



Regional Differences in Indian Health

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Department of Health and Human Services

Tommy G. Thompson

Secretary

Indian Health Service

Charles W. Grim, D.D.S., M.H.S.A.

Interim Director

Office of Public Health

Gary J. Hartz, P.E.

Acting Director

Office of Program Support

Phillip L. Smith, M.D., M.P.H.

Director

Division of Program Statistics

Edna L. Paisano

Director

Preface

Since 1955, the Indian Health Service (IHS) has had the responsibility to uphold the Federal Government's obligation to promote healthy American Indian and Alaska Native people, communities, and cultures and to honor and protect the inherent sovereign rights of Tribes. The IHS mission is to raise the physical, mental, social, and spiritual health status of American Indians and Alaska Natives to the highest level.

Regional Differences in Indian Health presents narrative, tables, and charts describing the IHS program and the health status of American Indian and Alaska Native people. Information pertaining to the IHS structure and American Indian and Alaska Native demography and patient care is also included. Current regional differences are presented, and comparisons to the general population are made when appropriate.

The IHS remains committed to our goal of assuring that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian and Alaska Native people. The data found in this publication will contribute positively to this health care goal.

Charles W. Grim, D.D.S., M.H.S.A.

Assistant Surgeon General

Interim Director

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Production coordination was provided by Priscilla Sandoval and Kathy Sanders.

Production was accomplished by the Program Statistics staff: Karen Carver, Kateri Gachupin, Bonnie Matheson, Barbara Moore, Edna Paisano, JoAnn Pappalardo, Colleen Ryan, Kathy Sanders, and Priscilla Sandoval.

Data were analyzed by the following Program Statistics staff:

- Part I Indian Health Structure:
 Karen Carver, Bonnie Matheson, David Sanborn, and Kathy Sanders
- Part II Population Statistics:
 Karen Carver and former staff members Linda Querec and Debra Heller
- Part III Natality and Infant Mortality Statistics:
 JoAnn Pappalardo and former staff member Aaron Handler
- Part IV General Mortality Statistics:
 JoAnn Pappalardo, Barbara Moore, and former staff member Aaron Handler
- Part V Patient Care Statistics:
 Karen Carver, Bonnie Matheson, Kathy Sanders, and former staff member Linda Querec

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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 Indian and Alaska Native (AI/AN) people. 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 AI/AN people and its goal is to assure that comprehensive, culturally-acceptable personal and public health services are available and accessible to AI/AN people. The mission of the IHS, in partnership with AI/AN people, is to raise their physical, mental, social, and spiritual health to the highest level. It is also the responsibility of the IHS to work with the people involved in the health delivery programs so they may be cognizant of entitlements of AI/AN 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 AI/AN 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 staffing 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 AI/AN people 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 administered by Area Offices.

Regional Differences in Indian Health

Introduction

Regional Differences in Indian Health provides basic statistical information to the IHS and its programs, Tribes, other federal and state government agencies, as well as other customers interested in the IHS. This publication uses narrative, charts, and tables to describe the IHS program and the health status of AI/AN people 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 sixty percent of all AI/AN people residing in the U.S. Information pertaining to the IHS organizational structure, AI/AN demography, and patient care is included. Current regional differences are presented, and comparisons to the general population are made when appropriate. Historical trend information can be found in the IHS companion publication *Trends in Indian Health*.

Scope and Organization of this Report

Narrative, charts, and tables are grouped into five major categories:

IHS Structure

Population Statistics

Natality and Infant/Maternal Mortality Statistics

General Mortality Statistics

Patient Care Statistics

The tables provide detailed data, while the charts further depict significant relationships. Throughout this report each table and its corresponding chart appear next to each other. However, some self-explanatory charts do not have a corresponding table. In other instances, a table may have more than one chart associated with it.

Summary of Data Shown

INDIAN HEALTH SERVICE ORGANIZATIONAL STRUCTURE

The IHS is comprised of twelve regional administrative units called Area Offices:

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

As of October 1, 2001, the Area Offices consisted of 155 basic administrative units called service units. Of the 155 service units, 92 were operated by Tribes. The number of service units ranged from one in Albuquerque to 27 in California.

