



REGIONAL
differences
in
INDIAN
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INDIAN HEALTH SERVICE

REGIONAL DIFFERENCES IN INDIAN HEALTH

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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 (DHHS), 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 DHHS 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 principal 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.

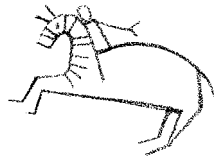
The IHS has carried out its responsibilities through developing and operating a health services delivery system designed to provide a broad-spectrum program of preventive, curative, rehabilitative and environmental services. This system integrates health services delivered directly through IHS facilities, 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 which 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, and its relationship with the American Indian and Alaska Native people. 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 U.S. 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 11 regional administrative units called Area Offices. There is also an Office located in Tucson which is responsible for administering health services delivery. For the present statistical purposes, the Tucson Office is also considered an Area Office, thereby making 12 in total. The 12 IHS Area Offices are:

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

As of October 1, 1995, the Area Offices consisted of 144 basic administrative units called service units. Of the 144 service units, 76 were operated by Tribes. The number of service units ranged from 2 in Tucson to 23 in California.

The IHS operated 38 hospitals, 61 health centers, 4 school health centers, and 47 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 11 hospitals (Title I, 2 hospitals and Title III, 9 hospitals), 129 health centers (Title I, 88 and Title III, 41), 3 school health centers (Title I, 2 and Title III, 1), 73 health stations (Title I, 60 and Title III, 13), and 167 Alaska village clinics (Title I, 14 and Title III, 153). 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 33.

Population Statistics

In fiscal year (FY) 1994, 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 1.2 million. Tucson (20,622) and Nashville (36,771) had the smallest user populations while Oklahoma (265,075) and Navajo (231,926) 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 1994, 11.7 percent of the persons were under age 5 compared to 7.7 percent for the U.S. All Races population (calendar (CY) 1994). There was considerable variation by Area with Nashville at 9.8 percent and Alaska at 13.3 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 26.6 (rate per 1,000 population) in 1991-1993. It is 1.7 times the 1992 birth rate of 15.9 for the U.S. All Races population. For the period 1991-1993, there were 7 maternal deaths in the IHS service area population. Only the Navajo Area (3 deaths) had more than 1 maternal death.

The infant mortality rate for American Indians and Alaska Natives residing in the IHS service area was 8.8 (rate per 1,000 live births) in 1991-1993 compared to 8.5 for the U.S. All Races population in 1992. However, there appears to be underreporting of Indian race on death certificates in at least 3 IHS Areas -- California, Oklahoma, and Portland. When these 3 Areas are excluded from the calculation, the IHS infant mortality rate for the 9 remaining Areas is 10.8, 27 percent higher than the U.S. rate. The infant mortality rate varied considerably among these 9 Areas, ranging from 8.8 in Nashville to 14.6 in Aberdeen.

General Mortality Statistics

In 1991-1993, the age-adjusted mortality rate (all causes) for American Indians and Alaska Natives residing in the IHS service area was 594.1 (rate per 100,000 population) compared to 504.5 for the U.S. All Races population in 1992. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 723.2. This is 43 percent greater than the U.S. rate. The Aberdeen Area rate of 1,045.9 is more than double the U.S. rate.

The 2 leading causes of death for the IHS service area population in 1991-1993 were diseases of the heart and malignant neoplasms, the same as the U.S. All Races in 1992. However, 5 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 1991-1993 Indian age-adjusted mortality rate (calculated by excluding the 3 IHS Areas with apparent death certificate problems) was greater than the 1992 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 (9 Area) rate to the U.S. rate where there are significant differences.

- 1) alcoholism—703 percent greater
- 2) tuberculosis—525 percent greater
- 3) accidents—282 percent greater
- 4) diabetes mellitus—248 percent greater
- 5) suicide—89 percent greater
- 6) homicide—68 percent greater
- 7) malignant neoplasms—15 percent less
- 8) human immunodeficiency virus (HIV) infection—80 percent less

Patient Care Statistics

In FY 1994 there were about 91,000 admissions to IHS and Tribal direct and contract general hospitals. The number of admissions ranged from 557 in California to 20,842 in Navajo. The leading cause of hospitalization in IHS and Tribal direct and contract

general hospitals was obstetric deliveries and complications of puerperium and pregnancy. However, there were 9 IHS Areas with a different leading cause; Aberdeen, Bemidji, Billings, Nashville, Phoenix, and Portland (respiratory system diseases), Albuquerque and California (digestive system diseases), and Tucson (diseases of the skin and subcutaneous tissue).

The total number of ambulatory medical visits (IHS and Tribal direct and contract facilities) was over 6.3 million in FY 1994. Tucson had the fewest ambulatory medical visits with 85,847 and Oklahoma had the most with 1,109,771. The leading cause of ambulatory medical visits in IHS and Tribal direct and contract facilities was supplementary classifications. All IHS Areas had this same 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 1995, there were approximately 3.1 million dental services provided at IHS and Tribal direct and contract facilities. Two IHS Areas provided 29 percent of the dental services, Oklahoma (468,368) and Navajo (427,938).



SOURCES AND LIMITATIONS OF DATA

Population 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 that 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.

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 (NCHS). 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 an underreporting of Indian race on State death certificates in the California, Oklahoma, and Portland Areas. Therefore, the indices based on mortality (i.e., mortality rates, years of potential life lost, and life expectancy at birth) that appear in this publication for these Areas are suspect and should be interpreted with caution.

As a result, this publication shows IHS-wide mortality-based rates with and without the data for these 3 Areas. IHS is currently assessing the extent of this problem in other IHS Areas.

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 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 which 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 mortality 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 mortality 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 mortality 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 3-group definition. This

expanded definition of alcoholism 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 which 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 Division of Program Statistics monitors the reporting systems, and each one has a computer edit. In these ways, errors are kept to an acceptable level.

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.

Birth Weight — 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 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.

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 and is 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 Birth Weight — Birth weight of less than five pounds, eight ounces or 2500 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, or 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 who have used IHS services at least once during the last 3-year period.

Years of Potential Life Lost (YPLL) — A mortality indicator which 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 Division of Program Statistics. Specific responsibilities are as follows:

General Information:

Anthony J. D'Angelo, *Director*, Division of Program Statistics

Demographic Statistics:

Aaron O. Handler, *Chief*, Demographic Statistics Branch

Linda J. Querec, *Statistician*

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Patient Care Statistics:

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Copies of this and other Division publications may be obtained from Priscilla Sandoval or Monique E. Alston, Division Secretaries.

The Division address and phone number are as follows:

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This publication, other IHS publications, and additional information about the IHS are available on the IHS Home Page on the Internet. The address is:

<http://www.ihs.gov/>



PART I—Indian Health Service Structure

Chart 1.1
Indian Health Service Area Offices

The Indian Health Service is comprised of 12 regional administrative units called Area Offices. IHS responsibilities extend to all or parts of 35 States known as Reservation States.

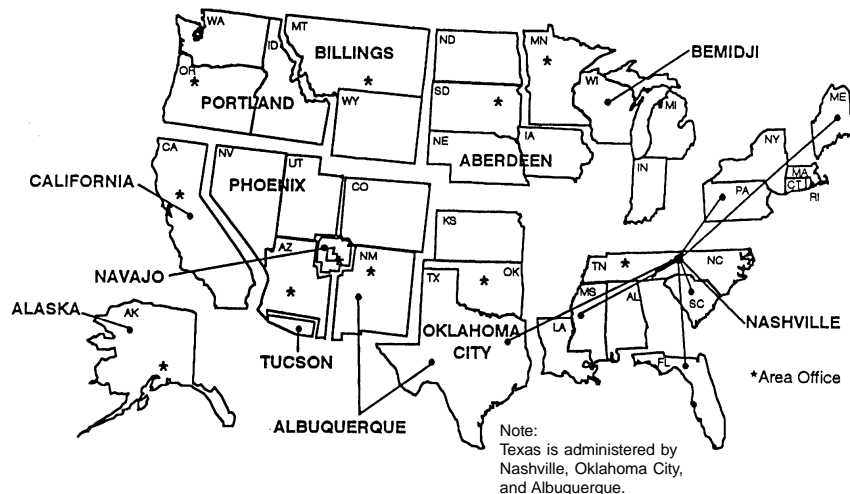


Chart 1.2
Number of Service Units and Facilities

Operated by IHS and Tribes, October 1, 1995

Indian Health Service operated 38 hospitals, 61 health centers, 4 school health centers, and 47 health stations as of October 1, 1995. Tribes can operate a facility under a P.L. 93-638 self-determination contract (Title I) or self-governance compact (Title III). Tribes operated 11 hospitals (Title I, 2 hospitals and Title III, 9 hospitals), 129 health centers (Title I, 88 and Title III, 41), 3 school health centers (Title I, 2 and Title III, 1), 73 health stations (Title I, 60 and Title III, 13), and 167 Alaska village clinics (Title I, 14 and Title III, 153).

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	144	68	76		
• Hospitals	49	38	11	2	9
• Ambulatory Facilities	484	112	372	164	208
— Health Centers	190	61	129	88	41
— School Health Centers	7	4	3	2	1
— Health Stations	120	47	73	60	13
— Alaska Village Clinics	167	—	167	14	153

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 1.3

Number of Service Units and Facilities

Operated by Aberdeen Area and Tribes, October 1, 1995

In the Aberdeen Area, Indian Health Service operated 8 hospitals, 8 health centers, 1 school health center, and 12 health stations as of October 1, 1995. Tribes operated 3 health centers, 2 school health centers, and 2 health stations, all under Title I.

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	17	13	4		
• Hospitals	8	8	—	—	—
• Ambulatory Facilities	28	21	7	7	—
— Health Centers	11	8	3	3	—
— School Health Centers	3	1	2	2	—
— Health Stations	14	12	2	2	—

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 1.4

Number of Service Units and Facilities

Operated by Alaska Area and Tribes, October 1, 1995

In the Alaska Area, Indian Health Service operated 2 hospitals as of October 1, 1995. Tribes operated 5 hospitals (all Title III), 14 health centers (Title I, 3 and Title III, 11), and 167 village clinics (Title I, 14 and Title III, 153).

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	9	2	7		
• Hospitals	7	2	5	—	5
• Ambulatory Facilities	181	—	181	17	164
— Health Centers	14	—	14	3	11
— School Health Centers	—	—	—	—	—
— Health Stations	—	—	—	—	—
— Village Clinics	167	—	167	14	153

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 1.5

Number of Service Units and Facilities

Operated by Albuquerque Area and Tribes, October 1, 1995

In the Albuquerque Area, Indian Health Service operated 5 hospitals, 9 health centers, 1 school health center, and 7 health stations as of October 1, 1995. Tribes operated 3 health centers, all under Title I.

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	7	6	1		
• Hospitals	5	5	—	—	—
• Ambulatory Facilities	20	17	3	3	—
—Health Centers	12	9	3	3	—
—School Health Centers	1	1	—	—	—
—Health Stations	7	7	—	—	—

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

Number of Service Units and Facilities

Operated by Bemidji Area and Tribes, October 1, 1995

In the Bemidji Area, Indian Health Service operated 2 hospitals, 2 health centers, and 2 health stations as of October 1, 1995. Tribes operated 21 health centers (Title I, 15 and Title III, 6) and 13 health stations (Title I, 10 and Title III, 3).

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	13	3	10		
• Hospitals	2	2	—	—	—
• Ambulatory Facilities	38	4	34	25	9
—Health Centers	23	2	21	15	6
—School Health Centers	—	—	—	—	—
—Health Stations	15	2	13	10	3

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 1.7 Number of Service Units and Facilities

Operated by Billings Area and Tribes, October 1, 1995

In the Billings Area, Indian Health Service operated 3 hospitals, 6 health centers, and 4 health stations as of October 1, 1995. Tribes operated 3 health centers and 3 health stations, all under Title III.

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	8	6	2		
• Hospitals	3	3	—	—	—
• Ambulatory Facilities	16	10	6	—	6
— Health Centers	9	6	3	—	3
— School Health Centers	—	—	—	—	—
— Health Stations	7	4	3	—	3

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 1.8 Number of Service Units and Facilities

Operated by California Area and Tribes, October 1, 1995

In the California Area, Indian Health Service did not operate any facilities as of October 1, 1995. Tribes operated 32 health centers (Title I, 31 and Title III, 1) and 23 health stations (all Title I).

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	23	—	23		
• Hospitals	—	—	—	—	—
• Ambulatory Facilities	55	—	55	54	1
— Health Centers	32	—	32	31	1
— School Health Centers	—	—	—	—	—
— Health Stations	23	—	23	23	—

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 1.9

Number of Service Units and Facilities

Operated by Nashville Area and Tribes, October 1, 1995

In the Nashville Area, Indian Health Service operated 1 hospital and 1 health station as of October 1, 1995. Tribes operated 1 hospital (Title III), 14 health centers (Title I, 13 and Title III, 1), 1 school health center (Title III), and 5 health stations (Title I, 2 and Title III, 3).

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	20	1	19		
• Hospitals	2	1	1	—	1
• Ambulatory Facilities	21	1	20	15	5
— Health Centers	14	—	14	13	1
— School Health Centers	1	—	1	—	1
— Health Stations	6	1	5	2	3

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 1.10

Number of Service Units and Facilities

Operated by Navajo Area and Tribes, October 1, 1995

In the Navajo Area, Indian Health Service operated 6 hospitals, 7 health centers, 1 school health center, and 13 health stations as of October 1, 1995. There were no Tribally-operated facilities as of October 1, 1995.

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	8	8	—		
• Hospitals	6	6	—	—	—
• Ambulatory Facilities	21	21	—	—	—
— Health Centers	7	7	—	—	—
— School Health Centers	1	1	—	—	—
— Health Stations	13	13	—	—	—

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 1.11 Number of Service Units and Facilities

Operated by Oklahoma Area and Tribes, October 1, 1995

In the Oklahoma Area, Indian Health Service operated 4 hospitals and 12 health centers as of October 1, 1995. Tribes operated 3 hospitals (Title I, 1 and Title III, 2) and 21 health centers (Title I, 7 and Title III, 14).

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	12	9	3		
• Hospitals	7	4	3	1	2
• Ambulatory Facilities	33	12	21	7	14
— Health Centers	33	12	21	7	14
— School Health Centers	—	—	—	—	—
— Health Stations	—	—	—	—	—

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 1.12 Number of Service Units and Facilities

Operated by Phoenix Area and Tribes, October 1, 1995

In the Phoenix Area, Indian Health Service operated 6 hospitals, 6 health centers, 1 school health center, and 6 health stations as of October 1, 1995. Tribes operated 2 hospitals (Title I, 1 and Title III, 1), 6 health centers (Title I), and 5 health stations (Title I, 4 and Title III, 1).

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	10	8	2		
• Hospitals	8	6	2	1	1
• Ambulatory Facilities	24	13	11	10	1
— Health Centers	12	6	6	6	—
— School Health Centers	1	1	—	—	—
— Health Stations	11	6	5	4	1

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 1.13

Number of Service Units and Facilities

Operated by Portland Area and Tribes, October 1, 1995

In the Portland Area, Indian Health Service operated 9 health centers and 1 health station as of October 1, 1995. Tribes operated 11 health centers (Title I, 6 and Title III, 5) and 22 health stations (Title I, 19 and Title III, 3).

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	15	10	5		
• Hospitals	—	—	—	—	—
• Ambulatory Facilities	43	10	33	25	8
— Health Centers	20	9	11	6	5
— School Health Centers	—	—	—	—	—
— Health Stations	23	1	22	19	3

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 1.14

Number of Service Units and Facilities

Operated by Tucson Area and Tribes, October 1, 1995

In the Tucson Area, Indian Health Service operated 1 hospital, 2 health centers, and 1 health station as of October 1, 1995. There was 1 Tribally-operated health center (Title I).

<i>Type of facility</i>	<i>Total</i>	<i>IHS</i>	<i>Tribal</i>		
			<i>Total</i>	<i>I</i>	<i>III</i>
• Service Units	2	2	—		
• Hospitals	1	1	—	—	—
• Ambulatory Facilities	4	3	1	1	—
— Health Centers	3	2	1	1	—
— School Health Centers	—	—	—	—	—
— Health Stations	1	1	—	—	—

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



PART II—Population Statistics

Chart 2.1
IHS User Population, FY 1994

In FY 1994, the Indian Health Service user population was over 1.2 million. Approximately 41 percent of the user population was concentrated in 2 IHS Areas, Oklahoma and Navajo.

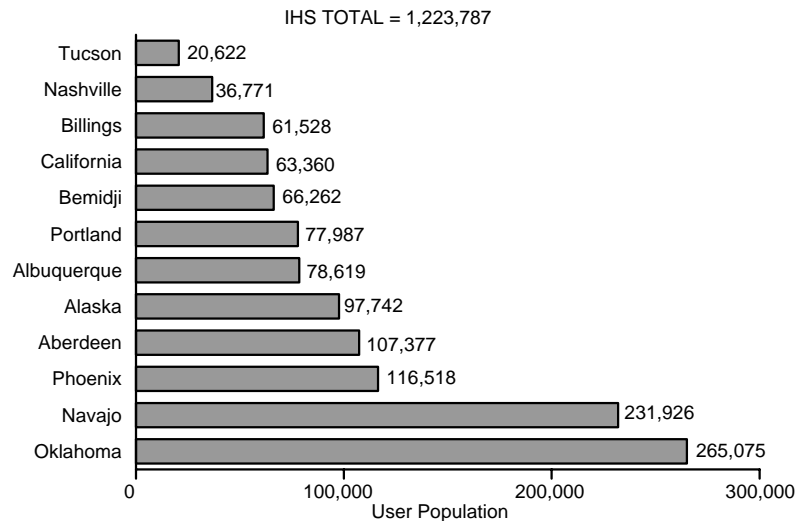


Chart 2.2
Percent of Females in User Population, FY 1994

There was a slightly higher percentage of females in FY 1994 in the IHS user population than the U.S. All Races population (CY 1994). Oklahoma had the highest percentage of females at 53.4.

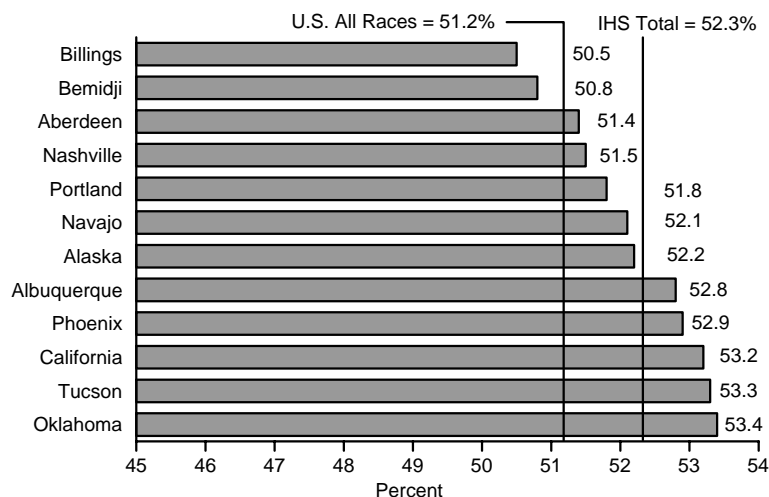


Chart 2.3
Percent of User Population Under
Age 5, FY 1994

The IHS user population in FY 1994 was considerably younger than the U.S. All Races population (CY 1994). The Nashville Area, which had the lowest percentage of population under age 5 (9.8), still had a percentage that was nearly 1.3 times the U.S. All Races percentage (7.7).

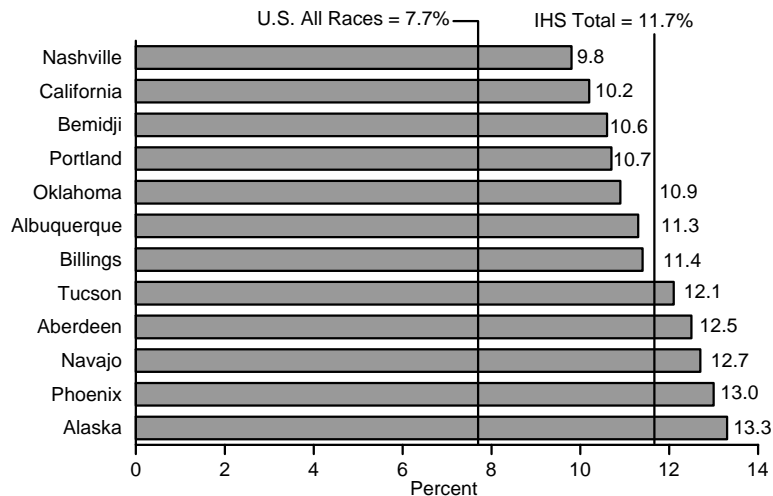


Chart 2.4
Percent of User Population Over
Age 54, FY 1994

In CY 1994, 19.6 percent of the U.S. All Races population was over age 54 compared to 10.7 for the IHS user population (FY 1994). Oklahoma and Nashville had the highest percentages for this age group.

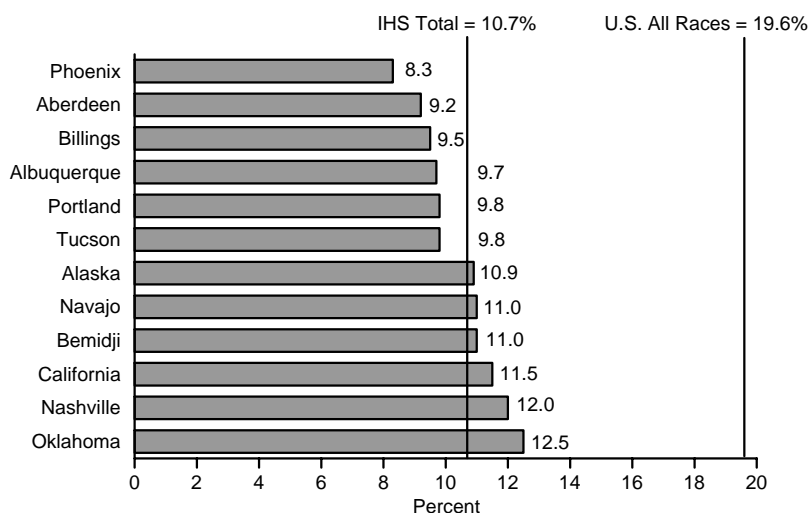
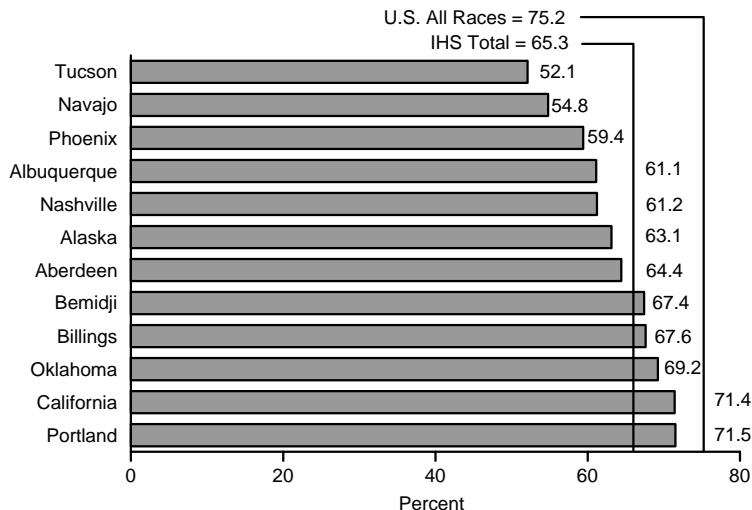


Chart 2.5

Percent High School Graduate or Higher, Age 25 and Older

1990 Census State-Level Indian Data

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. Tucson, Navajo, and Phoenix had percentages less than 60.0.



