4	4.9
Endocrine, nutritional & metabolic disorders	186	97	89	4.7	4.7	4.6
Genitourinary system diseases	162	34	128	4.1	1.6	6.7
Mental disorders	154	74	80	3.9	3.6	4.2
Nervous system & sense organ diseases	134	66	68	3.4	3.2	3.5
All other	302	115	187	7.6	5.5	9.8

**Sources:** Direct: On-request Report 21

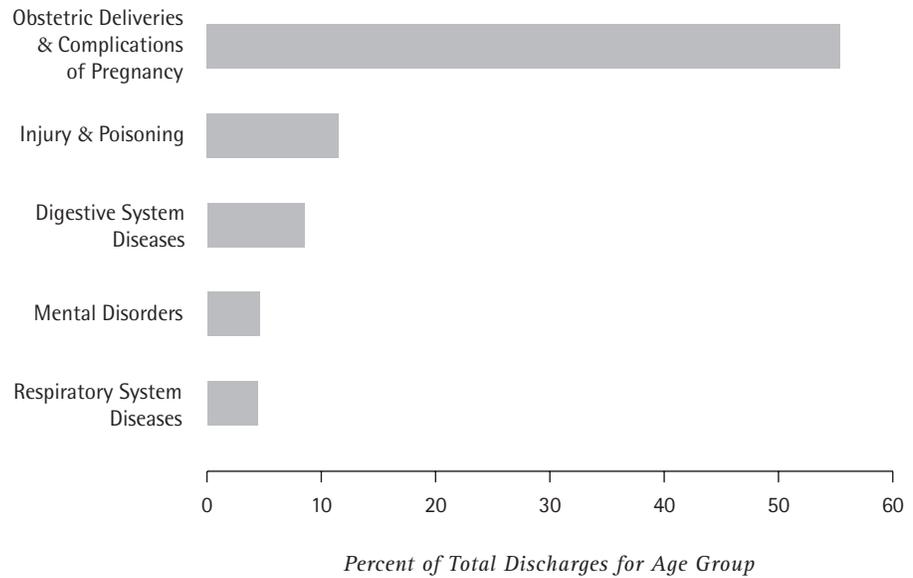
Contract: On-request Report 19

Part 5 Patient Care Statistics

Chart 5.9

*Leading Causes of Hospitalization: Ages 15 to 24 years, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

In FY 1997 (provisional), 55.4 percent of all discharges for patients 15 to 24 years of age from Indian Health Service and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of pregnancy and the puerperium. This was followed by injury and poisoning at 11.5 percent.



**Part 5 Patient Care Statistics**

**Table 5.9**

*Ten Leading Causes of Hospitalization for GM&S Patients 15 to 24 Years of Age*

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional)

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	12,871	2,549	10,322	100.0	19.8	80.2
				100.0	100.0	100.0
Obstetric deliveries and complications of pregnancy & puerperium	7,129	0	7,129	55.4	0.0	69.1
Injury & Poisoning	1,485	909	576	11.5	35.7	5.6
Digestive system diseases	1,089	333	756	8.5	13.1	7.3
Mental disorders	598	308	290	4.6	12.1	2.8
Respiratory system diseases	563	239	324	4.4	9.4	3.1
Genitourinary system diseases	467	45	422	3.6	1.8	4.1
Symptoms, signs & ill-defined conditions	330	130	200	2.6	5.1	1.9
Skin and subcutaneous tissue diseases	261	152	109	2.0	6.0	1.1
Endocrine, nutritional & metabolic disorders	212	120	92	1.6	4.7	0.9
Supplementary classification	183	53	130	1.4	2.1	1.3
All other	554	260	294	4.3	10.2	2.8

**Sources:** Direct: On-request Report 21

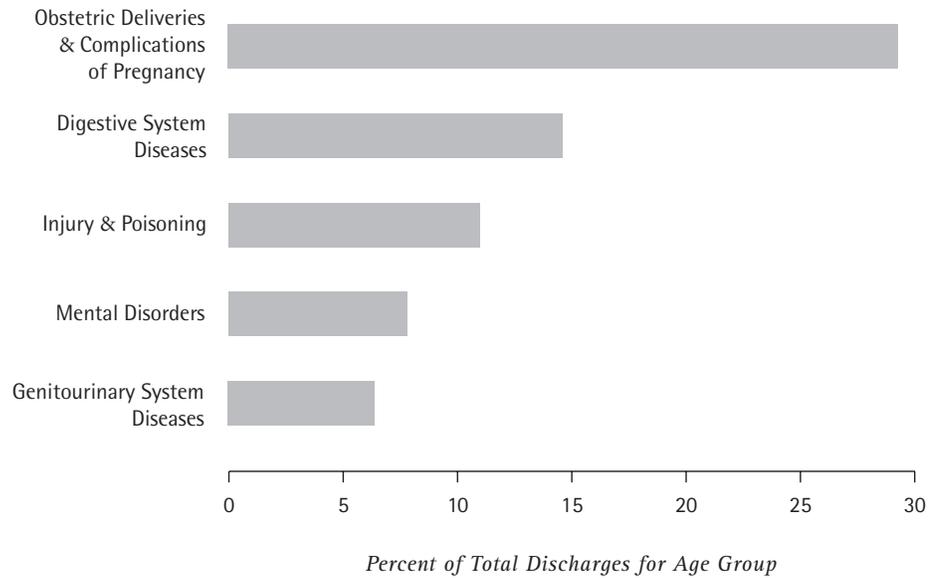
Contract: On-request Report 19

Part 5 Patient Care Statistics

Chart 5.10

*Leading Causes of Hospitalization: Ages 25 to 44 years, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

In FY 1997 (provisional), 29.3 percent of all discharges for patients 25 to 44 years of age from Indian Health Service and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of pregnancy and the puerperium. This was followed by digestive system diseases at 14.6 percent.



**Part 5 Patient Care Statistics**

**Table 5.10**

*Ten Leading Causes of Hospitalization for GM&S Patients 25 to 44 Years of Age*

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional)

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	24,470	8,315	16,155	100.0	34.0	66.0
				100.0	100.0	100.0
Obstetric deliveries and complications of pregnancy & puerperium	7,178	0	7,178	29.3	0.0	44.4
Digestive system diseases	3,562	1,453	2,109	14.6	17.5	13.1
Injury & poisoning	2,699	1,665	1,034	11.0	20.0	6.4
Mental disorders	1,913	1,258	655	7.8	15.1	4.1
Genitourinary system diseases	1,561	231	1,330	6.4	2.8	8.2
Symptoms, signs & ill-defined conditions	1,309	636	673	5.3	7.6	4.2
Respiratory system diseases	1,262	552	710	5.2	6.6	4.4
Skin and subcutaneous tissue diseases	974	574	400	4.0	6.9	2.5
Endocrine, nutritional & metabolic disorders	885	510	375	3.6	6.1	2.3
Circulatory system diseases	689	412	277	2.8	5.0	1.7
All other	2,438	1,024	1,414	10.0	12.3	8.8

**Sources:** Direct: On-request Report 21

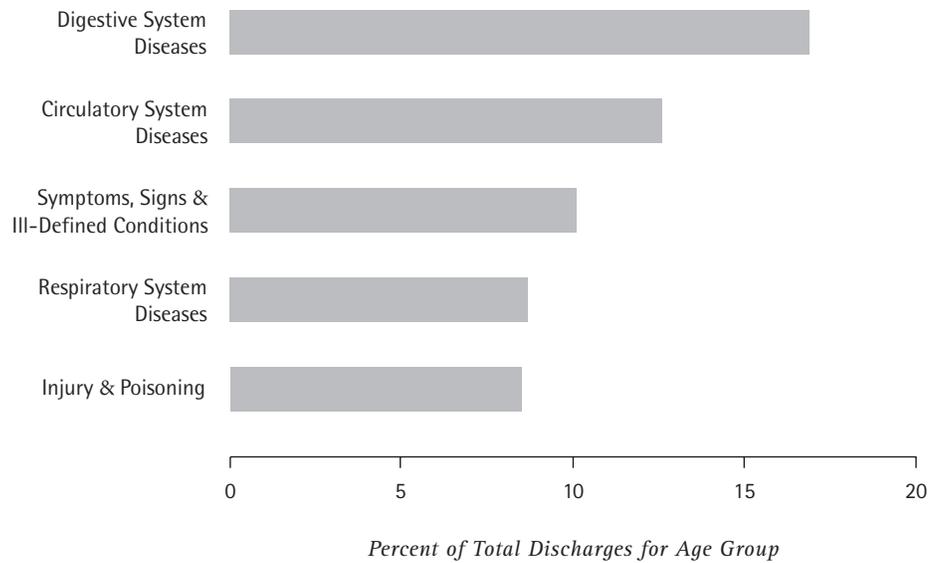
Contract: On-request Report 19

Part 5 Patient Care Statistics

Chart 5.11

*Leading Causes of Hospitalization: Ages 45 to 54 years, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

In FY 1997 (provisional), 16.9 percent of all discharges for patients 45 to 54 years of age from Indian Health Service and Tribal direct and contract general hospitals pertained to digestive system diseases. This was followed by circulatory system diseases at 12.6 percent.



**Part 5 Patient Care Statistics**

**Table 5.11**

*Ten Leading Causes of Hospitalization for GM&S Patients 45 to 54 Years of Age*

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional)

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	8,809	4,082	4,727	100.0	46.3	53.7
				100.0	100.0	100.0
Digestive system diseases	1,493	678	815	16.9	16.6	17.2
Circulatory system diseases	1,114	688	426	12.6	16.9	9.0
Symptoms, signs & ill-defined conditions	891	406	485	10.1	9.9	10.3
Respiratory system diseases	765	283	482	8.7	6.9	10.2
Injury & poisoning	753	420	333	8.5	10.3	7.0
Genitourinary system diseases	732	168	564	8.3	4.1	11.9
Endocrine, nutritional & metabolic disorders	639	287	352	7.3	7.0	7.4
Skin and subcutaneous tissue diseases	550	298	252	6.2	7.3	5.3
Mental disorders	470	316	154	5.3	7.7	3.3
Neoplasms	427	97	330	4.8	2.4	7.0
All other	975	441	534	11.1	10.8	11.3

**Sources:** Direct: On-request Report 21

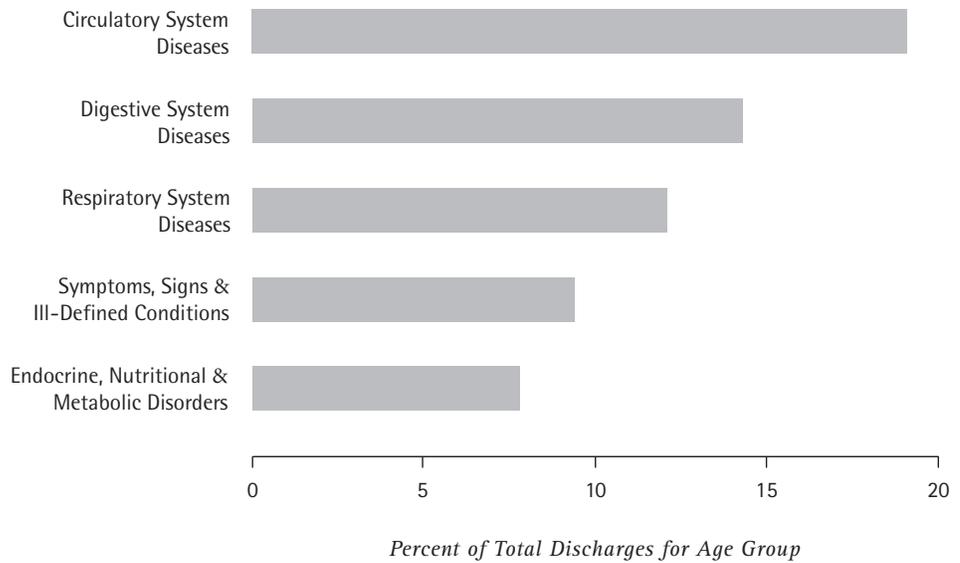
Contract: On-request Report 19

Part 5 Patient Care Statistics

Chart 5.12

*Leading Causes of Hospitalization: Ages 55 to 64 years, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

In FY 1997 (provisional), 19.1 percent of all discharges for patients 55 to 64 years of age from Indian Health Service and Tribal direct and contract general hospitals pertained to circulatory system diseases. This was followed by digestive system diseases at 14.3 percent.



**Part 5 Patient Care Statistics**

**Table 5.12**

*Ten Leading Causes of Hospitalization for GM&S Patients 55 to 64 Years of Age*

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional)

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	8,391	3,815	4,576	100.0	45.5	54.5
				100.0	100.0	100.0
Circulatory system diseases	1,604	856	748	19.1	22.4	16.3
Digestive system diseases	1,200	528	672	14.3	13.8	14.7
Respiratory system diseases	1,014	426	588	12.1	11.2	12.8
Symptoms, signs & ill-defined conditions	788	361	427	9.4	9.5	9.3
Endocrine, nutritional & metabolic disorders	653	269	384	7.8	7.1	8.4
Injury & poisoning	594	304	290	7.1	8.0	6.3
Genitourinary system diseases	559	152	407	6.7	4.0	8.9
Skin and subcutaneous tissue diseases	424	199	225	5.1	5.2	4.9
Neoplasms	423	189	234	5.0	5.0	5.1
Musculoskeletal system and connective tissue diseases	341	140	201	4.1	3.7	4.4
All other	791	391	400	9.4	10.2	8.7

Sources: Direct: On-request Report 21

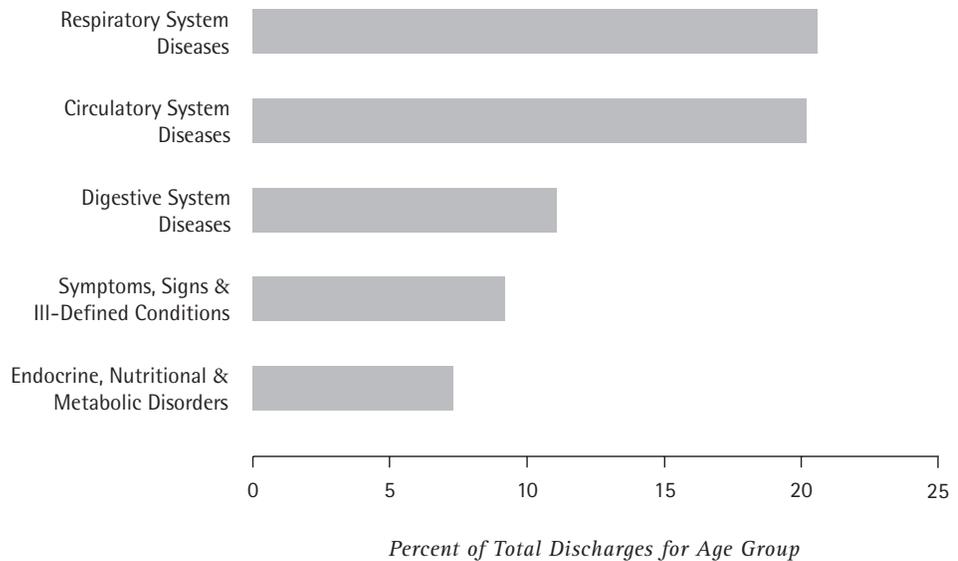
Contract: On-request Report 19

Part 5 Patient Care Statistics

Chart 5.13

*Leading Causes of Hospitalization: Ages 65+ years, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

In FY 1997 (provisional), 20.6 percent of all discharges for patients 65 years and older from Indian Health Service and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by circulatory system diseases at 20.2 percent.



**Part 5 Patient Care Statistics**

**Table 5.13**

*Ten Leading Causes of Hospitalization for GM&S Patients 65 Years Old and Older*

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional)

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	12,964	5,444	7,520	100.0	42.0	58.0
				100.0	100.0	100.0
Respiratory system diseases	2,669	1,166	1,503	20.6	21.4	20.0
Circulatory system diseases	2,624	1,206	1,418	20.2	22.2	18.9
Digestive system diseases	1,442	602	840	11.1	11.1	11.2
Symptoms, signs & ill-defined conditions	1,187	477	710	9.2	8.8	9.4
Endocrine, nutritional & metabolic disorders	943	339	604	7.3	6.2	8.0
Injury & poisoning	851	326	525	6.6	6.0	7.0
Genitourinary system diseases	849	309	540	6.5	5.7	7.2
Neoplasms	590	259	331	4.6	4.8	4.4
Skin and subcutaneous tissue diseases	501	218	283	3.9	4.0	3.8
Musculoskeletal system and connective tissue diseases	357	128	229	2.8	2.4	3.0
All other	951	414	537	7.3	7.6	7.1

Sources: Direct: On-request Report 21

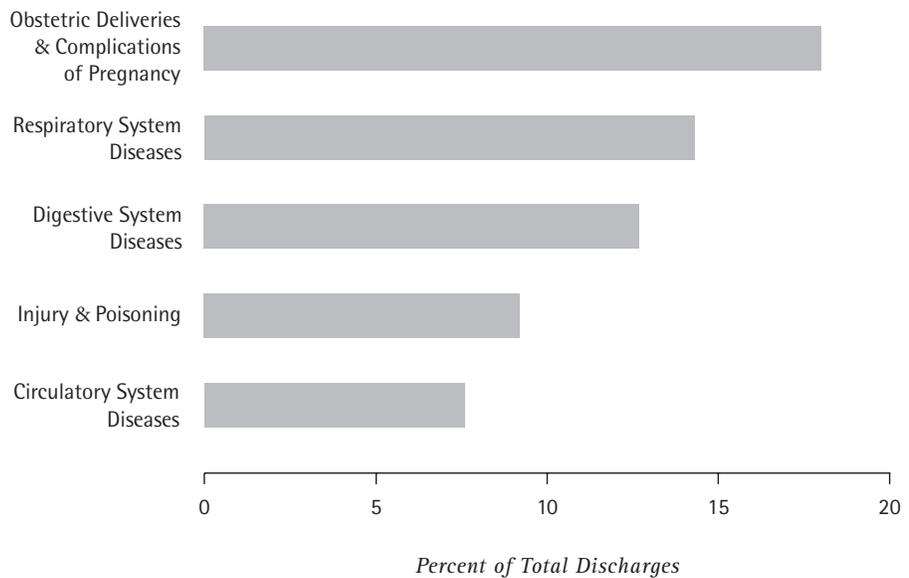
Contract: On-request Report 19

Part 5 Patient Care Statistics

Chart 5.14

*Leading Causes of Hospitalization, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

In FY 1997 (provisional), 18.0 percent of all discharges from Indian Health Service and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of pregnancy and the puerperium. This was followed by respiratory system diseases (14.3 percent), and digestive system diseases (12.7 percent).



## Part 5 Patient Care Statistics

**Table 5.14**

*Ten Leading Causes of Hospitalization for GM&S Patients by Sex*

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional)

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	79,663	30,747	48,916	100.0	38.6	61.4
				100.0	100.0	100.0
Obstetric deliveries and complications of pregnancy & puerperium	14,365	0	14,365	18.0	0.0	29.4
Respiratory system diseases	11,423	5,523	5,900	14.3	18.0	12.1
Digestive system diseases	10,154	4,349	5,805	12.7	14.1	11.9
Injury & poisoning	7,358	4,155	3,203	9.2	13.5	6.5
Circulatory system diseases	6,045	2,955	3,090	7.6	9.6	6.3
Symptoms, signs & ill-defined conditions	5,721	2,656	3,065	7.2	8.6	6.3
Genitourinary system diseases	4,561	998	3,563	5.7	3.2	7.3
Endocrine, nutritional & metabolic disorders	3,733	1,761	1,972	4.7	5.7	4.0
Mental disorders	3,564	2,254	1,310	4.5	7.3	2.7
Skin & subcutaneous tissue diseases	3,147	1,700	1,447	4.0	5.5	3.0
All other	9,592	4,396	5,196	12.0	14.3	10.6

**Note:** Due to updated data, the percentages in this table are slightly different from those in the IHS *Regional Differences in Indian Health* publication.

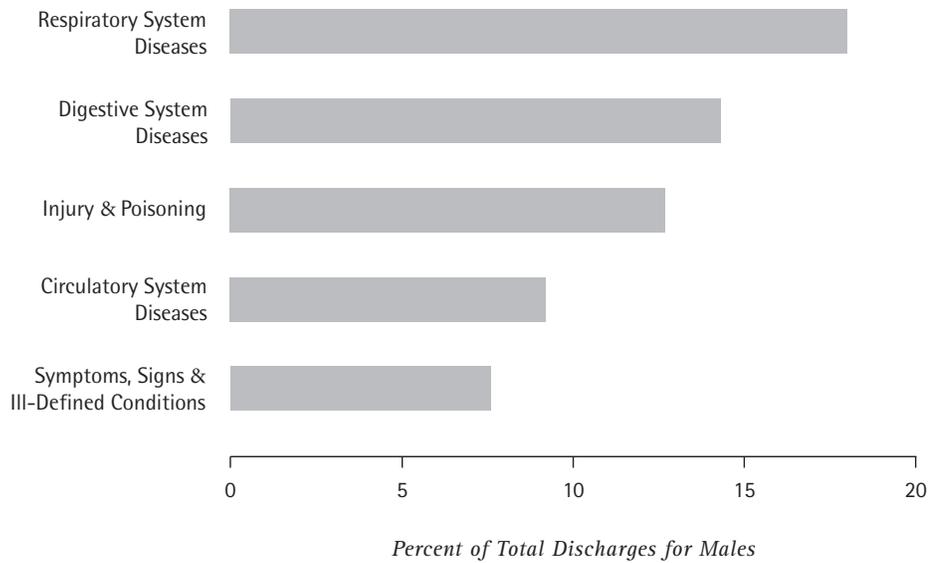
**Sources:** Direct: Annual Report 2C  
Contract: Annual Report 3I

Part 5 Patient Care Statistics

Chart 5.15

*Leading Causes of Hospitalization for Males, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

For males, 18.0 percent of all discharges (FY 1997, provisional) from Indian Health Service and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by digestive system diseases (14.1 percent), and injury and poisoning (13.5 percent).

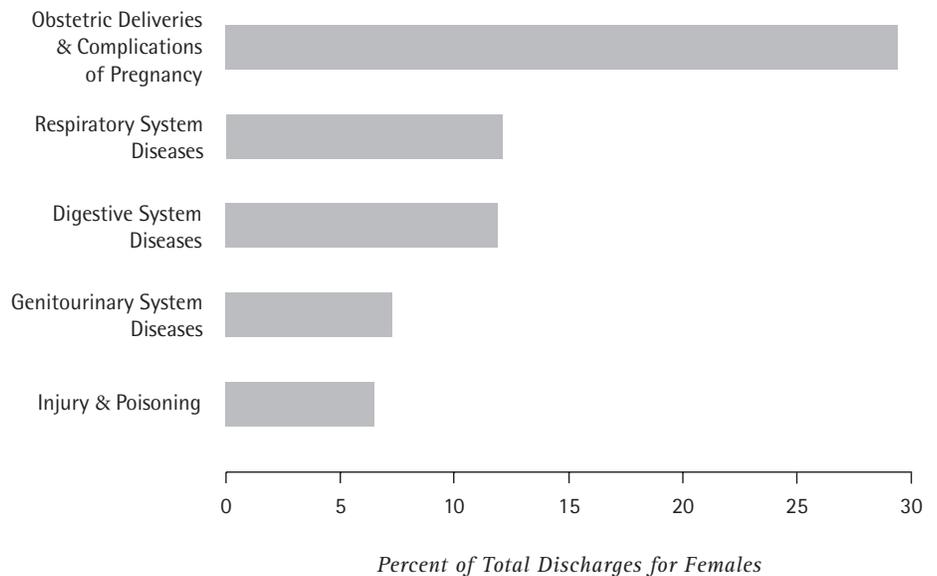


Part 5 Patient Care Statistics

Chart 5.16

*Leading Causes of Hospitalization for Females, IHS and Tribal Direct and Contract Hospitals, FY 1997 (Provisional)*

For females, 29.4 percent of all discharges (FY 1997, provisional) from Indian Health Service and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of pregnancy and the puerperium. This was followed by respiratory system diseases (12.1 percent), and digestive system diseases (11.9 percent).