The IHS operated 36 hospitals, 59 health centers, two school health centers, and 49 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, as amended (Title V). A distinction is made in this publication regarding these two Tribal modes of operation, i.e., Title I and Title V. A non-638 contract mechanism is used by Alaska to provide funding to several tribally operated village clinics that are not eligible for Title I funding. Tribes operated thirteen hospitals (Title I, two hospitals and Title V, eleven hospitals), 172 health centers (Title I, 108 and Title V, 64), three school health centers (Title I, two and Title V, one), 84 health stations (Title I, 55 and Title V, 29), and 176 Alaska village clinics (Title I, nine, Title V, 160, and Non-638 contract, seven). Both California and Portland had no hospitals while Aberdeen and Phoenix had eight hospitals each. Tucson had the fewest health centers with three, and California the most with 45.



Population Statistics

In fiscal year (FY) 2001, the IHS user population – a count of those AI/AN people who used IHS services at least once during the last three-year period – was over 1.3 million. Tucson (23,406) and Nashville (44,434) had the smallest user populations while Oklahoma (285,172) and Navajo (224,969) had the largest user populations.

The AI/AN population is younger, less educated and poorer than the U.S. all-races population. For the IHS user population in FY 2001 10.0 percent of the persons were under age five compared to 6.8 percent for the U.S. all-races population (Census 2000). There was considerable variation by Area with California at 8.5 percent and Aberdeen at 11.2 percent.

According to the 1990 Census, 65.3 percent of AI/AN people (ages 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 three IHS Areas (Tucson, Navajo, and Phoenix), the percentage was less than 60.0 (based on state-level AI/AN data). The 1990 Census also indicated that the median household income in 1989 for AI/AN people residing in the current Reservation States was \$19,897, while for the U.S. all-races it was \$30,056, which is over fifty percent higher than AI/AN people residing in Reservation States. Aberdeen had the lowest median household income at \$12,310, and California the highest at \$28,029 (based on state-level AI/AN data).

Nativity and Infant/Maternal Mortality Statistics

The birth rate for AI/AN people residing in the IHS service area was 24.0 (rate per 1,000 population) in 1996-98. It is 1.7 times the 1997 birth rate of 14.5 for the U.S. all-races population. For the period 1996-98, there were seven maternal deaths in the IHS service area population. Only one IHS Area had more than one maternal death, the Navajo Area, with three deaths in 1996-98.

The infant mortality rate for AI/AN people residing in the IHS service area was 8.9 per 1,000 live births in 1996-98 compared to 7.2 for the U.S. all-races population in 1997. The AI/AN rate is 24 percent higher than the U.S. all-races rate. The infant mortality rate varied considerably among the IHS Areas, ranging from 6.9 in Albuquerque to 12.5 in Aberdeen. These data are adjusted for misreporting of AI/AN race on the death certificate.¹

General Mortality Statistics

In 1996-98, the age-adjusted death rate (all causes) for AI/AN people residing in the IHS service area was 715.2 per 100,000 population compared to 479.1 for the U.S. all-races population in 1997. The AI/AN rate is 49 percent greater than the U.S. all-races rate. The rates for the Bemidji and Aberdeen Areas both exceed 1,000.0.

The top two leading causes of death for the IHS service area population in 1996-98 were diseases of the heart and malignant neoplasms, the same as the U.S. all-races in 1997. However, six IHS Areas (Alaska, Albuquerque, Billings, 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 and therefore could have an effect on the leading causes of death ranking.

For most of the specific causes of death identified in this publication, the 1996-98 AI/AN age-adjusted death rate (with data that have also been adjusted for misreporting of AI/AN race on death certificates) was greater than the 1997 U.S. all-races rate. There was also considerable variation in the rates among the IHS Areas. Some of the Area rates should be interpreted with caution, because of the small number of deaths involved. The following list is a comparison of the AI/AN age-adjusted rate (using data that are also adjusted for misreporting of AI/AN race on the death certificate) to the U.S. rate where there are substantial differences.

alcoholism	.638	percent greater
tuberculosis	.400	percent greater
diabetes mellitus	.291	percent greater
accidents	.215	percent greater
suicide	.91	percent greater
homicide	.81	percent greater
pneumonia and influenza	.67	percent greater
firearm injury	.44	percent greater
gastrointestinal disease	.38	percent greater
diseases of the heart	.20	percent greater
cerebrovascular diseases	.14	percent greater
malignant neoplasms	.1	percent less
human immunodeficiency virus (HIV) infection	.43	percent less

Comparison of 1996-98 AI/AN Death Rates to 1997 U.S. All Races Death Rates.



