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INDIAN HEALTH FOCUS: INJURIES 2017 EDITION

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



INDIAN HEALTH FOCUS: INJURIES 2017 EDITION

Indian Health Service

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PREFACE

During the 60 years that the Indian Health Service (IHS) has collected health and injury statistics, unintentional injuries have posed a significant challenge for American Indian and Alaska Native (AI/AN) communities. Despite improvements in health status over the decades, among American Indians and Alaska Natives between the ages of 1 to 44 years old, injury remains the leading cause of death. Compared to the United States (U.S.) All Races population, AI/AN people continue to have disproportionately higher rates of unintentional injury and injury-related mortality.

Working in partnership with Tribes and key stakeholders, this reliable and locally generated injury data has been vital to identifying health disparities, patterns of injury, and trends within this population. This in turn, has bolstered our ability to leverage Agency resources and best practices to develop injury prevention and public health interventions that meet specific community needs.

“Indian Health Focus: Injuries 2017 Edition” catalogues AI/AN-specific injury data to assess and evaluate program effectiveness. It also furthers the development of health policy and strategies to reduce or minimize the impact of injuries in tribal communities.

I encourage you to review and widely share this edition of *“Indian Health Focus: Injuries”* and I look forward to working with you to ensure continued improvement in the health and well-being of American Indians and Alaska Natives.

/Michael D. Weahkee/

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INTRODUCTION

The Indian Health Service (IHS) is an agency of the United States (U.S.) Department of Health and Human Services (HHS) and its goal is to assure that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian and Alaska Native (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.

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 the IHS through contractual arrangements with providers in the private sector, and delivered through tribally operated programs and Urban Indian Health Programs. The IHS service area consists of counties on and near federal Indian reservations.

The IHS is concerned with the health of AI/AN people of all ages. The IHS presents an overview of the health status of AI/AN people in its publications, *Trends in Indian Health* and *Regional Differences in Indian Health*. However, IHS recognizes that there are age and gender differences for those who are most at risk for injuries and require special attention including: children, youth, males, and the elderly. The IHS Injury report will be of importance to the IHS, tribes, other federal and state government agencies including key stakeholders interested in learning more about injuries as a public health problem. This publication examines the major category of injuries and its subgroups – unintentional injuries, suicides, homicides, firearm injuries, falls, fire and smoke, among other injuries. This publication refers to “injury events” as “unintentional injuries” to be consistent with the terminology used by the IHS Injury Prevention Program and the Centers for Disease Control and Prevention (CDC). It is similar to other data published from two major IHS publications: *Trends in Indian Health* and *Regional Differences in Indian Health*.

Injuries are the leading cause of death among AI/ANs people between the ages of 1 and 44 years. The progress in reducing the burden of injuries among AI/AN populations has been significant over the past three decades. Between 1973 and 2009, unintentional injury deaths for AI/AN people decreased by 59 percent, however, important injury death rate disparities remain between the AI/AN population and the U.S. all races population. The AI/AN injury problem continues to be a public health burden, costing the IHS, Tribes, and purchased/referred care approximately \$350 million per year in the treatment of injuries, and all injuries combined account for 42 percent of the years of potential life lost (YPLL) before age 65 for AI/AN populations. Factors contributing to the disproportionately higher injury rates among American Indians and Alaska Natives include a greater proportion of young adults as compared to other Americans, rural environments, lack of tribal traffic safety legislation, limited law enforcement, and a greater number of alcohol related motor vehicle crashes. Tribes can address the injury problem through action planning, such as a tribal injury prevention or highway safety plan. A comprehensive Injury Prevention action plan can provide a systematic approach to apply multi-factored intervention solutions to the injury problem.



INTRODUCTION

The IHS Injury Prevention Program is the lead IHS program to address the injury disparities on AI/AN communities. The IHS Injury Prevention Program top priorities include motor vehicle and unintentional elder fall prevention. The IHS Injury Prevention Program's approach is based on the same public health principles that have been applied to effectively control infectious diseases. The implementation of evidence-based injury prevention strategies to include policy development through a multidisciplinary approach to identify factors amenable to change are most effective. The IHS Injury Prevention Program supports community-specific solutions to the injury epidemic to increasing the understanding that injuries are not "accidents" but predictable and preventable events.

The population of interest for this publication is all AI/AN people residing within an IHS service area. The IHS service area consists of counties on and near federal Indian reservations. American Indian and Alaska Native people residing within a service area comprise about 56 percent of all AI/AN people (alone) residing in the U.S. It is estimated to be approximately 2.2 million in 2017 as compared to 3.9 million in the entire U.S.

SUMMARY OF DATA

Injuries are a major problem in Indian country. This is apparent from analyzing the primary category of injury and a number of injury subgroups, including unintentional injury, motor vehicle accidents, poisoning, suicide, homicide, firearm injury, fire and smoke injury, falls, and drowning.

Unintentional injuries are the third leading cause of death for the AI/AN population in general and for both sexes. Unintentional injuries also rank as the third leading cause of death for U.S. all races males and for U.S. white males. Unintentional injuries appear high on the list of leading causes of death for each specific AI/AN age group examined. They are the fourth leading cause of death for AI/AN infants, the first for all age groups between age 1 and age 44, the third for persons aged 45 to 54 years, and the fifth for persons aged 55 to 64 years. For the AI/AN population, unintentional injuries account for 33 percent of the total years of potential life lost (YPLL) before age 45, and 28 percent of total YPLL before age 65.

The AI/AN age-adjusted unintentional injury death rate has decreased by 59 percent since 1972-74. In 1972-74, the AI/AN rate (223.2) was 3.8 times the 1973 U.S. all races rate (59.5) and 3.9 times the 1973 U.S. white rate (57.5). Despite a reduction in the unintentional injury death rate for AI/AN, disparities continue to exist between the AI/AN population and the U.S. all races population. For 2008-2010, the AI/AN rate (91.9) is nearly 2.5 times that of the 2009 U.S. all races population (37.5) and is 2.3 times the U.S. white rate (39.5). The Billings and Navajo Areas each have a rate that exceeds 115.0, which is more than twice the lowest Area rate (Nashville, 50.7) and more than three times the U.S. all races rate (37.5). Unintentional injury death rates are highest in the oldest age groups (75-84 and 85 and older) for both AI/AN males and females. Among AI/AN younger than age 75, the highest AI/AN unintentional injury rate occurs in the 35 to 44 year age group (165.0 for males and 83.7 for females). Age-specific AI/AN rates for males younger than age 75 range from 2.1 to 3.2 times the corresponding rates for U.S. all races males. Similarly, age-specific AI/AN rates for females younger than age 75 range from 2.0 to 4.5 times the rates for U.S. all races females of the same age. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Motor vehicle accidents account for 43 percent of all unintentional injury deaths in the AI/AN population, and are the leading specific cause of injury-related death for 2008-2010. A 64 percent reduction in motor vehicle death rates since 1972-1974 has been a major factor in the overall decline in unintentional injury deaths among AI/AN. However, the 2008-2010 age-adjusted motor vehicle death rate of 36.0 for AI/AN is still 3.1 times the U.S. all races rate (11.6) for 2009. The Billings Area has the highest age-adjusted motor vehicle crash death rate (65.8) among the IHS Areas. This rate is three times the lowest Area rate (Alaska, 21.9), and is 5.7 times the 2009 U.S. all races rate (11.6). Pedestrian deaths account for a higher percentage of motor vehicle deaths in the IHS AI/AN population, compared with the U.S. all races population (17.6 percent vs. 12.3 percent). The percentage of motor vehicle deaths that are pedestrian-related also varies by IHS Area, with the highest pedestrian-related percentages occurring in Phoenix and Tucson (27.8 percent and 27.7 percent, respectively) and the lowest percentage occurring in Billings (9.2 percent). The AI/AN rates reported here have been adjusted to compensate for misreporting of AI/AN race on state death certificates.



Following motor vehicle crashes, poisoning is the second leading injury-specific cause of death in the AI/AN population. Although AI/AN death rates from a number of other injury categories have declined over time, death rates due to poisoning have increased markedly in recent decades. The AI/AN age-adjusted poisoning death rate of 30.8 observed for 2008-2010 is 2.8 times the rate of 10.9 that was observed during 1972-1974. For 2008-2010, the age-adjusted poisoning death rate for AI/AN is 2.3 times the U.S. all races rate for 2009 (13.4). For AI/AN males and females, age-specific poisoning death rates are highest in the 35 to 44 year age group (75.0 and 48.5 for males and females, respectively). Differences among IHS Areas in poisoning death rates are also apparent; the highest rate (Alaska, 48.5) is 3.0 times that of the lowest Area (Tucson, 16.0) and is 3.6 times the U.S. all races rate. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Suicide ranks as the eighth leading cause of death for the total AI/AN population, and is the sixth leading cause for AI/AN males. Considering only injury-specific causes of death, suicide is the third leading injury cause of death among all AI/AN. Since its peak value (29.4) in 1972-1974, the AI/AN age-adjusted suicide death rate dropped to a low in 1984-86 (15.9). For 2008-2010, the AI/AN rate (19.6) is 23 percent greater than that low. The 2008-2010 AI/AN suicide rate is also 66 percent higher than the 2009 U.S. all races rate (11.8) and 48 percent greater than the 2009 U.S. white rate (13.2). Among IHS Areas, the suicide rate is highest in Alaska, for which the rate of 39.7 is 31 percent greater than the next highest Area rate (Great Plains and Billings, both 30.2) and nearly five times the lowest Area rate (Nashville, 8.0). The highest AI/AN male suicide death rate (64.0) for 2008-2010 is in the 15 to 24 year age group, which has a rate that is approximately four times the corresponding U.S. all races rate for males aged 15 to 24. For AI/AN females, the peak rate (24.0) also occurs in the 15 to 24 year age group, and the female AI/AN rate is 6.7 times the female U.S. all races rate for this age group. The AI/AN rates reported here have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

The AI/AN age-adjusted homicide death rate has decreased by 58 percent since 1972-74. The 2008-2010 AI/AN homicide rate (11.3) is approximately twice the 2009 U.S. all races rate (5.5), and 3.2 times the 2009 U.S. white rate (3.5). The highest AI/AN male homicide death rate (35.3) for 2008-2010 is seen in the 25 to 34 year age group, whereas for the U.S. all races male population the highest rate (18.8) is for ages 15 to 24 years. However, for AI/AN females and U.S. all races females, the highest rate occurs in the under 1 year age group (20.6 and 6.8, respectively). A total of 8 out of the 12 IHS Areas have homicide rates that are more than double the U.S. all races rate of 5.5. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

