Regional Differences in Indian Health

2004-2005 EDITION

U.S. Department of Health and Human Services
Indian Health Service
Office of Public Health Support
Division of Program Statistics

INDIAN HEALTH SERVICE
REGIONAL DIFFERENCES IN INDIAN HEALTH
2004-2005 EDITION

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PREFACE

Since 1955, the Indian Health Service (IHS) has upheld the Federal Government's obligation to promote healthy American Indian and Alaska Native (AI/AN) communities and cultures, while honoring and protecting each Tribe's inherent sovereign rights. Our mission is to raise the physical, mental, social, and spiritual health of American Indians and Alaska Natives to the highest level.

*The 2004-2005 edition of "**Regional Differences in Indian Health**" describes IHS programs and provides tables and charts detailing the health status of AI/AN people. This report presents a structural overview of the Agency, along with demographic data on American Indians and Alaska Natives and patient care delivery services. Where appropriate, comparisons are made to the U.S. population at large.*

The IHS remains committed to ensuring that comprehensive, culturally acceptable personal and public health services are available and accessible to AI/AN people. The data contained within this report advances our ongoing efforts to achieve this vital health care goal.

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OVERVIEW

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

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

The IHS is the federal health care provider and health advocate for AI/AN people and its goal is to assure that comprehensive, culturally-acceptable personal and public health services are available and accessible to AI/AN people. The mission of the IHS, in partnership with AI/AN people, is to raise their physical, mental, social, and spiritual health to the highest level. It is also the responsibility of the IHS to work with the people involved in the health delivery programs so they may be cognizant of entitlements of AI/AN people, as American citizens, to all federal, state, and local health programs, in addition to IHS and Tribal services. The IHS also acts as the principal federal health advocate for AI/AN people in the building of health coalitions, networks, and partnerships with Tribal nations and other government agencies as well as with non-federal organizations, e.g., academic medical centers and private foundations.

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

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

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

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

INTRODUCTION

Regional Differences in Indian Health provides basic statistical information to the IHS and its programs, Tribes, other federal and state government agencies, as well as other customers interested in the IHS. This publication uses narrative, charts, and tables to describe the IHS program and the health status of AI/AN people residing in the IHS service area. The IHS service area consists of counties on and near federal Indian reservations. The Indians residing in the service area comprise about 56 percent of all AI/AN people residing in the U.S. Information pertaining to the IHS organizational structure, AI/AN demography, and patient care is included. Current regional differences are presented, and comparisons to the general population are made when appropriate. Historical trend information can be found in the IHS companion publication ***Trends in Indian Health***.

Scope and Organization of this Report

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

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

SUMMARY OF DATA

Indian Health Service Organizational Structure

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

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

As of October 1, 2009, the Area Offices consisted of 162 basic administrative units called service units. Of the 162 service units, 102 were operated by Tribes. The number of service units ranged from two in Tucson to 30 in California.

The IHS operated 29 hospitals, 59 health centers, four school health centers, and 28 health stations. Tribes have two different vehicles for exercising their self-determination—they can choose to take over the operation of an IHS facility through a P.L. 93-638 self-determination contract (Title I) or a P.L. 93-638 self-governance compact, as amended (Title V). A distinction is made in this publication regarding these two Tribal modes of operation, i.e., Title I and Title V. Tribes operated 16 hospitals (Title I, two hospitals and Title V, 14 hospitals), 237 health centers (Title I, 119 and Title V, 118), 13 school health centers (Title I, eleven and Title V, two), 93 health stations (Title I, 57 and Title V, 36), and 166 Alaska village clinics (Title I, eight, Title V, 152, and other, six). Both California and Portland operated no hospitals while Aberdeen, Alaska and Navajo operated seven hospitals each. Tucson had the fewest health centers with five and Oklahoma the most with 53.

Population Statistics

In fiscal year (FY) 2009, the IHS user population was over 1.5 million. The IHS user population is defined as the number of Indian registrants, residing within a service delivery area with at least one face-to-face, direct or contract, inpatient stay, ambulatory care visit, or dental visit during the prior three fiscal years. The service delivery area for the user population is called a “Contract Health Service Delivery Area”, and only users who live inside one can be counted as a user. Tucson (25,562) and Nashville (51,491) had the smallest user populations while Navajo (242,331) and Oklahoma (318,923) had the largest user populations.

The AI/AN population is younger, less educated and poorer than the U.S. all-races population. For the IHS user population in FY 2009, 9.4 percent of the persons were under age 5 compared to 6.9 percent for the U.S. all-races population (Census 2000). There was considerable variation by Area with Portland at 8.0 percent and Aberdeen at 11.4 percent.

According to the 2000 Census, 70.9 percent of AI/AN (alone) (ages 25 and older) residing in the IHS service areas are high school graduates or higher compared to 80.4 percent for the U.S. all-races population. For the Navajo Area, the percentage was less than 60.0 (based on state-level AI/AN (alone) data). The 2000 Census also indicated that the median household income in 1999 for AI/AN (alone) residing in the IHS service areas was $32,461, while for the U.S. all-races it was $50,046, which is 54 percent higher than AI/AN (alone) people residing in the IHS service areas. Albuquerque had the lowest median household income at $22,295 and California the highest at $35,611 (based on state-level AI/AN (alone) data).

Natality and Infant/Maternal Mortality Statistics

The birth rate for AI/AN people residing in the IHS service area was 22.6 (rate per 1,000 population) in 2003-2005. It is 1.6 times the 2004 birth rate of 14.0 for the U.S. all-races population.

The infant mortality rate for AI/AN people residing in the IHS service area was 8.2 per 1,000 live births in 2003-2005 compared to 6.8 for the U.S. all-races population in 2004. The AI/AN rate is 21 percent higher than the U.S. all-races rate. The infant mortality rate varied considerably among the IHS Areas, ranging from 6.5 in Tucson to 11.1 in Aberdeen. These data are adjusted for misreporting of AI/AN race on the death certificate.[1]

General Mortality Statistics

In 2003-2005 the age-adjusted death rate (all causes) for AI/AN people residing in the IHS service area was 1,016.7 per 100,000 population compared to 800.8 for the U.S. all-races population in 2004. The AI/AN rate is 27 percent greater than the U.S. all-races rate. The Aberdeen (1,442.1), Bemidji (1,351.5) and Billings (1,309.0) service areas had the highest rates. The rate is adjusted for misreporting of AI/AN race on the state death certificate.

The top two leading causes of death for the IHS service area population in 2003-2005 were diseases of the heart and malignant neoplasm, the same as the U.S. all-races in 2004. However, six IHS Areas (Aberdeen, Albuquerque, Billings, Navajo, Phoenix, and Tucson) had unintentional injuries as one of the top two leading causes. The leading causes of death were determined without any adjustment for age which is the customary method. However, it should be noted that the age composition of a population does influence its mortality pattern and therefore could have an effect on the leading causes of death ranking.

For most of the specific causes of death identified in this publication, the 2003-2005 AI/AN age-adjusted death rate (with data that have also been adjusted for misreporting of AI/AN race on death certificates) was greater than the 2004 U.S. all-races rate. There was also considerable variation in the rates among the IHS Areas. Some of the Area rates should be interpreted with caution because of the small number of deaths involved. The following list is a comparison of the AI/AN age-adjusted rate (using data that are also adjusted for misreporting of AI/AN race on the state death certificate) to the U.S. all-races rate where there are substantial differences.

1) alcoholism–*527 percent greater*
2) diabetes mellitus–*195 percent greater*
3) unintentional injuries–*149 percent greater*
4) poisoning–*92 percent greater*
5) homicide–*88 percent greater*
6) suicide–*72 percent greater*
7) pneumonia and influenza–*67 percent greater*
8) firearm injury–*36 percent greater*
9) diseases of the heart–*1 percent greater*
10) human immunodeficiency virus (HIV) infection–*27 percent less*

Patient Care Statistics

In FY 2009, there were over 70,000 admissions to IHS and Tribal direct and contract general hospitals. The number of admissions ranged from 451 in California to 18,088 in Navajo. Obstetric deliveries and complications of pregnancy accounted for the overall leading cause of hospitalization in IHS and Tribal direct and contract general hospitals. However, on an area-by-area basis, obstetric deliveries and complications of pregnancy led hospital admissions in Alaska, Navajo, Oklahoma and Phoenix. IHS and Tribal direct and contract facilities reported ambulatory medical visits in excess of 11 million for FY 2009. Tucson reported the fewest ambulatory medical visits with 215,846 and Oklahoma had the most with 2,492,519. The supplementary classification—an ambulatory visit that does not directly deal with an injury or disease, but rather includes such preventative care as well-child visits, vaccinations, physical examinations, tests only (lab, x-ray, screening), hospital, medical, or surgical follow-up, and prescription refills—led as the number-one cause of ambulatory medical visits for all IHS Areas. Prescription refills are thought to be a major contributor to the number of such visits relative to all others. In order to provide a true "top five" in terms of categories of diseases, additional such categories were added beyond five in order to balance the disproportionate number of supplementary classifications relative to all other categories.

In FY 2009, 79 percent of AI/AN children 19-35 months and residing in IHS service areas received all required immunizations. In the general population in CY 2009, 70 percent of children aged 19 to 35 months received all required immunizations. In AI/AN children 19-35 months and residing in an IHS service area, Oklahoma, Bemidji, and Portland areas had the lowest coverage rate at 74 percent, while the Tucson Area had the highest rate, 89 percent.

In FY 2009, over 3.2 million dental services were reported to be provided at IHS and Tribal direct and contract facilities. Three IHS Areas provided 48 percent of these reported dental services: Navajo (481,969), California (493,692), and Oklahoma (604,658).

SOURCES AND LIMITATIONS OF DATA

Population Statistics

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

The IHS user population estimates shown in this publication should be contrasted with the IHS service population (eligible population) estimates, which are shown in the ***Trends in Indian Health*** publication. The service population estimates are based on official U.S. Census Bureau county data, representing self-identified AI/AN people who may or may not use IHS services. IHS service populations between census years (e.g., 1990 and 2000) are estimated using a smoothing technique in order to show a gradual transition between census years. This normally results in upward revisions to service population figures projected prior to a census, since each Census tends to do a better job in enumerating AI/AN people. IHS service populations beyond the latest census year (2000) are projected through linear regression techniques, using the most current ten years of AI/AN birth and death data provided by the NCHS, Centers for Disease Control and Prevention (CDC).

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

The social and economic data contained in this publication are from the 2000 census and reflect the characteristics of persons self-identifying as AI/AN (alone).

IHS Service Population

Definition

The IHS service population is based on the 2000 census bridged-race file (developed by the Census Bureau and NCHS, CDC). It consists of AI/AN and serves as a measure of those eligible for IHS services. Those AI/AN eligible are estimated by counting AI/AN who reside in geographic areas in which IHS has responsibilities ("on or near" reservations) and is comprised of approximately 56 percent of all AI/AN residing in the U.S. These people **may** or **may not** use IHS health services. (Migration is not a factor when developing the IHS service population).

Description of Service Population Calculation

DPS produces service populations for IHS Areas, service units, and counties.

IHS service population figures are based on the 2000 census with bridged-race file county data. The Census Bureau enumerates those individuals who identify themselves as AI/AN. The IHS service population consists of those enumerated AI/ANs who reside in the geographic areas in which IHS has responsibilities ("on or near" reservations, i.e., contract health service delivery areas (CHSDAs)).

The 2000 Census allowed respondents to report more then one race category to describe themselves and household members. This was a result of the revised Office of Management and Budget (OMB) guidelines issued on October 30, 1997. All other censuses prior to 2000 had offered the respondent with the option for self-identification of a single race with which the respondent most closely identified. As a result of the aforementioned OMB revised standards a methodology was developed to "bridge" the 2000 Census with previous decennial censuses. This impacted the manner in which the total AI/AN population was counted.

The Census Bureau and NCHS are credited for developing the bridging methodology to address the inconsistencies for identifying race between the 2000 Census and the previous censuses. The 2000 Census with bridged-race categories re-categorizes more than one race responses to a single race response. The bridged 2000 Census single race corresponds with the single race categories used on the birth and death certificates.

Source: National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2004, United States resident population from the Vintage 2004 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. Available on the Internet at: http://www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2004 Accessed November 28, 2012

Using the 2000 Census with bridged-race categories increased the AI/AN population denominators resulting in slightly decreased IHS mortality rates. The 2000 Census with bridged-race categories population for all AI/AN in the U.S. is 3.3 million. This falls between the population of all AI/AN in the U.S. of 2.5 million who identified themselves as an AI/AN race (alone) and the population of all AI/AN in the U.S. of 4.2 million who identified themselves as an AI/AN and a combination of at least one other race (combination).

IHS service populations beyond the latest census (2000) are projected through linear regression techniques using the latest ten years of AI/AN birth and death data provided by NCHS. The estimated natural change for a county (number of births minus number of deaths) is applied accumulatively to the latest census enumeration for the county for each year beyond the census. DPS produces a new set of IHS service population projections each year.

The IHS service populations are produced for the IHS area, service unit, and county levels. If a county is split between and/or among service units and/or IHS service areas, DPS allocates the county population to the affected service units and/or service areas. These population allocations are based on percentage splits developed and agreed by the affected IHS areas. A letter of agreement describing the formal arrangement (including a valid authorization by all authorities for the population allocation) is sent to DPS and kept on file. These percentage splits are calculated using sub-county census data and census maps.

DPS also generates AI/AN population estimates and projections, utilizing an identical methodology, for non-service IHS counties. Therefore, DPS produces census-based AI/AN population figures for every U.S. county and all 50 states.

Changes in Methodologies

DPS used updated methodologies to produce age-adjusted mortality rates. These applied methodologies coincide with methodologies used by NCHS, CDC and the U.S. Census Bureau. Using these updated methodologies enabled AI/AN mortality rates to be compared to U.S. all-races mortality rates produced by the aforementioned agencies.

Age-adjusted mortality rates for ***Regional Differences in Indian Health*** developed for data years 2003-2005 are **NOT** comparable to previously published mortality rates calculated for data years prior to 1999. This is due to several changes in the methodology used to calculate the age-adjusted mortality rate produced by DPS.

The three major updated methodologies applied by DPS include:

ICD-9 Conversion to ICD-10

Beginning with the 1999 mortality data a new classification system was implemented to categorize causes of death. The International Classification of Diseases, Version 10 (ICD-10) was used by the states and NCHS to code all causes of death for years 1999 and onward. The ICD-10 classification system consists of a new nomenclature scheme with new and revised categories for some causes of death. Comparability ratios are applied when appropriate, i.e., to adjust data analyzed using the past classification system (ICD-9). Such revisions are noted on the data when applicable. ("***Regional Differences in Indian Health***" does not apply comparability ratios as these ratios are applied to data prior to 1999. This publication refers to data years 2003-2005 which eliminated the necessity to use these adjustment factors).

2000 U.S. Census Populations with Bridged Race Categories (2000 Census Bridged File)

The 2000 U.S. Census Population with Bridged-Race Categories (2000 Census Bridged File) for AI/ANs was used by IHS to calculate mortality and natality age-adjusted rates. The 2000 Census allowed respondents to report more than one race category to describe their race. The birth and death certificates (vital events) used by the states for years 2003-2005 allow only a single race category to be reported. Vital event totals are used in the numerator and the 2000 Census bridged population is used as the denominator to produce the birth or death rates that occur in the population of interest. The denominator data are based on the 2000 Census bridge file, which re-categorizes responses to a single race where more than one race was reported. This corresponds to the single race categories used on birth and death certificates.

Age Adjustment Based on the 2000 Standard Population

The HHS recommended that all HHS agencies use the 2000 Census standard population to age-adjust mortality rates. IHS calculates age-adjusted rates based on the 2000 standard population to comply to this HHS recommendation.

Vital Event Statistics

AI/AN vital event statistics are derived from data provided annually to IHS by NCHS. Vital event statistics for the U.S. population were derived from data reported in various NCHS publications[2,3,4], as well as from some unpublished data from NCHS. NCHS obtains birth and death records for all U.S. residents from state health departments, based on information reported on official state birth and death certificates. The records NCHS provides to IHS contain the same basic demographic items as the vital event records maintained by NCHS for all U.S. residents, but with names, addresses, and record identification numbers deleted. It should be noted that Tribal identity is not recorded on these records.

The natality and mortality data are only as accurate as the reporting by the states to NCHS. NCHS does perform numerous edit checks, applies verification methods, and imputes values for non-responses.[5]

Misreporting of AI/AN race on state death certificates occurs, especially in areas distant from traditional AI/AN reservations. In order to determine the degree and scope of the misreporting, IHS conducted a study utilizing the National Death Index (NDI) maintained by NCHS. The study involved matching IHS patient records of those patients who could have died during 1986 through 1988 with all death records of U.S. residents for 1986 through 1988 as contained on the NDI. The results were published in a document entitled, ***Adjusting for Miscoding of Indian Race on State Death Certificates***, November 1996. The study revealed that on 10.9 percent of the matched IHS-NDI records, the race reported for the decedent was other than AI/AN. The percentage of records with inconsistent classification of race ranged from 1.2 percent in the Navajo Area to 28.0 and 30.4 percent in the Oklahoma and California Areas, respectively.

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

These NDI adjustments were used for the first time in the 1997 edition of this publication. Both unadjusted and adjusted information is shown, as applicable. The adjustments were applied to the results obtained from using an unadjusted death file.

IHS has more specific adjustment factors for the age group less than one year. These are derived from the linked birth/infant death data sets produced by NCHS. In this edition unadjusted and adjusted infant mortality rates will be shown. These adjustments based on the linked data sets take precedent over the NDI adjustments for the under one-year age group, described above.

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

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

The AI/AN population is considerably younger than the U.S. all-races population. Death rates presented in this publication have been age-adjusted to the 2000 standard population, where applicable, so that appropriate comparisons can be made between these population groups. One exception is the information presented for leading causes of death. In order to determine the leading causes of death for a population group, it is necessary to rank causes of death without any adjustment for age. However, it should be kept in mind that the ranking of causes of death for a population group is affected by its age composition.

All age-adjusted death rates calculated using a small number of deaths should be interpreted with caution as the observed rate may be quite different from the true underlying rate. This occasionally occurred when an Area rate was calculated for a specific cause of death. Any rate based upon fewer than 20 deaths may not be reliable as the sample will be too small.

Patient Care Statistics

Patient care statistics are derived principally from the IHS National Patient Information Reporting System (NPIRS), the national data repository for IHS statistical health care data on patient registration and visit encounters occurring at either IHS facilities or contracting facilities that provide care. It collects data on persons who are members of federally recognized tribes that access IHS services. Other sources are listed below.

Monthly Inpatient Services Report—a patient census report prepared for each IHS hospital by NPIRS indicating the number of discharges and days by type of service (e.g., adult, pediatric, obstetric, newborn), used for direct inpatient workload statistics also referred to as the "INP 202" after the name of the report series from NPIRS. Sites can also submit manual monthly versions signed by the hospital CEO if technical issues prevent their transmitting data in time to meet IHS wide deadlines.

Inpatient Care Data— The IHS NPIRS serves as an agency-wide statistical information system and warehouse of Indian health and health system data. This data repository is the source of IHS hospital inpatient data pertaining to various patient characteristics (age, sex, principal diagnoses, other diagnoses, community of residence, etc.), collected daily, one record per discharge.

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

Contract Care Data—NPIRS website reports have provided ambulatory and inpatient contract care data collected through the Contract Health System

Immunization Data—information obtained by IHS/CDC jointly appointed immunization tracking staff.

Dental Data—The NPIRS repository is also the source for dental services data, monitored by IHS Headquarters dental personnel.

Tuberculosis Data—based on cases reported to State TB control units at the state health department level.

The data from these systems are subject to recording, inputting, and transmitting errors. However, the IHS DPS in consultation with the Office of Information Technology NPIRS Repository Staff closely monitor the electronic transmissions and content of the repository and its attendant reports ensuring data quality.

GLOSSARY

Age-Adjustment (direct method)—The application of age-specific rates in a population of interest to a standardized age distribution in order to eliminate differences in observed rates that result from age differences in population composition. This adjustment is usually done when comparing two or more populations at one point in time or one population at two or more points in time.[7]

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

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

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

Cause of Death—For the purpose of national mortality statistics, every death is attributed to *one* underlying condition, based on information reported on the death certificate and using the international rules for selecting the underlying cause of death from the conditions stated on the death certificate. The underlying cause is defined by the World Health Organization (WHO) as the disease or injury that initiated the train of events leading directly to death, or the circumstances of the accident or violence, which produced the fatal injury. Generally, more medical information is reported on death certificates than is directly reflected in the underlying cause of death. The conditions that are not selected as underlying cause of death constitute the non-underlying cause of death, also known as multiple cause of death. Cause of death is coded according to the appropriate revision of the International Classification of Diseases (ICD). Effective with deaths occurring in 1999, the United States began using the Tenth Revision of the ICD (ICD-10); during the period 1979-98, causes of death were coded and classified according to the Ninth Revision (ICD-9). Each of these revisions has produced discontinuities in cause-of-death trends. These discontinuities are measured using comparability ratios.[8]

Census Definitions—Definitions for census information including: unemployment, median household income, and poverty can be found on the census website: **http://www.census.gov**

Comparability Ratios—Adjustment factors designed to measure the effects of a new revision of the ICD on the comparability with the previous revision of mortality statistics cause of death.[8]

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

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

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

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

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

Infant Mortality Rate—A rate based on period files calculated by dividing the number of infant deaths during a calendar year by the number of live births reported in the same year. It is expressed as the number of infant deaths per 1,000 live births.[9]

International Classification of Diseases—The Ninth Revision (ICD-9) codes are used for years **prior** to 1999. The Tenth Revision (ICD-10) codes are used for data years 1999 onward.

Life Expectancy—Life expectancy is the average number of years of life remaining to a person at a particular age and is based on a given set of age-specific death rates, generally the mortality conditions existing in the period mentioned. Life expectancy may be determined by race, sex, or other characteristics using age-specific death rates for the population with that characteristic.[10]

Live Birth—In the WHO's definition, also adopted by the United Nations and NCHS, a live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life such as heartbeat, umbilical cord pulsation, or definite movement of voluntary muscles, whether the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.[11]

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

Neonatal Mortality Rate—The number of deaths under 28 days of age per 1,000 live births.

Occurrence—Place where the event occurred.

Post-neonatal Mortality Rate—The number of deaths that occur from 28 days to 365 days after birth per 1,000 live births.

Race—Federal Register Notice (October 30, 1997), Revision to the Standards for the Classification of Federal Data on Race and Ethnicity.

> The revised standards have five minimum categories for data on race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. There will be two categories for data on ethnicity: "Hispanic or Latino: and "Not Hispanic or Latino."
>
> Persons are offered the option to select one or more races.
>
> **http://www.whitehouse.gov/omb/fedreg/1997standards.html**

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 an event occurred. For births and deaths, residence is defined as the mother's place of residence.

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

Service Population—AI/AN people identified to be eligible for IHS services.

Service Unit—The local administrative unit of IHS.

User Population—AI/AN people who have used IHS services at least once during the last three-year period according to their community of residence.

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

SOURCES OF COPIES AND ADDITIONAL INFORMATION

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

GENERAL INFORMATION
Kirk Greenway, Principal Statistician and Director, Division of Program Statistics

Priscilla Sandoval, Program Analyst

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DEMOGRAPHIC STATISTICS
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PATIENT CARE STATISTICS
Vacant

Copies of this and other statistical publications may be obtained from Division of Program Statistics at:

Indian Health Service
Office of Public Health Support
Division of Program Statistics
801 Thompson Building
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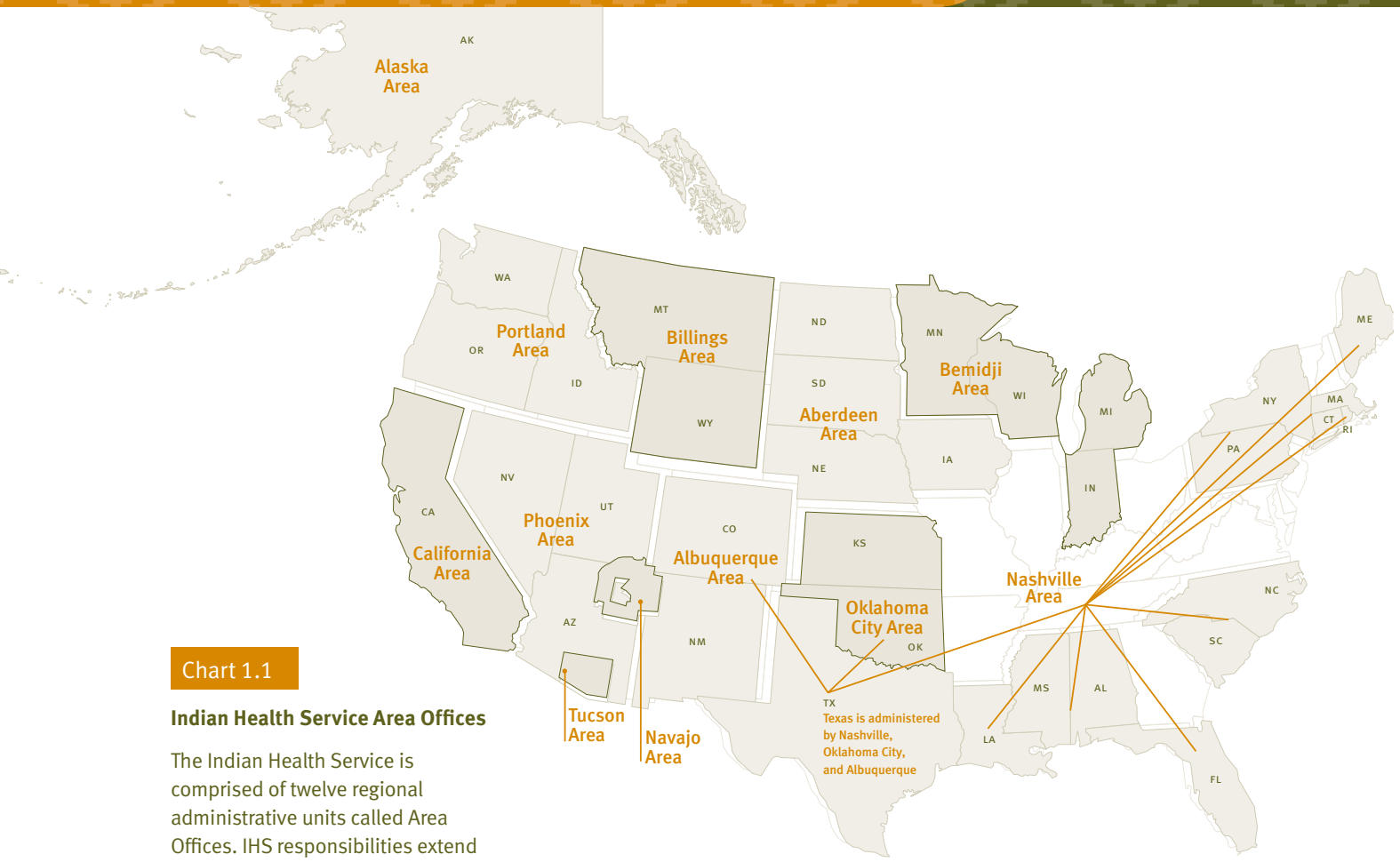


Chart 1.1

Indian Health Service Area Offices

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

Indian Health Service operated 29 hospitals, 59 health centers, four school health centers, and 28 health stations as of October 1, 2009. Tribes can operate a facility under a P.L. 93-638 self-determination contract (Title I) or self-governance compact, as amended (Title V), or—in Alaska only—an Alaska village clinic funded by a standard procurement contract. Tribes operated 16 hospitals (Title I, two hospitals and Title V, 14 hospitals), 237 health centers (Title I, 119 and Title V, 118), 13 school health centers (Title I, eleven and Title V, two), 93 health stations (Title I, 57 and Title V, 36), and 166 Alaska village clinics (Title I, eight; Title V, 152; and Other, six).

Chart 1.2

Number of Service Units and Facilities, Operated by IHS and Tribes, October 1, 2009

			Tribal			
Type of Facility	Total	IHS	Total	I	V	Other
Service Units	162	60	102	--	--	--
Hospitals	45	29	16	2	14	--
Ambulatory Facilities	600	91	509	195	308	6
Health Centers	*296*	*59*	*237*	*119*	*118*	*--*
School Health Centers	*17*	*4*	*13*	*11*	*2*	*--*
Health Stations	*121*	*28*	*93*	*57*	*36*	*--*
Alaska Village Clinics	*166*	*--*	*166*	*8*	*152*	*6*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000
Other — operated by a local government, not a tribe, for some Alaska Native villages through a standard procurement contract

In the **Aberdeen Area**, Indian Health Service operated seven hospitals, eight health centers, and five health stations as of October 1, 2009. Tribes operated seven health centers, two school health centers, and eight health stations, all under Title I.

Chart 1.3

Number of Service Units and Facilities, Operated by Aberdeen Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	19	12	7	--	--
Hospitals	7	7	--	--	--
Ambulatory Facilities	30	13	17	17	--
Health Centers	*15*	*8*	*7*	*7*	*--*
School Health Centers	*2*	*0*	*2*	*2*	*--*
Health Stations	*13*	*5*	*8*	*8*	*--*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

In the **Alaska Area**, Indian Health Service did not operate any facilities as of October 1, 2009. Tribes operated seven hospitals, 37 health centers (Title I, two and Title V, 35), and 166 village clinics (Title I, eight; Title V, 152; and Other, six).

Chart 1.4

Number of Service Units and Facilities, Operated by Alaska Area and Tribes, October 1, 2009

			Tribal			
Type of Facility	Total	IHS	Total	I	V	Other
Service Units	9	--	9	--	--	--
Hospitals	7	--	7	--	7	--
Ambulatory Facilities	203	--	203	10	187	6
Health Centers	*37*	*--*	*37*	*2*	*35*	*--*
School Health Centers	*--*	*--*	*--*	*--*	*--*	*--*
Health Stations	*--*	*--*	*--*	*--*	*--*	*--*
Alaska Village Clinics	*166*	*--*	*166*	*8*	*152*	*6*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000
Other — operated by a local government, not a tribe, for some Alaska Native villages through a standard procurement contract

In the **Albuquerque Area**, Indian Health Service operated four hospitals, six health centers, one school health center and seven health stations as of October 1, 2009. Tribes operated seven health centers (Title I).

Chart 1.5

Number of Service Units and Facilities, Operated by Albuquerque Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	9	8	1	--	--
Hospitals	4	4	--	--	--
Ambulatory Facilities	21	14	7	7	--
Health Centers	*13*	*6*	*7*	*7*	--
School Health Centers	*1*	*1*	--	--	--
Health Stations	*7*	*7*	--	--	--

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

In the **Bemidji Area**, Indian Health Service operated two hospitals, two health centers, and two health stations as of October 1, 2009. Tribes operated 34 health centers (Title I, 23 and Title V, 11), eight school health centers (Title I) and 11 health stations (Title I, eight and Title V, three).

Chart 1.6

Number of Service Units and Facilities, Operated by Bemidji Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	13	3	10	--	--
Hospitals	2	2	--	--	--
Ambulatory Facilities	57	4	53	39	14
Health Centers	*36*	*2*	*34*	*23*	*11*
School Health Centers	*8*	*--*	*8*	*8*	*--*
Health Stations	*13*	*2*	*11*	*8*	*3*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

In the **Billings Area**, Indian Health Service operated three hospitals, six health centers, and three health stations as of October 1, 2009. Tribes operated four health centers and three health stations, all under Title V.

Chart 1.7

Number of Service Units and Facilities, Operated by Billings Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	8	6	2	--	--
Hospitals	3	3	--	--	--
Ambulatory Facilities	16	9	7	--	7
Health Centers	*10*	*6*	*4*	*--*	*4*
School Health Centers	*--*	*--*	*--*	*--*	*--*
Health Stations	*6*	*3*	*3*	*--*	*3*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

In the **California Area**, Indian Health Service did not operate any facilities as of October 1, 2009. Tribes operated 53 health centers (Title I, 43 and Title V, ten) and 10 health stations (Title I, nine and Title V, one).

Chart 1.8

Number of Service Units and Facilities, Operated by California Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	30	--	30	--	--
Hospitals	--	--	--	--	--
Ambulatory Facilities	63	--	63	52	11
Health Centers	*53*	*--*	*53*	*43*	*10*
School Health Centers	*--*	*--*	*--*	*--*	*--*
Health Stations	*10*	*--*	*10*	*9*	*1*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

In the **Nashville Area**, Indian Health Service operated four health centers as of October 1, 2009. Tribes operated two hospitals (Title V), 22 health centers (Title I, 12 and Title V, 10), one school health center (Title V) and eight health stations (Title I, two, Title V, six).

Chart 1.9

Number of Service Units and Facilities, Operated by Nashville Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	25	4	21	--	--
Hospitals	2	--	2	--	2
Ambulatory Facilities	35	4	31	14	17
Health Centers	*26*	*4*	*22*	*12*	*10*
School Health Centers	*1*	*--*	*1*	*--*	*1*
Health Stations	*8*	*--*	*8*	*2*	*6*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

In the **Navajo Area**, Indian Health Service operated five hospitals, eight health centers, and six health stations as of October 1, 2009. Tribes operated two hospitals (Title I), eight health centers (Title I), and one health station (Title I).

Chart 1.10

Number of Service Units and Facilities, Operated by Navajo Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	8	6	2	--	--
Hospitals	7	5	2	2	--
Ambulatory Facilities	23	14	9	9	--
Health Centers	*16*	*8*	*8*	*8*	*--*
School Health Centers	*--*	*--*	*--*	*--*	*--*
Health Stations	*7*	*6*	*1*	*1*	*--*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

In the **Oklahoma Area**, Indian Health Service operated two hospitals, nine health centers, and one health station as of October 1, 2009. Tribes operated four hospitals (Title V), 40 health centers (Title I, two and Title V, 38), and one school health center (Title V).

Number of Service Units and Facilities, Operated by Oklahoma Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	12	7	5	--	--
Hospitals	6	2	4	--	4
Ambulatory Facilities	51	10	41	2	39
Health Centers	*49*	*9*	*40*	*2*	*38*
School Health Centers	*1*	*--*	*1*	*--*	*1*
Health Stations	*1*	*1*	*--*	*--*	*--*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

In the **Phoenix Area**, Indian Health Service operated five hospitals, six health centers, one school health center, and four health stations as of October 1, 2009. Tribes operated one hospital (Title V), ten health centers (Title I) and 20 health stations (Title I, 12 and Title V, eight).

Chart 1.12

Number of Service Units and Facilities, Operated by Phoenix Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	11	7	4	--	--
Hospitals	6	5	1	--	1
Ambulatory Facilities	41	11	30	22	8
Health Centers	*16*	*6*	*10*	*10*	*--*
School Health Centers	*1*	*1*	*--*	*--*	*--*
Health Stations	*24*	*4*	*20*	*12*	*8*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

In the **Portland Area**, Indian Health Service operated seven health centers as of October 1, 2009. Tribes operated 13 health centers (Title I, three and Title V, ten), one school health center (Title I) and 32 health stations (Title I, 17 and Title V, 15).

Chart 1.13

Number of Service Units and Facilities, Operated by Portland Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	16	6	10	--	--
Hospitals	--	--	--	--	--
Ambulatory Facilities	53	7	46	21	25
Health Centers	*20*	*7*	*13*	*3*	*10*
School Health Centers	*1*	*--*	*1*	*1*	*--*
Health Stations	*32*	*--*	*32*	*17*	*15*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

In the **Tucson Area**, Indian Health Service operated one hospital and two health centers as of October 1, 2009. Tribes operated two health centers (Title I).

Chart 1.14

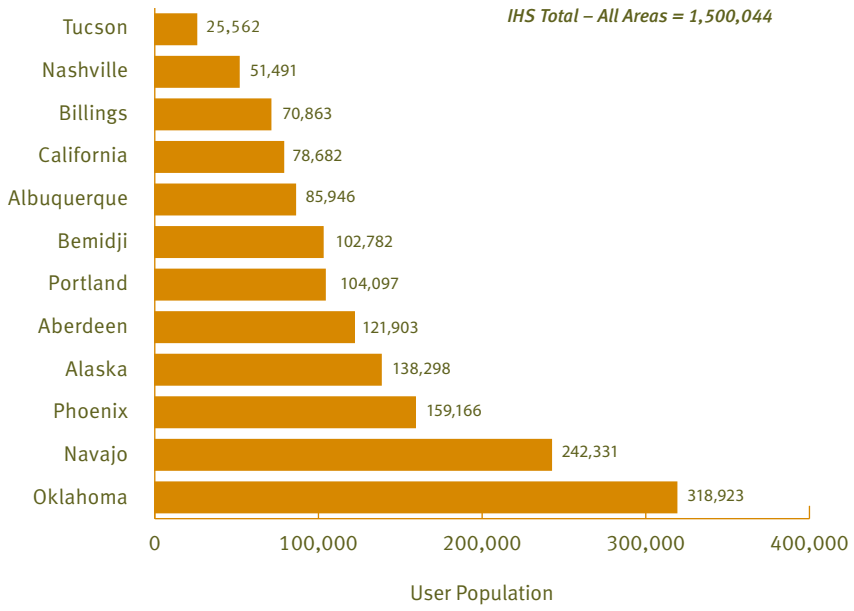
Number of Service Units and Facilities, Operated by Tucson Area and Tribes, October 1, 2009

			Tribal		
Type of Facility	Total	IHS	Total	I	V
Service Units	2	1	1	--	--
Hospitals	1	1	--	--	--
Ambulatory Facilities	7	5	2	2	--
Health Centers	*5*	*3*	*2*	*2*	*--*
School Health Centers	*2*	*2*	*--*	*--*	*--*
Health Stations	*--*	*--*	*--*	*--*	*--*

I — operated under Title I, P.L. 93-638 Self-Determination Contracts
V — operated under Title V, P.L. 106-260 Tribal Self-Governance Amendment of 2000

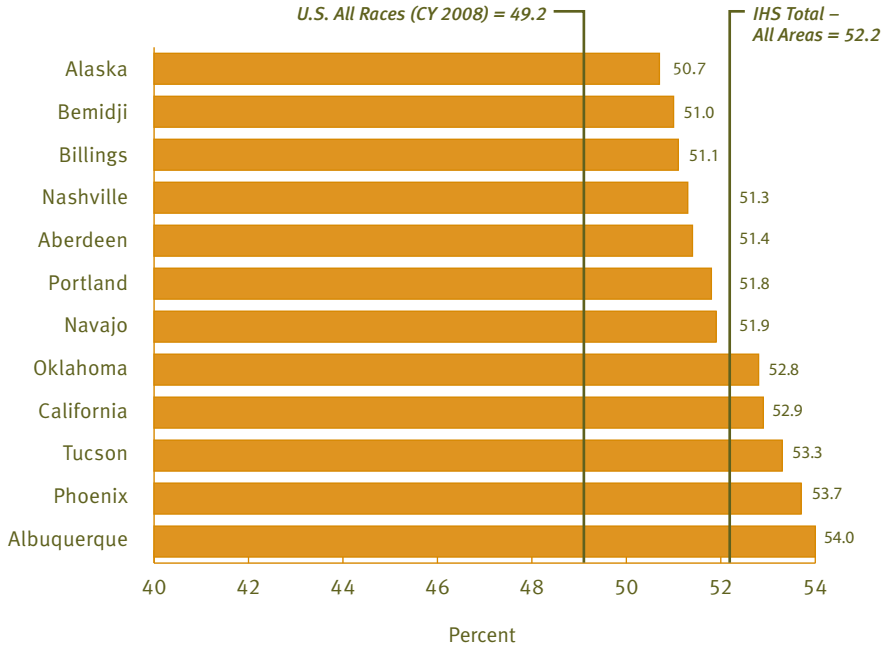
In FY 2009, the IHS user population—a count of those AI/AN people who used IHS services at least once during the last 3-year period—was nearly 1.5 million. Approximately 37 percent of the user population was concentrated in two IHS Areas: Oklahoma and Navajo.