## Part 5 Patient Care Statistics

**Table 5.15**

*Ten Leading Causes of Hospitalization by Sex*

Indian Health Service and Tribal Direct and Contract General Hospitals, Fiscal Year 1997 (Provisional)

Male			Female		
Diagnostic Category	Number of Discharges	Percent of Total	Diagnostic Category	Number of Discharges	Percent of Total
All Categories	30,747	100.0	All Categories	48,916	100.0
Respiratory system diseases	5,523	18.0	Obstetric deliveries & complications of pregnancy & puerperium	14,365	29.4
Digestive system diseases	4,349	14.1	Respiratory system diseases	5,900	12.1
Injury & poisoning	4,155	13.5	Digestive system diseases	5,805	11.9
Circulatory system diseases	2,955	9.6	Genitourinary system diseases	3,563	7.3
Symptoms, signs & ill-defined conditions	2,656	8.6	Injury & poisoning	3,203	6.5
Mental disorders	2,254	7.3	Circulatory system diseases	3,090	6.3
Endocrine, nutritional & metabolic disorders	1,761	5.7	Symptoms, signs & ill-defined conditions	3,065	6.3
Skin & subcutaneous tissue diseases	1,700	5.5	Endocrine, nutritional & metabolic disorders	1,972	4.0
Genitourinary system diseases	998	3.2	Skin & subcutaneous tissue diseases	1,447	3.0
Musculoskeletal system & connective tissue diseases	989	3.2	Mental disorders	1,310	2.7
All other	3,407	11.1	All other	5,196	10.6

Sources: IHS and Tribal Direct: On-request Report 21

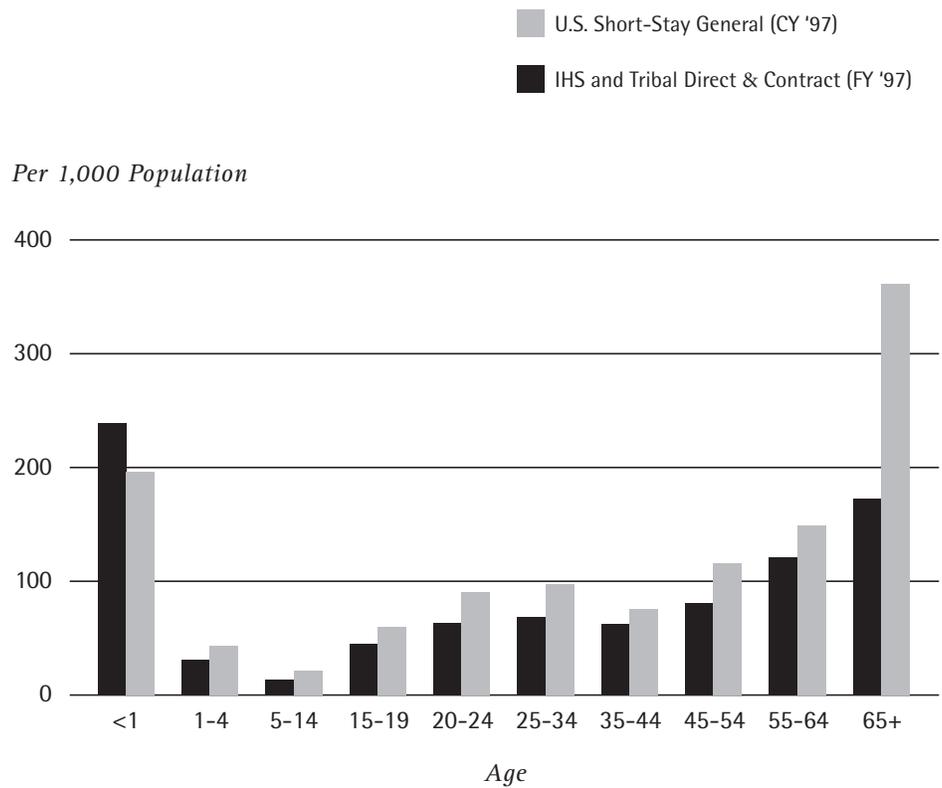
IHS and Tribal Contract: On-request Report 19

Part 5 Patient Care Statistics

**Chart 5.17**

*Hospital Discharge Rates by Age*

For both the Indian Health Service (FY 1997, provisional) and U.S. (CY 1997), discharge rates were highest for the age groups under 1 year and over 64 years. The U.S. rate was greater than the Indian rate except for the age group under 1 year.



**Part 5 Patient Care Statistics**

**Table 5.17**

*Comparison of Indian Health Service and U.S. Hospital Discharge Rates by Age*

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional)  
and U.S. General Short-Stay Hospitals, CY 1997

Age of Admission	Discharges per 1,000 Population		Percent Difference IHS Rate to U.S. Rate
	IHS	U.S.	
All Ages	61.2	114.3	-46.4
Under 1 year	238.9	196.6	21.5
1-4 years	31.0	43.3	-28.5
5-14 years	13.3	21.2	-37.1
15-19 years	45.4	59.6	-23.8
20-24 years	63.0	90.1	-30.1
25-34 years	68.3	97.7	-30.1
35-44 years	62.3	75.7	-17.8
45-54 years	80.8	115.4	-30.0
55-64 years	120.6	149.1	-19.1
65 years and over	172.3	361.1	-52.3

**Note:** IHS discharge rates were calculated using the IHS FY 1997 user population.

**Sources:** IHS: Annual reports 2C and 3I

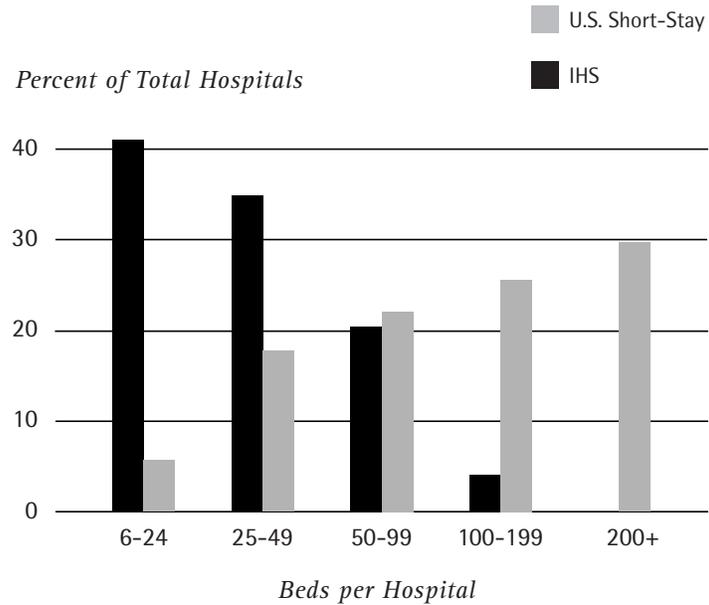
U.S.: Utilization of Short-Stay Hospitals, Annual Summary of the U.S., NCHS

Part 5 Patient Care Statistics

**Chart 5.18**

*Beds per Hospital,  
IHS (FY 1998) vs  
U.S. Short-Stay (CY 1997)*

76 percent of Indian Health Service hospitals (FY 1998) had fewer than 50 beds, as compared to 23 percent of U.S. short-stay hospitals (CY 1997).



**Table 5.18**

*Comparison of Indian Health Service and U.S. Hospitals by Bed Size*

Indian Health Service and Tribal Hospitals, FY 1998 and U.S. General Short-Stay Hospitals, CY 1997

Bed Size	Number of Hospitals		Percent of Total	
	IHS <sup>1</sup>	US	IHS	US
All	49	5,057	100.0	100.0
6-24	20	281	40.8	5.6
25-49	17	890	34.7	17.6
50-99	10	1,111	20.4	22.0
100-199	2	1,289	4.1	25.5
200+	—	1,486	—	29.4

<sup>1</sup> Operated by IHS or the Tribes on September 30, 1998

Sources: IHS: Monthly Report of Inpatient Services

U.S.: Hospital Statistics, 1999 Edition, American Hospital Association, Table 3

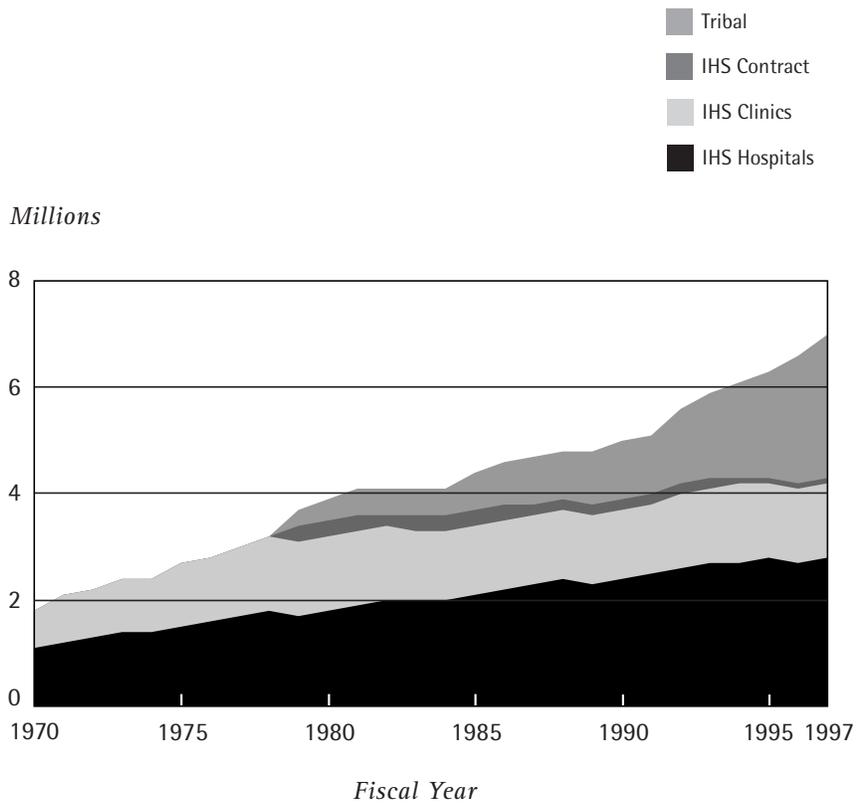


**Part 5 Patient Care Statistics**

**Chart 5.19**

*Number of Ambulatory Medical Visits, IHS and Tribal Direct and Contract Facilities*

Ambulatory medical visits to Indian Health Service and Tribal direct and contract facilities have increased 309 percent since FY 1970. In FY 1997 (provisional), there were over 7.3 million visits.



**Part 5 Patient Care Statistics**

**Table 5.19**

*Number of Ambulatory Medical Visits*

Indian Health Service and Tribal Direct and Contract Facilities, Fiscal Years 1955-1997

Fiscal Year	Grand Total	Indian Health Service Direct Facilities					
		Total	Hospitals	Health Centers & Other Field Clinics	IHS Contract	Tribal Direct	Tribal Contract
1997 (Prov.)	7,307,697	4,288,120	2,849,499	1,438,621	129,459	2,710,775	179,343
1996	7,050,151	4,127,503	2,734,825	1,392,678	137,382	2,438,351	346,915
1995	6,546,028	4,156,146	2,750,617	1,405,529	149,963	1,975,136	264,783
1994	6,339,270	4,184,641	2,718,482	1,466,159	145,295	1,764,625	244,709
1993	5,976,290	4,084,118	2,672,476	1,411,642	169,625	1,582,748	139,799
1992	5,659,820	3,924,484	2,561,024	1,363,460	167,697	1,407,421	160,218
1991	5,211,351	3,762,580	2,481,726	1,280,854	154,488	1,126,685	167,598
1990	5,031,262	3,629,952	2,363,459	1,266,493	161,001	1,084,923	155,386
1985	4,432,054	3,389,618	2,088,973	1,300,645	275,457	667,651	99,328 <sup>2</sup>
1980	3,869,936	3,194,936	1,795,607	1,399,329	275,000 <sup>1</sup>	400,000 <sup>1</sup>	
1975		2,501,050	1,465,816	1,035,234			
1970		1,786,920	1,068,820	718,100			
1965		1,325,400	757,700	567,700			
1960		989,500	585,100	404,400			
1955		455,000	355,000	100,000			

<sup>1</sup> Estimate. Comparable data not available prior to FY 1980.

<sup>2</sup> Comparable Tribal contract health services data not available prior to FY 1985.

NOTE: NA denotes data not available.

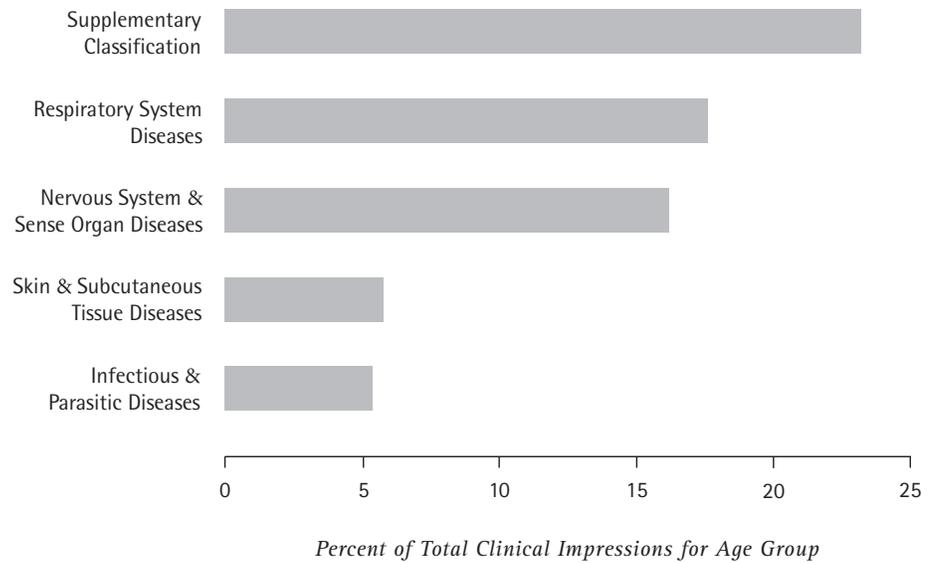
SOURCE: IHS Direct: Annual Report 1A  
 IHS Contract: Annual Report 3G  
 Tribal Direct: IHS Area Submissions  
 Tribal Contract: IHS Area Submissions

Part 5 Patient Care Statistics

Chart 5.20

*Leading Causes of Ambulatory Medical Visits: Ages Under 1 Year, Indian Health Service and Tribal Direct and Contract Facilities (FY 1997, Provisional)*

In FY 1997 (provisional), the leading cause of ambulatory medical visits in Indian Health Service and Tribal direct and contract facilities for ages under 1 year was supplementary classification conditions. This was followed by respiratory system diseases.



**Part 5 Patient Care Statistics**

**Table 5.20**

*Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients Under 1 Year of Age*

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	313,665	163,883	149,782	100.0	52.2	47.8
				100.0	100.0	100.0
Supplementary classification	72,718	36,708	36,010	23.2	22.4	24.0
Respiratory system diseases	55,269	29,875	25,394	17.6	18.2	17.0
Nervous system & sense organ diseases	50,872	27,071	23,801	16.2	16.5	15.9
Skin & subcutaneous tissue diseases	18,337	9,394	8,943	5.8	5.7	6.0
Infectious & parasitic diseases	16,861	8,848	8,013	5.4	5.4	5.3
Symptoms, signs & ill-defined conditions	14,969	8,013	6,956	4.8	4.9	4.6
Digestive system diseases	6,504	3,454	3,050	2.1	2.1	2.0
Perinatal period conditions	5,994	3,275	2,719	1.9	2.0	1.8
Injury & poisoning	3,048	1,634	1,414	1.0	1.0	0.9
Congenital anomalies	2,630	1,413	1,217	0.8	0.9	0.8
All other	66,463	34,198	32,265	21.2	20.9	21.5

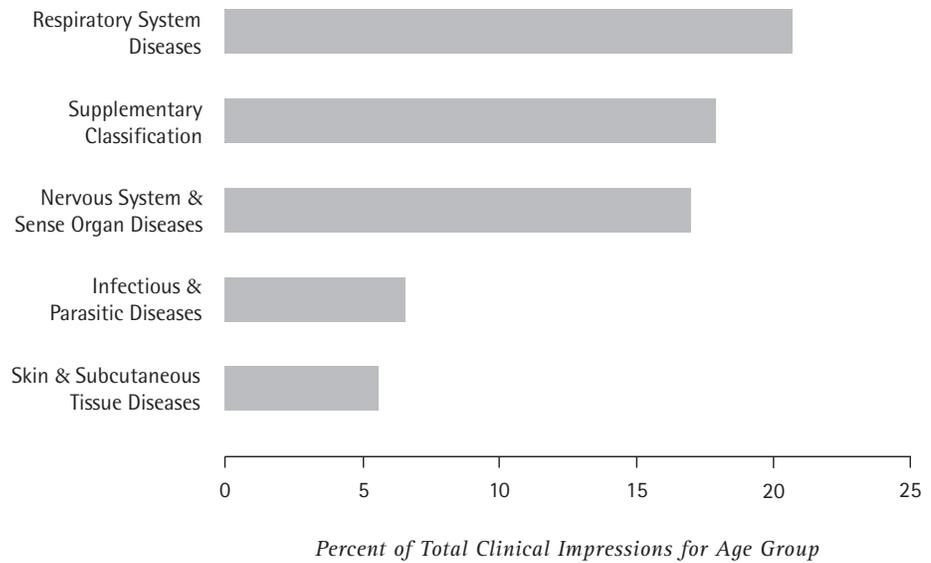
Sources: Direct: Annual Report 1C  
 Contract: Annual Report 3A

Part 5 Patient Care Statistics

Chart 5.21

*Leading Causes of Ambulatory Medical Visits: Ages 1 to 4 Years, Indian Health Service and Tribal Direct and Contract Facilities (FY 1997, Provisional)*

In FY 1997 (provisional), the leading cause of ambulatory medical visits in Indian Health Service and Tribal direct and contract facilities for ages 1 to 4 years was respiratory system diseases. This was followed by supplementary classification conditions.



**Part 5 Patient Care Statistics**

**Table 5.21**

*Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 1 to 4 Years of Age*

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	616,528	314,517	302,011	100.00	51.0	49.0
				100.0	100.0	100.0
Respiratory system diseases	127,764	66,107	61,657	20.7	21.0	20.4
Supplementary classification	110,093	55,853	54,240	17.9	17.8	18.0
Nervous system & sense organ diseases	104,925	54,704	50,221	17.0	17.4	16.6
Infectious & parasitic diseases	40,454	19,437	21,017	6.6	6.2	7.0
Skin & subcutaneous tissue diseases	34,270	16,905	17,365	5.6	5.4	5.7
Symptoms, signs & ill-defined conditions	27,347	13,738	13,609	4.4	4.4	4.5
Injury & poisoning	25,563	14,263	11,300	4.1	4.5	3.7
Digestive system diseases	10,365	5,199	5,166	1.7	1.7	1.7
Genitourinary system diseases	5,763	1,739	4,024	0.9	0.6	1.3
Mental disorders	3,869	2,278	1,591	0.6	0.7	0.5
All other	126,115	64,294	61,821	20.5	20.4	20.5

Sources: Direct: Annual Report 1C

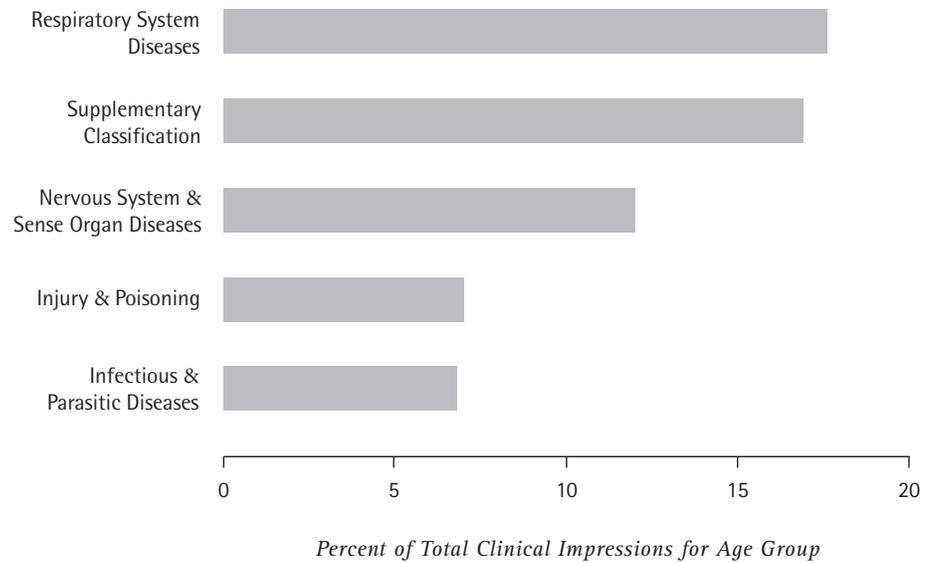
Contract: Annual Report 3A

Part 5 Patient Care Statistics

Chart 5.22

*Leading Causes of Ambulatory Medical Visits: Ages 5 to 14 Years, Indian Health Service and Tribal Direct and Contract Facilities (FY 1997, Provisional)*

In FY 1997 (provisional), the leading cause of ambulatory medical visits in Indian Health Service and Tribal direct and contract facilities for ages 5 to 14 years was respiratory system diseases. This was followed by supplementary classification conditions.



**Part 5 Patient Care Statistics**

**Table 5.22**

*Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 5 to 14 Years of Age*

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	999,158	494,606	504,552	100.00	49.5	50.5
				100.0	100.0	100.0
Respiratory system diseases	175,630	85,005	90,625	17.6	17.2	18.0
Supplementary classification	168,884	85,675	83,209	16.9	17.3	16.5
Nervous system & sense organ diseases	119,943	56,980	62,963	12.0	11.5	12.5
Injury & poisoning	70,410	40,061	30,349	7.0	8.1	6.0
Infectious & parasitic diseases	67,498	27,599	39,899	6.8	5.6	7.9
Skin & subcutaneous tissue diseases	61,469	30,091	31,378	6.2	6.1	6.2
Symptoms, signs & ill-defined conditions	46,983	22,090	24,893	4.7	4.5	4.9
Mental disorders	45,117	30,454	14,663	4.5	6.2	2.9
Musculoskeletal system diseases	15,292	7,174	8,118	1.5	1.5	1.6
Digestive system diseases	14,572	6,987	7,585	1.5	1.4	1.5
All other	213,360	102,490	110,870	21.4	20.7	22.0

Sources: Direct: Annual Report 1C

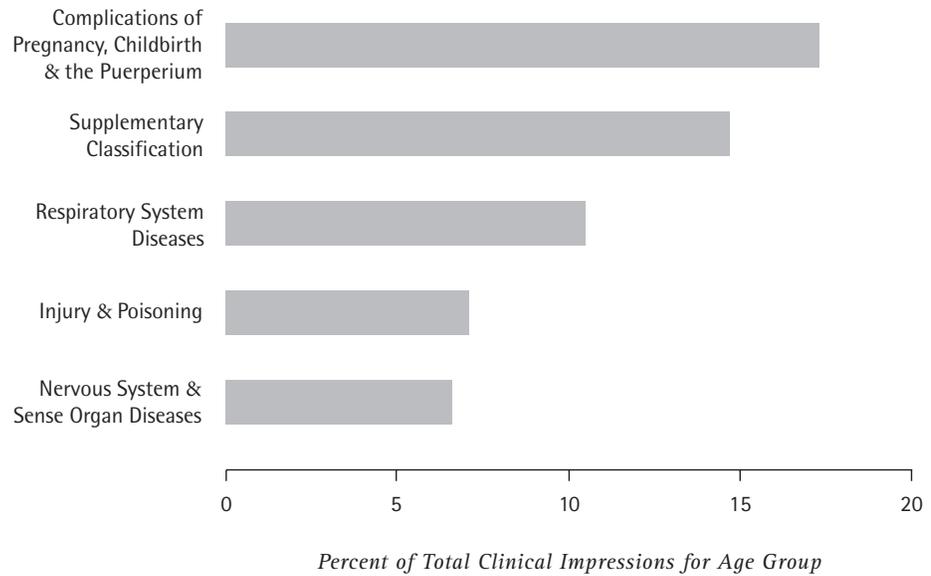
Contract: Annual Report 3A

Part 5 Patient Care Statistics

Chart 5.23

*Leading Causes of Ambulatory Medical Visits: Ages 15 to 24 Years, Indian Health Service and Tribal Direct and Contract Facilities (FY 1997, Provisional)*

In FY 1997 (provisional), the leading cause of ambulatory medical visits in Indian Health Service and Tribal direct and contract facilities for ages 15 to 24 years was complications of pregnancy, childbirth, and the puerperium. This was followed by supplementary classification conditions.