The AI/AN age-adjusted firearm injury death rate has decreased by 49 percent since 1979-1981. U.S. all races and white rates have also decreased since 1980 (by 32 and 28 percent, respectively). The 2008-2010 AI/AN rate (13.3) is 32 percent greater than the 2009 U.S. all races rate (10.1) and 46 percent greater than the 2009 U.S. white rate (9.1). Age-adjusted firearm injury death rates vary considerably among the IHS Areas. The highest Area rate (Alaska, 29.7) is five times the lowest Area rate (Nashville, 6.0). While Nashville's rate is 41 percent lower than the U.S. all races rate, Alaska's rate is 2.9 times the U.S. all races rate. For AI/AN males, the firearm injury death rate is highest in the 15 to 24 year age group (49.2); the AI/AN rate in this age group is nearly twice that of U.S. all races males the same age, and is more than six times the peak rate seen for AI/AN females (7.5) occurring in the

25 to 34 year age group. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

AI/AN death rates associated with fire and smoke injuries have declined greatly over the last three decades. The AI/AN age-adjusted fire and smoke injury death rate of 2.3 for 2008-2010 reflects a 70 percent reduction from the peak rate of 7.6 in 1979-1981. Despite this reduction, the AI/AN death rate due to fire and smoke injury remains more than twice that of both the U.S. all races and U.S. white populations. However, there are substantial differences among IHS Areas in fire and smoke injury death rates. The Tucson Area had no deaths from fire and smoke injury during 2008-2010. Among the remaining areas, the highest Area rate (Oklahoma City, 4.5) is 6.4 times the lowest non-zero Area rate (Albuquerque, 0.7). These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Unintentional falls represent an important subgroup of unintentional injuries, particularly among older age groups. AI/AN fall injury death rates have fluctuated. The rate of 10.2 for 2008-2010 is 4.1 percent higher than the rate of 9.8 reported for 1979-1981. Fall injury death rates show strong associations with older age for both sexes and in all populations examined, particularly after age 65. For example, the 2008-2010 rate of 195.5 seen for AI/AN adults aged 85 and older is 27 times the rate of 7.2 observed among AI/AN adults aged 55-64. Age-specific rates for AI/AN males are generally higher than AI/AN females of the same age, a gender difference that is also apparent in the U.S. all races and U.S. white populations. When age-adjusted fall death rates for 2008-2010 are evaluated across IHS Areas, large differences are apparent. The age-adjusted rate for Great Plains (17.6) is 9.3 times the age-adjusted rate for Nashville (1.9). These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Drowning injuries also contribute to injury-related mortality in the AI/AN population, but drowning death rates have declined substantially during the past three decades. The AI/AN age-adjusted drowning injury death rate of 3.0 during 2008-2010 reflects a 68 percent reduction compared to the highest rate (9.5) observed during 1979-1981. The drowning injury death rate disparity between the AI/AN population and the U.S. all races population has also declined over time. However, despite these improvements, the 2008-2010 rate (3.0) for AI/AN is still 2.7 times the U.S. all races and U.S. white rates (both 1.1 during 2009). For most age groups examined, AI/AN drowning injury death rates during 2008-2010 are higher among males than females. Although all 12 IHS Areas have drowning injury death rates that exceed the U.S. all races rate of 1.1, rates vary among IHS Areas. The highest Area rate (Alaska, 10.4) is 7.4 times the lowest rate of 1.4 seen in three Areas (Albuquerque, Great Plains, and Nashville), and is 9.5 times the U.S. all races rate. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Problem drinking is also associated with injuries. (Note: alcohol-related ICD-10 codes were expanded in the year 2003.) The AI/AN age-adjusted rate of 50.4 for years 2008-2010 is 6.8 times the U.S. all races rate (7.4) and 6.5 times the U.S. white rate (7.7). In the six years between 1979-1981 and 1985-1987, the AI/AN rate decreased 49 percent. In the twenty-three years from 1985-1987 to 2008-2010, AI/AN alcohol-related death rates increased by 26 percent, with some year-to-year fluctuation apparent. Substantial variation in alcohol-related mortality is seen among IHS Areas, but all twelve areas have rates that exceed the U.S. all races rate. The Billings Area age-adjusted alcohol-related death rate (89.4) is 12.1 times the



U.S. all races rate (7.4). The lowest IHS Area rate occurs in Nashville (10.9), but this is still nearly 1.5 times the U.S. all races rate. AI/AN alcohol-related death rates are higher for males than females. For AI/AN males, the highest age-specific alcohol-related death rate (153.0) occurs in the 55 to 64 year age group. This rate is 4.6 times the U.S. all races male peak (33.1 for 55 to 64 years). The highest rate among AI/AN females (80.2 for age 45 to 54 years) is 48 percent less than the AI/AN male peak, but is 7.6 times the U.S. all races female peak (10.5 for 45 to 54 years). These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

In FY 2016, injury and poisoning is the fourth leading cause of ambulatory medical visits for AI/AN male patients (all ages). It is the fourth leading cause of ambulatory medical visits for AI/AN patients 5 to 14 years of age

Injury and poisoning is the seventh leading cause of hospitalization for AI/AN patients (all ages). It is the fourth leading cause of hospitalization for AI/AN male patients (all ages) and seventh for AI/AN female patients (all ages). Injury and poisoning is also a major leading cause of hospitalization for AI/AN patients ages 5 to 44 years of age and older. It is fourth leading cause of hospitalization for AI/AN patients, 5 to 14 and 25 to 44 years, and is fifth for 15 to 24 years. However, the number of discharges for injury and poisoning from IHS and Tribal direct and contract hospitals has declined. In FY 2016, the number of such discharges was 20 percent less than in FY 2014.

During FY 2016, under Purchased/Referred Care Medical Expense, the claim count was 363,861 for all types of services of which 233,693 (64.2 percent) were from physicians. \$305.7 million in claims were paid for all types of services. The average cost of a Purchased/Referred Care inpatient case for injuries was \$6,975 and for an outpatient case was \$981. Inpatient claim payments were seven times higher than outpatient claim payments in this fiscal year. *Note: The data is subject to change as the FY 2016 claims processing is 95 percent complete for these reports.*

The number of Purchased/Referred Care Expenses in FY 2016 related to injuries and poisonings claims from physicians was 21,903, 9,617 outpatient claims and 1,391 inpatient claims were processed in that fiscal year. Outpatient claims outnumbered inpatient claims by a ratio of 6.9 to 1. The total amount paid for Purchased/Referred Care inpatient cases of injuries and poisonings was \$14 million and for outpatient cases was \$8 million. The amount paid for inpatient claims exceeded outpatient 1.75 times. The average cost of a Purchased/Referred Care inpatient case for injuries and poisonings was \$10,130 and for an outpatient one was \$846. The cost of an average inpatient injury and poisoning case exceeded an outpatient one by 12 times. *Note: The data is subject to change as the FY 2016 claims processing is 95 percent complete for these reports.*

SOURCES AND LIMITATIONS OF DATA

Population Statistics

The IHS service population consists of AI/AN identified to be eligible for IHS services. IHS service population estimates are based on official U.S. Census Bureau county data. The Census Bureau enumerates those individuals who identify themselves as being American Indians or Alaska Natives. The IHS service population is estimated by counting those American Indians or Alaska Natives (as identified during the Census) who reside in the geographic areas in which IHS has responsibilities (“on or near” reservations, i.e., purchased referred care service delivery areas [PRCSDAs]). These people may or may not use IHS services.

IHS user population estimates are based on data from the IHS Patient Registration System. Patients who receive direct or contract health services from IHS or Tribally-operated programs are registered in the Patient Registration System. Those registered AI/AN patients that had at least one direct or contract inpatient stay, ambulatory medical visit, or dental visit during the last three years are defined as users. IHS user population figures are used for calculating IHS patient care rates. In contrast, IHS service population figures are used in calculating AI/AN vital event rates since state birth and death certificates do not provide information on use of IHS services.

IHS service populations between census years (e.g., 2000-2010) are estimated by a smoothing technique in order to show a gradual transition between census years. IHS service populations beyond the latest census year (2010) are projected through linear regression techniques, using the most current ten years of AI/AN birth and death data provided by the National Center for Health Statistics (NCHS). The natural change (estimated number of births minus estimated number of deaths) is applied to the latest census enumeration.

Vital Event Statistics

AI/AN vital event statistics are derived from data provided annually to the IHS by NCHS. Vital event statistics for the U.S. population were derived from data reported in various NCHS publications^{1,2,3} and CDC Wonder⁴, as well as from some unpublished data from NCHS. NCHS obtains birth and death records for all U.S. residents from the state health departments, based on information reported on official state birth and death certificates. The records NCHS provides IHS contain the same basic demographic items as the vital event records maintained by NCHS for all U.S. residents, but with names, addresses, and record identification numbers deleted. It should be noted that Tribal identity is not recorded on these records. Tabulations of vital events for this publication are by place of residence.

The 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.^{1,2,3}



Misreporting of Race on State Death Certificates

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 the NCHS.⁵ 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 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 City and California Areas, respectively.⁵

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, IHS felt that it was necessary to adjust all of the death rates in this publication to provide a meaningful and comprehensive look at health status. IHS also believes that they are reasonable adjustments.

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

IHS has more specific adjustment factors for the age group less than 1 year. These are derived from the linked birth/infant death data sets produced by the NCHS.¹ In this edition (as was done for the first time in the 1997 edition with 1992-1994 data), unadjusted and adjusted infant mortality rates will be shown for data years 1972 through 2010. It is reasonably assumed that data years for which linked data sets were not produced (NCHS did not produce linked data sets prior to data year 1983 and for data years 1992-1994) may be adjusted based on the results from other linked data sets. These adjustments based on the linked data sets take precedence over the NDI adjustments for the under 1 year age group, described above.

Age-Adjustment

The age-adjusted death rates presented in this publication were computed by the direct method, that is, by applying the age-specific death rate for a given cause of death to the standard population distributed by age. The total population as enumerated in 2000 was selected as the standard since this is the standard used by NCHS.⁶ The rates for the total population and for each race-sex group were adjusted separately by using the same standard population. The age-adjusted rates were based on ten-year age groups. It is important not to compare age-adjusted death rates with crude rates.

ICD-10 Codes

The injury death data presented in this publication are categorized according to the International Classification of Diseases, Tenth Revision (ICD-10). The ICD-10 codes for specific injuries are listed in the appended *Glossary of ICD-10 Codes* and are also provided within the footnotes of selected injury tables.