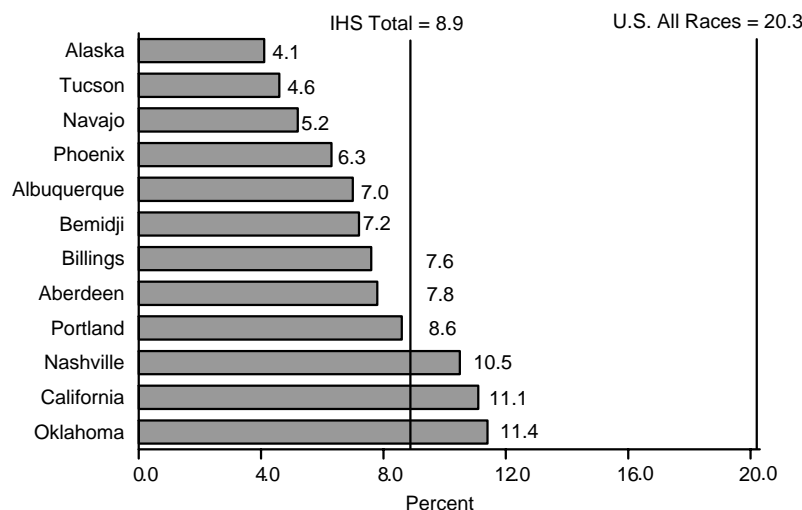
Note: Includes data for 35 Reservation States (South Carolina and Indiana were added as Reservation States in 1994 and 1995, respectively).

Chart 2.6

Percent Bachelor's Degree or Higher, Age 25 and Older

1990 Census State-Level Indian Data

The 1990 Census indicated that 8.9 percent of Indians, age 25 and older, residing in the current Reservation States have a bachelor's degree or higher. This is well below the percentage for the U.S. All Races population of 20.3. The Area percentages ranged from 4.1 in Alaska to 11.4 in Oklahoma.



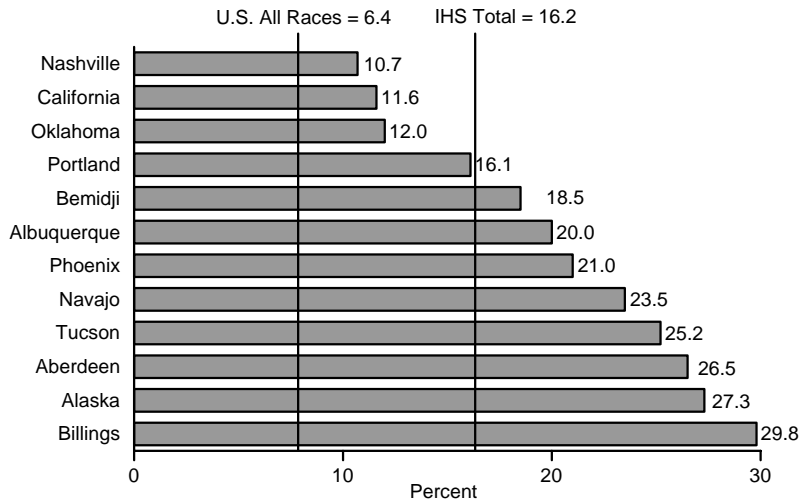
Note: Includes data for 35 Reservation States (South Carolina and Indiana were added as Reservation States in 1994 and 1995, respectively).

Chart 2.7

Percent of Males Unemployed, Age 16 and Older

1990 Census State-Level Indian Data

In 1990, 16.2 percent of Indian males, age 16 and older, residing in the current Reservation States were unemployed compared to 6.4 percent for the U.S. All Races male population. Billings, Alaska, Aberdeen, and Tucson had unemployment rates greater than 25.0 percent.



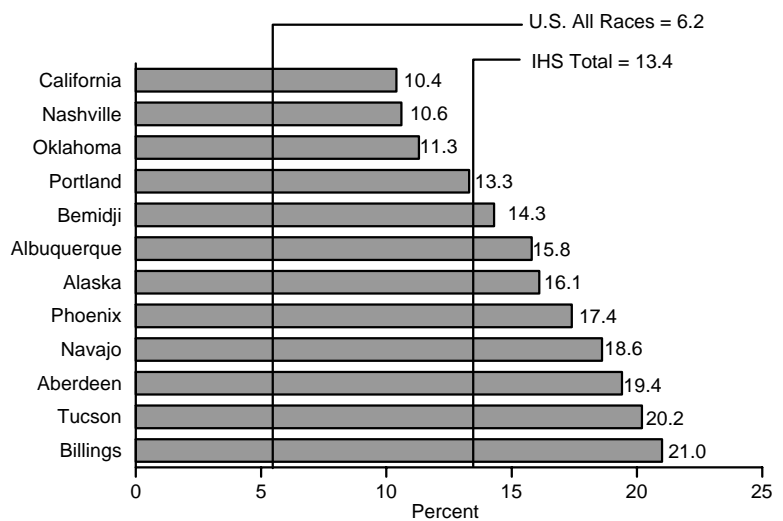
Note: Includes data for 35 Reservation States (South Carolina and Indiana were added as Reservation States in 1994 and 1995, respectively).

Chart 2.8

Percent of Females Unemployed, Age 16 and Older

1990 Census State-Level Indian Data

In 1990, 13.4 percent of Indian females, age 16 and older, residing in the current Reservation States were unemployed compared to 6.2 percent for the U.S. All Races female population. The Area unemployment rates ranged from 10.4 in California to 21.0 in Billings.



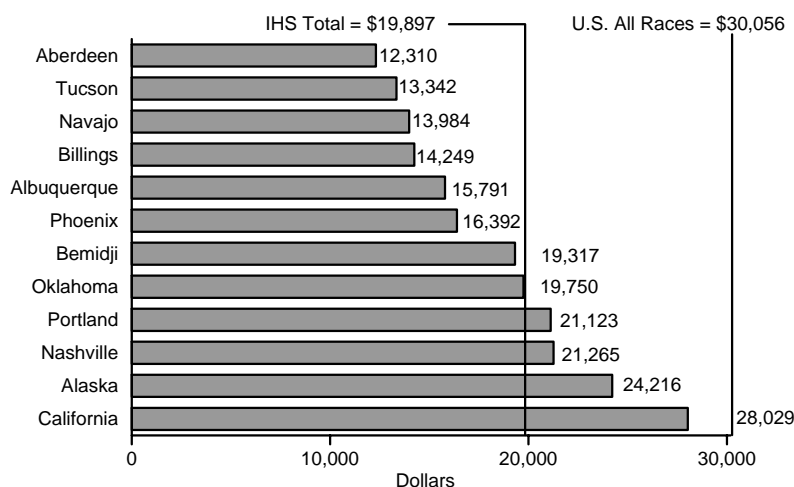
Note: Includes data for 35 Reservation States (South Carolina and Indiana were added as Reservation States in 1994 and 1995, respectively).

Chart 2.9

Median Household Income in 1989

1990 Census State-Level Indian Data

According to the 1990 Census, the median household income in 1989 for Indians residing in the current Reservation States was \$19,897. This is two-thirds of the U.S. All Races figure for 1989 of \$30,056. Aberdeen, Tucson, Navajo, and Billings had median household incomes that were less than half the U.S. figure.



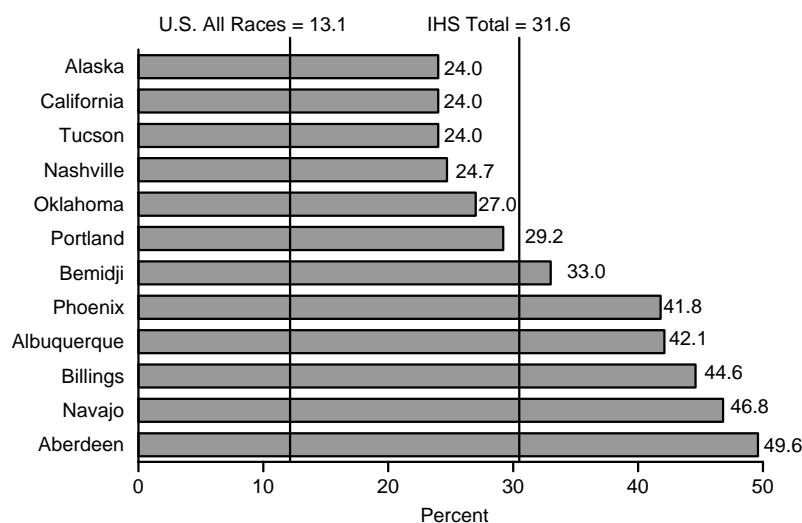
Note: Includes data for 35 Reservation States (South Carolina and Indiana were added as Reservation States in 1994 and 1995, respectively).

Chart 2.10

Percent of Population Below Poverty Level

1990 Census State-Level Indian Data

The 1990 Census indicated that 31.6 percent of Indians residing in the current Reservation States were below the poverty level. This is 2.4 times the comparable U.S. All Races figure of 13.1. Aberdeen, Navajo, Billings, Albuquerque, and Phoenix had percentages exceeding 40.0.



Note: Includes data for 35 Reservation States (South Carolina and Indiana were added as Reservation States in 1994 and 1995, respectively).



PART III—Natality and Infant/Maternal Mortality Statistics

Chart 3.1 Birth Rates

Calendar Years 1991–1993

The birth rate for the IHS service area population in 1991–1993 was 1.7 times the rate for the U.S. All Races population in 1992, i.e., 26.6 compared to 15.9. Even the IHS Area with the lowest birth rate (Nashville, 21.3) had a rate considerably greater than the U.S. rate (34 percent greater).

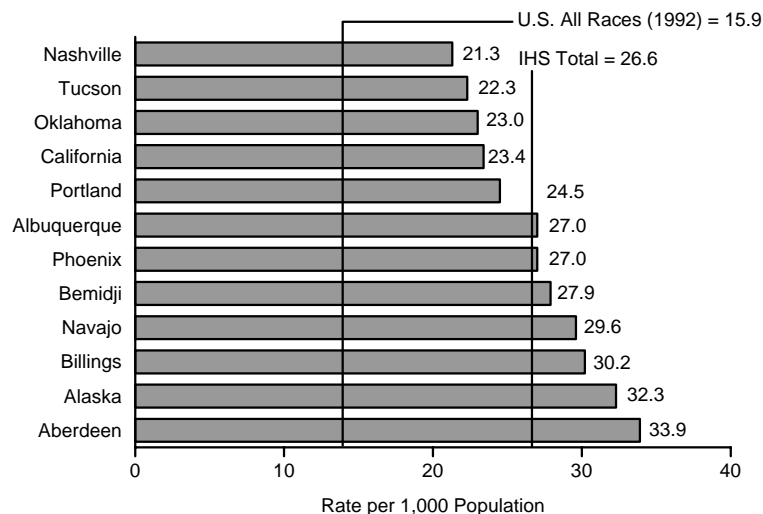


Table 3.1 Number and Rate of Live Births

Calendar Years 1991–1993

	Number	Rate ¹
U.S. All Races (1992)	4,065,014	15.9
All IHS Areas	101,406	26.6
Aberdeen	8,465	33.9
Alaska	8,807	32.3
Albuquerque	5,707	27.0
Bemidji	5,355	27.9
Billings	4,467	30.2
California	7,700	23.4
Nashville	3,528	21.3
Navajo	16,887	29.6
Oklahoma	18,809	23.0
Phoenix	10,197	27.0
Portland	9,783	24.5
Tucson	1,701	22.3

¹ Rate per 1,000 population.

Chart 3.2

Low Weight Births

Calendar Years 1991–1993

For 1991–1993, 5.8 percent of all Indian births in the IHS service area were low weight (less than 2,500 grams) births. This was better than the figure for the U.S. All Races population, i.e., 7.1 percent in 1992. All IHS Areas had relatively fewer low weight births than occurred in the general population.

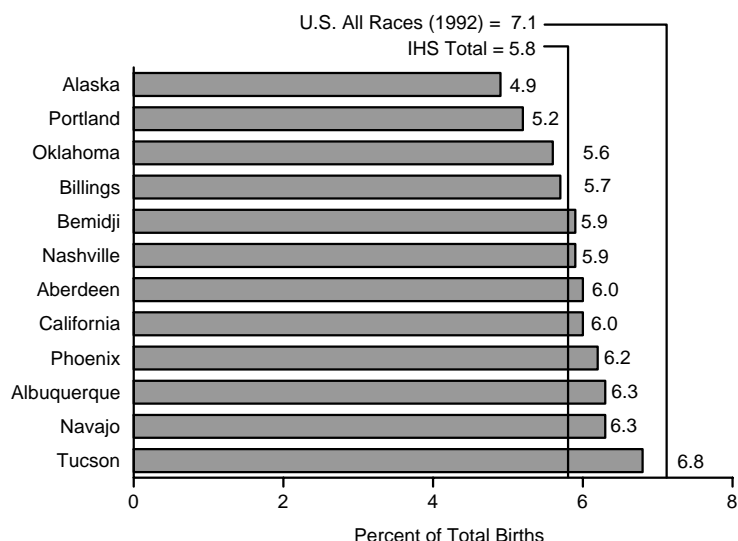


Table 3.2

Births of Low Weight as a Percent of Total Live Births

Calendar Years 1991–1993

	Total live births ¹	Number low weight ²	Percent low weight ³
U.S. All Races (1992)	4,065,014	287,493	7.1
All IHS Areas	101,406	5,911	5.8
Aberdeen	8,465	508	6.0
Alaska	8,807	430	4.9
Albuquerque	5,707	357	6.3
Bemidji	5,355	315	5.9
Billings	4,467	255	5.7
California	7,700	464	6.0
Nashville	3,528	209	5.9
Navajo	16,887	1,056	6.3
Oklahoma	18,809	1,058	5.6
Phoenix	10,197	631	6.2
Portland	9,783	513	5.2
Tucson	1,701	115	6.8

¹ Includes 4,483 U.S. All Races live births and 180 American Indian/Alaska Native live births with birth weight not stated.

² Births of less than 2,500 grams.

³ Percent low weight based on live births with a birth weight reported.

Chart 3.3

Live Births With Prenatal Care Beginning in First Trimester

Calendar Years 1991–1993

In 1991–1993, prenatal care began in the first trimester for 62.0 percent of Indian live births for the IHS service area population. This compared to 77.7 percent for the U.S. All Races population in 1992. The percentages varied widely among IHS Areas, ranging from 47.8 for Navajo to 75.8 for Alaska.

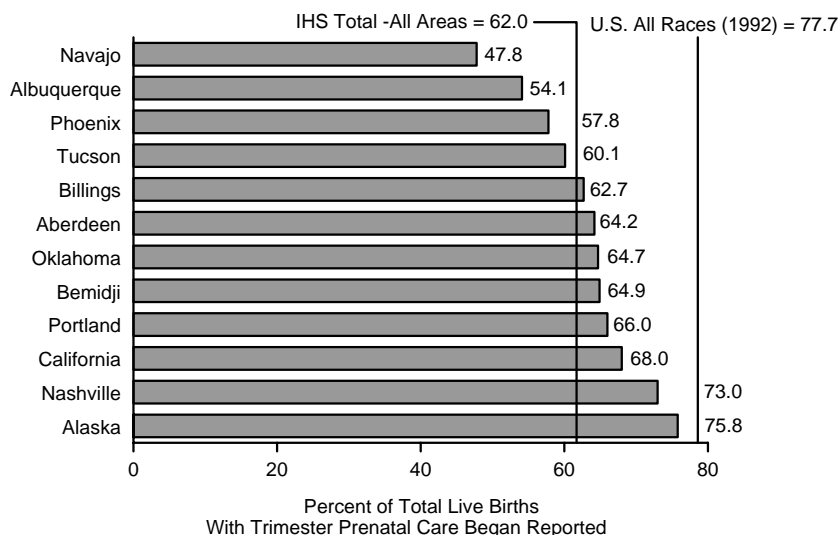


Table 3.3

Live Births With Prenatal Care Beginning in First Trimester

Calendar Years 1991–1993

	Total live births ¹	Live births with trimester prenatal care began reported	Live births with prenatal care beginning in the first trimester ²	
			Number	Percent
U.S. All Races (1992)	4,065,014	3,976,509	3,091,543	77.7
All IHS Areas	101,406	99,064	61,453	62.0
Aberdeen	8,465	8,374	5,376	64.2
Alaska	8,807	8,679	6,576	75.8
Albuquerque	5,707	5,492	2,973	54.1
Bemidji	5,355	5,244	3,401	64.9
Billings	4,467	4,438	2,781	62.7
California	7,700	7,630	5,192	68.0
Nashville	3,528	3,469	2,533	73.0
Navajo	16,887	16,626	7,947	47.8
Oklahoma	18,809	18,114	11,728	64.7
Phoenix	10,197	9,874	5,705	57.8
Portland	9,783	9,433	6,225	66.0
Tucson	1,701	1,691	1,016	60.1

¹ Includes 88,505 U.S. All Races live births and 2,342 American Indian/Alaska Native live births for which trimester of pregnancy that prenatal care began was not reported on the State birth certificate.

² Percent based on live births with this information reported.



Chart 3.4

Maternal Deaths

Calendar Years 1991–1993

There were 7 maternal deaths in the IHS service area population in 1991-1993. Only the Navajo Area (3 deaths) had more than 1 maternal death.

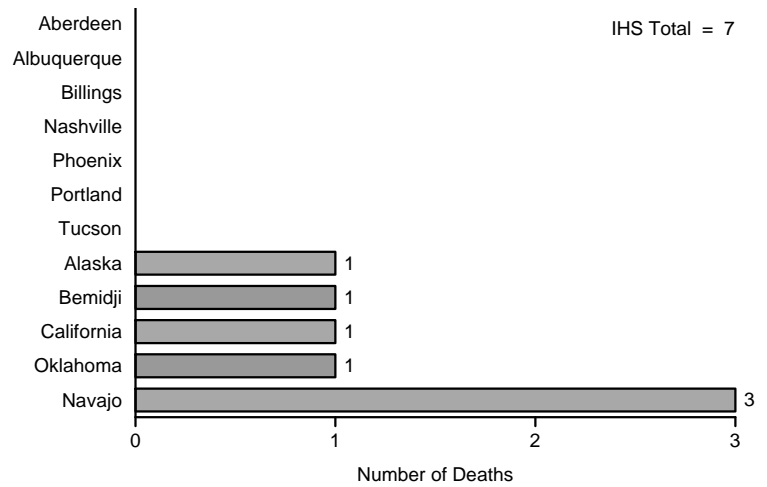


Chart 3.5
Infant Mortality Rates
 Calendar Years 1991–1993

The infant mortality rate for the IHS service area population in 1991-1993 was 8.8. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 10.8. This is 27 percent higher than the U.S. All Races rate of 8.5 for 1992. The Aberdeen and Billings Areas had the highest rates, 14.6 and 11.4, respectively.

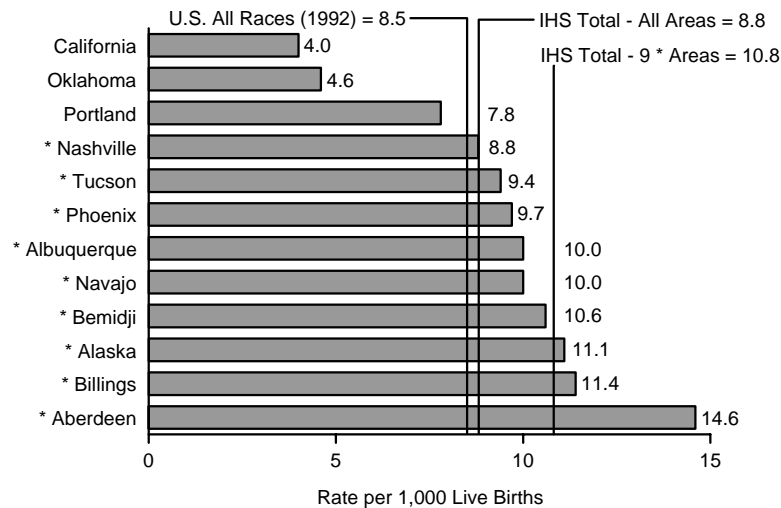


Table 3.5
Infant Mortality Rates
(Under 1 Year)

Calendar Years 1991–1993

	Live births	Infant deaths	Rate ¹
U.S. All Races (1992)	4,065,014	34,628	8.5
All IHS Areas	101,406	895	8.8
9* Areas ²	65,114	702	10.8
Aberdeen*	8,465	124	14.6
Alaska*	8,807	98	11.1
Albuquerque*	5,707	57	10.0
Bemidji*	5,355	57	10.6
Billings*	4,467	51	11.4
California	7,700	31	4.0
Nashville*	3,528	31	8.8
Navajo*	16,887	169	10.0
Oklahoma	18,809	86	4.6
Phoenix*	10,197	99	9.7
Portland	9,783	76	7.8
Tucson*	1,701	16	9.4

¹ Rate per 1,000 live births.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 3.6 Neonatal Mortality Rates

Calendar Years 1991–1993

The neonatal mortality rate for the IHS service area population in 1991-1993 was 4.0. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 4.8. This still less than the U.S. All Races rate of 5.4 for 1992. The Aberdeen Area had the highest rate at 6.4.

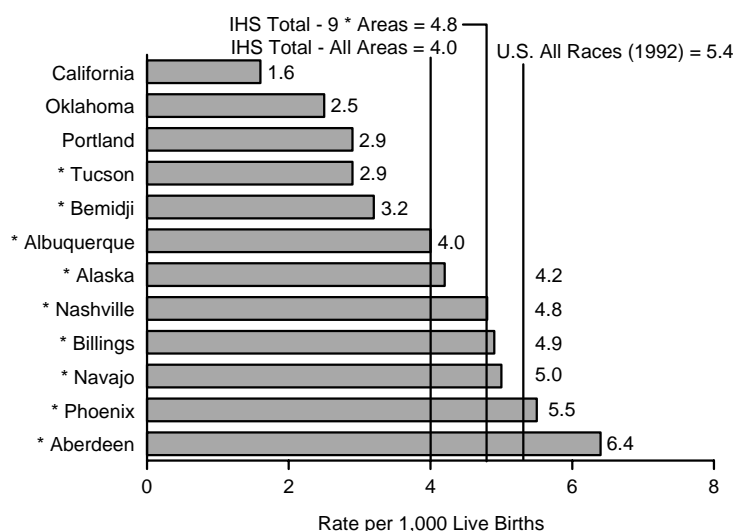


Table 3.6 Neonatal Mortality Rates (Under 28 Days)

Calendar Years 1991–1993



	Live births	Infant deaths	Rate ¹
U.S. All Races (1992)	4,065,014	21,849	5.4
All IHS Areas	101,406	402	4.0
9* Areas ²	65,114	315	4.8
Aberdeen*	8,465	54	6.4
Alaska*	8,807	37	4.2
Albuquerque*	5,707	23	4.0
Bemidji*	5,355	17	3.2
Billings*	4,467	22	4.9
California	7,700	12	1.6
Nashville*	3,528	17	4.8
Navajo*	16,887	84	5.0
Oklahoma	18,809	47	2.5
Phoenix*	10,197	56	5.5
Portland	9,783	28	2.9
Tucson*	1,701	5	2.9

¹ Rate per 1,000 live births.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 3.7 Postneonatal Mortality Rates

Calendar Years 1991–1993

The postneonatal mortality rate for the IHS service area population in 1991–1993 was 4.9. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 5.9. This is 1.9 times the U.S. All Races rate of 3.1 for 1992. The Aberdeen and Bemidji Areas had the highest rates, 8.3 and 7.5, respectively.