**Part 5 Patient Care Statistics**

**Table 5.23**

*Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 15 to 24 Years of Age*

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	1,011,234	301,320	709,914	100.00	29.8	70.2
				100.0	100.0	100.0
Complications of pregnancy, childbirth & the puerperium	174,822	0	174,822	17.3	0.0	24.6
Supplementary classification	148,343	48,211	100,132	14.7	16.0	14.1
Respiratory system diseases	106,635	38,833	67,802	10.5	12.9	9.6
Injury & poisoning	71,328	41,306	30,022	7.1	13.7	4.2
Nervous system & sense organ diseases	67,224	25,942	41,282	6.6	8.6	5.8
Skin & subcutaneous tissue diseases	51,860	22,012	29,848	5.1	7.3	4.2
Symptoms, signs & ill-defined conditions	47,011	14,302	32,709	4.6	4.7	4.6
Genitourinary system disease	45,793	2,411	43,382	4.5	0.8	6.1
Mental disorders	41,736	20,180	21,556	4.1	6.7	3.0
Musculoskeletal system diseases	32,293	13,215	19,078	3.2	4.4	2.7
All other	224,189	74,908	149,281	22.2	24.9	21.0

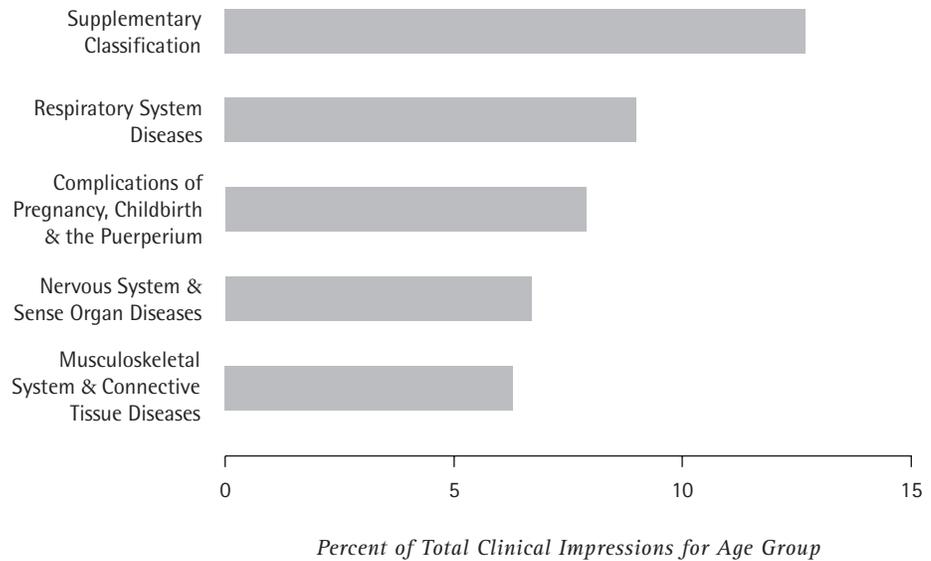
**Sources:** Direct: Annual Report 1C  
Contract: Annual Report 3A

Part 5 Patient Care Statistics

Chart 5.24

*Leading Causes of Ambulatory Medical Visits: Ages 25 to 44 Years, Indian Health Service and Tribal Direct and Contract Facilities (FY 1997, Provisional)*

In FY 1997 (provisional), the leading cause of ambulatory medical visits in Indian Health Service and Tribal direct and contract facilities for ages 25 to 44 years was supplementary classification conditions. This was followed by respiratory system diseases.



**Part 5 Patient Care Statistics**

**Table 5.24**

*Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 25 to 44 Years of Age*

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	2,157,994	686,301	1,471,693	100.0	31.8	68.2
				100.0	100.0	100.0
Supplementary classification	274,162	82,719	191,443	12.7	12.1	13.0
Respiratory system diseases	195,060	57,409	137,651	9.0	8.4	9.4
Complications of pregnancy, childbirth & the puerperium	169,916	0	169,916	7.9	0.0	11.5
Nervous system & sense organ diseases	143,880	53,004	90,876	6.7	7.7	6.2
Musculoskeletal system diseases	136,928	50,120	86,808	6.3	7.3	5.9
Mental disorders	131,092	52,131	78,961	6.1	7.6	5.4
Symptoms, signs & ill-defined conditions	123,540	38,835	84,705	5.7	5.7	5.8
Endocrine, nutritional, & metabolic disorders	117,849	42,870	74,979	5.5	6.2	5.1
Injury & poisoning	115,583	59,211	56,372	5.4	8.6	3.8
Genitourinary system diseases	97,116	9,971	87,145	4.5	1.5	5.9
All other	652,868	240,031	412,837	30.3	35.0	28.1

Sources: Direct: Annual Report 1C

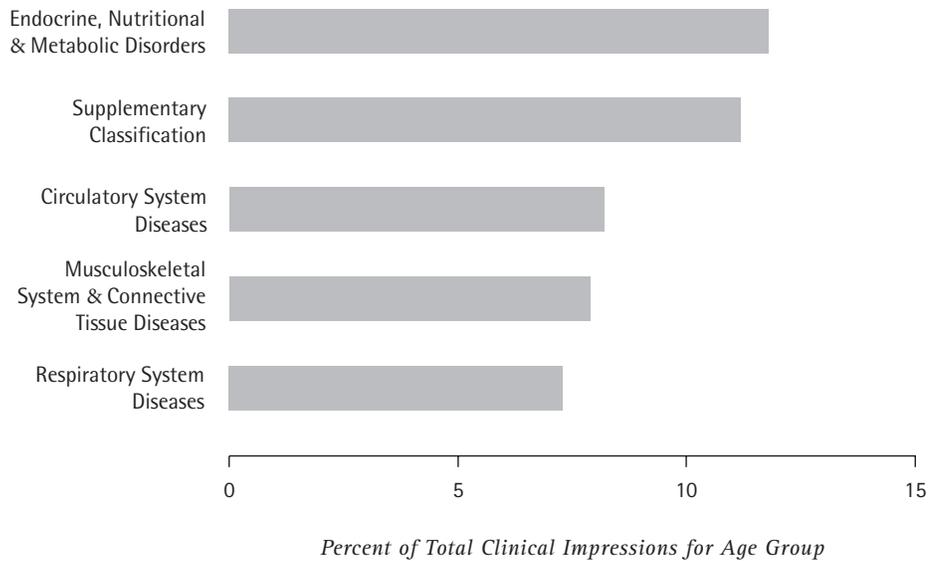
Contract: Annual Report 3A

Part 5 Patient Care Statistics

Chart 5.25

*Leading Causes of Ambulatory Medical Visits: Ages 45 to 54 Years, Indian Health Service and Tribal Direct and Contract Facilities (FY 1997, Provisional)*

In FY 1997 (provisional), the leading cause of ambulatory medical visits in Indian Health Service and Tribal direct and contract facilities for ages 45 to 54 years was endocrine, nutritional, and metabolic disorders. This was followed by supplementary classification conditions.



**Part 5 Patient Care Statistics**

**Table 5.25**

*Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 45 to 54 Years of Age*

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	1,011,147	361,130	650,017	100.0	35.7	64.3
				100.0	100.0	100.0
Endocrine, nutritional & metabolic disorders	119,670	45,418	74,252	11.8	12.6	11.4
Supplementary classification	112,997	34,228	78,769	11.2	9.5	12.1
Circulatory system diseases	83,109	39,947	43,162	8.2	11.1	6.6
Musculoskeletal system diseases	79,954	26,110	53,844	7.9	7.2	8.3
Respiratory system diseases	73,945	21,871	52,074	7.3	6.1	8.0
Nervous system & sense organ diseases	69,630	26,595	43,035	6.9	7.4	6.6
Symptoms, signs & ill-defined conditions	55,205	18,296	36,909	5.5	5.1	5.7
Mental disorders	45,331	16,766	28,565	4.5	4.6	4.4
Genitourinary system diseases	41,348	8,402	32,946	4.1	2.3	5.1
Skin & subcutaneous tissue diseases	37,454	14,661	22,793	3.7	4.1	3.5
All other	292,504	108,836	183,668	28.9	30.1	28.3

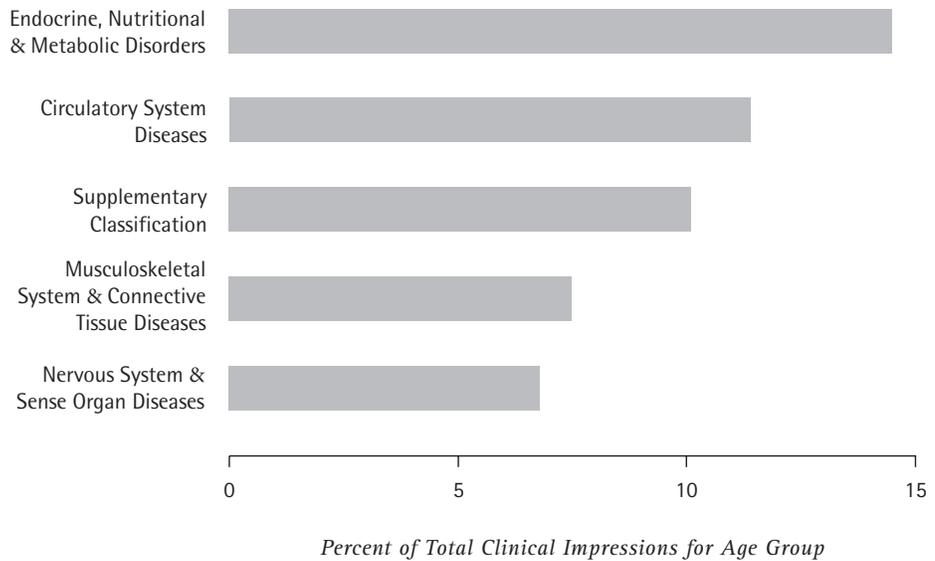
Sources: Direct: Annual Report 1C  
 Contract: Annual Report 3A

Part 5 Patient Care Statistics

Chart 5.26

*Leading Causes of Ambulatory Medical Visits: Ages 55 to 64 Years, Indian Health Service and Tribal Direct and Contract Facilities (FY 1997, Provisional)*

In FY 1997 (provisional), the leading cause of ambulatory medical visits in Indian Health Service and Tribal direct and contract facilities for ages 55 to 64 years was endocrine, nutritional, and metabolic disorders. This was followed by circulatory system diseases.



**Part 5 Patient Care Statistics**

**Table 5.26**

*Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 55 to 64 Years of Age*

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	830,102	310,941	519,161	100.0	37.5	62.5
				100.0	100.0	100.0
Endocrine, nutritional & metabolic disorders	120,655	43,743	76,912	14.5	14.1	14.8
Circulatory system diseases	94,457	44,292	50,165	11.4	14.2	9.7
Supplementary classification	84,108	27,299	56,809	10.1	8.8	10.9
Musculoskeletal system diseases	62,670	21,079	41,591	7.5	6.8	8.0
Nervous system & sense organ diseases	56,199	22,002	34,197	6.8	7.1	6.6
Respiratory system diseases	54,694	17,951	36,743	6.6	5.8	7.1
Symptoms, signs & ill-defined conditions	43,038	15,703	27,335	5.2	5.1	5.3
Genitourinary system diseases	30,971	8,618	22,353	3.7	2.8	4.3
Skin & subcutaneous tissue diseases	28,642	11,673	16,969	3.5	3.8	3.3
Digestive system diseases	23,957	9,850	14,107	2.9	3.2	2.7
All other	230,711	88,731	141,980	27.8	28.5	27.3

Sources: Direct: Annual Report 1C

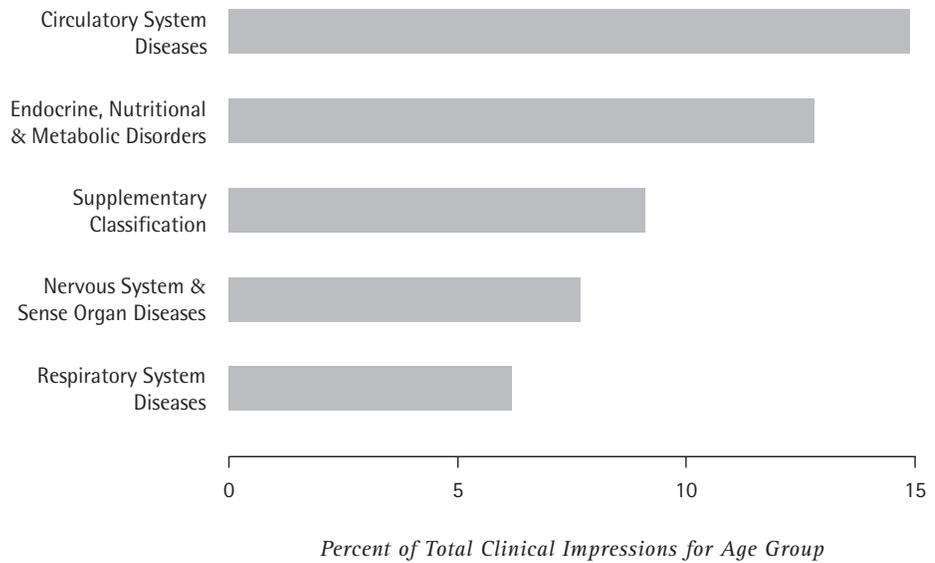
Contract: Annual Report 3A

Part 5 Patient Care Statistics

Chart 5.27

*Leading Causes of Ambulatory Medical Visits: Ages 65+ Years, Indian Health Service and Tribal Direct and Contract Facilities (FY 1997, Provisional)*

In FY 1997 (provisional), the leading cause of ambulatory medical visits in Indian Health Service and Tribal direct and contract facilities for ages 65 and over was circulatory system diseases. This was followed by endocrine, nutritional, and metabolic disorders.



**Part 5 Patient Care Statistics**

**Table 5.27**

*Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 65 Years Old and Older*

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	896,182	336,327	559,855	100.0	37.5	62.5
				100.0	100.0	100.0
Circulatory system diseases	133,213	54,260	78,953	14.9	16.1	14.1
Endocrine, nutritional & metabolic disorders	115,069	39,991	75,078	12.8	11.9	13.4
Supplementary classification	81,809	28,473	53,336	9.1	8.5	9.5
Nervous system & sense organ diseases	68,650	27,402	41,248	7.7	8.1	7.4
Respiratory system diseases	55,853	22,926	32,927	6.2	6.8	5.9
Musculoskeletal system diseases	53,888	17,053	36,835	6.0	5.1	6.6
Symptoms, signs & ill-defined conditions	45,983	17,252	28,731	5.1	5.1	5.1
Genitourinary system diseases	32,376	11,082	21,294	3.6	3.3	3.8
Skin & subcutaneous tissue diseases	29,017	11,895	17,122	3.2	3.5	3.1
Digestive system diseases	24,223	9,252	14,971	2.7	2.8	2.7
All other	256,101	96,741	159,360	28.6	28.8	28.5

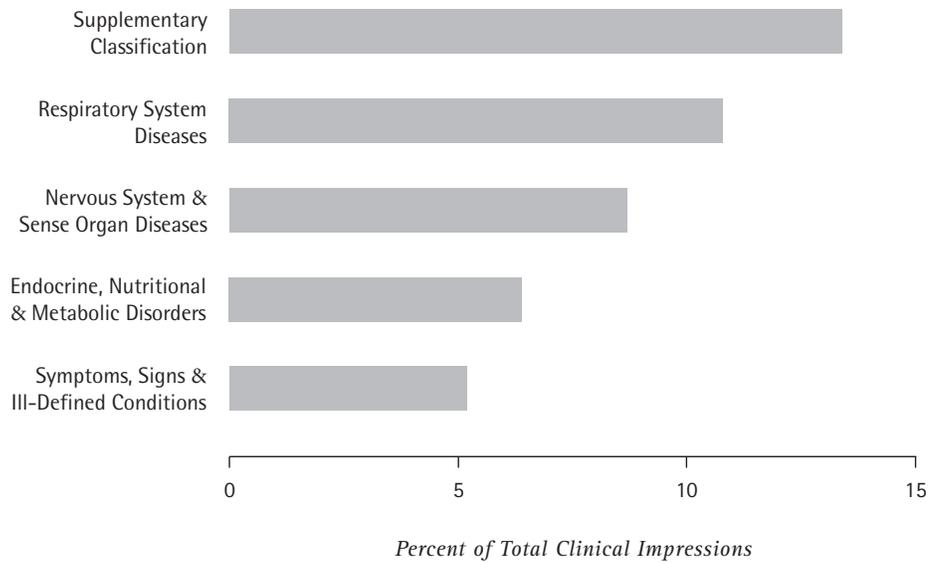
Sources: Direct: Annual Report 1C  
 Contract: Annual Report 3A

Part 5 Patient Care Statistics

Chart 5.28

*Leading Causes of Ambulatory Medical Visits, Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)*

In FY 1997 (provisional), the leading cause of ambulatory medical visits in Indian Health Service and Tribal direct and contract facilities was supplementary classification conditions. This was followed by respiratory system diseases.



**Part 5 Patient Care Statistics**

**Table 5.28**

*Ten Leading Causes of Ambulatory Medical Clinical Impressions by Sex*

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	7,836,010	2,969,025	4,866,985	100.0	37.9	62.1
				100.0	100.0	100.0
Supplementary classification	1,053,114	399,166	653,948	13.4	13.4	13.4
Respiratory system diseases	844,850	339,977	504,873	10.8	11.5	10.4
Nervous system & sense organ diseases	681,323	293,700	387,623	8.7	9.9	8.0
Endocrine, nutritional & metabolic disorders	502,333	183,020	319,313	6.4	6.2	6.6
Symptoms, signs & ill-defined conditions	404,076	148,229	255,847	5.2	5.0	5.3
Circulatory system diseases	388,922	180,046	208,876	5.0	6.1	4.3
Musculoskeletal system diseases	384,030	136,275	247,755	4.9	4.6	5.1
Complications of pregnancy, childbirth & the puerperium	358,277	0	358,277	4.6	0.0	7.4
Injury & poisoning	353,398	184,578	168,820	4.5	6.2	3.5
Skin & subcutaneous tissue diseases	350,700	149,514	201,186	4.5	5.0	4.1
All other	2,514,987	954,520	1,560,467	32.1	32.1	32.1

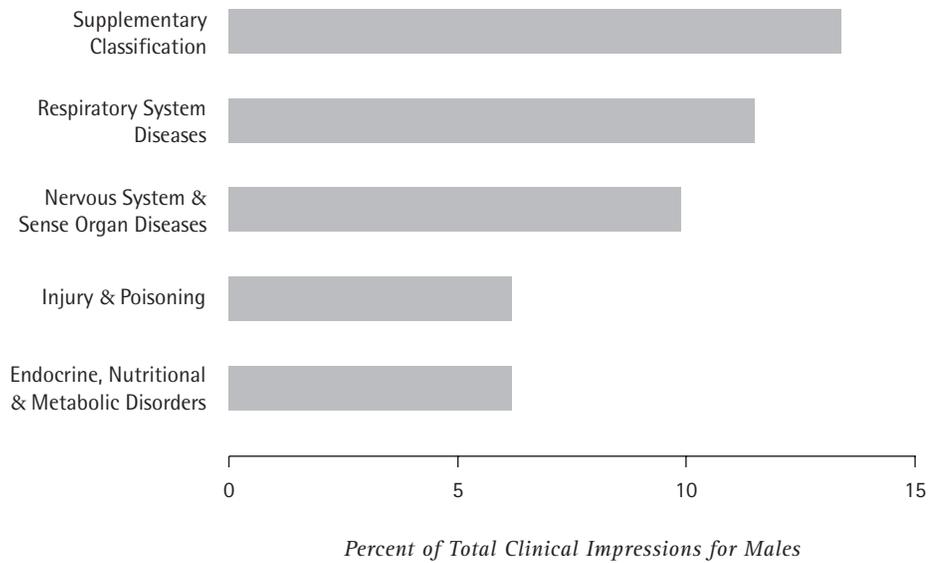
**Sources:** Direct: Annual Report 1C  
Contract: Annual Report 3A

Part 5 Patient Care Statistics

Chart 5.29

*Leading Causes of Ambulatory Medical Visits for Males, Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)*

For Indian males, the leading cause of ambulatory medical visits (FY 1997, provisional) in Indian Health Service and Tribal direct and contract facilities was supplementary classification conditions. This was followed by respiratory system diseases.

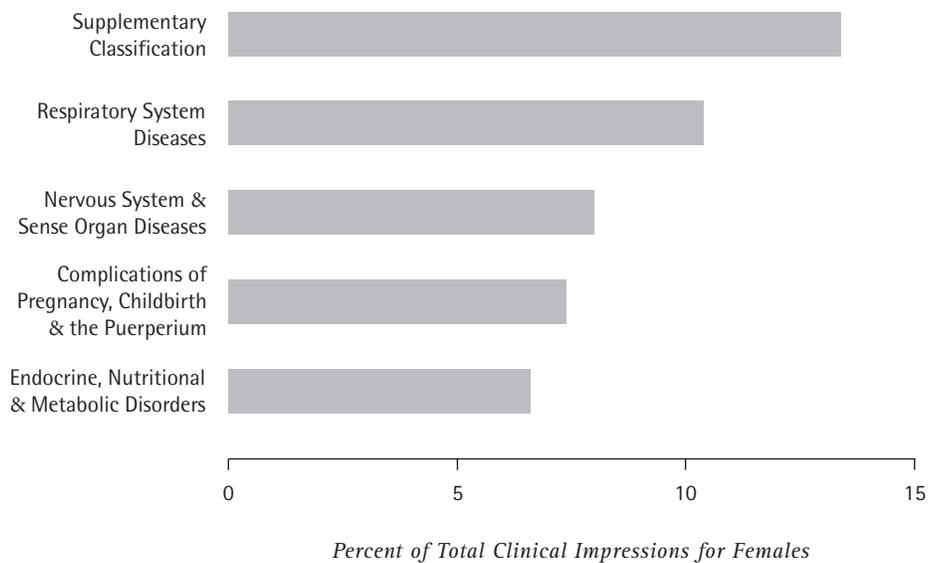


Part 5 Patient Care Statistics

Chart 5.30

*Leading Causes of Ambulatory Medical Visits for Females, Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)*

For Indian females, the leading cause of ambulatory medical visits (FY 1997, provisional) in Indian Health Service and Tribal direct and contract facilities was supplementary classification conditions. This was followed by respiratory system diseases.