Chart 2.1 IHS User Population, FY 2009



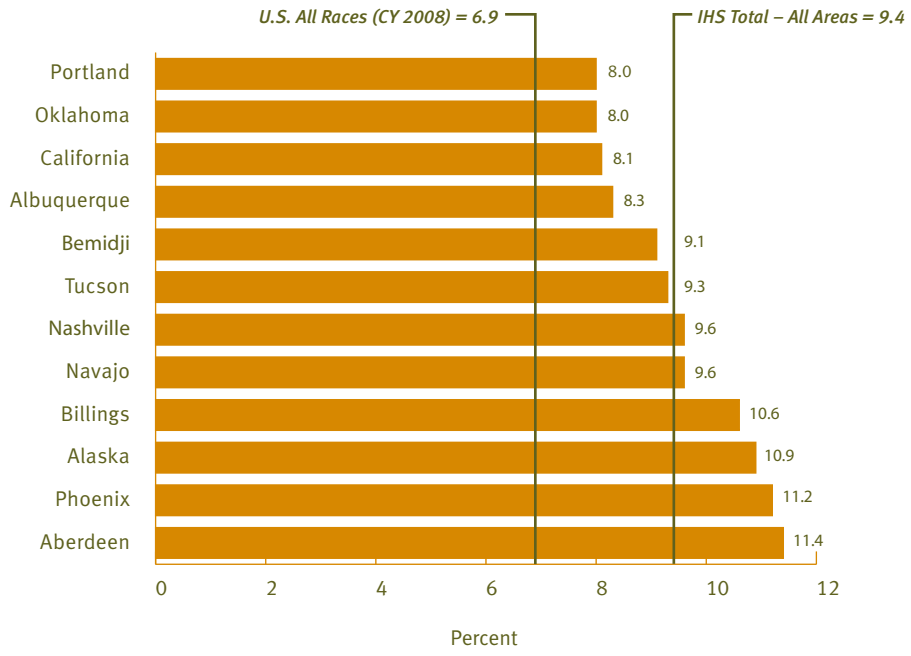
There were a slightly higher percentage of females in FY 2009 in the IHS user population than the U.S. all-races population (CY 2008). Phoenix and Albuquerque had the two highest percentages at 53.7 and 54.0, respectively.

Chart 2.2 Percent of Females in User Population, FY 2009



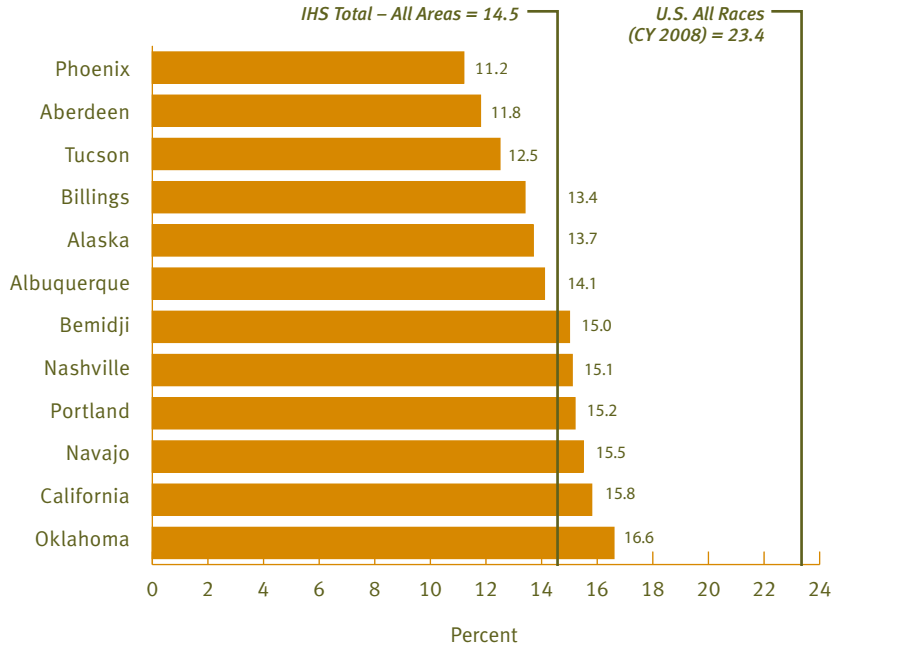
The IHS user population in FY 2009 was considerably younger than the U.S. all-races population (CY 2008). The Portland Area, which had the lowest percentage of population under age 5 (8.0), still had a percentage that was 1.1 percent higher than the U.S. all-races percentage (6.9).

Chart 2.3 Percent of User Population under Age Five, FY 2009



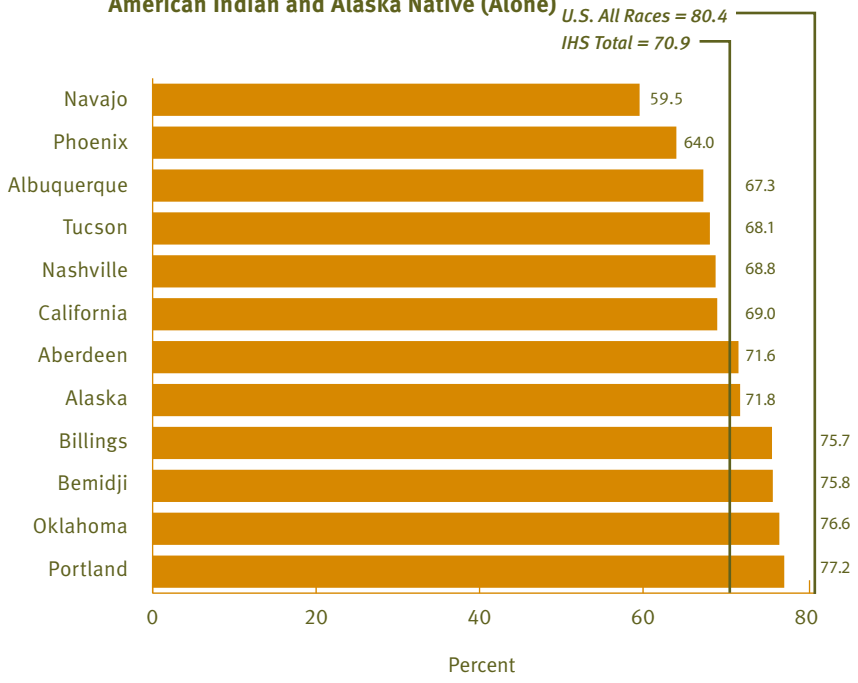
In CY 2008, 23.4 percent of the U.S. all-races population was over age 54 compared to 14.5 for the IHS user population (FY 2009). California and Oklahoma had the highest percentages for this age group, 15.8 and 16.6, respectively.

Chart 2.4 Percent of User Population over Age 54, FY 2009



According to the 2000 Census, 70.9 percent of AI/AN people, age 25 and older, are high school graduates or higher as compared to 80.4 percent for the U.S. all-races population. Ten (10) percent more people in the U.S. general population had at least a high school education as compared to the AI/AN people in the IHS service Area. All IHS Areas were below the U.S. percent.

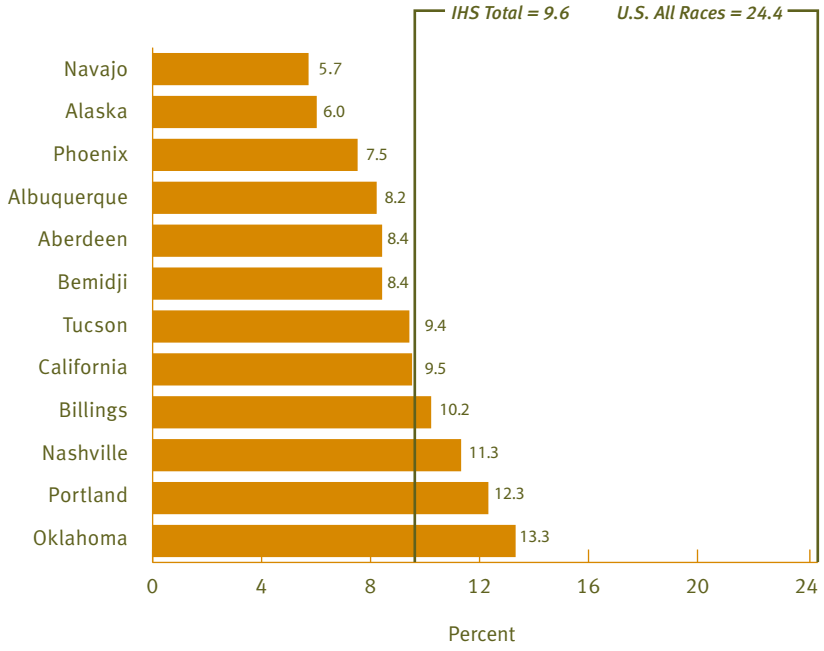
Percent High School Graduate or Higher, Age 25 and Older, 2000 Census American Indian and Alaska Native (Alone)



The 2000 Census indicated that 9.6 percent of AI/AN people, age 25 and older, residing in the current IHS Areas have a Bachelor's Degree or higher. This is less than half the rate for U.S. all-races with a Bachelor Degree (24.4 percent). The Area percentages ranged from 5.7 percent in Navajo to 13.3 percent in Oklahoma.

Chart 2.6

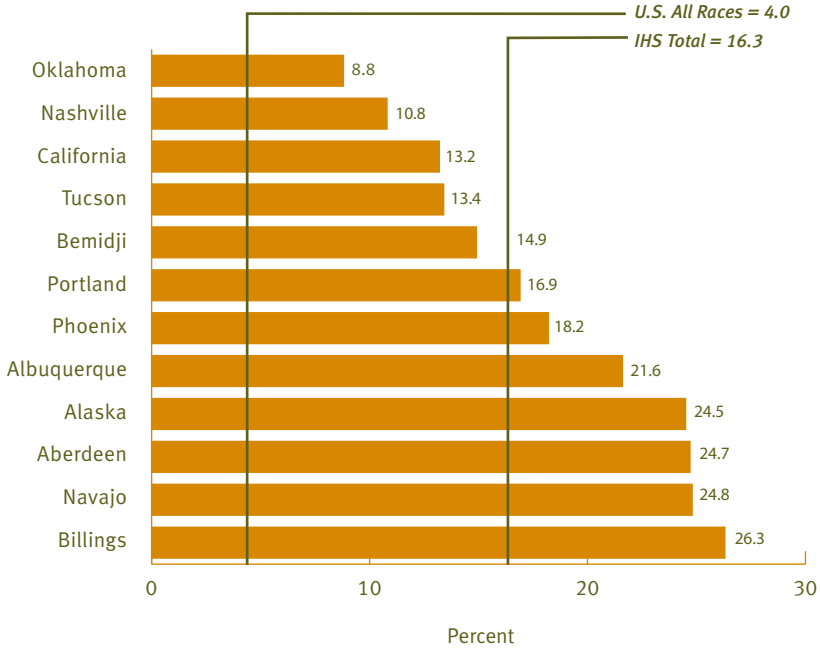
Percent Bachelor's Degree or Higher, Age 25 and Older, 2000 Census American Indian and Alaska Native (Alone)



In 2000, 16.3 percent of AI/AN males, age 16 and older, residing in the current IHS Areas were unemployed compared to 4.0 percent for the U.S. all-races male population. Billings had unemployment rates greater than 26.0 percent.

Chart 2.7

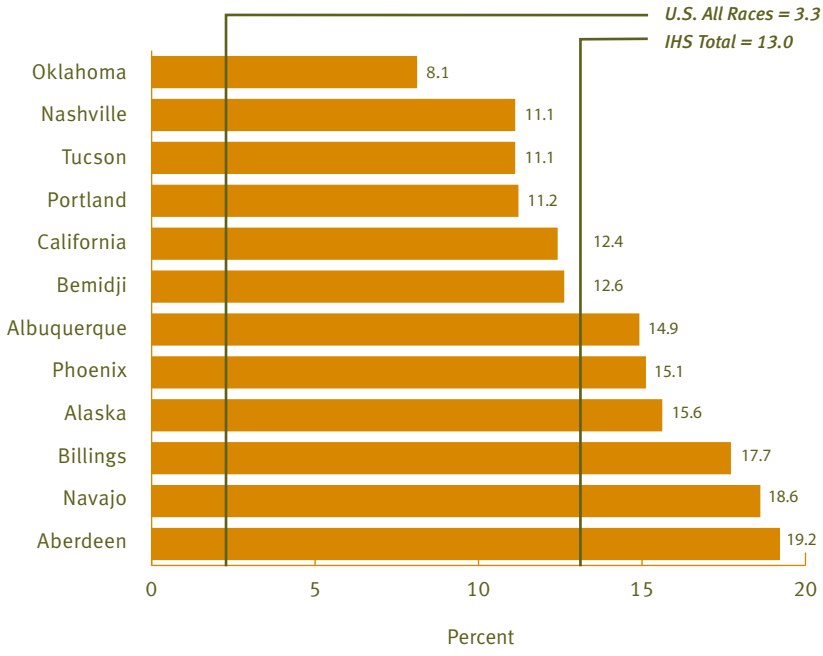
Percent of Males Unemployed, Age 16 and Older, 2000 Census American Indian and Alaska Native (Alone)



In 2000, 13.0 percent of AI/AN females, age 16 and older, residing in the current IHS Areas were unemployed a rate that is four times greater than the U.S. all-races female population (3.3 percent). The Area unemployment rates ranged from 8.1 in Oklahoma to 19.2 in Aberdeen.

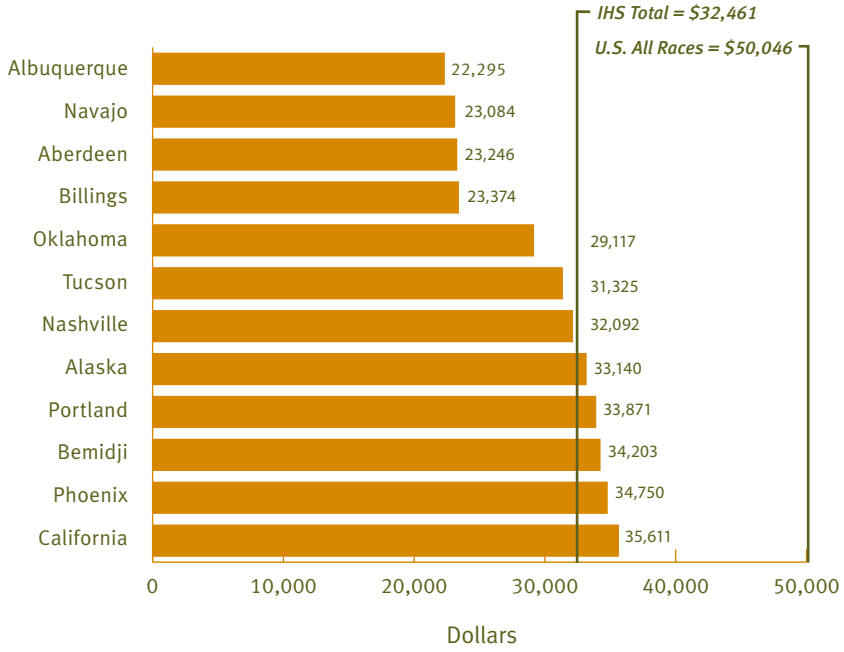
Chart 2.8

Percent of Females Unemployed, Age 16 and Older, 2000 Census American Indian and Alaska Native (Alone)



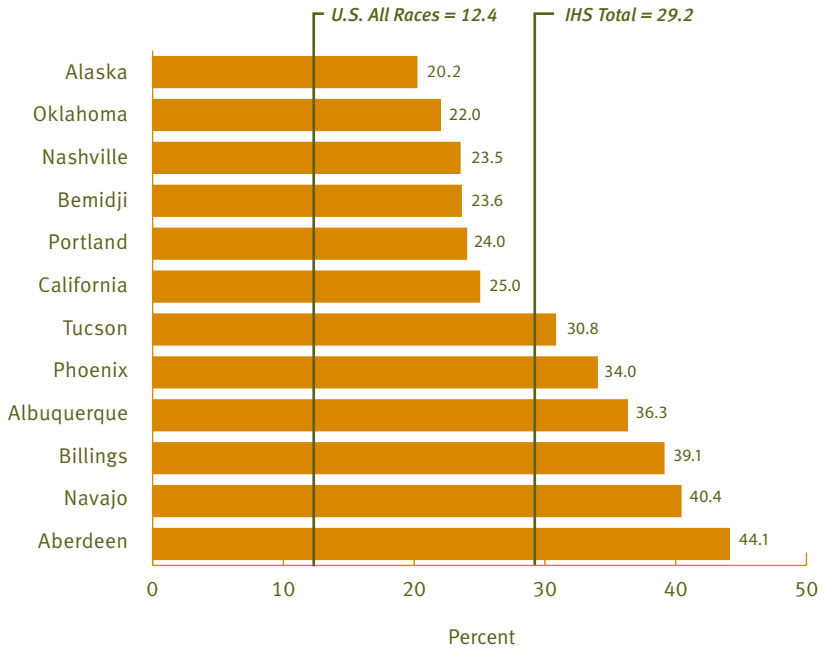
According to the 2000 Census, the median household income in 1999 for AI/AN people residing in the current IHS Areas was $32,461. The median household income for U.S. all-races (50,046) is 54.2 percent higher than that of AI/AN. The Albuquerque, Navajo, Aberdeen, and Billings Areas had median household incomes that were less than half of the U.S. figure.

Chart 2.9 **Median Household Income in 1999, 2000 Census American Indian and Alaska Native (Alone)**



The 2000 Census indicated that almost one-third (29.2 percent) of AI/AN people residing IHS Areas were below the poverty level. This is 2.4 times higher than the comparable U.S. all-races figure of 12.4 percent below the poverty level. Aberdeen and Navajo had percentages exceeding 40.0.

Chart 2.10 **Percent of Population Below Poverty Level, 2000 Census American Indian and Alaska Native (Alone)**



The birth rate for the IHS service area population in 2003-2005 was 1.6 times the rate for the U.S. all-races population in 2004, (14.0 percent and 22.6 percent, respectively). The IHS Area with the lowest birth rate (California, 14.8).

Chart 3.1 Birth Rates, Calendar Years 2003-2005

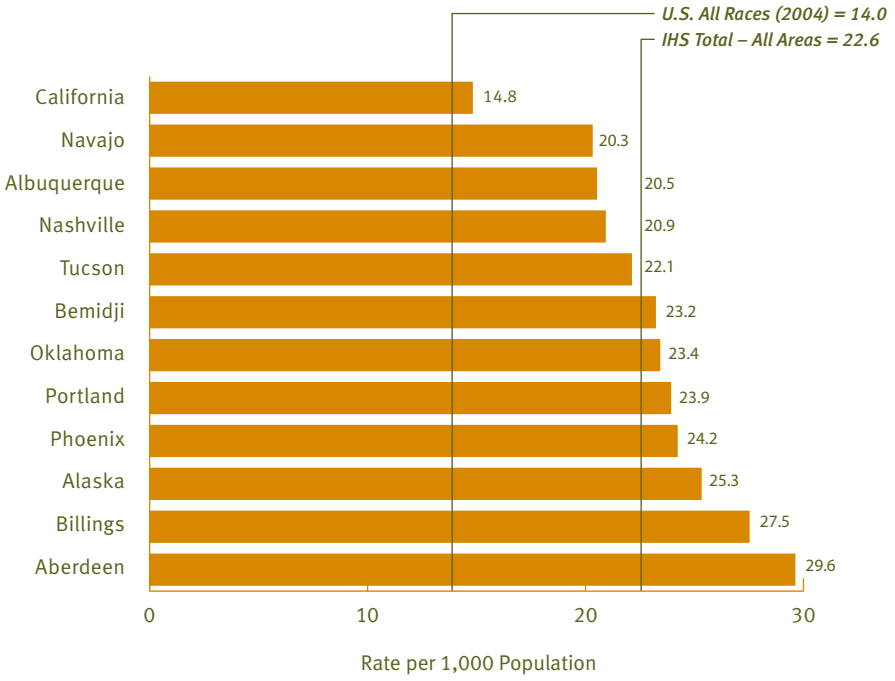


Table 3.1 Number and Rate of Live Births, Calendar Years 2003-2005

	Number	Rate[1/]
U.S. All Races (2004)	*4,112,052*	*14.0*
All IHS Areas	***119,585***	***22.6***
Aberdeen	9,760	29.6
Alaska	8,781	25.3
Albuquerque	6,224	20.5
Bemidji	7,893	23.2
Billings	5,219	27.5
California	7,752	14.8
Nashville	6,862	20.9
Navajo	14,091	20.3
Oklahoma	23,950	23.4
Phoenix	13,679	24.2
Portland	13,080	23.9
Tucson	2,294	22.1

[1/] Rate per 1,000 population.

For 2003-2005, 7.0 percent of all AI/AN births in the IHS service area were considered low birthweight (less than 2,500 grams). This was better than the figure for the U.S. all-races population (8.1 percent in 2004). All IHS Areas had lower proportions of low birthweight births than the general population, except for the Albuquerque Area that had the same rate.

Chart 3.2 Low Birthweight, Calendar Years 2003-2005

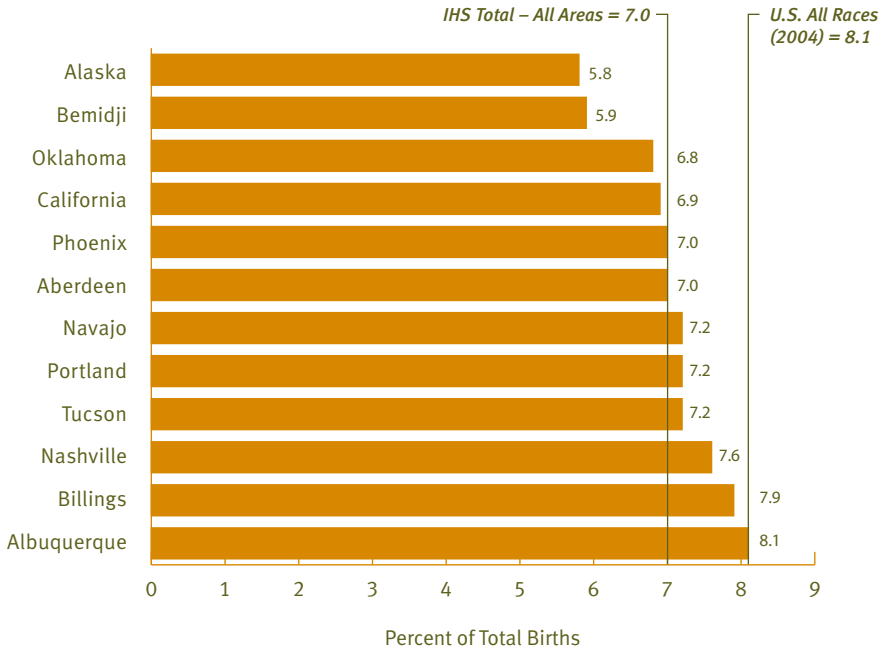


Table 3.2 Low Birthweight as a Percent of Total Live Births, Calendar Years 2003-2005

	Total Live Births[1/]	Number Low Birthweight[2/]	Percent Low Birthweight[3/]
U.S. All Races (2004)	*4,112,052*	*331,772*	*8.1*
All IHS Areas	***119,585***	***8,331***	***7.0***
Aberdeen	9,760	686	7.0
Alaska	8,781	509	5.8
Albuquerque	6,224	506	8.1
Bemidji	7,893	466	5.9
Billings	5,219	410	7.9
California	7,752	533	6.9
Nashville	6,862	523	7.6
Navajo	14,091	1,013	7.2
Oklahoma	23,950	1,625	6.8
Phoenix	13,679	951	7.0
Portland	13,080	944	7.2
Tucson	2,294	165	7.2

[1/] Includes 3,809 U.S. All-Races live births and 163 American Indian/Alaska Native live births with birthweight not stated.
[2/] Birthweight of less than 2,500 grams (5lb 8oz).
[3/] Percent low weight based on live births with a birthweight reported.

The AI/AN population experiences more high birthweights than the U.S. all-races population. High birthweight may be a complication of diabetic pregnancies. In 2003-2005, 10.9 percent of all births in the IHS service area were high birthweight (4,000 grams or more). In contrast, the U.S. all-races percentage was 2.4 percentage points lower (8.5 percent) in 2004 than the IHS service area high birthweight. The rates varied considerably by Area ranging from 6.2 percent in Albuquerque to 17.1 percent in Alaska.

Chart 3.3 High Birthweight, Calendar Years 2003-2005

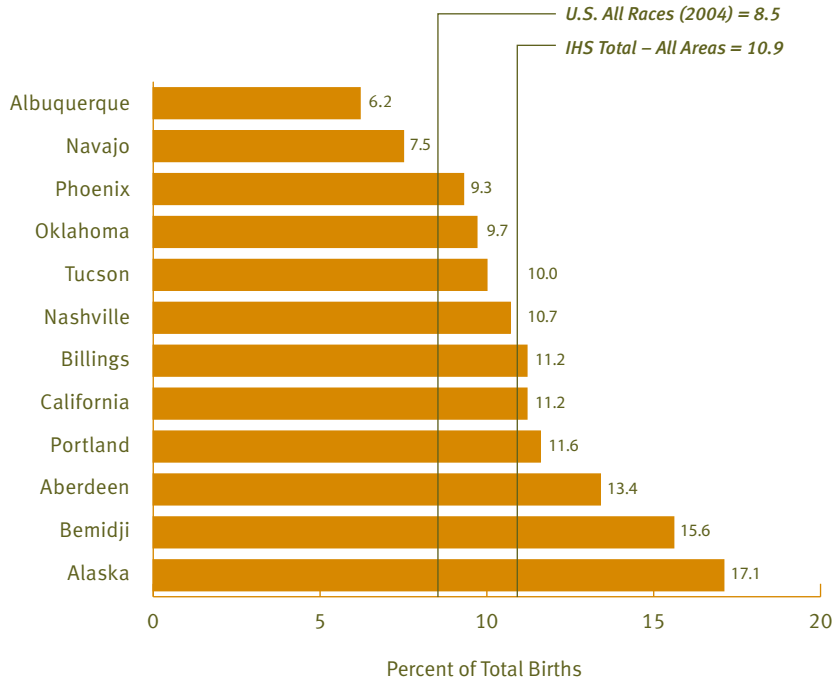


Table 3.3 High Birthweight as a Percent of Total Live Births, Calendar Years 2003-2005

	Total Live Births[1/]	Number High Birthweight[2/]	Percent High Birthweight[3/]
U.S. All Races (2004)	*4,112,052*	*348,977*	*8.5*
All IHS Areas	***119,585***	***13,018***	***10.9***
Aberdeen	9,760	1,308	13.4
Alaska	8,781	1,498	17.1
Albuquerque	6,224	386	6.2
Bemidji	7,893	1,234	15.6
Billings	5,219	587	11.2
California	7,752	872	11.2
Nashville	6,862	736	10.7
Navajo	14,091	1,053	7.5
Oklahoma	23,950	2,318	9.7
Phoenix	13,679	1,275	9.3
Portland	13,080	1,521	11.6
Tucson	2,294	230	10.0

[1/] Includes 3,809 U.S. All-Races live births and 163 American Indian/Alaska Native live births with birthweight not stated.
[2/] Birthweight of more than 4,000 grams (8lb 14oz).
[3/] Percent high weight based on live births with a birthweight reported.

During 2003-2005, prenatal care began in the first trimester for 67.2 percent of AI/AN live births among the IHS service area population, which is slightly higher than the number of births with prenatal care among the U.S. all-races population (65.8 percent) in 2004. The percentages varied widely among IHS Areas, ranging from 57.3 for Portland to 75.6 for Nashville.

Chart 3.4 Prenatal Care in First Trimester, Calendar Years 2003-2005

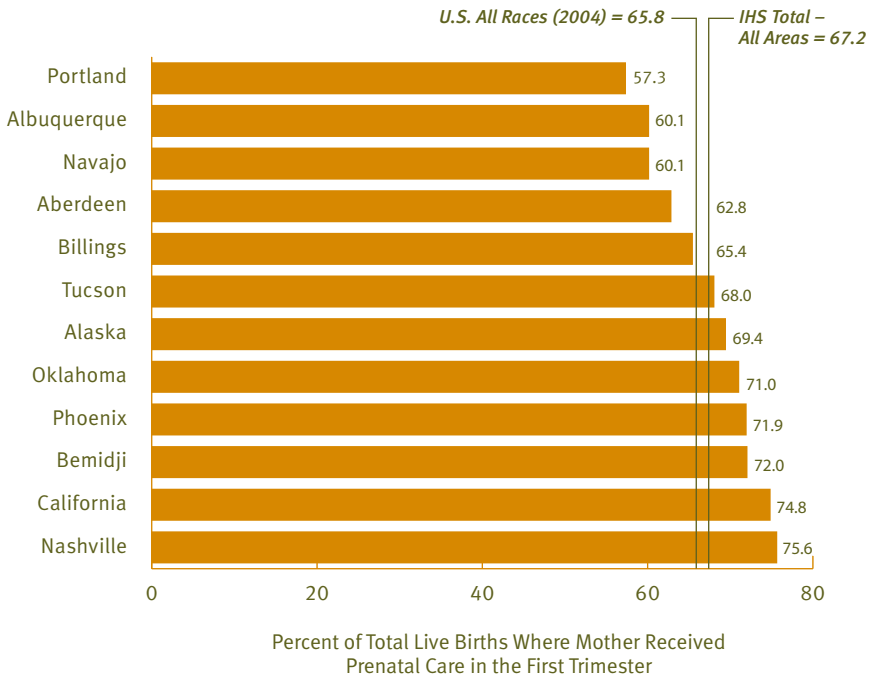


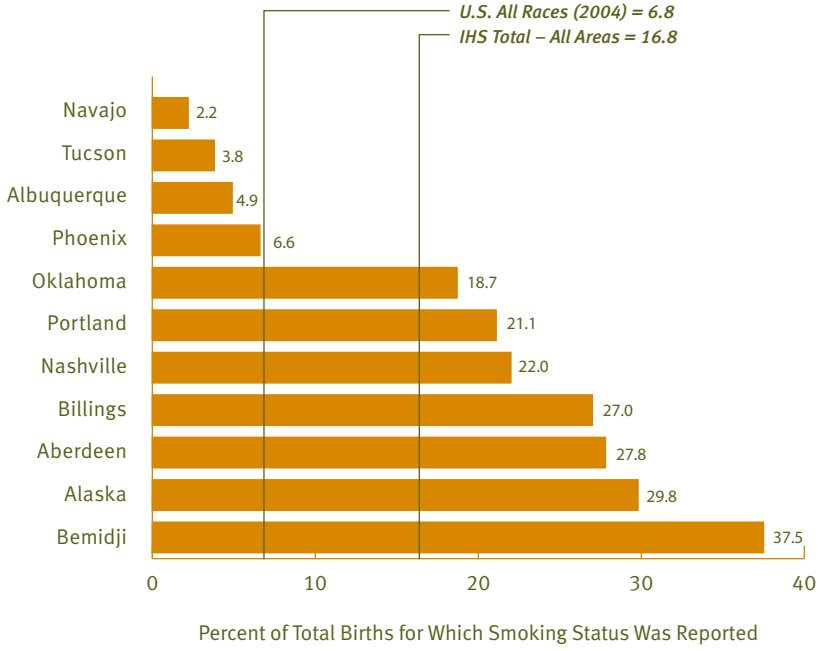
Table 3.4 Prenatal Care in First Trimester, Calendar Years 2003-2005

	Total Live Births[1/]	Mother Received Prenatal Care	Mother Received Prenatal Care in the First Trimester[2/]	
		Reported	*Number*	*Percent*
U.S. All Races (2004)	*4,112,052*	*3,192,935*	*2,707,542*	*65.8*
All IHS Areas	***119,585***	***113,628***	***80,413***	***67.2***
Aberdeen	9,760	9,461	6,130	62.8
Alaska	8,781	8,384	6,093	69.4
Albuquerque	6,224	5,698	3,740	60.1
Bemidji	7,893	7,703	5,685	72.0
Billings	5,219	5,057	3,415	65.4
California	7,752	7,477	5,798	74.8
Nashville	6,862	6,683	5,190	75.6
Navajo	14,091	13,508	8,473	60.1
Oklahoma	23,950	23,123	16,997	71.0
Phoenix	13,679	13,007	9,833	71.9
Portland	13,080	11,314	7,498	57.3
Tucson	2,294	2,213	1,561	68.0

[1/] Includes 919,117 U.S. All-Races live births and 5,957 American Indian/Alaska Native live births for which prenatal care was either 'not reported' or 'no prenatal care' was provided.
[2/] Percent based on live births with this information reported.

During 2003-2005, 16.8 percent of mothers of AI/AN newborns who smoked during pregnancy (as reported on the state birth certificate), which is 2.5 times the rate for mothers in the U.S. general population (6.8 percent) in 2004. The Bemidji Area (37.5 percent) was 2.2 times the all IHS Area rate.

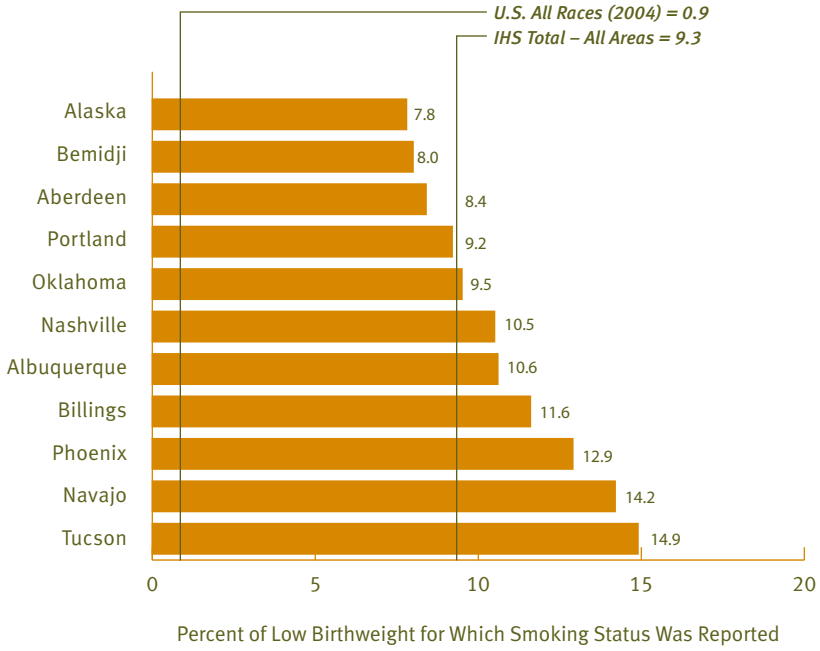
Chart 3.5 Percent of Live Births for Mothers Who Smoked During Pregnancy, Calendar Years 2003-2005



NOTE: California data was excluded.

During 2003-2005, 9.3 percent of women who gave birth to AI/AN newborns smoked tobacco during pregnancy. Women in the U.S. all-races population smoked at a lower rate during pregnancy (0.9 percent) in 2004.

Chart 3.6 Percent of Low Birthweight for Mothers Who Smoked During Pregnancy, Calendar Years 2003-2005



NOTE: California data was excluded.

Table 3.5

Percent of Mothers Who Smoked During Pregnancy for All Births and Low Birthweight by Age of Mother, Calendar Years 2003-2005

(Low Birthweight is defined as weight less than 2,500 grams (5lb., 8oz.))