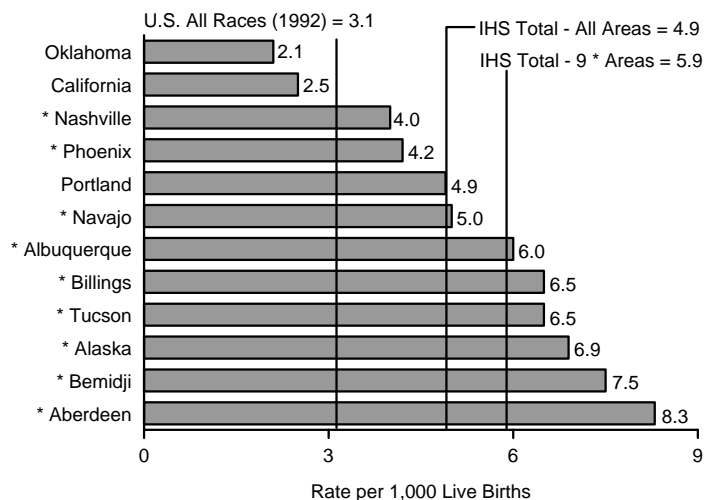


Table 3.7 Postneonatal Mortality Rates (28 Days to Under 1 Year)

Calendar Years 1991–1993

	Live births	Infant deaths	Rate ¹
U.S. All Races (1992)	4,065,014	12,779	3.1
All IHS Areas	101,406	493	4.9
9* Areas ²	65,114	387	5.9
Aberdeen*	8,465	70	8.3
Alaska*	8,807	61	6.9
Albuquerque*	5,707	34	6.0
Bemidji*	5,355	40	7.5
Billings*	4,467	29	6.5
California	7,700	19	2.5
Nashville*	3,528	14	4.0
Navajo*	16,887	85	5.0
Oklahoma	18,809	39	2.1
Phoenix*	10,197	43	4.2
Portland	9,783	48	4.9
Tucson*	1,701	11	6.5

¹ Rate per 1,000 live births.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.



Chart 3.8

Leading Causes of Infant Deaths

All IHS Areas, Calendar Years 1991–1993

In 1991–1993, 24.2 percent of all infant deaths in the IHS service area were caused by sudden infant death syndrome. This was followed by congenital anomalies at 23.0 percent.

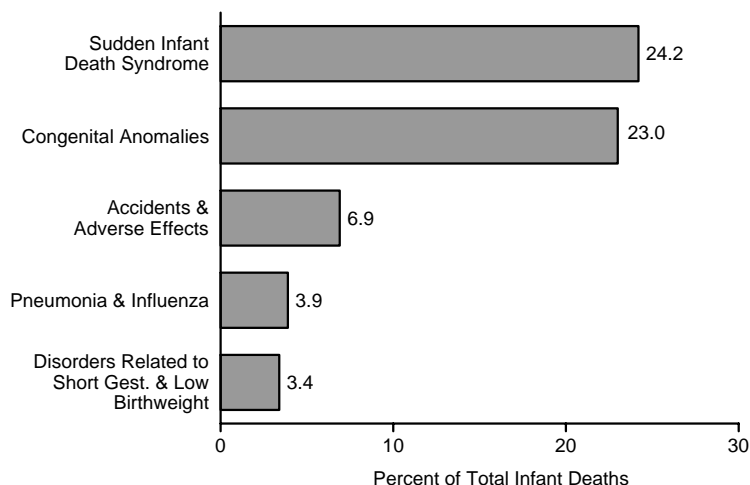


Chart 3.9

Leading Causes of Infant Deaths

U.S. All Races, 1992

In 1992, 21.5 percent of all infant deaths in the U.S. were caused by congenital anomalies. This was followed by sudden infant death syndrome at 14.1 percent.

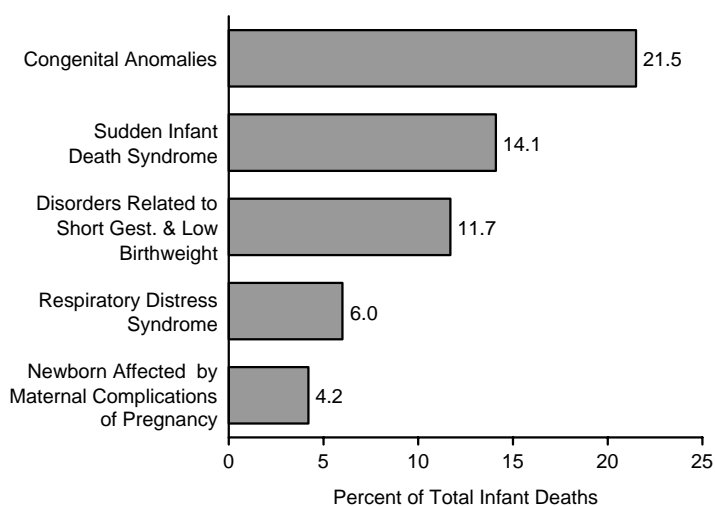


Chart 3.10

Leading Causes of Infant Deaths

Aberdeen Area, Calendar Years 1991–1993

In 1991-1993, 25.0 percent of all infant deaths in the Aberdeen Area were caused by sudden infant death syndrome. This was followed by congenital anomalies at 18.5 percent.

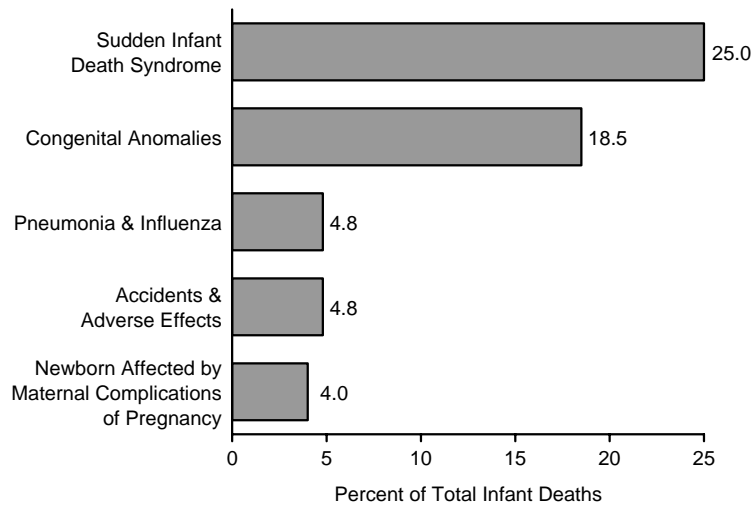


Chart 3.11

Leading Causes of Infant Deaths

Alaska Area, Calendar Years 1991–1993

In 1991-1993, 27.6 percent of all infant deaths in the Alaska Area were caused by sudden infant death syndrome. This was followed by congenital anomalies at 16.3 percent.

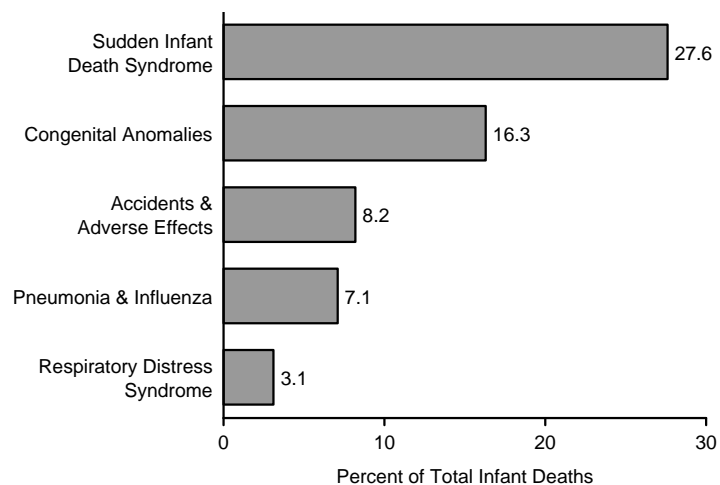


Chart 3.12

Leading Causes of Infant Deaths

Albuquerque Area, Calendar Years 1991–1993

In 1991-1993, 28.1 percent of all infant deaths in the Albuquerque Area were caused by sudden infant death syndrome. This was followed by congenital anomalies at 17.5 percent.

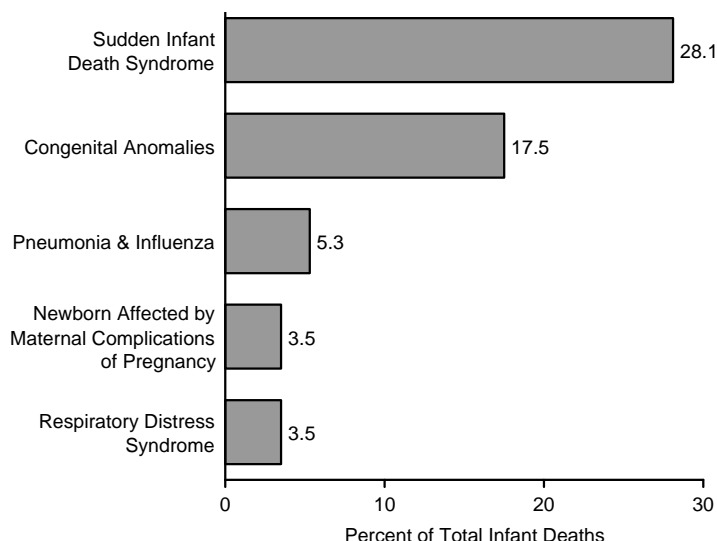


Chart 3.13

Leading Causes of Infant Deaths

Bemidji Area, Calendar Years 1991–1993

In 1991-1993, 29.8 percent of all infant deaths in the Bemidji Area were caused by sudden infant death syndrome. This was followed by congenital anomalies at 17.5 percent.

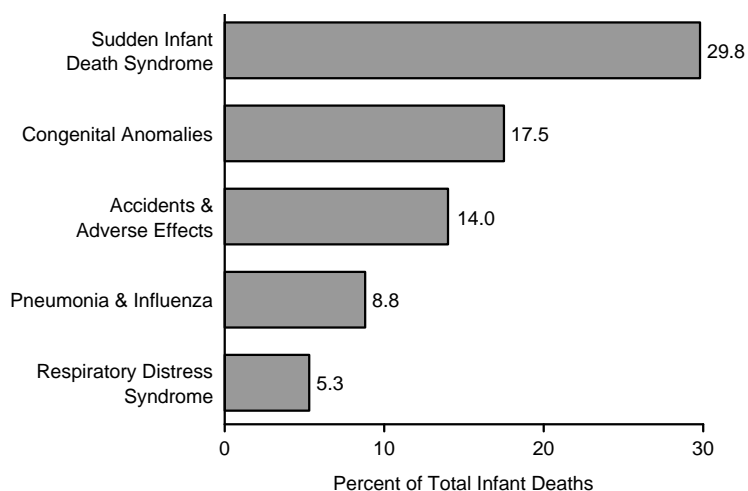


Chart 3.14
Leading Causes of Infant Deaths
 Billings Area, Calendar Years 1991–1993

In 1991-1993, 29.4 percent of all infant deaths in the Billings Area were caused by sudden infant death syndrome. This was followed by congenital anomalies at 15.7 percent.

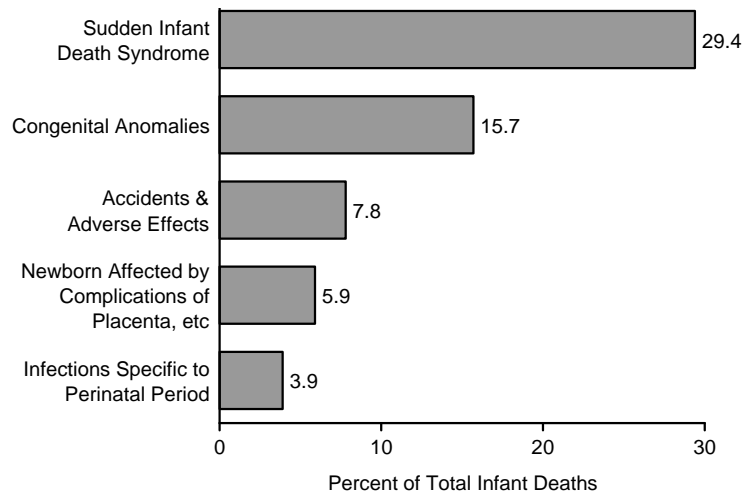


Chart 3.15
Leading Causes of Infant Deaths
 California Area, Calendar Years 1991–1993

In 1991-1993, 22.6 percent of all infant deaths in the California Area were caused by sudden infant death syndrome. Congenital anomalies was also at this percentage level.

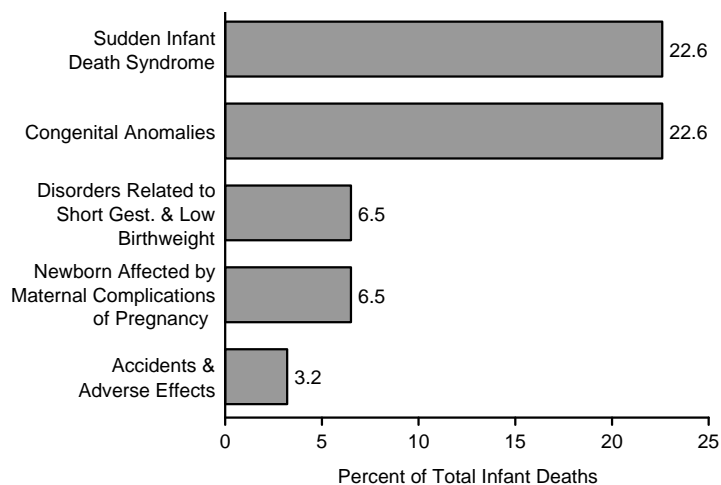


Chart 3.16

Leading Causes of Infant Deaths

Nashville Area, Calendar Years 1991–1993

In 1991-1993, 32.3 percent of all infant deaths in the Nashville Area were caused by congenital anomalies. This was followed by sudden infant death syndrome at 22.6 percent.

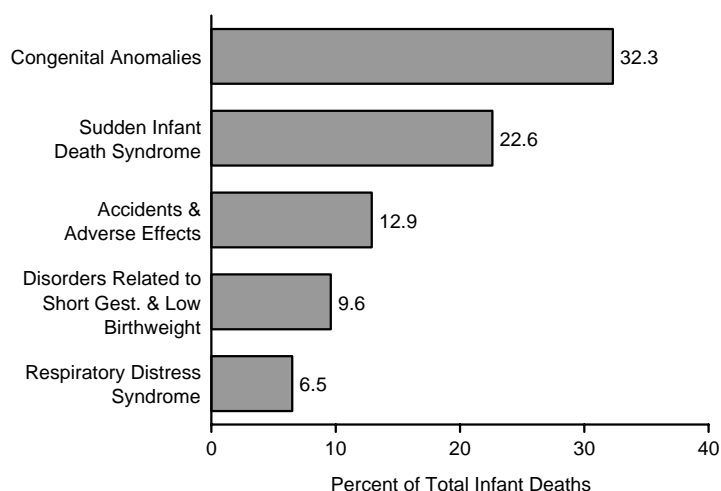


Chart 3.17

Leading Causes of Infant Deaths

Navajo Area, Calendar Years 1991–1993

In 1991-1993, 34.9 percent of all infant deaths in the Navajo Area were caused by congenital anomalies. This was followed by sudden infant death syndrome at 11.8 percent.

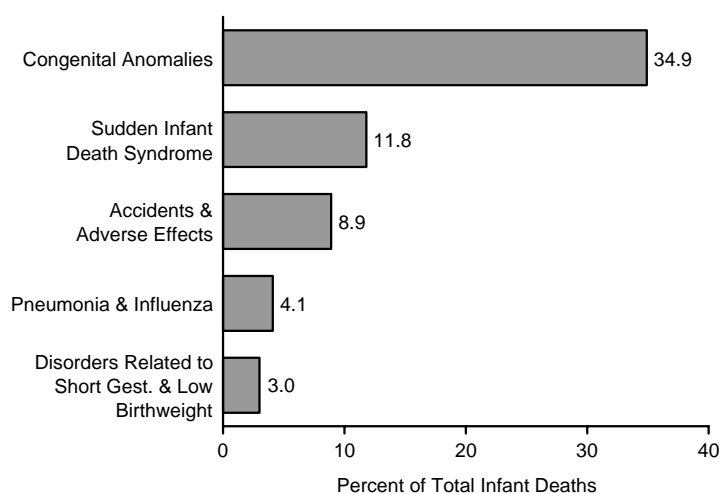


Chart 3.18
Leading Causes of Infant Deaths
 Oklahoma Area, Calendar Years 1991–1993

In 1991-1993, 24.4 percent of all infant deaths in the Oklahoma Area were caused by sudden infant death syndrome. Congenital anomalies was also at this percentage level.

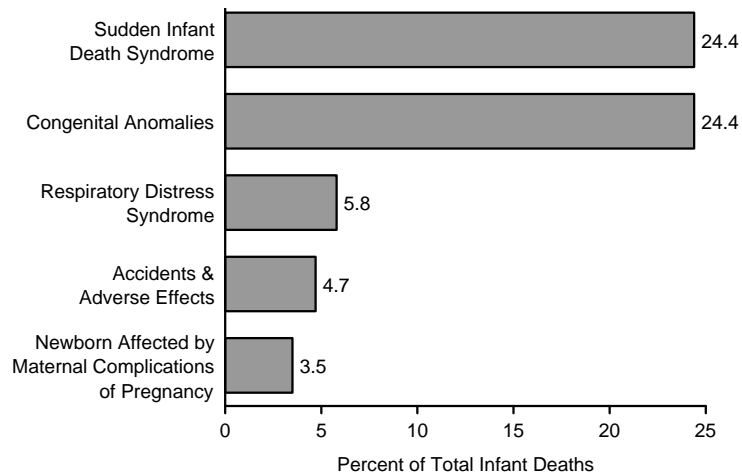


Chart 3.19
Leading Causes of Infant Deaths
 Phoenix Area, Calendar Years 1991–1993

In 1991-1993, 27.3 percent of all infant deaths in the Phoenix Area were caused by congenital anomalies. This was followed by sudden infant death syndrome at 17.2 percent.

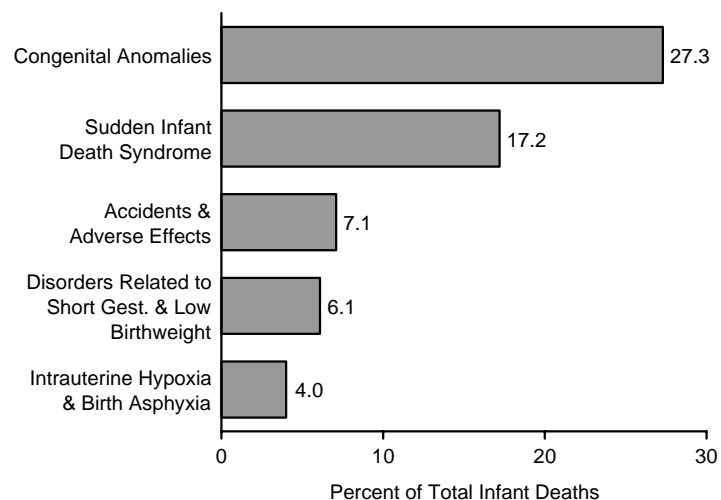


Chart 3.20

Leading Causes of Infant Deaths

Portland Area, Calendar Years 1991–1993

In 1991-1993, 46.1 percent of all infant deaths in the Portland Area were caused by sudden infant death syndrome. This was followed by congenital anomalies at 17.1 percent.

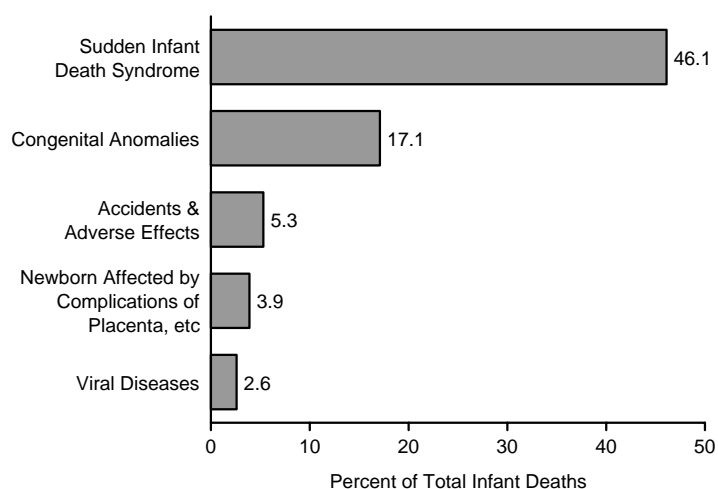


Chart 3.21

Leading Causes of Infant Deaths

Tucson Area, Calendar Years 1991–1993

In 1991-1993, 25.0 percent of all infant deaths in the Tucson Area were caused by sudden infant death syndrome. This was followed by congenital anomalies at 12.5 percent.

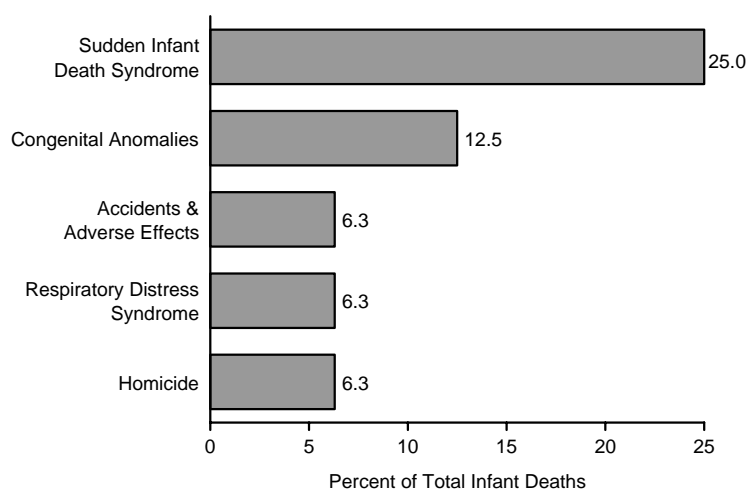


Chart 3.22
Sudden Infant Death Syndrome Rates
 Calendar Years 1991–1993

In 1991–1993, the mortality rate for sudden infant death syndrome (SIDS) for the IHS service area population was nearly double the rate for the U.S. All Races population in 1992, 214.0 compared to 120.3. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the IHS rate in this instance only increases 11 percent to 236.5 because of the problem with SIDS in the Portland Area. In the Portland Area, 46.1 percent of infant deaths were because of SIDS.

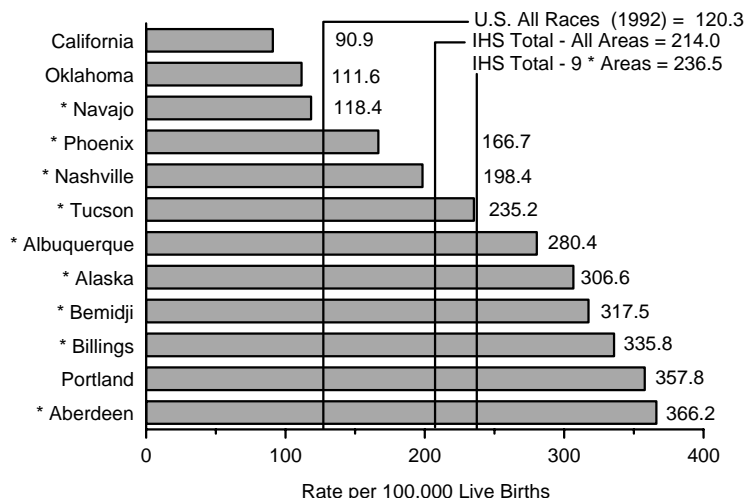


Table 3.22
Sudden Infant Death Syndrome Rates
 Calendar Years 1991–1993

	Live births	Infant deaths	Rate ¹
U.S. All Races (1992)	4,065,014	4,891	120.3
All IHS Areas	101,406	217	214.0
9* Areas ²	65,114	154	236.5
Aberdeen*	8,465	31	366.2
Alaska*	8,807	27	306.6
Albuquerque*	5,707	16	280.4
Bemidji*	5,355	17	317.5
Billings*	4,467	15	335.8
California	7,700	7	90.9
Nashville*	3,528	7	198.4
Navajo*	16,887	20	118.4
Oklahoma	18,809	21	111.6
Phoenix*	10,197	17	166.7
Portland	9,783	35	357.8
Tucson*	1,701	4	235.2

¹ Rate per 100,000 live births.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.