**Part 5 Patient Care Statistics**

**Table 5.29**

*Number of Ambulatory Medical Clinical Impressions for Leading Major Categories by Sex*

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997 (Provisional)

Male		Female	
Category	Number of Clinical Impressions	Category	Number of Clinical Impressions
All Categories	2,969,025	All Categories	4,866,985
Supplementary classification	399,166	Supplementary classification	653,948
Respiratory system diseases	339,977	Respiratory system diseases	504,873
Nervous system & sense organ diseases	293,700	Nervous system & sense organ diseases	387,623
Injury & poisoning	184,578	Complication of pregnancy, childbirth & the puerperium	358,277
Endocrine, nutritional & metabolic disorders	183,020	Endocrine, nutritional & metabolic disorders	319,313
Circulatory system diseases	180,046	Symptoms, signs & ill-defined conditions	255,847
Skin & subcutaneous tissue diseases	149,514	Musculoskeletal system diseases	247,755
Symptoms, signs & ill-defined conditions	148,229	Genitourinary system diseases	221,253
Musculoskeletal system diseases	136,275	Circulatory system diseases	208,876
Mental disorders	133,870	Skin & subcutaneous tissue diseases	201,186
All other	820,650	All other	1,508,034

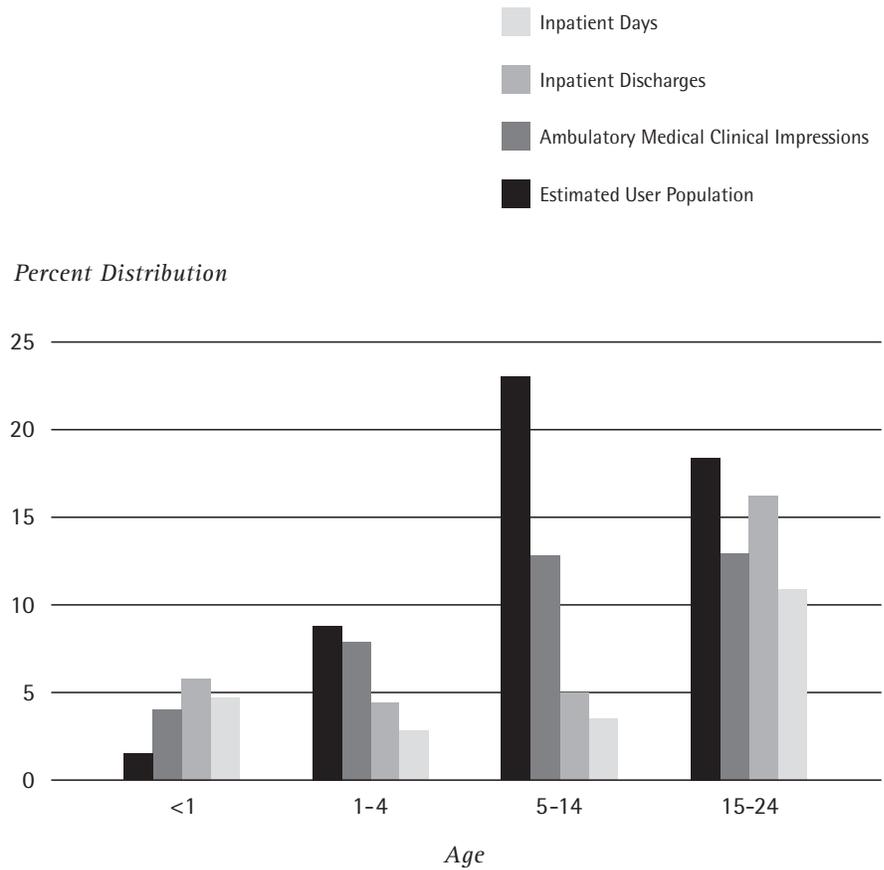
Sources: Direct: Annual Report 1C  
Contract: Annual Report 3A

Part 5 Patient Care Statistics

**Chart 5.31**

*Percent Distributions for Population and Patient Care Workloads, Ages Under 25 Years, FY 1997 (Provisional)*

Indian children under 1 year of age comprise 1.5 percent of the Indian Health Service user population but have 4.0 percent of the ambulatory medical clinical impressions, 5.8 percent of the inpatient discharges, and 4.7 percent of the inpatient days.

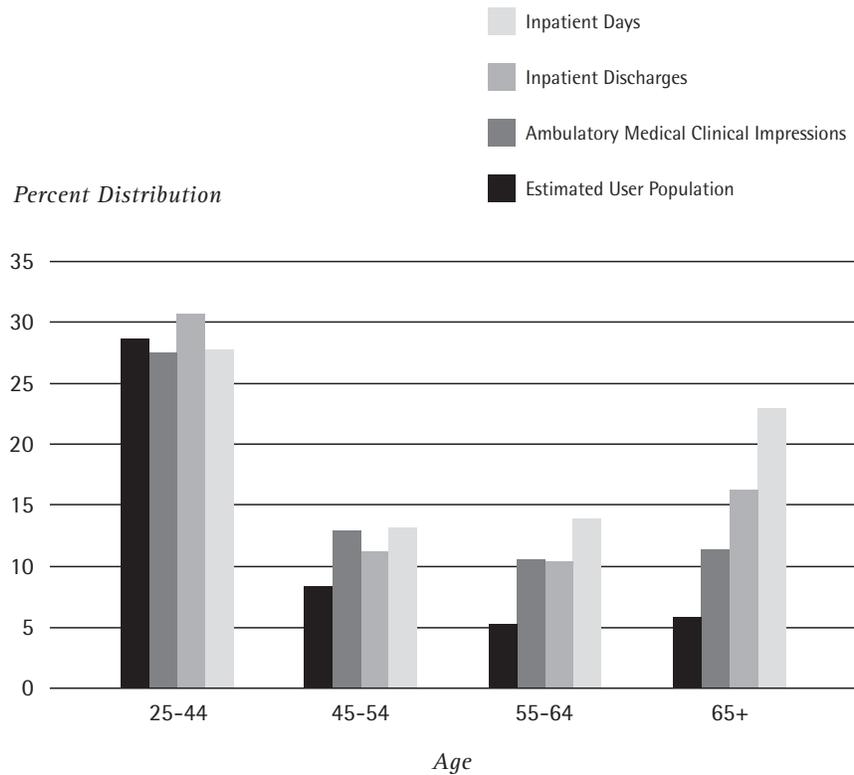


**Part 5 Patient Care Statistics**

**Chart 5.32**

*Percent Distributions for Population and Patient Care Workloads, Ages Over 24, FY 1997 (Provisional)*

Indian adults over age 65 comprise 5.8 percent of the Indian Health Service user population but have 11.4 percent of the ambulatory medical clinical impressions, 16.3 percent of the inpatient discharges, and 23.0 percent of the inpatient days.



**Table 5.31**

*Percent Distributions for Estimated Population, Ambulatory Medical Clinical Impressions, and Inpatient Discharges and Days, Fiscal Year 1997 (Provisional)*

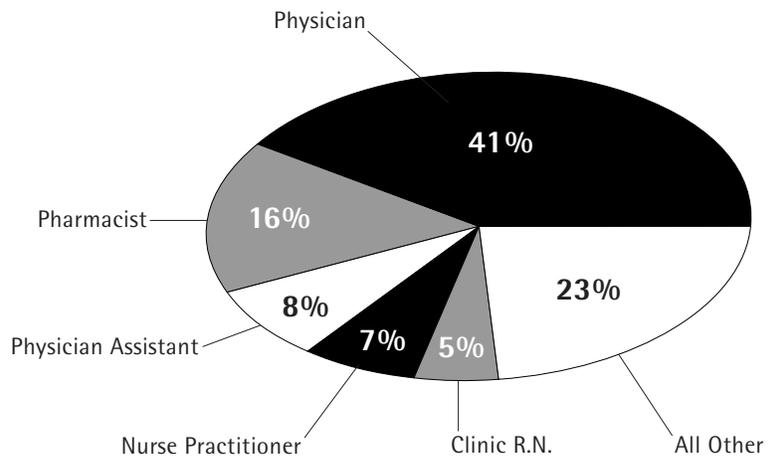
Distribution	Age								
	All ages	Under 1 year	1-4 years	5-14 years	15-24 years	25-44 years	45-54 years	55-64 years	65 years & over
Estimated user population	100.0	1.5	8.8	23.0	18.4	28.7	8.4	5.3	5.8
Ambulatory medical clinical impressions	100.0	4.0	7.9	12.8	12.9	27.5	12.9	10.6	11.4
Inpatient discharges	100.0	5.8	4.4	5.0	16.2	30.7	11.2	10.4	16.3
Inpatient days	100.0	4.7	2.8	3.5	10.9	27.8	13.2	13.9	23.0

Part 5 Patient Care Statistics

**Chart 5.33**

*Percent Distribution of Ambulatory Medical Visits by Type of Provider, Indian Health Service and Tribal Direct Facilities, FY 1997 (Provisional)*

For 41 percent of ambulatory medical visits to Indian Health Service and Tribal facilities in FY 1997 (provisional), the patient was seen by a physician. For 16 percent, the main provider was a pharmacist.



**Table 5.33**

*Number of Ambulatory Medical Visits by Type of Provider*

Indian Health Service and Tribal Direct Facilities, FY 1997 (Provisional)

Type of Provider	Number of Ambulatory Medical Visits	Percent of Total
Total, All Providers	6,731,097	100.0
Primary Care Providers	4,170,390	62.0
Physician	2,787,060	41.4
Physician Assistant	510,870	7.6
Nurse Practitioner	463,158	6.9
Contract Physician	169,762	2.5
Tribal Physician	77,423	1.2
Nurse Midwife	71,746	1.1
All Other	90,371	1.3
Other Providers	2,560,707	38.0
Pharmacist	1,056,144	15.7
Clinic R.N.	309,608	4.6
Optometrist	211,682	3.1
Public Health Nurse	110,440	1.6
Licensed Practical Nurse	97,430	1.4
Physical Therapist	71,690	1.1
All Other	703,713	10.5

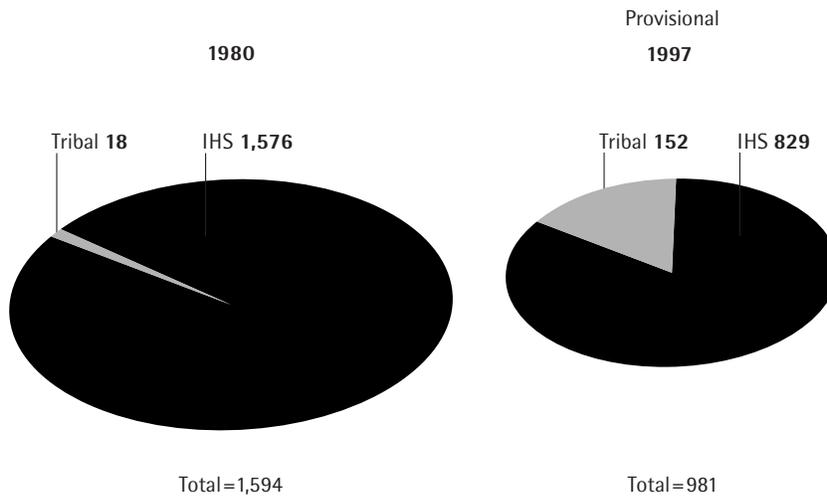
Source: APC Data System (Report 1A)

**Part 5 Patient Care Statistics**

**Chart 5.34**

*Trend in Average Daily Patient Load, IHS and Tribal Direct and Contract Hospitals*

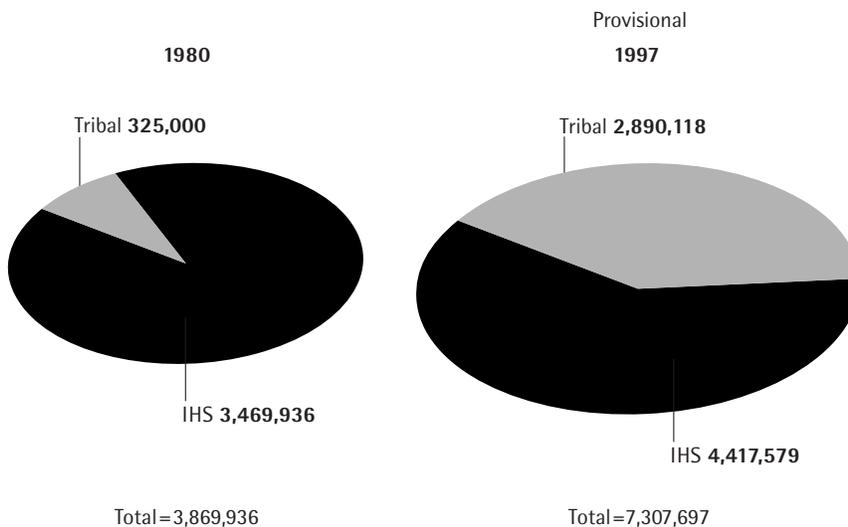
IHS services shifted away from inpatient care as demonstrated by the decline in average daily patient load (ADPL) between 1980 and 1997 (provisional). However, the Tribal portion of total ADPL increased from 1 to 15 percent during that time period.



**Chart 5.35**

*Trend in Number of Ambulatory Medical Visits, IHS and Tribal Direct and Contract Facilities*

While inpatient services declined, ambulatory medical services increased 89 percent between 1980 and 1997 (provisional). Also, the Tribal portion of total ambulatory medical visits increased from 8 to 65 percent during that time period.

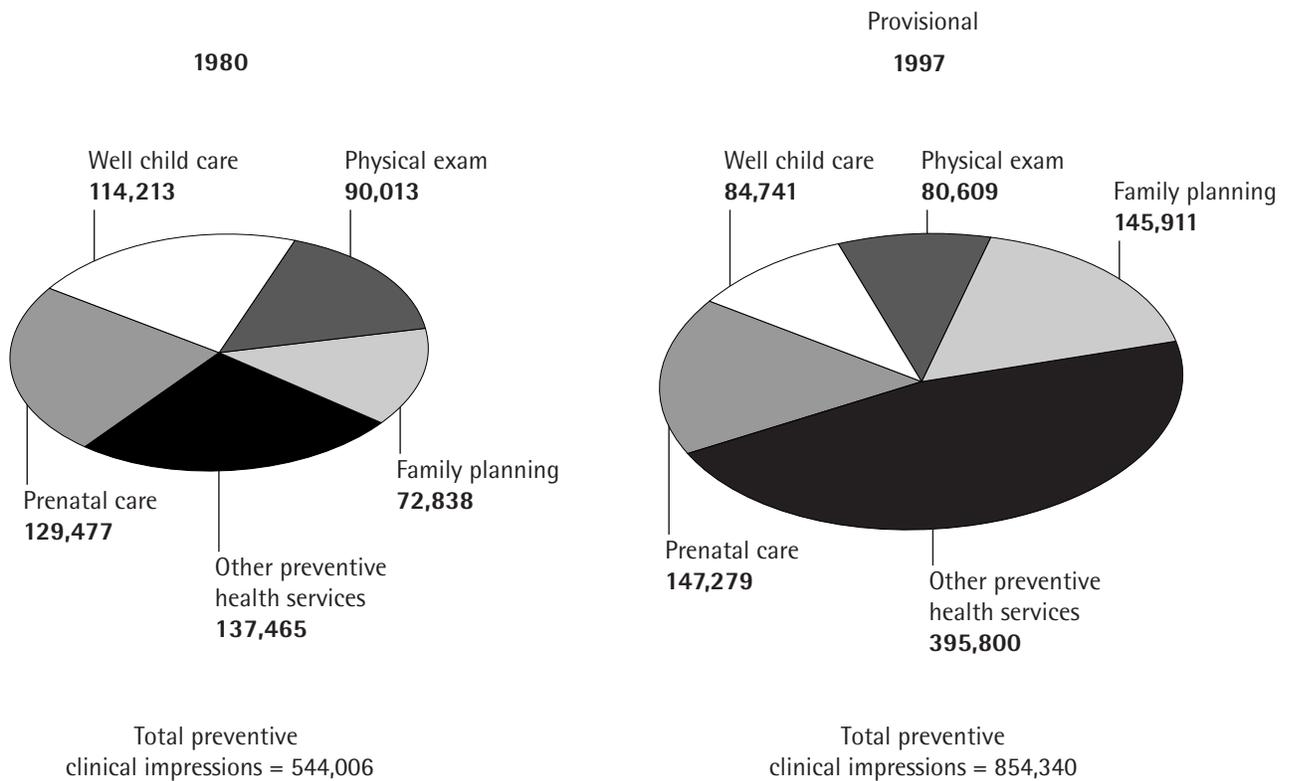


**Part 5 Patient Care Statistics**

**Chart 5.36**

*Trend in Preventive Ambulatory Medical Visits, IHS and Tribal Direct and Contract Facilities*

IHS services related to preventive care have increased 57 percent since 1980. In 1997 (provisional), the largest single category of preventive clinical impressions was prenatal care, 17 percent of the preventive total. These are conservative estimates since preventive activities also occur during visits reported for other causes.

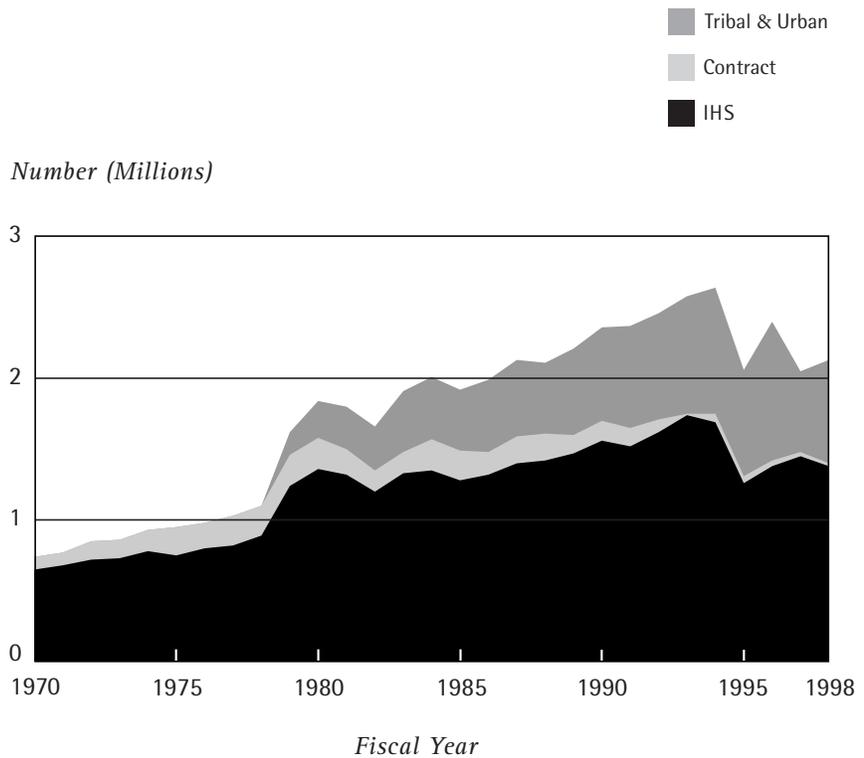


Part 5 Patient Care Statistics

Chart 5.37

Dental Service Provided

The number of direct and contract dental services provided by Indian Health Service, Tribal, and Urban Programs, as reported to the IHS central database, has increased 188 percent since FY 1970. In FY 1998, over 2.1 million dental services were provided.



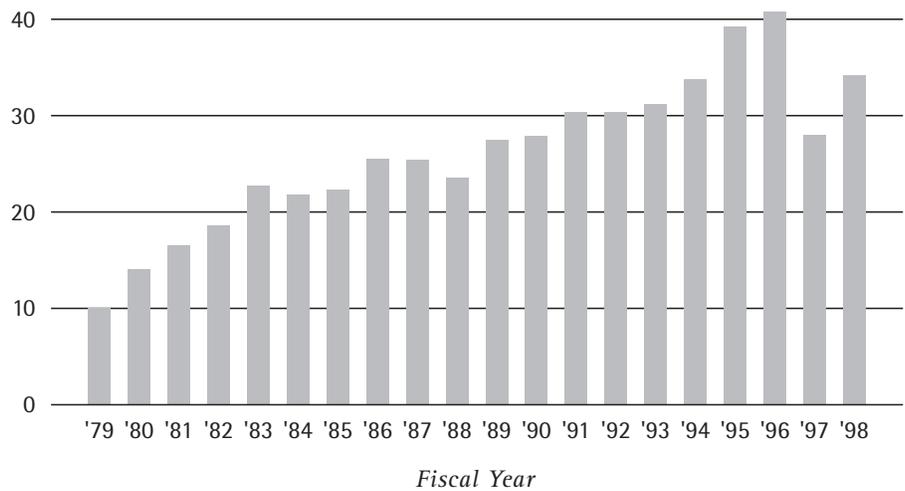
Part 5 Patient Care Statistics

**Chart 5.38**

*Dental Service  
Provided by Tribal/  
Urban Programs*

The number of dental services provided by Tribal and Urban Programs, as reported to the IHS central database, has increased over 344 percent since FY 1979. In FY 1998, they comprised 34 percent of the total dental services provided, as compared to 10 percent in FY 1979.

*Tribal and Urban as a Percent of Total*



## Part 5 Patient Care Statistics

**Table 5.37**

### Number of Dental Service Provided

IHS, Contract, Tribal and Urban Programs, FY 1955-1998

Fiscal Year	Number of Services Provided			Tribal & Urban	% Contract of Total	% Tribal & Urban of Total	% Increase of Total since 1955
	Total	IHS					
		Direct	Contract <sup>1</sup>				
1998	2,123,895	1,382,583	15,773	725,539	0.7	34.2	1,079.9
1997	2,052,076	1,451,797	26,134	574,145	1.3	28.0	1,040.0
1996	2,400,646	1,383,870	36,171	980,605	1.5	40.8	1,233.7
1995	2,058,032	1,261,787	49,827	746,418	2.4	39.3	1,043.4
1994	2,643,757	1,686,892	64,483	892,382	2.4	33.8	1,368.8
1993	2,675,525	1,742,936	97,897	834,692	3.7	31.2	1,386.4
1992	2,458,811	1,618,679	92,447	747,685	3.8	30.4	1,266.0
1991	2,369,484	1,516,233	133,253	719,998	5.6	30.4	1,216.4
1990	2,362,228	1,563,934	139,425	658,869	5.9	27.9	1,212.3
1989	2,207,082	1,466,812	132,918	607,352	6.0	27.5	1,126.2
1988	2,106,741	1,415,815	194,784	496,142	9.2	23.6	1,070.4
1987	2,130,690	1,397,262	191,639	541,789	9.0	25.4	1,083.7
1986	1,984,522	1,322,794	155,939	505,789	7.9	25.5	1,002.5
1985	1,914,820	1,276,623	210,508	427,689	11.0	22.3	963.8
1984	2,011,326	1,348,599	224,918	437,809	11.2	21.8	1,017.4
1983	1,907,336	1,325,187	149,741	432,408	7.9	22.7	959.6
1982	1,666,263	1,202,422	153,030	311,341	9.2	18.6	825.7
1981	1,801,982	1,319,913	182,880	299,189	10.1	16.6	901.1
1980	1,833,206	1,357,809	216,574	258,823	11.8	14.1	918.4
1979 <sup>2</sup>	1,618,383	1,239,108	215,997	163,278	13.3	10.1	799.1
1978 <sup>2</sup>	1,099,019	885,019	214,000		19.5		510.6
1977	1,037,640	823,328	214,312		20.7		476.5
1976	975,647	798,709	176,938		18.1		442.0
1975	946,722	745,831	200,891		21.2		426.0
1974	927,701	775,747	151,954		16.4		415.4
1973	863,057	728,909	134,148		15.5		379.5
1972	844,724	718,176	126,548		15.0		369.3
1971	776,168	684,612	91,556		11.8		331.2
1970	737,206	646,580	90,626		12.3		309.6
1969	703,232	634,479	68,753		9.8		290.7
1968	681,745	613,084	68,661		10.1		278.7
1967	626,458	545,509	80,949		12.9		248.0
1966 <sup>2</sup>	570,779	502,710	60,069		11.9		217.1
1965	572,079	495,006	77,073		13.5		217.8
1964	525,010	462,981	62,029		11.8		191.7
1963	453,906	398,452	55,454		12.2		152.2
1962	421,597	364,988	56,609		13.4		134.2
1961	403,528	348,776	54,752		13.6		124.2
1960 <sup>2</sup>	364,423	307,248	57,175		15.7		102.5
1959	328,613	283,206	45,407		13.8		82.6
1958	282,372	282,372	—		—		56.9
1957	249,048	249,048	—		—		38.4
1956	219,353	219,353	—		—		21.9
1955	180,000	180,000	—		—		—

<sup>1</sup> Beginning with FY 1979, this category excludes contract services purchased from the private sector by Tribes.