It should be noted that the list of codes included in alcohol-related causes was expanded in the 2003 data year to be more comprehensive. Alcohol-related deaths are defined through the use of ICD-10 cause of death code groups, including: E24.4, Alcohol-induced pseudo-Cushing's syndrome; F10, Mental and behavioral disorders due to alcohol use; G31.2, Degeneration of nervous system due to alcohol; G62.1, Alcoholic polyneuropathy; G72.1, Alcoholic myopathy; I42.6, Alcoholic cardiomyopathy; K29.2, Alcoholic gastritis; K70, Alcoholic liver disease; K85.2, Alcohol induced acute pancreatitis; K86.0, Alcohol-induced chronic pancreatitis; R78.0, Finding of alcohol in blood; X45, Accidental poisoning by and exposure to alcohol; X65, intentional self-poisoning by and exposure to alcohol; and Y15, Poisoning by and exposure to alcohol, undetermined intent. Alcohol-induced causes exclude accidents, homicides, and other causes indirectly related to alcohol use. This category also excludes newborn deaths associated with maternal alcohol use. To be consistent with NCHS, these additional codes were used by IHS starting with the 2002-2003 edition of this publication. The NCHS definition includes all of the code groups previously used by IHS plus these new codes.² The NCHS definition of alcohol-induced deaths is now used in all IHS publications, including *Regional Differences in Indian Health and Trends in Indian Health*.

References

- ¹ Mathews TJ, MacDorman MF. Infant mortality statistics from the 2009 period linked birth/infant death data set. *National vital statistics reports*; vol 61 no 8. Hyattsville, MD: National Centers for Health Statistics. 2013.
- ² Kochanek KD, Xu J, Murphy SL, et al. Deaths: Final Data for 2009. *National vital statistics reports*; vol 60 no 3. Hyattsville, MD: National Center for Health Statistics. 2012.
- ³ Martin JA, Hamilton BE, Ventura SJ, et al. Births: Final data for 2009. *National vital statistics reports*; vol 60 no 1. Hyattsville, MD: National Center for Health Statistics. 2011.
- ⁴ Centers for Disease Control and Prevention. CDC Wonder. <http://wonder.cdc.gov/>
- ⁵ IHS, Division of Program Statistics. Adjusting for Miscoding of Indian Race on State Death Certificates. November 1996.
- ⁶ Anderson RN, Rosenberg, HM. Age Standardization of Death Rates: Implementation of the Year 2000 Standard; *National Vital Statistics Reports*, vol 47 no 3. Hyattsville, Maryland: National Center for Health Statistics. 1998.



Patient Care Statistics

Patient care statistics are derived from a single IHS reporting system. All patient care data used in this report for IHS and Tribal facilities originated from the National Data Warehouse (NDW), the central data repository which is managed by the National Patient Information Reporting System (NPIRS) team in collaboration with the IHS Division of Program Statistics (DPS). This effort began in December 2003 with files that contained initial loads of historical data going back to 2001 from the sites. Initial loads were completed in November 2005. In January 2006, incremental files started to be exported from all reporting sites. As of this writing, almost all reporting sites (99 percent) transmit exports to the NDW in incremental files monthly in one of two standard formats, Health Level 7 (HL7) or simplified format. Reporting sites do not need to run the Resource Patient Management System (RPMS) software locally in order to send files successfully to the NDW. Data received by the NDW is subject to errors in entering, transmitting, and formatting. Data quality issues with registration and encounter data might occur. The NPIRS team works with the DPS, Area Statistical staff, and Facility statistical staff to resolve such issues and continuously analyze, maintain, and improve the timeliness and accuracy of the data.

The NDW contains only IHS federal and Tribal direct and contract facility inpatient and outpatient data pertaining to various patient characteristics (age, sex, principal diagnoses, other diagnoses, community of residence, etc.). The data are collected by the local medical records system at each facility (RPMS or other), one record per inpatient discharge or outpatient visit, and then transmitted electronically to the NDW.

SOURCES 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
Jennifer Joseph, Staff Assistant

Demographic Statistics

Jo Ann Glakas Pappalardo, Senior Health Statistician
Alan Friedman, Health Statistician

Patient Care Statistics

Ying Zhang, Senior Health Statistician

Additional AI/AN Injury Prevention information can be obtained from the IHS Injury Prevention Program.

Nancy M. Bill, Principal Injury Prevention Consultant

IHS Division of Program Statistics mailing address:

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AI/AN infants die from injuries at a rate that is 2.1 times that of the U.S. all races population. Leading injury-related causes of AI/AN infant deaths include accidental suffocation and strangulation in bed, homicide, and motor vehicle crashes.

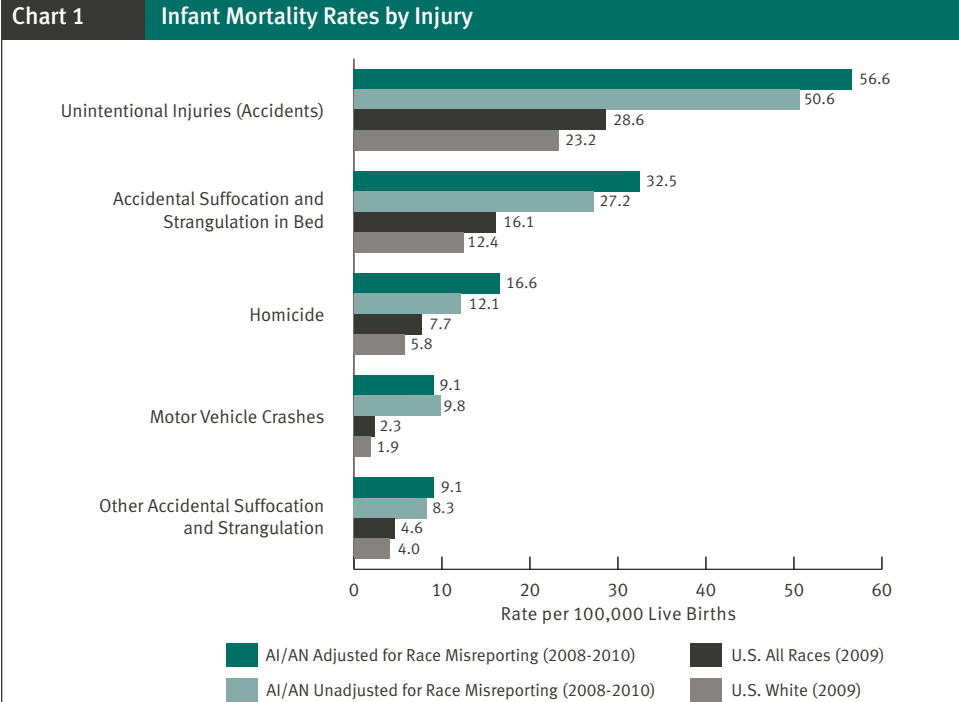


Table 1 Infant Mortality Rates by Injury

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Live Births)

Cause of Infant Death	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ Adjusted Rate to:	
	Number		Rate ¹				U.S. All Races	U.S. White
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²				
All external causes of mortality	92	107	69.5	80.8	39.4	31.3	2.1	2.6
Homicide	16	22	12.1	16.6	7.7	5.8	2.2	2.9
Neglect, abandonment and other maltreatment syndromes	*	*	3.8	4.5	2.3	1.6	2.0	2.8
Assault by hanging, strangulation, suffocation	*	*	0.8	1.5	0.6	**	2.5	**
Assault by discharge of firearms	–	* ³	0.0	0.8	**	**	**	**
Assault by other and unspecified means	10	13	7.6	9.8	4.4	3.5	2.2	2.8
Unintentional Injuries (Accidents)	67	75	50.6	56.6	28.6	23.2	2.0	2.4
Accidental suffocation and strangulation in bed	36	43	27.2	32.5	16.1	12.4	2.0	2.6
Motor vehicle crashes	13 ³	12 ³	9.8 ³	9.1 ³	2.3	1.9	4.0	4.8
Other accidental suffocation and strangulation	11	12	8.3	9.1	4.6	4.0	2.0	2.3
Accidental inhal/ingest of food/objects w/resp. obstruction	*	*	3.0	3.0	1.3	1.2	2.3	2.5
Accidental drowning and submersion	*	*	1.5	1.5	1.1	1.0	1.4	1.5
Other and unspecified accidents	*	*	0.8	1.5	1.6	1.4	0.9	1.1
Accidents caused by exposure to smoke, fire, flames	–	–	0.0	0.0	0.6	**	0.0	**
Accidental poisoning and exposure to noxious substances	–	–	0.0	0.0	0.5	**	**	**
Falls	–	–	0.0	0.0	**	**	**	**
Complications of medical and surgical care	*	*	1.5	1.5	**	**	**	**
Other external causes	*	*	5.3	6.0	2.7	2.0	2.2	3.0

– Quantity zero.
 * Represents number of deaths less than ten deaths.
 ** Figure does not meet standards of reliability or precision.
¹ 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 state death certificates.
³ The adjusted number and rate for age less than one year (infants) is lower than the unadjusted number and rate because the linked birth/infant death file (used to obtain the adjusted counts of infant deaths) had fewer deaths for these causes than did the unadjusted mortality file (2008-2010).

SOURCE: Rates for U.S. Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



AI/AN infant mortality is 1.3 times that of the U.S. all races population and 1.5 times that of the U.S. white population. Unintentional injuries are the fourth leading cause of infant deaths among AI/AN. AI/AN infants die from unintentional injuries at a rate that is two times that of the U.S. all races population, and 2.4 times that of U.S. white infants. These AI/AN counts and rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 2 Leading Causes of Infant Deaths (Births to Under 1 Year)

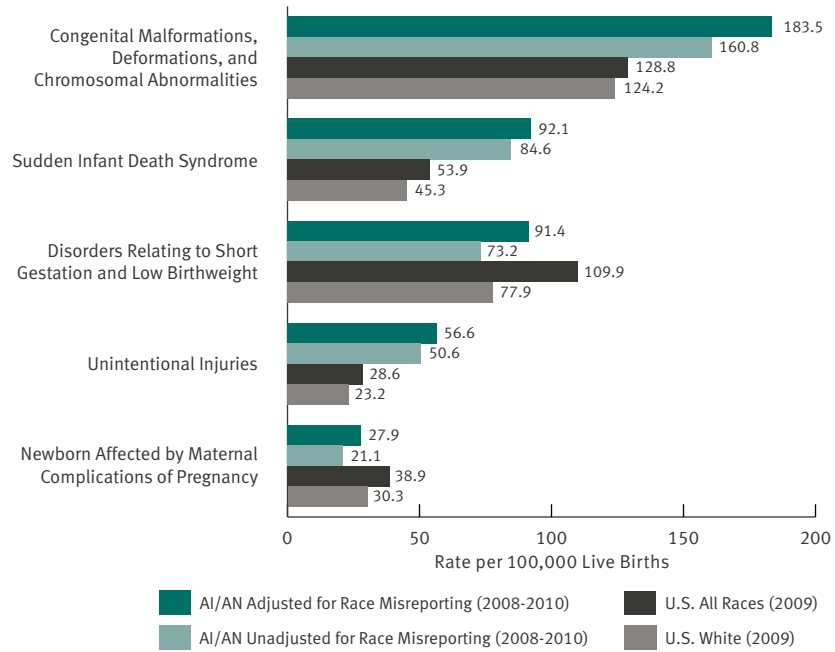


Table 2 Leading Causes of Infant Deaths (Births to Under 1 Year)