	Percent of Live Births[1/] for Which the Mother Reported Smoking				
	All Ages	*Under 15 Years*	*15-19 Years*	*20-34 Years*	*35-54 Years*
U.S. All Races (2004)	*6.8*	*2.9*	*9.8*	*6.9*	*4.1*
All IHS Areas	***16.8***	***6.7***	***17.7***	***16.9***	***13.4***
Aberdeen	27.8	14.3	24.9	28.9	24.5
Alaska	29.8	17.4	31.4	30.4	23.0
Albuquerque	4.9	0.0 *	4.5	5.2	3.3
Bemidji	37.5	21.7	39.9	37.4	32.3
Billings	27.0	17.6	26.6	27.2	27.4
California[2/]	-- *	-- *	-- *	-- *	-- *
Nashville	22.0	0.0 *	26.0	21.8	17.4
Navajo	2.2	0.0 *	3.1	2.1	1.4
Oklahoma	18.7	5.3	19.2	18.6	18.8
Phoenix	6.6	0.0 *	5.2	6.9	7.2
Portland	21.1	11.8	24.5	20.9	16.9
Tucson	3.8	0.0 *	3.8	3.8	3.6

	Percent of Low Birthweight[1/] for Which the Mother Reported Smoking				
	All Ages	*Under 15 Years*	*15-19 Years*	*20-34 Years*	*35-54 Years*
U.S. All Races (2004)	*0.9*	*0.5*	*1.2*	*0.8*	*0.7*
All IHS Areas	***9.3***	***0.0***	***8.2***	***9.1***	***15.0***
Aberdeen	8.4	0.0 *	6.4	8.6	13.3
Alaska	7.8	0.0 *	5.8	8.1	9.3
Albuquerque	10.6	0.0 *	8.7	10.9	10.5
Bemidji	8.0	0.0 *	6.9	7.7	15.0
Billings	11.6	0.0 *	7.6	12.4	16.1
California[2/]	-- *	-- *	-- *	-- *	-- *
Nashville	10.5	0.0 *	11.2	10.1	13.7
Navajo	14.2	0.0 *	14.5	13.7	17.4
Oklahoma	9.5	6.6	9.3	8.8	19.0
Phoenix	12.9	0.0 *	11.8	12.8	16.0
Portland	9.2	0.0 *	8.9	8.5	17.2
Tucson	14.9	0.0 *	17.6	14.3	14.3

-- Represents zero.
* Figure does not meet standards of reliability or precision.
[1/] Based on the number of live births with smoking status of the mother reported.
[2/] Excludes data for California, which did not require reporting of tobacco use during pregnancy.

During 2003-2005 mothers of AI/AN newborns were more likely to have diabetes than their counterparts in the U.S. all-races population in 2004. The 2003-2005 rate for AI/AN people was 1.6 times larger than the U.S. all-races rate (35.8 births to mothers with diabetes per 1,000 live births). For the AI/AN population, there were 56.1 births to mothers with diabetes per 1,000 of all live births. The Area proportions ranged from 34.2 per 1,000 live births in California to 83.9 in Navajo.

Chart 3.7 Birth Rates Among Mothers with Diabetes, Calendar Years 2003-2005

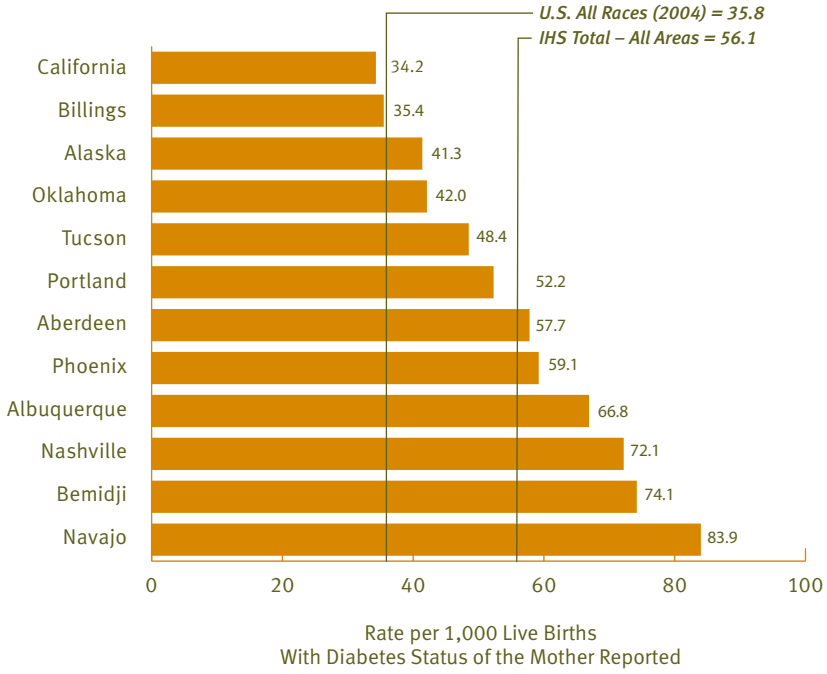


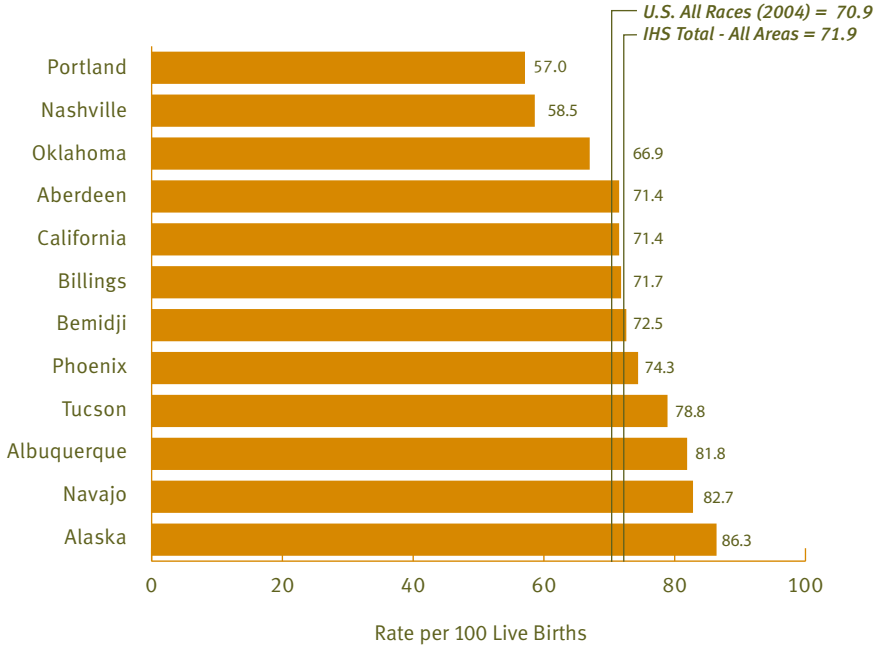
Table 3.7 Rate[1/] of Live Births Among Mothers with Diabetes by Age of Mother, Calendar Years 2003-2005

	All Ages	Under 20 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-54 Years
U.S. All Races (2004)	*35.8*	*11.2*	*20.4*	*34.1*	*46.9*	*61.8*	*80.9*
All IHS Areas	***56.1***	***17.0***	***31.4***	***63.6***	***101.3***	***138.5***	***164.4***
Aberdeen	57.7	10.9	31.4	71.3	132.9	173.9	233.6
Alaska	41.3	11.6	22.8	46.3	71.8	94.2	94.1
Albuquerque	66.8	15.3	31.4	74.6	116.0	177.3	217.7
Bemidji	74.1	21.9	47.3	92.4	121.3	186.3	244.4
Billings	35.4	7.8	21.0	43.8	59.5	76.0	90.9
California	34.2	12.5	21.7	37.5	54.5	56.1	123.4
Nashville	72.1	32.6	48.2	89.7	99.3	129.0	102.4
Navajo	83.9	20.2	38.5	85.6	145.2	205.5	220.6
Oklahoma	42.0	18.0	24.1	52.1	80.5	101.4	129.6
Phoenix	59.1	17.2	35.6	64.7	102.3	153.0	169.9
Portland	52.2	19.2	34.6	54.6	68.5	121.5	155.7
Tucson	48.4	8.7	17.6	59.1	100.3	152.3	97.6

[1/] Number of live births among mothers with diabetes per 1,000 live births with diabetes status reported in age group specified.

Mothers of AI/AN newborns have a 1.4 higher rate of vaginal deliveries than do women in the U.S. all-races population. The AI/AN rate of vaginal deliveries was 71.9 per 100 live births in 2003-2005, while the 2004 U.S. all-races rate was 70.9. Portland (57.0), Nashville (58.5), and Oklahoma (66.9) were less than the U.S. all-races rate.

Chart 3.8 Vaginal Delivery, Calendar Years 2003-2005



Women of the U.S. all-races population are one and a half times more likely to have cesarean delivery than mothers of AI/AN newborns. The highest percent of cesarean deliveries was in the Oklahoma Area (30.5) whereas the lowest percent of cesarean deliveries was in the Alaska Area (13.2).

Chart 3.9 Cesarean Delivery, Calendar Years 2003-2005

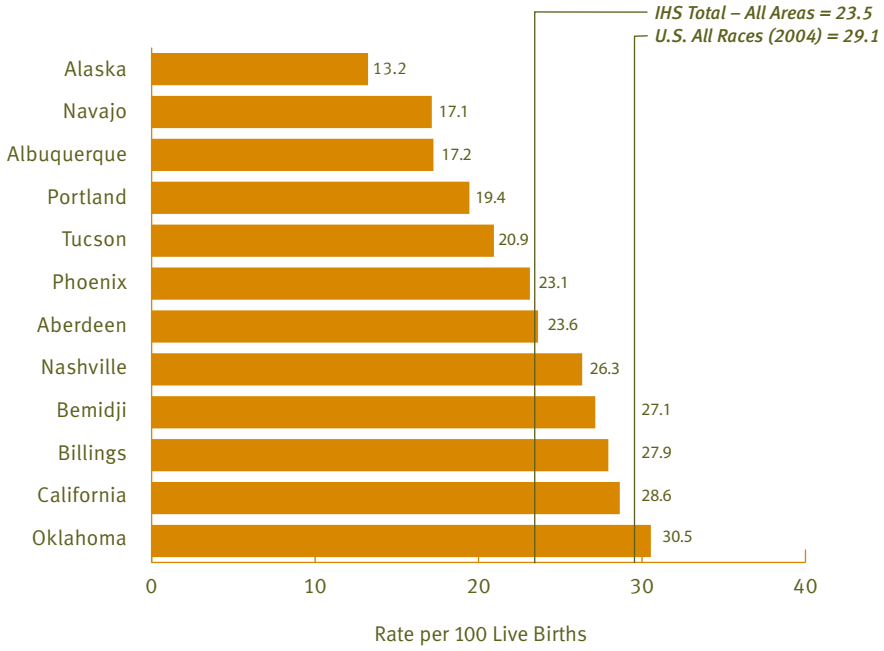


Table 3.8

Birth by Method of Delivery, Calendar Years 2003-2005

(Rates per 100 live births)

	Method of Delivery							
	Vaginal				Cesarean			
	All Ages	Under 25 Years	25-34 Years	35-54 Years	All Ages	Under 25 Years	25-34 Years	35-54 Years
U.S. All Races (2004)	*70.9*	*76.8*	*69.7*	*60.4*	*29.1*	*23.2*	*30.3*	*39.6*
All IHS Areas	***71.9***	***75.7***	***68.9***	***61.6***	***23.5***	***19.9***	***26.3***	***31.8***
Aberdeen	71.4	75.5	66.4	59.4	23.6	20.0	27.7	35.2
Alaska	86.3	89.0	84.1	81.1	13.2	10.4	15.5	18.5
Albuquerque	81.8	86.3	78.5	71.8	17.2	12.7	20.7	26.1
Bemidji	72.5	77.0	69.3	55.7	27.1	22.7	30.4	43.6
Billings	71.7	75.9	68.0	53.8	27.9	23.7	31.5	45.6
California	71.4	76.2	68.8	57.9	28.6	23.8	31.2	42.0
Nashville	58.5	61.9	56.2	51.7	26.3	21.9	29.4	34.0
Navajo	82.7	86.8	80.5	72.8	17.1	13.1	19.2	26.9
Oklahoma	66.9	70.9	63.2	52.0	30.5	26.8	34.0	43.8
Phoenix	74.3	79.8	72.9	64.9	23.1	19.8	26.5	34.3
Portland	57.0	60.4	55.1	47.1	19.4	16.1	20.9	29.9
Tucson	78.8	82.1	76.5	68.2	20.9	17.4	23.2	31.8

NOTE: When computing vaginal and cesarean rates "births not stated" are not included in the calculation.

The infant mortality rate for the IHS service area population in 2003-2005 was 8.2 deaths per 1,000 live births. The AI/AN rate is 21 percent higher than the U.S. all-races (6.8 deaths per 1,000 live births for 2004). The Aberdeen Area had the highest infant mortality rate (11.1) followed by the Billings Area (9.8). The rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.10 Infant Mortality Rates, Calendar Years 2003-2005

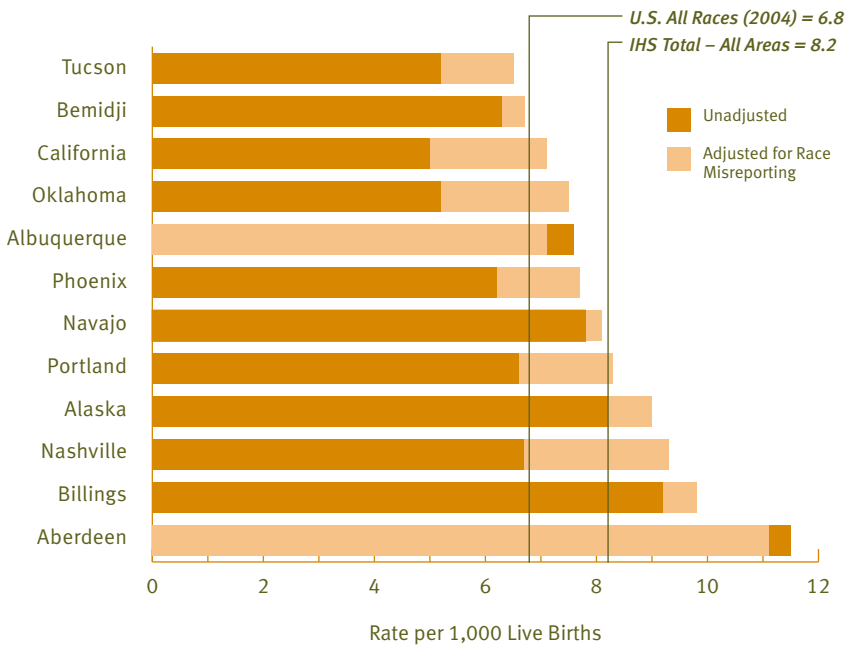


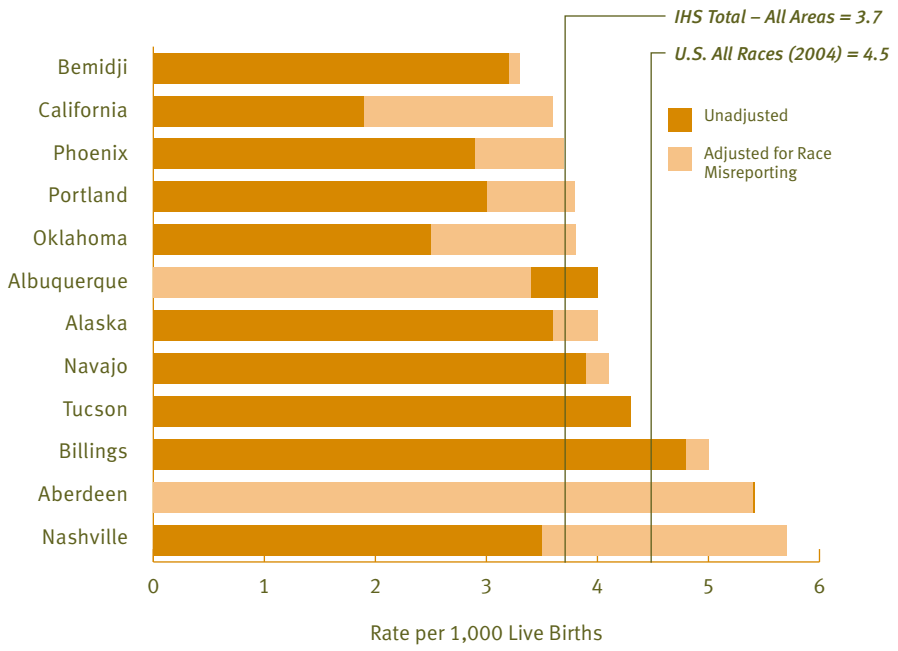
Table 3.10 Infant Mortality Rates *(Under One Year)*, Calendar Years 2003-2005

		Infant Deaths		Rate[1/]	
	Live Births	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*4,112,052*	*27,860*		*6.8*	
All IHS Areas	***119,585***	***830***	***977***	***6.9***	***8.2***
Aberdeen	9,760	111[3/]	108[3/]	11.4[3/]	11.1[3/]
Alaska	8,781	72	79	8.2	9.0
Albuquerque	6,224	47[3/]	44[3/]	7.6[3/]	7.1[3/]
Bemidji	7,893	50	53	6.3	6.7
Billings	5,219	48	51	9.2	9.8
California	7,752	39	55	5.0	7.1
Nashville	6,862	46	64	6.7	9.3
Navajo	14,091	110	114	7.8	8.1
Oklahoma	23,950	124	180	5.2	7.5
Phoenix	13,679	85	106	6.2	7.7
Portland	13,080	86	108	6.6	8.3
Tucson	2,294	12	15	5.2	6.5

[1/] Rate per 1,000 live births.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] For the Aberdeen and Albuquerque Areas, there were more American Indian and Alaska Native infant deaths identified through use of the state death certificate records (unadjusted data) than through use of match between state birth and deaths certificate records (adjusted data).

The neonatal mortality rate for the IHS service area population in 2003-2005 was 3.7 deaths per 1,000 live births. The U.S. all-races rate of 4.5 deaths per 1,000 live births in 2004 is 1.2 times higher than the AI/AN rate of 3.7. Three IHS Areas (Aberdeen, Billings, and Nashville) had rates that exceeded the U.S. all-races rate. The rate is adjusted for misreporting of AI/AN race on the state death certificate.

Neonatal Mortality Rates, Calendar Years 2003-2005



Neonatal Mortality Rates *(Under 28 Days)*, Calendar Years 2003-2005

	Live Births	Infant Deaths		Rate[1/]	
		Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*4,112,052*	*18,602*		*4.5*	
All IHS Areas	***119,585***	***404***	***486***	***3.3***	***3.7***
Aberdeen	9,760	54[3/]	53[3/]	5.5[3/]	5.4[3/]
Alaska	8,781	32	34	3.6	4.0
Albuquerque	6,224	25[3/]	21[3/]	4.0[3/]	3.4[3/]
Bemidji	7,893	25	26	3.2	3.3
Billings	5,219	25	26	4.8	5.0
California	7,752	15	28	1.9	3.6
Nashville	6,862	24	39	3.5	5.7
Navajo	14,031	55	57	3.9	4.1
Oklahoma	23,950	61	91	2.5	3.8
Phoenix	13,679	39	51	2.9	3.7
Portland	13,080	39	50	3.0	3.8
Tucson	2,294	10[4/]	10[4/]	4.3[4/, 5/]	4.3[4/, 5/]

[1/] Rate per 1,000 live births.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] The adjusted numbers and rates for neonatal deaths for Aberdeen and Albuquerque Areas are lower than the unadjusted numbers and rates because the linked birth/infant death file (used to obtain the adjusted counts for neonatal deaths) had six and two less deaths, respectively, than did the unadjusted mortality file for each Area (2003-2005 data).
[4/] Includes number of deaths and rates for the Tucson Area rounded to ten in order to adhere to IHS confidentiality agreements.
[5/] Quantity greater than zero and less than ten. Confidentiality agreements require IHS to round the number of deaths upwards to ten; the rate also includes number of deaths rounded upwards to ten.

The postneonatal mortality rate for the IHS service area population in 2003-2005 was 3.8 deaths per 1,000 live births. The AI/AN rate is 1.7 times higher than the U.S. all-races rate of 2.3 deaths per 1,000 live births for 2004. The Aberdeen Area had the highest rate (5.6 deaths per 1,000 live births) among the IHS Areas followed by Alaska (5.0 deaths per 1,000 live births). The rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.12 Postneonatal Mortality Rates, Calendar Years 2003-2005

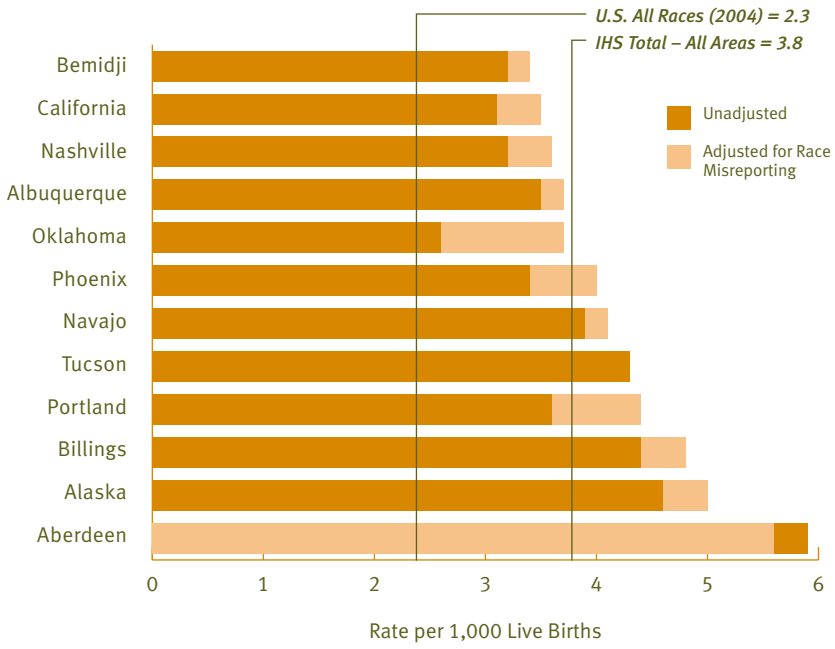


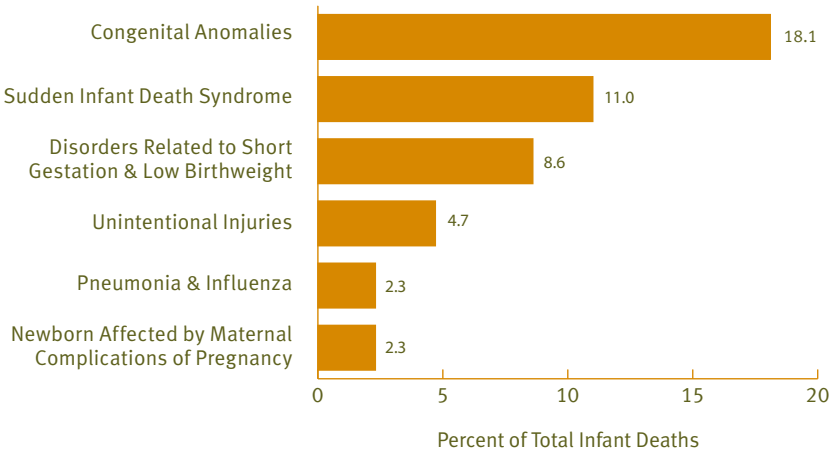
Table 3.12 Postneonatal Mortality Rates *(28 Days to Under One Year)*, Calendar Years 2003-2005

	Live Births	Infant Deaths		Rate[1/]	
		Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*4,112,052*	*9,258*		*2.3*	
All IHS Areas	***119,585***	***431***	***495***	***3.6***	***3.8***
Aberdeen	9,760	57[3/]	55[3/]	5.8[3/]	5.6[3/]
Alaska	8,781	40	44	4.6	5.0
Albuquerque	6,224	22	23	3.5	3.7
Bemidji	7,893	25	27	3.2	3.4
Billings	5,219	23	25	4.4	4.8
California	7,752	24	27	3.1	3.5
Nashville	6,862	22	25	3.2	3.6
Navajo	14,091	55	57	3.9	4.1
Oklahoma	23,950	63	89	2.6	3.7
Phoenix	13,679	46	55	3.4	4.0
Portland	13,080	47	58	3.6	4.4
Tucson	2,294	10[4/]	10[4/]	4.3[4/, 5/]	4.3[4/, 5/]

[1/] Rate per 1,000 live births.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] The adjusted numbers and rates for postneonatal deaths for the Aberdeen Area are lower than the unadjusted numbers and rates because the linked birth/infant death file (used to obtain the adjusted counts for postneonatal deaths) had two less deaths than did the unadjusted mortality file for each Area (2003-2005 data).
[4/] Includes number of deaths and rates for the Tucson Area rounded to ten in order to adhere to IHS confidentiality agreements.
[5/] Quantity greater than zero and less than ten. Confidentiality agreements require IHS to round the number of deaths upwards to ten; the rate also includes number of deaths rounded upwards to ten.

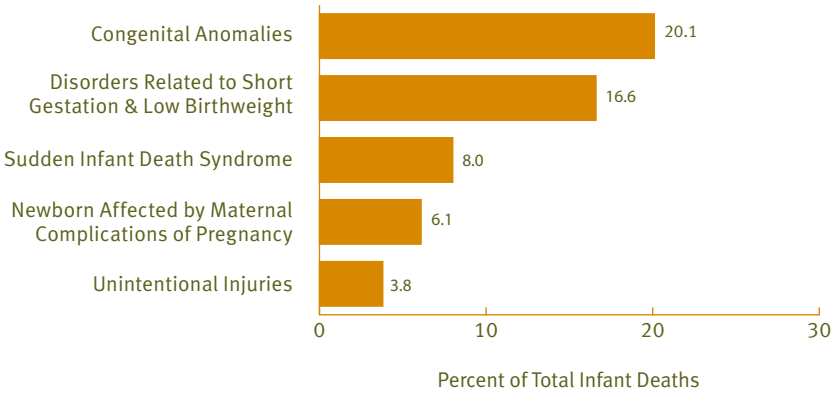
In 2003-2005, 18.1 percent of all infant deaths in the IHS service area were caused by congenital anomalies. This was followed by sudden infant death syndrome (11.0 percent), disorders related to short gestation and low birth weight (8.6 percent), unintentional injuries (4.7 percent), newborn affected by maternal complications of pregnancy and pneumonia and influenza, both at 2.3 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.13 Leading Causes of Infant Deaths, All IHS Areas, Calendar Years 2003-2005



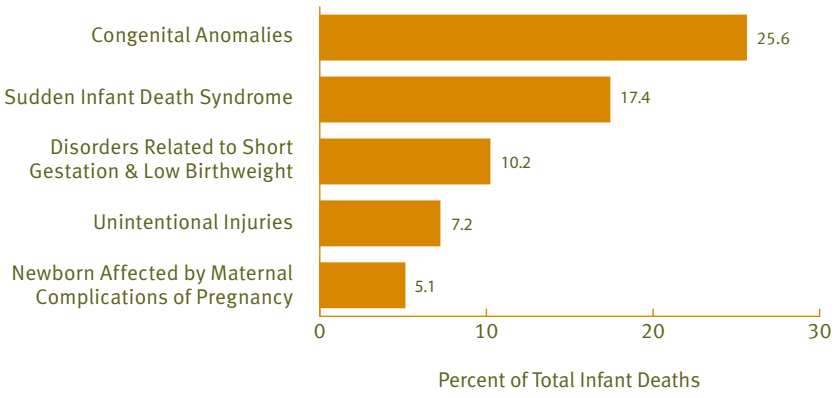
In 2004, 20.1 percent of all infant deaths in the U.S. were caused by congenital anomalies, followed by disorders related to short gestation and low birthweight at 16.6 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.14 Leading Causes of Infant Deaths, U.S. All Races, Calendar Year 2004



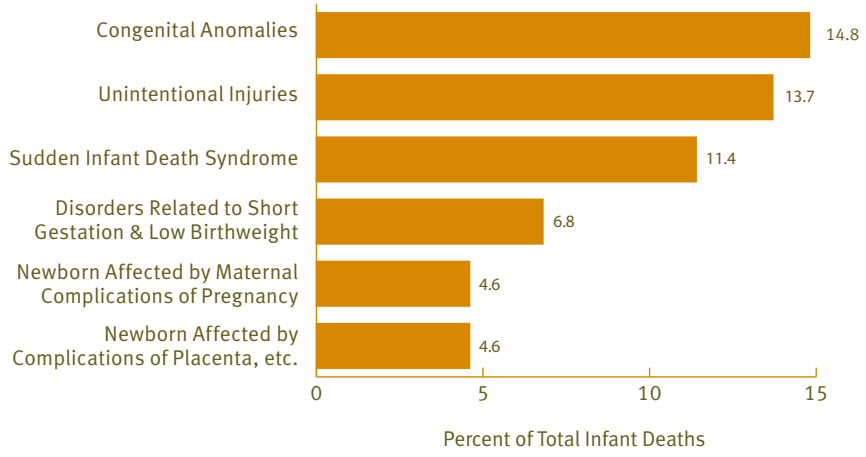
In 2003-2005, 25.6 percent of all infant deaths in the **Aberdeen Area** were caused by congenital anomalies, followed by sudden infant death syndrome at 17.4 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.15 Leading Causes of Infant Deaths, Aberdeen Area, Calendar Years 2003-2005



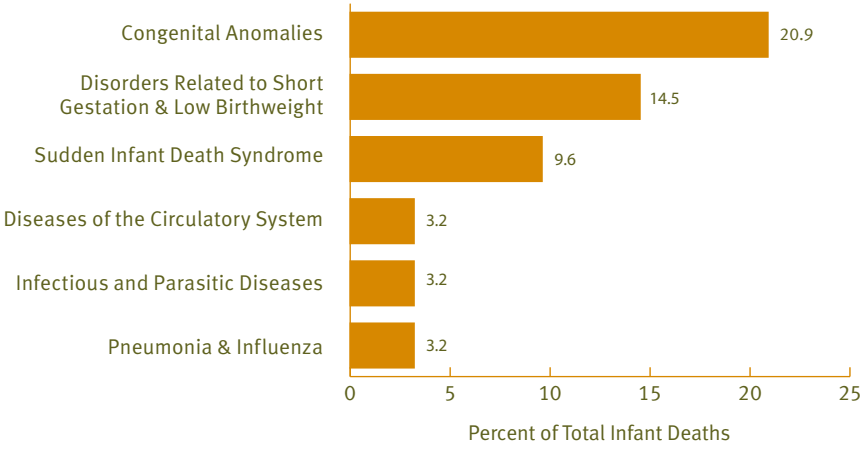
In 2003-2005, 14.8 percent of all infant deaths in the **Alaska Area** were caused by congenital anomalies, followed by unintentional injuries at 13.7 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.16 **Leading Causes of Infant Deaths, Alaska Area, Calendar Years 2003-2005**



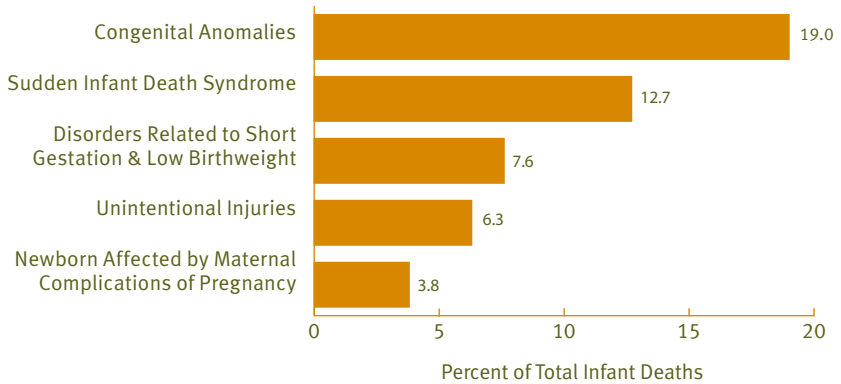
In 2003-2005, 20.9 percent of all infant deaths in the **Albuquerque Area** were caused by congenital anomalies, followed by disorders related to short gestation and low birthweight at 14.5 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.17 **Leading Causes of Infant Deaths, Albuquerque Area, Calendar Years 2003-2005**



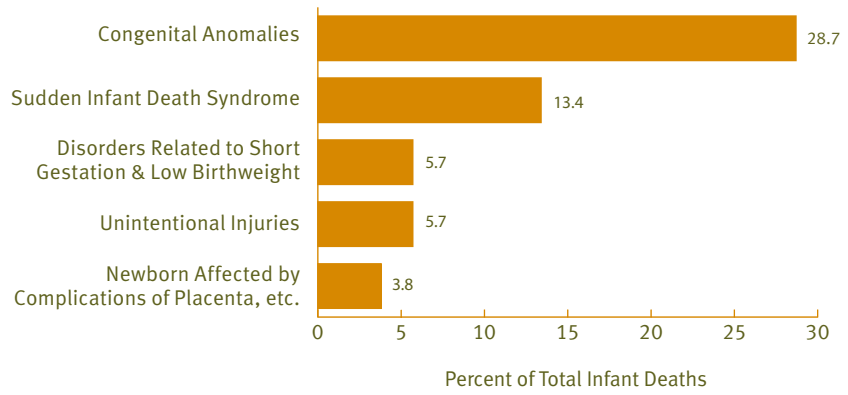
In 2003-2005, 19.0 percent of all infant deaths in the **Bemidji Area** were caused by congenital anomalies, followed by sudden infant death syndrome at 12.7 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.18 **Leading Causes of Infant Deaths, Bemidji Area, Calendar Years 2003-2005**



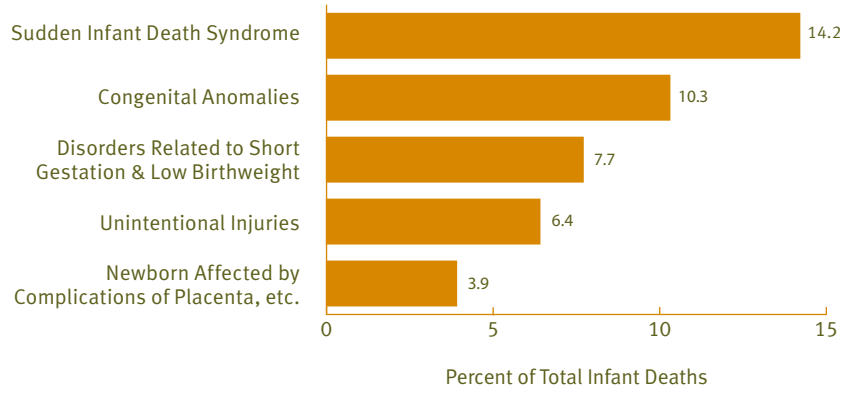
In 2003-2005, 28.7 percent of all infant deaths in the **Billings Area** were caused by congenital anomalies, followed by sudden infant death syndrome at 13.4 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.19 Leading Causes of Infant Deaths, Billings Area, Calendar Years 2003-2005



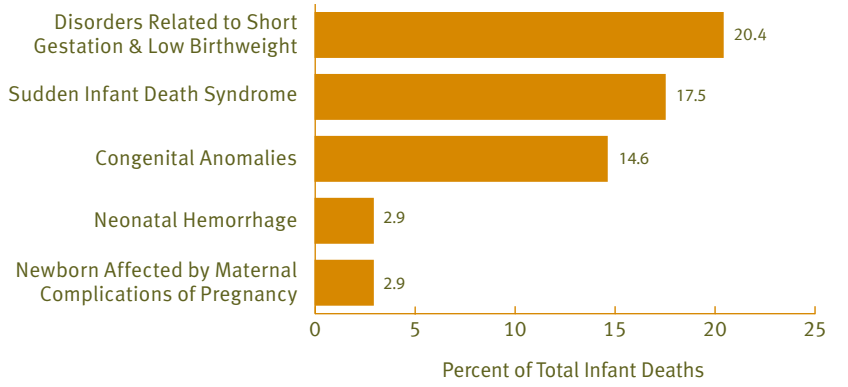
In 2003-2005, 14.2 percent of all infant deaths in the **California Area** were caused by sudden infant death syndrome, followed by congenital anomalies at 10.3 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.20 Leading Causes of Infant Deaths, California Area, Calendar Years 2003-2005



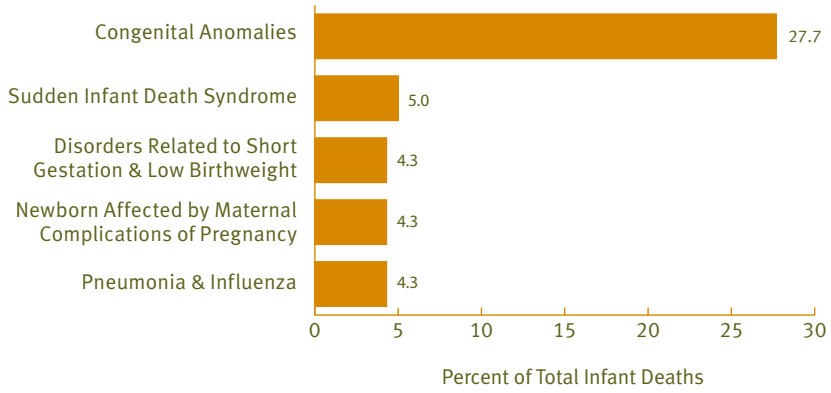
In 2003-2005, 20.4 percent of all infant deaths in the **Nashville Area** were caused by disorders related to short gestation and low birthweight, followed by sudden infant death syndrome (17.5 percent). The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.21 Leading Causes of Infant Deaths, Nashville Area, Calendar Years 2003-2005



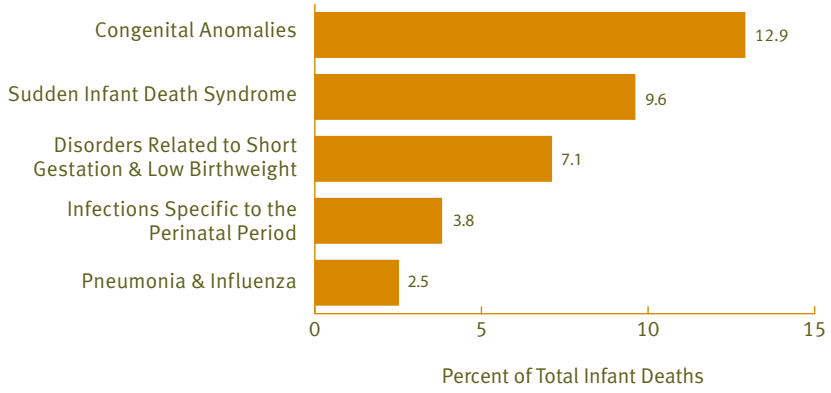
In 2003-2005, 27.7 percent of all infant deaths in the **Navajo Area** were caused by congenital anomalies, followed by sudden infant death syndrome at 5.0 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.22 **Leading Causes of Infant Deaths, Navajo Area, Calendar Years 2003-2005**



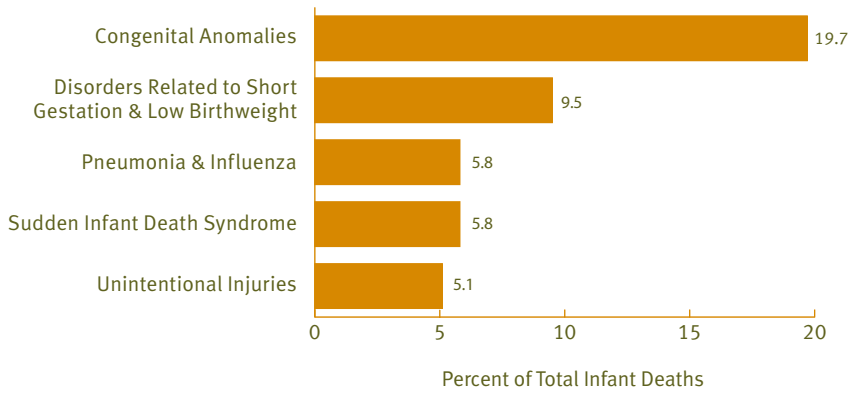
In 2003-2005, 12.9 percent of all infant deaths in the **Oklahoma Area** were caused by congenital anomalies, followed by sudden infant death syndrome at 9.6 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.23 **Leading Causes of Infant Deaths, Oklahoma Area, Calendar Years 2003-2005**



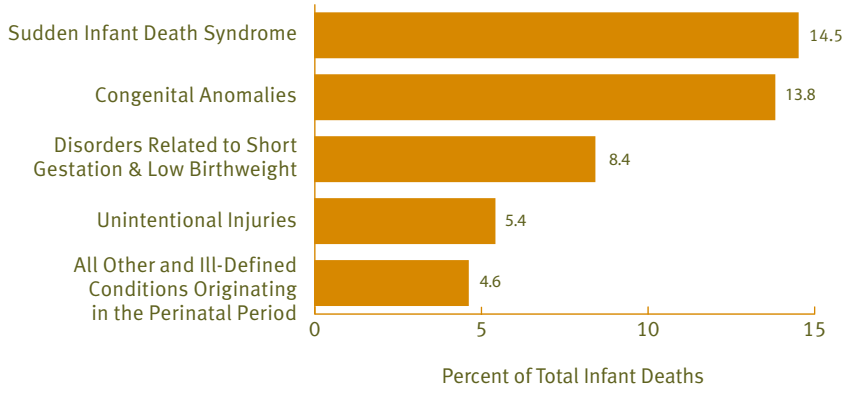
In 2003-2005, 19.7 percent of all infant deaths in the **Phoenix Area** were caused by congenital anomalies, followed by disorders related to short gestation and low birthweight at 9.5 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.24 **Leading Causes of Infant Deaths, Phoenix Area, Calendar Years 2003-2005**



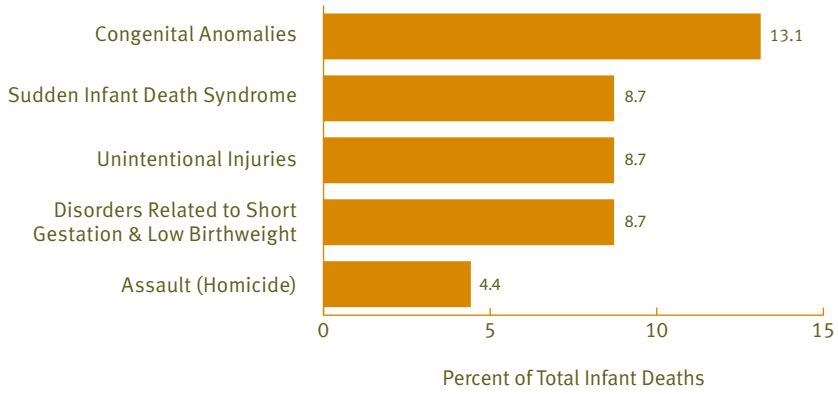
In 2003-2005, 14.5 percent of all infant deaths in the **Portland Area** were caused by sudden infant death syndrome, followed by congenital anomalies at 13.8 percent. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.25 **Leading Causes of Infant Deaths, Portland Area, Calendar Years 2003-2005**



In 2003-2005, 13.1 percent of all infant deaths in the **Tucson Area** were caused by congenital anomalies. The following leading causes of deaths: sudden infant death syndrome; unintentional injuries; and disorders related to short gestation and low birthweight were equal each at 8.7 percent. The number of infant deaths for the Tucson Area is very small therefore these percent's should be interpreted with caution. The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.26 **Leading Causes of Infant Deaths, Tucson Area, Calendar Years 2003-2005**



In 2003-2005, the mortality rate for sudden infant death syndrome **(SIDS)** for the IHS service area population was 2.0 times the rate for the U.S. all-races population in 2004 (110.4 and 54.6, respectively). The percent's are based on calculations adjusted for misreporting of AI/AN race on the state death certificate.