<sup>2</sup> Data systems were modified in 1960, 1966, and 1978. In 1978 the IHS began to use the dental services coding list adopted by the American Dental Association (ADA). The ADA list identifies individual clinical services. Previously the IHS had reported specified clinical services combined into major dental service groupings. Excluded from the 1978 count are diagnostic and adjunctive services. Excluded from the clinical counts since 1979 are diagnostic services other than examinations, revisits and non-clinical adjunctive services.

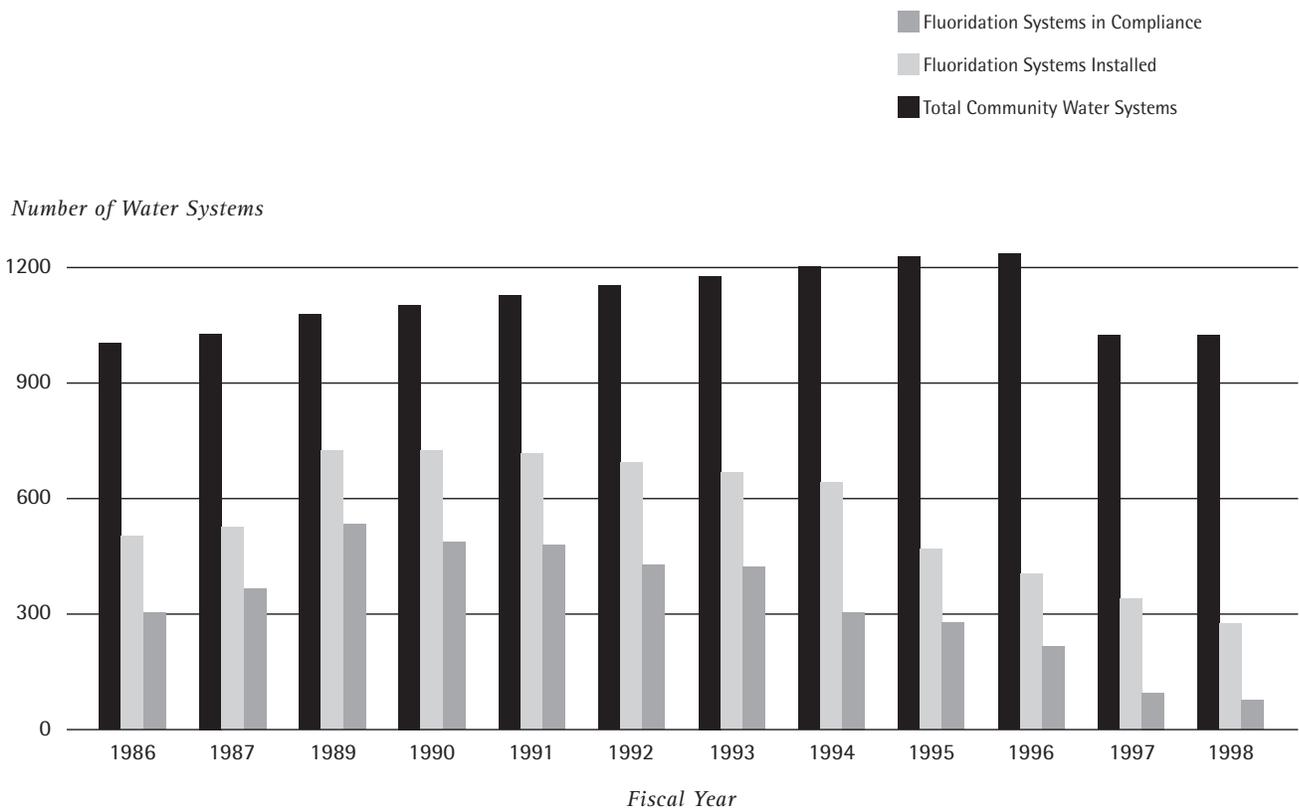
Part 5 Patient Care Statistics

Chart 5.39

*Trend in Community Water Systems Monitoring Fluoridation*

There has been a decline since FY 1994 in both the number of community water systems monitoring fluoride levels as well as the number of fluoridated water systems in compliance. This effect has occurred largely due to a lack of resources for both personnel and funding at the local, Area, and Headquarters levels. The Centers for Disease Control and Prevention published guidelines in 1995 that were more stringent, and this issue has caused some small Tribal programs to decide to discontinue fluoridation.

There are currently 1,025 community water systems on reservations serving American Indian and Alaska Native people. In FY 1998, 276 water systems delivered fluoride for the entire year; of those systems 76 were in compliance. A water system is considered to be in compliance for the year if the daily water sample is in the optimal fluoride range. Optimally fluoridated systems provide the dental benefits of this safe and cost effective public health measure to over 40 percent of the American Indian and Alaska Native population. Increasing the number of optimally fluoridated water systems is a high priority for the IHS Dental and Office of Environmental Health and Engineering programs.



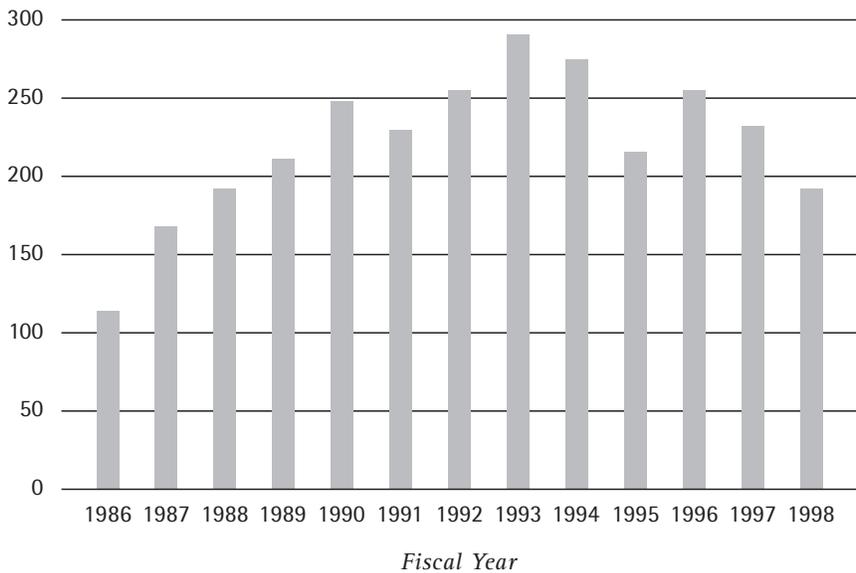
Part 5 Patient Care Statistics

Chart 5.40

*Annual Preventive Sealant Usage in IHS and Tribal Dental Programs, FY 1986-1998*

Since FY 1986, there has been a dramatic increase in dental sealant usage. The number of sealants placed in FY 1998 is almost double the number placed in FY 1986. Dental sealants are plastic coatings applied to the chewing surfaces of teeth. When applied correctly, they can prevent up to 100 percent of dental decay on those surfaces. Dental sealants are applied to children's teeth when they first erupt into the mouth at about the age of 6 and 12 years. Given the high rate of dental disease among the American Indian and Alaska Native population, dental sealants are one of the best preventive methods available today.

*Number of Sealant Services (000's)*



## Part 6

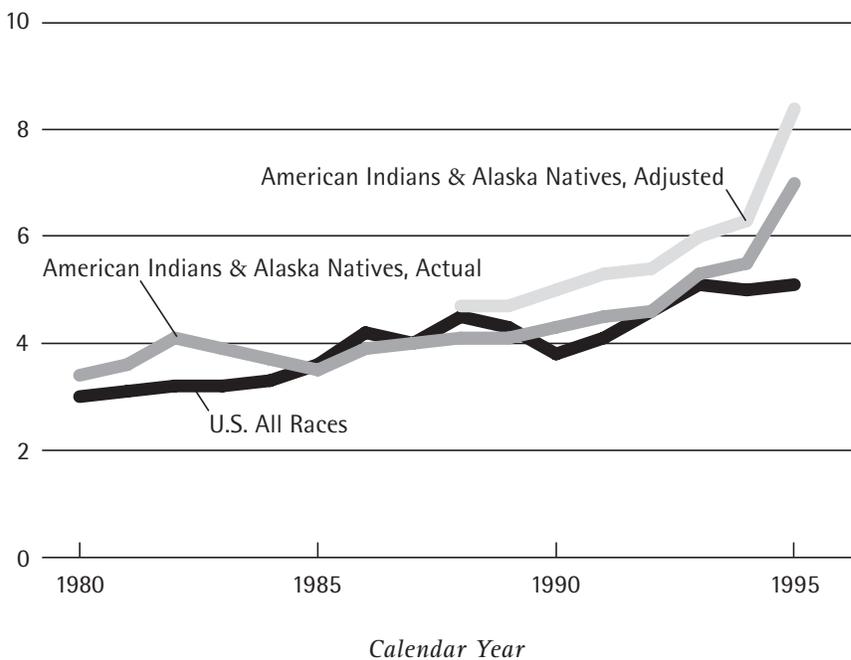
### Community Health Statistics

**Chart 6.1**

*Age-Adjusted  
Drug Related Death Rates*

The age-adjusted drug related death rate for American Indians and Alaska Natives increased from 3.4 deaths per 100,000 population in 1979-1981 to 8.4 in 1994-1996. The 1994-1996 rate is 65 percent higher than the U.S. All Races rate of 5.1 for 1995. These Indian rates have been adjusted for mis-coding of Indian race on death certificates.

*Per 100,000 Population*



Part 6 Community Health Statistics

Table 6.1

Drug Related Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1980-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted		
(1996)	110	141								
1994-1996 (1995)	69	80	7.0	8.4	5.1	4.8	1.4	1.6	1.5	1.8
1993-1995 (1994)	75	85	5.5	6.3	5.0	4.7	1.1	1.3	1.2	1.3
1992-1994 (1993)	52	62	5.3	6.0	5.1	4.8	1.0	1.2	1.1	1.3
1991-1993 (1992)	57	67	4.6	5.4	4.6	4.4	1.0	1.2	1.0	1.2
1990-1992 (1991)	50	59	4.5	5.3	4.1	3.9	1.1	1.3	1.2	1.4
1989-1991 (1990)	48	55	4.3	5.0	3.8	3.6	1.1	1.3	1.2	1.4
1988-1990 (1989)	45	52	4.1	4.7	4.3	4.0	1.0	1.1	1.0	1.2
1987-1989 (1988)	36	43	4.1	4.7	4.5	4.1	0.9	1.0	1.0	1.1
1986-1988 (1987)	45	52	4.0		4.0	3.7	1.0		1.1	
1985-1987 (1986)	36		3.9		4.2	3.9	0.9		1.0	
1984-1986 (1985)	34		3.5		3.6	3.4	1.0		1.0	
1983-1985 (1984)	27		3.7		3.3	3.1	1.1		1.2	
1982-1984 (1983)	40		3.9		3.2	3.1	1.2		1.3	
1981-1983 (1982)	30		4.1		3.2	3.0	1.3		1.4	
1980-1982 (1981)	28		3.6		3.1	3.0	1.2		1.2	
1979-1981 (1980)	25		3.4		3.0	3.0	1.1		1.1	
(1979)	27									

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

Note: American Indian and Alaska Native rates are for the 3-year periods specified.

Numbers of deaths and rates for U.S. populations are for the single year specified.

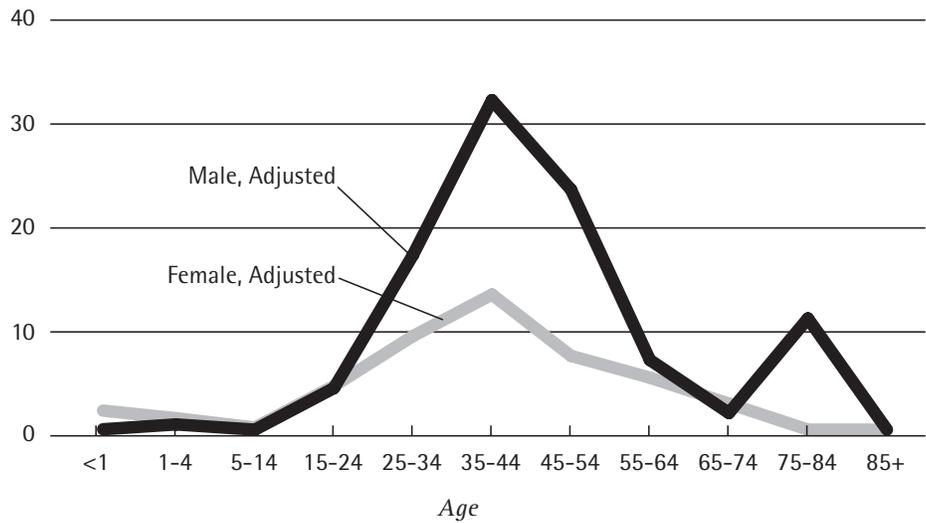
Part 6 Community Health Statistics

Chart 6.2

*Drug Related Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)*

The age-specific drug related death rate (1994-1996) for Indian males peaked at 31.7 for age group 35 to 44 years. The highest age-specific rate for Indian females (13.0) occurred in the same age group. However, the peak male rate was 2.4 times the peak female rate. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

Per 100,000 Population



**Part 6 Community Health Statistics**

**Table 6.2**

*Drug Related Death Rates by Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	0.9	0.9	—	—	1.9	1.9
1-4 years	0.5	0.8	0.5	0.5	0.5	1.1
5-14 years	0.1	0.1	—	—	0.2	0.2
15-24 years	3.0	4.1	3.5	4.0	2.5	4.2
25-34 years	10.5	12.8	14.4	16.8	6.8	9.0
35-44 years	18.2	22.0	26.6	31.7	10.4	13.0
45-54 years	13.2	14.8	19.9	23.1	7.1	7.1
55-64 years	5.4	5.8	5.8	6.7	5.0	5.0
65-74 years	2.1	2.1	1.6	1.6	2.5	2.5
75-84 years	2.9	4.3	7.1	10.7	—	—
85 years +	—	—	—	—	—	—

U.S. All Races				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	0.6	0.6	0.6	0.6
1-4 years	0.2	0.2	0.1	0.1
5-14 years	0.1	0.1	0.1	0.1
15-24 years	2.4	3.3	1.4	1.4
25-34 years	8.3	12.3	4.4	4.4
35-44 years	13.5	20.2	7.0	7.0
45-54 years	8.1	11.5	5.0	5.0
55-64 years	3.3	3.9	2.8	2.8
65-74 years	2.3	2.1	2.5	2.5
75-84 years	2.7	2.9	2.6	2.6
85 years +	4.4	5.9	3.9	3.9

U.S. White				
Age Group	Both Sexes		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	0.4	0.5	0.3	0.3
1-4 years	0.1	0.1	0.1	0.1
5-14 years	0.1	0.1	0.1	0.1
15-24 years	2.5	3.5	1.5	1.5
25-34 years	8.3	12.4	4.2	4.2
35-44 years	12.4	18.4	6.3	6.3
45-54 years	7.1	9.4	4.8	4.8
55-64 years	3.1	3.3	2.8	2.8
65-74 years	2.3	2.0	2.6	2.6
75-84 years	2.7	2.8	2.6	2.6
85 years +	4.6	6.3	4.0	4.0

<sup>1</sup> Adjusted to compensate for miscoding of Indian race on death certificates.

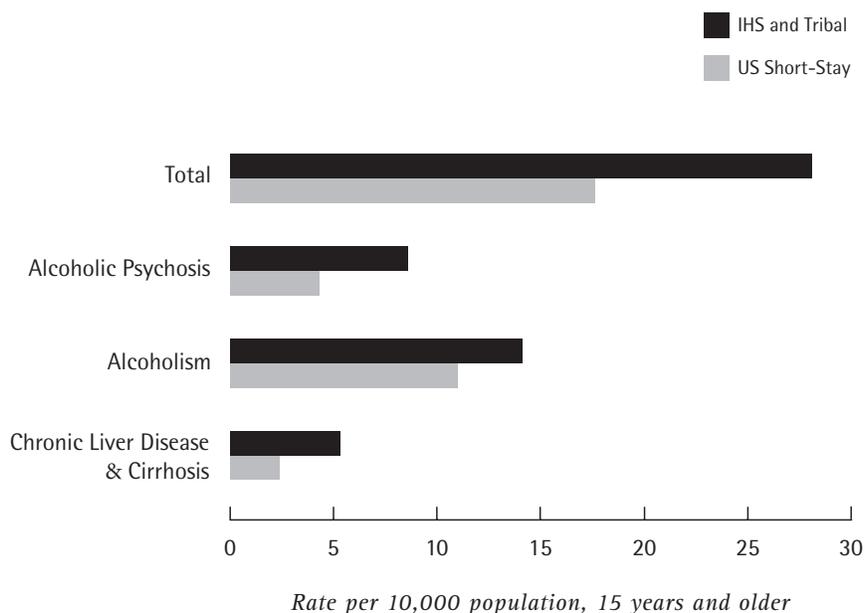
**Note:** — Represents zero.

**Part 6 Community Health Statistics**

**Chart 6.3**

*Alcohol-Related Discharge Rates (First-Listed Diagnosis)*

In FY 1997 (provisional), the total alcohol-related discharge rate (first diagnosis) for IHS and Tribal direct and contract general hospitals was 28.1 per 10,000 user population aged 15 years and older. This is 1.6 times the CY 1997 rate of 17.6 for U.S. general short-stay hospitals.



**Table 6.3**

*Number and Rate for Discharges with a First-Listed Diagnosis of Alcoholism for Persons 15 Years Old and Older*

IHS and Tribal Direct and Contract General Hospitals, FY 1997 (Provisional), and U.S. General Short-Stay Hospitals, CY 1997

First Listed Diagnosis	IHS and Tribal Hospitals		US General Short-Stay Hospitals	
	Number	Rate	Number (thousands)	Rate
Total	2,417	28.1	372	17.6
Alcoholic psychosis (ICD-9-CM 291)	741	8.6	91	4.3
Alcoholism (ICD-9-CM 303, 305.0)	1,217	14.1	231	11.0
Chronic liver disease and cirrhosis, specified as alcoholic (ICD-9-CM 571.0-571.3)	459	5.3	50	2.4

**Note:** Rate is number of discharges per 10,000 user population aged 15 years and older  
**Sources:** US—National Center for Health Statistics, DHHS, unpublished data  
 IHS—Annual Reports 2C and 3I

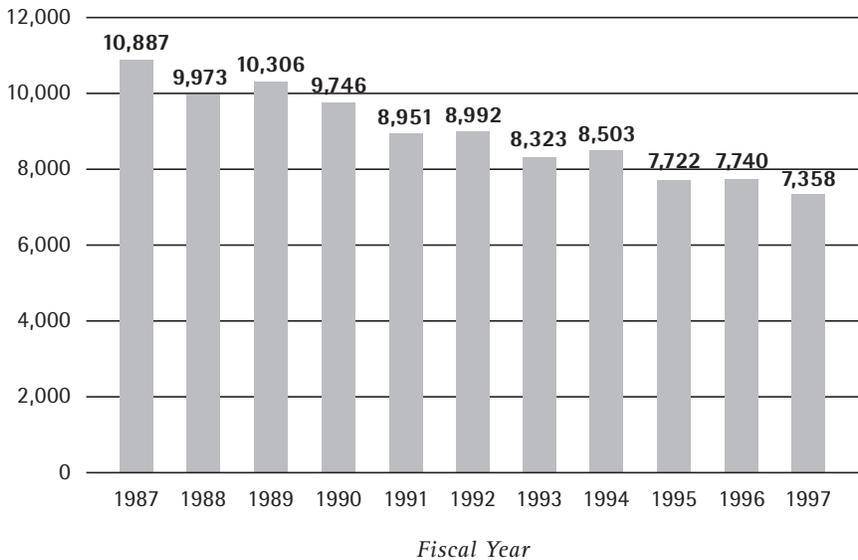
**Part 6 Community Health Statistics**

**Chart 6.4**

*Hospitalizations for Injuries and Poisonings*

Since FY 1987, the number of discharges for injuries and poisonings from IHS and Tribal direct and contract general hospitals has decreased 32 percent. In FY 1997 (provisional), there were 7,358 discharges.