PART IV—General Mortality Statistics

Chart 4.1
Age-Adjusted Mortality Rates
Calendar Years 1991–1993

In 1991–1993, the age-adjusted mortality rate (all causes) for the IHS service area population was 594.1. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 723.2. This is 43 percent higher than the U.S. All Races rate of 504.5 for 1992. The Aberdeen rate (1,045.9) was more than double the U.S. rate.

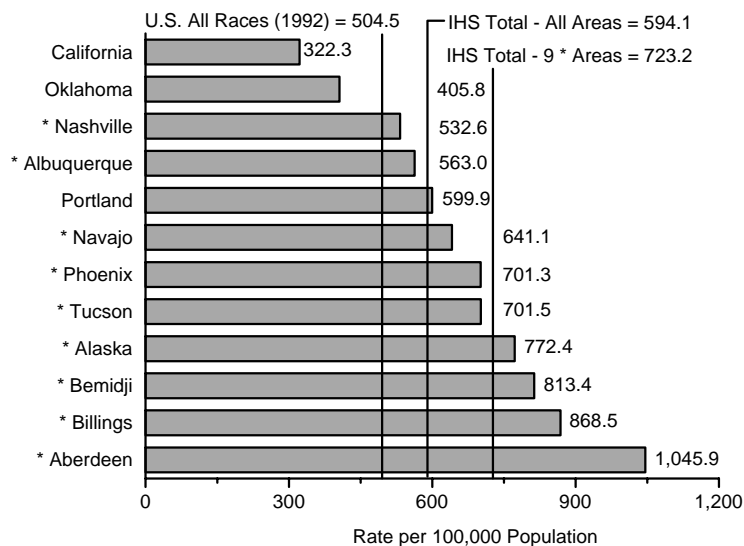


Table 4.1
Age-Adjusted Mortality Rates
(All Causes)

Calendar Years 1991–1993

	Total Deaths	Rate ¹
U.S. All Races (1992)	2,175,613	504.5
All IHS Areas	20,217	594.1
9* Areas ²	13,693	723.2
Aberdeen*	1,983	1,045.9
Alaska*	1,778	772.4
Albuquerque*	1,064	563.0
Bemidji*	1,303	813.4
Billings*	997	868.5
California	967	322.3
Nashville*	847	532.6
Navajo*	3,203	641.1
Oklahoma	3,634	405.8
Phoenix*	2,063	701.3
Portland	1,923	599.9
Tucson*	455	701.5

¹ Rate per 100,000 population.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.2
Years of Potential Life Lost Rates
 Calendar Years 1991–1993

In 1991–1993, the years of potential life lost rate (all causes) for the IHS service area population was 81.1. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 101.5. This is nearly double the U.S. All Races rate of 54.1 for 1992. Each of the remaining 9 IHS Areas had a rate greater than the U.S. All Races rate.

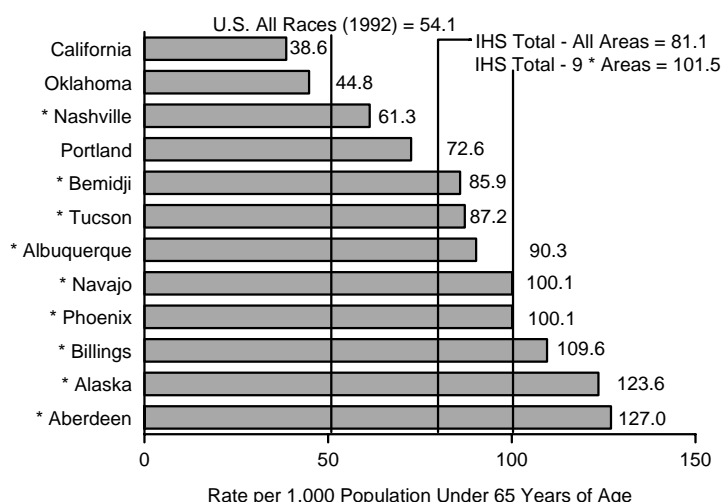


Table 4.2
Years of Potential Life Lost
(YPLL) Rates (All Causes)
 Calendar Years 1991–1993



	Number of YPLL ¹	Rate ²
U.S. All Races (1992)	12,363,946	54.1
All IHS Areas	291,557	81.1
9* Areas ³	218,315	101.5
Aberdeen*	30,199	127.0
Alaska*	32,133	123.6
Albuquerque*	18,096	90.3
Bemidji*	15,603	85.9
Billings*	15,503	109.6
California	11,984	38.6
Nashville*	9,511	61.3
Navajo*	54,763	100.1
Oklahoma	33,612	44.8
Phoenix*	36,211	100.1
Portland	27,646	72.6
Tucson*	6,296	87.2

¹ Years of Potential Life Lost (YPLL) is a mortality indicator which 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.

² Rate per 1,000 population under 65 years of age.

³ The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.3

Leading Causes of Death

All IHS Areas, Calendar Years 1991–1993

In 1991-1993, 21.9 percent of all deaths in the IHS service area were caused by diseases of the heart. This was followed by malignant neoplasms at 15.2 percent.

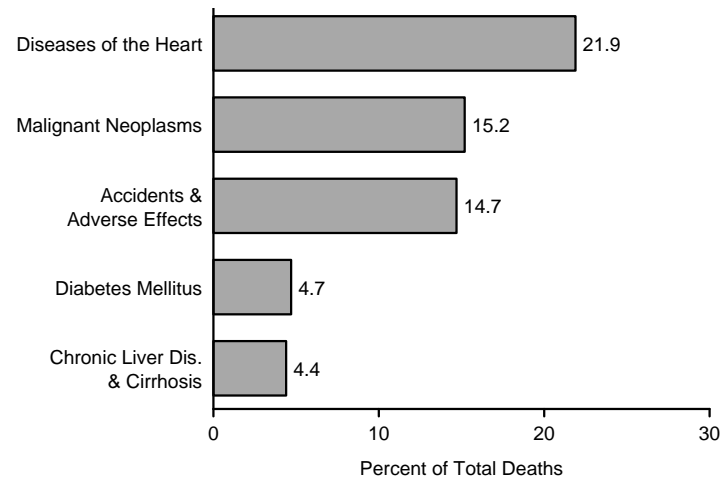


Chart 4.4

Leading Causes of Death

U.S. All Races, Calendar Year 1992

In 1992, 33.0 percent of all deaths in the U.S. were caused by diseases of the heart. This was followed by malignant neoplasms at 23.9 percent.

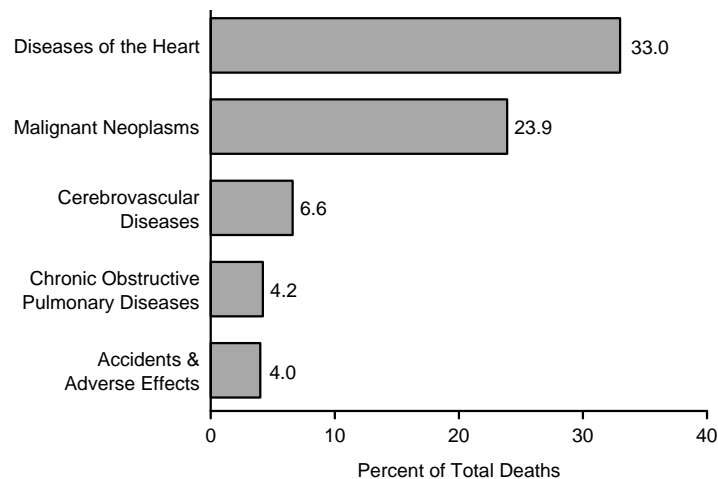


Chart 4.5 Leading Causes of Death

Aberdeen Area, Calendar Years 1991–1993

In 1991-1993, 21.1 percent of all deaths in the Aberdeen Area were caused by diseases of the heart. This was followed by malignant neoplasms at 15.7 percent.

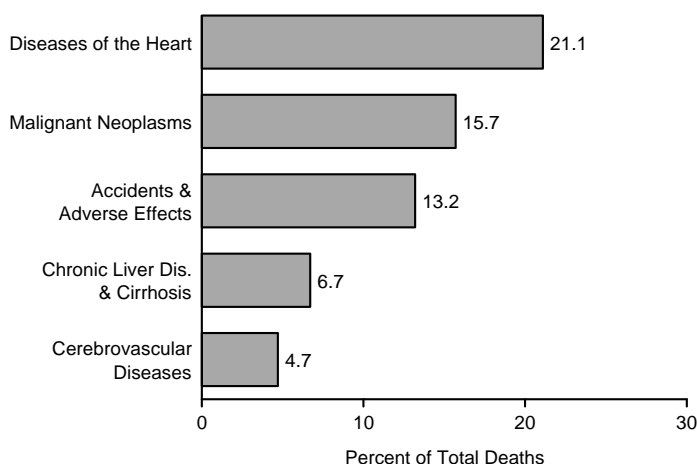


Chart 4.6 Leading Causes of Death

Alaska Area, Calendar Years 1991–1993

In 1991-1993, 20.2 percent of all deaths in the Alaska Area were caused by accidents and adverse effects. This was followed by malignant neoplasms at 16.6 percent.



Chart 4.7
Leading Causes of Death
 Albuquerque Area, Calendar Years 1991–1993

In 1991-1993, 16.4 percent of all deaths in the Albuquerque Area were caused by accidents and adverse effects. This was followed by diseases of the heart at 14.1 percent.

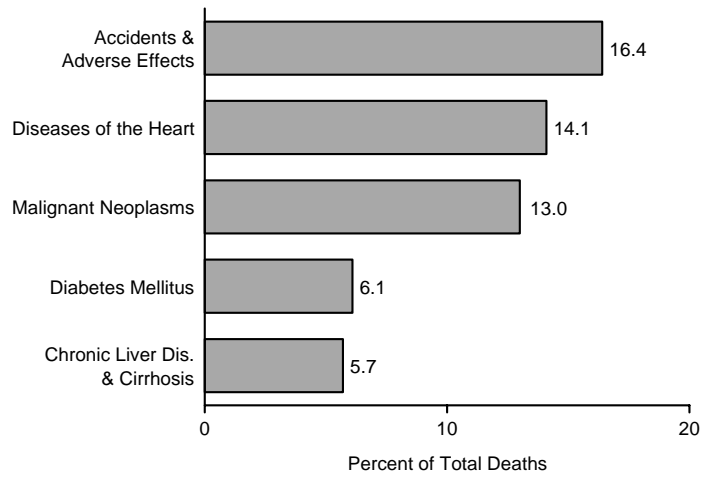


Chart 4.8
Leading Causes of Death
 Bemidji Area, Calendar Years 1991–1993

In 1991-1993, 27.3 percent of all deaths in the Bemidji Area were caused by diseases of the heart. This was followed by malignant neoplasms at 18.9 percent.

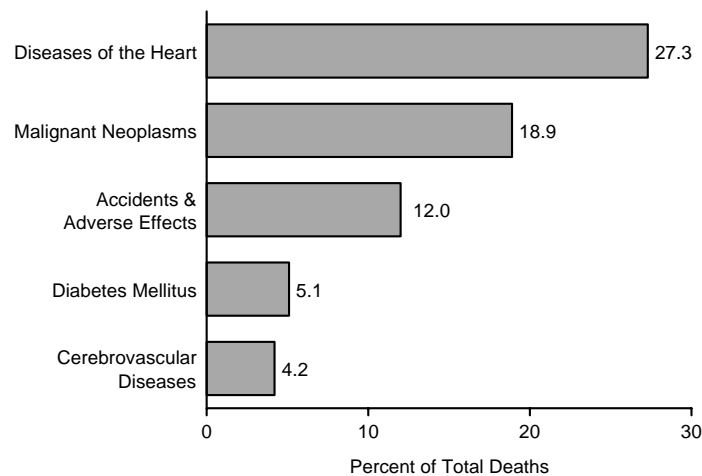


Chart 4.9 Leading Causes of Death

Billings Area, Calendar Years 1991–1993

In 1991-1993, 18.2 percent of all deaths in the Billings Area were caused by diseases of the heart. This was followed by malignant neoplasms at 16.1 percent.

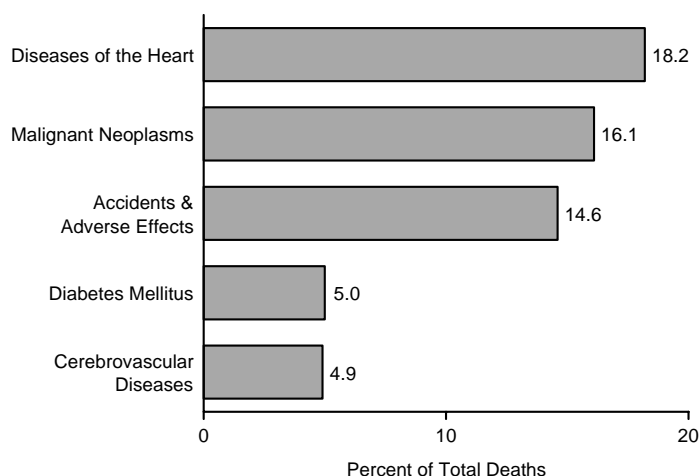


Chart 4.10 Leading Causes of Death

California Area, Calendar Years 1991–1993

In 1991-1993, 27.7 percent of all deaths in the California Area were caused by diseases of the heart. This was followed by malignant neoplasms at 15.4 percent.

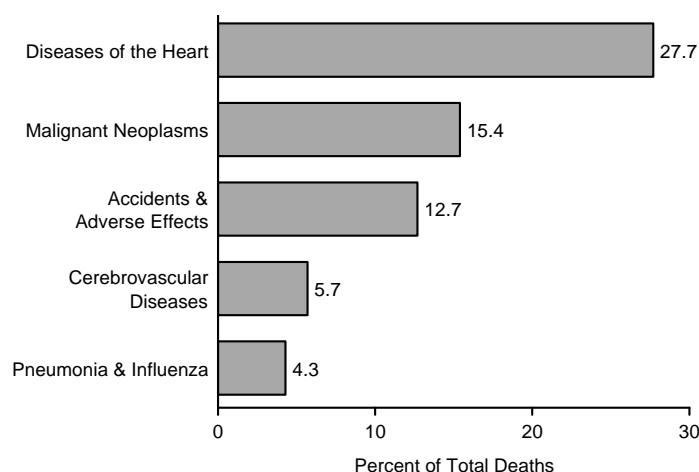


Chart 4.11 Leading Causes of Death

Nashville Area, Calendar Years 1991–1993

In 1991-1993, 27.0 percent of all deaths in the Nashville Area were caused by diseases of the heart. This was followed by malignant neoplasms at 16.4 percent.

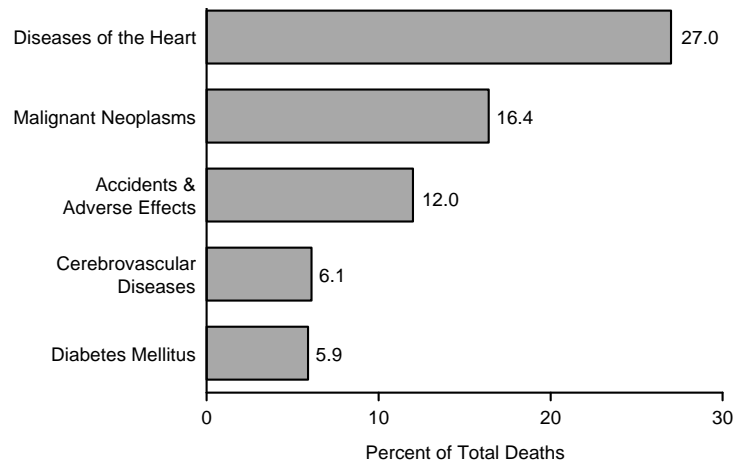


Chart 4.12 Leading Causes of Death

Navajo Area, Calendar Years 1991–1993

In 1991-1993, 22.0 percent of all deaths in the Navajo Area were caused by accidents and adverse effects. This was followed by diseases of the heart at 16.3 percent.

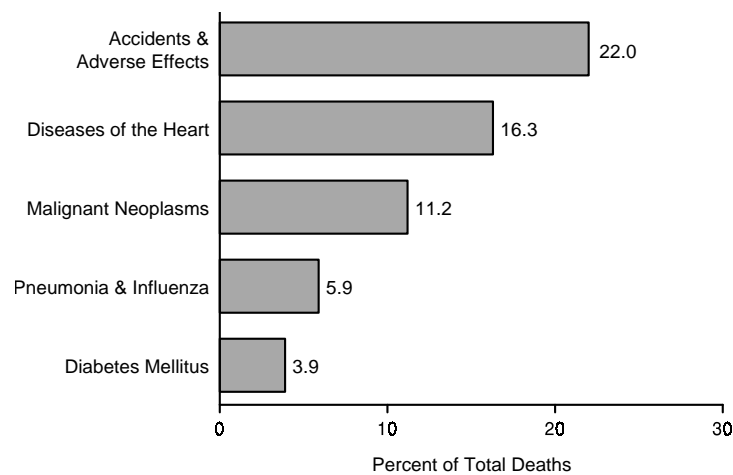


Chart 4.13 Leading Causes of Death

Oklahoma Area, Calendar Years 1991–1993

In 1991-1993, 32.4 percent of all deaths in the Oklahoma Area were caused by diseases of the heart. This was followed by malignant neoplasms at 18.9 percent.

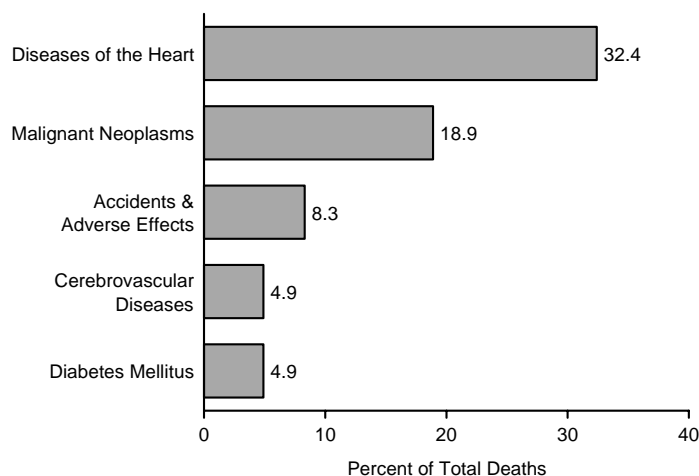


Chart 4.14 Leading Causes of Death

Phoenix Area, Calendar Years 1991–1993

In 1991-1993, 17.3 percent of all deaths in the Phoenix Area were caused by diseases of the heart. This was followed by accidents and adverse effects at 16.1 percent.

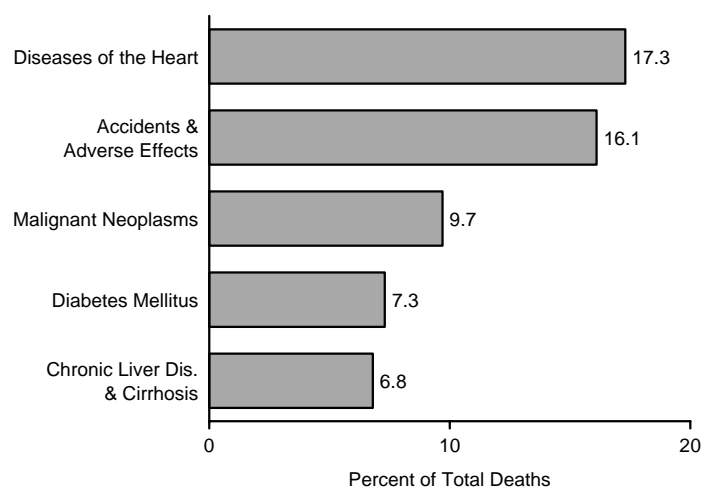


Chart 4.15 Leading Causes of Death

Portland Area, Calendar Years 1991–1993

In 1991-1993, 21.2 percent of all deaths in the Portland Area were caused by diseases of the heart. This was followed by malignant neoplasms at 17.5 percent.

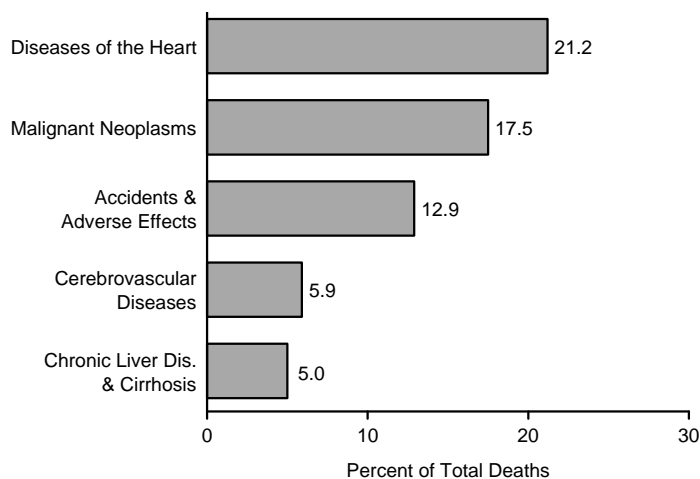


Chart 4.16 Leading Causes of Death

Tucson Area, Calendar Years 1991–1993

In 1991-1993, 15.4 percent of all deaths in the Tucson Area were caused by diseases of the heart. This was followed by accidents and adverse effects at 13.0 percent.

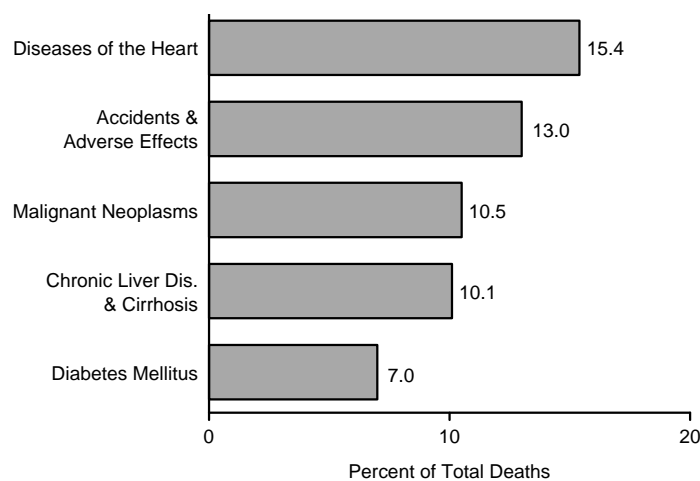


Chart 4.17 Age-Adjusted Injury and Poisoning Mortality Rates

Calendar Years 1991-1993

In 1991-1993, the age-adjusted injury and poisoning mortality rate for the IHS service area population was 116.3. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 153.8. This is nearly 3 times the U.S. All Races rate of 52.4 for 1992. Three Areas (Aberdeen, Navajo, and Alaska) had rates in the 185 to 190 range.