Chart 3.27 Sudden Infant Death Syndrome (SIDS) Rates, Calendar Years 2003-2005

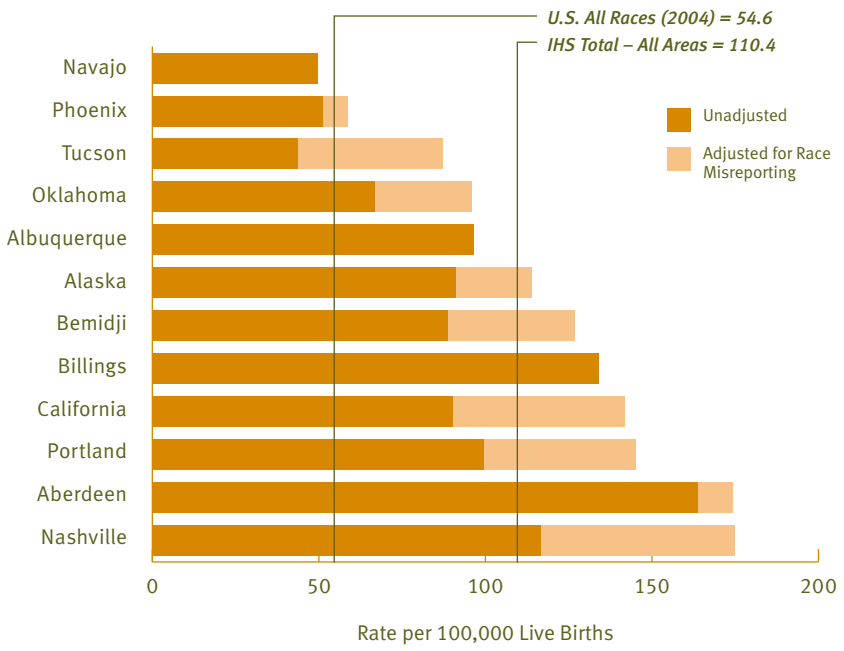


Table 3.27 Sudden Infant Death Syndrome (SIDS) Rates, Calendar Years 2003-2005

	Live Births	Infant Deaths		Rate[1/]	
		Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*4,221,052*	*2,246*		*54.6*	
All IHS Areas	***119,585***	***103***[3/]	***132***[3/]	***86.1***[4/]	***110.4***[4/]
Aberdeen	9,760	16	17	163.9	174.2
Alaska	8,781	*	10	91.1	113.9
Albuquerque	6,224	*	*	96.4	96.4
Bemidji	7,893	*	10	88.7	126.7
Billings	5,219	*	*	134.1	134.1
California	7,752	*	11	90.3	141.9
Nashville	6,862	*	12	116.6	174.9
Navajo	14,091	*	*	49.7	49.7
Oklahoma	23,950	16	23	66.8	96.0
Phoenix	13,679	*	*	51.2	58.5
Portland	13,080	13	19	99.4	145.3
Tucson	2,294	*	*	43.6	87.2

* Quantity greater than zero and less than 10.
[1/] Rate per 100,000 live births.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] Total number of deaths for the Indian Health Service include suppressed counts (counts greater than zero and less than 10).
[4/] Calculated unadjusted and adjusted rate include all Indian Health Service Areas with suppressed counts.

In 2003-2005, the age-adjusted death rate (all causes) for the IHS service area population was 1,016.7 deaths per 100,000 population. The AI/AN rate is 27 percent higher than the U.S. all-races rate of 800.8 for 2004. The Aberdeen (1,442.1), Bemidji (1,351.5) and Billings (1,309.0) service areas had the highest rates. The rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.1 Age-Adjusted Death Rates, Calendar Years 2003-2005

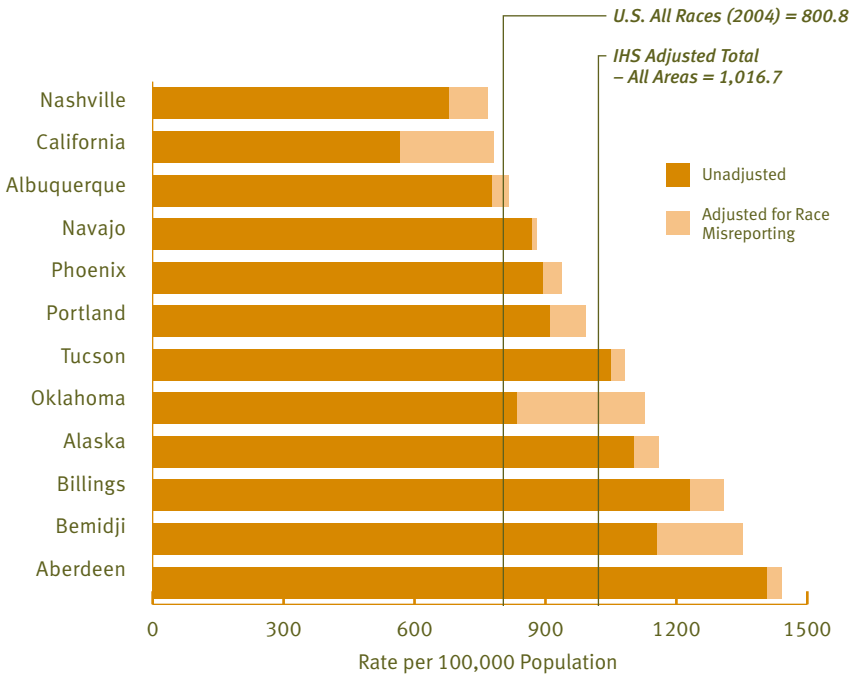


Table 4.1 Age-Adjusted Death Rates *(All Causes)*, Calendar Years 2003-2005

	Deaths[1/]		Rate[2/]	
	Unadjusted	Adjusted[3/]	Unadjusted	Adjusted[3/]
U.S. All Races (2004)	*2,397,615*		*800.8*	
All IHS Areas	***29,618***	***34,259***	***888.3***	***1,016.7***
Aberdeen	2,475	2,534	1,406.6	1,442.1
Alaska	2,203	2,328	1,103.5	1,160.0
Albuquerque	1,528	1,603	777.8	816.5
Bemidji	2,264	2,684	1,155.0	1,351.5
Billings	1,317	1,403	1,229.8	1,309.0
California	1,845	2,632	565.2	782.6
Nashville	1,529	1,749	678.1	767.0
Navajo	3,856	3,907	869.3	879.4
Oklahoma	6,068	8,410	834.4	1,126.2
Phoenix	2,939	3,093	894.9	938.2
Portland	2,946	3,249	908.9	993.6
Tucson	648	667	1,050.9	1,081.0

[1/] Includes deaths with age not reported (15 deaths IHS-wide; Alaska-1 death, California-1 death, Oklahoma-1 death, Phoenix-8 deaths and Tucson-4 deaths).
[2/] Age-adjusted rate per 100,000 population.
[3/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

In 2003-2005, the years of potential life lost rate for the IHS service area population was 87.6 years per 1,000 persons under 65 years, which is 92 percent higher than the U.S. all-races rate of 45.6 for 2004. The rate of each IHS Area is higher than the U.S. all-races rate. The lowest Area rate, California (59.4 years of potential life lost per 1,000 persons under 65 years), is 30 percent greater than the U.S. all-races rate, while the highest Area rate, Aberdeen, (123.5) is 2.7 times the U.S. all-races rate. The IHS service area rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.2 Years of Potential Life Lost (YPLL) Rates, Calendar Years 2003-2005

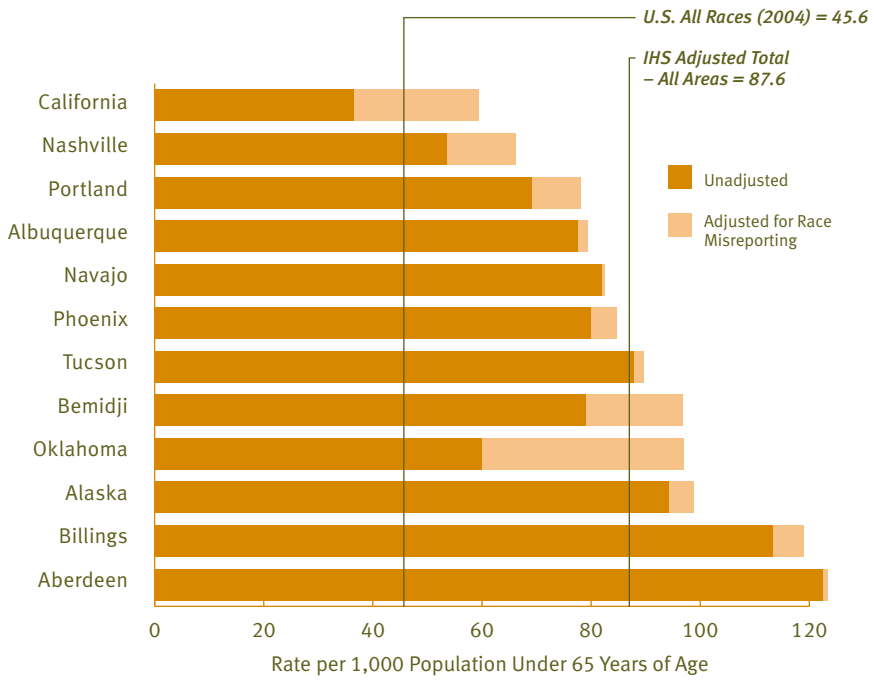


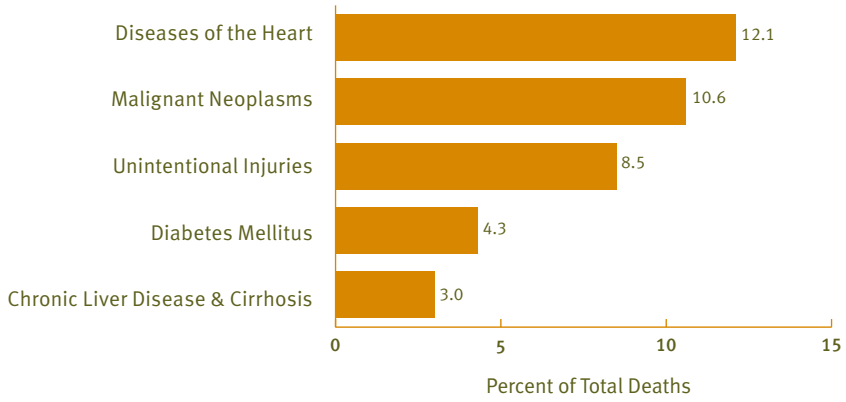
Table 4.2 Years of Potential Life Lost (YPLL) Rates *(All Causes)*, Calendar Years 2003-2005

	Number of YPLL[1/]		Rate[2/]	
	Unadjusted	Adjusted[3/]	Unadjusted	Adjusted[3/]
U.S. All Races (2004)	*11,822,941*		*45.6*	
All IHS Areas	***369,443***	***436,591***	***74.5***	***87.6***
Aberdeen	38,505	38,845	122.4	123.5
Alaska	30,928	32,445	94.2	98.8
Albuquerque	22,102	22,687	77.5	79.5
Bemidji	25,434	31,152	79.1	96.8
Billings	20,366	21,361	113.3	118.9
California	17,906	29,140	36.5	59.4
Nashville	16,490	20,397	53.5	66.2
Navajo	53,159	53,414	82.0	82.4
Oklahoma	56,482	91,528	59.9	97.0
Phoenix	42,776	45,371	79.9	84.7
Portland	36,690	41,464	69.1	78.1
Tucson	8,605	8,787	87.8	89.7

[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. This calculation was performed through the use of age groups under one, one to four, and five-year age groups through sixty to 64 years. The age at death was calculated based upon the mid-point of each of these age groups.
[2/] Rate per 1,000 population under 65 years of age.
[3/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

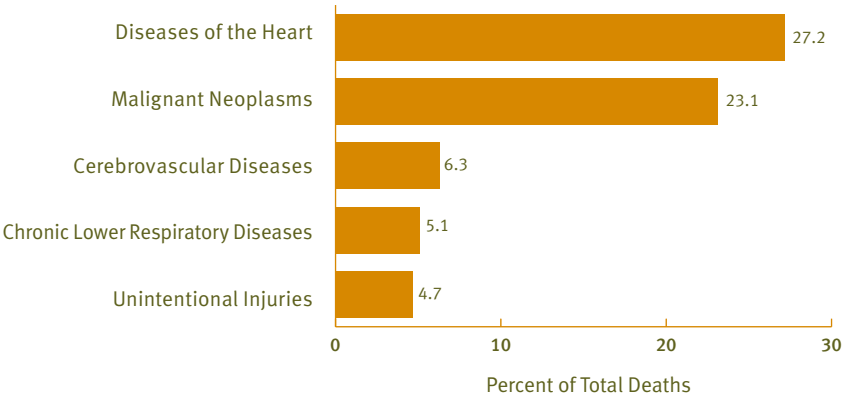
In 2003-2005, 12.1 percent of all deaths in the IHS service area were caused by diseases of the heart, followed by malignant neoplasms (10.6 percent), unintentional injuries (8.5 percent), diabetes mellitus (4.3 percent), and chronic liver disease and cirrhosis (3.0 percent).

Chart 4.3 **Leading Causes of Death, All IHS Areas, Calendar Years 2003-2005**



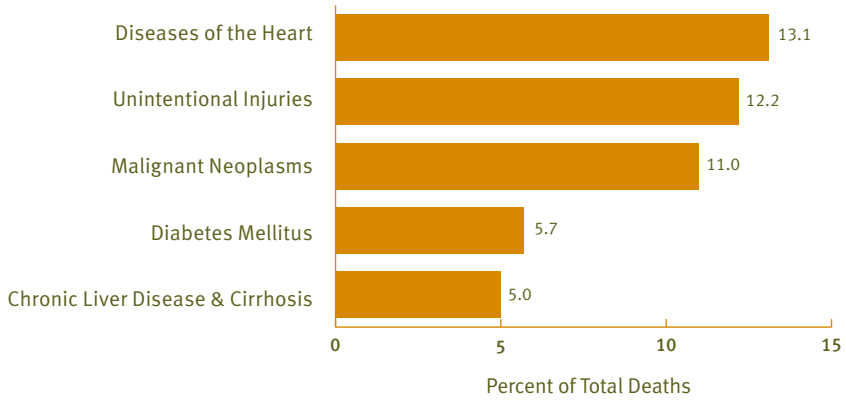
In 2004, 27.2 percent of all deaths in the U.S. were caused by diseases of the heart, followed by malignant neoplasms at 23.1 percent.

Chart 4.4 **Leading Causes of Death, U.S. All Races, Calendar Year 2004**



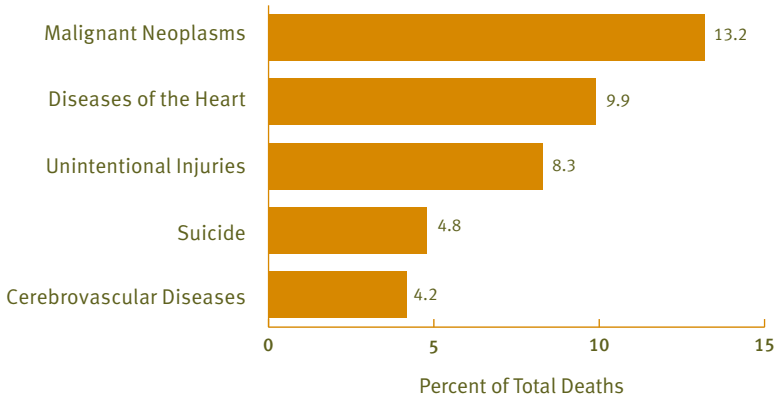
In 2003-2005, 13.1 percent of all deaths in the **Aberdeen Area** were caused by diseases of the heart, followed by unintentional injuries at 12.2 percent.

Chart 4.5 **Leading Causes of Death, Aberdeen Area, Calendar Years 2003-2005**



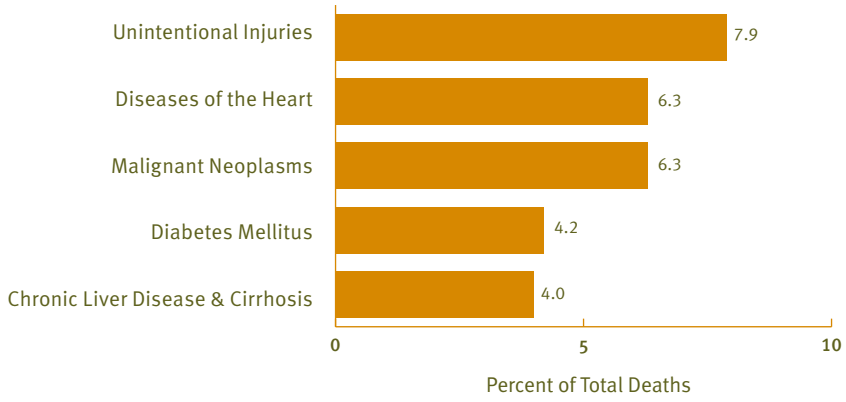
In 2003-2005, 13.2 percent of all deaths in the **Alaska Area** were caused by malignant neoplasms, followed by diseases of the heart at 9.9 percent.

Chart 4.6 **Leading Causes of Death, Alaska Area, Calendar Years 2003-2005**



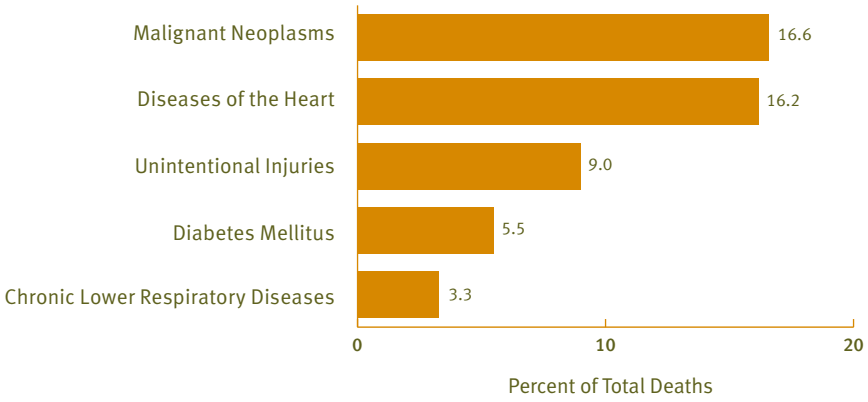
In 2003-2005, 7.9 percent of all deaths in the **Albuquerque Area** were caused by unintentional injuries, followed by diseases of the heart and malignant neoplasms, both at 6.3 percent.

Chart 4.7 **Leading Causes of Death, Albuquerque Area, Calendar Years 2003-2005**



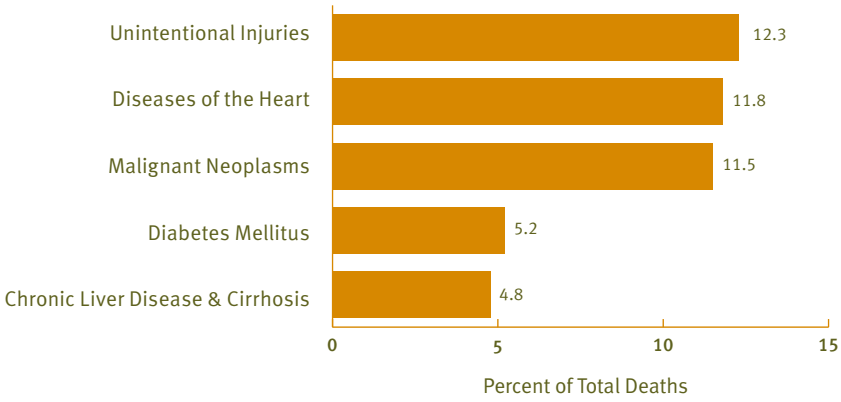
In 2003-2005, 16.6 percent of all deaths in the **Bemidji Area** were caused by malignant neoplasms, followed by diseases of the heart at 16.2 percent.

Chart 4.8 **Leading Causes of Death, Bemidji Area, Calendar Years 2003-2005**



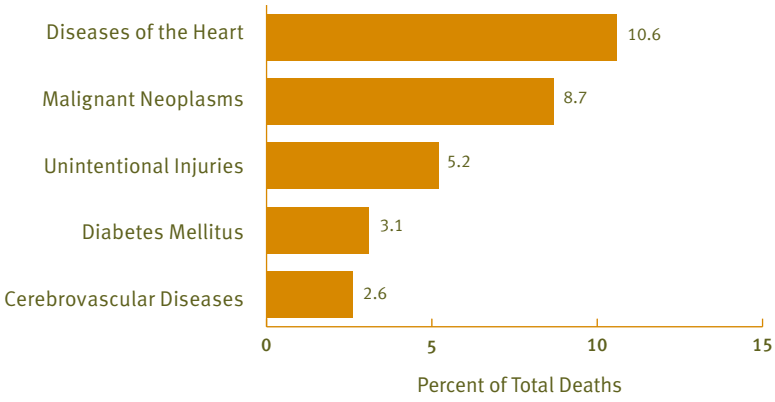
In 2003-2005, 12.3 percent of all deaths in the **Billings Area** were caused by unintentional injuries, followed by diseases of the heart at 11.8 percent.

Chart 4.9 **Leading Causes of Death, Billings Area, Calendar Years 2003-2005**



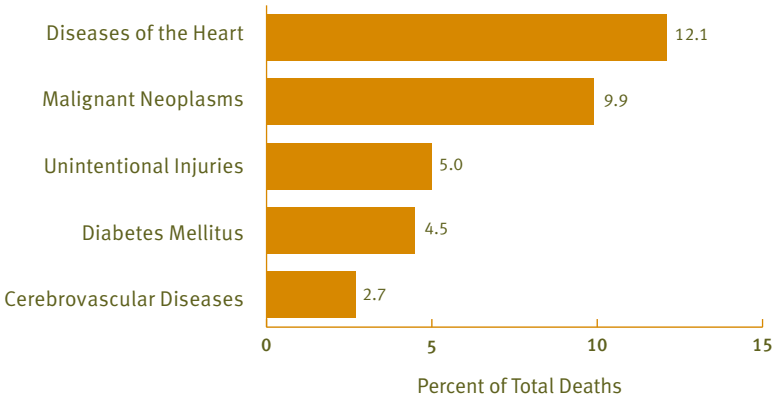
In 2003-2005, 10.6 percent of all deaths in the **California Area** were caused by diseases of the heart, followed by malignant neoplasms at 8.7 percent.

Chart 4.10 **Leading Causes of Death, California Area, Calendar Years 2003-2005**



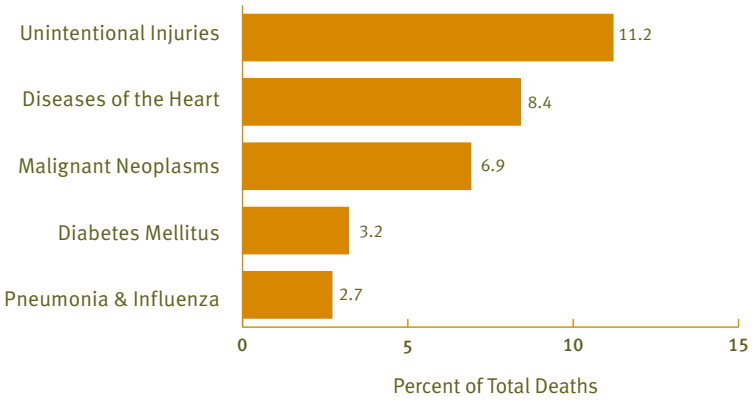
In 2003-2005, 12.1 percent of all deaths in the **Nashville Area** were caused by diseases of the heart, followed by malignant neoplasms at 9.9 percent.

Chart 4.11 **Leading Causes of Death, Nashville Area, Calendar Years 2003-2005**



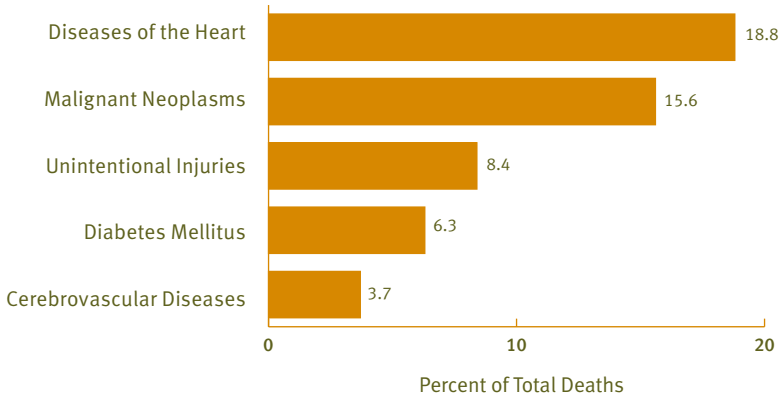
In 2003-2005, 11.2 percent of all deaths in the **Navajo Area** were caused by unintentional injuries, followed by diseases of the heart at 8.4 percent.

Chart 4.12 **Leading Causes of Death, Navajo Area, Calendar Years 2003-2005**



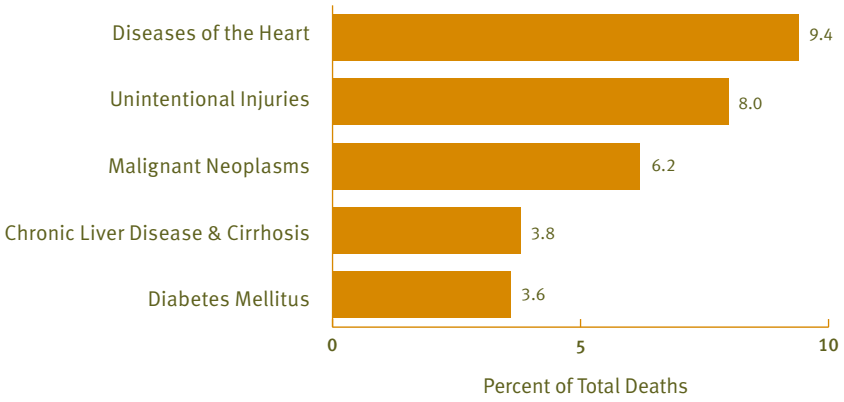
In 2003-2005, 18.8 percent of all deaths in the **Oklahoma Area** were caused by diseases of the heart, followed by malignant neoplasms at 15.6 percent.

Chart 4.13 **Leading Causes of Death, Oklahoma Area, Calendar Years 2003-2005**



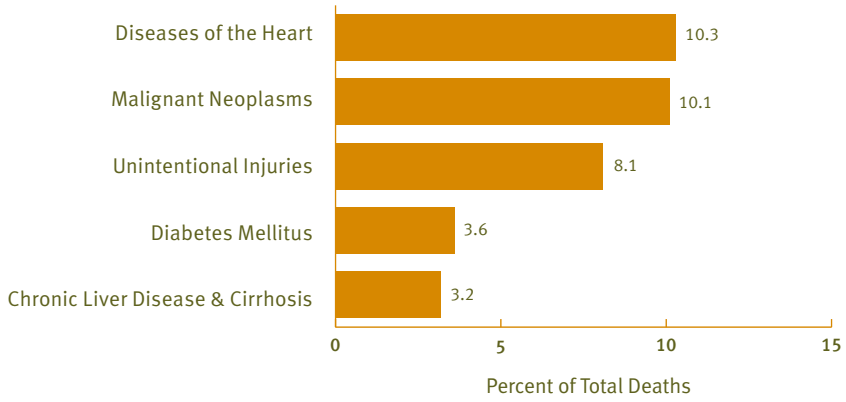
In 2003-2005, 9.4 percent of all deaths in the **Phoenix Area** were caused by diseases of the heart, followed by unintentional injuries at 8.0 percent.

Chart 4.14 **Leading Causes of Death, Phoenix Area, Calendar Years 2003-2005**



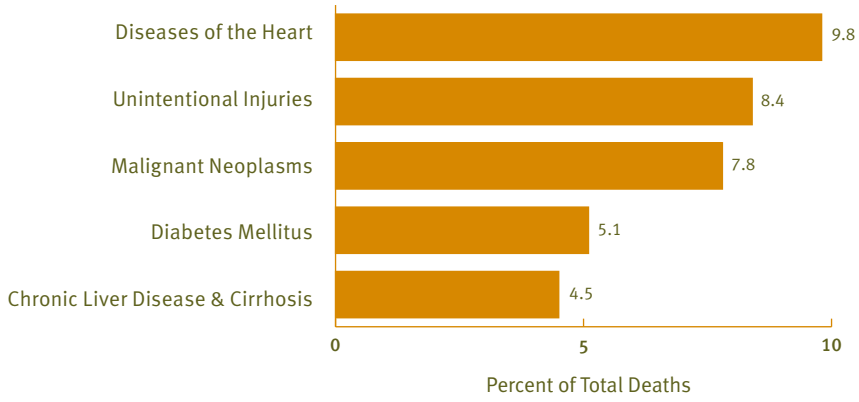
In 2003-2005, 10.3 percent of all deaths in the **Portland Area** were caused by diseases of the heart, followed by malignant neoplasms at 10.1 percent.

Chart 4.15 **Leading Causes of Death, Portland Area, Calendar Years 2003-2005**



In 2003-2005, 9.8 percent of all deaths in the **Tucson Area** were caused by diseases of the heart, followed by unintentional injuries at 8.4 percent.