*Discharges*

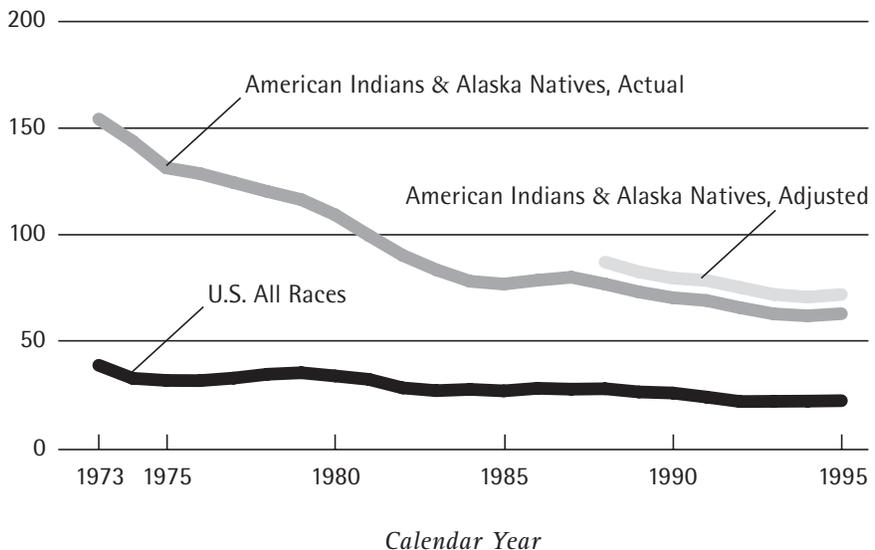


**Chart 6.5**

*Age-Adjusted Motor Vehicle Death Rates for Males*

The age-adjusted motor vehicle death rate for American Indian and Alaska Native males has decreased 53 percent since 1972-1974. The 1994-1996 rate, 72.5 deaths per 100,000 population, is 3.2 times the U.S. All Races rate of 22.7 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

*Per 100,000 Population*



Part 6 Community Health Statistics

Table 6.5

Motor Vehicle Deaths and Death Rates for Males

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	417	481								
1994-1996 (1995)	396	456	63.5	72.5	22.7	22.6	2.8	3.2	2.8	3.2
1993-1995 (1994)	373	424	62.5	71.3	22.5	22.5	2.8	3.2	2.8	3.2
1992-1994 (1993)	367	423	63.4	72.5	22.4	22.5	2.8	3.2	2.8	3.2
1991-1993 (1992)	382	443	66.3	75.8	22.3	22.2	3.0	3.4	3.0	3.4
1990-1992 (1991)	393	449	69.7	79.1	24.4	24.4	2.9	3.2	2.9	3.2
1989-1991 (1990)	399	451	71.1	80.2	26.3	26.3	2.7	3.0	2.7	3.0
1988-1990 (1989)	381	432	73.7	83.1	26.8	26.8	2.8	3.1	2.8	3.1
1987-1989 (1988)	410	467	77.4	87.7	28.3	28.5	2.7	3.1	2.7	3.1
1986-1988 (1987)	423	481	80.6		28.1	28.4	2.9		2.8	
1985-1987 (1986)	395		79.2		28.5	28.7	2.8		2.8	
1984-1986 (1985)	354		77.4		27.3	27.6	2.8		2.8	
1983-1985 (1984)	351		78.7		28.0	28.4	2.8		2.8	
1982-1984 (1983)	358		84.1		27.4	27.8	3.1		3.0	
1981-1983 (1982)	362		90.9		28.7	29.3	3.2		3.1	
1980-1982 (1981)	405		100.2		32.7	33.4	3.1		3.0	
1979-1981 (1980)	429		109.9		34.3	34.8	3.2		3.2	
1978-1980 (1979)	448		117.0		35.8	36.2	3.3		3.2	
1977-1979 (1978)	431		120.8		35.1	35.2	3.4		3.4	
1976-1978 (1977)	416		125.0		33.3	33.2	3.8		3.8	
1975-1977 (1976)	413		129.2		32.1	31.8	4.0		4.1	
1974-1976 (1975)	419		131.9		32.2	31.7	4.1		4.2	
1973-1975 (1974)	357		144.4		33.2	32.8	4.3		4.4	
1972-1974 (1973)	443		154.8		39.3	38.4	3.9		4.0	
(1972)	399									
1954-1956 (1955)	NA		NA		38.4	37.8	NA		NA	

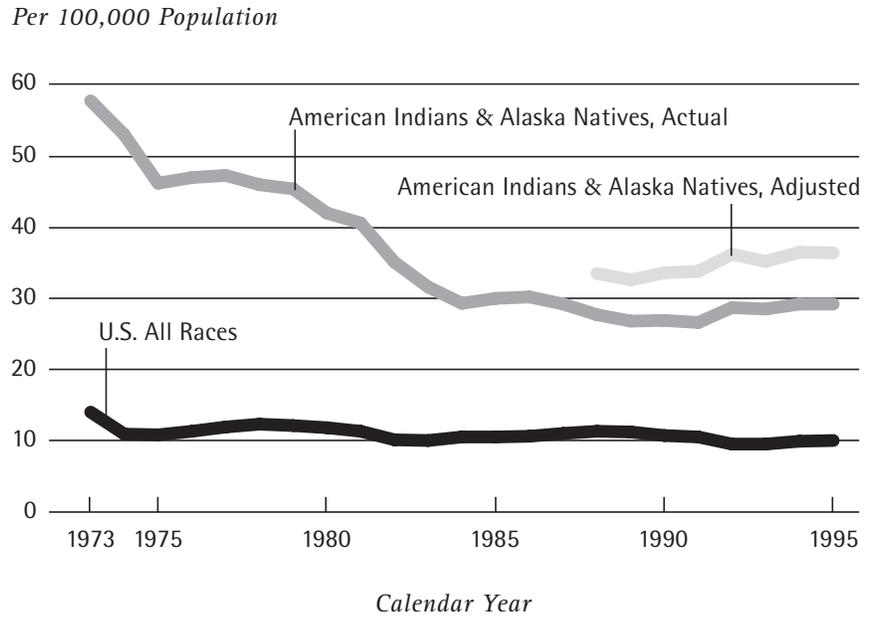
Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

Note: NA denotes data not available

Chart 6.6

*Age-Adjusted Motor Vehicle Death Rates for Females*

The age-adjusted motor vehicle death rate for American Indian and Alaska Native females has decreased 37 percent since 1972-1974. The 1994-1996 rate, 36.4 deaths per 100,000 population, is 3.6 times the U.S. All Races rate of 10.0 for 1995. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Part 6 Community Health Statistics

Table 6.6

Motor Vehicle Deaths and Death Rates for Females

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	208	257								
1994-1996 (1995)	194	247	29.2	36.4	10.0	10.3	2.9	3.6	2.8	3.5
1993-1995 (1994)	179	218	29.2	36.5	9.9	10.0	2.9	3.7	2.9	3.7
1992-1994 (1993)	201	249	28.5	35.2	9.5	9.8	3.0	3.7	2.9	3.6
1991-1993 (1992)	156	197	28.7	36.2	9.5	9.6	3.0	3.8	3.0	3.8
1990-1992 (1991)	165	218	26.6	33.8	10.5	10.8	2.5	3.2	2.5	3.1
1989-1991 (1990)	149	186	26.9	33.6	10.7	11.0	2.5	3.1	2.4	3.1
1988-1990 (1989)	155	186	26.8	32.6	11.2	11.5	2.4	2.9	2.3	2.8
1987-1989 (1988)	155	188	27.7	33.5	11.3	11.6	2.5	3.0	2.4	2.9
1986-1988 (1987)	151	185	29.2		11.0	11.4	2.7		2.6	
1985-1987 (1986)	171		30.2		10.6	11.0	2.8		2.7	
1984-1986 (1985)	154		30.0		10.5	10.8	2.9		2.8	
1983-1985 (1984)	134		29.3		10.5	10.9	2.8		2.7	
1982-1984 (1983)	140		31.6		10.0	10.3	3.2		3.1	
1981-1983 (1982)	168		35.1		10.1	10.5	3.5		3.3	
1980-1982 (1981)	165		40.6		11.3	11.7	3.6		3.5	
1979-1981 (1980)	193		42.0		11.8	12.3	3.6		3.4	
1978-1980 (1979)	168		45.4		12.1	12.6	3.8		3.6	
1977-1979 (1978)	175		46.0		12.3	12.6	3.7		3.7	
1976-1978 (1977)	177		47.3		11.9	12.2	4.0		3.9	
1975-1977 (1976)	156		47.0		11.3	11.5	4.2		4.1	
1974-1976 (1975)	151		46.2		10.8	10.9	4.3		4.2	
1973-1975 (1974)	138		53.0		10.9	11.0	4.9		4.8	
1972-1974 (1973)	184		57.8		14.0	14.0	4.1		4.1	
(1972)	158									
1954-1956 (1955)	NA		NA		11.6	11.4	NA		NA	

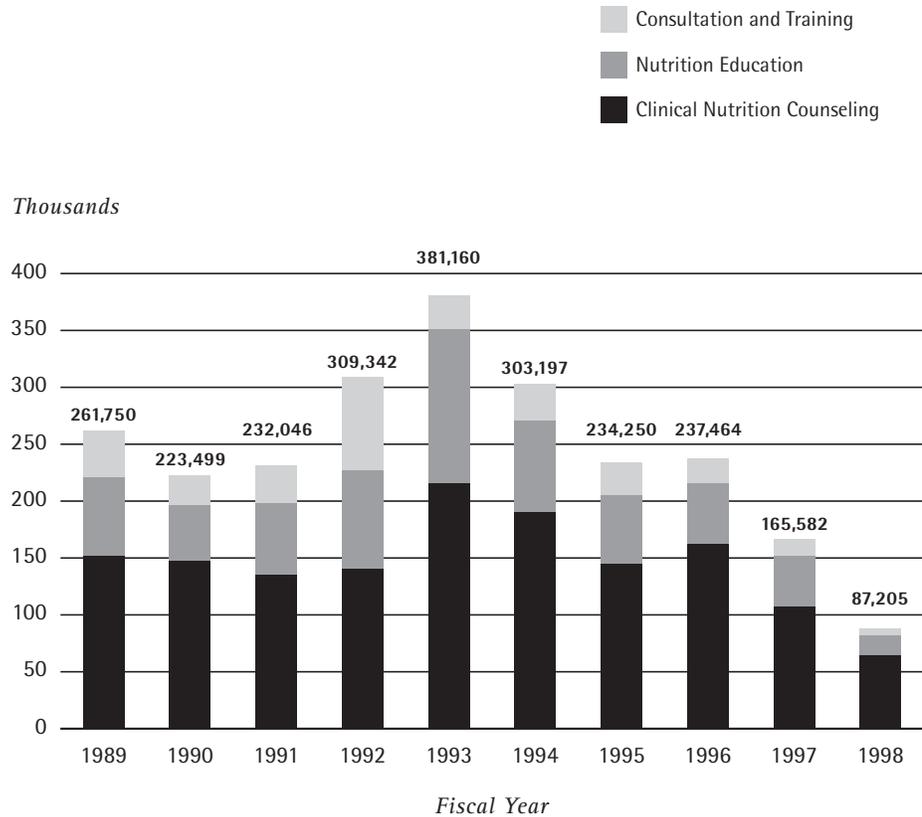
Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for miscoding of Indian race on death certificates.

Note: NA denotes data not available

**Chart 6.7**

*Indian Health Service  
Nutrition and Dietetics –  
Trend in Patient/Client  
Contacts by Nutrition  
Function*

The number of patient/client contacts reported by the nutrition and dietetics program has decreased 77 percent since FY 1993. However, this does not necessarily reflect a decrease in total workload. There have been many changes in the IHS nutrition and dietetics program during the mid to late 1990's that have been instrumental in contributing to a decrease in workload reporting by local nutrition personnel. Among them are loss of IHS Area and Headquarters nutritionists responsible for coordinating and orienting new staff to the nutrition reporting system, as well as the transition of many former IHS facilities to Tribally-operated and administered programs that no longer submit data to the IHS central database.



Part 6 Community Health Statistics

Chart 6.8

*Indian Health Service Nutrition and Dietetics – Percent of Contacts by Setting, FY 1998*

The Indian Health Service nutrition and dietetics program reported over 87,000 patient/client contacts during FY 1998. The majority of the contacts were in the hospital or ambulatory clinic (80 percent).

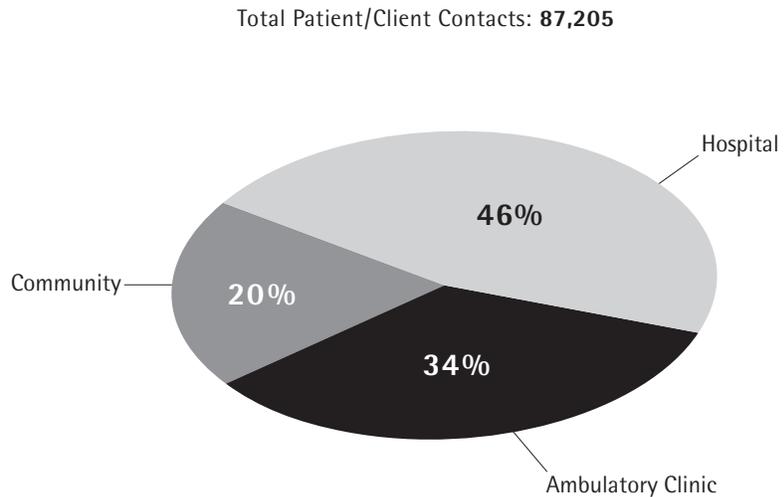
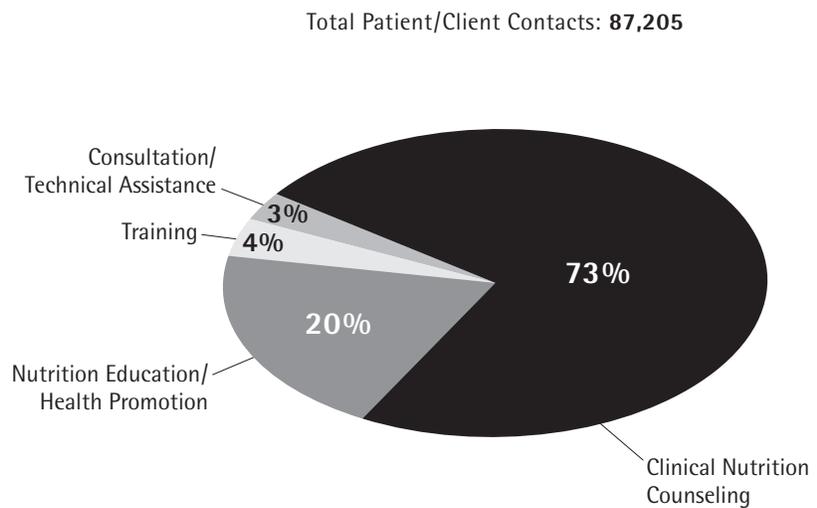


Chart 6.9

*Indian Health Service Nutrition and Dietetics – Percent of Contacts by Nutrition Function, FY 1998*

Nearly three-fourths (73 percent) of the nutrition and dietetics program contacts reported during FY 1998 were for clinical nutrition counseling and one-fifth (20 percent) were for health promotion.



Part 6 Community Health Statistics

**Table 6.8**

*Nutrition and Dietetics  
Patient/Client Contacts*

By Setting and Function,  
FY 1998

	Patient/Client Contacts	
	Number	Percent Distribution
<b>Setting</b>		
Total Patient/Client Contacts	87,205	100.0
Hospital	40,157	46.0
Ambulatory Clinic	29,865	34.2
Community	17,183	19.7
<b>Nutrition Function</b>		
Total Patient/Client Contacts	87,205	100.0
Clinical Nutrition Counseling	63,938	73.3
Nutrition Education/Health Promotion	17,717	20.3
Training for IHS and Tribal Staff	3,374	3.9
Consultation/Technical Assistance	2,176	2.5

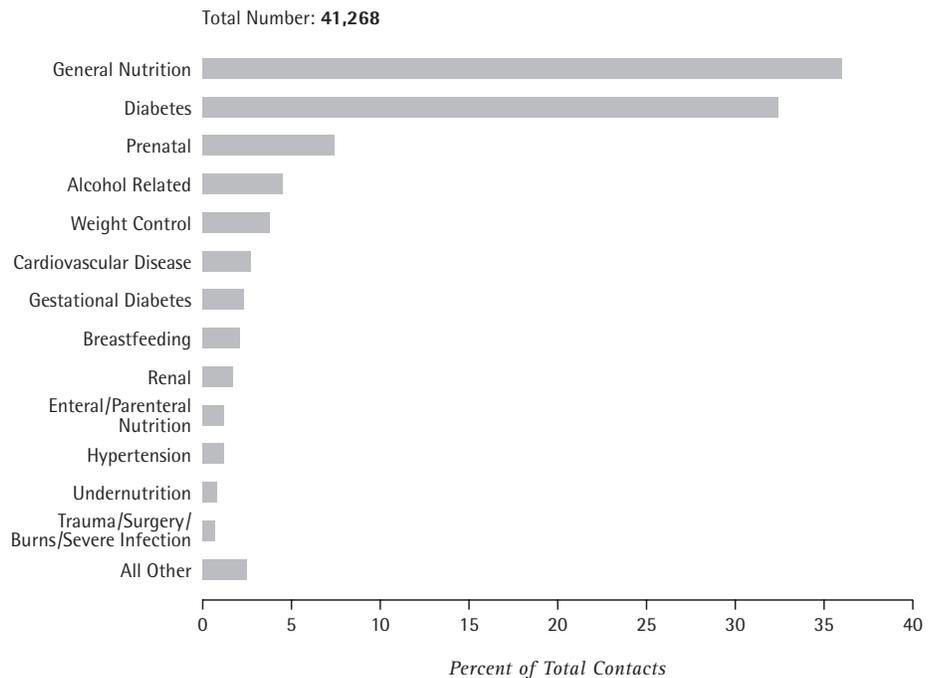
**Note:** Percentages do not sum to 100.0 due to rounding

Part 6 Community Health Statistics

**Chart 6.10**

*Leading Clinical Nutrition Patient/Client Contacts, FY 1998*

Of the clinical nutrition counseling contacts reported during FY 1998, the majority were for general nutrition counseling (36 percent), consistent with the U.S. Dietary Guidelines, and diabetes nutrition counseling (32 percent).



**Table 6.10**

*Leading Clinical Nutrition Patient/Client Contacts, FY 1998*

Purpose	Number	Percent Distribution
Total Contacts <sup>1</sup>	41,268	100.0
General Nutrition	14,848	36.0
Diabetes	13,380	32.4
Prenatal	3,073	7.4
Alcohol Related	1,843	4.5
Weight Control	1,582	3.8
Cardiovascular Disease	1,130	2.7
Gestational Diabetes	960	2.3
Breastfeeding	852	2.1
Renal	690	1.7
Enteral/Parenteral Nutrition	491	1.2
Hypertension	486	1.2
Undernutrition	329	0.8
Trauma/Surgery/Burn/Severe Infection	275	0.7
Anemia	159	0.4
Gallbladder Disease	122	0.3
All Other	1,048	2.5

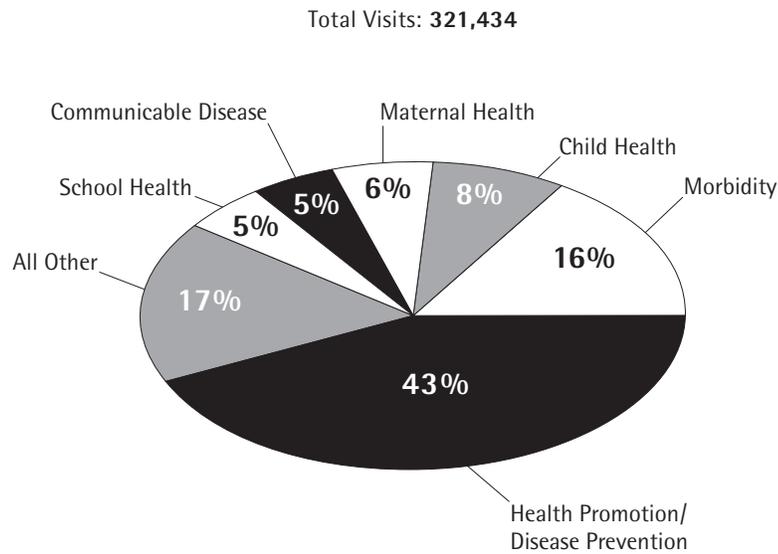
<sup>1</sup> Excludes activities that are not direct patient/client services, and activities associated with program planning, administration, evaluation, and continuing education.

Part 6 Community Health Statistics

**Chart 6.11**

*Indian Health Service  
Public Health Nursing—  
Percent of Visits by  
Program Area, FY 1998*

There were over 321,000 public health nursing visits recorded in the Headquarters reports for FY 1998. The most frequent program areas dealt with during these visits were health promotion/disease prevention (43 percent of the visits), morbidity (16 percent), and child health (8 percent).



**Table 6.11**

*IHS Public Health  
Nursing Visits  
by Program Area,  
FY 1998*

Program Area	Number of Visits	Percent Distribution
Total Visits	321,434	100.0
Health Promotion/Disease Prevention	138,202	43.0
Morbidity	50,830	15.8
Child Health	25,938	8.1
Maternal Health	19,799	6.2
Communicable Disease	16,528	5.1
School Health	15,514	4.8
Mental Health	6,221	1.9
Accidents/Trauma	1,758	0.5
General	46,644	14.5

**Note:** Percentages do not sum to 100.0 due to rounding.

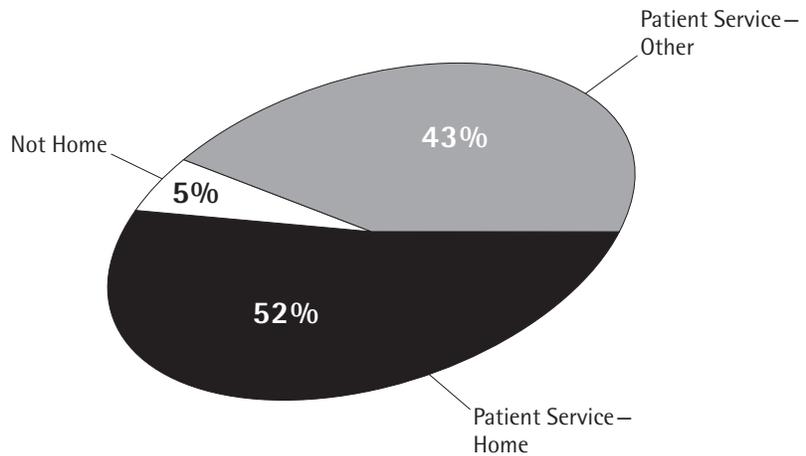
**Sources:** Indian Health Service, Public Health Nursing Report No. 3, Fiscal Year 1998.

**Part 6** *Community Health Statistics*

**Chart 6.12**

*Indian Health Service  
Public Health Nursing—  
Percent of PHN Time  
by Type of Activity,  
FY 1998*

Nearly 52 percent of public health nursing time in FY 1998 was devoted to patient service in the home, while over 43 percent was spent on patient service outside the home.



**Table 6.12**

*IHS Public Health  
Nursing Time Worked  
by Type of Activity,  
FY 1998*

Type of Activity	Number of Hours	Percent Distribution
Total Hours	152,666	100.0
Patient Service—Home	78,838	51.6
Patient Service—Other	66,354	43.5
Not Home	7,474	4.9

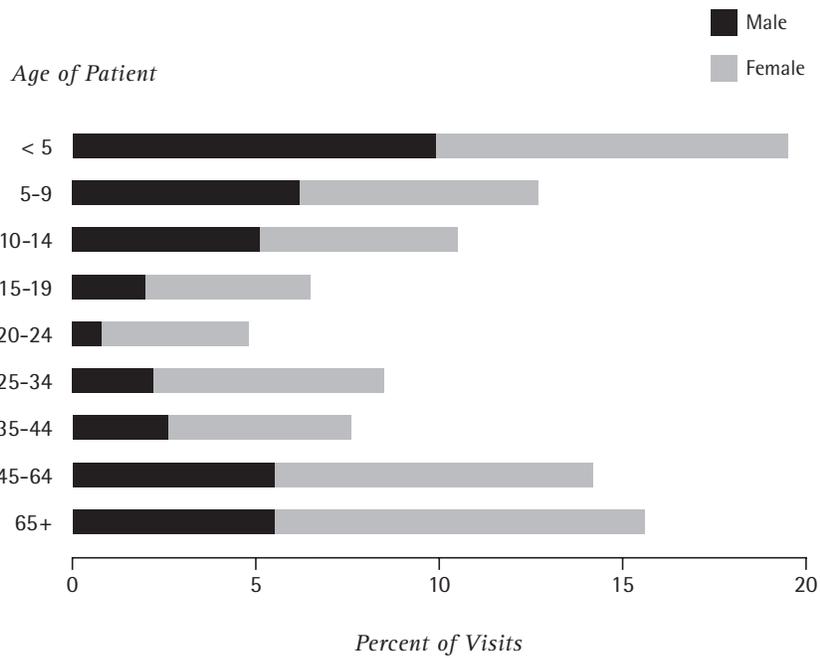
**Sources:** Indian Health Service, Public Health Nursing Report No. 2, Fiscal Year 1998.

Part 6 Community Health Statistics

**Chart 6.13**

*Indian Health Service  
Public Health Nursing—  
Percent Visits by Age  
and Sex, FY 1998*

For the public health nursing program in FY 1998, female visits outnumbered male visits by 51 percent. Ten percent of all visits pertained to males under 5 years of age and 6 percent pertained to males aged 65 and over. The corresponding percentages for females were both 10.



**Table 6.13**

*IHS Public Health  
Nursing Visits by Age  
and Sex of Patients,  
FY 1998*

Age Group	Number of Visits <sup>1</sup>		Percent Distribution		Ratio
	Male	Female	Male	Female	Female to Male
All Ages	128,029	193,405	39.8	60.2	1.5
Under 5 years	31,914	31,000	9.9	9.6	1.0
5 to 9 years	19,964	20,837	6.2	6.5	1.0
10 to 14 years	16,308	17,495	5.1	5.4	1.1
15 to 19 years	6,359	14,491	2.0	4.5	2.3
20 to 24 years	2,597	12,823	0.8	4.0	4.9
25 to 34 years	6,931	20,365	2.2	6.3	2.9
35 to 44 years	8,506	15,930	2.6	5.0	1.9
45 to 64 years	17,668	28,029	5.5	8.7	1.6
65 years +	17,740	32,371	5.5	10.1	1.8
Unspecified Age	42	64	0.0	0.0	1.5

<sup>1</sup>The same visit is counted more than once if it involved more than 1 family member, e.g., 2 children in the same family, both for child health, but different ages and gender.