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Live Births)

Cause of Death	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
Total Infant Deaths								
All Causes	925	1,061	698.5	801.2	639.4	530.0	1.3	1.5
Congenital malformations, deformations, and chromosomal abnormalities	213	243	160.8	183.5	128.8	124.2	1.4	1.5
Sudden infant death syndrome	112	122	84.6	92.1	53.9	45.3	1.7	2.0
Disorders relating to short gestation and low birthweight	97	121	73.2	91.4	109.9	77.9	0.8	1.2
Unintentional injuries (accidents)	67	75	50.6	56.6	28.6	23.2	2.0	2.4
Newborn affected by maternal complications of pregnancy	28	37	21.1	27.9	38.9	30.3	0.7	0.9
Newborn affected by complications of placenta, cord, and membranes	37	33	27.9	24.9	25.8	21.7	1.0	1.1
Diseases of the circulatory system	23	28	17.4	21.1	14.1	11.9	1.5	1.8
Pneumonia and influenza	24	26	18.1	19.6	6.1	4.7	3.2	4.2
Homicide (assault)	16	22	12.1	16.6	7.7	5.8	2.2	2.9
Respiratory distress of newborn	14	18	10.6	13.6	14.4	11.2	0.9	1.2
Bacterial sepsis of newborn	18	17	13.6	12.8	15.8	12.0	0.8	1.1
Necrotizing enterocolitis of newborn	16	17	12.1	12.8	11.7	9.1	1.1	1.4
All other causes	260	302	196.3	228.0	183.9	152.5	1.2	1.5

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths.

SOURCE: Rates for U.S. Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

The leading cause of death (2008-2010) for AI/AN children who are 1 to 4 years of age is unintentional injuries. For this age group, unintentional injuries are also the leading cause of death in the U.S. all races and white (2009) populations. Forty percent of all AI/AN deaths in this age group are caused by unintentional injuries, of which nearly half (46 percent) occur in motor vehicle crashes. After unintentional injuries, homicide is the second leading cause of death for AI/AN children in this age group. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

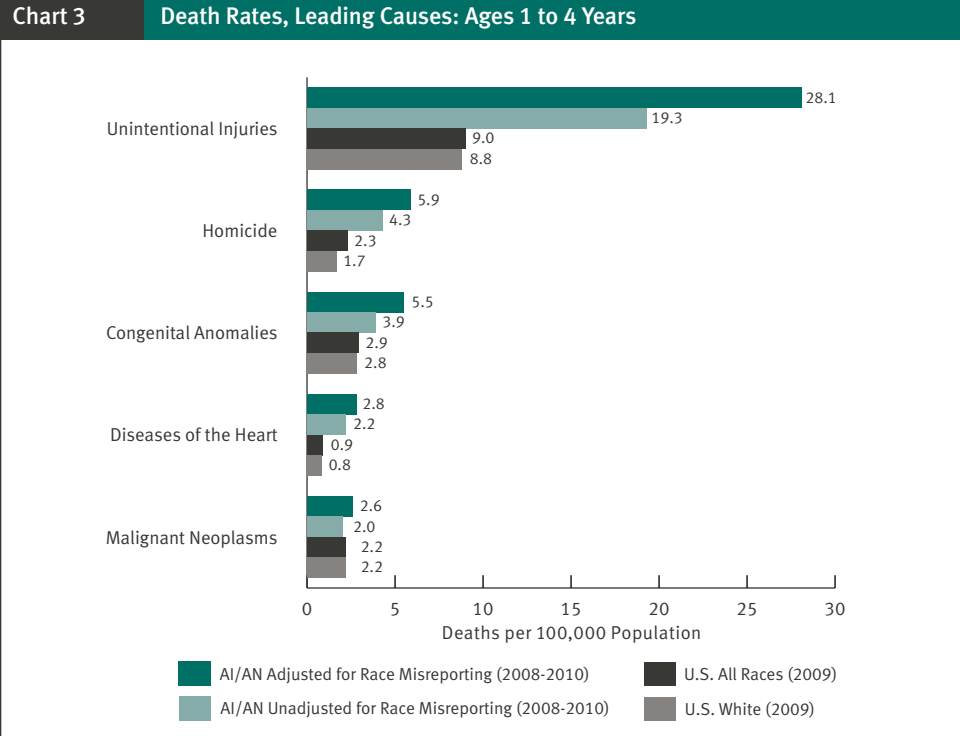


Table 3 Ten Leading Causes of Death for Decedents 1 to 4 Years of Age

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
All Causes	238	342	48.4	69.5	27.4	25.5	2.5	2.7
Unintentional injuries	95	138	19.3	28.1	9.0	8.8	3.1	3.2
Motor vehicle	44	64	8.9	13.0	2.9	2.7	4.5	4.8
Other unintentional injuries	51	74	10.4	15.0	6.1	6.1	2.5	2.5
Homicide	21	29	4.3	5.9	2.3	1.7	2.6	3.5
Congenital anomalies	19	27	3.9	5.5	2.9	2.8	1.9	2.0
Diseases of the heart	11	14	2.2	2.8	0.9	0.8	3.1	3.5
Malignant neoplasms	10	13	2.0	2.6	2.2	2.2	1.2	1.2
Pneumonia and influenza	*	*	1.4	1.6	0.9	0.9	1.8	1.8
In situ or benign neoplasms	*	*	0.4	0.8	0.3	0.3	2.7	2.7
Cerebrovascular diseases	*	*	0.4	0.6	0.3	0.3	2.0	2.0
Meningococcal infections	*	*	0.4	0.6	**	**	**	**
Acute bronchitis and acute bronchiolitis	*	*	0.2	0.4	**	**	**	**
All other causes	68	101	13.8	20.5	8.4	7.5	2.4	2.7

* Represents number of deaths less than ten deaths.
 ** Figure does not meet standards of reliability or precision.
 0.0 Quantity more than zero but less than 0.05.
¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.
 NOTE: Causes of death listed are based on the order of adjusted number of deaths.
 SOURCE: Rates for U.S. Races and U.S. White: Centers for Disease Control and Prevention, CDC Wonder, <https://wonder.cdc.gov/>



Unintentional injuries account for 39 percent of all deaths (2008-2010) among AI/AN children aged 5 to 14 years, and are the leading cause of death for AI/AN children in this age group. Suicide is the second leading cause of death for AI/AN children aged 5 to 14, and suicides account for 10 percent of all deaths in this age group. For the U.S. all races and white populations (2009) the two leading causes of death are unintentional injuries and malignant neoplasms. These AI/AN counts have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

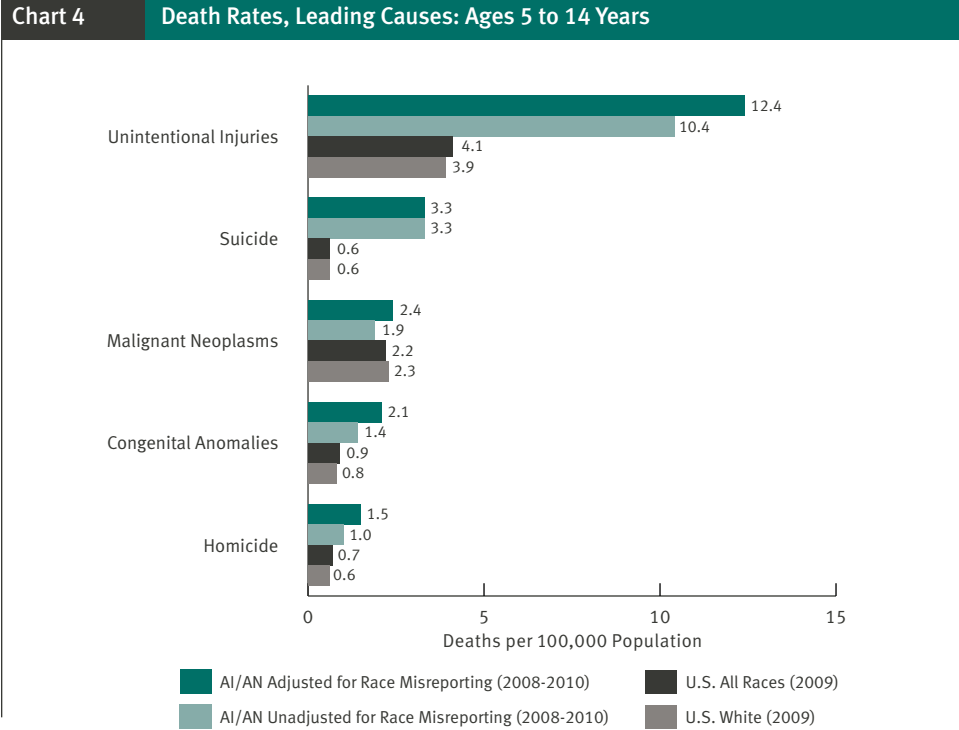


Table 4 Ten Leading Causes of Death for Decedents 5 to 14 Years of Age

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
All Causes	273	338	25.5	31.6	13.8	12.8	2.3	2.5
Unintentional injuries	111	133	10.4	12.4	4.1	3.9	3.0	3.2
Motor vehicle	61	76	5.7	7.1	2.4	2.4	3.0	3.0
Other unintentional injuries	50	57	4.7	5.3	1.8	1.5	2.9	3.5
Suicide	35	35	3.3	3.3	0.6	0.6	5.5	5.5
Malignant neoplasms	20	26	1.9	2.4	2.2	2.3	1.1	1.0
Congenital anomalies	15	22	1.4	2.1	0.9	0.8	2.3	2.6
Homicide	11	16	1.0	1.5	0.7	0.6	2.1	2.5
Pneumonia and influenza	12	14	1.1	1.3	0.6	0.5	2.2	2.6
Diseases of the heart	*	*	0.6	0.7	0.5	0.4	1.4	1.8
Septicemia	*	*	0.7	0.7	0.2	0.1	3.5	7.0
In situ and benign neoplasms	*	*	0.4	0.4	0.2	0.2	2.0	2.0
Cerebrovascular diseases	*	*	0.2	0.3	0.2	0.2	1.5	1.5
All other causes	50	70	4.7	6.6	3.6	3.1	1.8	2.1

* Represents number of deaths less than ten deaths.

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths.