Chart 4.16 **Leading Causes of Death, Tucson Area, Calendar Years 2003-2005**



In 2003-2005, the age-adjusted poisoning death rate for the IHS service area population was 17.5 deaths per 100,000 population. The AI/AN rate is 1.9 times the U.S. all-races rate (9.1 per 100,000 population) for 2004 The Tucson Area rate (33.0 per 100,000 population), which is the highest among the Areas, is 3.6 times the U.S. all-races rate. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.17 Age-Adjusted Poisoning Death Rates, Calendar Years 2003-2005

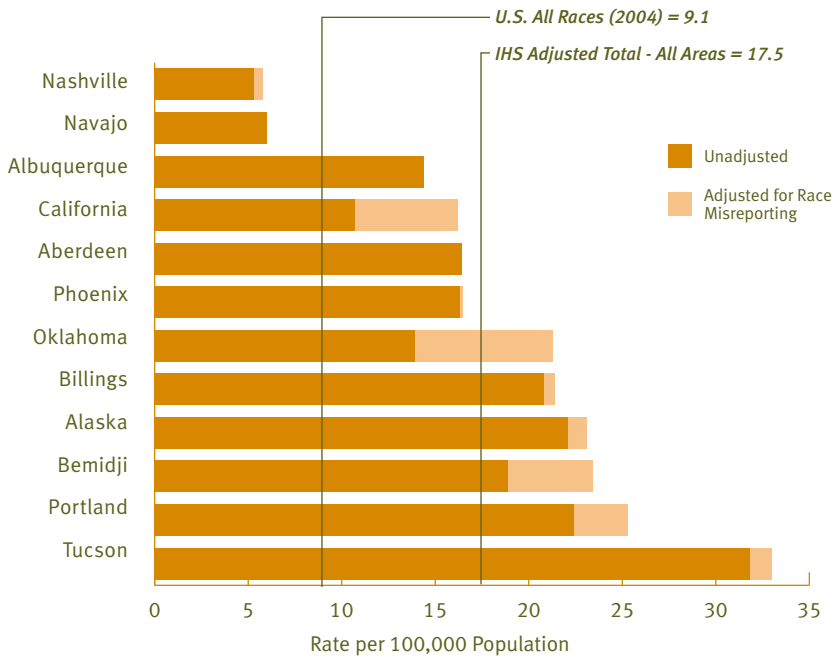


Table 4.17 Age-Adjusted Poisoning[1/] Death Rates, Calendar Years 2003-2005

	Deaths		Rate[2/]	
	Unadjusted	Adjusted[3/]	Unadjusted	Adjusted[3/]
U.S. All Races (2004)	*26,853*		*9.1*	
All IHS Areas	***722***	***865***	***14.7***	***17.5***
Aberdeen	43	43	16.4	16.4
Alaska	66	69	22.1	23.1
Albuquerque	42	42	14.4	14.4
Bemidji	64	80	18.9	23.4
Billings	36	37	20.8	21.4
California	52	80	10.7	16.2
Nashville	18	20	5.3	5.8
Navajo	40	40	6.0	6.0
Oklahoma	131	206	13.9	21.3
Phoenix	85	86	16.3	16.5
Portland	117	133	22.4	25.3
Tucson	28	29	31.8	33.0

[1/] Includes the following ICD-10 cause of death groups combined: U01(.6-.7), X40-X49, X60-X69, X85-X90, Y10-Y19, and Y35.2.
[2/] Age-adjusted rate per 100,000 population.
[3/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

In 2003-2005, the age-adjusted unintentional injury death rate for the IHS service area population was 94.0 per 100,000 population. The AI/AN rate is 2.5 times higher than the U.S. all-races rate of 37.7 for 2004. The Nashville Area has the lowest rate among the IHS Areas (52.1), but it is still over 1.4 times the U.S. all-races rate. The highest Area rate (Aberdeen, 143.1) is 3.8 times the U.S. all-races rate. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.18 Age-Adjusted Unintentional Injury Death Rates, Calendar Years 2003-2005

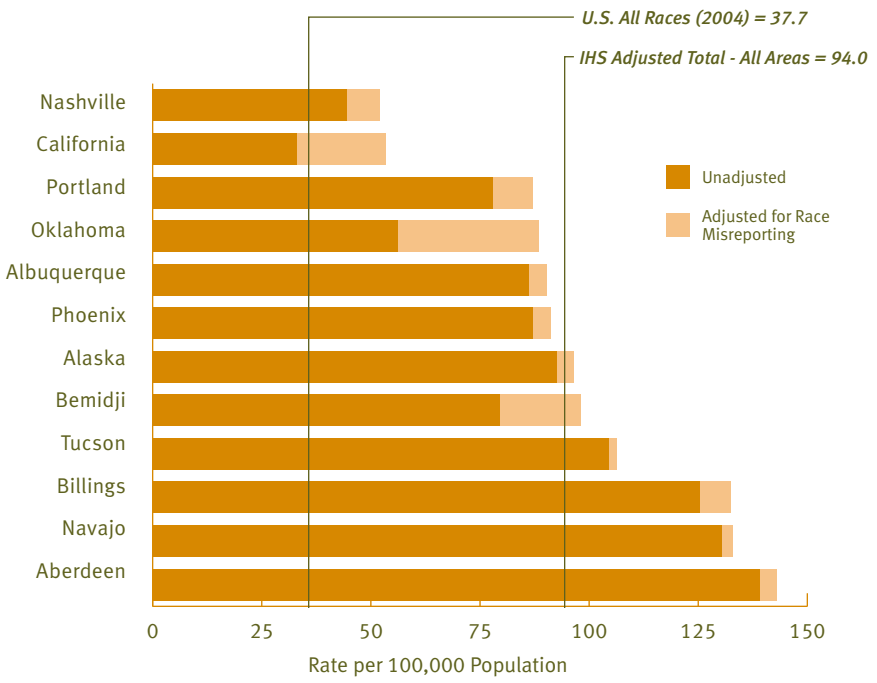


Table 4.18 Age-Adjusted Unintentional Injury Death Rates, Calendar Years 2003-2005

	All Unintentional Injuries				Motor Vehicle Crashes			Other Unintentional Injuries	
	Deaths		Rate[2]		Totals Rate[2]		Percent of Motor Vehicle Crash Deaths Pedestrian-related[1]	Rate[2]	
	Unadjusted	Adjusted[3]	Unadjusted	Adjusted[3]	Unadjusted	Adjusted[3]		Unadjusted	Adjusted[3]
U.S. All Races (2004)	*97,900*		*37.7*		*15.3*		*10.8%*	*1.7*	
All IHS Areas	***3,835***	***4,530***	***81.3***	***94.0***	***39.8***	***47.8***	***14.3***	***41.5***	***46.3***
Aberdeen	389	403	139.1	143.1	82.3	86.3	9.5%	56.8	56.8
Alaska	275	288	92.7	96.4	23.6	24.5	21.4%	69.1	71.9
Albuquerque	226	240	86.3	90.3	41.8	45.9	26.1%	44.5	44.5
Bemidji	243	307	79.5	98.1	39.1	50.8	11.6%	40.4	47.3
Billings	219	233	125.4	132.5	68.6	75.7	4.3%	56.8	56.8
California	163	275	33.0	53.4	15.7	27.1	10.9%	17.3	26.3
Nashville	136	164	44.6	52.1	22.6	29.1	8.0%	22.0	23.0
Navajo	761	776	130.5	132.9	72.1	74.4	20.8%	58.4	58.5
Oklahoma	522	860	56.2	88.4	25.2	43.5	8.6%	31.0	45.0
Phoenix	426	452	87.2	91.2	45.7	49.2	18.2%	41.4	42.0
Portland	390	445	77.9	87.1	35.6	41.6	15.4%	42.3	45.5
Tucson	85	87	104.5	106.4	32.8	33.6	22.9%	71.7	72.9

[1] Includes Motor vehicle crashes having ICD-10 codes. V02-V04 (.1,.9) and V09.2 indicates a pedestrian was the subject decedent as a result of the motor vehicle crash. Percentages rare based on adjusted numbers of deaths.
[2] Age-adjusted rate per 100,000 population.
[3] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

In 2003-2005, the age-adjusted suicide death rate for the IHS service area population was 18.8 per 100,000 population. The AI/AN rate is 73 percent higher than the U.S. all-races rate of 10.9 for 2004. The Alaska Area rate (47.3) is 4.3 times the U.S. rate. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.19 Age-Adjusted Suicide Death Rates, Calendar Years 2003-2005

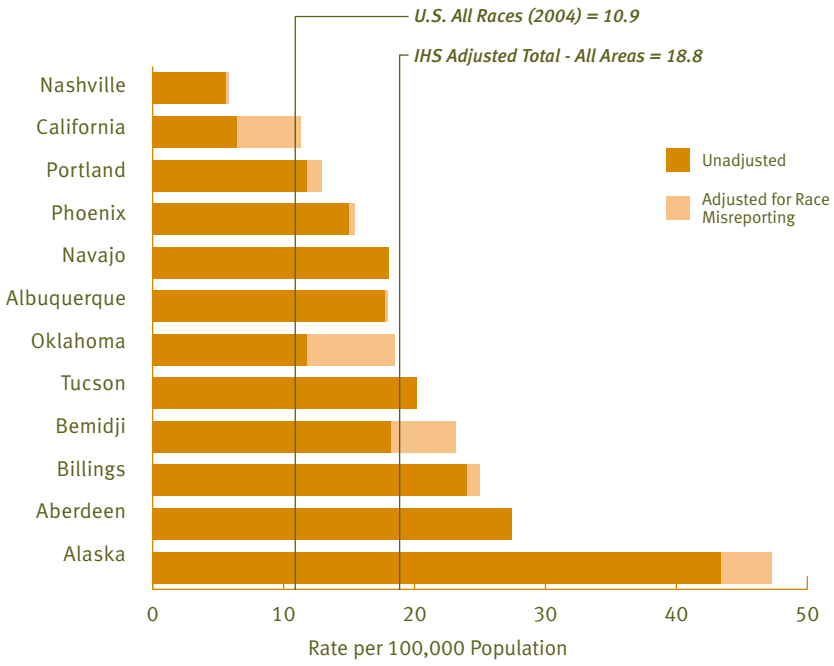


Table 4.19 Age-Adjusted Suicide Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*32,439*		*10.9*	
All IHS Areas	***887***	***1,032***	***16.3***	***18.8***
Aberdeen	95	95	27.4	27.4
Alaska	152	166	43.4	47.3
Albuquerque	53	54	17.7	18.0
Bemidji	64	82	18.2	23.1
Billings	45	47	24.0	25.0
California	33	61	6.4	11.3
Nashville	19	20	5.6	5.8
Navajo	128	128	18.0	18.0
Oklahoma	117	188	11.8	18.5
Phoenix	92	95	15.0	15.4
Portland	65	72	11.8	12.9
Tucson	24	24	20.2	20.2

[1/] Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

In 2003-2005, the age-adjusted homicide death rate for the IHS service area population was 11.3 per 100,000 population. The AI/AN rate is 88 percent higher than the U.S. all-races rate of 6.0 for 2004. The Tucson Area had the highest rate of 17.8. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Age-Adjusted Homicide Death Rates, Calendar Years 2003-2005

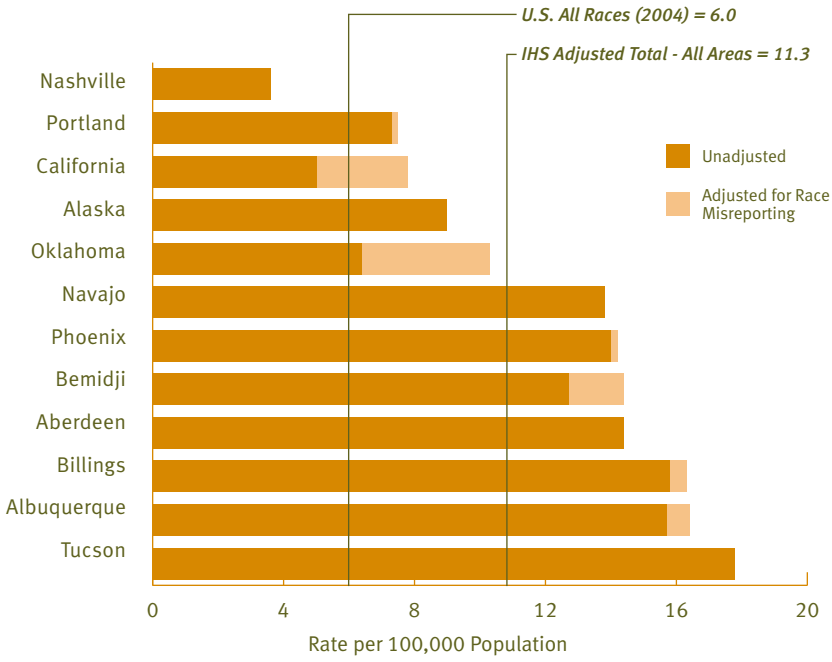


Table 4.20 Age-Adjusted Homicide Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*17,729*		*6.0*	
All IHS Areas	***568***	***646***	***10.0***	***11.3***
Aberdeen	52	52	14.4	14.4
Alaska	31	31	9.0	9.0
Albuquerque	50	52	15.7	16.4
Bemidji	46	53	12.7	14.4
Billings	32	33	15.8	16.3
California	31	51	5.0	7.8
Nashville	11	11	3.6	3.6
Navajo	94	94	13.8	13.8
Oklahoma	65	109	6.4	10.3
Phoenix	93	94	14.0	14.2
Portland	43	46	7.3	7.5
Tucson	20	20	17.8	17.8

[1/] Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

NOTE: Includes deaths due to homicide and legal intervention.

In 2003-2005 the age-adjusted firearm injury death rate for the IHS service area population was 13.6 per 100,000 population. The AI/AN rate is 1.4 times the U.S. all-races rate of 10.0 for 2004. The Alaska Area rate (35.2) far exceeds the rate of the next highest area (Tucson) with a rate of 21.3. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.21 Age-Adjusted Firearm Injury Death Rates, Calendar Years 2003-2005

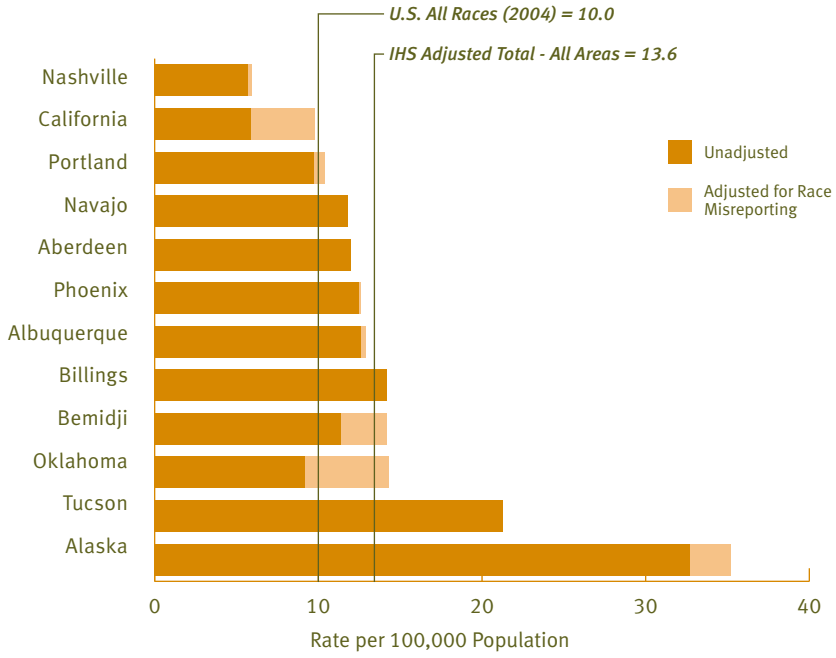


Table 4.21 Age-Adjusted Firearm Injury[1/] Death Rates, Calendar Years 2003-2005

	Deaths		Rate[2/]	
	Unadjusted	Adjusted[3/]	Unadjusted	Adjusted[3/]
U.S. All Races (2004)	*29,569*		*10.0*	
All IHS Areas	***645***	***753***	***11.8***	***13.6***
Aberdeen	42	42	12.0	12.0
Alaska	113	122	32.7	35.2
Albuquerque	39	40	12.6	12.9
Bemidji	43	54	11.4	14.2
Billings	28	28	14.2	14.2
California	33	56	5.9	9.8
Nashville	18	19	5.7	5.9
Navajo	77	77	11.8	11.8
Oklahoma	92	149	9.2	14.3
Phoenix	80	81	12.5	12.6
Portland	55	60	9.7	10.4
Tucson[2/]	25	25	21.3	21.3

[1/] Includes deaths with ICD-10 codes: accident caused by firearm missile—W32-W34; suicide and self-inflicted injury by firearms—X72-X74; assault by firearms and legal intervention—X93-X95,Y35.0; and injury by firearms, undetermined whether accidentally or purposely inflicted—Y22-Y24. Injury by firearm causes exclude explosive and other causes indirectly related to firearms.
[2/] Age-adjusted rate per 100,000 population.
[3/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

The age-adjusted alcohol-related death rate for the IHS service area population in 2003-2005 was 43.3 per 100,000 population. The AI/AN rate is 6.2 times the U.S. all-races rate of 7.0 for 2004. The Aberdeen Area rate of 89.4 is 12.8 times the U.S. all-races rate and 6 times the lowest Area rate (Nashville, 14.8). The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Age-Adjusted Alcohol-Related Death Rates, Calendar Years 2003-2005

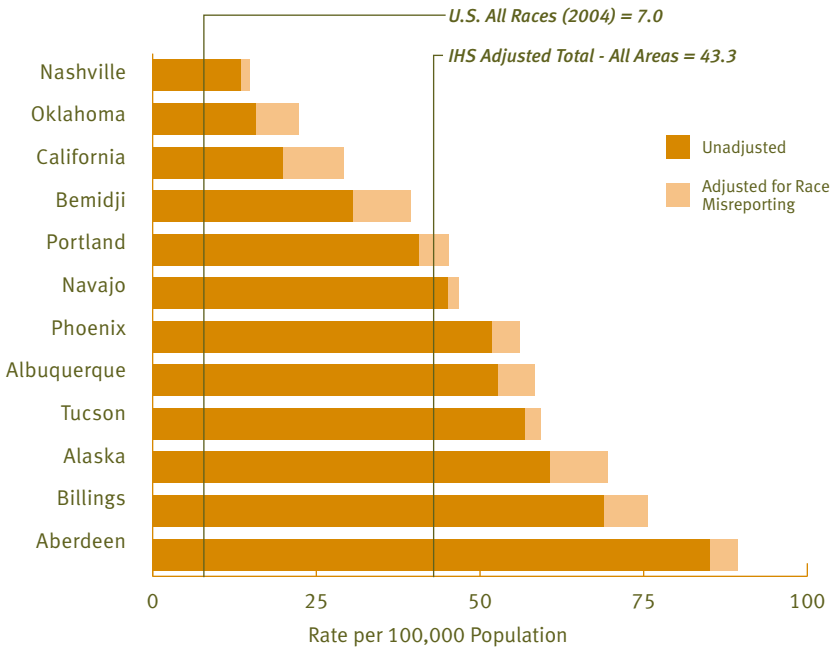


Table 4.22 Age-Adjusted Alcohol-Related Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*21,081*		*7.0*	
All IHS Areas	***1,632***	***1,872***	***37.9***	***43.3***
Aberdeen	183	193	85.1	89.4
Alaska	164	188	60.6	69.6
Albuquerque	134	149	52.7	58.4
Bemidji	88	114	30.5	39.5
Billings	101	110	68.9	75.7
California	86	128	19.9	29.2
Nashville	40	44	13.5	14.8
Navajo	247	256	45.1	46.8
Oklahoma	136	193	15.8	22.3
Phoenix	221	240	51.8	56.1
Portland	185	208	40.6	45.3
Tucson	47	49	56.9	59.2

[1/] Age-adjusted rate per 100,000 population.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

The age-adjusted diabetes death rate for the IHS service area population in 2003-2005 was 72.2 per 100,000 population. The 2003-2005 AI/AN rate is 2.9 times the 2004 U.S. all-races rate of 24.5. The IHS Area rates vary widely, ranging from 20.6 in Alaska to 126.5 in Aberdeen. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.23 Age-Adjusted Diabetes Mellitus Death Rates, Calendar Years 2003-2005

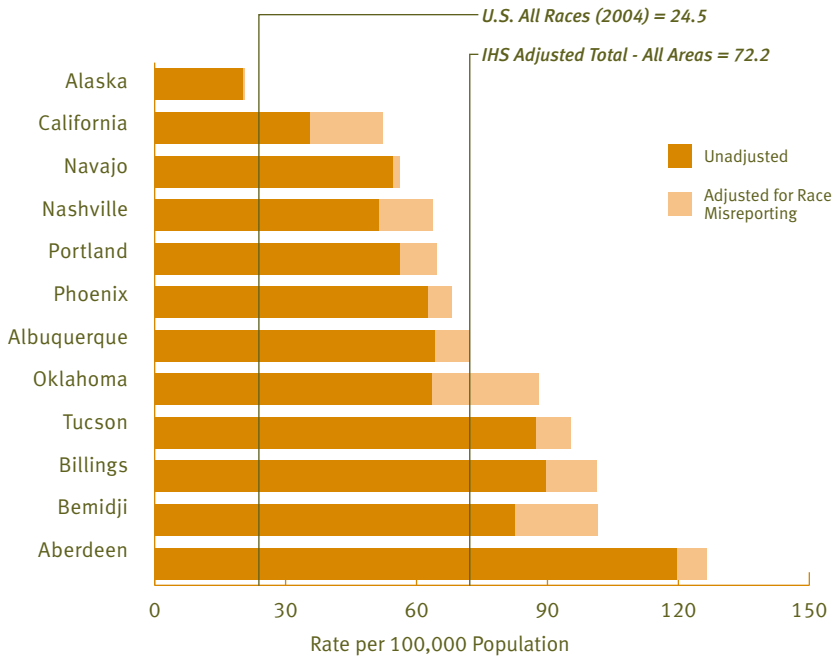


Table 4.23 Age-Adjusted Diabetes Mellitus Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*73,138*		*24.5*	
All IHS Areas	***1,874***	***2,268***	***60.1***	***72.2***
Aberdeen	177	187	119.7	126.5
Alaska	37	38	20.1	20.6
Albuquerque	113	127	64.1	72.2
Bemidji	153	189	82.6	101.5
Billings	87	99	89.6	101.4
California	111	164	35.5	52.2
Nashville	117	146	51.4	63.7
Navajo	218	224	54.6	56.0
Oklahoma	456	640	63.5	88.0
Phoenix	188	205	62.5	68.2
Portland	169	196	56.1	64.6
Tucson	48	53	87.3	95.4

[1/] Age-adjusted rate per 100,000 population.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

The age-adjusted pneumonia and influenza death rate for the IHS service area population in 2003-2005 was 33.1 per 100,000 population. The AI/AN rate is 1.7 times the U.S. all-races rate of 19.8 for 2004. The two highest Area rates in Navajo (54.2) and Phoenix (48.3), are at least two times higher than the lowest Area rate in Nashville (20.3). The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Age-Adjusted Pneumonia and Influenza Death Rates, Calendar Years 2003-2005

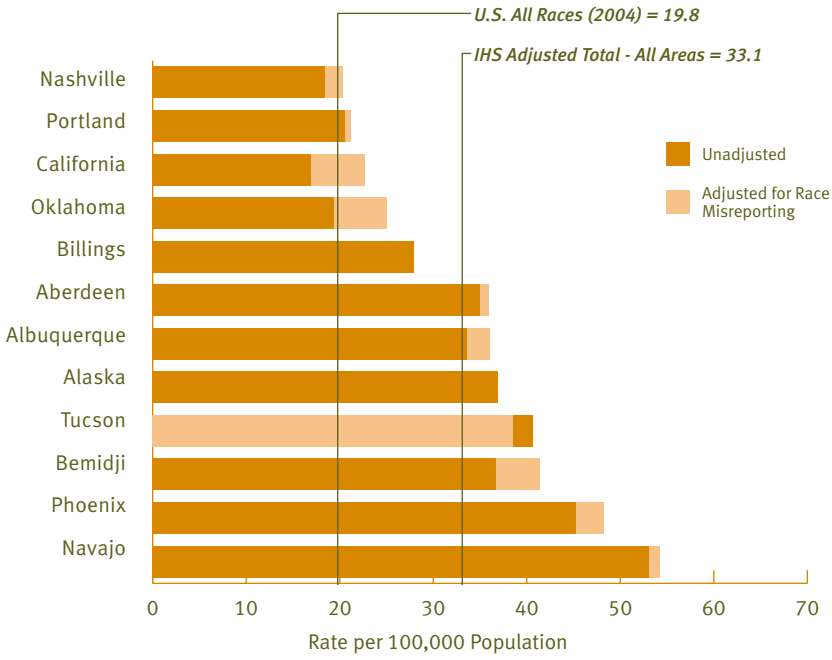


Table 4.24 Age-Adjusted Pneumonia and Influenza Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*59,664*		*19.8*	
All IHS Areas	***818***	***902***	***30.1***	***33.1***
Aberdeen	47	47	35.0	35.9
Alaska	55	55	36.9	36.9
Albuquerque	53	56	33.6	36.0
Bemidji	55	64	36.7	41.4
Billings	23	23	27.9	27.9
California	46	62	16.9	22.7
Nashville	35	39	18.4	20.3
Navajo	189	191	53.1	54.2
Oklahoma	127	168	19.4	25.0
Phoenix	114	121	45.2	48.3
Portland	54	55	20.6	21.2
Tucson	20[3/]	19[3/]	39.2[3/]	38.5[3/]

[1/] Age-adjusted rate per 100,000 population.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] The adjusted numbers and rates in the Tucson Area is lower than the unadjusted numbers and rates because the linked birth/infant death file (used to obtain the adjusted counts of infant deaths) had one less death for this cause than did the unadjusted mortality file (2003-2005 data).

In 2003-2005, the age-adjusted gastrointestinal diseases death rate for the IHS service area population was 1.2 per 100,000 population. The AI/AN rate is lower than the U.S. all-races rate for 2004 (1.8 per 100,000 population). The Area rates should be interpreted with caution because of the small number of deaths involved. (See section Sources and Limitations of Data: Population Statistics.). The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.25 Age-Adjusted Gastrointestinal Diseases Death Rates, Calendar Years 2003-2005

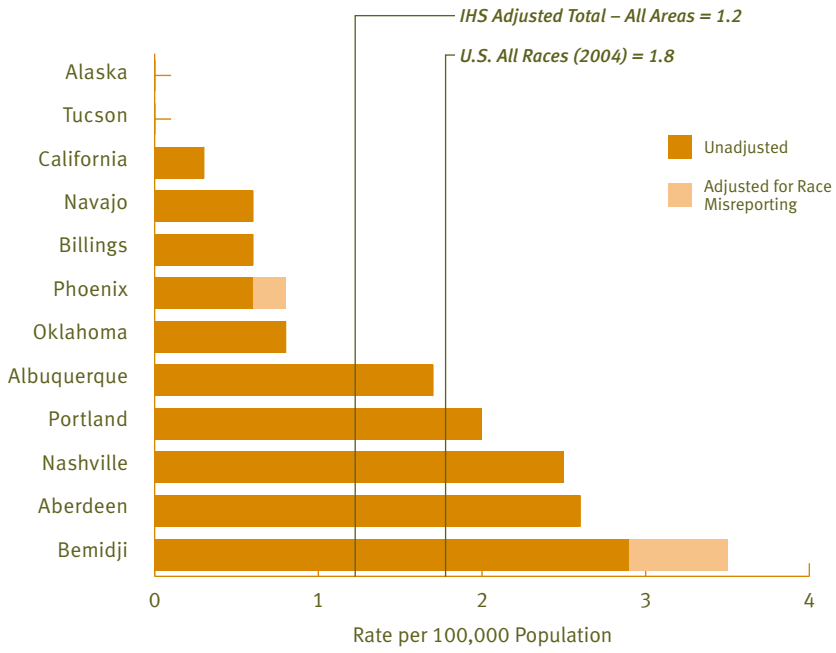


Table 4.25 Age-Adjusted Gastrointestinal Diseases Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*5,259*		*1.8*	
All IHS Areas	***35***[3/]	***37***[3/]	***1.1***[4/]	***1.2***[4/]
Aberdeen	*	*	2.6	2.6
Alaska	--	--	--	--
Albuquerque	*	*	1.7	1.7
Bemidji	*	*	2.9	3.5
Billings	*	*	0.6	0.6
California	*	*	0.3	0.3
Nashville	*	*	2.5	2.5
Navajo	*	*	0.6	0.6
Oklahoma	*	*	0.8	0.8
Phoenix	*	*	0.6	0.8
Portland	*	*	2.0	2.0
Tucson	--	--	--	--

-- Represents zero.
* Quantity greater than zero and less than 10.
[1/] Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] Total number of deaths for the Indian Health Service includes suppressed counts (counts greater than zero and less than 10).
[4/] Calculated unadjusted and adjusted rates include all Indian Health Service Areas with suppressed counts.

In 2003-2005, the age-adjusted heart disease death rate for the IHS service area population was 219.8 per 100,000 population. The AI/AN rate is 1.3 percent higher than the U.S. all-races rate (217.0) in 2004. The Albuquerque Area has the lowest rate (121.5) and is 45 percent lower than the U.S. all-races rate while the Bemidji Area has the highest rate (315.9) for heart disease which is 46 percent higher than the U.S. all-races rate. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.26 Age-Adjusted Heart Disease Death Rates, Calendar Years 2003-2005

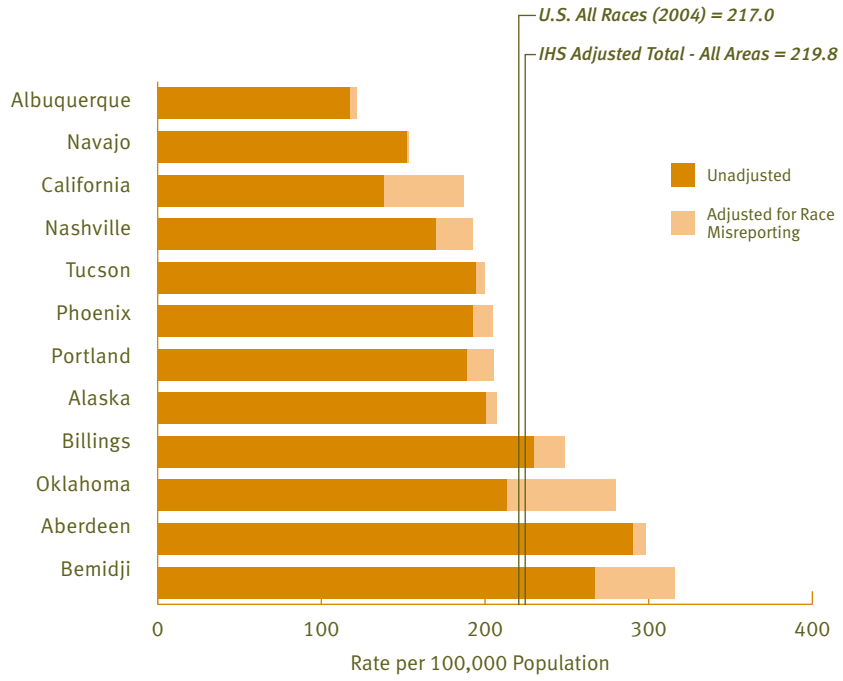


Table 4.26 Age-Adjusted Heart Disease Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*652,486*		*217.0*	
All IHS Areas	***5,513***	***6,404***	***190.4***	***219.8***
Aberdeen	419	430	290.3	298.4
Alaska	334	345	200.4	207.5
Albuquerque	187	192	117.7	121.5
Bemidji	465	552	267.4	315.9
Billings	207	224	230.1	248.9
California	403	556	138.0	186.9
Nashville	351	398	169.9	192.4
Navajo	579	585	152.2	153.6
Oklahoma	1,446	1,926	213.3	280.1
Phoenix	502	531	192.4	204.9
Portland	520	563	189.1	205.1
Tucson	100	102	194.5	199.7

[1/] Age-adjusted rate per 100,000 population.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

In 2003-2005, the age-adjusted cerebrovascular diseases death rate for the IHS service area population was 49.7 per 100,000 population, whereas, the U.S. all-races rate is 50.0 for the year 2004. The IHS Area rates differ considerably among Areas; the Alaska rate of 89.1 is 3.2 times higher than the Navajo rate of 27.7. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.27 Age-Adjusted Cerebrovascular Diseases Death Rates, Calendar Years 2003-2005

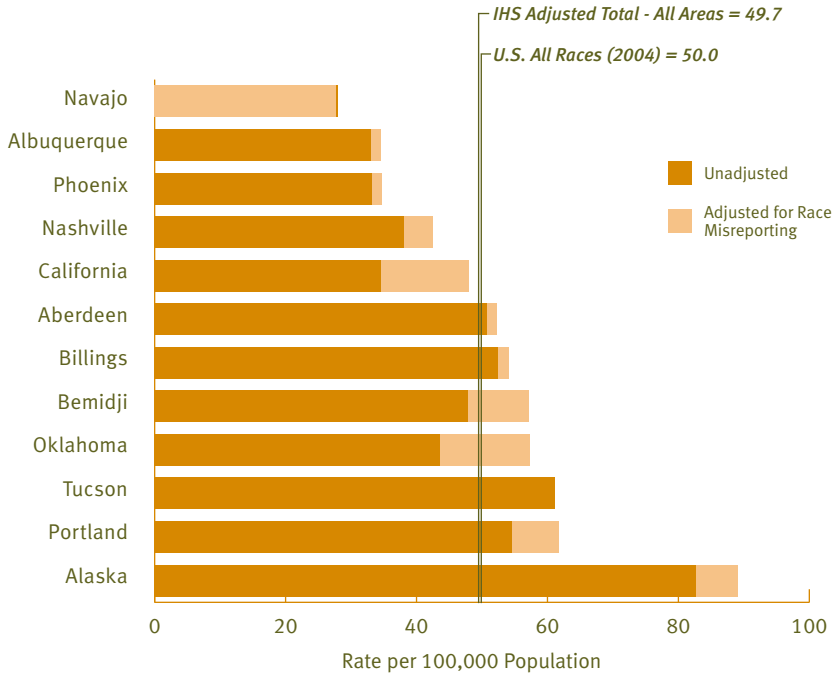


Table 4.27 Age-Adjusted Cerebrovascular Diseases Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*150,074*		*50.0*	
All IHS Areas	***1,186***	***1,385***	***42.8***	***49.7***
Aberdeen	64	66	50.7	52.3
Alaska	133	145	82.7	89.1
Albuquerque	52	54	33.0	34.5
Bemidji	79	95	47.9	57.2
Billings	38	39	52.4	54.1
California	97	137	34.6	48.0
Nashville	81	90	38.1	42.4
Navajo	104[3/]	103[3/]	27.8[3/]	27.7[3/]
Oklahoma	283	379	43.5	57.3
Phoenix	88	92	33.1	34.7
Portland	139	157	54.5	61.8
Tucson	28	28	61.1	61.1

[1/] Age-adjusted rate per 100,000 population.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] The adjusted numbers and rates in the Navajo Area is lower than the unadjusted numbers and rates because the linked birth/infant death file (used to obtain the adjusted counts of infant deaths) had one less death for this cause than did the unadjusted mortality file (2003-2005 data).

In 2003-2005, the age-adjusted malignant neoplasm death rate for the IHS service area population was 179.9 per 100,000 population. The 2003-2005 AI/AN rate is 3.2 percent less than the U.S. all-races rate of 185.8 for 2004. Five IHS Areas have a rate greater than the U.S. all-races rate; Bemidji (308.0), Aberdeen (248.2), Alaska (244.1), Billings (241.5), and Oklahoma (217.1). The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.28 Age-Adjusted Malignant Neoplasm Death Rates, Calendar Years 2003-2005

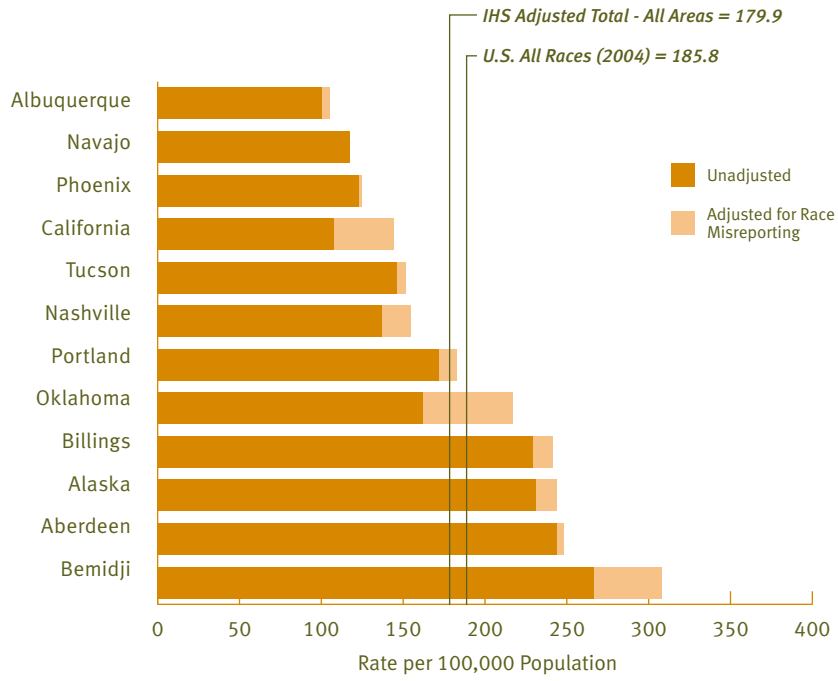


Table 4.28 Age-Adjusted Malignant Neoplasm Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*553,888*		*185.8*	
All IHS Areas	***4,902***	***5,641***	***157.2***	***179.9***
Aberdeen	358	364	243.8	248.2
Alaska	431	458	230.9	244.1
Albuquerque	183	190	100.5	105.1
Bemidji	489	566	266.8	308.0
Billings	208	219	229.4	241.5
California	341	458	107.7	143.9
Nashville	287	324	137.0	154.7
Navajo	481	481	117.5	117.5
Oklahoma	1,183	1,601	162.2	217.1
Phoenix	344	348	122.9	124.5
Portland	518	551	171.7	182.9
Tucson	79	81	146.4	151.9

[1/] Age-adjusted rate per 100,000 population.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.

In 2003-2005, the age-adjusted lung cancer death rate for the IHS service area population was 49.5 per 100,000 population. The definition of lung cancer has been expanded to include the trachea and bronchus. The 2003-2005 AI/AN rate is 7.0 percent less than the U.S. all-races rate of 53.2 in 2004. Five IHS Areas (Aberdeen, Alaska, Bemidji, Billings, and Oklahoma) have rates exceeding the U.S. all-races rate. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.29 Age-Adjusted Lung Cancer Death Rates, Calendar Years 2003-2005

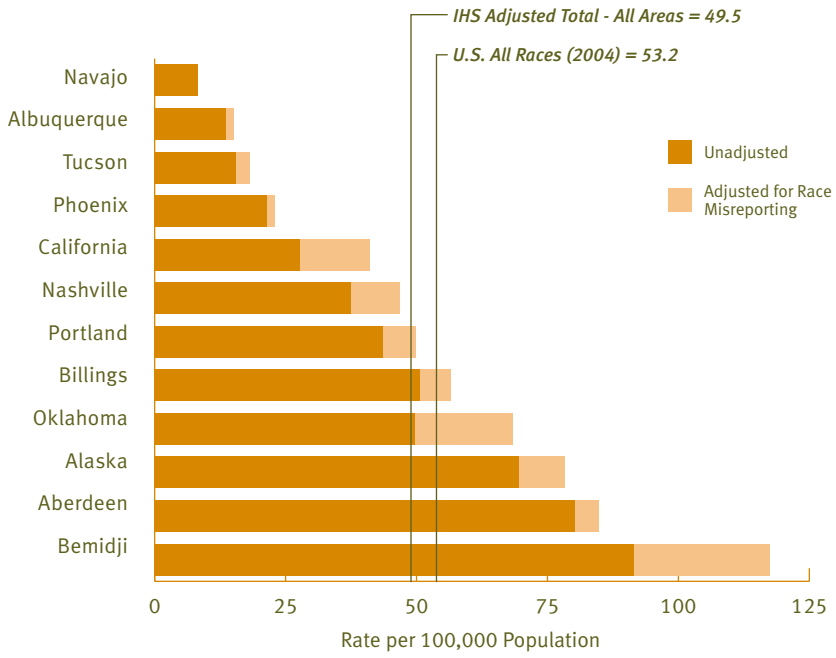


Table 4.29 Age-Adjusted Lung Cancer[1/] Death Rates, Calendar Years 2003-2005

	Deaths		Rate[2/]	
	Unadjusted	Adjusted[3/]	Unadjusted	Adjusted[3/]
U.S. All Races (2004)	*158,091*		*53.2*	
All IHS Areas	***1,229***[4/]	***1,535***[4/]	***40.0***[5/]	***49.5***[5/]
Aberdeen	114	120	80.3	84.8
Alaska	129	146	69.6	78.2
Albuquerque	24	26	13.6	15.0
Bemidji	170	220	91.4	117.4
Billings	46	52	50.7	56.6
California	87	130	27.7	41.0
Nashville	79	98	37.5	46.7
Navajo	32	32	8.2	8.2
Oklahoma	363	504	49.6	68.4
Phoenix	57	60	21.5	22.9
Portland	128	147	43.6	49.9
Tucson	*	*	15.5	18.2

* Quantity greater than zero and less than 10.
[1/] Lung cancer death includes deaths due to cancers of the trachea, bronchus and lung, ICD-10 codes C33-C34.
[2/] Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.
[3/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[4/] Total number of deaths for the Indian Health Service does not include suppressed counts (counts greater than zero and less than 10).
[5/] Calculated unadjusted and adjusted rates include all Indian Health Service Areas with suppressed counts.