**Note:** The male percentage does not sum to its total due to rounding.

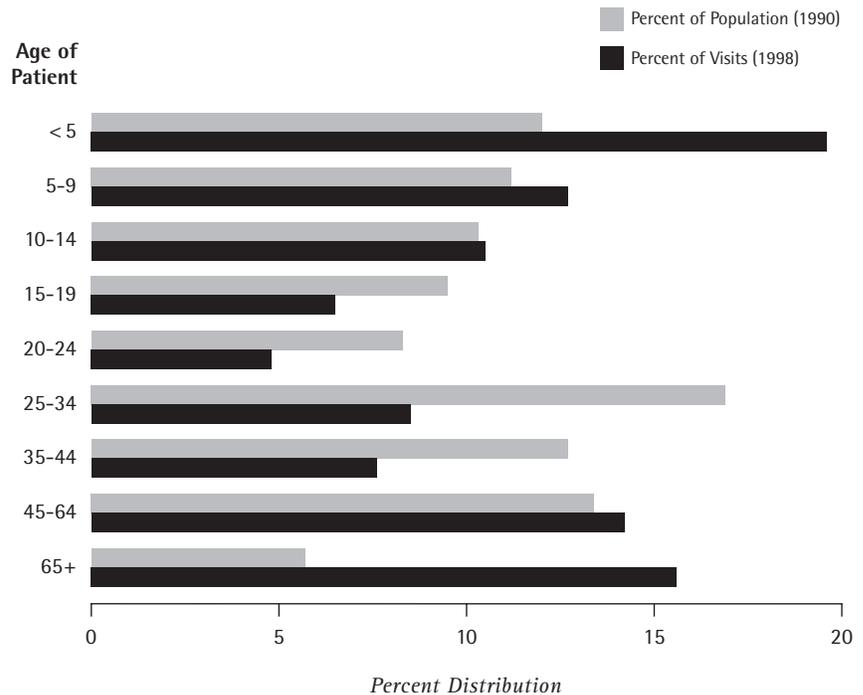
**Sources:** Indian Health Service, Public Health Nursing Report No. 19, Fiscal Year 1998.

Part 6 Community Health Statistics

**Chart 6.14**

*Indian Health Service  
Public Health Nursing  
Visits by Age FY 1998  
versus 1990 Census*

20 percent of public health nursing visits in FY 1998 pertained to children under 5 years of age and 16 percent pertained to adults over the age of 64. Based on the 1990 Census, these 2 age groups comprised much smaller proportions of the Indian population—12 percent and 6 percent, respectively.



**Table 6.14**

*IHS Public Health  
Nursing Visits  
by Age of Patients*

FY 1998 Visits Compared  
with 1990 Census Data

Age Group	PHN Visits		1990 Census Percent Distribution <sup>2</sup>	Ratio PHN Visit Distribution to 1990 Census
	Number <sup>1</sup>	Percent Distribution		
All Ages	321,434	100.0	100.0	
Under 5 years	62,914	19.6	12.0	1.6
5 to 9 years	40,801	12.7	11.2	1.1
10 to 14 years	33,803	10.5	10.3	1.0
15 to 19 years	20,850	6.5	9.5	0.7
20 to 24 years	15,420	4.8	8.3	0.6
25 to 34 years	27,296	8.5	16.9	0.5
35 to 44 years	24,436	7.6	12.7	0.6
45 to 64 years	45,697	14.2	13.4	1.1
65 years +	50,175	15.6	5.7	2.7
Unspecified Age	42	0.0	—	—

<sup>1</sup>The same visit is counted more than once if it involved more than 1 family member, e.g., 2 children in the same family, both for child health, but different ages and gender.

<sup>2</sup>Based on data contained in the 1990 Census modified age, race and sex file for American Indians and Alaska Natives residing in the IHS service area.

**Source:** Indian Health Service, Public Health Nursing Report No. 14, Fiscal Year 1998.

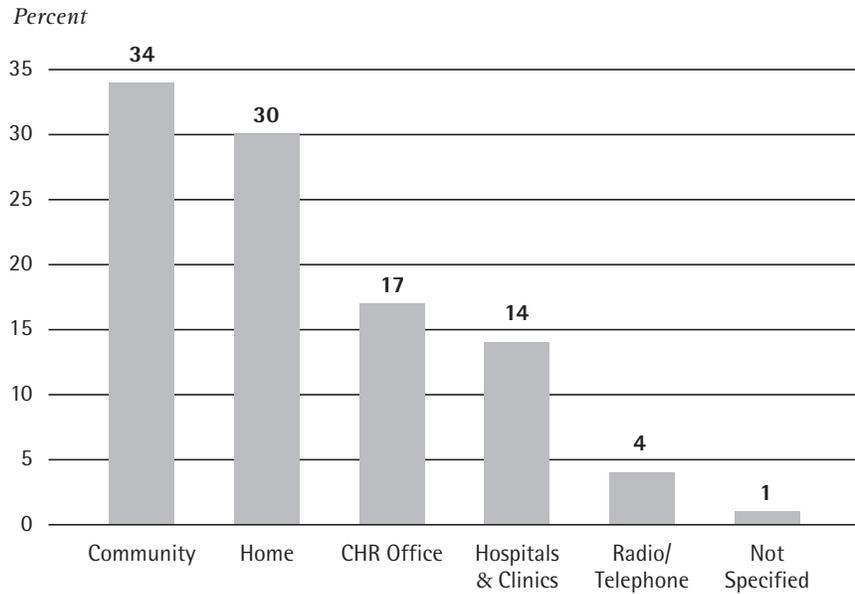
**Part 6 Community Health Statistics**

**Chart 6.15**

*Distribution of  
CHR Client Contacts  
by Setting, FY 1998*

The community health representatives (CHR) program reported nearly 2.3 million client contacts in FY 1998. Most of these contacts took place in the community (34 percent), followed by home (30 percent).

Total Number: 2,280,053



**Table 6.15**

*Community Health  
Representative  
Client Contacts  
by Setting, FY 1998*

	Client Contacts	
	Number	Percent Distribution
Total Client Contacts <sup>1</sup>	2,280,053	100.0
Community	784,014	34.4
Home	691,428	30.3
CHR Office	393,345	17.3
Hospitals and Clinics	325,782	14.3
Radio/Telephone	79,202	3.5
Not Specified	6,282	0.3

<sup>1</sup> Estimated data based on CHR client contact reports completed during 12 sample reporting weeks during October 1, 1997 to September 30, 1998 and inflated to represent all weeks during FY 1998.

Part 6 Community Health Statistics

Chart 6.16

CHR Client Contacts –  
Trend in Leading Detailed  
Activities, FY 1993-98

The two leading detailed activities for CHR contacts in FY 1998 were case management (22 percent) and health education (20 percent). In FY 1993, the top two were health education (23 percent) and case management (17 percent).

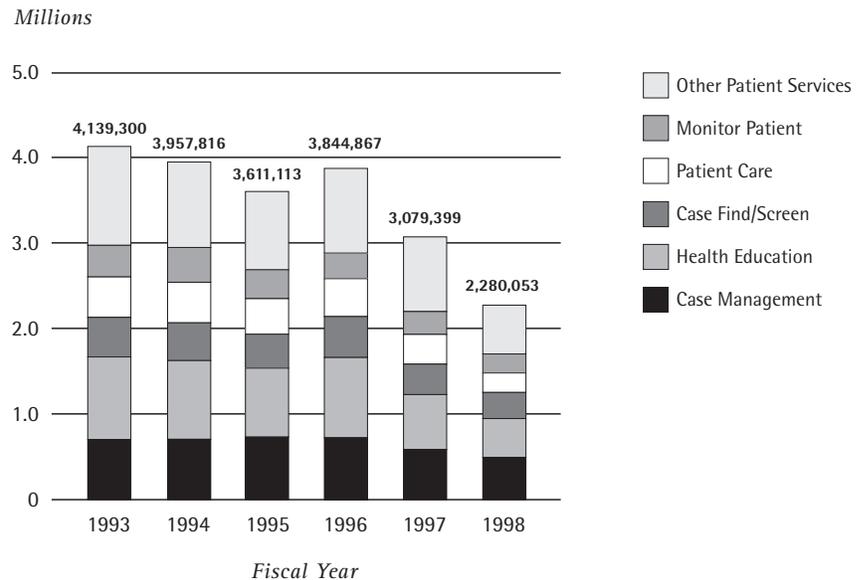


Table 6.16

Community Health Representative Client Contacts

By Leading Detailed Activities, FY 1993-1998

Detailed Activity	1993	1994	1995	1996	1997	1998
Total Client Contacts <sup>1</sup>	4,139,300 <sup>2</sup>	3,957,816 <sup>2</sup>	3,611,113	3,884,867 <sup>2</sup>	3,079,399 <sup>2</sup>	2,280,053 <sup>2</sup>
<b>Percent Distribution</b>						
Total Client Contacts <sup>3</sup>	100.0	100.0	100.0	100.0	100.0	100.0
Case Management	17.0	17.9	20.3	18.7	19.1	21.8
Health Education	23.4	23.3	22.4	24.2	20.9	19.9
Case Finding and Screening	11.2	11.2	11.0	12.4	11.6	13.4
Provide Patient Care	11.5	12.0	11.5	11.4	11.3	10.0
Monitor Patient	8.9	10.3	9.4	7.7	8.7	9.8
Transport Patient	10.5	8.9	8.6	7.6	9.4	8.5
Provide Environmental Services	5.4	4.7	5.9	5.0	5.2	5.2
Provide Homemaker Services	2.6	1.7	1.5	1.1	1.7	1.5
Interpret/Translate for Patient	1.2	0.9	1.0	3.0	0.9	1.0
Provide Emergency Care	0.5	0.8	0.4	0.3	0.6	0.8
Provide Other Patient Services <sup>4</sup>	7.8	8.3	8.0	8.5	10.6	8.1

<sup>1</sup> Estimated data based on CHR client contact reports completed during 12 sample reporting weeks between October 1 and September 30 and inflated to represent all weeks during each fiscal year.

<sup>2</sup> Total includes activity unspecified, not shown separately. Percent distribution based on number of client contacts with activity specified.

<sup>3</sup> Includes the delivery of medical supplies to patients in 1991.

<sup>4</sup> Includes client contacts with activity not reported.

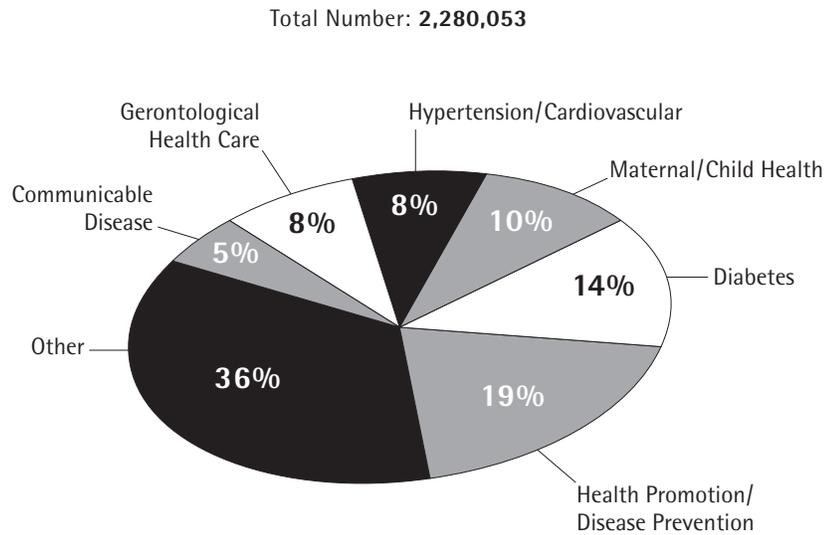
**Note:** The reduction of CHR services from FY 1993 to FY 1998 reflects the transfer of resources to Tribes as part of the Self-Governance activity. Most Self-Governance Tribes elected not to use the national CHR program reporting system.

Part 6 Community Health Statistics

**Chart 6.17**

*Leading Health Problems for CHR Client Contacts, FY 1998*

The two leading health problems for CHR contacts in FY 1998 were health promotion/disease prevention (19 percent) and diabetes (14 percent).



**Table 6.17**

*Community Health Representative Client Contacts*

By Leading Health Problems, FY 1998

Health Problem	Number	Percent Distribution
Total Client Contacts <sup>1</sup>	2,280,053	100.0
Health Promotion/Disease Prevention	437,648	19.2
Diabetes	315,969	13.9
Maternal/Child Health	240,024	10.5
Hypertension/Cardiovascular Disease	190,211	8.3
Gerontological Health Care	176,653	7.7
Communicable Disease	104,139	4.6
Community Injury Control	80,842	3.5
Dental	45,548	2.0
Alcohol/Substance Abuse	40,608	1.8
Cancer	35,994	1.6
Mental Health	15,964	0.7
HIV/AIDS/ARC <sup>2</sup>	13,424	0.6
Other General Medical	419,447	18.4
Not Specified	163,582	7.2

<sup>1</sup> Estimated data based on CHR client contact reports completed during 12 sample reporting weeks between October 1, 1997 and September 30, 1998 and inflated to represent all weeks during FY 1998.

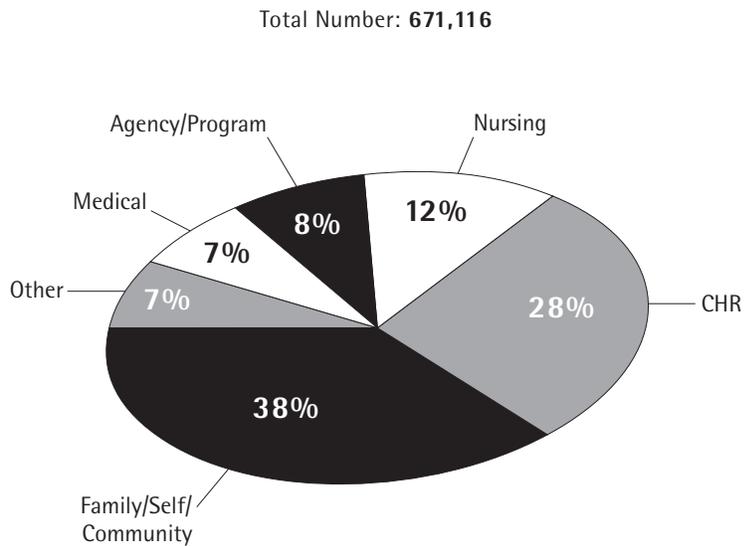
<sup>2</sup> Human immunodeficiency virus infection, acquired immunodeficiency syndrome (AIDS) and AIDS-related condition.

Part 6 Community Health Statistics

**Chart 6.18**

*Leading Types of CHR Incoming Client Referrals, FY 1998*

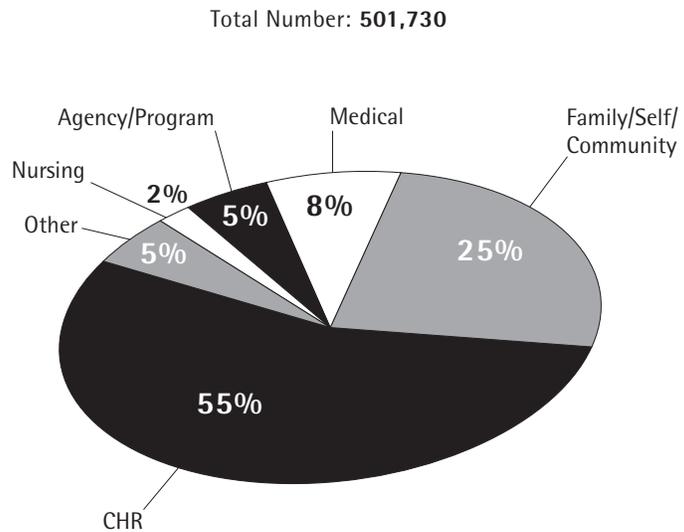
The CHR program reported receiving nearly 700,000 referrals in FY 1998. Family/self/community referrals comprised 38 percent of the total, while 28 percent came from fellow CHRs.



**Chart 6.19**

*Leading Types of CHR Outgoing Client Referrals, FY 1998*

The CHR program reported making over 500,000 referrals in FY 1998. CHR to CHR referrals made up 55 percent of outgoing CHR referrals, while family/self/community received 25 percent of these referrals, and medical professionals received 8 percent.

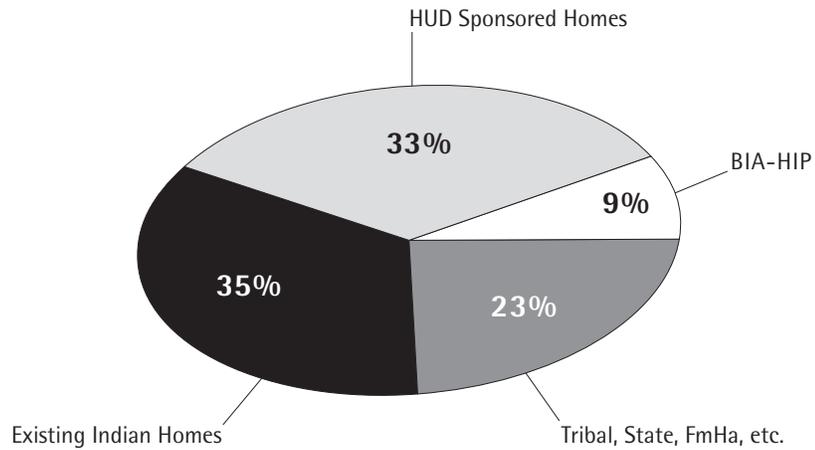


**Part 6 Community Health Statistics**

**Chart 6.20**

*Types of Indian Homes Provided with Sanitation Facilities by Indian Health Service through 1998*

Since 1960, over 230,000 Indian homes were funded by Indian Health Service for the provision of sanitation facilities.



**Table 6.20**

*Indian Home Provided with Sanitation Facilities by IHS, FY 1960-1998*

Fiscal Year	Total First Service	First Service & Upgrade	Existing First Service	HUD First Service	HIP First Service	Tribal & Other	Total Upgrade
Total	230,427	362,743	80,320	76,749	19,830	53,616	132,228
1998	7,784	14,459	1,939	1,318	381	4,232	6,589
1997	6,857	18,008	2,668	1,122	363	2,705	11,150
1996	8,167	17,320	3,169	1,642	538	2,818	9,153
1995	6,496	13,256	1,980	884	471	3,161	6,760
1994	7,072	17,253	1,834	1,867	359	3,012	10,181
1993	6,967	16,776	1,913	1,253	488	3,313	9,809
1992	6,143	16,483	2,032	972	495	2,645	10,339
1991	7,987	13,927	2,167	1,669	702	3,449	5,940
1990	4,637	7,903	531	1,674	468	1,964	3,266
1980-1989	56,254	88,549	8,447	26,435	6,135	15,237	32,295
1970-1979	71,406	94,545	19,859	33,675	8,088	9,784	23,139
1960-1969	40,657	44,264	33,781	4,238	1,342	1296	3,607

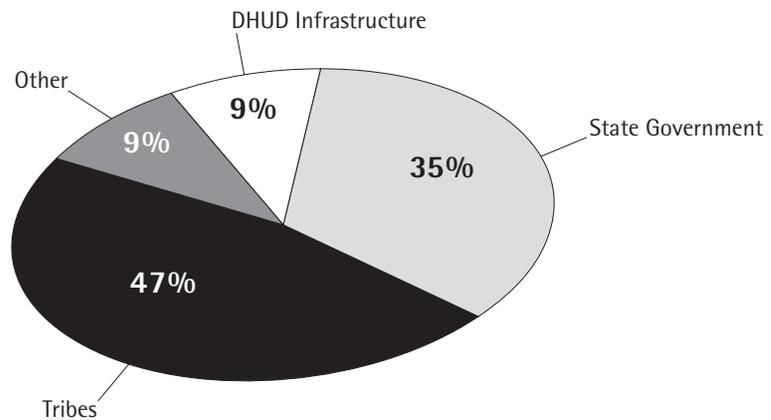
**Note:** Data for the later years represent estimates of services to be provided.

Part 6 Community Health Statistics

**Chart 6.21**

*Contributions to Indian Health Service Sanitation Facilities Projects (1998)*

Contributions to Indian Health Service sanitation facilities projects are received from numerous sources. In FY 1998, 47 percent of the contributions were attributed to the Tribes. State governments contributed 35 percent of the funds for these cooperative projects, followed by HUD infrastructure with 9 percent.



**Table 6.21**

*P.L. 86-121 Program*  
Summary of Cash Contributions Received in FY 1998 by Contributor

Contributor	Contributions	Percent
Total	\$ 42,413,693	100.0
Tribes <sup>1</sup>	19,898,595	46.9
State Government	14,866,600	35.1
Department of Housing and Urban Development (DHUD) Infrastructure	3,962,919	9.3
Other Federal	1,635,000	3.9
Businesses	754,000	1.8
Local Government	538,329	1.3
Housing Authorities	415,250	1.0
Navajo-Hopi Indian Relocation Commission (NHIRC)	343,000	0.8

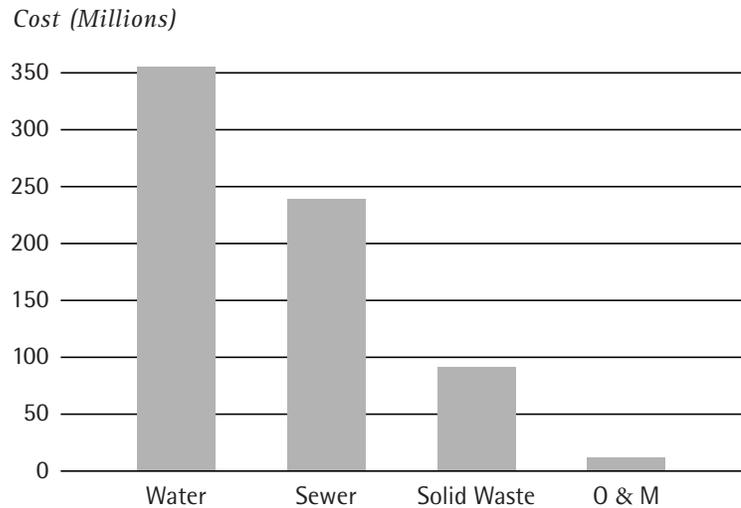
<sup>1</sup> Includes EPA and DHUD Community Development Block Grant funds that were contributed by Tribes.

**Part 6 Community Health Statistics**

**Chart 6.22**

*Sanitation Facilities Deficiencies  
FY 1999 – Costs*

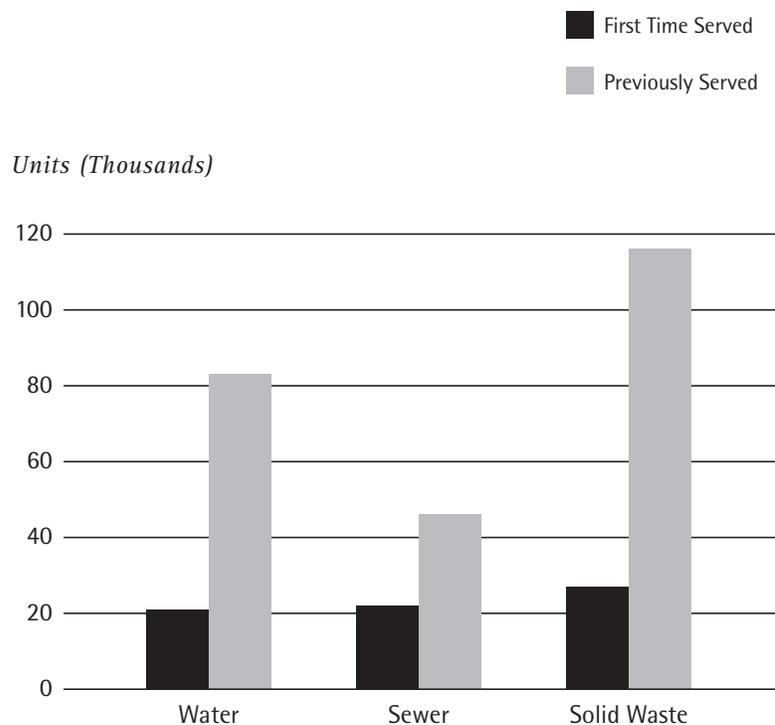
The FY 1999 sanitation facility deficiency of \$696 million to serve existing American Indian and Alaska Native homes and communities represents the cost to provide first service sanitation facilities, to upgrade existing facilities, to provide solid waste facilities, and to provide assistance to operation and maintenance organizations.



