

REGIONAL DIFFERENCES IN INDIAN HEALTH 1998-99

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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 and patient care are included. Current regional differences are presented, and comparisons to the general population 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 U.S. Department of Health and Human Services (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 health 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.

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 that are administered by Area Offices.



Purpose and Description of Regional Differences in Indian Health

The IHS *Regional Differences 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 *Regional Differences 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 United States. Information pertaining to the IHS structure and American Indian and Alaska Native demography and patient care are included. Current regional differences are depicted, and comparisons to the general population are made, when appropriate. Historical trend information can be found in the IHS companion publication called *Trends in Indian Health*.

The tables and charts are grouped into five major categories: 1) IHS Structure, 2) Population Statistics, 3) Natality and Infant/Maternal Mortality Statistics, 4) General Mortality Statistics, and 5) Patient Care 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 table may have more than one chart associated with it.



Summary of Data Shown

Indian Health Service Structure

The IHS is comprised of 12 regional administrative units called Area Offices. They are listed below.

Aberdeen	Nashville
Alaska	Navajo
Albuquerque	Oklahoma City
Bemidji	Phoenix
Billings	Portland
California	Tucson

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 number of service units ranged from 2 in Tucson to 26 in California.

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). Both California and Portland had no hospitals while Aberdeen and Phoenix had 8 hospitals each. Tucson had the fewest health centers with 3, and Oklahoma the most with 38.

Population Statistics

In fiscal year (FY) 1997, the IHS user population (count of those American Indians and Alaska Natives who used IHS services at least once during the last 3-year period) was over 1.3 million. Tucson (21,120) and Nashville (42,271) had the smallest user populations while Oklahoma (281,310) and Navajo (234,868) had the largest user populations.



The Indian population is younger, less educated and poorer than the U.S. All Races population. For the IHS user population in FY 1997, 10.2 percent of the persons were under age 5 compared to 7.7 percent for the U.S. All Races population (calendar (CY) 1998). There was considerable variation by Area with Nashville at 8.5 percent and Phoenix at 11.4 percent. 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 to 75.2 percent for the U.S. All Races population. For 3 IHS Areas (Tucson, Navajo, and Phoenix), the percentage was less than 60.0 (based on State-level Indian data). The 1990 Census also indicated that the median household income in 1989 for Indians residing in the current Reservation States was \$19,897, while for the U.S. All Races it was \$30,056. Aberdeen had the lowest median household income at \$12,310, and California the highest at \$28,029 (based on State-level Indian data).

Natality 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 1994-96. It is 1.6 times the 1995 birth rate of 14.8 for the U.S. All Races population. For the period 1994-96, there were 6 maternal deaths in the IHS service area population. Only one IHS Area had more than 1 maternal death, i.e., the Navajo Area with 3 deaths.

The infant mortality rate for American Indians and Alaska Natives residing in the IHS service area was 9.3 (rate per 1,000 live births) in 1994-96 compared to 7.6 for the U.S. All Races population in 1995. This is the rate adjusted for miscoding of Indian race on death certificates. The Indian rate is 22 percent higher than the U.S. rate. The infant mortality rate varied considerably among the IHS Areas, ranging from 7.5 in Oklahoma to 14.1 in Aberdeen.

General Mortality Statistics

In 1994-96, the age-adjusted death rate (all causes) for American Indians and Alaska Natives residing in the IHS service area was 699.3 (rate per 100,000 population) compared to 503.9 for the U.S. All Races population in 1995. This is the rate adjusted for miscoding of Indian race on death certificates. The Indian rate is 39 percent greater than the U.S. rate. The rates for the Bemidji and Aberdeen Areas both exceed 1,000.0.

The two leading causes of death for the IHS service area population in 1994-96 were diseases of the heart and malignant neoplasms, the same as the U.S. All Races in 1995.