Patient Care Statistics

In FY 2001, there were over 81,000 admissions to IHS and Tribal direct and contract general hospitals. The number of admissions ranged from 205 in California to 19,280 in Navajo. Obstetric deliveries and complications of pregnancy accounted for the overall leading cause of hospitalization in IHS and Tribal direct and contract general hospitals. However, on an area-by-area basis, diseases of the respiratory system led hospital admissions in Aberdeen, Bemidji, Billings, Nashville, Phoenix, and Tucson; diseases of the digestive system led in Albuquerque and Portland; and, lastly, diseases of the circulatory system led in California.

IHS and Tribal direct and contract facilities reported ambulatory medical visits in excess of eight million for FY 2001. Tucson reported the fewest ambulatory medical visits with 132,050 and Oklahoma had the most with 1,460,570. The supplementary classification – an ambulatory visit that does not directly deal with an injury or disease, but rather includes such preventative care as well-child visits, vaccinations, physical examinations, tests only (lab, x-ray, screening), hospital, medical, or surgical follow-up, and prescription refills – led as the number-one cause of ambulatory medical visits for all IHS Area. Most Areas evidenced a significant increase in supplementary classification visits during FY 2001; a change in the IHS prescription refill policy (from a 90-day prescription to a 30-day prescription) accounts for the increase.

In FY 2001, 83.3 percent of AI/AN children 3–27 months and residing in the IHS service area received all required immunizations. In the general population in FY 2001, 73.7 percent of children aged 19 to 35 months received all required immunizations. The Alaska Area had the lowest IHS rate at 75.5 percent, while the Billings Area had the highest rate, 91.5.

In FY 2001, over 2.7 million dental services were provided at IHS and Tribal direct and contract facilities, as reported to the IHS central database. Two IHS Areas provided 29.4 percent of these dental services, Navajo (376,867) and Oklahoma (419,679).

Sources and Limitations of Data

Population Statistics

Registered AI/AN patients with at least one direct or contract inpatient stay, outpatient visit, or dental visit during the last three years are defined as users. IHS user population estimates are drawn from data in the IHS Patient Registration System. First implemented in 1984, the Patient Registration System functioned adequately for many years; but, in recent years, system changes resulted in registration record errors. New system-wide improvements were implemented. From August through December 2001 local facilities re-sent complete and up-to-date information for all patients who had ever received direct or contract health services from IHS or Tribally-operated programs to a central data repository. Data matching software was then applied to the information, allowing for the identification and removal of duplicate records. Thanks to the dedicated efforts of area statistical officers and information technologists alike, this publication contains some of the most accurate user population estimates ever produced.

The IHS user population estimates shown in this publication should 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, representing self-identified AI/AN people who may or may not use

IHS services. IHS service populations between census years (e.g., 1980 and 1990) are estimated using 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 AI/AN people. IHS service populations beyond the latest census year (1990) are projected through linear regression techniques, using the most current ten years of AI/AN birth and death data provided by the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC).

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 AI/AN vital event rates for the IHS service areas.

The social and economic data contained in this publication are from the 1990 census and reflect the characteristics of persons self-identifying as AI/AN.



Vital Event Statistics

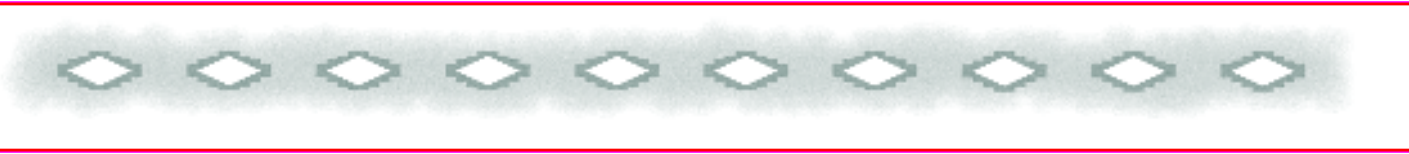
AI/AN vital event statistics are derived from data provided annually to the IHS by NCHS. Vital event statistics for the U.S. population were derived from data reported in various NCHS publications,^{2,3,4} as well as from some unpublished data from NCHS.⁵ NCHS obtains birth and death records for all U.S. residents from state health departments, based on information reported on official state birth and death certificates. The records NCHS provides to 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 natality and mortality data are only as accurate as the reporting by the states to NCHS. NCHS does perform numerous edit checks, applies verification methods, and imputes values for non-responses.²

Misreporting of AI/AN race on state death certificates occurs, especially in areas distant from traditional AI/AN reservations.⁷ In order to determine the degree and scope of the misreporting, 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 1996.¹ The study revealed

that on 10.9 percent of the matched IHS-NDI records, the race reported for the decedent was other than AI/AN. 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 ten 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, it was necessary to adjust all the death rates in this publication to provide a meaningful and comprehensive look at health status.