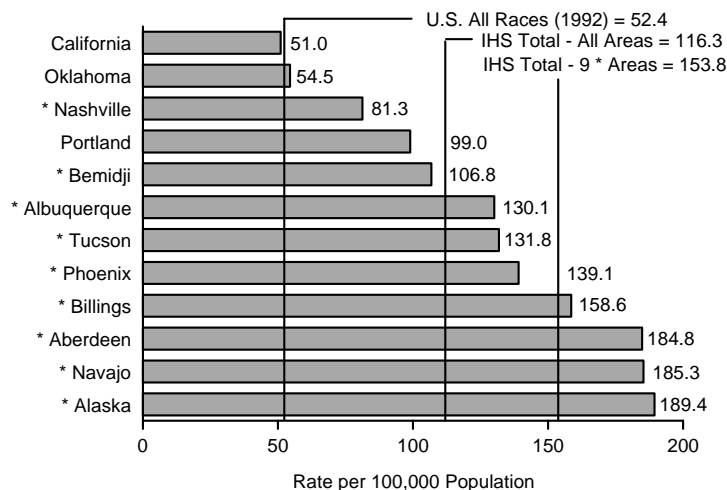


Table 4.17 Age-Adjusted Injury and Poisoning¹ Mortality Rates

Calendar Years 1991-1993

	Deaths ²	Rate ³
U.S. All Races (1992)	146,195	52.4
All IHS Areas	4,169	116.3
9* Areas ⁴	3,181	153.8
Aberdeen*	385	184.8
Alaska*	495	189.4
Albuquerque*	258	130.1
Bemidji*	194	106.8
Billings*	213	158.6
California	169	51.0
Nashville*	134	81.3
Navajo*	923	185.3
Oklahoma	430	54.5
Phoenix*	490	139.1
Portland	389	99.0
Tucson*	89	131.8

¹ Includes the following ICD-9 cause of death groups combined: 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. Injury resulting from operations of war-E990-E999.

² Includes deaths with age not reported. For IHS, includes Albuquerque-1 death, Navajo-2 deaths, Oklahoma-3 deaths, and Phoenix-1 death.

³ Age-adjusted rate per 100,000 population.

⁴ The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.



Chart 4.18
Age-Adjusted Accident Mortality Rates
 Calendar Years 1991–1993

In 1991–1993, the age-adjusted accident mortality rate for the IHS service area population was 83.4. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 112.4. This is 282 percent higher than the U.S. All Races rate of 29.4 for 1992. The Navajo Area had the highest rate (143.4), and the Alaska Area was second (138.0). For the IHS service area, 23.4 percent of the motor vehicle accident deaths were pedestrian-related compared to 15.6 percent for the U.S. All Races population.

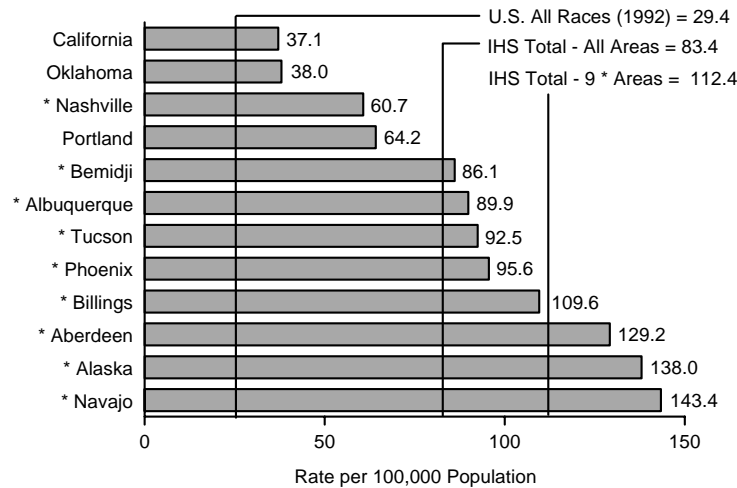


Table 4.18
Age-Adjusted Accident Mortality Rates
 Calendar Years 1991–1993

	Motor Vehicle Accidents							
					Pedestrian-related ¹			
	All Accidents		Totals		Percent of Motor Vehicle Accident		Other Accidents	
	Deaths	Rate ²	Deaths	Rate ²	Deaths	Deaths	Deaths	Rate ²
U.S. All Races (1992)	86,777	29.4	40,982	15.8	6,378	15.6%	45,795	13.7
All IHS Areas	2,970	83.4	1,664	47.0	390	23.4%	1,308	36.4
9* Areas ³	2,297	112.4	1,282	62.6	324	25.3%	1,016	49.7
Aberdeen*	261	129.2	155	77.6	31	20.0%	106	51.6
Alaska*	360	138.0	82	31.4	27	32.9%	278	106.6
Albuquerque*	175	89.9	118	58.3	39	33.1%	57	31.5
Bemidji*	156	86.1	93	52.3	15	16.1%	63	33.8
Billings*	146	109.6	92	69.6	11	12.0%	54	40.0
California	123	37.1	69	20.8	15	21.7%	54	16.3
Nashville*	102	60.7	67	40.8	16	23.9%	35	20.0
Navajo*	705	143.4	429	85.9	133	31.0%	277	57.4
Oklahoma	302	38.0	180	23.0	33	18.3%	123	14.9
Phoenix*	333	95.6	210	60.1	45	21.4%	123	35.4
Portland	248	64.2	133	34.5	18	13.5%	115	29.8
Tucson*	59	92.5	36	53.6	7	19.4%	23	38.9

¹ Includes motor vehicle accidents having ICD-9 codes E810-E825 with a fourth digit code .7. The fourth digit code .7 indicates that a pedestrian was the subject decedent as a result of the motor vehicle accident.

² Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

³ The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.19 Age-Adjusted Suicide Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted suicide mortality rate for the IHS service area population was 16.2. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 21.0. This is 89 percent higher than the U.S. All Races rate of 11.1 for 1992. Four Areas (Alaska, Aberdeen, Albuquerque, and Billings) had rates more than double the U.S. rate.

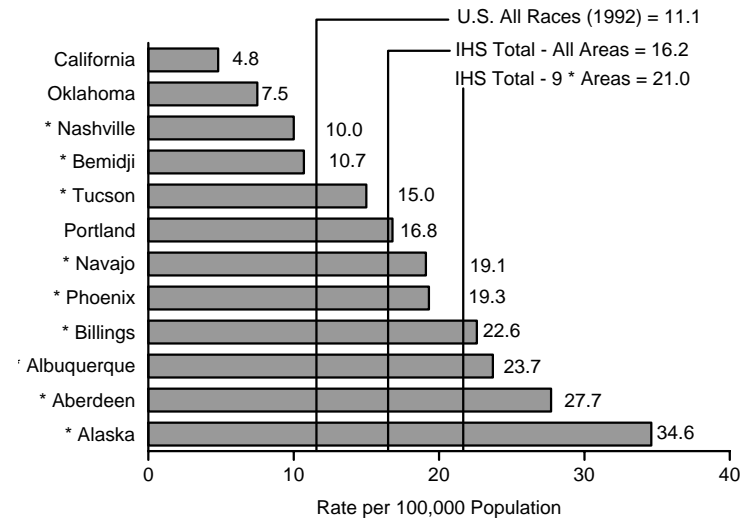


Table 4.19 Age-Adjusted Suicide Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	30,484	11.1
All IHS Areas	581	16.2
9* Areas ²	443	21.0
Aberdeen*	61	27.7
Alaska*	90	34.6
Albuquerque*	49	23.7
Bemidji*	20	10.7
Billings*	30	22.6
California	15	4.8
Nashville*	16	10.0
Navajo*	99	19.1
Oklahoma	58	7.5
Phoenix*	67	19.3
Portland	65	16.8
Tucson*	11	15.0

¹ Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.20 Age-Adjusted Homicide Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted homicide mortality rate for the IHS service area population was 14.6. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 17.6. This is 68 percent higher than the U.S. All Races rate of 10.5 for 1992. The Aberdeen Area rate of 24.7 was 2.4 times the U.S. rate.

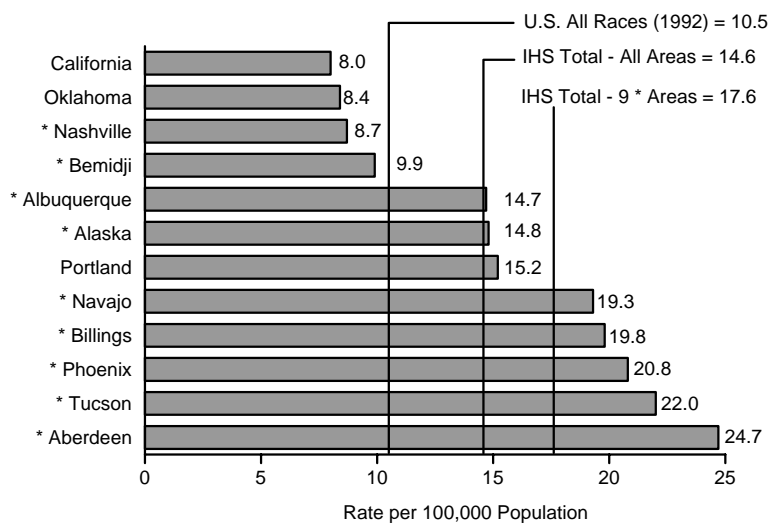


Table 4.20 Age-Adjusted Homicide Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	25,488	10.5
All IHS Areas	535	14.6
9* Areas ²	381	17.6
Aberdeen*	57	24.7
Alaska*	41	14.8
Albuquerque*	29	14.7
Bemidji*	18	9.9
Billings*	29	19.8
California	27	8.0
Nashville*	13	8.7
Navajo*	99	19.3
Oklahoma	63	8.4
Phoenix*	78	20.8
Portland	64	15.2
Tucson*	17	22.0

¹ Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Note: Includes deaths due to homicide and legal intervention.



Chart 4.21

Age-Adjusted Mortality Rates for Injury and Poisoning Deaths Due to Other Causes

Calendar Years 1991–1993

In 1991–1993 for the IHS service area population, the age-adjusted mortality rate for injury and poisoning deaths due to other causes was 2.2. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 2.8. This is 2.5 times the U.S. All Races rate of 1.1 for 1992. The Area rates should be interpreted with caution because of the small number of deaths involved.

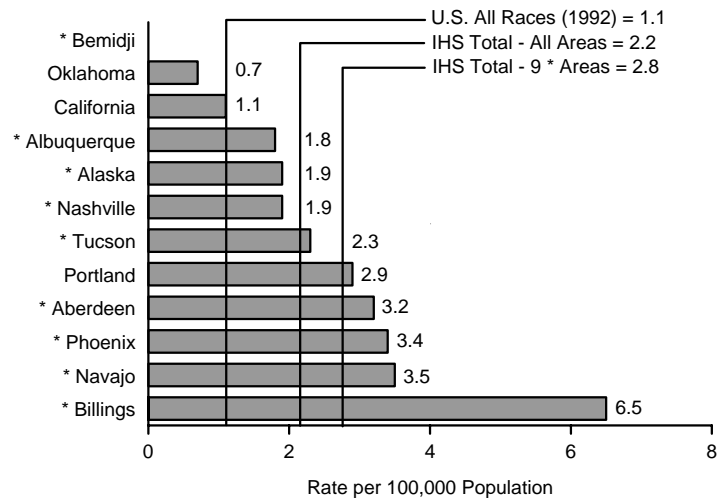


Table 4.21

Age-Adjusted Mortality Rates for Injury and Poisoning Deaths Due to Other Causes¹

Calendar Years 1991–1993



	Deaths	Rate ²
U.S. All Races (1992)	2,906	1.1
All IHS Areas	81	2.2
9* Areas ³	59	2.8
Aberdeen*	6	3.2
Alaska*	4	1.9
Albuquerque*	5	1.8
Bemidji*	—	—
Billings*	8	6.5
California	4	1.1
Nashville*	3	1.9
Navajo*	19	3.5
Oklahoma	6	0.7
Phoenix*	12	3.4
Portland	12	2.9
Tucson*	2	2.3

¹ Includes the following ICD-9 cause of death groups combined: Injury undetermined whether accidentally or purposely inflicted-E980-E989. Injury resulting from operations of war-E990-E999 (there were 11 deaths due to this cause for the U.S. All Races during 1992 and 0 deaths for the American Indian and Alaska Native population in the IHS service area, 1991–1993).

² Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

³ The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.22 Age-Adjusted Alcoholism Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted alcoholism mortality rate for the IHS service area population was 38.4. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 54.6. This is 703 percent higher than the U.S. All Races rate of 6.8 for 1992. The Aberdeen Area rate of 98.0 was over 14 times the U.S. rate.

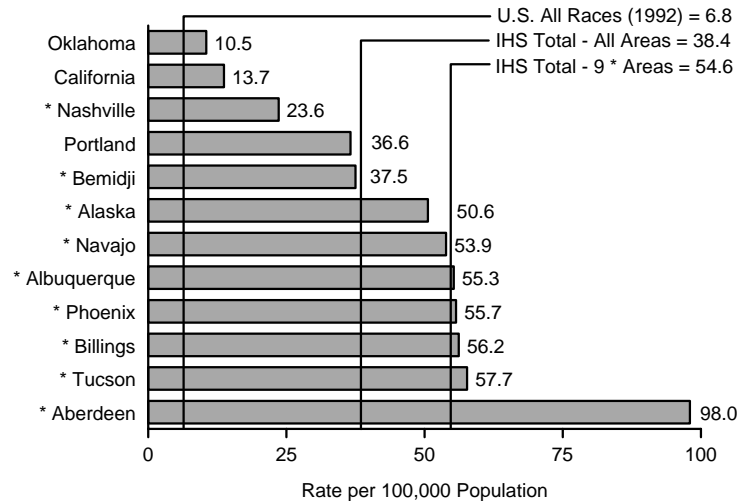


Table 4.22 Age-Adjusted Alcoholism Mortality Rates

Calendar Years 1991–1993

	All Causes	Number of Deaths and ICD-9 Causes of Death Group								Rate ¹
		291	303	305.0	425.5	535.3	571.0–571.3	790.3	E860	
U.S. All Races (1992)	19,438	385	5,225	792	879	63	11,881	34	179	6.8
All IHS Areas	1,164	13	317	121	25	7	626	13	42	38.4
9* Areas ²	934	9	257	105	19	4	495	13	32	54.6
Aberdeen*	160	—	38	11	4	—	105	—	2	98.0
Alaska*	113	1	20	29	7	1	39	13	3	50.6
Albuquerque*	91	2	30	7	1	—	47	—	4	55.3
Bemidji*	53	2	17	2	1	1	26	—	4	37.5
Billings*	62	1	19	1	2	—	39	—	—	56.2
California	38	—	14	2	—	—	22	—	—	13.7
Nashville*	34	—	6	2	—	1	25	—	—	23.6
Navajo*	231	2	77	40	3	1	93	—	15	53.9
Oklahoma	74	1	13	8	1	1	47	—	3	10.5
Phoenix*	154	1	43	12	1	—	93	—	4	55.7
Portland	118	3	33	6	5	2	62	—	7	36.6
Tucson*	36	—	7	1	—	—	28	—	—	57.7

¹ Age-adjusted rate per 100,000 population. The rate computation excludes 0 IHS All Area and 10 U.S. All Races deaths with age not reported. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

291—Alcoholic Psychoses; 303—Alcoholic Dependence Syndrome; 305.0—Alcohol Overdose; 357.5—Alcoholic Polyneuropathy; 425.5—Alcoholic Cardiomyopathy; 535.3—Alcoholic Gastritis; 571.0–571.3—Alcoholic Liver Disease; 790.3—Elevated Blood-Alcohol Level; E860—Accidental Poisoning by Alcohol, not elsewhere classified. There were no deaths in the IHS Area (1991–93) for 357.5—Alcoholic Polyneuropathy.

Chart 4.23

Age-Adjusted Diabetes Mellitus Mortality Rates

Calendar Years 1991–1993

In 1991-1993, the age-adjusted diabetes mortality rate for the IHS service area population was 31.7. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 41.4. This is 248 percent higher than the U.S. All Races rate of 11.9 for 1992. All of the IHS Areas had a rate greater than the U.S. rate.

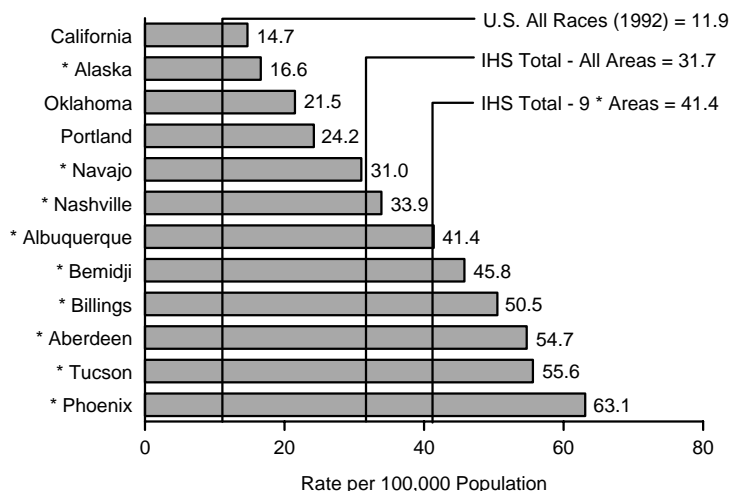


Table 4.23

Age-Adjusted Diabetes Mellitus Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	50,067	11.9
All IHS Areas	953	31.7
9* Areas ²	668	41.4
Aberdeen*	93	54.7
Alaska*	34	16.6
Albuquerque*	65	41.4
Bemidji*	67	45.8
Billings*	50	50.5
California	39	14.7
Nashville*	50	33.9
Navajo*	126	31.0
Oklahoma	177	21.5
Phoenix*	151	63.1
Portland	69	24.2
Tucson*	32	55.6

¹ Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.24

Age-Adjusted Tuberculosis Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted tuberculosis mortality rate for the IHS service area population was 2.1. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 2.5. This is over 6 times the U.S. All Races rate of 0.4 for 1992. The Area rates should be interpreted with caution because of the small number of deaths involved. The Navajo and Oklahoma Areas had the most deaths over the 3-year period with 18 and 11, respectively.

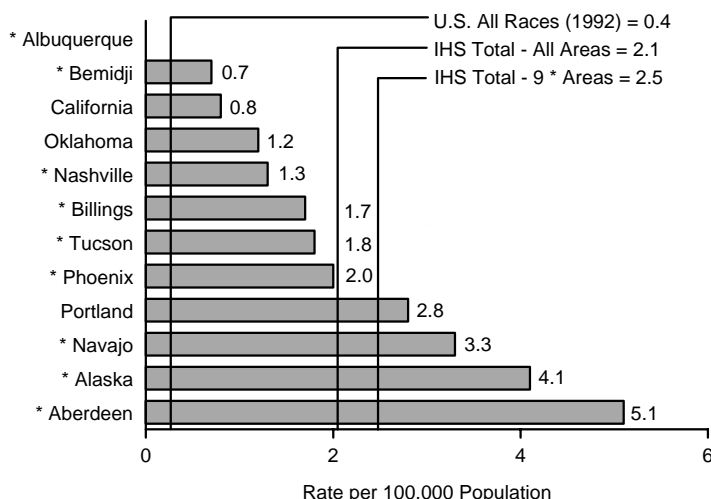


Table 4.24

Age-Adjusted Tuberculosis Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	1,705	0.4
All IHS Areas	68	2.1
9* Areas ²	47	2.5
Aberdeen*	9	5.1
Alaska*	9	4.1
Albuquerque*	—	—
Bemidji*	1	0.7
Billings*	2	1.7
California	2	0.8
Nashville*	2	1.3
Navajo*	18	3.3
Oklahoma	11	1.2
Phoenix*	5	2.0
Portland	8	2.8
Tucson*	1	1.8

¹ Rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.



Chart 4.25 Age-Adjusted Gastrointestinal Diseases Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted gastrointestinal diseases mortality rate for the IHS service area population was 1.5. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 1.9. This is 46 percent greater than the U.S. All Races rate for 1992 (1.3). The Area rates should be interpreted with caution because of the small number of deaths involved. The Navajo and Alaska Areas had the most deaths over the 3-year period (10 and 9, respectively).

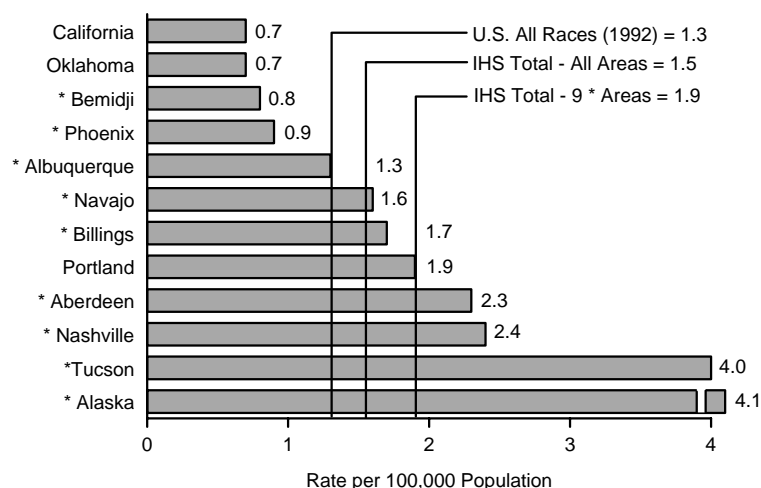


Table 4.25 Age-Adjusted Gastrointestinal Diseases Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	6,338	1.3
All IHS Areas	53	1.5
9* Areas ²	39	1.9
Aberdeen*	5	2.3
Alaska*	9	4.1
Albuquerque*	3	1.3
Bemidji*	1	0.8
Billings*	2	1.7
California	2	0.7
Nashville*	4	2.4
Navajo*	10	1.6
Oklahoma	6	0.7
Phoenix*	3	0.9
Portland	6	1.9
Tucson*	2	4.0

¹ Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.26 Age-Adjusted Diseases of the Heart Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted diseases of the heart mortality rate for the IHS service area population was 132.4. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 143.3. This is essentially the same as the U.S. All Races rate in 1992, i.e., 144.3. The Albuquerque, Tucson, and Navajo Area rates are well below the U.S. rate.

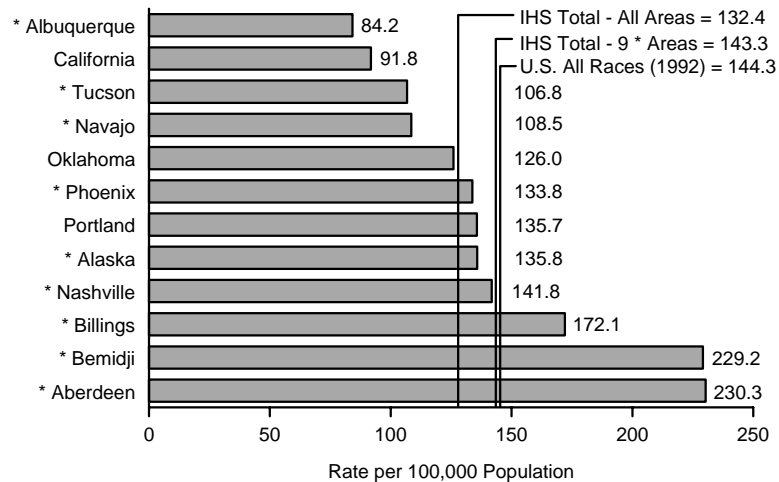


Table 4.26 Age-Adjusted Diseases of the Heart Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	717,706	144.3
All IHS Areas	4,422	132.4
9* Areas ²	2,569	143.3
Aberdeen*	419	230.3
Alaska*	283	135.8
Albuquerque*	150	84.2
Bemidji*	356	229.2
Billings*	181	172.1
California	268	91.8
Nashville*	229	141.8
Navajo*	524	108.5
Oklahoma	1,178	126.0
Phoenix*	357	133.8
Portland	407	135.7
Tucson*	70	106.8

¹ Age-adjusted rate per 100,000 population.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.27

Age-Adjusted Cerebrovascular Diseases Mortality Rates

Calendar Years 1991–1993

In 1991-1993, the age-adjusted cerebrovascular diseases mortality rate for the IHS service area population was 25.3. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 29.0. This is 11 percent higher than the U.S. All Races rate of 26.2 for 1992. The Billings Area rate of 44.7 was 2.3 times the Navajo Area rate of 19.8.