However, five IHS Areas (Alaska, Albuquerque, Navajo, Phoenix, and Tucson) had different top two leading causes. The leading causes of death were determined without any adjustment for age, which is the customary method. However, it should be noted that the age composition of a population does influence its mortality pattern.

For most of the specific causes of death identified in this publication, the 1994-96 Indian age-adjusted death rate (the rate adjusted for miscoding of Indian race on death certificates) was greater than the 1995 U.S. All Races rate. There was also considerable variation in the rates among the IHS Areas. However, some of the Area rates need to be interpreted with caution because of the small number of deaths involved. Following is a comparison of the Indian rate (the rate adjusted for miscoding of Indian race on death certificates) to the U.S. rate where there are significant differences.

- 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) homicide - 63 percent greater
- 7) malignant neoplasms - 10 percent less
- 8) human immunodeficiency virus (HIV) infection - 60 percent less

Patient Care Statistics

In FY 1997 (provisional), there were over 85,000 admissions to IHS and Tribal direct and contract general hospitals. The number of admissions (provisional) ranged from 99 in California to 20,281 in Navajo. The leading cause of hospitalization in IHS and Tribal direct and contract general hospitals was obstetric deliveries and complications of pregnancy. However, there were 9 IHS Areas with a different leading cause; Aberdeen, Albuquerque, Billings, Nashville, Phoenix, and Tucson (respiratory system diseases), California (endocrine, nutritional, and metabolic disorders), Portland (digestive system diseases), and Bemidji (circulatory system diseases).

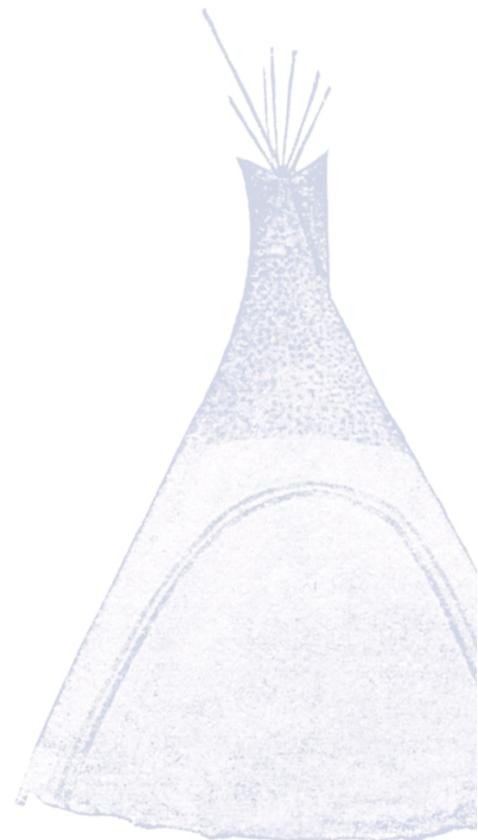
The total number of ambulatory medical visits (IHS and Tribal direct and contract facilities) was over 7.3 million in FY 1997 (provisional). Tucson had the fewest ambulatory medical visits (provisional) with 98,378 and Oklahoma had the most with 1,333,944. The leading cause of ambulatory medical visits in IHS and Tribal direct and contract facilities was supplementary classifications. All IHS Areas had this same lead-



ing cause except for Aberdeen and Portland; respiratory system diseases was their leading cause. The supplementary classifications 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.

In FY 1998, 88.0 percent of Indian children, 0-27 months, residing in the IHS service area received all required immunizations. In the general population in CY 1996, 77.0 percent of children ages 19 to 35 months received all required immunizations. The Nashville Area had the lowest IHS rate at 78.0 percent, while the Phoenix Area had the highest rate, 96.0.

In FY 1998, there were nearly 2.1 million dental services provided at IHS and Tribal direct and contract facilities, as reported to the IHS central database. Two IHS Areas provided 37 percent of these dental services, Navajo (391,727) and Oklahoma (378,550).





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 each of the six health focus areas.