These NDI adjustments were used for the first time in the 1997 edition of this publication. Both unadjusted and adjusted information are 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 less than one year. These are derived from the linked birth/infant death data sets produced by the NCHS. In this edition unadjusted and adjusted infant mortality rates will be shown. It is reasonably assumed 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) may be adjusted based on the results from other linked data sets. These adjustments based on the linked data sets take precedent over the NDI adjustments for the under one-year age group, described above.

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

The AI/AN vital event statistics in this publication pertain only to AI/AN people residing in the counties that make up the IHS service area, in contrast to earlier editions of the *Trends in Indian Health* publication which showed vital event statistics for all AI/AN people 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 Reservation State data were available; these data were used to show trends going back to 1955, the inception of the IHS. However, now that sufficient vital event data are 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. IHS service area data are more indicative of the health status of the AI/AN people that IHS serves.

The AI/AN population is considerably younger than the U.S. All-races population. Death rates presented in this publication have been age-adjusted to the 1940 standard population, 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. Future publications will utilize the new age-adjustment standard – the estimated 2000 U.S. standard population.



All age-adjusted death rates calculated using a small number of deaths should be interpreted with caution as the observed rate may be quite different from the true underlying rate. This occasionally occurred when an Area rate was calculated for a specific cause of death, e.g., tuberculosis. Any rate based upon fewer than twenty deaths may not be reliable as the sample will be too small.

Prior to the 1993 edition of this publication, alcohol-related 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 categories were used for the first time in the 1993 edition and 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. The expanded definition results in about a 25-percent increase in the number of alcohol-related deaths identified in comparison to the previous three-group definition. NCHS

is now publishing alcohol-related 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 of alcohol-related deaths includes all of the code groups previously used by IHS plus these new codes and is now used in all IHS publications, including *Trends in Indian Health*.

NCHS also publishes 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.³ The NCHS definition includes all of the code groups previously used by IHS plus these two codes. To be consistent with NCHS, these additional codes are now used by IHS starting with the 1996 edition. The 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 many IHS reporting systems.

Monthly Inpatient Services Report

A patient census report prepared by each IHS hospital indicating the number of discharges and days by type of service (e.g., adult, pediatric, obstetric, newborn), used for direct inpatient workload statistics.

Direct Inpatient Care System

The source of IHS hospital inpatient data pertaining to various patient characteristics (age, sex, principal diagnoses, other diagnoses, community of residence, etc.), collected daily, one record per discharge.

Direct Ambulatory Patient Care System

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.

Contract Care System

Provides ambulatory and inpatient contract care data similar to the Direct Inpatient Care and the Direct Ambulatory Patient Care systems. The data are collected through the Contract Health System and may be reported directly or through the IHS Fiscal Intermediary (FI).

Immunization Data

Information obtained by IHS Area Immunization Coordinators from facility quarterly reports.

Dental Data System

The source for dental services data, monitored by IHS Headquarters dental personnel.

Tuberculosis Data

Based on cases reported to the Centers for Disease Control and Prevention.

The data from these systems are subject to recording, inputting, and transmitting errors. However, the IHS Program Statistics Team closely monitors the reporting systems, and each is computer edited. In these ways, errors are kept to an acceptable level.

Glossary

Age-Adjustment (direct method): The application of age-specific rates in a population of interest to a standardized age distribution in order to eliminate 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.⁶

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 mortality statistics, every death is attributed to one underlying condition, based on information reported on the death certificate and using the international rules for selecting the underlying cause of death from the conditions stated on the death certificate. The underlying cause is defined by the World Health Organization (WHO) as the disease or injury that initiated the train of events leading directly to death, or the circumstances of the accident or violence, which produced the fatal injury. Generally, more


medical information is reported on death certificates than is directly reflected in the underlying cause of death. The conditions that are not selected as underlying cause of death constitute the non-underlying cause of death, also known as multiple cause of death. Cause of death is coded according to the appropriate revision of the International Classification of Diseases (ICD). Effective with deaths occurring in 1999, the United States began using the Tenth Revision of the ICD (ICD-10); during the period 1979-98, causes of death were coded and classified according to the Ninth Revision (ICD-9). Each of these revisions has produced discontinuities in cause-of-death trends. These discontinuities are measured using comparability ratios.⁷

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 forty 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 forty hours a week.