SOURCE: Rates for U.S. Races and U.S. White: Centers for Disease Control and Prevention, CDC Wonder, <https://wonder.cdc.gov/>

The leading cause of death (2008-2010) among AI/AN aged 15-24 years and for the corresponding U.S. all races and white populations (2009) is unintentional injuries. The death rate from unintentional injuries among AI/AN is 3.2 times that of the U.S. all races population and 2.9 times that of the U.S. white population. Forty-nine (49) percent of all AI/AN deaths in this age group are caused by unintentional injuries, and motor vehicle crashes account for 68 percent of these unintentional injuries. Suicide and homicide are the second and third leading causes of death for AI/AN aged 15 to 24. The suicide rate among AI/AN is more than four times the suicide rate of either U.S. all races or U.S. white populations in this age group. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 5 Death Rates, Leading Causes: Ages 15 to 24 Years

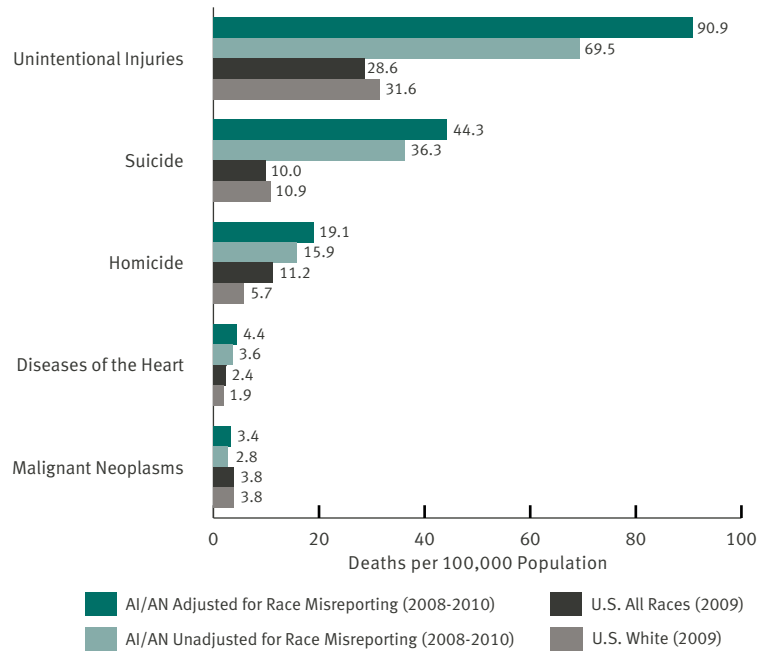


Table 5 Ten Leading Causes of Death for Decedents 15 to 24 Years of Age

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
All Causes	1,622	2,047	148.0	186.8	69.8	66.8	2.7	2.8
Unintentional injuries	762	996	69.5	90.9	28.6	31.6	3.2	2.9
Motor vehicle	500	678	45.6	61.9	17.6	19.1	3.5	3.2
Other unintentional injuries	262	318	23.9	29.0	10.9	12.5	2.7	2.3
Suicide	398	486	36.3	44.3	10.0	10.9	4.4	4.1
Homicide	174	209	15.9	19.1	11.2	5.7	1.7	3.4
Diseases of the heart	39	48	3.6	4.4	2.4	1.9	1.8	2.3
Malignant neoplasms	31	37	2.8	3.4	3.8	3.8	0.9	0.9
Congenital anomalies	17	22	1.6	2.0	1.0	1.0	2.0	2.0
Pneumonia and influenza	12	17	1.1	1.6	1.0	0.9	1.6	1.8
Chronic liver disease and cirrhosis	11	13	1.0	1.2	0.1	**	12.0	**
Pregnancy, childbirth, and puerperium	*	11	0.7	1.0	0.5	0.4	2.0	2.5
Legal intervention	*	*	0.5	0.7	0.2	0.1	3.5	7.0
All other causes	165	200	15.1	18.2	11.1	10.4	1.6	1.8

* Represents number of deaths less than ten deaths.
 ** Figure does not meet standards of reliability or precision.
¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.
 NOTE: Causes of death listed are based on the order of adjusted number of deaths.
 SOURCE: Rates for U.S. Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



Unintentional injuries are the leading cause of death for persons ages 25-44 in the AI/AN population (2008-2010) as well as the U.S. all races and white populations (2009). Approximately one-third of all AI/AN deaths in this age group are caused by unintentional injuries. Suicide and homicide are the fourth and sixth leading causes of death, respectively, among AI/AN. For the U.S. all races population, suicide and homicide are the fourth and fifth leading causes of death. The unintentional injury death rate among AI/AN persons aged 25-44 is 3.3 times that of the U.S. all races population, and 3.1 times that of the U.S. white population. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 6 Death Rates, Leading Causes: Ages 25 to 44 Years

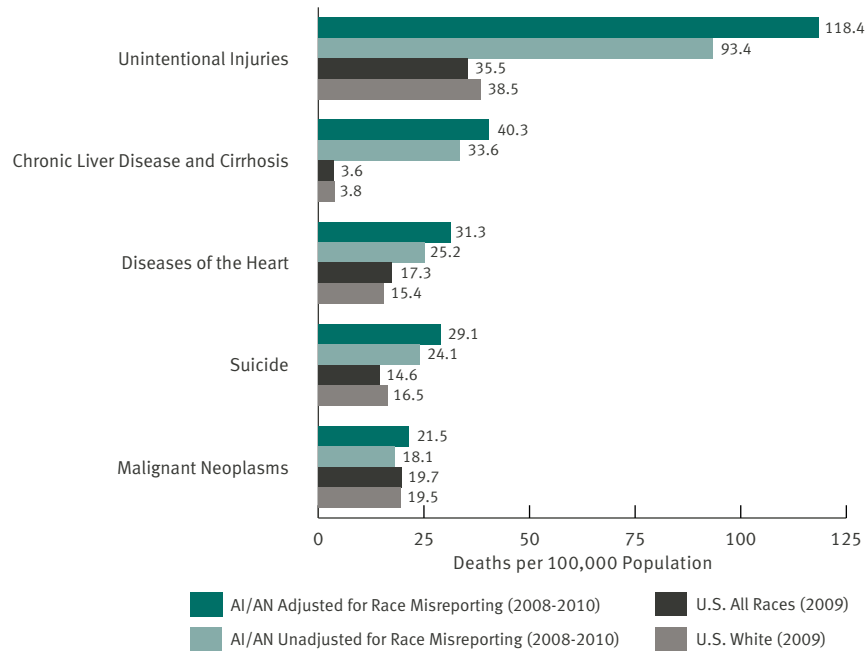


Table 6 Ten Leading Causes of Death for Decedents 25 to 44 Years of Age

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
All Causes	4,768	5,801	296.2	360.4	142.5	137.1	2.5	2.6
Unintentional injuries	1,503	1,905	93.4	118.4	35.5	38.5	3.3	3.1
Motor vehicle	647	819	40.2	50.9	13.3	13.6	3.8	3.7
Other unintentional injuries	856	1,086	53.2	67.5	22.2	24.9	3.0	2.7
Chronic liver disease and cirrhosis	540	649	33.6	40.3	3.6	3.8	11.2	10.6
Diseases of the heart	406	503	25.2	31.3	17.3	15.4	1.8	2.0
Suicide	388	469	24.1	29.1	14.6	16.5	2.0	1.8
Malignant neoplasms	291	346	18.1	21.5	19.7	19.5	1.1	1.1
Homicide	268	312	16.7	19.4	8.5	5.0	2.3	3.9
Diabetes mellitus	133	166	8.3	10.3	3.0	2.6	3.4	4.0
Pneumonia and influenza	105	119	6.5	7.4	2.6	2.5	2.8	3.0
Septicemia	63	67	3.9	4.2	1.6	1.3	2.6	3.2
Human immunodeficiency virus (HIV) infection	51	56	3.2	3.5	4.0	2.0	0.9	1.8
All other causes	1,020	1,209	63.4	75.1	32.2	29.9	2.3	2.5

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths.

SOURCE: Rates for U.S. Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

For AI/AN persons aged 45 to 54 years, unintentional injuries are the third leading cause of death for years 2008-2010, following malignant neoplasms and diseases of the heart. The same relative ranking for these three leading causes of death is seen for the U.S. all races and U.S. white populations for 2009. The unintentional injury death rate among AI/AN is 2.5 times the U.S. all races rate and 2.4 times the U.S. white rate. Suicide and homicide are not among the top 5 leading causes of death for the AI/AN population aged 45 to 54. The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

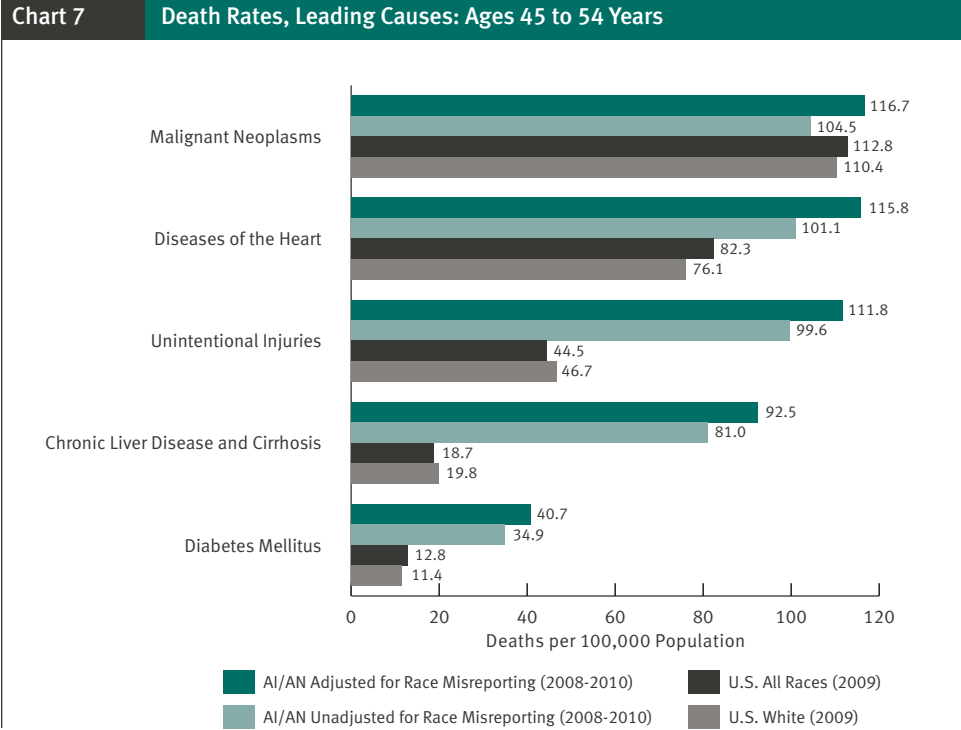


Table 7 Ten Leading Causes of Death for Decedents 45 to 54 Years of Age

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
All Causes	4,805	5,422	658.2	742.7	418.1	401.4	1.8	1.9
Malignant neoplasms	763	852	104.5	116.7	112.8	110.4	1.0	1.1
Diseases of the heart	738	845	101.1	115.8	82.3	76.1	1.4	1.5
Unintentional injuries	727	816	99.6	111.8	44.5	46.7	2.5	2.4
Motor vehicle	224	250	30.7	34.2	12.7	13.2	2.7	2.6
Other unintentional injuries	503	566	68.9	77.5	31.8	33.6	2.4	2.3
Chronic liver disease and cirrhosis	591	675	81.0	92.5	18.7	19.8	4.9	4.7
Diabetes mellitus	255	297	34.9	40.7	12.8	11.4	3.2	3.6
Cerebrovascular diseases	124	141	17.0	19.3	13.7	11.1	1.4	1.7
Suicide	133	140	18.2	19.2	19.2	21.9	1.0	0.9
Pneumonia and influenza	118	128	16.2	17.5	6.5	6.2	2.7	2.8
Viral hepatitis	94	112	12.9	15.3	5.8	5.9	2.6	2.6
Nephritis, nephrotic syndrome, and nephrosis	90	99	12.3	13.6	5.2	3.8	2.6	3.6
All other causes	1,172	1,317	160.5	180.4	96.5	87.8	1.9	2.1

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths.