In 2003-2005, the age-adjusted female breast cancer death rate in the IHS service area population was 22.2 per 100,000 population. The 2003-2005 AI/AN rate is 9 percent less than the U.S. all-races rate of 24.5 per 100,000 population for 2004. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.30 Age-Adjusted Female Breast Cancer Death Rates, Calendar Years 2003-2005

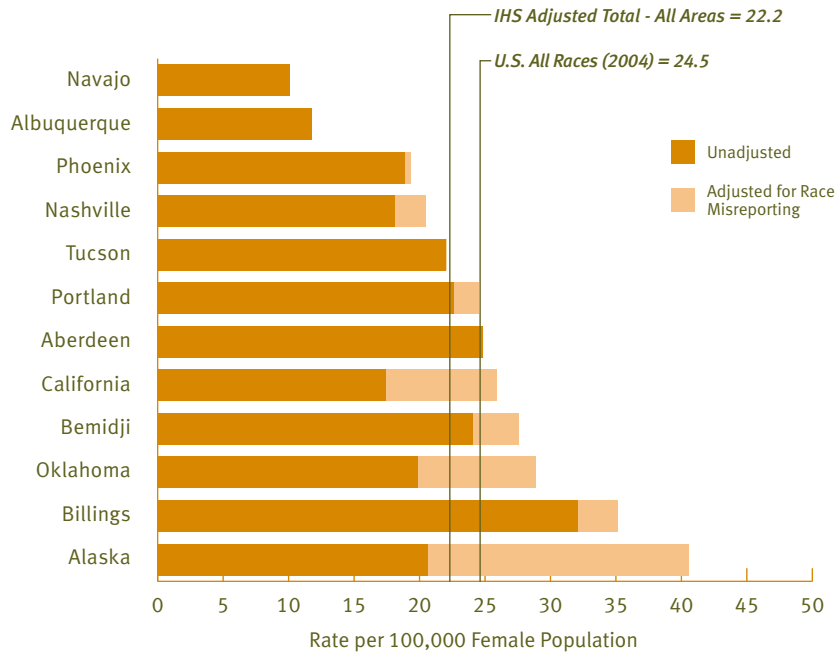


Table 4.30 Age-Adjusted Female Breast Cancer Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*40,954*		*24.5*	
All IHS Areas	***328***[3/]	***395***[3/]	***18.6***[4/]	***22.2***[4/]
Aberdeen	22	22	24.8	24.8
Alaska	26	28	20.6	40.6
Albuquerque	13	13	11.8	11.8
Bemidji	23	26	24.1	27.6
Billings	16	17	32.1	35.1
California	30	45	17.4	25.9
Nashville	22	25	18.1	20.5
Navajo	25	25	10.1	10.1
Oklahoma	81	120	19.9	28.9
Phoenix	34	35	18.9	19.3
Portland	36	39	22.6	24.5
Tucson	*	*	22.0	22.0

* Quantity greater than zero and less than 10.
[1/] Age-adjusted rate per 100,000 **female** population. Rates based on a small number of deaths should be interpreted with caution.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] Total number of deaths for the Indian Health Service does not include suppressed counts (counts greater than zero and less than 10).
[4/] Calculated unadjusted and adjusted rates include all Indian Health Service Areas with suppressed counts.

In 2003-2005, the age-adjusted cervical cancer death rate for females in the IHS service area population was 4.0 per 100,000 population. The 2003-2005 AI/AN rate is 67 percent greater than the U.S. all-races rate of 2.4 per 100,000 population for 2004. The Area rates should be interpreted with caution because of the small number of deaths involved. The highest death rates for cervical cancer occurred in Aberdeen (10.0) followed by Alaska (8.1) during the 3-year period. (See section *Sources and Limitations of Data: Population Statistics*.) The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.31 Age-Adjusted Cervical Cancer Death Rates, Calendar Years 2003-2005

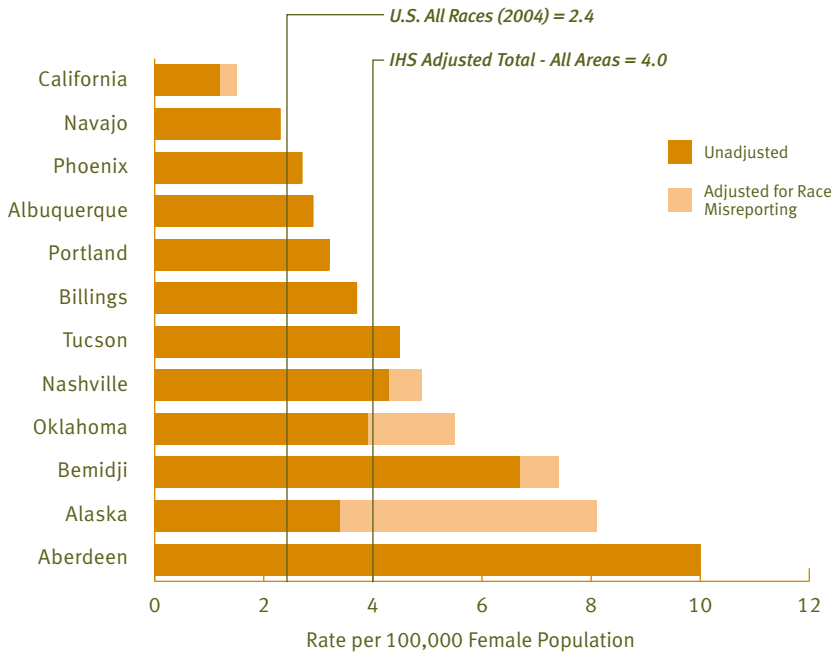


Table 4.31 Age-Adjusted Cervical Cancer Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*3,850*		*2.4*	
All IHS Areas	***74***[3/]	***84***[3/]	***3.6***[4/]	***4.0***[4/]
Aberdeen	10	10	10.0	10.0
Alaska	*	*	3.4	8.1
Albuquerque	*	*	2.9	2.9
Bemidji	*	10	6.7	7.4
Billings	*	*	3.7	3.7
California	*	*	1.2	1.5
Nashville	*	*	4.3	4.9
Navajo	*	*	2.3	2.3
Oklahoma	17	24	3.9	5.5
Phoenix	*	*	2.7	2.7
Portland	*	*	3.2	3.2
Tucson	*	*	4.5	4.5

* Quantity greater than zero and less than 10.
[1/] Age-adjusted rate per 100,000 **female** population. Rates based on a small number of deaths should be interpreted with caution.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] Total number of deaths for the Indian Health Service does not include suppressed counts (counts greater than zero and less than 10).
[4/] Calculated unadjusted and adjusted rates include all Indian Health Service Areas with suppressed counts.

The age-adjusted colon rectal cancer death rate for the IHS service area population in 2003-2005 was 18.3 per 100,000 population. The 2003-2005 AI/AN rate is 1.7 percent higher than the U.S. all-races rate in 2004 (18.0). The highest IHS Area rate (Bemidji, 37.8) is 2.1 times the U.S. all-races rate. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.32 Age-Adjusted Colon-Rectal Cancer Death Rates, Calendar Years 2003-2005

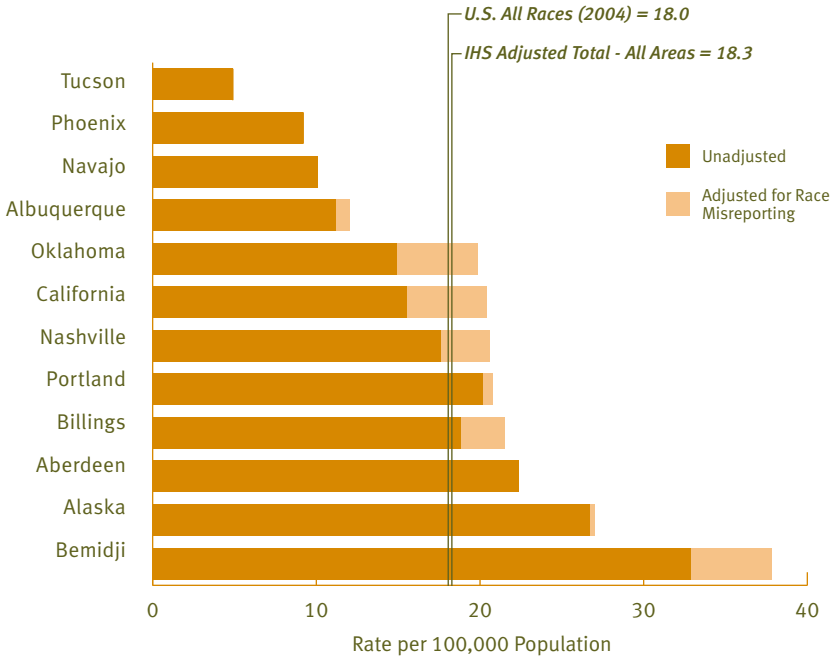


Table 4.32 Age-Adjusted Colon-Rectal Cancer Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*53,772*		*18.0*	
All IHS Areas	***481***[3/]	***554***[3/]	***16.0***[4/]	***18.3***[4/]
Aberdeen	30	30	22.4	22.4
Alaska	46	47	26.7	27.0
Albuquerque	20	21	11.2	12.0
Bemidji	53	60	32.9	37.8
Billings	16	18	18.8	21.5
California	48	64	15.5	20.4
Nashville	35	41	17.6	20.6
Navajo	42	42	10.1	10.1
Oklahoma	111	150	14.9	19.9
Phoenix	26	26	9.2	9.2
Portland	54	55	20.2	20.8
Tucson	*	*	4.9	4.9

* Quantity greater than zero and less than 10.
[1/] Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] Total number of deaths for the Indian Health Service does not include suppressed counts (counts greater than zero and less than 10).
[4/] Calculated unadjusted and adjusted rates include all Indian Health Service Areas with suppressed counts.

In 2003-2005, the age-adjusted prostate cancer death rate for males in the IHS service area population was 24.3 per 100,000 population, whereas, the 2004 U.S. all-races rate is 25.4 per 100,000 population. The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.33 Age-Adjusted Prostate Cancer Death Rates, Calendar Years 2003-2005

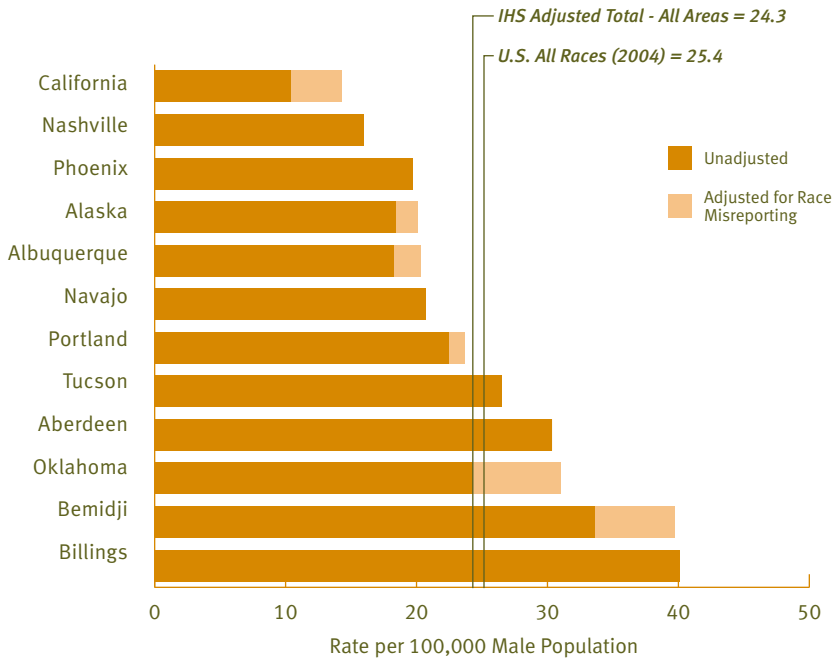


Table 4.33 Age-Adjusted Prostate Cancer Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*29,004*		*25.4*	
All IHS Areas	***213***[3/]	***242***[3/]	***21.7***[4/]	***24.3***[4/]
Aberdeen	11	11	30.3	30.3
Alaska	11	12	18.4	20.1
Albuquerque	11	12	18.3	20.3
Bemidji	18	21	33.6	39.7
Billings	10	10	40.1	40.1
California	13	18	10.4	14.3
Nashville	12	12	16.0	16.0
Navajo	28	28	20.7	20.7
Oklahoma	57	75	24.3	31.0
Phoenix	19	19	19.7	19.7
Portland	23	24	22.5	23.7
Tucson	*	*	26.5	26.5

* Quantity greater than zero and less than 10.
[1/] Age-adjusted rate per 100,000 **male** population. Rates based on a small number of deaths should be interpreted with caution.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] Total number of deaths for the Indian Health Service does not include suppressed counts (counts greater than zero and less than 10).
[4/] Calculated unadjusted and adjusted rates include all Indian Health Service Areas with suppressed counts.

In 2003-2005, the age-adjusted human immunodeficiency virus (HIV) infection death rate for the IHS service area population is 3.3 per 100,000 population, whereas, the 2004 U.S. all-races rate is 4.5 per 100,000 population. The Bemidji Area's rate (1.2) is the lowest mortality rate for all IHS areas. Area rates should be interpreted with caution when small numbers of deaths occur. (See section: *Sources and Limitations of Data: Population Statistics*.) The age-adjusted rate is adjusted for misreporting of AI/AN race on the state death certificate.

Chart 4.34 Age-Adjusted Human Immunodeficiency Virus (HIV) Infection Death Rates, Calendar Years 2003-2005

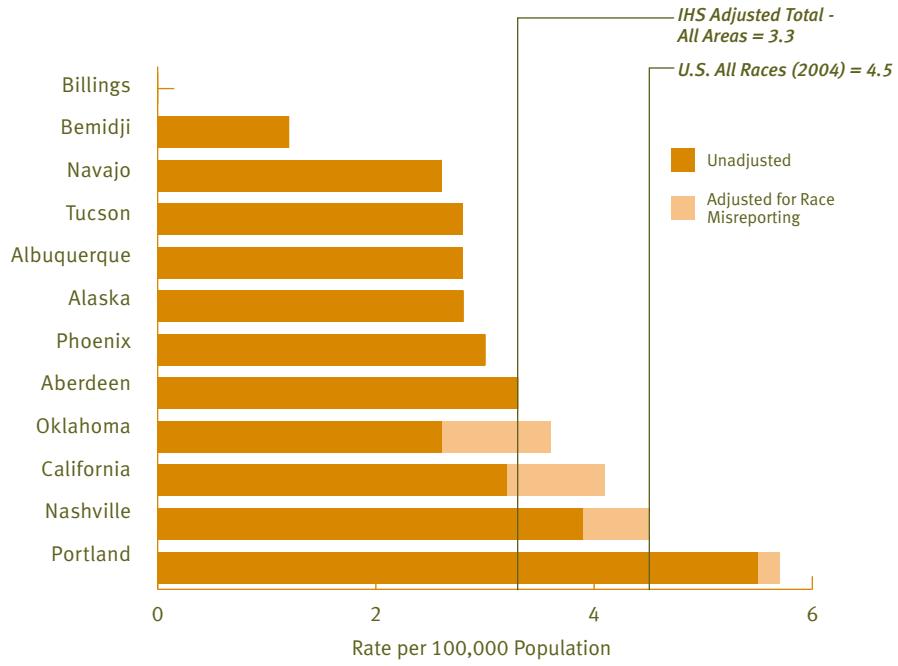


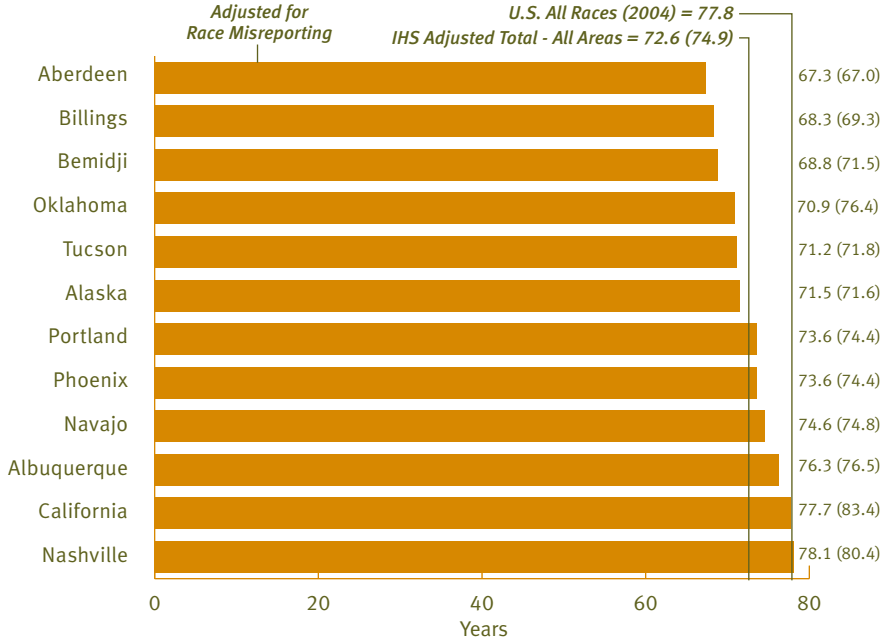
Table 4.34 Age-Adjusted Human Immunodeficiency Virus (HIV) Infection Death Rates, Calendar Years 2003-2005

	Deaths		Rate[1/]	
	Unadjusted	Adjusted[2/]	Unadjusted	Adjusted[2/]
U.S. All Races (2004)	*13,063*		*4.5*	
All IHS Areas	***105***[3/]	***121***[3/]	***3.0***[4/]	***3.3***[4/]
Aberdeen	*	*	3.3	3.3
Alaska	*	*	2.8	2.8
Albuquerque	*	*	2.8	2.8
Bemidji	*	*	1.2	1.2
Billings	--	--	--	--
California	15	19	3.2	4.1
Nashville	11	13	3.9	4.5
Navajo	14	14	2.6	2.6
Oklahoma	23	32	2.6	3.6
Phoenix	14	14	3.0	3.0
Portland	28	29	5.5	5.7
Tucson	*	*	2.8	2.8

-- Represents zero.
* Quantity greater than zero and less than 10.
[1/] Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.
[2/] Adjusted to compensate for misreporting of American Indian/Alaska Native race on the state death certificate.
[3/] Total number of deaths for the Indian Health Service includes suppressed counts (counts greater than zero and less than 10).
[4/] Calculated unadjusted and adjusted rates include all Indian Health Service Areas with suppressed counts.

In 2003-2005, the AI/AN life expectancy at birth (both sexes) for the IHS service area population was 72.6 years. Life expectancy calculations are based on rates adjusted for misreporting of AI/AN race on the death certificate. Life expectancy at birth is 5.2 years less than the 2004 figure of 77.8 years for the U.S. all-races population. The Nashville IHS Area has a life expectancy greater than the U.S. all-races population. The Aberdeen Area has a life expectancy (67.3) 10.5 years less than the U.S. figure.

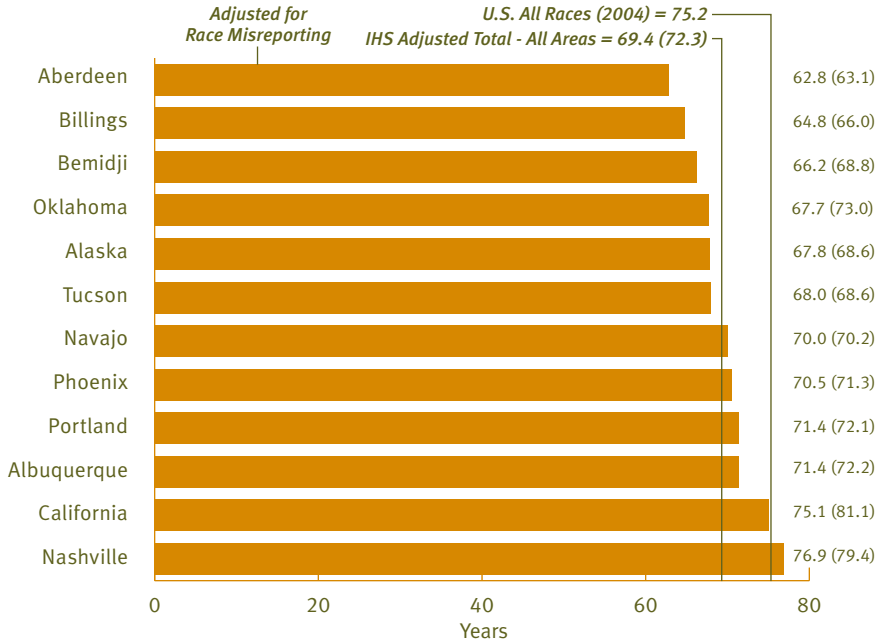
Chart 4.35 Life Expectancy at Birth for Both Sexes, Calendar Years 2003-2005



NOTE: Life expectancies **not** adjusted for misreporting of American Indian/Alaska Native race on state death certificates are shown in parentheses.

In 2003-2005, the life expectancy at birth for AI/AN males in the IHS service area population was 69.4 years. Life expectancy calculations are based on rates adjusted for misreporting of AI/AN race on the death certificate. Life expectancy at birth is 5.8 years less than the 2004 figure of 75.2 years for the U.S. all-races male population. AI/AN males in the Aberdeen Area (62.8) can expect to live from birth, 12.4 years less than U.S. males.

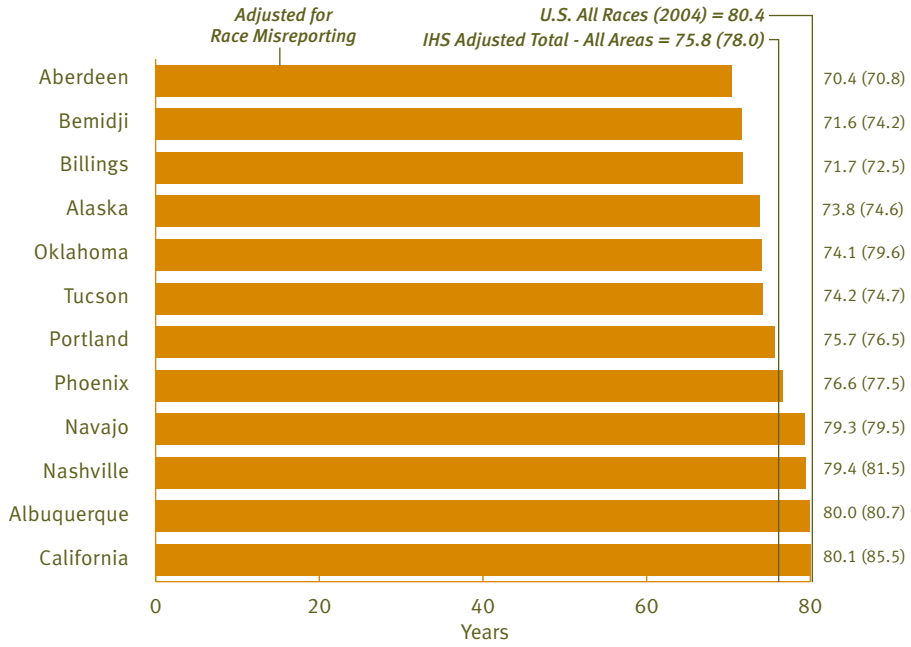
Chart 4.36 Life Expectancy at Birth for Males, Calendar Years 2003-2005



NOTE: Life expectancies **not** adjusted for misreporting of American Indian/Alaska Native race on state death certificates are shown in parentheses.

In 2003-2005, the life expectancy at birth for AI/AN females in the IHS service area population was 75.8 years. Life expectancy calculations are based on rates adjusted for misreporting of AI/AN race on the state death certificate. Life expectancy at birth is 4.6 years less than the 2004 figure of 80.4 years for the U.S. all-races female population. AI/AN females in the California Area (80.1) had the best Area life expectancy, can expect to live from birth slightly less than their counterparts in the U.S. all-races population. Females in the Aberdeen Area have a life expectancy (70.4) that is 10 years less than that of U.S. females.

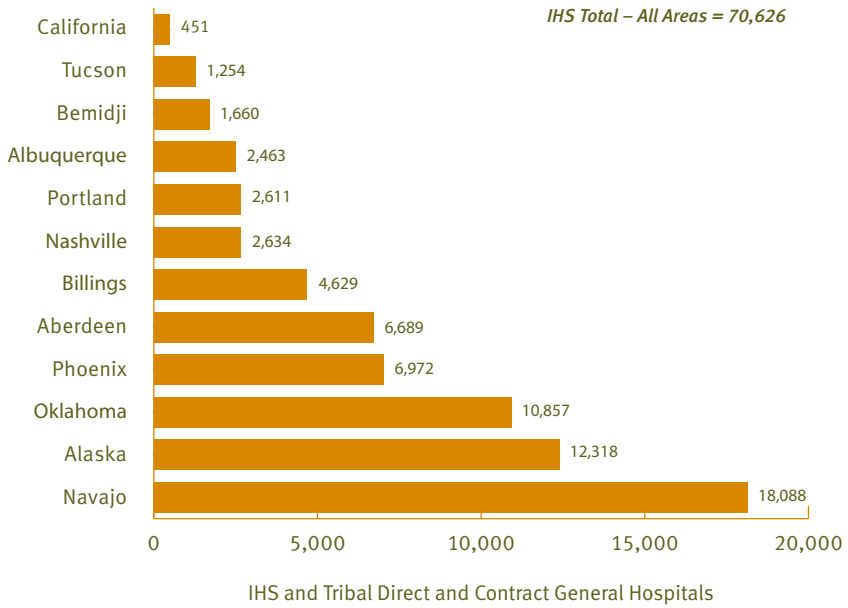
Chart 4.37 Life Expectancy at Birth for Females, Calendar Years 2003-2005



NOTE: Life expectancies **not** adjusted for misreporting of American Indian/Alaska Native race on state death certificates are shown in parentheses.

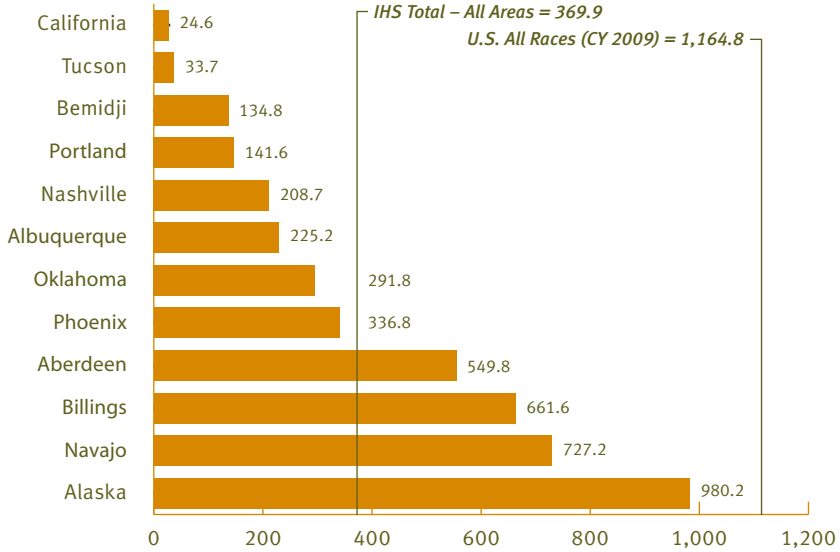
In FY 2009, there were over 70,000 admissions to IHS and Tribal direct and contract general hospitals. Over 43.1 percent of these admissions were in two IHS Areas, Oklahoma (12,318) and Navajo (18,088).

Number of Hospital Admissions, FY 2009



The IHS admission rate of 369.9 admissions per 10,000 service population in FY 2009 was 32 percent lower than the U.S. rate of 1,164.8 in CY 2009. The IHS Area rates ranged from 24.6 in California, where the IHS provides little inpatient care, to 980.2 in Alaska.

Chart 5.2 Hospital Admission Rates, FY 2009



NOTE: Prior issues used User Population for the denominator of this measure.

Table 5.1

Number and Rate of Admissions, Indian Health Service and Tribal Direct and Contract General Hospitals, FY 2009, and U.S. Short-Stay Community Hospitals, Calendar Year 2009

	Total Admission Rate[1/]	Total Admissions	IHS Admissions		Tribal Admissions	
			Direct	*Contract*	*Direct*	*Contract*
U.S. All Races (2009)	*1,164.8*	*35,761*[2/]				
All IHS Areas	***369.9***	***70,626***	***27,214***	***12,787***	***23,453***	***7,172***
Aberdeen	549.8	6,689	3,556	3,023	0	110
Alaska	980.2	12,318	0	0	11,992	326
Albuquerque	225.2	2,463	1,436	965	0	62
Bemidji	134.8	1,660	409	403	0	848
Billings	661.6	4,629	1,835	2,629	0	165
California[3/]	24.6	451	0	0	0	451
Nashville	208.7	2,634	0	74	1,253	1,307
Navajo	727.2	18,088	12,693	1,610	3,265	520
Oklahoma	291.8	10,857	1,540	1,689	6,721	907
Phoenix	336.8	6,972	5,116	1,512	222	122
Portland[3/]	141.6	2,611	0	257	0	2,354
Tucson	33.7	1,254	629	625	0	0

[1/] Number of admissions per 10,000 service population.
[2/] Number of admissions in thousands.
[3/] California and Portland do not have direct IHS or Tribal inpatient care.

SOURCES: FY 2009 Inpatient Memorandum. October, 2010; NPIRS, National Data Warehouse; American Hospital Association. "Fast Facts on U.S. Hospitals". AHA Hospital Statistics, 2010 Edition; US Census Bureau American Fact Finder. http://1.usa.gov/SldHxr.

The number of inpatient days in IHS and Tribal direct and contract general hospitals was nearly 288,000 in FY 2009. The number varied considerably among the IHS Areas, ranging from 4,843 in Tucson to 65,326 in Navajo.

Chart 5.3 Number of Hospital Days, FY 2009

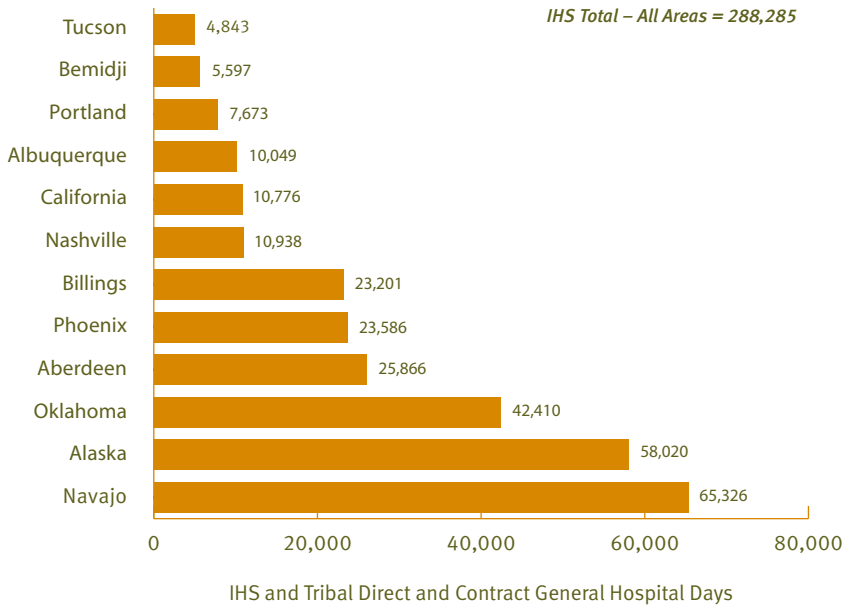


Table 5.3 Number of Hospital Days, Indian Health Service and Tribal Direct and Contract General Hospitals, FY 2009

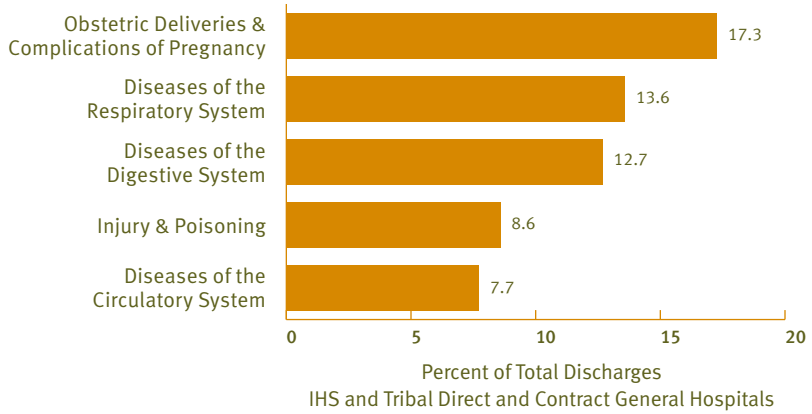
		IHS Days		Tribal Days	
	Total Days	*Direct*	*Contract*	*Direct*	*Contract*
All IHS Areas	***288,285***	***107,222***	***27,933***	***105,663***	***47,467***
Aberdeen	25,866	11,874	13,537	0	455
Alaska	58,020	0	0	56,521	1,499
Albuquerque	10,049	5,420	4,390	0	239
Bemidji	5,597	1,715	1,417	0	2,465
Billings	23,201	6,859	2,805	0	13,537
California[1/]	10,776	0	0	0	10,776
Nashville	10,938	0	455	6,093	4,390
Navajo	65,326	51,119	275	13,657	275
Oklahoma	42,410	6,753	1,417	28,988	5,252
Phoenix	23,586	21,444	239	404	1,499
Portland[1/]	7,673	0	593	0	7,080
Tucson	4,843	2,038	2,805	0	0

[1/] California and Portland do not have direct IHS or Tribal inpatient care.

SOURCES: FY 2009 Inpatient Memorandum, October 2010

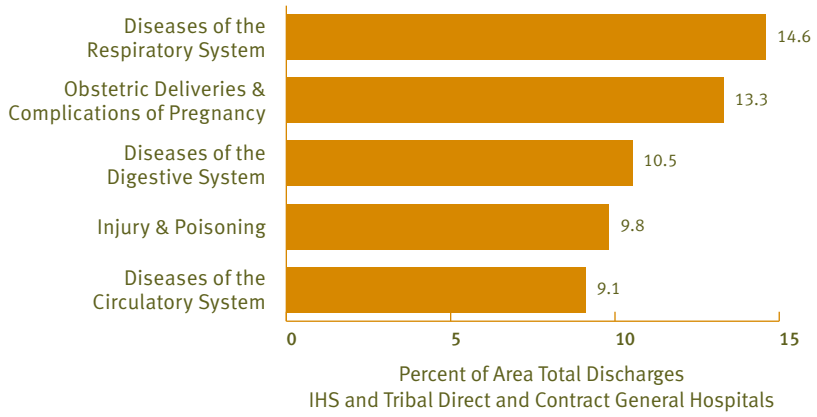
In FY 2009, 17.3 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of pregnancy, followed by diseases of the respiratory system at 13.6 percent.

Chart 5.4 Leading Causes of Hospitalization, All IHS Areas, FY 2009



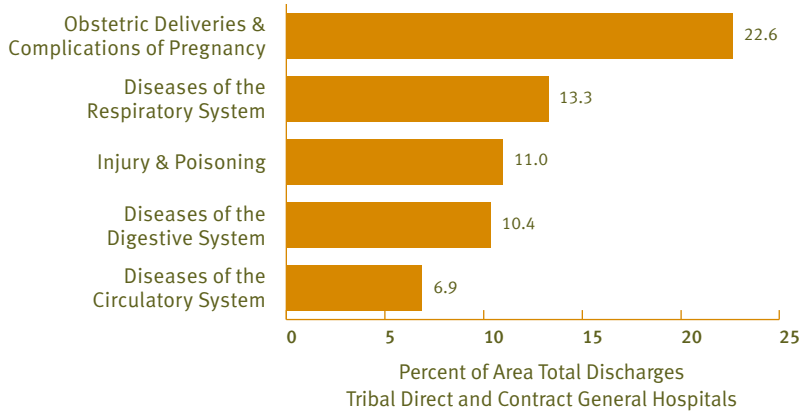
For the **Aberdeen Area** in FY 2009, 14.6 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to diseases of the respiratory system, followed by obstetric deliveries and complications of pregnancy at 13.3 percent.

Chart 5.5 Leading Causes of Hospitalization, Aberdeen Area, FY 2009



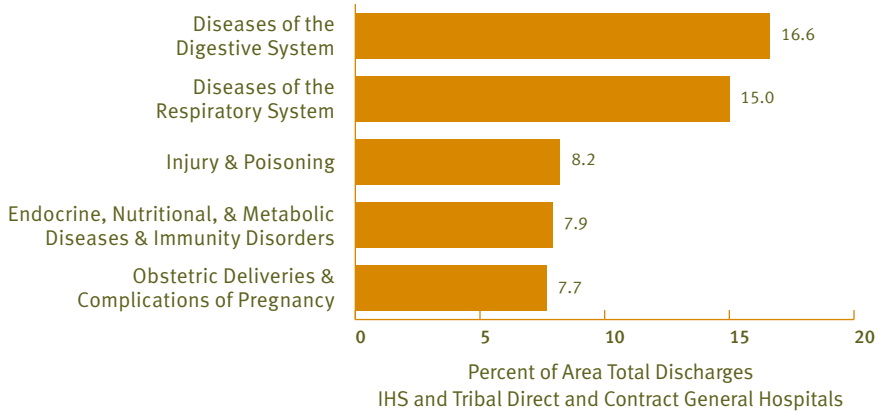
For the **Alaska Area** in FY 2009, 22.6 percent of all discharges from Tribal contract general hospitals pertained to obstetric deliveries and complications of pregnancy, followed by diseases of the respiratory system at 13.3 percent.