Infant Mortality

The American Indian and Alaska Native population had an infant mortality rate in 1994-96 that was 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 Aberdeen Area had the highest rate among the IHS Areas; the rate of 14.1 was 86 percent greater than the U.S. All Races rate. The Oklahoma Area had the only rate (7.5) that was less than the All Races rate. 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.

There are various factors that have an influence on infant mortality and/or the health of the infant. For example in 1994-96, prenatal care began in the first trimester for 66.5 percent of Indian live births. This was 18 percent less than the percentage for the U.S. All Races population in 1995 (81.3). Indian mothers drank during pregnancy at a rate three times that for All Races mothers, i.e., 4.5 percent of Indian mothers compared to 1.5 percent of All Races mothers. Also, Indian mothers smoked during pregnancy at a rate 1.5 times that for All Races mothers, i.e., 20.4 percent of Indian mothers compared to 13.9 percent of All Races mothers. 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 Trends in Indian Health publication.



Diabetes Mellitus

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 rate varied considerably by IHS Area. The Tucson Area rate (highest Area rate) of 79.7 was 6 times the All Races rate and 7.3 times the Alaska Area rate (lowest Area rate) of 10.9. These Indian rates have been adjusted for miscoding of Indian race on death certificates. (See Chart and Table 4.24.) Additional information on this topic is provided in the *Trends in Indian Health* publication.

Cardiovascular Diseases

The 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. However, the highest IHS Area rate (Bemidji, 287.0) was more than double the All Races rate. In contrast, the lowest IHS Area rate (Albuquerque, 85.1) was 38 percent less than the All Races rate. 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 highest IHS Area rate (Bemidji, 53.5) was more than double the All Races rate. The lowest IHS Area rate (Navajo, 20.4) was 24 percent less than the All Races rate. These Indian rates have been adjusted for miscoding of Indian race on death certificates. (See Charts and Tables 4.28 and 4.29.) Additional information on this topic is provided in the *Trends in Indian Health* publication.

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). All IHS Area rates were below the All Races rate. The California, Portland, and Phoenix Areas had the highest Area rates, 11.0, 9.6, 7.8, respectively. These Indian rates have been adjusted for miscoding of Indian race on death certificates. (See Chart and Table 4.36.) Additional information on this topic is provided in the *Trends in Indian Health* publication.



Breast and Cervical Cancers

This publication does not have information on cancer screening rates. However, the death rates due to female breast cancer and cervical cancer can be examined. In comparison to the general population, Indians fare better concerning female breast cancer than cervical cancer. The Indian age-adjusted death rate for female breast cancer in 1994-96 was 31 percent less than the U.S. All Races rate in 1995, i.e., 14.5 versus 21.1. However, two IHS Areas (Bemidji, 23.4 and Portland, 23.2) had a rate that exceeded the All Races rate. In contrast, the Indian age-adjusted death rate for cervical cancer in 1994-96 was 52 percent higher than the All Races rate in 1995, 3.8 versus 2.5. The IHS Area rates for cervical cancer deaths need to be interpreted with caution because of the small number of deaths involved; only the Oklahoma Area (21 deaths) had at least 20 deaths (a rule of thumb for reliable rates). These Indian rates and counts have been adjusted for miscoding of Indian race on death certificates. (See Charts and Tables 4.32 and 4.33.) Additional information on this topic is provided in the *Trends in Indian Health* publication.

Immunization Rates

This publication only has information on child immunization rates. In FY 1998, 88.0 percent of Indian children, 0-27 months of age, completed all required immunizations. The most comparable figure published for the U.S. All Races population was for children, 19-35 months, in 1996. That U.S. rate is 77.0 percent. The IHS Area rates ranged from 78.0 percent in Nashville to 96.0 percent in Phoenix. (See Chart and Table 5.32.)