SOURCE: Rates for U.S. Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



Unintentional injuries are the fifth leading cause of death for AI/AN persons 55-64 years of age. The unintentional injury death rate for AI/AN (79.0) is 2.2 times the U.S. all races rate (36.5) for this age group. Unintentional injuries are the fourth leading cause of death in the U.S. all races and the U.S. white populations. The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

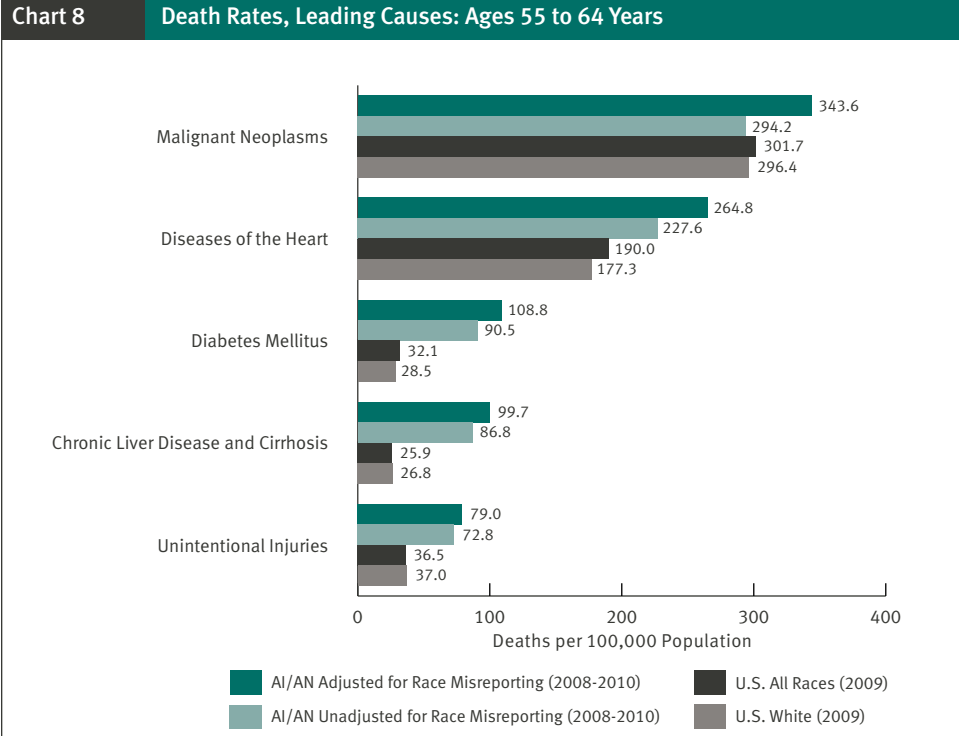


Table 8 Ten Leading Causes of Death for Decedents 55 to 64 Years of Age

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
All Causes	5,630	6,490	1,157.6	1,334.4	856.7	823.4	1.6	1.6
Malignant neoplasms	1,431	1,671	294.2	343.6	301.7	296.4	1.1	1.2
Diseases of the heart	1,107	1,288	227.6	264.8	190.0	177.3	1.4	1.5
Diabetes mellitus	440	529	90.5	108.8	32.1	28.5	3.4	3.8
Chronic liver disease and cirrhosis	422	485	86.8	99.7	25.9	26.8	3.8	3.7
Unintentional injuries	354	384	72.8	79.0	36.5	37.0	2.2	2.1
Motor vehicle	113	124	23.2	25.5	11.5	11.8	2.2	2.2
Other unintentional injuries	241	260	49.6	53.5	25.0	25.2	2.1	2.1
Chronic lower respiratory diseases	217	256	44.6	52.6	40.0	42.6	1.3	1.2
Cerebrovascular diseases	169	198	34.7	40.7	29.7	25.1	1.4	1.6
Nephritis, nephrotic syndrome, and nephrosis	130	147	26.7	30.2	13.5	10.9	2.2	2.8
Pneumonia and influenza	115	124	23.6	25.5	11.7	11.3	2.2	2.3
Septicemia	100	107	20.6	22.0	13.1	11.6	1.7	1.9
All other causes	1,145	1,301	235.4	267.5	162.5	155.9	1.6	1.7

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths.

SOURCE: Rates for U.S. Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov>

Unintentional injuries are the third leading cause of death for all ages for the AI/AN population, after malignant neoplasms and diseases of the heart. Motor vehicle crashes account for 43 percent of all unintentional injury deaths in the AI/AN population. Suicide, while in the top 10 causes of death for the AI/AN, U.S. all races, and white populations, is ranked 8th among AI/AN and 10th for the U.S. all races and U.S. white populations. Homicide is not in the top ten leading causes of death for the AI/AN, U.S. all races, or white populations. The AI/AN rates shown on this chart and table have been adjusted to compensate for misreporting of AI/AN race on state death certificates, and are not age-adjusted.

Chart 9 Death Rates for Leading Causes for All Ages

American Indians and Alaska Natives (2008-2010)

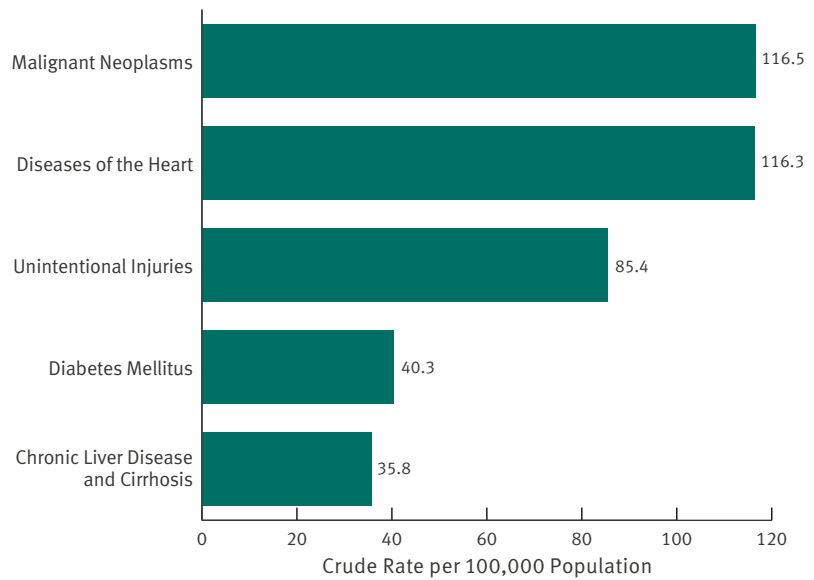


Table 9 Ten Leading Causes of Death for Decedents of All Ages

*American Indians and Alaska Natives, IHS Service Area, 2008-2010
(Crude Rate per 100,000 Population)*

Cause of Death	Number		Rate	
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹
All Causes	33,834	39,266	580.0	673.2
Malignant neoplasms	5,898	6,796	101.1	116.5
Diseases of the heart	5,825	6,785	99.9	116.3
Unintentional injuries	4,134	4,982	70.9	85.4
Motor vehicle	1,715	2,144	29.4	36.8
Other unintentional injuries	2,419	2,838	41.5	48.7
Diabetes mellitus	1,962	2,352	33.6	40.3
Chronic liver disease and cirrhosis	1,811	2,086	31.0	35.8
Chronic lower respiratory diseases	1,323	1,582	22.7	27.1
Cerebrovascular diseases	1,169	1,353	20.0	23.2
Suicide	1,034	1,215	17.7	20.8
Pneumonia and influenza	893	972	15.3	16.7
Nephritis, nephrotic syndrome, and nephrosis	741	836	12.7	14.3
All other causes	9,044	10,307	155.0	176.7

¹ Adjusted to compensate for misreporting of AI/AN race on state death certificates.

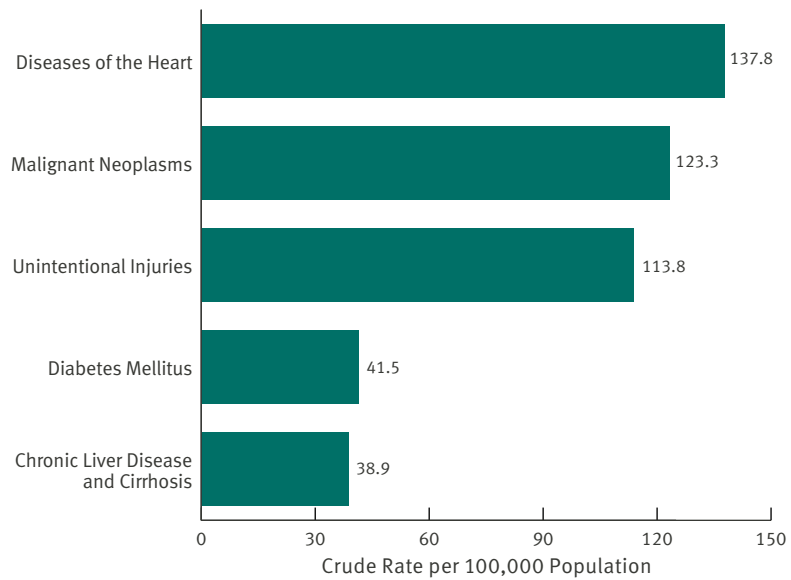
NOTE: Causes of death listed are based on the order of adjusted rate of deaths.