Chart 5.6 Leading Causes of Hospitalization, Alaska Area, FY 2009



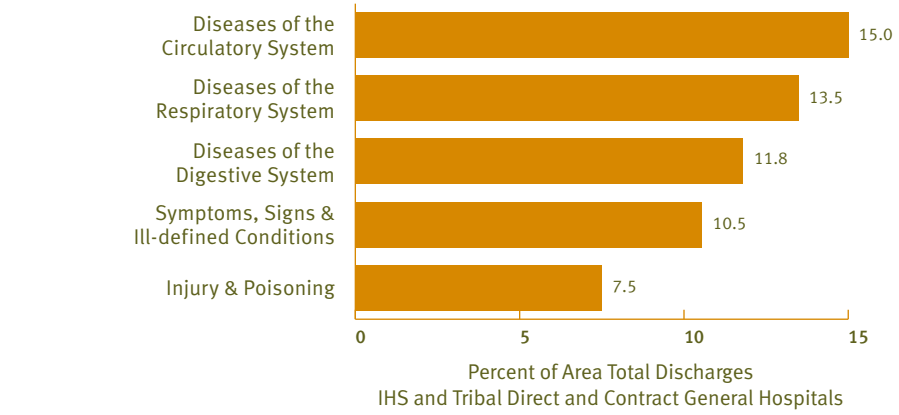
For the **Albuquerque Area** in FY 2009, 16.6 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to diseases of the digestive system, closely followed by diseases of the respiratory system at 15.0 percent.

Leading Causes of Hospitalization, Albuquerque Area, FY 2009



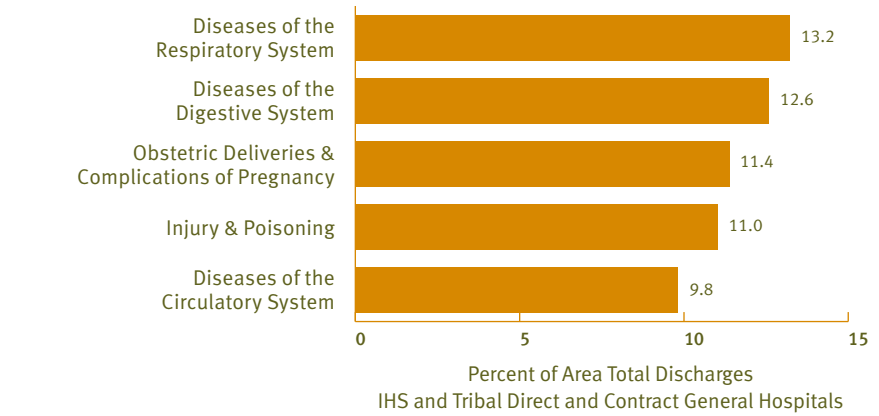
For the **Bemidji Area** in FY 2009, 15.0 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to diseases of the circulatory system, followed by diseases of the respiratory system at 13.5 percent.

Chart 5.8 **Leading Causes of Hospitalization, Bemidji Area, FY 2009**



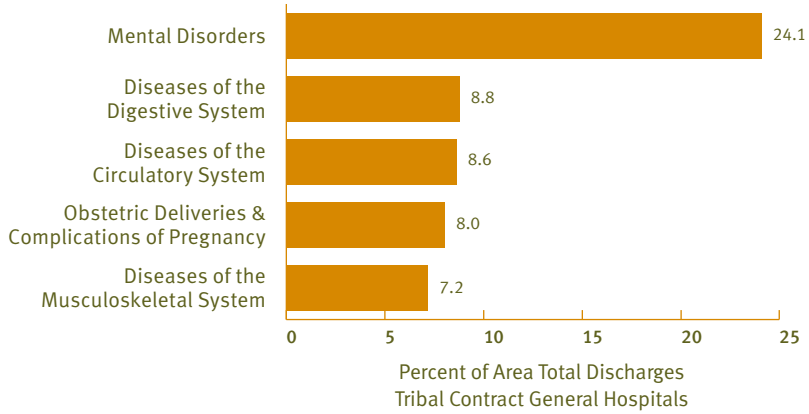
For the **Billings Area** in FY 2009, 13.2 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to diseases of the respiratory system, followed by diseases of the digestive system at 12.6 percent.

Chart 5.9 **Leading Causes of Hospitalization, Billings Area, FY 2009**



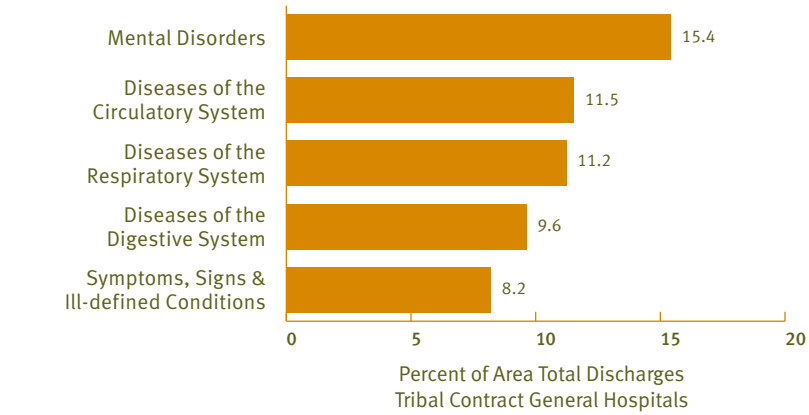
For the **California Area** in FY 2009, 24.1 percent of all discharges from Tribal contract health service hospitals pertained to mental disorders, followed by diseases of the digestive system at 8.8 percent.

Chart 5.10 Leading Causes of Hospitalization, California Area, FY 2009



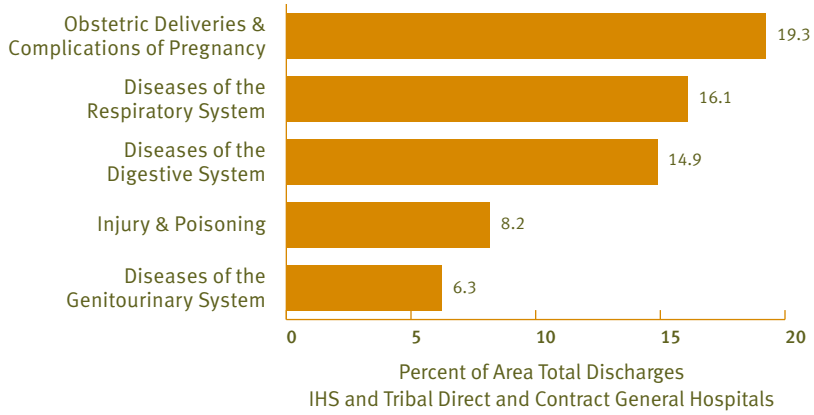
For the **Nashville Area** in FY 2009, 15.4 percent of all discharges from Tribal contract general hospitals pertained to mental disorders, followed by diseases of the circulatory system at 11.5 percent.

Chart 5.11 Leading Causes of Hospitalization, Nashville Area, FY 2009



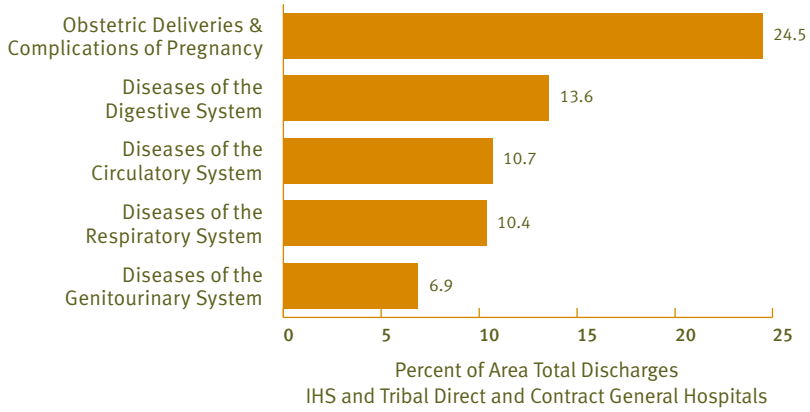
For the **Navajo Area** in FY 2009, 19.3 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of pregnancy, followed by diseases of the respiratory system at 16.1 percent.

Chart 5.12 Leading Causes of Hospitalization, Navajo Area, FY 2009



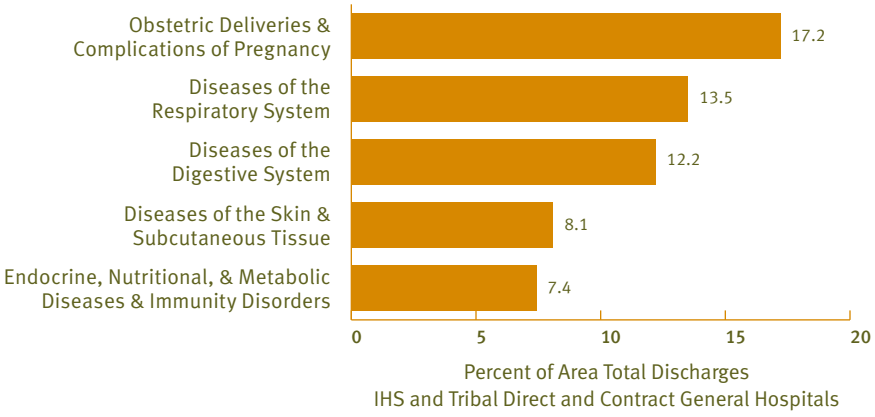
For the **Oklahoma Area** in FY 2009, 24.5 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of pregnancy, followed by diseases of the digestive system at 13.6 percent.

Chart 5.13 Leading Causes of Hospitalization, Oklahoma Area, FY 2009



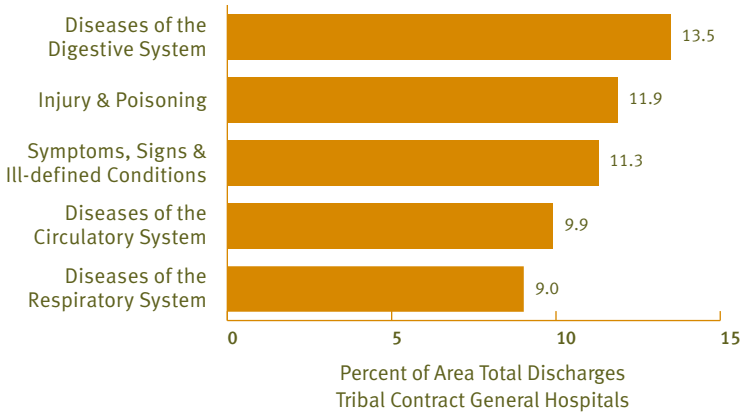
For the **Phoenix Area** in FY 2009, 17.2 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of pregnancy, followed by diseases of the respiratory system at 13.5 percent.

Chart 5.14 Leading Causes of Hospitalization, Phoenix Area, FY 2009



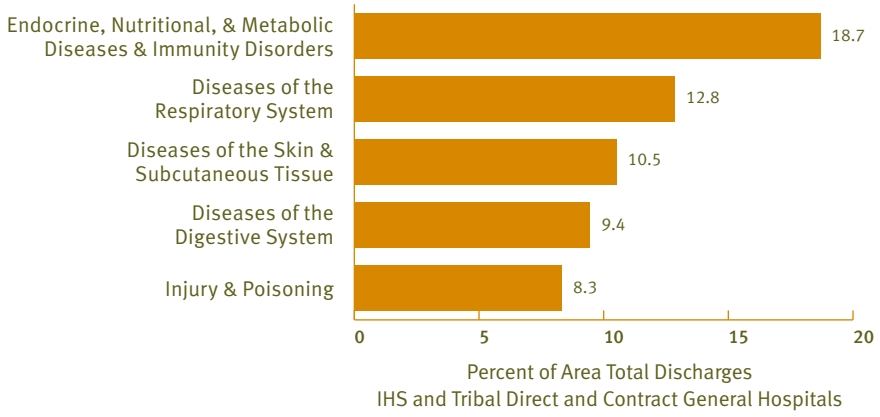
For the **Portland Area** in FY 2009, 13.5 percent of all discharges from Tribal contract general hospitals pertained to diseases of the digestive system, followed by injury and poisoning at 11.9 percent.

Chart 5.15 **Leading Causes of Hospitalization, Portland Area, FY 2009**



For the **Tucson Area** in FY 2009, 18.7 percent of all discharges from IHS and Tribal direct and contract general hospitals pertained to endocrine, nutritional, and metabolic diseases and immunity disorders, followed by diseases of the respiratory system at 12.8 percent.

Chart 5.16 **Leading Causes of Hospitalization, Tucson Area, FY 2009**



In FY 2009, there were nearly 12 million ambulatory medical visits to IHS and Tribal direct and contract facilities. Three IHS Areas—Oklahoma (2,492,519), Navajo (1,584,552) and Alaska (1,561,989)—had 48.9 percent of the visits.

Chart 5.17 Number of Ambulatory Medical Visits, FY 2009

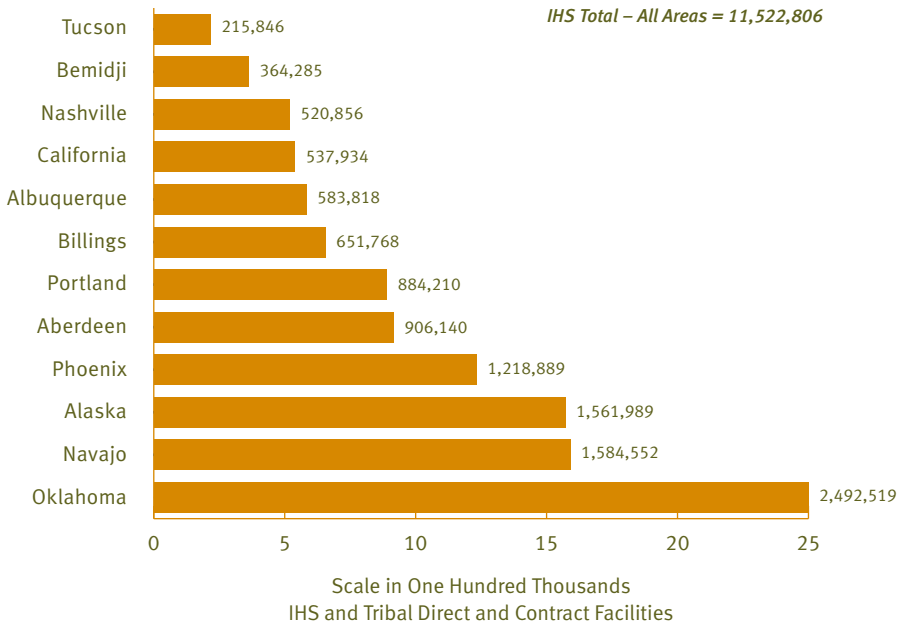


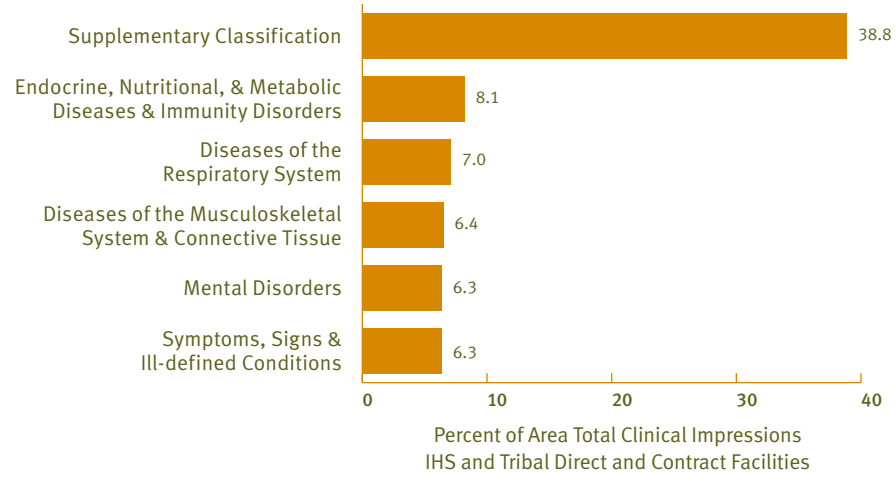
Table 5.17 Number of Ambulatory Medical Visits, Indian Health Service and Tribal Direct and Contract Facilities, FY 2009

		Indian Health Service		Tribal	
	Total	*Direct*	*Contract*	*Direct*	*Contract*
All IHS Areas	***11,522,806***	***5,034,353***	***196,775***	***6,053,574***	***238,104***
Aberdeen	906,140	772,196	36,145	95,884	1,915
Alaska	1,561,989	0	0	1,555,484	6,505
Albuquerque	583,818	485,194	13,807	83,282	1,535
Bemidji	364,285	257,462	9,024	95,884	1,915
Billings	651,768	483,393	48,594	117,020	2,761
California	537,934	0	0	499,647	38,287
Nashville	520,856	9,866	1,838	453,781	55,371
Navajo	1,584,552	1,331,420	23,120	207,509	22,503
Oklahoma	2,492,519	503,802	24,946	1,950,302	13,469
Phoenix	1,218,889	777,628	23,452	412,063	5,746
Portland	884,210	273,716	5,950	516,851	87,693
Tucson	215,846	139,676	9,899	65,867	404

SOURCE: IHS NPIRS Database

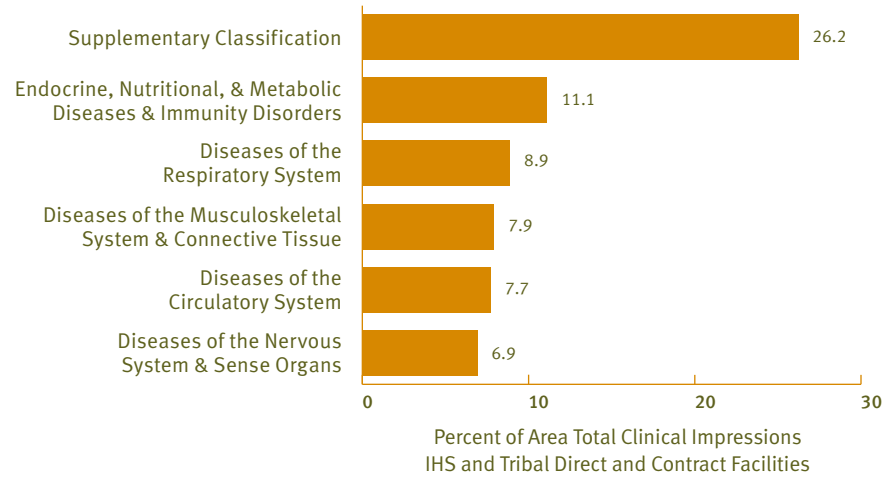
In FY 2009, 38.8 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classification, followed by endocrine, nutritional, and metabolic diseases and immunity disorders at 8.1 percent.

Chart 5.18 Leading Causes of Ambulatory Medical Visits, All IHS Areas, FY 2009



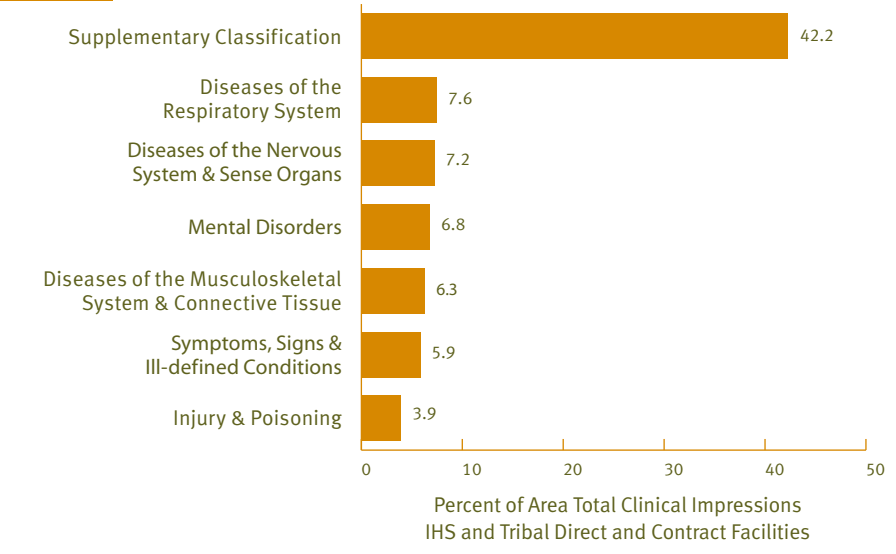
For the **Aberdeen Area** in FY 2009, 26.2 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications, followed by endocrine, nutritional, and metabolic diseases and immunity disorders at 11.1 percent.

Chart 5.19 Leading Causes of Ambulatory Medical Visits, Aberdeen Area, FY 2009



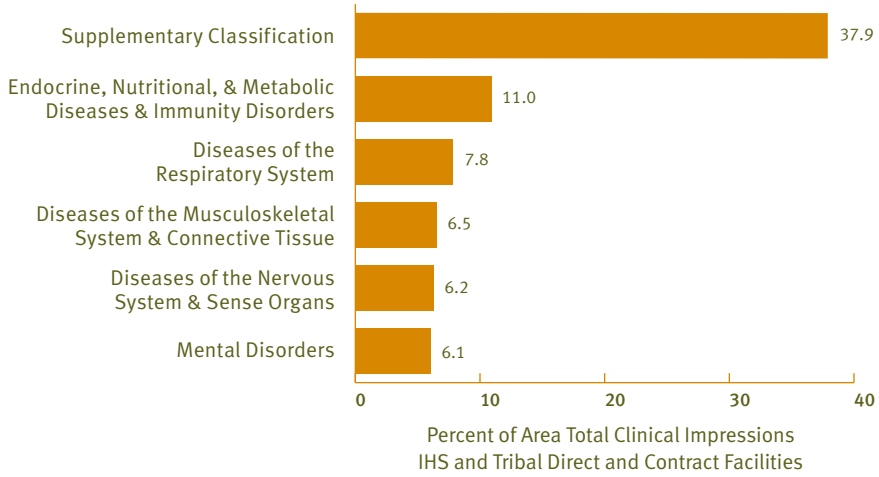
For the **Alaska Area** in FY 2009, 42.2 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications, followed by diseases of the respiratory system at 7.6 percent.

Chart 5.20 Leading Causes of Ambulatory Medical Visits, Alaska Area, FY 2009



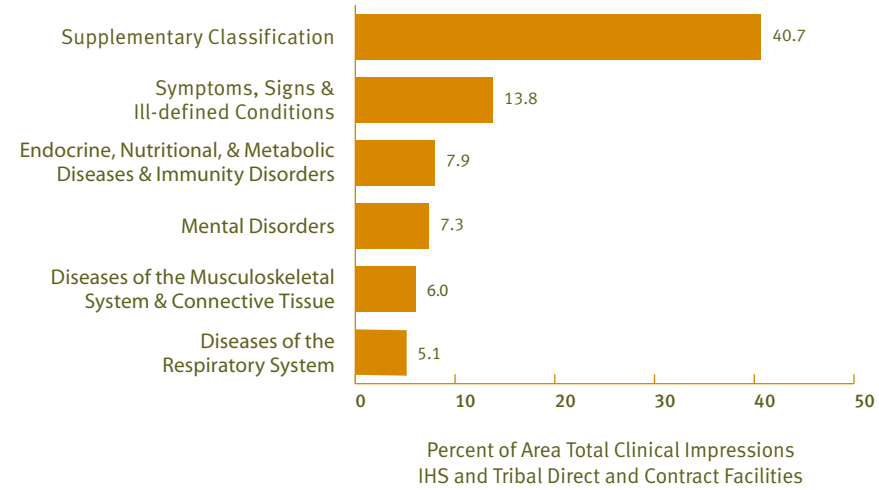
For the **Albuquerque Area** in FY 2009, 37.9 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications, followed by endocrine, nutritional, and metabolic diseases and immunity disorders at 11.0 percent.

Chart 5.21 Leading Causes of Ambulatory Medical Visits, Albuquerque Area, FY 2009



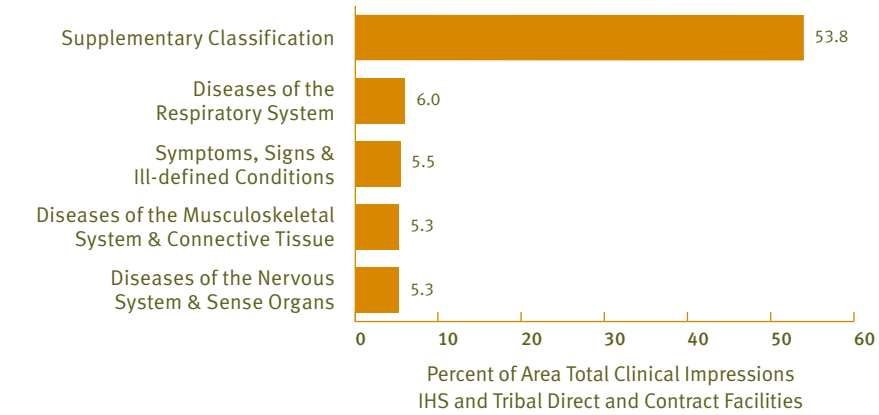
For the **Bemidji Area** in FY 2009, 40.7 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications, followed by symptoms, signs and ill-defined conditions at 13.8 percent.

Chart 5.22 Leading Causes of Ambulatory Medical Visits, Bemidji Area, FY 2009



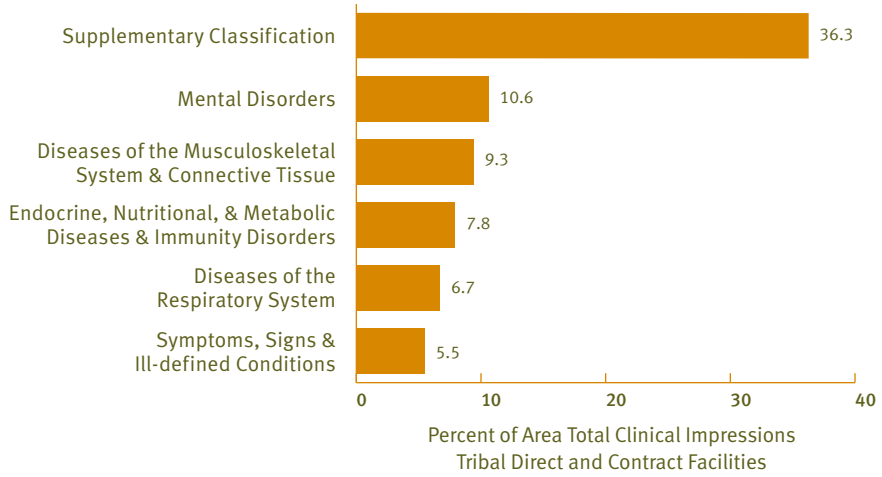
For the **Billings Area** in FY 2009, 53.8 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications, followed by diseases of the respiratory system at 6.0 percent.

Chart 5.23 Leading Causes of Ambulatory Medical Visits, Billings Area, FY 2009



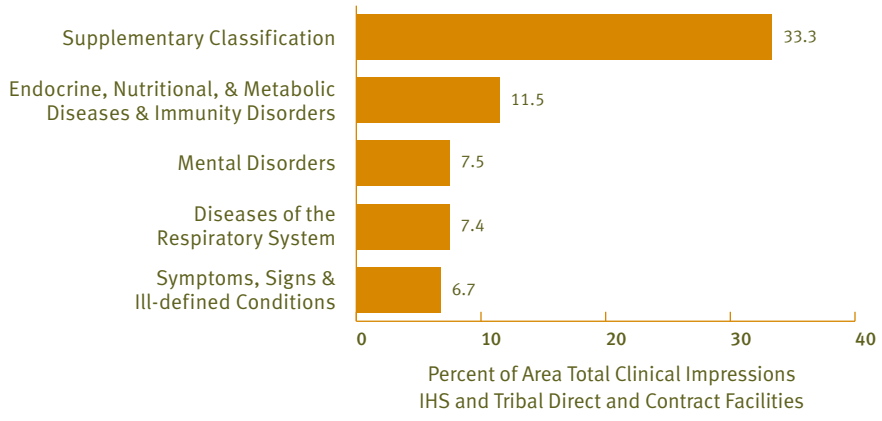
For the **California Area** in FY 2009, 36.3 percent of all clinical impressions in Tribal direct and contract facilities pertained to supplementary classifications, followed by mental disorders at 10.6 percent.

Chart 5.24 **Leading Causes of Ambulatory Medical Visits, California Area, FY 2009**



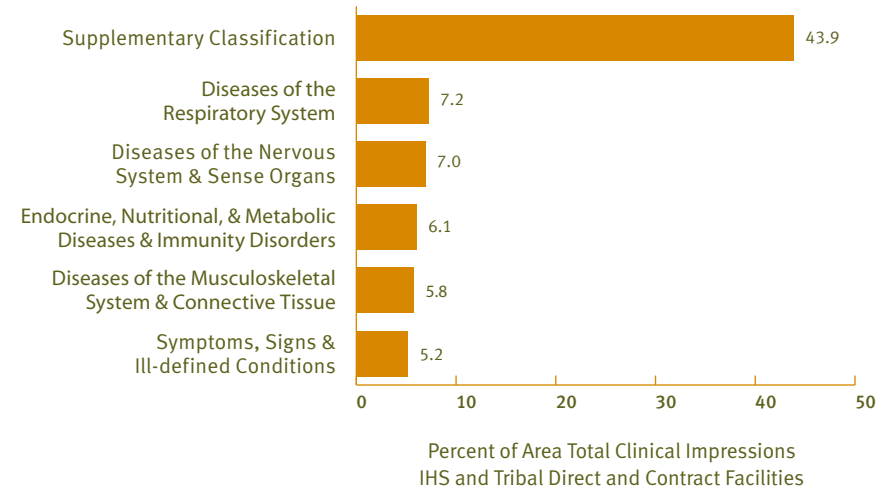
For the **Nashville Area** in FY 2009, 33.3 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications, followed by endocrine, nutritional, and metabolic diseases and immunity disorders at 11.5 percent.

Chart 5.25 **Leading Causes of Ambulatory Medical Visits, Nashville Area, FY 2009**



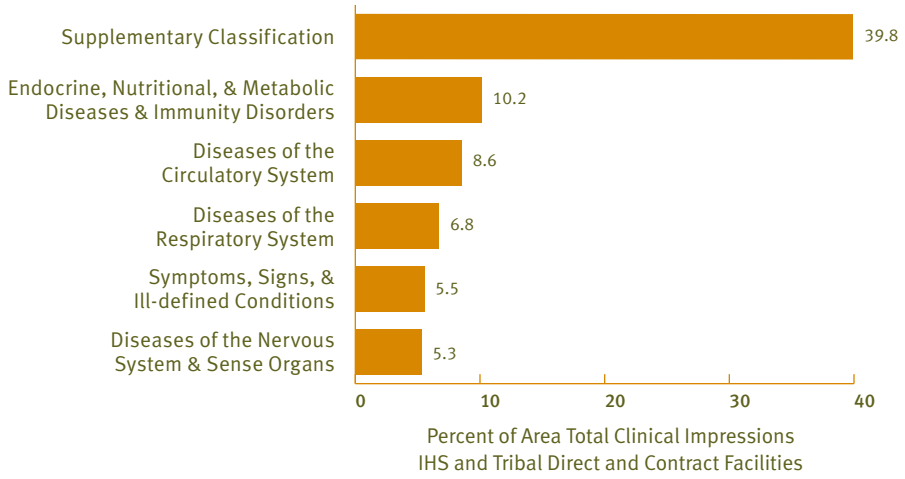
For the **Navajo Area** in FY 2009, 43.9 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications, followed by diseases of the respiratory system at 7.2 percent.

Chart 5.26 **Leading Causes of Ambulatory Medical Visits, Navajo Area, FY 2009**



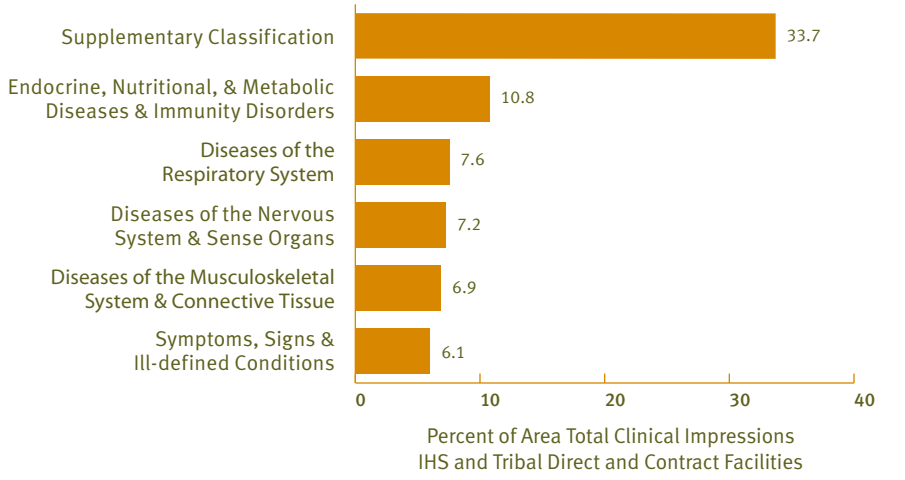
For the **Oklahoma Area** in FY 2009, 39.8 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications, followed by endocrine, nutritional, and metabolic diseases and immunity disorders at 10.2 percent.

Chart 5.27 **Leading Causes of Ambulatory Medical Visits, Oklahoma Area, FY 2009**



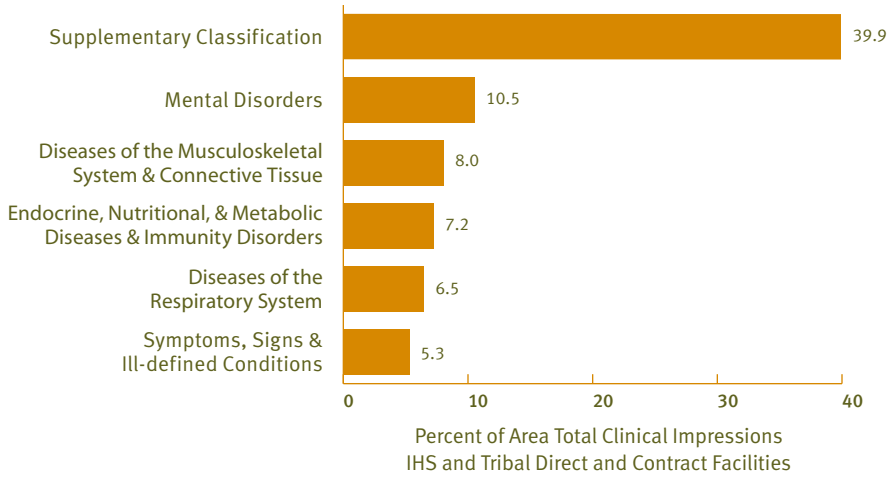
For the **Phoenix Area** in FY 2009, 33.7 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications, followed by endocrine, nutritional, and metabolic diseases and immunity disorders at 10.8 percent.

Chart 5.28 **Leading Causes of Ambulatory Medical Visits, Phoenix Area, FY 2009**



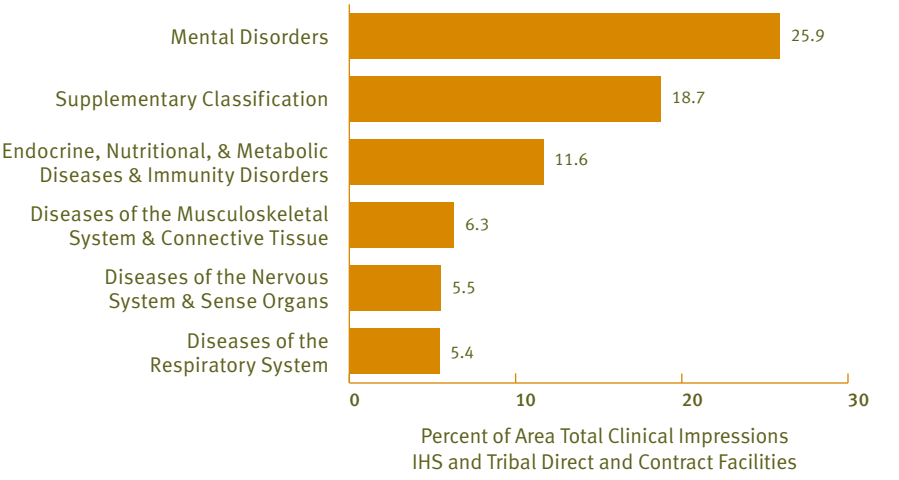
For the **Portland Area** in FY 2009, 39.9 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to supplementary classifications, followed by mental disorders at 10.5 percent.