**Chart 6.23**

*Sanitation Facilities Deficiencies  
FY 1999 – Units*

The sanitation facility deficiency for American Indian and Alaska Native homes and communities is categorized into requirements for water, sewer, assistance to establish and equip organizations to operate and maintain the facilities, and solid waste disposal systems. Units are the total number of homes.



**Part 6** *Community Health Statistics*

**Table 6.22**

*Sanitation Facilities*

Deficiency Summary (FY 1999)

Total Deficiency: \$696,470,997 <sup>1</sup>								
	Water		Sewer		Solid Waste		Operation and Maintenance	
	Units	Cost (thousands)	Units	Cost (thousands)	Units	Cost (thousands)	Units	Cost (thousands)
Total	103,851	\$354,775	67,480	\$239,078	142,988	\$90,553	45,281	\$12,065
1st Service	21,123		21,711		26,942			
Previous Service	82,728		45,769		116,046			

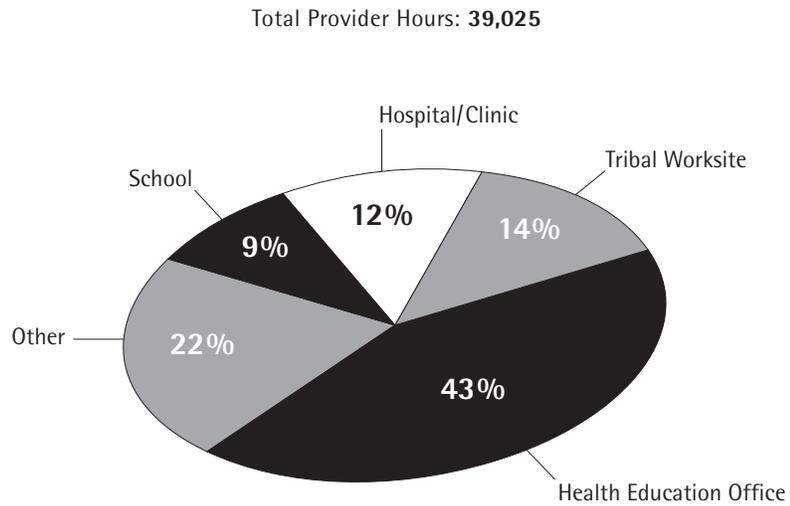
<sup>1</sup> Cost estimates are for projects in current IHS funding plan. Additional projects totaling approximately \$991 million, mostly for the provision of piped water and sewer to 2-5 percent of existing American Indian and Alaska Native homes and communities, are not considered economically feasible at this time.

**Part 6 Community Health Statistics**

**Chart 6.24**

*Indian Health Service  
Health Education –  
Percent of Provider Hours  
by Location, FY 1998*

Health education providers spent the majority of their time in the office (43 percent of total provider hours) followed by Tribal worksite (14 percent) and hospital/clinic (12 percent).



**Table 6.24**

*IHS Health  
Education Provider  
Hours by Location,  
FY 1998*

Location	Number of Hours	Percent Distribution
Total Hours	39,025	100.0
Health Education Office	16,737	42.9
Tribal Worksite	5,537	14.2
Hospital/Clinic	4,638	11.9
School	3,684	9.4
Roadside	931	2.4
Recreation Center	405	1.0
Home	174	0.4
Other	6,919	17.7

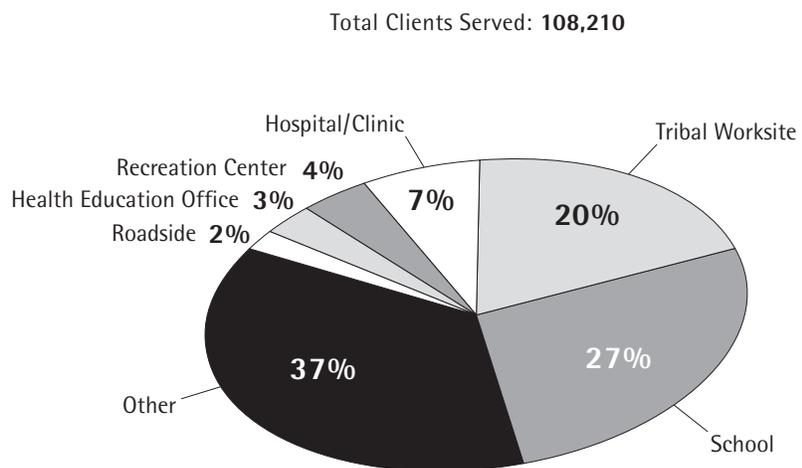
**Source:** Based on data reported from the Nashville, Navajo, and Phoenix Areas.

Part 6 Community Health Statistics

**Chart 6.25**

*Indian Health Service  
Health Education –  
Percent of Clients Served  
by Location, FY 1998*

Twenty-seven percent of health education clients were served at a school location and 20 percent at a Tribal worksite. Another 7 percent of the clients were seen in the hospital/clinic.



**Table 6.25**

*Health Education Clients  
Served by Location,  
FY 1998*

Location	Number of Clients	Percent Distribution
Total Clients	108,210	100.0
School	28,949	26.8
Tribal Worksite	22,021	20.4
Hospital/Clinic	7,101	6.6
Recreation Center	4,064	3.8
Health Education Office	2,675	2.5
Roadside	1,891	1.7
Home	68	0.1
Other	41,441	38.3

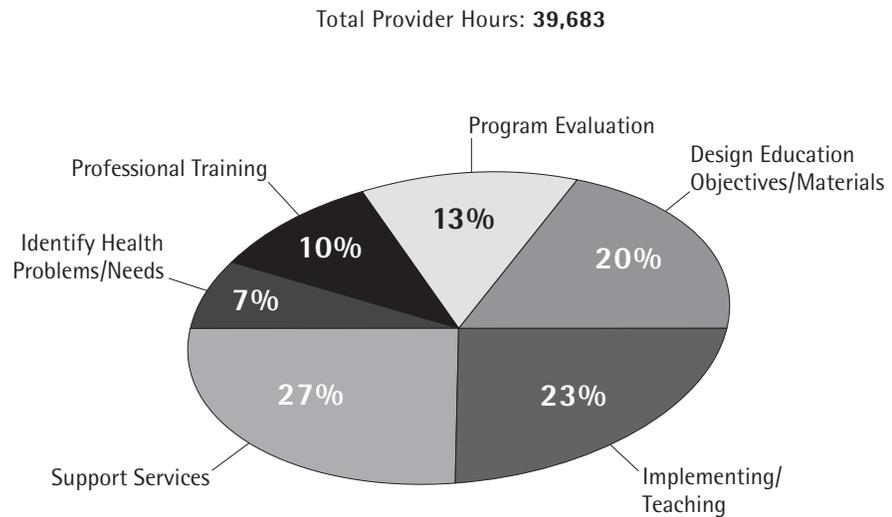
Source: Based on data reported from the Nashville, Navajo, and Phoenix Areas.

**Part 6 Community Health Statistics**

**Chart 6.26**

*Indian Health Service Health Education – Percent of Provider Hours by Task Function, FY 1998*

Health education providers devoted 27 percent of their time to support services and 23 percent to implementing/teaching. The next most common function was design education objectives/materials at 20 percent.



**Table 6.26**

*Health Education Provider Hours by Task Function, FY 1998*

Task	Number of Hours	Percent Distribution
Total Hours	39,683	100.0
Support Services	10,836	27.3
Implementing/Teaching	9,247	23.3
Design Education Objectives/Materials	7,828	19.7
Program Evaluation	5,151	13.0
Professional Training	3,765	9.5
Identify Health Problems/Needs	2,856	7.2

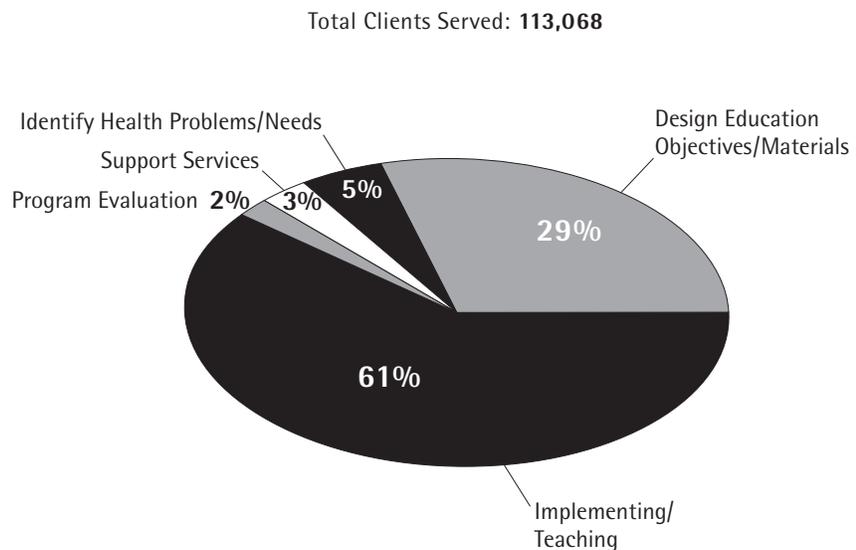
**Source:** Based on data reported from the Nashville, Navajo, Phoenix, and Portland Areas.

**Part 6 Community Health Statistics**

**Chart 6.27**

*Indian Health Service Health Education – Percent of Clients Served by Task Function, FY 1998*

Over 90 percent of health education clients received services in one of two functional areas – implementing/teaching (61 percent) or design education objectives/materials (29 percent).



**Table 6.27**

*Health Education Clients Served by Task Function, FY 1998*

Task	Number of Clients	Percent Distribution
Total Clients	113,068	100.0
Implementing/Teaching	69,478	61.4
Design Education Objectives/Materials	32,637	28.9
Identify Health Problems/Needs	5,275	4.7
Support Services	3,096	2.7
Program Evaluation	2,394	2.1
Professional Training	188	0.2

**Source:** Based on data reported from the Nashville, Navajo, Phoenix, and Portland Areas.

# Glossary

## of ICD-9 Codes

### List of 72 Selected Causes of Death (1979–Present)

<i>Cause of Death</i>	<i>ICD-9 Codes</i>
Shigellosis and amebiasis . . . . .	004, 006
Certain other intestinal infections . . . . .	007–009
Tuberculosis . . . . .	010–018
Tuberculosis of respiratory system . . . . .	010–012
Other tuberculosis . . . . .	013–018
Whooping cough . . . . .	033
Streptococcal sore throat, scarlatina, and erysipelas . . . . .	034–035
Meningococcal infection . . . . .	036
Septicemia . . . . .	038
Acute poliomyelitis . . . . .	045
Measles . . . . .	055
Viral hepatitis . . . . .	070
Syphilis . . . . .	090–097
All other infectious and parasitic diseases . . . . .	<b>001–003, 005, 020–032, 037, 039–041, 042–044, 046–054, 056–066, 071–088, 098–139</b>
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues . . . . .	140–208
Malignant neoplasms of lip, oral cavity, and pharynx . . . . .	140–149
Malignant neoplasms of digestive organs and peritoneum . . . . .	150–159
Malignant neoplasms of respiratory and intrathoracic organs . . . . .	160–165
Malignant neoplasm of breast . . . . .	174–175
Malignant neoplasms of genital organs . . . . .	179–187
Malignant neoplasms of urinary organs . . . . .	188–189
Malignant neoplasms of all other and unspecified sites . . . . .	<b>170–173, 190–199</b>
Leukemia . . . . .	204–208
Other malignant neoplasms of lymphatic and hematopoietic tissues . . . . .	200–203
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature . . . . .	210–239
Diabetes mellitus . . . . .	250
Nutritional deficiencies . . . . .	260–269
Anemias . . . . .	280–285
Meningitis . . . . .	320–322
Major cardiovascular diseases . . . . .	390–448
Diseases of heart . . . . .	<b>390–398, 402, 404–429</b>
Rheumatic fever and rheumatic heart disease . . . . .	390–398
Hypertensive heart disease . . . . .	402
Hypertensive heart and renal disease . . . . .	404
Ischemic heart disease . . . . .	410–414
Acute myocardial infarction . . . . .	410
Other acute and subacute forms of ischemic heart disease . . . . .	411
Angina pectoris . . . . .	413
Old myocardial infarction and other forms of chronic ischemic heart disease . . . . .	412, 414

## Glossary of ICD-9 Codes

### List of 72 Selected Causes of Death (1979–Present)

<i>Cause of Death</i>	<i>ICD-9 Codes</i>
Other diseases of endocardium . . . . .	424
All other forms of heart disease . . . . .	415–423, 425–429
Hypertension with or without renal disease . . . . .	401, 403
Cerebrovascular diseases . . . . .	430–438
Intracerebral and other intracranial hemorrhage . . . . .	431–432
Cerebral thrombosis and unspecified occlusion of cerebral arteries . . . . .	434.0, 434.9
Cerebral embolism . . . . .	434.1
All other and late effects of cerebrovascular diseases . . . . .	430, 433, 435–438
Atherosclerosis . . . . .	440
Other diseases of arteries, arterioles, and capillaries . . . . .	441–448
Acute bronchitis and bronchiolitis . . . . .	466
Pneumonia and influenza . . . . .	480–487
Pneumonia . . . . .	480–486
Influenza . . . . .	487
Chronic obstructive pulmonary diseases and allied conditions . . . . .	490–496
Bronchitis, chronic and unspecified . . . . .	490–491
Emphysema . . . . .	492
Asthma . . . . .	493
Other chronic obstructive pulmonary diseases and allied conditions . . . . .	494–496
Ulcer of stomach and duodenum . . . . .	531–533
Appendicitis . . . . .	540–543
Hernia of abdominal cavity and intestinal obstruction without mention of hernia . . . . .	550–553, 560
Chronic liver disease and cirrhosis . . . . .	571
Cholelithiasis and other disorders of gallbladder . . . . .	574–575
Nephritis, nephrotic syndrome, and nephrosis . . . . .	580–589
Acute glomerulonephritis and nephrotic syndrome . . . . .	580–581
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified . . . . .	582–583, 587
Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause . . . . .	584–586, 588–589
Infections of kidney . . . . .	590
Hyperplasia of prostate . . . . .	600
Complications of pregnancy, childbirth, and the puerperium . . . . .	630–676
Pregnancy with abortive outcome . . . . .	630–638
Other complications of pregnancy, childbirth, and the puerperium . . . . .	640–676
Congenital anomalies . . . . .	740–759
Certain conditions originating in the perinatal period . . . . .	760–779
Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome . . . . .	767–769
Other conditions originating in the perinatal period . . . . .	760–766, 770–779
Symptoms, signs, and ill-defined conditions . . . . .	780–799
All other diseases . . . . .	Residual
Accidents and adverse effects . . . . .	E800–E949
Motor vehicle accidents . . . . .	E810–E825
All other accidents and adverse effects . . . . .	E800–E807, E826–E949
Suicide . . . . .	E950–E959
Homicide and legal intervention . . . . .	E960–E978
All other external causes . . . . .	E980–E999

## Glossary of ICD-9 Codes

### List of 61 Selected Causes of Infant Death (1979–Present)

<i>Cause of Death</i>	<i>ICD-9 Codes</i>
Certain intestinal infections . . . . .	008–009
Whooping cough . . . . .	033
Meningococcal infection . . . . .	036
Septicemia . . . . .	038
Viral diseases . . . . .	045–079
Congenital syphilis . . . . .	090
Remainder of infectious and parasitic diseases . . . . .	001–007, 010–032, 034–035, 037, 039–041, 042–044, 080–088, 091–139
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues . . . . .	140–208
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature . . . . .	210–239
Diseases of thymus gland . . . . .	254
Cystic fibrosis . . . . .	277.0
Diseases of blood and blood-forming organs . . . . .	280–289
Meningitis . . . . .	320–322
Other diseases of nervous system and sense organs . . . . .	323–389
Acute upper respiratory infections . . . . .	460–465
Bronchitis and bronchiolitis . . . . .	466, 490–491
Pneumonia and influenza . . . . .	480–487
Pneumonia . . . . .	480–486
Influenza . . . . .	487
Remainder of diseases of respiratory system . . . . .	470–478, 492–519
Hernia of abdominal cavity and intestinal obstruction without mention of hernia . . . . .	550–553, 560
Gastritis, duodenitis, and noninfective enteritis and colitis . . . . .	535, 555–558
Remainder of diseases of digestive system . . . . .	520–534, 536–543, 562–579
Congenital anomalies . . . . .	740–759
Anencephalus and similar anomalies . . . . .	740
Spina bifida . . . . .	741
Congenital hydrocephalus . . . . .	742.3
Other congenital anomalies of central nervous system and eye . . . . .	742.0–742.2, 742.4–742.9, 743
Congenital anomalies of heart . . . . .	745–746
Other congenital anomalies of circulatory system . . . . .	747
Congenital anomalies of respiratory system . . . . .	748
Congenital anomalies of digestive system . . . . .	749–751
Congenital anomalies of genitourinary system . . . . .	752–753
Congenital anomalies of musculoskeletal system . . . . .	754–756
Down's syndrome . . . . .	758.0
Other chromosomal anomalies . . . . .	758.1–758.9
All other and unspecified congenital anomalies . . . . .	744, 757, 759
Certain conditions originating in the perinatal period . . . . .	760–779
Newborn affected by maternal conditions which may be unrelated to present pregnancy . . . . .	760
Newborn affected by maternal complications of pregnancy . . . . .	761
Newborn affected by complications of placenta, cord, and membranes . . . . .	762
Newborn affected by other complications of labor and delivery . . . . .	763
Slow fetal growth and fetal malnutrition . . . . .	764
Disorders relating to short gestation and unspecified low birthweight . . . . .	765
Disorders relating to long gestation and high birthweight . . . . .	766
Birth trauma . . . . .	767

**Glossary of ICD-9 Codes**

**List of 61 Selected Causes of Infant Death (1979–Present)**

<i>Cause of Death</i>	<i>ICD-9 Codes</i>
Intrauterine hypoxia and birth asphyxia . . . . .	768
Fetal distress in liveborn infant . . . . .	768.2–768.4
Birth asphyxia . . . . .	768.5–768.9
Respiratory distress syndrome . . . . .	769
Other respiratory conditions of newborn . . . . .	770
Infections specific to the perinatal period . . . . .	771
Neonatal hemorrhage . . . . .	772
Hemolytic disease of newborn, due to isoimmunization, and other perinatal jaundice . . . . .	773–774
Syndrome of “infant of a diabetic mother” and neonatal diabetes mellitus . . . . .	775.0–775.1
Hemorrhagic disease of newborn . . . . .	776.0
All other and ill-defined conditions originating in the perinatal period . . . . .	775.2–775.9, 776.1–779
Symptoms, signs, and ill-defined conditions . . . . .	780–799
Sudden infant death syndrome . . . . .	798.0
Symptoms, signs, and all other ill-defined conditions . . . . .	780–797, 798.1–799
Accidents and adverse effects . . . . .	E800–E949
Inhalation and ingestion of food or other object causing obstruction of respiratory tract or suffocation . . . . .	E911–E912
Accidental mechanical suffocation . . . . .	E913
Other accidental causes and adverse effects . . . . .	E800–E910, E914–E949
Homicide E960–E969	
Child battering and other maltreatment . . . . .	E967
Other homicide . . . . .	E960–E966, E968–E969
All other causes . . . . .	Residual

## Glossary of ICD-9 Codes

### Additional Causes of Death and Their Corresponding ICD-9 Codes Which May Be Found in This Publication

(These categories are not included as part of the 72 cause of death or 61 cause of infant death lists. They are independent of these two lists but are valid cause of death codes to use for the causes indicated)

<i>Cause of Death</i>	<i>ICD-9 Codes</i>
Alcoholism deaths . . . . .	291, 303, 305.0, 357.5, 425.5, 535.3, 571.0-571.3, 790.3, E860
Alzheimer's disease deaths . . . . .	331.0
Breast cancer (females) . . . . .	174
Cervical cancer . . . . .	180
Colon-rectal cancer . . . . .	153.0-154.3, 154.8, 159.0
Drug related deaths . . . . .	292, 304, 305.2-305.9, E850-E858, E950.0-E950.5, E962.0, E980.0-E980.5
Gastroenteric deaths . . . . .	004, 006-009, 535, 555-556, 558, 562
Human immunodeficiency virus (HIV) infection . . . . .	042-044
Injury by firearms . . . . .	E922, E955.0-E955.4, E965.0-E965.4, E970, E985.0-E985.4
Injury and poisoning . . . . .	E800-E807, E810-E825, E826-E949, E950-E959, E960-E978, E980-E989, E990-E999
Other injuries . . . . .	E980-E989, E990-E999
Lung cancer . . . . .	162.2-162.9
Maternal deaths . . . . .	630-676
Prostate cancer . . . . .	185

### List of ICD-9 Codes Used in Patient Care Charts and Tables

<i>Cause of Death</i>	<i>ICD-9 Codes</i>
Infectious and parasitic diseases . . . . .	001-139
Neoplasms . . . . .	140-239
Endocrine, nutritional, and metabolic diseases and immunity disorders . . . . .	240-279
Diseases of the blood and blood-forming organs . . . . .	280-289
Mental disorders . . . . .	290-319
Diseases of the nervous system and sense organs . . . . .	320-389
Diseases of the circulatory system . . . . .	390-459
Diseases of the respiratory system . . . . .	460-519
Diseases of the digestive system . . . . .	520-579
Diseases of the genitourinary system . . . . .	580-629
Complications of pregnancy, childbirth, and the puerperium . . . . .	630-676
Diseases of the skin and subcutaneous tissue . . . . .	680-709
Diseases of the musculoskeletal system and connective tissue . . . . .	710-739
Congenital anomalies . . . . .	740-759
Certain conditions originating in the perinatal period . . . . .	760-779
Symptoms, signs, and ill-defined conditions . . . . .	780-799
Injury and poisoning . . . . .	800-999
Supplementary classification (classification of factors influencing health status and contact with health service) . . . . .	E01-E99

# Method Used

## *to Rank Leading Sites of Cancer Deaths*

Site of Cancer Death

ICD-9 Codes

The causes designated by the symbol # were ranked to designate the leading sites of cancer deaths

Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues . . . . .	140-208
Malignant neoplasms of lip, oral cavity, and pharynx . . . . .	140-149
# of lip . . . . .	140
# of tongue . . . . .	141
# of pharynx . . . . .	146-149.0
of other and ill-defined sites within the lip, oral cavity, and pharynx . . . . .	142-145, 149.1-149.9
Malignant neoplasms of digestive organs and peritoneum . . . . .	150-159
# of esophagus . . . . .	150
# of stomach . . . . .	151
# of small intestine, including duodenum . . . . .	152
# of colon . . . . .	153
Hepatic and splenic flexures and transverse colon . . . . .	153.0-153.1, 153.7
Descending colon . . . . .	153.2
Sigmoid colon . . . . .	153.3
# Cecum, appendix, and ascending colon . . . . .	153.4-153.6
Other and colon, unspecified . . . . .	153.8-153.9
# of rectum, rectosigmoid junction, and anus . . . . .	154
# of liver and intrahepatic bile ducts . . . . .	155
Liver, primary . . . . .	155.0
Intrahepatic bile ducts . . . . .	155.1
Liver, not specified as primary or secondary . . . . .	155.2
# of gallbladder and extrahepatic bile ducts . . . . .	156
# of pancreas . . . . .	157
of retroperitoneum, peritoneum, and other and ill-defined sites within the digestive organs and peritoneum . . . . .	158-159
Malignant neoplasms of respiratory and intrathoracic organs . . . . .	160-165
# of larynx . . . . .	161
# of trachea, bronchus, and lung . . . . .	162
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**Method Used to Rank Leading Sites of Cancer Deaths**

Site of Cancer Death

ICD-9 Codes

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