High Birthweight: Birthweight of 4,000 grams or more.



Infant Mortality: The death of a live-born child before his or her first birthday. Deaths in the first year of life may be further classified according to age as neonatal and postneonatal. Neonatal deaths are those that occur before the 28th day of life; postneonatal deaths are those that occur between 28 and 365 days of age.

Infant Mortality Rate: A rate based on period files calculated by dividing the number of infant deaths during a calendar year by the number of live births reported in the same year. It is expressed as the number of infant deaths per 1,000 live births.⁸

Life Expectancy: Life expectancy is 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. Life expectancy may be determined by race, sex, or other characteristics using age-specific death rates for the population with that characteristic.⁹

Live Birth: In the WHO's definition, also adopted by the United Nations and the National Center for Health Statistics, a live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life such as heartbeat, umbilical cord pulsation, or definite movement of voluntary muscles, whether the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.¹⁰

Low Birthweight: Birthweight of less than 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. Maternal death is one for which the certifying physician has designated a maternal condition as the underlying cause of death. Maternal conditions are those assigned to Complications of Pregnancy, Childbirth, and the Puerperium, ICD-9 codes 630-676 (ICD-10 codes O00-O99).¹¹

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: In 1977 the Office of Management and Budget (OMB) issued Race and Ethnic Standards for Federal Statistics and Administrative Reporting in order to promote comparability of data among Federal data systems. The standards called for the Federal Government's data systems to classify individuals into the following four racial groups:

- American Indian or Alaska Native
- Asian or Pacific Islander
- Black
- White

Depending on the data source, the classification by race was based on self-classification or on observation by an interviewer or other person filling out the questionnaire.



In 1997 new standards were announced for classification of individuals by race within the Federal Government's data systems. The latest standards have five racial groups:

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or other Pacific Islander
- White

These five categories are the minimum set for data on race for Federal statistics. The 1997 standards also offer an opportunity for respondents to select more than one of the five groups, leading to many possible multiple race categories. As with the single race groups, data for the multiple race groups are to be reported when estimates meet agency requirements for reliability and confidentiality. The 1997 standards allow for observer or proxy identification of race but clearly state a preference for self-classification. The Federal government considers race and Hispanic origin to be two separate and distinct concepts. Thus Hispanics may be of any race. Federal data systems are required to comply with the 1997 Standards by 2003.¹²

On the death certificate, 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. To determine race on the birth certificate, if either the mother, or the father, or both parents were recorded as AI/AN on the birth certificate, the birth is considered as an AI/AN 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 a person to whom an 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: AI/AN people identified to be eligible for IHS services.

Service Unit: The local administrative unit of IHS.

User Population: AI/AN people who have used IHS services at least once during the last three-year period.

Years of Potential Life Lost (YPLL): A mortality indicator that measures the burden of premature deaths, calculated by subtracting the age at death from age 65 and summing the result over all deaths.



Sources of Additional Information

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

General Information

Edna L. Paisano, Principal Statistician and Director, Division of Program Statistics
Priscilla Sandoval, Program Analyst

Demographic Statistics

Jo Ann N. Pappalardo, Acting Team Leader and Computer Systems Analyst
Colleen M. Ryan, Health Statistician
Barbara A. Moore, Statistical Assistant

Patient Care Statistics

Karen Carver, Team Leader, Patient Care Statistics Team
Bonnie M. Matheson, Computer Assistant

Copies of this and other statistical publications may be obtained from Kateri L. Gachupin, Secretary at:

Indian Health Service
Office of Public Health
Office of Program Support
Division of Program Statistics
801 Thompson Building
Suite 120
Rockville, Maryland 20852

Phone (301) 443-1180
Fax (301) 443-4087/1522

This publication, other IHS statistical publications, and links to IHS data files are available on the Division of Program Statistics website at:

http://www.ihs.gov/NonMedicalPrograms/IHS_Stats/