Sources and Limitations of Data

Populations Statistics

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 who had at least one direct or contract inpatient stay, outpatient visit, or dental visit during the last 3 years are defined as users. The Patient Registration System was first implemented in 1984, and by now is considered to be fairly complete and accurate. It is possible for patients to register at more than one site, but the IHS central computer is programmed to unduplicate registration records within an Area. Those cases that are not clear are sent to the IHS Area Offices as possible duplicates for resolution.

The IHS user population estimates, which are shown in this publication, need to be contrasted with the IHS service population (eligible population) estimates, which are shown in the *Trends in Indian Health* publication. The service population estimates are based on official U.S. Census Bureau county data. These are self-identified Indians who may or may not use 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. 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 (NCHS).

IHS user population figures are used for calculating IHS patient care rates. However, since State birth and death certificates do not provide information on use of IHS services, IHS service population figures are used in calculating Indian vital event rates for the IHS service area.

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. Vital event statistics for the U.S. population were derived from data 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.

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 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: 1) the results from 1986-88 apply to other years; 2) IHS age-group adjustments applied also to each Area; and 3) 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, then 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.

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. In this edition (as was done for the first time in the 1997 edition), unadjusted and adjusted infant mortality rates will be shown. 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 precedence over the NDI adjustments for the under 1 year age group, described above.

Natality statistics are based on the total file of birth records occurring in the United States each year. Mortality statistics are based on the total file of registered deaths occurring in the United States each year. Tabulations of vital events for IHS Areas are by place of residence.

The Indian vital event statistics in this publication pertain only to American Indians and Alaska Natives residing in the counties that make up the IHS service area. This contrasts with earlier editions of the *Trends in Indian Health* publication that showed vital event statistics for all American Indians and Alaska Natives residing in the Reservation States. Calculations done on a Reservation State basis include all counties within the State, even those outside the IHS service area. Reservation State vital event rates tend to be lower in value (i.e., lower birth rates, lower death rates) than IHS service area rates. Since prior to 1972, only total Reservation State data are available, Reservation State data need to be used to show trends going back to 1955, the inception of the IHS. However, now that there are sufficient vital event data available for the IHS service area to show meaningful trends, the *Trends in Indian Health* publication, beginning with the 1992 edition, shows vital event statistics for the IHS service population. The reason for this is that IHS service area data are more indicative of the health status of the Indians that IHS serves.

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. One exception is the information presented for leading causes of death. In order to determine the leading causes of death for a population group, it is necessary to rank causes of death without any adjustment for age. However, it should be kept in mind that the ranking of causes of death for a population group is affected by its age composition.



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 to be consistent with 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. An age-adjusted rate that was calculated based upon a small number of deaths should be interpreted with caution since the observed rate may be very different from the true underlying rate. This occasionally occurred when an Area rate was calculated for a specific cause of death, e.g., tuberculosis.

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 elsewhere classified. This expanded definition results in about a 25 percent increase in the number of alcoholism deaths identified in comparison to the previous three-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-accidental poisoning by alcohol (not just E860.0 and E860.1). 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 *Trends 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, 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 two codes. This NCHS definition of drug-related deaths is now used in all IHS publications, including *Trends in Indian Health*.



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, input, and transmission 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.

The immunization data are obtained by IHS Area Immunization Coordinators from facility quarterly reports. The Dental Data System is the source for dental services data. The system is monitored by IHS Headquarters Dental personnel. The tuberculosis data are based on cases reported to the Centers for Disease Control and Prevention.



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.
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, which 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 8 pounds, 14 ounces or 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 remaining to a person at a particular age based on a given set of age-specific death rates, generally the mortality conditions existing in the period mentioned.



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 5 pounds, 8 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 may 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, or the father, or both parents were recorded as American Indian or Alaska Native on 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 who have used IHS services at least once during the last 3-year period.
Years of Potential 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:

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Copies of this and other statistical publications may be obtained from Donna Y. Anderson, 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://www2.ihs.gov/IHS_Stats/