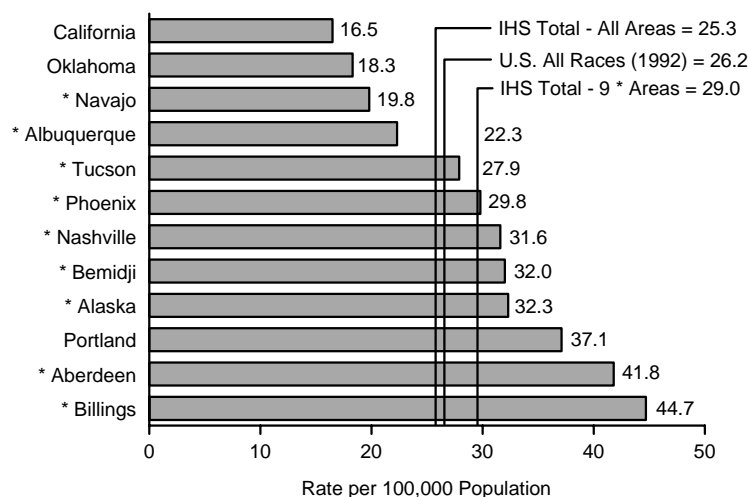


Table 4.27

Age-Adjusted Cerebrovascular Diseases Mortality Rates

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	143,769	26.2
All IHS Areas	887	25.3
9* Areas ²	539	29.0
Aberdeen*	76	41.8
Alaska*	68	32.3
Albuquerque*	45	22.3
Bemidji*	55	32.0
Billings*	49	44.7
California	55	16.5
Nashville*	52	31.6
Navajo*	96	19.8
Oklahoma	180	18.3
Phoenix*	80	29.8
Portland	113	37.1
Tucson*	18	27.9

¹ Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.28 Age-Adjusted Malignant Neoplasm Mortality Rates

Calendar Years 1991–1993

In 1991–1993, the age-adjusted malignant neoplasm mortality rate for the IHS service area population was 98.8. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 113.4. This is 15 percent less than the U.S. All Races rate of 133.1 for 1992. However, the northern IHS Areas (excluding Portland), Aberdeen, Bemidji, Billings, and Alaska, had rates greater than the U.S. rate. The recent increase in northern cancers is believed to be almost entirely related to tobacco, although a minor factor may be the high fat content in the northern diet.

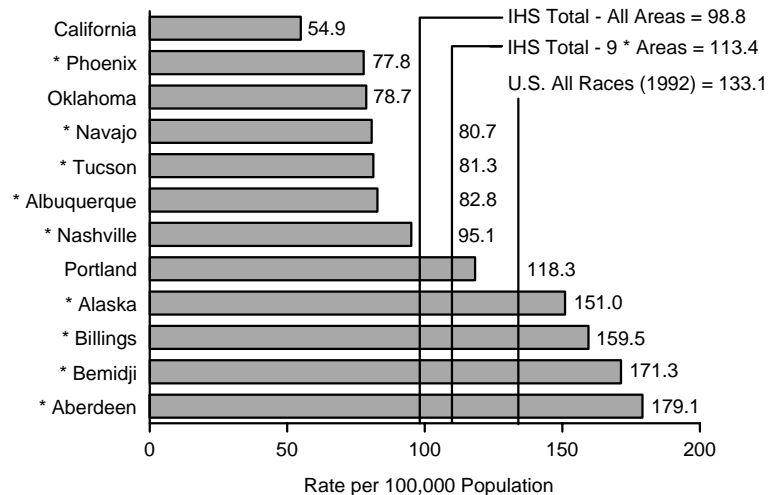


Table 4.28 **Age-Adjusted Malignant Neoplasm** **Mortality Rates**

Calendar Years 1991–1993

	Deaths	Rate ¹
U.S. All Races (1992)	520,578	133.1
All IHS Areas	3,071	98.8
9* Areas ²	1,899	113.4
Aberdeen*	311	179.1
Alaska*	296	151.0
Albuquerque*	138	82.8
Bemidji*	246	171.3
Billings*	161	159.5
California	149	54.9
Nashville*	139	95.1
Navajo*	359	80.7
Oklahoma	686	78.7
Phoenix*	201	77.8
Portland	337	118.3
Tucson*	48	81.3

¹ Age-adjusted rate per 100,000 population.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.



Chart 4.29

Age-Adjusted Breast Cancer Mortality Rates for Females

Calendar Years 1991–1993

In 1991–1993, the age-adjusted breast cancer mortality rate for females in the IHS service area population was 12.3. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 12.9. This is 42 percent less than the U.S. All Races rate of 22.4 for 1992. The Aberdeen Area rate of 24.6 exceeds the U.S. rate.

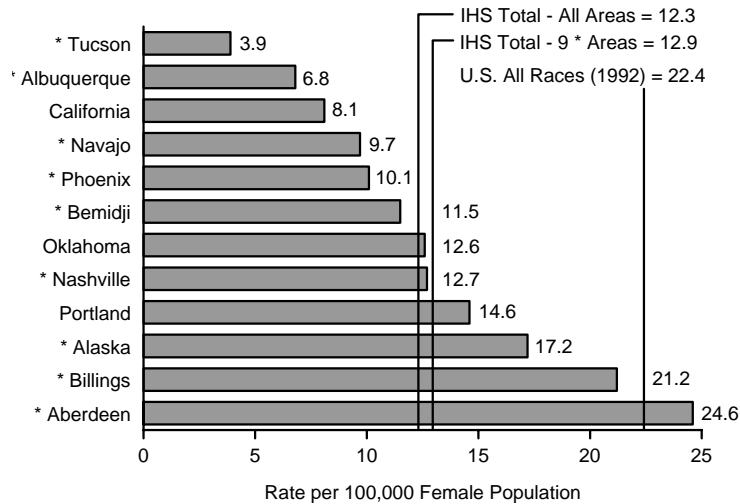


Table 4.29

Age-Adjusted Breast Cancer Mortality Rates For Females

Calendar Years 1991–1993

	Total Deaths	Rate ¹
U.S. All Races (1992)	43,098	22.4
All IHS Areas	201	12.3
9* Areas ²	116	12.9
Aberdeen*	24	24.6
Alaska*	17	17.2
Albuquerque*	7	6.8
Bemidji*	9	11.5
Billings*	12	21.2
California	12	8.1
Nashville*	10	12.7
Navajo*	22	9.7
Oklahoma	50	12.6
Phoenix*	14	10.1
Portland	23	14.6
Tucson*	1	3.9

¹ Age-adjusted rate per 100,000 female population. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.30

Age-Adjusted Cervical Cancer Mortality Rates for Females

Calendar Years 1991–1993

In 1991–1993, the age-adjusted cervical cancer mortality rate for females in the IHS service area population was 4.3. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate is 5.2. This is nearly double the U.S. All Races rate of 2.7 for 1992. The Area rates should be interpreted with caution because of the small number of deaths involved. Navajo had the highest number of deaths (14) over the 3-year period, followed closely by Aberdeen and Oklahoma, each with 13.

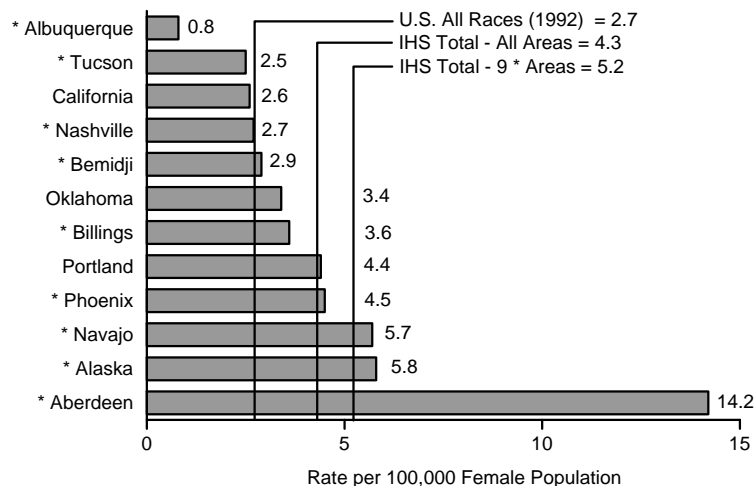


Table 4.30

Age-Adjusted Cervical Cancer Mortality Rates For Females

Calendar Years 1991–1993

	Total Deaths	Rate ¹
U.S. All Races (1992)	4,641	2.7
All IHS Areas	72	4.3
9* Areas ²	48	5.2
Aberdeen*	13	14.2
Alaska*	6	5.8
Albuquerque*	1	0.8
Bemidji*	2	2.9
Billings*	2	3.6
California	4	2.6
Nashville*	2	2.7
Navajo*	14	5.7
Oklahoma	13	3.4
Phoenix*	7	4.5
Portland	7	4.4
Tucson*	1	2.5

¹ Age-adjusted rate per 100,000 female population. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

Chart 4.31 **Age-Adjusted Human** **Immunodeficiency Virus (HIV)** **Infection Mortality Rates**

Calendar Years 1991–1993

In 1991-1993, the age-adjusted human immunodeficiency virus (HIV) infection mortality rate for the IHS service area population was 2.7. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the rate drops to 2.5. This is because the rate of HIV deaths is relatively high in the Portland (5.0) and California (3.1) Areas even with the death certificate problem. The IHS rate (total or 9 Area) is about 80 percent less than the 1992 U.S. rate of 12.6. The Area rates should be interpreted with caution because of the small number of deaths involved.

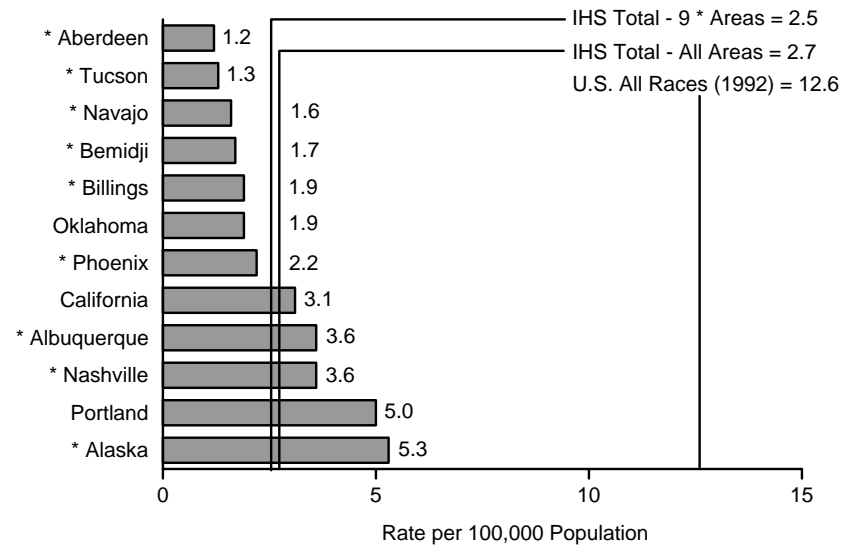


Table 4.31 **Age-Adjusted Human** **Immunodeficiency Virus (HIV)** **Infection Mortality Rates**

Calendar Years 1991–1993

	Total Deaths	Rate ¹
U.S. All Races (1992)	33,566	12.6
All IHS Areas	97	2.7
9* Areas ²	52	2.5
Aberdeen*	2	1.2
Alaska*	14	5.3
Albuquerque*	7	3.6
Bemidji*	3	1.7
Billings*	3	1.9
California	10	3.1
Nashville*	6	3.6
Navajo*	8	1.6
Oklahoma	15	1.9
Phoenix*	8	2.2
Portland	20	5.0
Tucson*	1	1.3

¹ Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

² The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.



Chart 4.32

Life Expectancy at Birth, Both Sexes

Calendar Years 1991–1993

In 1991–1993, the life expectancy at birth (both sexes) for the IHS service area population was 73.2 years. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the life expectancy is 70.2 years. This is 5.6 years less than the 1992 figure of 75.8 for the U.S. All Races population.

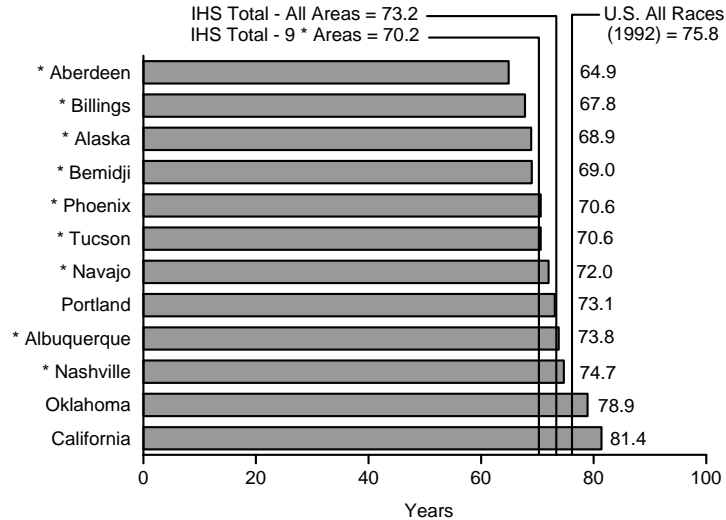


Chart 4.33

Life Expectancy at Birth, Males

Calendar Years 1991–1993

In 1991–1993, the life expectancy at birth for males in the IHS service area population was 69.3 years. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the life expectancy is 66.1 years. This is 6.2 years less than the 1992 figure of 72.3 years for the U.S. All Races male population.

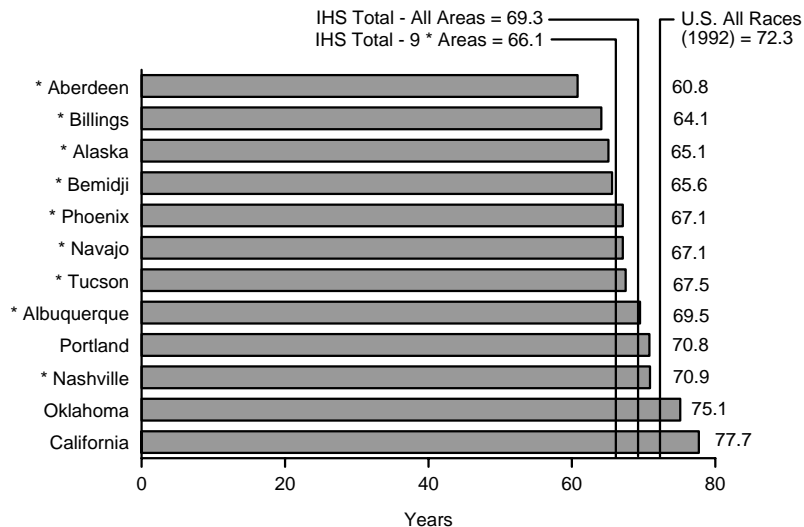
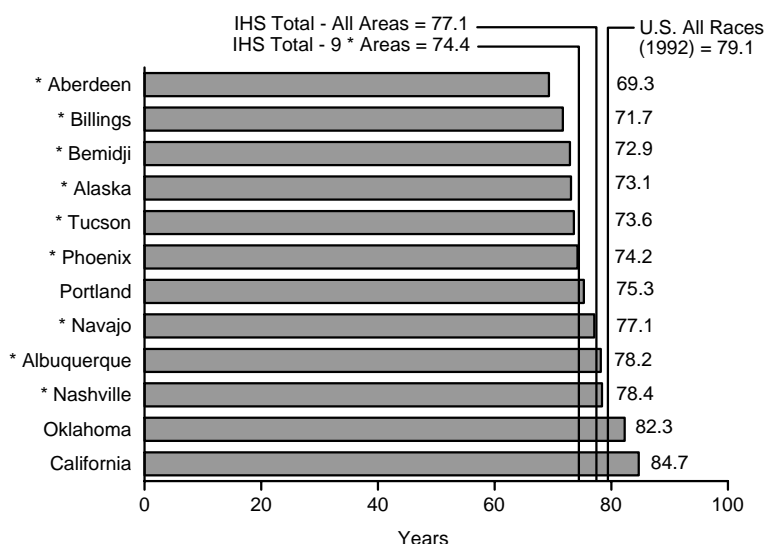


Chart 4.34
Life Expectancy at Birth, Females
 Calendar Years 1991–1993

In 1991-1993, the life expectancy at birth for females in the IHS service area population was 77.1 years. When the 3 IHS Areas with apparent problems in underreporting of Indian race on death certificates are excluded, the life expectancy is 74.4 years. This is 4.7 years less than the 1992 figure of 79.1 years for the U.S. All Races female population.



PART V—Patient Care Statistics

Chart 5.1
Number of Admissions, FY 1994

In FY 1994, there were about 91,000 admissions to IHS and Tribal direct and contract general hospitals. Approximately 39 percent of these admissions were in 2 IHS Areas, Navajo (20,842) and Oklahoma (14,647).

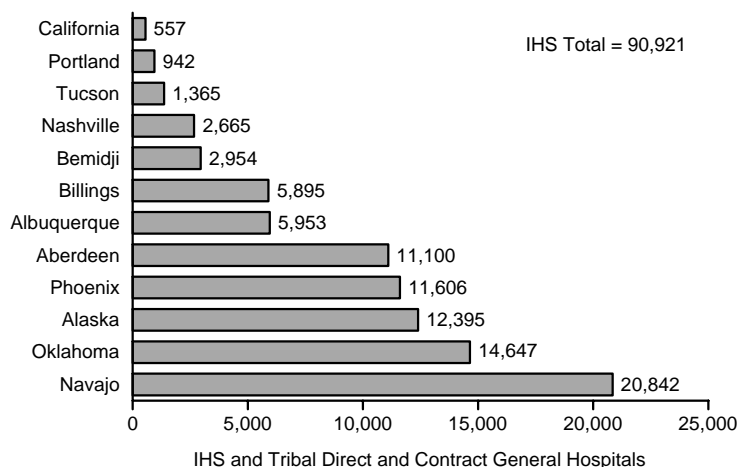


Chart 5.2
Hospital Admission Rates, FY 1994

The IHS admission rate of 742.9 admissions per 10,000 user population in FY 1994 was 38 percent lower than the U.S. rate of 1,191.2 in CY 1994. The IHS Area rates ranged from 87.9 in California, where the IHS provides little inpatient care, to 1,268.1 in Alaska.

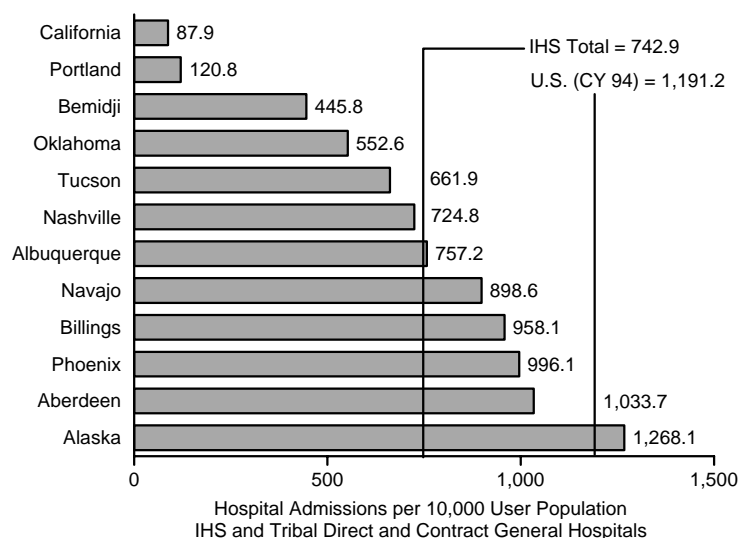


Table 5.1

Number and Rate of Admissions

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1994

U.S. Short-Stay Community Hospitals, CY 1994

	Total admission rate ¹	Total admissions	IHS admissions		Tribal admissions	
			Direct	Contract	Direct	Contract
U.S. All Races	1,191.2	30,843 ²				
All IHS Areas	742.9	90,921	60,950	16,458	8,411	5,102
Aberdeen	1,033.7	11,100	7,146	3,768	—	186
Alaska	1,268.1	12,395	5,472	222	5,632	1,069
Albuquerque	757.2	5,953	4,618	1,335	—	—
Bemidji	445.8	2,954	1,085	408	—	1,461
Billings	958.1	5,895	3,077	2,429	—	389
California	87.9	557	—	—	—	557
Nashville	724.8	2,665	851	219	914	681
Navajo	898.6	20,842	18,850	1,992	—	—
Oklahoma	552.6	14,647	9,451	3,032	1,865	299
Phoenix	996.1	11,606	9,730	1,808	—	68
Portland	120.8	942	—	942	—	—
Tucson	661.9	1,365	670	303	—	392

¹ Number of admissions per 10,000 populations.

² Number of admissions in thousands.

Sources: IHS Direct: Monthly Report of Inpatient Services

IHS Contract: Contract Statistical System (Report 3I)

Tribal Direct: Monthly Report of Inpatient Services

Tribal Contract: IHS Area Submissions

U.S.: Unpublished Data, NCHS Hospital Discharge Survey Branch



Chart 5.3

Number of Hospital Days, FY 1994

The number of inpatient days in IHS and Tribal direct and contract general hospitals was about 397,000 in FY 1994. The number varied considerably among the IHS Areas, ranging from 2,734 in California to 79,830 in Navajo.

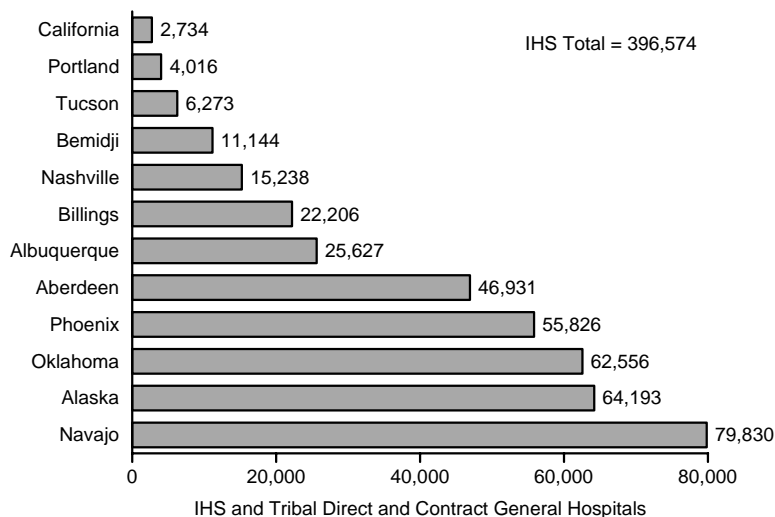


Table 5.3

Number of Hospital Days

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1994



	Total days	IHS days		Tribal days	
		Direct	Contract	Direct	Contract
All IHS Areas	396,574	258,604	80,254	36,508	21,208
Aberdeen	46,931	28,243	17,936	—	752
Alaska	64,193	35,552	1,247	23,972	3,422
Albuquerque	25,627	20,191	5,436	—	—
Bemidji	11,144	3,900	1,658	—	5,586
Billings	22,206	9,204	11,531	—	1,471
California	2,734	—	—	—	2,734
Nashville	15,238	5,135	1,094	5,033	3,976
Navajo	79,830	69,883	9,947	—	—
Oklahoma	62,556	35,323	17,675	7,503	2,055
Phoenix	55,826	47,047	8,624	—	155
Portland	4,016	—	4,016	—	—
Tucson	6,273	4,126	1,090	—	1,057

Sources: IHS Direct: Monthly Report of Inpatient Services
 IHS Contract: Contract Statistical System (Report 3I)
 Tribal Direct: Monthly Report of Inpatient Services
 Tribal Contract: IHS Area Submissions

Chart 5.4 Leading Causes of Hospitalization

All IHS Areas, FY 1994

In FY 1994, 18.1 percent of all discharges from IHS 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 at 13.2 percent.