Unintentional injuries are the third leading cause of death for AI/AN males of all ages. For the AI/AN male population, suicide is the sixth leading cause of death and homicide is the ninth leading cause of death. AI/AN males die from unintentional injuries at a rate that is 3.7 times the rate of suicide and 6.2 times the rate of homicide. Of all unintentional injury deaths among AI/AN males, 41 percent are caused by motor vehicle crashes. The AI/AN rates shown on this chart have been adjusted to compensate for misreporting of AI/AN race on state death certificates, and are not age-adjusted.

Chart 10.1 Death Rates, Leading Causes: Males

American Indians and Alaska Natives (2008-2010)



Among AI/AN females of all ages, unintentional injuries are the third leading cause of death, with motor vehicle accidents accounting for 46 percent of all unintentional injury deaths. Neither suicide nor homicide are in the ten leading causes of death for AI/AN females. The AI/AN rates shown on this chart have been adjusted to compensate for misreporting of AI/AN race on state death certificates, and are not age-adjusted.

Chart 10.2 Death Rates, Leading Causes: Females

American Indians and Alaska Natives (2008-2010)

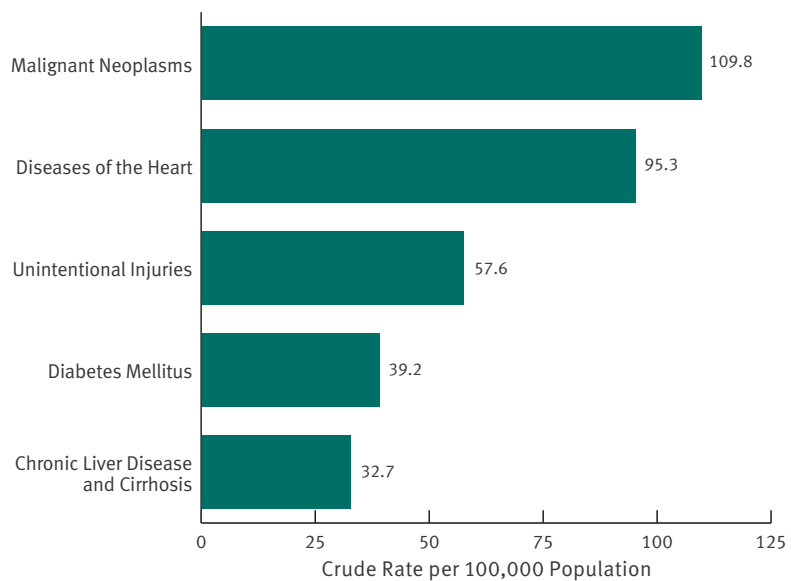


Table 10 **Leading Causes of Death by Sex**

*American Indians and Alaska Natives, IHS Service Area, 2008-2010
(Crude Rate per 100,000 Population)*

Cause of Death	Number		Rate	
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹
MALE				
All Causes	18,590	21,556	644.0	746.7
Diseases of the heart	3,376	3,978	116.9	137.8
Malignant neoplasms	3,075	3,560	106.5	123.3
Unintentional injuries	2,800	3,286	97.0	113.8
Motor vehicle	1,129	1,363	39.1	47.2
Other unintentional injuries	1,671	1,923	57.9	66.6
Diabetes mellitus	1,000	1,197	34.6	41.5
Chronic liver disease and cirrhosis	978	1,123	33.9	38.9
Suicide	775	897	26.8	31.1
Chronic lower respiratory diseases	640	769	22.2	26.6
Cerebrovascular diseases	531	624	18.4	21.6
Homicide	461	534	16.0	18.5
Pneumonia and influenza	450	494	15.6	17.1
All other causes	4,504	5,094	156.0	176.5
FEMALE				
All Causes	15,244	17,710	517.4	601.1
Malignant neoplasms	2,823	3,236	95.8	109.8
Diseases of the heart	2,449	2,807	83.1	95.3
Unintentional injuries	1,334	1,696	45.3	57.6
Motor vehicle	586	781	19.9	26.5
Other unintentional injuries	748	915	25.4	31.1
Diabetes mellitus	962	1,155	32.7	39.2
Chronic liver disease and cirrhosis	833	963	28.3	32.7
Chronic lower respiratory diseases	683	813	23.2	27.6
Cerebrovascular diseases	638	729	21.7	24.7
Pneumonia and influenza	443	478	15.0	16.2
Nephritis, nephrotic syndrome, and nephrosis	425	476	14.4	16.2
Septicemia	328	357	11.1	12.1
All other causes	4,326	5,000	146.8	169.7

¹ Adjusted to compensate for misreporting of AI/AN race on state death certificates.



The AI/AN population has considerably higher age-adjusted death rates for unintentional injuries, suicide, and homicide than the U.S. all races and white populations. The AI/AN age-adjusted unintentional injury death rate (94.7) is 2.5 times the U.S. all races rate (37.5) and 2.4 times the U.S. white rate (39.5). For suicide, the AI/AN rate (20.2) is 1.7 times the U.S. all races rate (11.8) and 1.5 times the U.S. white rate (13.2). The AI/AN age-adjusted homicide rate (11.6) is more than twice the U.S. all races rate (5.5) and is 3.3 times the U.S. white rate (3.5). The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 11 Selected Age-Adjusted Death Rates

Ratio of American Indians and Alaska Natives (2008-2010) to U.S. All Races (2009)

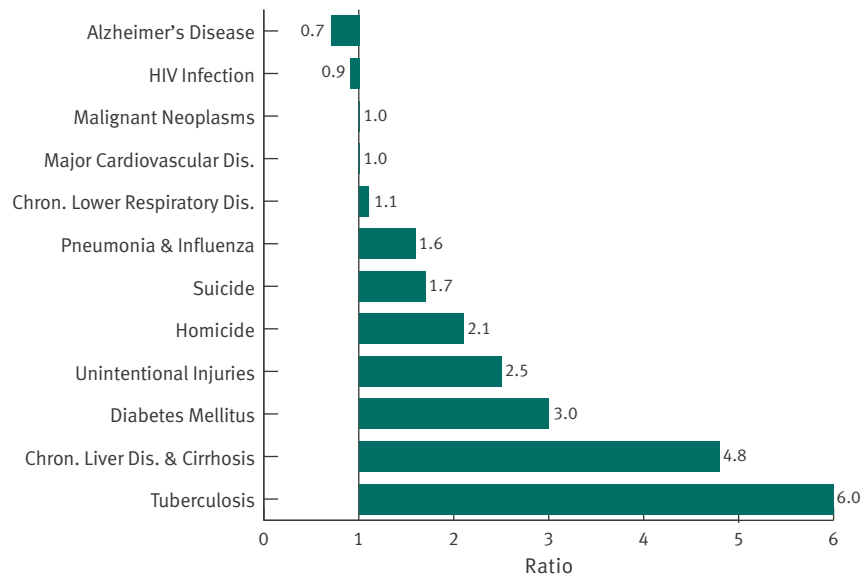


Table 11 Age-Adjusted Death Rates

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Age-Adjusted Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native		U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Rate Unadjusted	Rate Adjusted ¹			U.S. All Races	U.S. White
All Causes	857.7	986.5	749.6	742.8	1.3	1.3
Major cardiovascular diseases	213.4	246.0	238.5	233.4	1.0	1.1
Diseases of the heart	163.7	189.7	182.8	180.1	1.0	1.1
Cerebrovascular diseases	35.3	40.6	39.6	38.1	1.0	1.1
Hypertension	17.0	18.9	18.7	16.2	1.0	1.2
Atherosclerosis	1.8	1.9	2.2	2.3	0.9	0.8
Malignant neoplasms	157.4	180.6	173.5	173.3	1.0	1.0
Unintentional injuries	80.3	94.7	37.5	39.5	2.5	2.4
Motor vehicle	30.4	37.2	11.6	12.1	3.2	3.1
Other unintentional injuries	50.0	57.5	25.9	27.5	2.2	2.1
Diabetes mellitus	53.3	63.6	21.0	19.2	3.0	3.3
Chronic lower respiratory diseases	39.6	47.2	42.7	45.1	1.1	1.0
Chronic liver disease and cirrhosis	38.1	43.7	9.1	9.6	4.8	4.6
Pneumonia and influenza	24.9	26.9	16.5	16.3	1.6	1.7
Suicide	17.4	20.2	11.8	13.2	1.7	1.5
Alzheimer's disease	15.9	17.9	24.2	25.0	0.7	0.7
Homicide	10.1	11.6	5.5	3.5	2.1	3.3
Human immunodeficiency virus (HIV) infection	2.4	2.6	3.0	1.5	0.9	1.7
Tuberculosis, all forms	1.2	1.2	0.2	0.1	6.0	12.0

¹ Adjusted to compensate for misreporting of AI/AN race on state death certificates.

SOURCE: Rates for U.S. Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

The AI/AN age-adjusted death rate (30.8) due to poisoning for years 2008-2010 is 2.8 times the rate of 10.9 that was observed during 1972-1974, with rates appearing to have increased steadily over time. The 2008-2010 age-adjusted poisoning death rate for AI/AN is 2.3 times the U.S. all races rate and 2.1 times the U.S. white rate for 2009. The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 12 Age-Adjusted Poisoning Death Rates