Leading Causes of Ambulatory Medical Visits, Portland Area, FY 2009



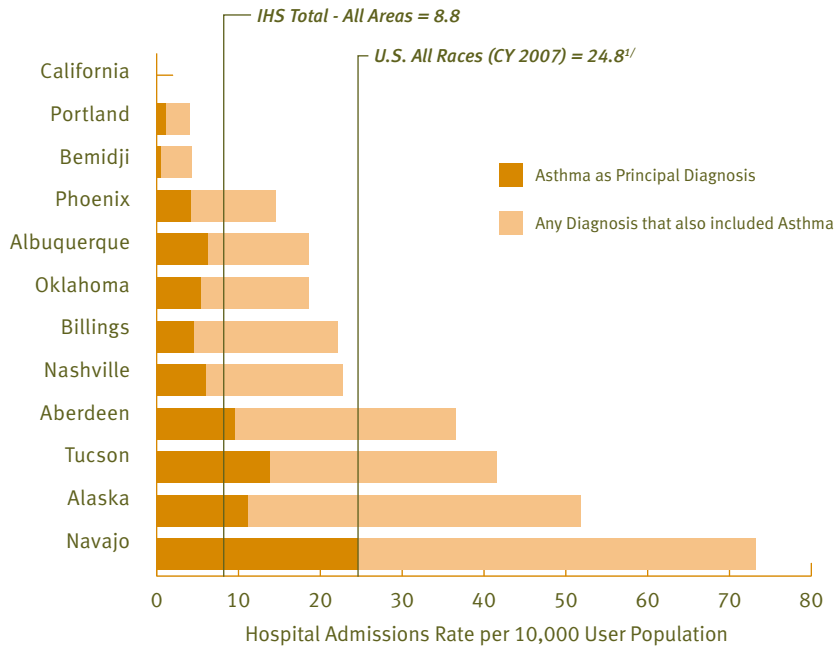
For the **Tucson Area** in FY 2009, 25.9 percent of all clinical impressions in IHS and Tribal direct and contract facilities pertained to mental disorders, followed by supplementary classifications at 18.7 percent.

Chart 5.30 **Leading Causes of Ambulatory Medical Visits, Tucson Area, FY 2009**



In FY 2009, there were 443 asthma admissions to IHS and Tribal direct and contract general hospitals with asthma as a principal diagnosis. Approximately 59 percent of these admissions where asthma was a principal diagnosis were in two IHS Areas, Navajo (207) and Alaska (56). The rate of the IHS and Tribal AI/AN population is 35.5 percent of that found in the U.S. all-races population (8.8 asthma admissions per 10,000 versus 24.8, respectively).

Chart 5.31 Hospital Rate of Persons Diagnosed with Asthma under Age 18, FY 2009



[1]CDC National Hospital Discharge Survey

Table 5.31 Number and Rate of Hospitalization of Persons Diagnosed with Asthma under Age 18, FY 2009

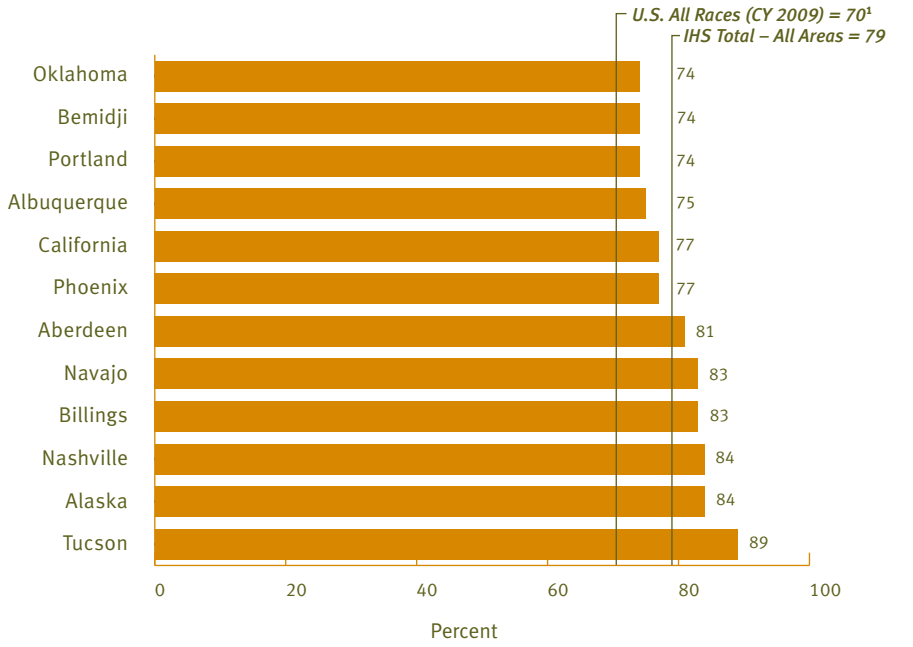
	Asthma as Principal Diagnosis		Any Diagnosis that also Included Asthma		Estimated Population Under Age 18 Years[1/]
	Admission Rate per 10,000	*Number of Admissions*	*Admission Rate per 10,000*	*Number of Admissions*	
U.S. All Races (2007)[2/]	*24.8*				
All IHS Areas	***8.8***	***443***	***21.0***	***1,054***	***500,915***
Aberdeen	9.7	44	26.6	120	45,186
Alaska	11.3	56	40.6	201	49,454
Albuquerque	6.3	17	12.2	33	27,141
Bemidji	0.6	2	3.5	12	33,882
Billings	4.8	12	17.2	43	25,017
California	0.0	0	0.0	0	25,598
Nashville	6.1	10	16.5	27	16,342
Navajo	24.9	207	48.3	401	82,995
Oklahoma	5.6	55	12.9	126	97,637
Phoenix	4.2	24	10.2	58	56,668
Portland	1.2	4	2.8	9	32,294
Tucson	13.8	12	27.6	24	8,701

[1/] IHS User Population under age 18 for FY 2009.
[2/] CDC National Hospital Discharge Survey under age 18 for CY 2007. National Health Statistics Reports 29 (October 26, 2010) p.9. Standard error rate was 5.3 per 10,000 discharges. Principal Diagnosis.

SOURCES: NPIRS, National Data Warehouse.

In FY 2009, 79 percent of AI/AN children 19-35 months old residing in an IHS service area who received care from an IHS, Tribal Indian facility completed the 4:3:1:3:3 vaccine series (4 or more doses Diphtheria, Tetanus, Acellular Pertussis, 3 or more doses of Polio, 1 or more doses of Measles, Mumps, Rubella, 3 or more doses of Haemophilus influenzae type B, and 3 or more doses of Hepatitis B vaccines). The Oklahoma, Bemidji, and Portland Areas had the lowest coverage at 74 percent, while the Tucson Area had the highest coverage, 89 percent. Based on the data from the National Health Interview Survey, in CY 2009, 70 percent of children completed the 4:3:1:3:3 vaccine series.

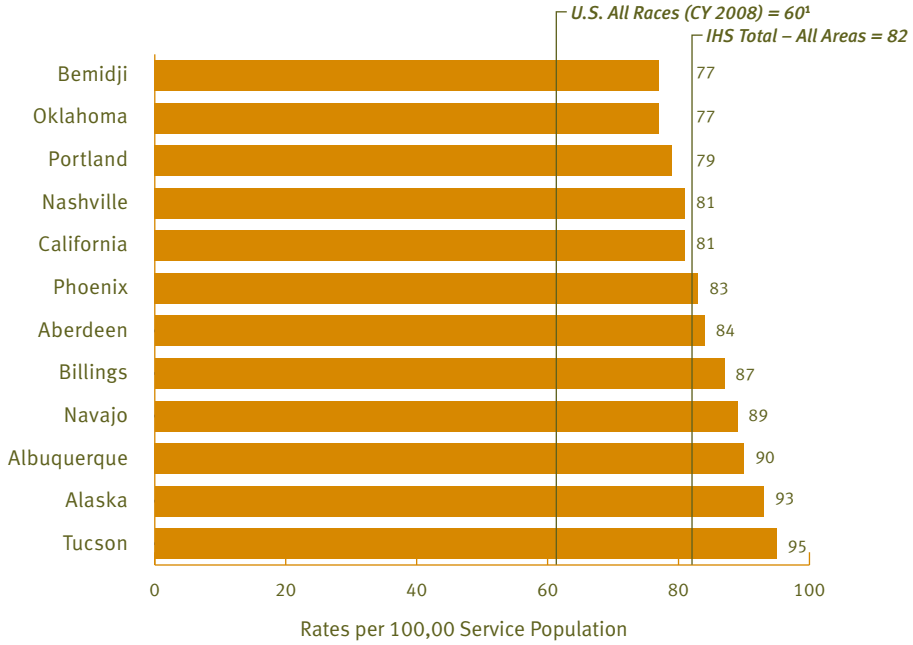
Chart 5.32 Immunization Rates, 19-35 Months, FY 2009



[1] Centers for Disease Control and Prevention. NIS. Vaccination coverage of 4:3:1:3:3 Series for children aged 19-35 months-U.S. 2009. Available at: http://www.cdc.gov/vaccines/stats-surv/nis/tables/04/tab03_antigen_state.xls

In FY 2009, 82 percent of AI/AN adults over 65 years and residing in an IHS service area and receiving care from an IHS, Tribal Indian facility, received the pneumococcal vaccine. The Oklahoma and Bemidji Areas had the lowest coverage at 77 percent, while the Tucson Area had the highest coverage, 95 percent. Based on the data from the National Health Interview Survey, in CY 2008, 60 percent of the U.S. general population over 65 years received pneumococcal vaccine.

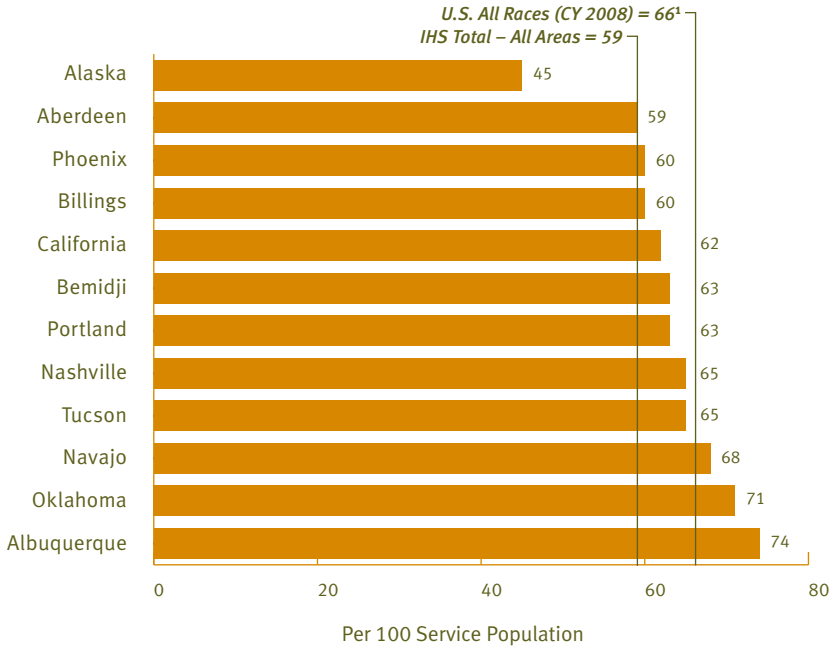
Chart 5.33 Pneumococcal Immunization Rates, Over 65 Years, FY 2009



[1] Centers for Disease Control and Prevention. Self Reported Pneumococcal Vaccination Trends 1989-2008. National Health Interview Survey data, Available at: http://www.cdc.gov/flu/professionals/vaccination/pdf/NHIS89_08ppvvaxtrendtab.pdf

During FY 2009, 59 percent of AI/AN adults over 65 years residing in an IHS service area and receiving care from an IHS, Tribal Indian facility, received a seasonal influenza vaccine during the 2008-2009 influenza season. The Alaska Area had the lowest coverage at 45 percent, while the Albuquerque Area had the highest coverage, 74 percent. Based on the data from the National Health Interview Survey for the 2007-2008 influenza season, 66 percent of the U.S. general population over 65 years received influenza vaccine.

Chart 5.34 Influenza Immunization Rates, Over 65 Years, FY 2009



[1] Centers for Disease Control and Prevention. Self Reported Pneumococcal Vaccination Trends 1989-2008. National Health Interview Survey data, Available at: http://www.cdc.gov/flu/professionals/vaccination/pdf/NHIS89_08ppvvaxtrendtab.pdf

In FY 2009, over 3.2 million dental services were provided at IHS and Tribal direct and contract facilities, as reported to the IHS National Data Warehouse. These IHS Areas provided 48 percent of these dental services: Navajo (481,969), California (493,692), and Oklahoma (604,658). *NOTE: not all IHS areas fully report contract dental services.*

Chart 5.35 Number of Dental Services Provided, FY 2009

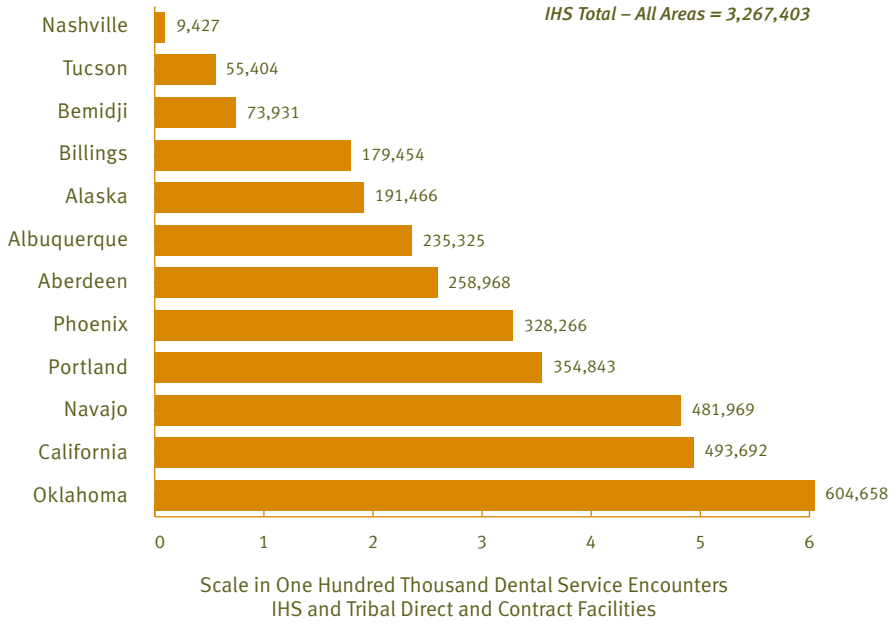


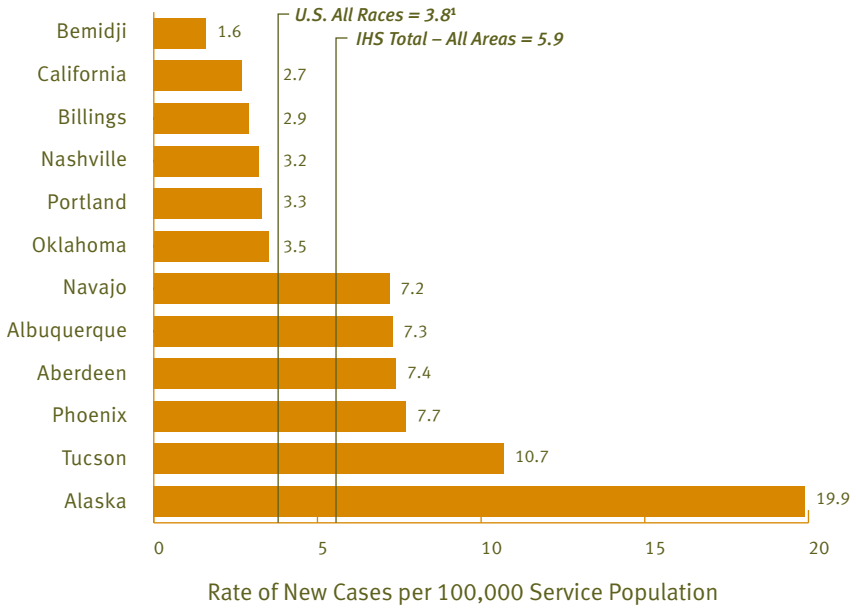
Table 5.35 Number of Dental Services Provided, Indian Health Service and Tribal Direct and Contract Facilities, FY 2009

	Total		IHS Direct		IHS Contract		Tribal Direct		Tribal Contract	
	Patients	*Services*	*Patients*	*Services*	*Patients*	*Services*	*Patients*	*Services*	*Patients*	*Services*
All IHS Areas	***801,557***	***3,267,403***	***446,340***	***1,526,910***	***0***	***64,113***	***355,217***	***1,652,217***	***0***	***24,163***
Aberdeen	83,572	258,968	73,512	211,590	0	4,673	10,060	42,705	0	0
Alaska	24,801	191,466	0	0	0	5,323	24,801	177,821	0	8,322
Albuquerque	56,040	235,325	45,748	187,865	0	4,688	10,292	42,772	0	0
Bemidji	21,296	73,931	21,296	69,203	0	4,728	0	0	0	0
Billings	65,572	179,454	51,944	144,729	0	3,605	13,628	31,120	0	0
California	95,948	493,692	0	0	0	10,256	95,948	483,232	0	204
Nashville	1,128	9,427	1,128	5,545	0	3,882	0	0	0	0
Navajo	123,088	481,969	95,704	366,984	0	5,244	27,384	109,741	0	0
Oklahoma	127,612	604,658	37,916	148,473	0	8,391	89,696	447,794	0	0
Phoenix	92,236	328,266	65,996	226,219	0	5,046	26,240	97,001	0	0
Portland	97,500	354,843	40,332	125,311	0	7,436	57,168	206,459	0	15,637
Tucson	12,764	55,404	12,764	40,991	0	841	0	13,572	0	0

NOTE: Not all IHS areas fully report contract dental services.
Dental patients by definition are not referrals. Contract patients by definition are referrals.

The rate of new tuberculosis cases for the IHS in CY 2009 (5.9 per 100,000 population) is 1.6 times the rate as compared to the U.S. all-races (3.8). Two Areas had a significantly higher rate of new tuberculosis cases. Alaska area (19.9) was 5.2 times and Tucson area (10.9) was 2.8 times compared to the U.S. all-races rate.

Chart 5.36 Rate of New Tuberculosis Cases, Calendar Year 2009



[1] CDC. Reported Tuberculosis in the United States, 2009. Atlanta, GA: US Department of Health and Human Services, CDC, October 2010.

Table 5.36 Number and Rate of New Tuberculosis Cases, Calendar Year 2009

	Number of Cases[1/]	Case Rate[1/]
U.S. All Races	*11,545*	*3.8*
All IHS Areas	***112***	***5.9***
Aberdeen	9	7.4
Alaska	25	19.9
Albuquerque	8	7.3
Bemidji	2	1.6
Billings	2	2.9
California	5	2.7
Nashville	4	3.2
Navajo	18	7.2
Oklahoma	13	3.5
Phoenix	16	7.7
Portland	6	3.3
Tucson	4	10.7

[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.

SOURCES: IHS Number and Rates; State Tuberculosis Control Programs in the states covered by the IHS area reporting for counties serviced by IHS in their state. Numbers and rates for U.S. All-Races: CDC Reported Tuberculosis in the United States, 2009, Atlanta, GA: US Department of Health and Human Services, CDC, October 2010.

List of 113 Causes of Death (1999-present)

Cause of Death	ICD-10 Codes
Salmonella infections	A01-A02
Shigellosis and amebiasis	A03, A06
Certain other intestinal infections	A04, A07-A09
Tuberculosis	A16-A19
Respiratory Tuberculosis	A16
Other Tuberculosis	A17-A19
Whooping cough	A37
Scarlet fever and erysipelas	A38, A46
Meningococcal infection	A39
Septicemia	A40-A41
Syphilis	A50-A53
Acute poliomyelitis	A80
Arthropod-borne viral encephalitis	A83-A84, A85.2
Measles	B05
Viral Hepatitis	B15-B19
Human immunodeficiency virus (HIV) disease	B20-B24
Malaria	B50-B54
Other and unspecified infections and parasitic diseases and their sequelae	A00, A05, A20-A36, A42-A44, A48-A49, A54-A79, A81-A82, A85.0-A85.1, A85.8, A86-B04, B06-B09, B25-B49, B55-B99
Malignant neoplasm	C00-C97
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14
Malignant neoplasm of esophagus	C15
Malignant neoplasm of stomach	C16
Malignant neoplasm of colon, rectum, anus	C18-C21
Malignant neoplasm of liver and intrahepatic bile ducts	C22
Malignant neoplasm of pancreas	C25
Malignant neoplasm of larynx	C32
Malignant neoplasm of trachea, bronchus and lung	C33-C34
Malignant melanoma of skin	C43
Malignant neoplasm of breast	C50
Malignant neoplasm of cervix uteri	C53
Malignant neoplasm of corpus uteri and uterus, part unspecified	C54-C55
Malignant neoplasm of ovary	C56
Malignant neoplasm of prostate	C61
Malignant neoplasm of kidney and renal pelvis	C64-C65
Malignant neoplasm of bladder	C67
Malignant neoplasm of meninges, brain, and other parts of central nervous System	C70-C72
Malignant neoplasm of lymphoid, hematopoietic and related tissue	C81-C96
Hodgkin's disease	C81
Non-Hodgkin's lymphoma	C82-C85
Leukemia	C91-C95
Multiple myeloma and immunoproliferative neoplasm	C88, C90
Other and unspecified malignant neoplasm of lymphoid, hematopoietic and related tissue	C96
All other unspecified malignant neoplasm	C17, C23-C24, C26-C31, C37-C41, C44-C49, C51-C52, C57-C60, C62-C63, C66, C68-C69, C73-C80, C97
In situ neoplasm, benign neoplasm and neoplasm of uncertain or unknown behavior	D00-D48
Anemia	D50-D64
Diabetes mellitus	E10-E14

List of 113 Causes of Death (1999-present)

Cause of Death	ICD-10 Codes
Nutritional deficiencies	E40-E64
Malnutrition	E40-E46
Other nutritional deficiencies	E50-E64
Meningitis	G00, G03
Parkinson's disease	G20-G21
Alzheimer's disease	G30
Major cardiovascular diseases	I00-I78
Diseases of heart	I00-I09, I11, I13, I20-I51
Acute rheumatic fever and chronic rheumatic heart diseases	I00-I09
Hypertensive heart disease	I11
Hypertensive and renal disease	I13
Ischemic heart disease	I20-I25
Acute myocardial infraction	I21-I22
Other acute ischemic heart diseases	I24
Other forms of chronic ischemic heart disease	I20-I25
Atherosclerotic cardiovascular disease, so described	I25.0
All other forms of chronic ischemic heart disease	I20, I25.1-I25.9
Other heart diseases	I26-I51
Acute and subacute endocartitis	I33
Diseases of pericardium and acute myocarditis	I30-I31, I40
Heart failure	I50
All other forms of heart disease	I26-I28, I34-I38, I42-I49, I51
Essential (primary) hypertension and hypertensive renal disease	I10, I12
Cerebrovascular disease	I60-I69
Atherosclerosis	I70
Other diseases of circulatory system	I71-I78
Aortic aneurysm and dissection	I71
Other diseases of arteries, arterioles and capillaries	I72-I78
Other disorders of circulatory system	I80-I99
Influenza and pneumonia	J10-J18
Influenza	J10-J11
Pneumonia	J12-J18
Other acute lower respiratory infections	J20-J22
Acute bronchitis and bronchiolitis	J20-J21
Unspecified acute lower respiratory infection	J22
Chronic lower respiratory diseases	J40-J47
Bronchitis chronic and unspecified	J44, J47
Emphysema	J43
Asthma	J45-J46
Other chronic lower respiratory diseases	J44, J47
Pneumoconioses and chemical effects	J60-J66, J68
Pneumonitis due to solids and liquids	J69
Other diseases of respiratory system	J00-J06, J30-J39, J67, J70-J98
Peptic ulcer	K25-K28
Diseases of appendix	K35-K38
Hernia	K40-K46
Chronic liver disease and cirrhosis	K70, K73-K74
Alcoholic liver disease	K70
Other chronic liver disease and cirrhosis	K73-K74

Cause of Death	ICD-10 Codes
Cholelithias and other disorders of gall bladder	K80-K82
Nephritis, nephritic syndrome and nephrosis	N00-N07, N17-N19, N25-N27
Acute and rapidly progressive nephritic and nephritic syndrome	N00-N01, N04
Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified	N02-N03, N05-N07, N26
Renal failure	N17-N19
Other disorders of kidney	N25, N27
Infections of kidney	N10-N12, N13.6, N15.1
Hyperplasia of prostate	N40
Inflammatory diseases of female pelvic organs	N70-N76
Pregnancy, childbirth and the puerperium	O00-O99
Pregnancy with abortive outcome	O00-O07
Other complications of pregnancy, childbirth and the puerperium	O10-O99
Certain conditions originating in the perinatal period	P00-P96
Congenital malformations, deformations and chromosomal abnormalities	Q00-Q99
Symptoms, signs, and abnormal clinical and laboratory findings not elsewhere classified	R00-R99
All other diseases	Residual
Accidents (unintentional injuries)	V01-X59, Y85-Y86
Transport accidents	V01-V99, Y85
Motor vehicle accidents	V02-V04, V09.0-V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
Other land transport accidents	V01, V05-V06, V09.1, V09.3-V09.9, V10-V11, V15-V18, V19.3, V19.8-V19.9, V80.0-V80.2, V80.6-V80.9, V81.2-V81.9, V82.2-V82.9, V87.9, V88.9, V89.1, V89.3, V89.9
Water, air and space and other and unspecified transport accidents and their sequelae	V90-V99, Y85
Nontransport accidents	W00-X59, Y86
Falls	W00-W19
Accidental discharge of firearms	W32-W34
Accidental drowning and submersion	W65-W74
Accidental exposure to smoke, fire and flames	X00-X09
Accidental poisoning and exposure to noxious substances	X40-X49
Other and unspecified nontransport accidents and their sequelae	W20-W31, W35-W64, W75-W99, X10-X39, X50-X59, Y86
Intentional self-harm (suicide)	U03, X60-X84, Y87.0
Intentional self-harm (suicide) by discharge of firearms	X72-X74
Intentional self-harm (suicide) by other and unspecified means and their sequelae	U03, X60-X71, X75-X84, Y87.0
Assault (homicide)	U01-U02, X85-Y09, Y87.1
Assault (homicide) by discharge of firearms	U01.4, X93-X95
Assault (homicide) by other and unspecified means and their sequelae	U01.0-U01.3, U01.5-U01.9, U02, X85-X92, X96-Y09, Y87.1
Legal intervention	Y35, Y89.0
Events of undetermined intent	Y10-Y34, Y87.2, Y89.9
Discharge of firearms, undetermined intent	Y22-Y24
Other and unspecified events of undetermined intent and their sequelae	Y10-Y21, Y25-Y34, Y87.2, Y89.9
Operations of war and their sequelae	Y36, Y89.1
Complications of medical and surgical care	Y40-Y84, Y88

List of 130 Causes of Infant Death (1999-present)

Cause of Death	ICD-10 Codes
Certain infections and parasitic diseases	A00-B99
Certain intestinal infectious diseases	A00-A08
Diarrhea and gastroenteritis of infectious origin	A09
Tuberculosis	A16-A19
Tetanus	A33, A35
Diptheria	A36
Whooping cough	A37
Meningococcal infection	A39
Septicemia	A40-A41
Congenital syphilis	A50
Gonococcal infection	A54
Viral diseases	A80-B34
Acute poliomyelitis	A80
Varicella (chickenpox)	B01
Measles	B05
Human immunodeficiency virus (HIV) disease	B20-B24
Mumps	B26
Other and unspecified viral diseases	A81-B00, B02-B04, B06-B19, B25, B27-B34
Candidiasis	B37
Malaria	B50-B54
Pneumocystosis	B59
All other and unspecified infectious and parasitic diseases	A20-A32, A38, A42-A49, A51-A53, A55-A79, B35-B36, B38-B49, B55-B58, B60-B99
Neoplasm	C00-D48
Malignant neoplasm	C00-C97
Hodgkin's disease and non-Hodgkin's lymphomas	C81-C85
Leukemia	C91-C95
Other and unspecified malignant neoplasm	C00-C80, C88-C90, C96-C97
In situ neoplasm, benign, neoplasm and neoplasm of uncertain or unknown behavior	D00-D48
Diseases of the blood and blood forming organs and certain disorders involving the immune mechanism	D50-D89
Anemias	D50-D64
Other diseases of blood and blood forming organs	D65-D76
Certain disorders involving the immune mechanism	D80-D89
Endocrine, nutritional and metabolic diseases	E00-E88
Short stature, not elsewhere classified	E34.3
Malnutrition and other nutritional deficiencies	E40-E64
Cystic fibrosis	E84
Volume depletion, disorders of fluid, electrolyte and acid-base balance	E86-E87
All other endocrine, nutritional and metabolic diseases	E00-E32, E34.0-E34.2, E34.4-E34.9, E65-E83, E85, E88
Diseases of the nervous system	G00-G98
Meningitis	G00, G03
Infantile spinal muscular atrophy, type I (Werdnig-Hoffman)	G12.0
Infantile cerebral palsy	G80
Anoxic brain damage, not elsewhere classified	G93.1
Other diseases of nervous system	G04, G06-G11, G12.1-G12.9, G20-G72, G81-G92, G93.0, G93.2-G93.9, G95-G98
Diseases of the ear and mastoid process	H60-H93

Cause of Death	ICD-10 Codes
Diseases of the circulatory system	I00-I99
Pulmonary heart disease and diseases of pulmonary circulation	I26-I28
Pericarditis, endocarditis and myocarditis	I30, I33, I40
Cardiomyopathy	I42
Cardiac arrest	I46
Cerebrovascular disease	I60-I69
All other diseases of the circulatory system	I00-I25, I31, I34-I38, I44-I45, I47-I51, I70-I99
Diseases of the respiratory system	J00-J98
Acute upper respiratory infections	J00-J06
Influenza and pneumonia	J10-J18
Influenza	J10-J11
Pneumonia	J12-J18
Acute bronchitis and acute bronchiolitis	J20-J21
Bronchitis, chronic and unspecified	J40-J42
Asthma	J45-J46
Pneumonitis due to solids and liquids	J69
Other and unspecified diseases of the respiratory system	J22, J30-J39, J43-J44, J47-J68, J70-J98
Diseases of the digestive system	K00-K92
Gastritis, duodenitis, and noninfective enteritis and colitis	K29, K50-K55
Hernia of abdominal cavity and intestinal obstruction without hernia	K40-K46, K56
All other and unspecified diseases of the digestive system	K00-K28, K30-K38, K57-K92
Diseases of the genitourinary system	N00-N95
Renal failure and other diseases of the kidney	N17-N19, N25, N27
Other and unspecified diseases of the genitourinary system	N00-N15, N20-N23, N26, N28-N95
Certain conditions originating in the prenatal period	P00-P96
Newborn affected by maternal factors and by complications of pregnancy, labor and delivery	P00-P04
Newborn affected by maternal hypertensive disorders	P00.0
Newborn affected by other maternal conditions which may be unrelated to present pregnancy	P00.1- P00.9
Newborn affected by maternal complications of pregnancy	P01
Newborn affected by incompetent cervix	P01.0
Newborn affected by premature rupture of membranes	P01.1
Newborn affected by multiple pregnancy	P01.5
Newborn affected by other maternal complications of pregnancy	P01.2-P01.4, P01.6-P01.9
Newborn affected by complications of placenta, cord, and membranes	P02
Newborn affected by complications involving placenta	P02.0-P02.3
Newborn affected by complications involving cord	P02.4-P02.6
Newborn affected by chorioamnionitis	P02.7
Newborn affected by other and unspecified abnormalities of membranes	P02.8-P02.9
Newborn affected by other complications of labor and delivery	P03
Newborn affected by noxious influences transmitted via placenta or breast milk	P04
Disorders related to length of gestation and fetal malnutrition	P05-P08
Slow fetal growth and fetal malnutrition	P05
Disorders related to short gestation and low birthweight not elsewhere classified	P07
Extremely low birthweight or extreme immaturity	P07.0-P07.2
Other low birthweight or preterm	P07.1, P07.3
Disorders related to long gestation and high birthweight	P08
Birth trauma	P10-P15

List of 130 Causes of Infant Death (1999-present)

Cause of Death	ICD-10 Codes
Intrauterine hypoxia and birth asphyxia	P20-P21
Intrauterine hypoxia	P20
Birth asphyxia	P21
Respiratory distress of newborn	P22
Other respiratory conditions originating in the perinatal period	P23-P28
Congenital pneumonia	P23
Neonatal aspiration syndromes	P24
Interstitial emphysema and related conditions originating in the perinatal period	P25
Pulmonary hemorrhage originating in the perinatal period	P26
Chronic respiratory disease originating in the perinatal period	P27
Atelectasis	P28.0-P28.1
All other respiratory conditions originating in the perinatal period	P28.2-P28.9
Infections specific to the perinatal period	P35-P39
Bacterial sepsis of newborn	P36
Omphalitis of newborn with or without mild hemorrhage	P38
All other infections specific to the perinatal period	P35, P37, P39
Hemorrhagic and hematological disorders of newborn	P50-P61
Neonatal hemorrhage	P50-P52, P54
Hemorrhagic disease of newborn	P53
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice	P55-P59
Hematological disorders	P60-P61
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus	P70.0-P70.2
Necrotizing enterocolitis of newborn	P77
Hydrops fetalis not due to hemolytic disease	P83.2
Other perinatal conditions	P29, P70.3-P76, P78-P81, P83.0-P83.1, P83.3-P83.9, P90-P96
Congenital malformations, deformations and chromosomal abnormalities	Q00-Q99
Anencephaly and similar malformations.	Q00
Congenital hydrocephalus	Q03
Spina bifida	Q05
Other congenital malformations of the nervous system	Q01-Q02, Q04, Q06-Q07
Congenital malformations of heart	Q20-Q24
Other congenital malformations of circulatory system	Q25-Q28
Congenital malformations of respiratory system	Q30-Q34
Congenital malformations of digestive system	Q35-Q45
Congenital malformations genitourinary system	Q50-Q64
Congenital malformations and deformations of musculoskeletal system, limbs and integument	Q65-Q85
Down's syndrome	Q90
Edwards syndrome	Q91.0-Q91.3
Patau's syndrome	Q91.4-Q91.7
Other congenital malformations and deformations	Q10-Q18, Q86-Q89
Other chromosomal abnormalities, not elsewhere classified	Q92-Q99
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	R00-R99
Sudden infant death syndrome	R95
Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	R00-R53, R55-R59.4, R96-R99
All other diseases	F01-F99, H00-H57, L00-M99

Cause of Death	ICD-10 Codes
External causes of mortality	U01, V01-Y84
Accidents (unintentional injuries)	V01-X59
Transport accident	V01-V99
Motor vehicle accidents	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3,-V80.2, V80.6-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
Other unspecified transport accidents	V01, V05-V06, V09.1, V09.3-V09.9, V10-V11, V15-V18, V19.3, V19.8, V19.9, V80.0-V80.2, V80.6-V80.9, V81.2-V81.9, V82.2-V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90-V99
Falls	W00-W19
Accidental discharge of firearms	W32-W34
Accidental drowning and submersion	W65-W74
Accidental suffocation and strangulation in bed	W75
Other accidental suffocation and strangulation	W76-W77, W81-W84
Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract	W78-W80
Accidents caused by exposure to smoke, fire and flames	X00-X09
Accidental poisoning and exposure to noxious substances	X40-X49
Other and unspecified accidents	W20-W31, W35-W64, W85-W99, X10-X39, X50-X59
Assault (homicide)	X85-Y09
Assault (homicide) by hanging, strangulation and suffocation	X91
Assault (homicide) by discharge of firearms	X93-X95
Neglect, abandonment and other maltreatment syndromes	Y06-Y07
Assault (homicide) by other and unspecified means	U01.1-U01.3, X85-X90 X92, X96-X99, Y00-Y05, Y08-Y09
Complications of medical and surgical care	Y40-Y84
Other external causes	X60-X84, Y10-Y36

Additional Causes of Death and Their Corresponding ICD-10 Codes (1999-Present)

(These categories are not included as part of the 113 cause of death or 130 causes 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-10 Codes
Alcohol-related deaths	F10, G31.2, G62.1, I42.6, K29.2, K70, R78.0, X45, X65, Y15
Breast cancer (females)	C50
Cervical cancer	C53
Colon-rectal-cancer	C18-C21
Drug-related deaths	F11-F11.5, F11.7-F11.9, F12-F12.5, F12.7-F12.9, F13-F13.5, F13.7-F13.9, F14-F14.5, F14.7-F14.9, F15-F15.5, F15.7-F15.9, F16-F16.5, F16.7-F16.9, F17.0, F17.3-F17.5, F17.7-F17.9, F18-F18.5, F18.7-F18.9, F19-F19.5, F19.7-F19.9, X40-X44, X60-X64, X85, Y10-Y14
Gastrointestinal disease deaths	A03-A03.3, A03.8-A03.9, A04, A06.1-A06.2, A06.4-A06.9, A07.0-A07.3, A07.8-A07.9, A08-A08.3, A08.5, A09, K29-K29.1, K50.0-K50.1, K50.8-K50.9, K51.0- K51.4, K51.8-K51.9, K52.0-K52.1, K52.8-K57.9
Human Immunodeficiency virus (HIV) infection	B24
Firearm deaths	W32-W34, X72-X74, X93-X95, Y22-Y24, Y35.0, U01.4
Injury and poisoning	S00-T98, U01-U03, V00-Y89
Other injuries	Y10-Y21, Y25-Y34, Y36, Y87.2, Y89.1, Y89.9
Lung cancer	C33-C34
Maternal death	A34, O00-O95, O98-O99
Prostate cancer	C61, D29

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	630-679
Diseases of the skin and subcutaneous tissue	680-709
Diseases of the musculoskeletal system and connective tissue	710-739
Congenital anomalies	740-759
Certain conditions originating in the perinatal period	760-779
Symptoms, signs, and ill-defined conditions	780-799
Injury and poisoning	800-999
Supplementary classification (classification of factors influencing health status and contact with health service)	V01-V89

(Numbers refer to chart and table numbers)

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[11] http://www.cdc.gov/nchs/datawh/nchsdefs/livebirth.htm

[12] http://www.cdc.gov/nchs/datawh/nchsdefs/rates.htm#maternaldeath

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