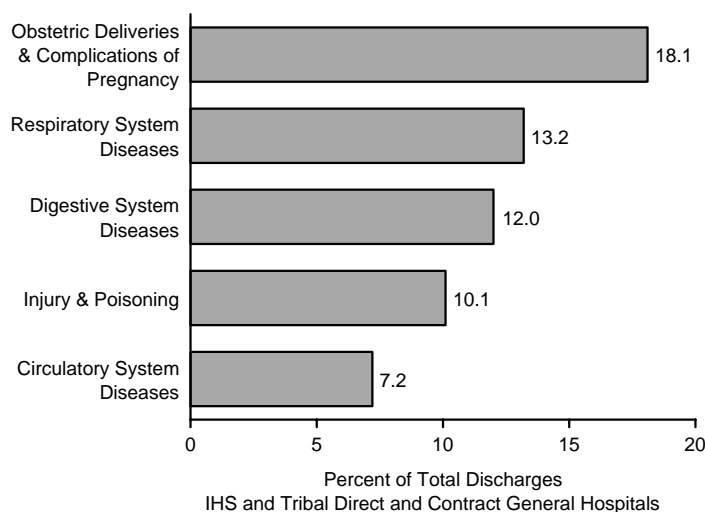


Chart 5.5 Leading Causes of Hospitalization

Aberdeen Area, FY 1994

For the Aberdeen Area in FY 1994, 15.1 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by injury and poisoning at 12.3 percent.

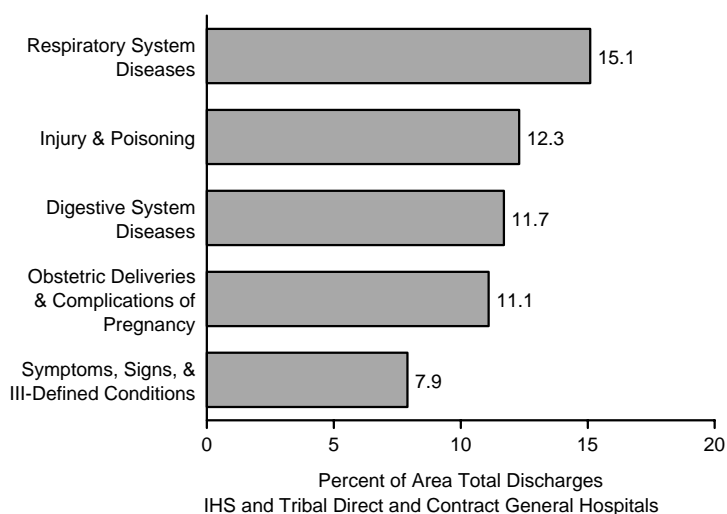


Chart 5.6 Leading Causes of Hospitalization

Alaska Area, FY 1994

For the Alaska Area in FY 1994, 20.4 percent of all discharges from IHS 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 12.8 percent.

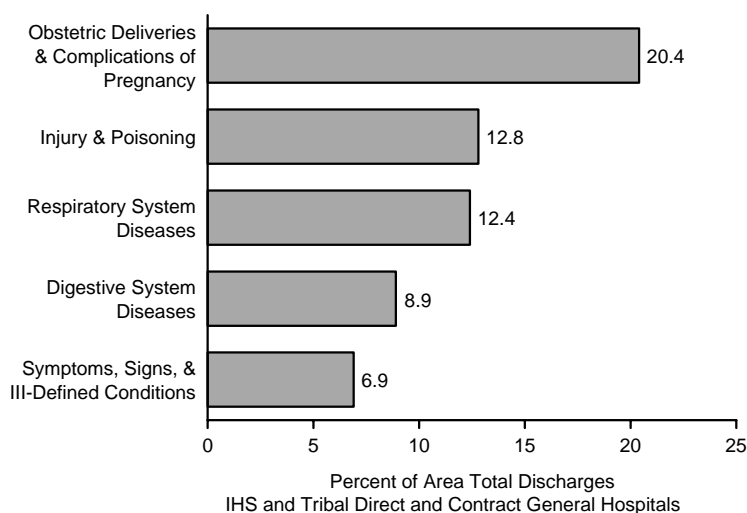


Chart 5.7 Leading Causes of Hospitalization

Albuquerque Area, FY 1994

For the Albuquerque Area in FY 1994, 15.8 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to digestive system diseases. This was followed by obstetric deliveries and complications of pregnancy and the puerperium at 12.6 percent.

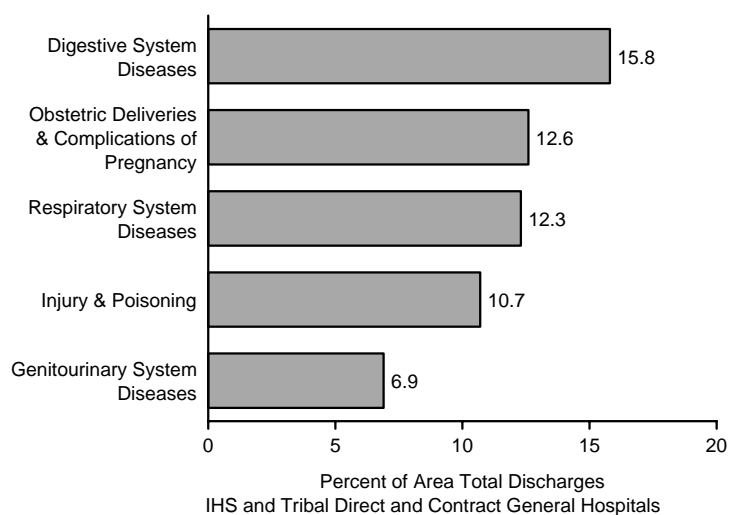


Chart 5.8 Leading Causes of Hospitalization

Bemidji Area, FY 1994

For the Bemidji Area in FY 1994, 15.7 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by circulatory system diseases at 13.7 percent.

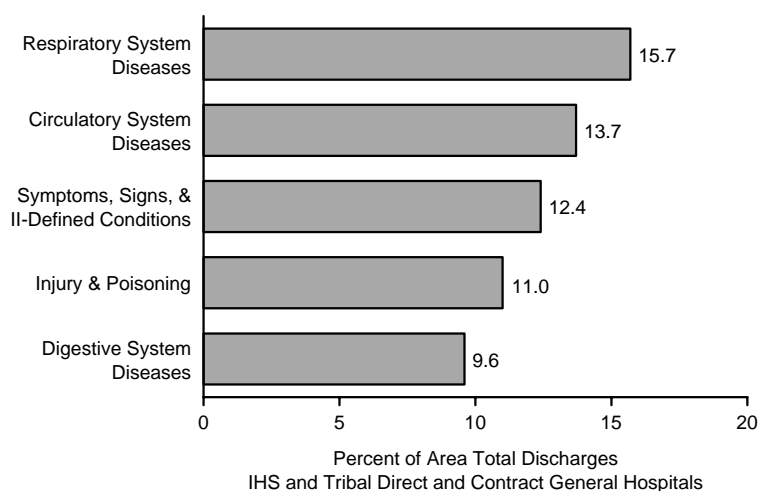


Chart 5.9 Leading Causes of Hospitalization

Billings Area, FY 1994

For the Billings Area in FY 1994, 15.8 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by injury and poisoning at 12.6 percent.

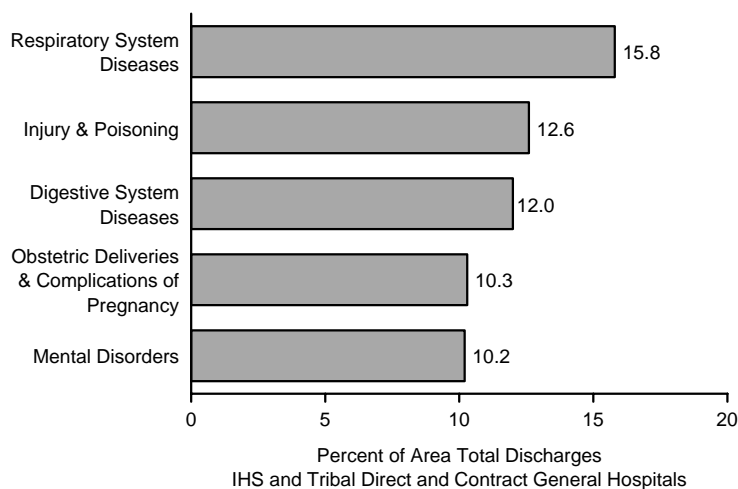


Chart 5.10
Leading Causes of Hospitalization
 California Area, FY 1994

For the California Area in FY 1994, 11.8 percent of all discharges from Tribal contract health service hospitals pertained to digestive system diseases. This was followed by injury and poisoning at 11.6 percent.

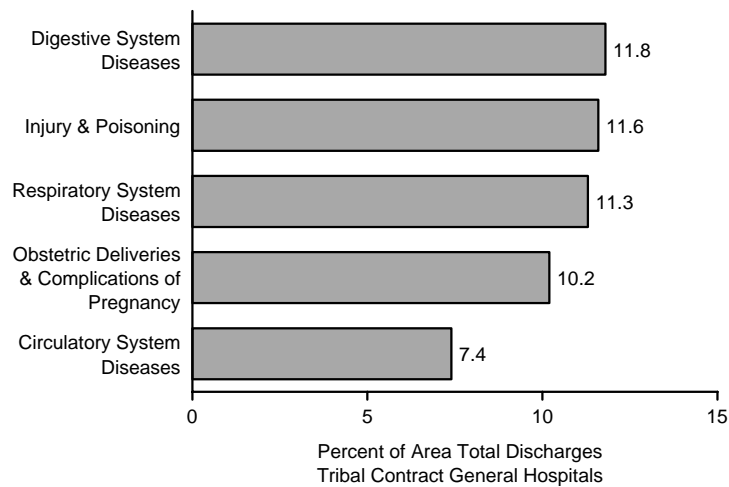


Chart 5.11
Leading Causes of Hospitalization
 Nashville Area, FY 1994

For the Nashville Area in FY 1994, 13.6 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by mental disorders at 13.3 percent.

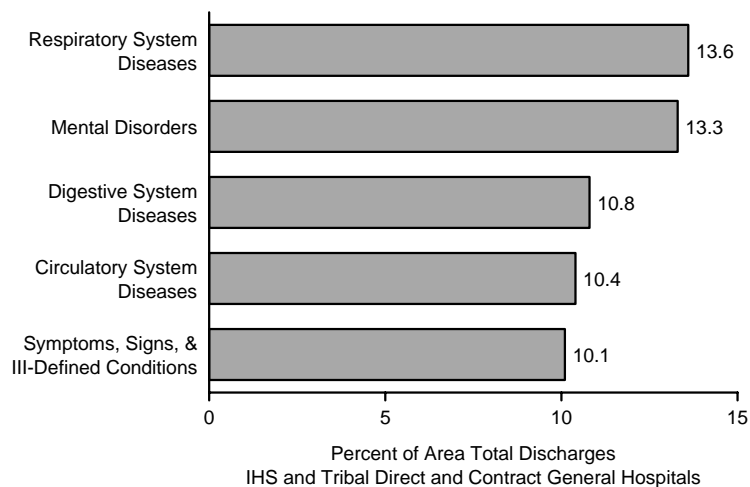


Chart 5.12 Leading Causes of Hospitalization

Navajo Area, FY 1994

For the Navajo Area in FY 1994, 24.2 percent of all discharges from IHS direct and contract general hospitals pertained to obstetric deliveries and complications of pregnancy and the puerperium. This was followed by respiratory system diseases at 14.0 percent.

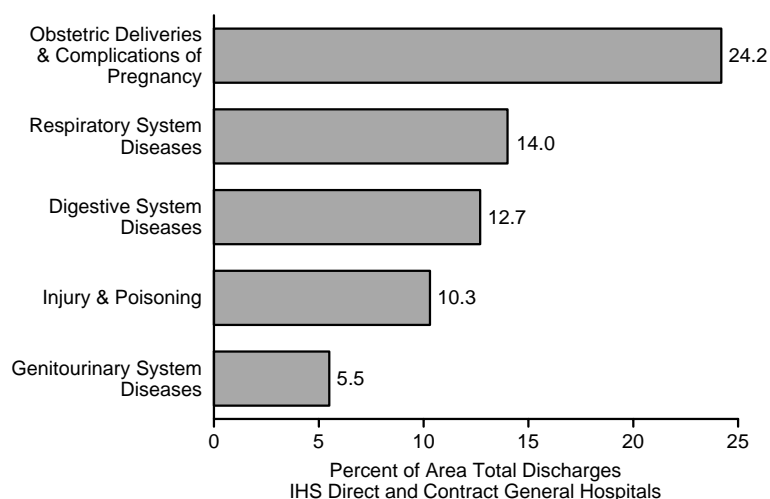


Chart 5.13 Leading Causes of Hospitalization

Oklahoma Area, FY 1994

For the Oklahoma Area in FY 1994, 30.4 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of pregnancy and the puerperium. This was followed by circulatory system diseases at 12.8 percent.

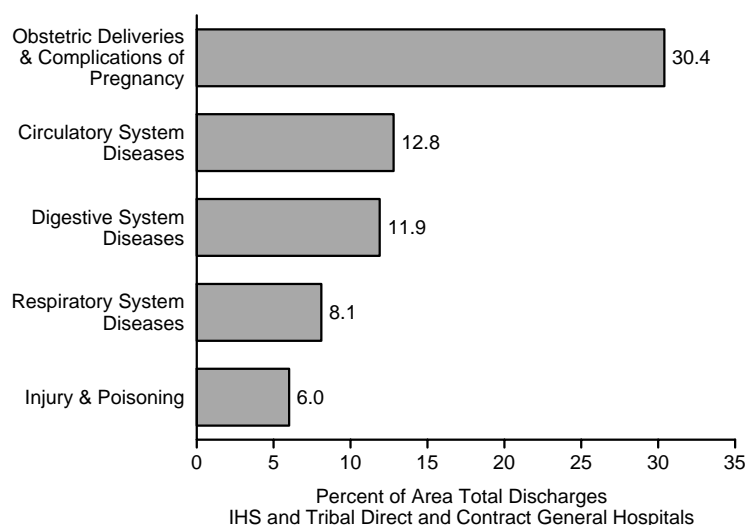


Chart 5.14 Leading Causes of Hospitalization

Phoenix Area, FY 1994

For the Phoenix Area in FY 1994, 15.3 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by obstetric deliveries and complications of pregnancy and puerperium at 12.9 percent.

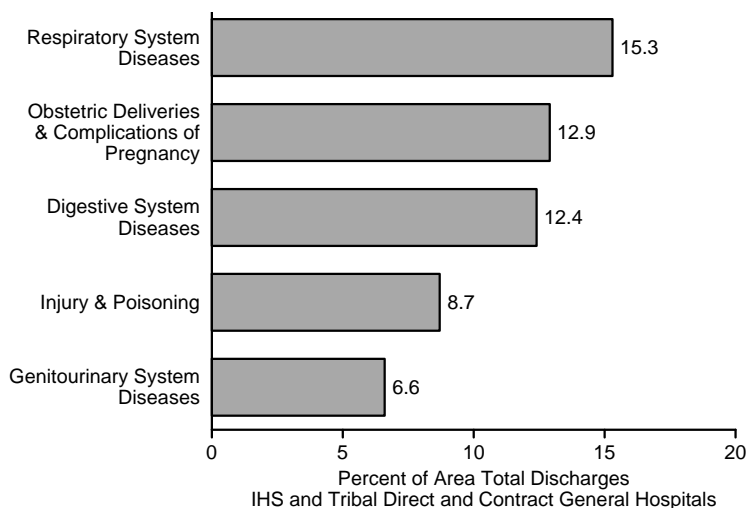


Chart 5.15 Leading Causes of Hospitalization

Portland Area, FY 1994

For Portland Area in FY 1994, 13.1 percent of all discharges from IHS and Tribal contract general hospitals pertained to respiratory system diseases. This was followed by digestive system diseases at 12.2 percent.

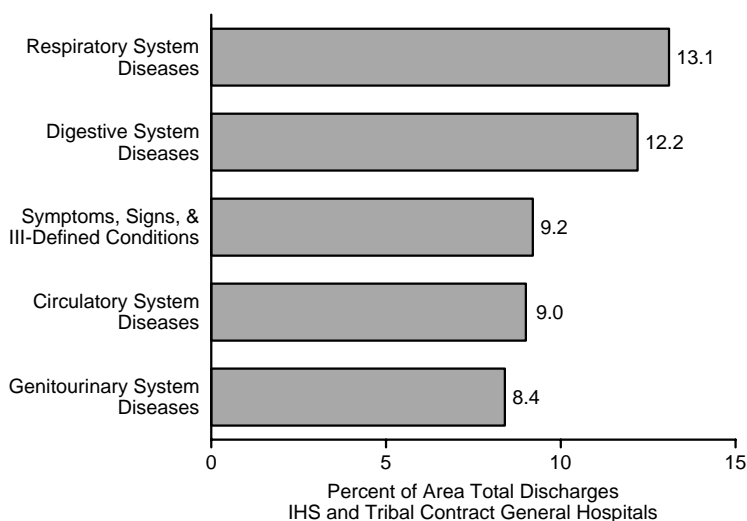


Chart 5.16 Leading Causes of Hospitalization

Tucson Area, FY 1994

For the Tucson Area in FY 1994, 15.7 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to diseases of the skin and subcutaneous tissue. This was followed by respiratory system diseases at 10.5 percent.

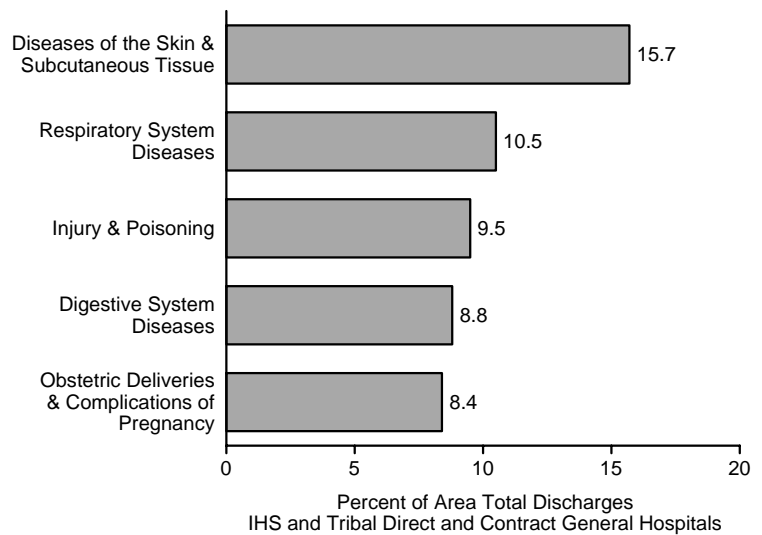


Chart 5.17

Number of Ambulatory Medical Visits, FY 1994

In FY 1994, there were over 6.3 million ambulatory medical visits to IHS and Tribal direct and contract facilities. Two IHS Areas had 32 percent of the visits, Oklahoma (1,109,771) and Navajo (900,181).

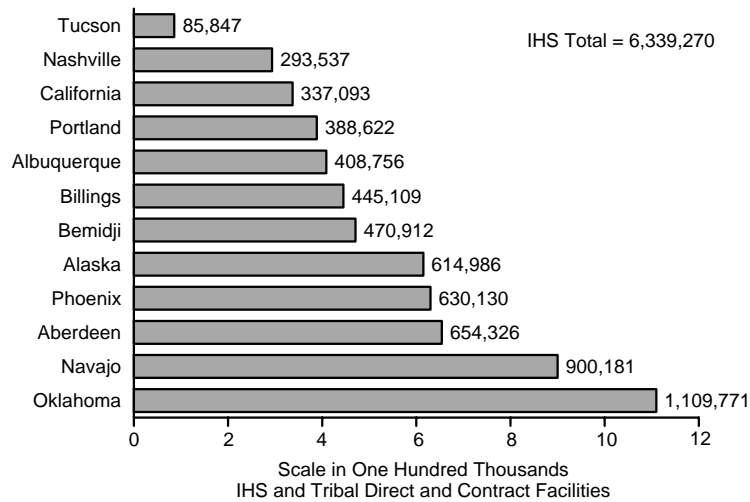


Table 5.17

Number of Ambulatory Medical Visits

Indian Health Service and Tribal Direct and Contract Facilities, FY 1994

	Total	Indian Health Service		Tribal	
		Direct	Contract	Direct	Contract
All IHS Areas	6,339,270	4,184,641	145,295	1,764,625	244,709
Aberdeen	654,326	568,370	18,709	65,009	2,238
Alaska	614,986	195,088	1,664	371,646	46,588
Albuquerque	408,756	374,667	8,031	26,058	—
Bemidji	470,912	133,488	6,504	288,337	42,583
Billings	445,109	366,972	10,720	25,714	41,703
California	337,093	—	—	256,110	80,983
Nashville	293,537	63,710	1,600	202,986	25,241
Navajo	900,181	861,786	38,395	—	—
Oklahoma	1,109,771	728,848	20,969	359,334	620
Phoenix	630,130	547,964	14,317	63,096	4,753
Portland	388,622	268,342	23,400	96,880	—
Tucson	85,847	75,406	986	9,455	—

Sources: IHS Direct: APC Data System (Report 1A)

IHS Contract: Contract Statistical System (Report 3G)

Tribal Direct and Contract: Area Submissions



Chart 5.18 Leading Causes of Ambulatory Medical Visits

All IHS Areas, FY 1994

In FY 1994, 21.1 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 11.3 percent.

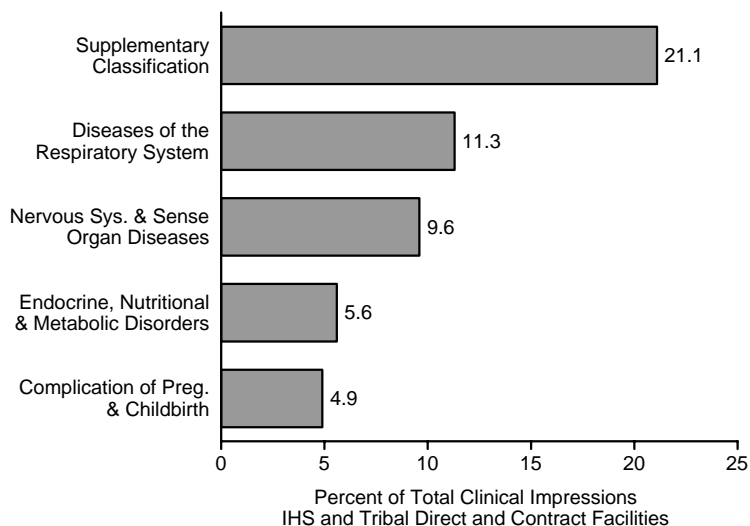


Chart 5.19 Leading Causes of Ambulatory Medical Visits

Aberdeen Area, FY 1994

For the Aberdeen Area in FY 1994, 25.5 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 12.2 percent.

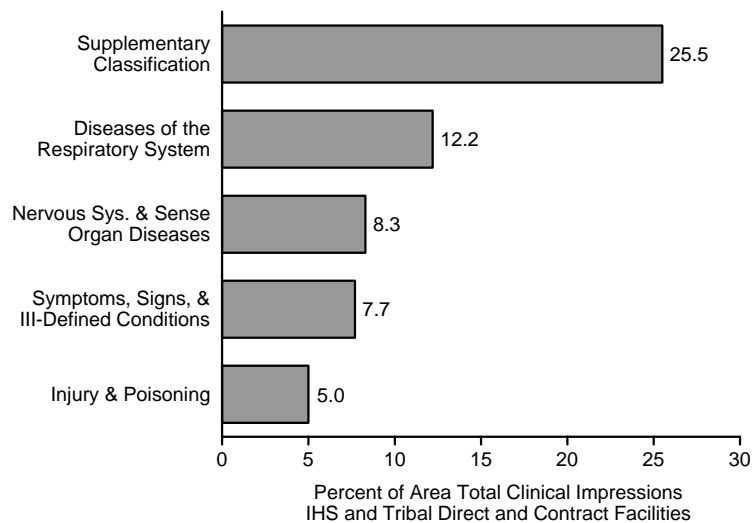


Chart 5.20 Leading Causes of Ambulatory Medical Visits

Alaska Area, FY 1994

For the Alaska Area in FY 1994, 23.3 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 10.5 percent.

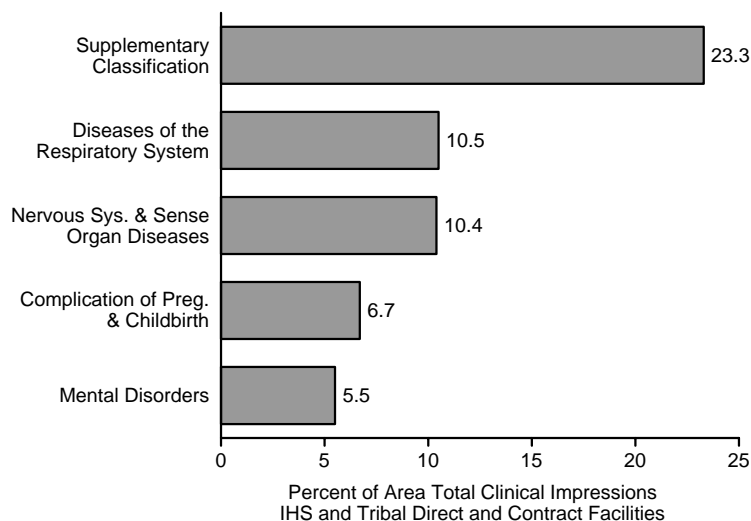


Chart 5.21 Leading Causes of Ambulatory Medical Visits

Albuquerque Area, FY 1994

For the Albuquerque Area in FY 1994, 21.0 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 11.3 percent.

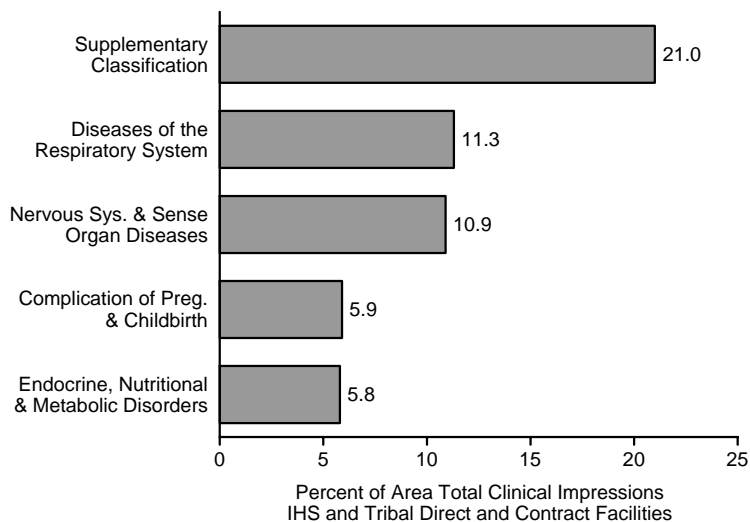


Chart 5.22

Leading Causes of Ambulatory Medical Visits

Bemidji Area, FY 1994

For the Bemidji Area in FY 1994, 30.3 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 9.7 percent.

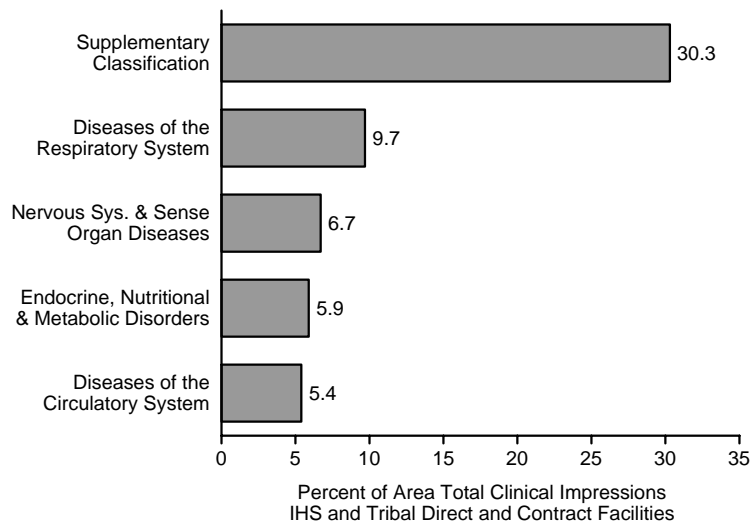


Chart 5.23

Leading Causes of Ambulatory Medical Visits

Billings Area, FY 1994

For the Billings Area in FY 1994, 19.6 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 10.8 percent.

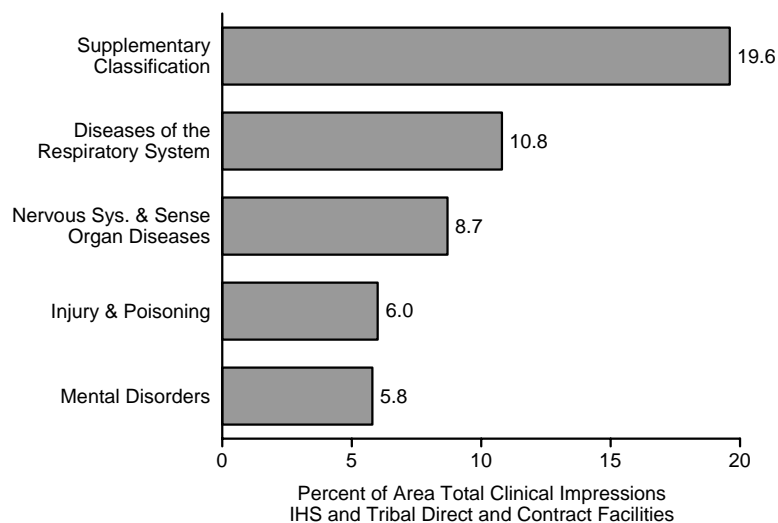


Chart 5.24 Leading Causes of Ambulatory Medical Visits

California Area, FY 1994

For the California Area in FY 1994, 20.3 percent of all clinical impressions in Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 13.1 percent.

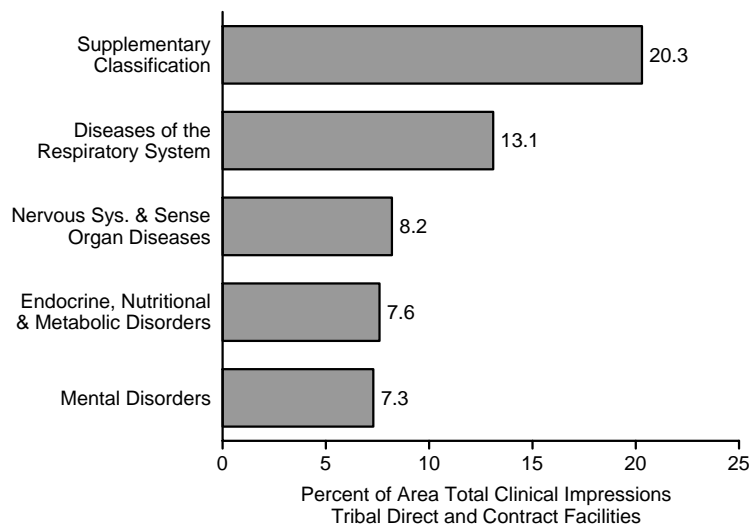


Chart 5.25 Leading Causes of Ambulatory Medical Visits

Nashville Area, FY 1994

For the Nashville Area in FY 1994, 27.7 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 9.0 percent.

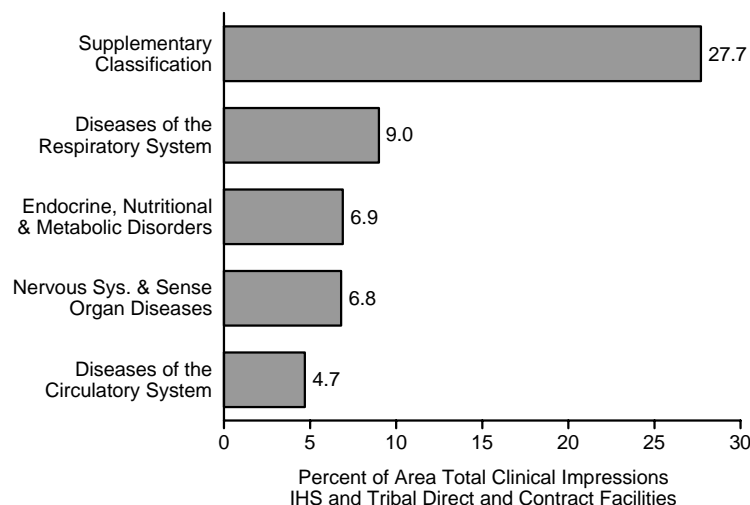


Chart 5.26

Leading Causes of Ambulatory Medical Visits

Navajo Area, FY 1994

For the Navajo Area in FY 1994, 16.5 percent of all clinical impressions in IHS direct and contract facilities pertained to supplementary classifications. This was followed by nervous system and sense organ diseases at 12.2 percent.

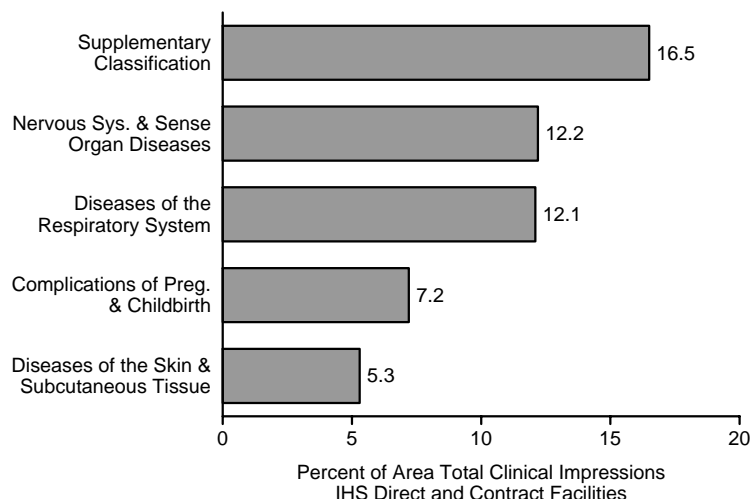


Chart 5.27

Leading Causes of Ambulatory Medical Visits

Oklahoma Area, FY 1994

For the Oklahoma Area in FY 1994, 16.0 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 11.7 percent.

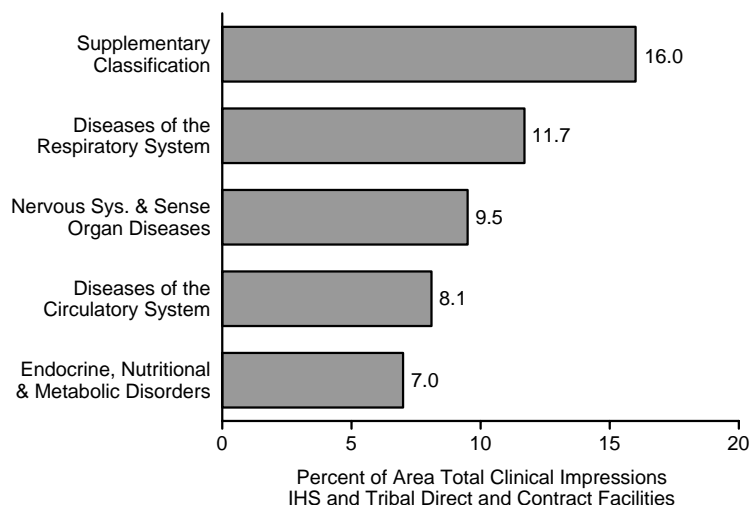


Chart 5.28 Leading Causes of Ambulatory Medical Visits

Phoenix Area, FY 1994

For the Phoenix Area in FY 1994, 21.3 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 10.7 percent.

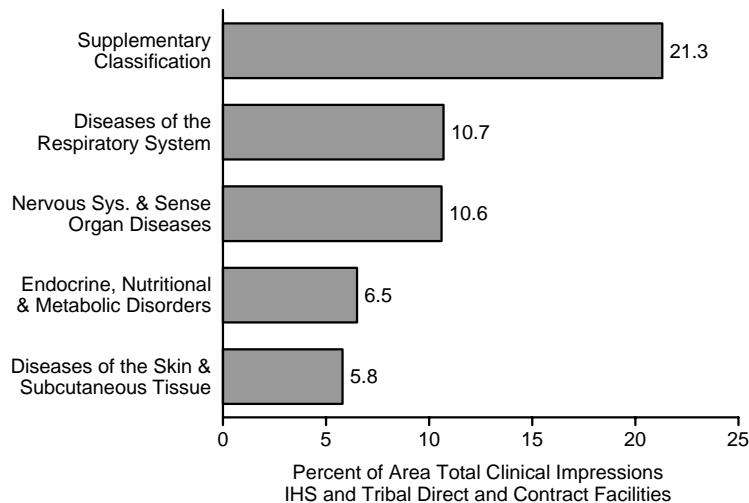


Chart 5.29 Leading Causes of Ambulatory Medical Visits

Portland Area, FY 1994

For the Portland Area in FY 1994, 25.3 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by diseases of the respiratory system at 12.6 percent.

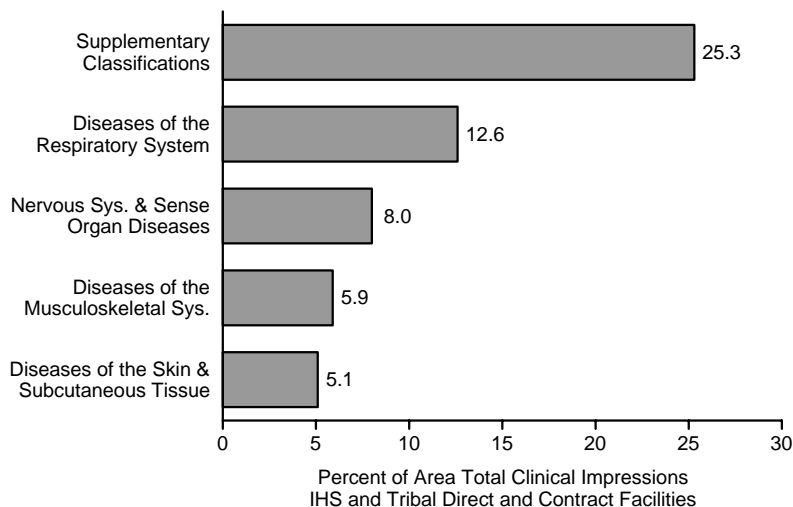


Chart 5.30

Leading Causes of Ambulatory Medical Visits

Tucson Area, FY 1994

For the Tucson Area in FY 1994, 14.8 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications. This was followed by nervous system and sense organ diseases at 9.3 percent.

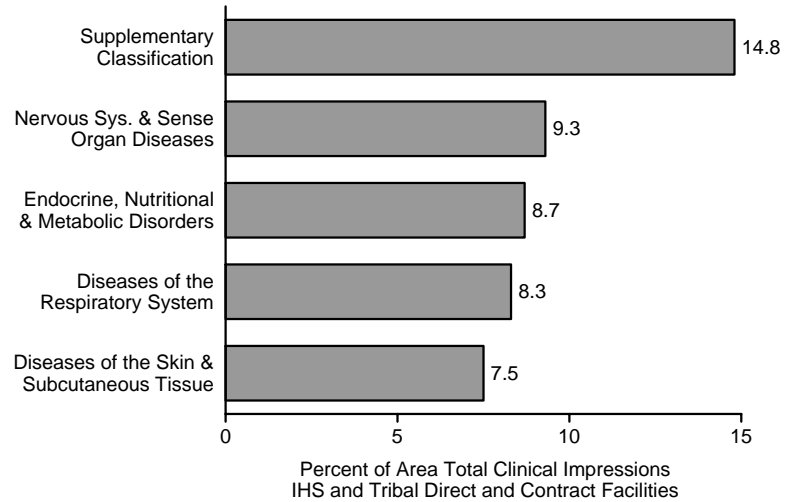


Chart 5.31

Number of Dental Services Provided, FY 1995

In FY 1995, there were approximately 3.1 million dental services provided at IHS and Tribal direct and contract facilities. Two IHS Areas provided 29 percent of the dental services, Oklahoma (468,368) and Navajo (427,938).

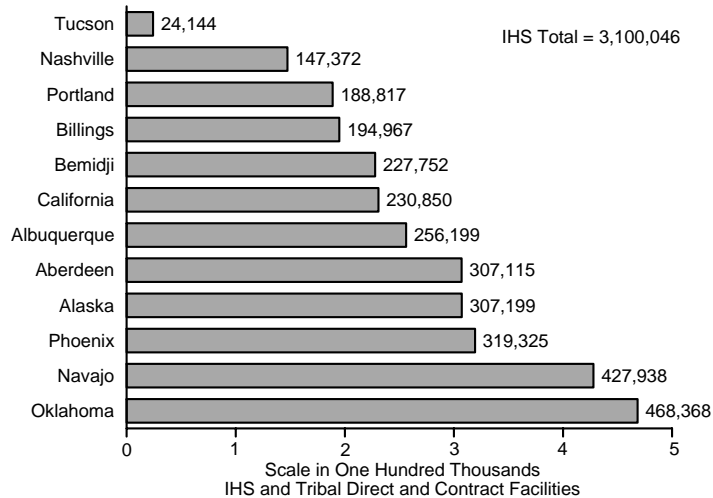


Table 5.31

Number of Dental Services Provided

Indian Health Service and Tribal Direct and Contract Facilities, FY 1995

	Total		IHS direct		IHS contract		Tribal direct		Tribal contract	
	Patients	Services	Patients	Services	Patients	Services	Patients	Services	Patients	Services
All IHS Areas	282,455	3,100,046	175,401	1,931,177	459	33,802	91,109	1,099,747	15,486	35,320
Aberdeen	26,869	307,115	21,256	245,382	0	5,488	5,613	54,210	0	2,035
Alaska	26,913	307,199	9,183	95,954	261	2,519	17,469	208,726	0	0
Albuquerque	23,249	256,199	19,912	221,759	127	1,396	3,139	32,674	71	370
Bemidji	33,037	227,752	5,240	53,578	0	1,101	12,989	152,798	14,808	20,275
Billings	18,386	194,967	17,342	187,014	71	1,390	973	6,563	0	0
California	18,074	230,850	0	0	0	0	17,487	230,169	587	681
Nashville	10,871	147,372	2,724	32,580	0	23	8,127	108,179	20	6,590
Navajo	37,685	427,938	37,685	425,649	0	2,289	0	0	0	0
Oklahoma	42,241	468,368	27,295	282,881	0	14,385	14,946	167,606	0	3,496
Phoenix	28,825	319,325	23,205	252,997	0	60	5,620	66,261	0	7
Portland	13,687	188,817	8,941	109,764	0	4,845	4,746	72,561	0	1,647
Tucson	2,618	24,144	2,618	23,619	0	306	0	0	0	219

Source: IHS Dental Workload Data Reporting System, 1995

Chart 5.32

Rate of New Tuberculosis Cases, CY 1995

The rate of new tuberculosis cases for the IHS in CY 1995 was 2.3 times the rate for the U.S., 20.2 new cases per 100,000 population compared to 8.7. The Alaska Area rate (57.0) was over 6.5 times the U.S. rate.

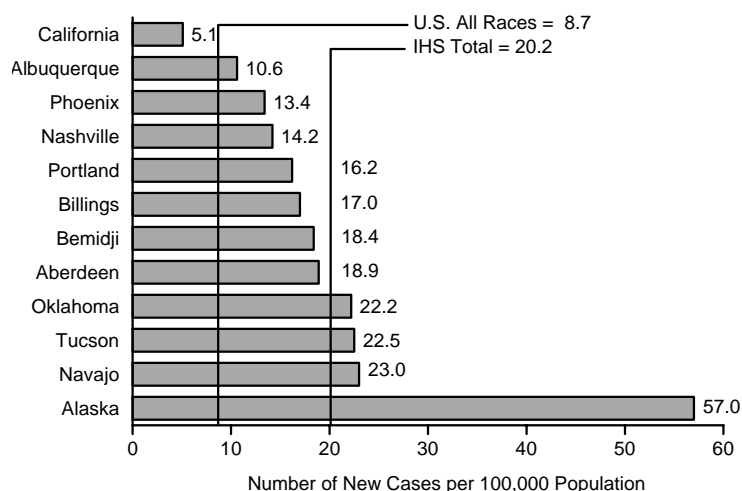


Table 5.32

Number and Rate of New Tuberculosis Cases, CY 1995



	Case rate ¹	Number of cases ¹
U.S. All Races	8.7	22,860
All IHS Areas	20.2	278
Aberdeen	18.9	17
Alaska	57.0	56
Albuquerque	10.6	8
Bemidji	18.4	14
Billings	17.0	9
California	5.1	6
Nashville	14.2	10
Navajo	23.0	47
Oklahoma	22.2	64
Phoenix	13.4	18
Portland	16.2	23
Tucson	22.5	6

¹ Number of new cases per 100,000 service population. Rates are based on a small number of new cases and should be interpreted with caution.

Source: Centers for Disease Control and Prevention (data by State and county)

GLOSSARY OF ICD-9 CODES

List of 72 Selected Causes of Death (1979-Present)

Cause of death	ICD-9 Codes
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	001-003, 005, 020-032, 037, 039-041, 042-044, 046-054, 056-066, 071-088, 098-139
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	170-173, 190-199
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	390-398, 402, 404-429
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
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

List of 61 Selected Causes of Infant Death (1979-Present)

Cause of death	ICD-9 Codes
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
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

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)

Cause of death	ICD-9 Codes
Drug related deaths	292, 304, 305.2-305.9, E850-E858, E950-E950.5, E962.0, E980.0-E980.5
Maternal deaths	630-676
Human immunodeficiency virus (HIV) infection	042-044
Injury and poisoning	E810-E825, E800-E807, E826-E949, E950-E959, E960-E978, E980-E989, E990-E999
Other injuries	E980-E989, E990-E999
Alcoholism deaths	291, 303, 305.0, 357.5, 425.5, 535.3, 571.0-571.3, 790.3, E860
Injury by firearms	E922, E955.0-E955.4, E965.0-E965.4, E970, E985.0-E985.4
Gastroenteric deaths	004, 006-009, 535, 555-556, 558, 562
Breast cancer (females)	174
Cervical cancer	180

List of ICD-9-CM Codes Used in Patient Care Charts and Tables

Condition	ICD-9-CM Codes
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
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INDEX TO CHARTS AND TABLES

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