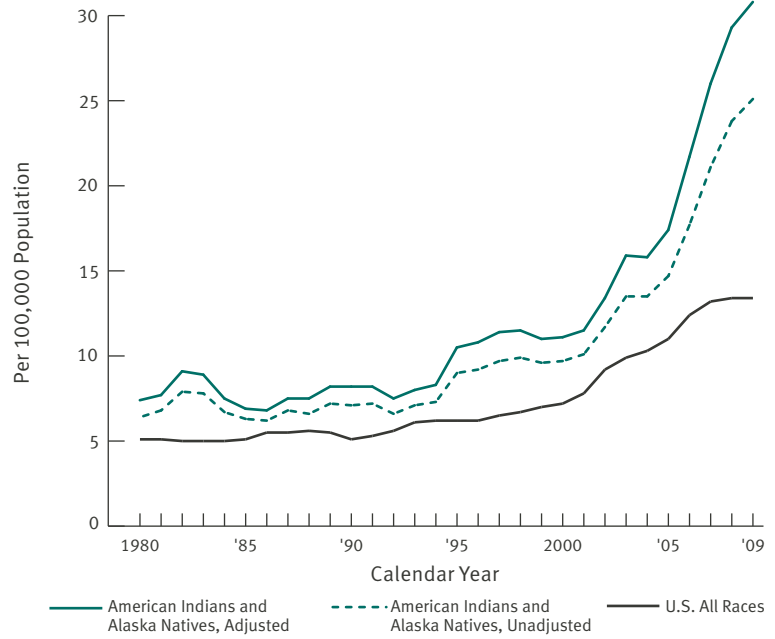




Table 12 Poisoning¹ Deaths and Death Rates

*American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1973-2009
(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ² to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²				
(2010)	462	579						
2008-2010 (2009)	466	573	25.1	30.8	13.4	15.0	2.3	2.1
2007-2009 (2008)	447	550	23.8	29.3	13.4	14.9	2.2	2.0
2006-2008 (2007)	345	436	21.1	26.0	13.2	14.5	2.0	1.8
2005-2007 (2006)	313	384	17.7	21.7	12.4	13.4	1.8	1.6
2004-2006 (2005)	253	309	14.7	17.4	11.0	11.8	1.6	1.5
2003-2005 (2004)	252	304	13.5	15.8	10.3	11.2	1.5	1.4
2002-2004 (2003)	217	252	13.5	15.9	9.9	10.6	1.6	1.5
2001-2003 (2002)	178	210	11.7	13.4	9.2	9.7	1.5	1.4
2000-2002 (2001)	147	166	10.1	11.5	7.8	8.1	1.5	1.4
1999-2001 (2000)	137	154	9.7	11.1	7.2	7.4	1.5	1.5
1998-2000 (1999)	154	185	9.6	11.0	7.0	7.2	1.6	1.5
1997-1999 (1998)	135	154	9.9	11.5	6.7	6.8	1.7	1.7
1996-1998 (1997)	130	153	9.7	11.4	6.5	6.5	1.8	1.8
1995-1997 (1996)	129	162	9.2	10.8	6.2	6.2	1.7	1.7
1994-1996 (1995)	97	109	9.0	10.5	6.2	6.1	1.7	1.7
1993-1995 (1994)	96	109	7.3	8.3	6.2	6.1	1.3	1.4
1992-1994 (1993)	74	86	7.1	8.0	6.1	6.0	1.3	1.3
1991-1993 (1992)	81	94	6.6	7.5	5.6	5.6	1.3	1.3
1990-1992 (1991)	72	83	7.2	8.2	5.3	5.2	1.5	1.6
1989-1991 (1990)	83	95	7.1	8.2	5.1	5.1	1.6	1.6
1988-1990 (1989)	73	85	7.2	8.2	5.5	5.4	1.5	1.5
1987-1989 (1988)	69	79	6.6	7.5	5.6	5.5	1.3	1.4
1986-1988 (1987)	62	71	6.8	7.5	5.5	5.5	1.4	1.4
1985-1987 (1986)	72	77	6.2	6.8	5.5	5.7	1.2	1.2
1984-1986 (1985)	50	54	6.3	6.9	5.1	5.3	1.4	1.3
1983-1985 (1984)	57	66	6.7	7.5	5.0	5.1	1.5	1.5
1982-1984 (1983)	65	75	7.8	8.9	5.0	5.2	1.8	1.7
1981-1983 (1982)	61	67	7.9	9.1	5.0	5.1	1.8	1.8
1980-1982 (1981)	47	57	6.8	7.7	5.1	5.2	1.5	1.5
1979-1981 (1980)	44	47	6.4	7.4	5.1	5.2	1.5	1.4
1972-1974 (1973)	158	174	9.8	10.9	6.1	6.2	1.8	1.8

¹ Includes deaths with ICD-10 codes: U01(.6-.7), X40-X49, X60-X69, X85-X90, Y10-Y19, and Y35.2.

² Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 2000 standard population; the U.S. all races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

For AI/AN males and females, age-specific poisoning death rates are highest in the 35 to 44 year age group (75.0 and 48.5 for males and females, respectively). Poisoning death rates for AI/AN males during 2008-2010 are higher than the corresponding rates for AI/AN females, for most age groups. However, for infants and children up to age 4, female rates are higher, and for individuals aged 85 or older, the male and female rates are equal. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 13 Poisoning Death Rates by Age and Sex

American Indians and Alaska Natives (2008-2010)

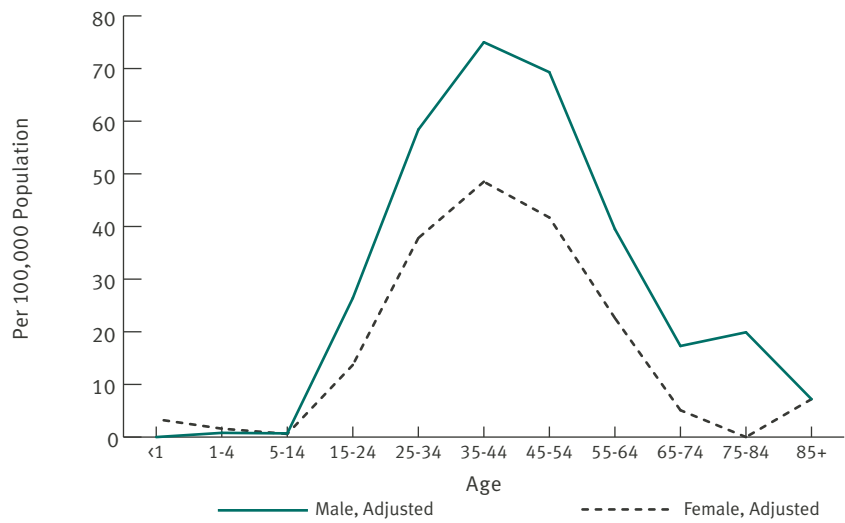




Table 13 Poisoning¹ Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²
Under 1 year	1.7 ³	1.7 ³	—* ³	—* ³	3.4 ³	3.4 ³
1-4 years	0.8	1.2	0.4	0.8	1.2	1.6
5-14 years	0.7	0.7	0.7	0.7	0.6	0.6
15-24 years	15.9	20.2	21.7	26.4	9.8	13.7
25-34 years	35.3	48.3	44.4	58.4	25.9	37.8
35-44 years	49.2	61.7	61.9	75.0	36.7	48.5
45-54 years	47.5	54.9	60.2	69.3	35.9	41.7
55-64 years	26.9	30.6	34.8	39.5	19.9	22.6
65-74 years	10.7	10.7	17.3	17.3	5.1	5.1
75-84 years	7.5	8.3	17.9	19.9	0.0	0.0
85 years +	7.2	7.2	7.2	7.2	7.2	7.2

Age Group	U.S. All Races			U.S. White		
	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	0.9	0.8	1.0	0.8	0.5	1.0
1-4 years	0.4	0.4	0.3	0.4	0.5	0.3
5-14 years	0.2	0.2	0.2	0.2	0.2	0.2
15-24 years	8.5	12.3	4.5	10.2	14.9	5.2
25-34 years	18.5	26.1	10.9	21.9	30.6	12.9
35-44 years	22.9	28.8	17.2	25.9	32.0	19.7
45-54 years	28.5	33.7	23.3	30.8	35.9	25.7
55-64 years	15.9	19.3	12.8	16.4	19.0	13.9
65-74 years	5.9	6.6	5.3	6.2	6.6	5.9
75-84 years	5.0	5.5	4.7	5.2	5.6	5.0
85 years +	6.3	8.8	5.1	6.4	9.1	5.2

—* Represents zero.

¹ Includes deaths with ICD-10 codes: U01(.6-.7), X40-X49, X60-X69, X85-X90, Y10-Y19, and Y35.2.

² Adjusted to compensate for misreporting of AI/AN race on state death certificates.

³ The adjusted rate for age less than one year is the **same** or **lower** than the unadjusted rate because the linked birth/infant death file (used to obtain the adjusted counts of infant deaths) had the **same** or **fewer** deaths for this cause than did the unadjusted mortality file (2008-2010 data).

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

The AI/AN age-adjusted death rate due to poisoning varies among IHS Areas, but rates for all Areas exceed that observed in the U.S. all races population. The highest Area rate (Alaska, 48.5) is 3.0 times that of the lowest Area (Tucson, 16.0) and is 3.6 times the U.S. all races rate. Although the Tucson Area rate of 16.0 is the lowest among the IHS Areas, it is still 19 percent higher than the U.S. all races rate. Aggregated across all IHS Areas, the total age-adjusted rate of 30.8 is 2.3 times the U.S. all races rate. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 14 Age-Adjusted Poisoning Death Rates by Area

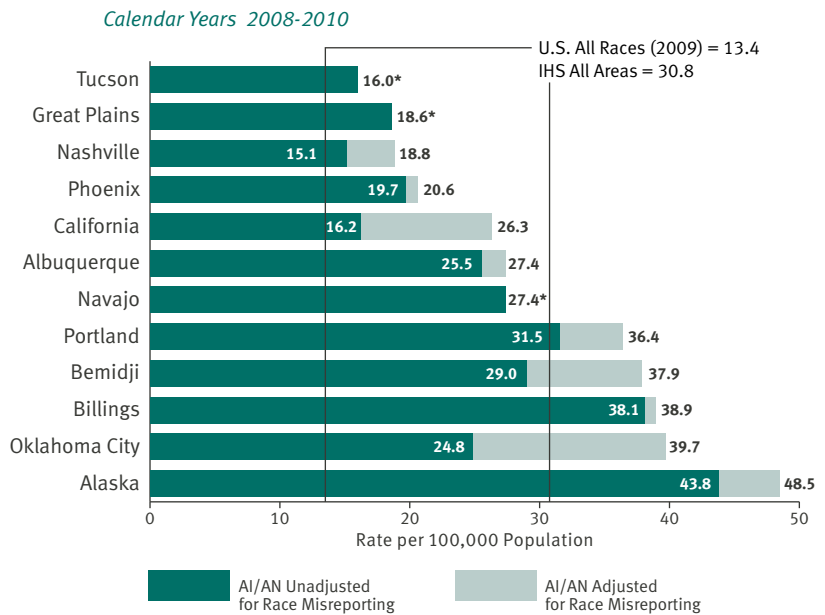


Table 14 Age-Adjusted Poisoning¹ Death Rates by Area

Calendar Years 2008-2010

	Deaths		Rate ²	
	Unadjusted	Adjusted ³	Unadjusted	Adjusted ³
U.S. All Races (2009)	41,592		13.4	
All IHS Areas	1,375	1,702	25.1	30.8
Alaska	145	161	43.8	48.5
Albuquerque	83	89	25.5	27.4
Bemidji	101	134	29.0	37.9
Billings	67	68	38.1	38.9
California	93	153	16.2	26.3
Great Plains	57	57	18.6	18.6
Nashville	64	80	15.1	18.8
Navajo	175	175	27.4	27.4
Oklahoma City	255	413	24.8	39.7
Phoenix	125	131	19.7	20.6
Portland	193	224	31.5	36.4
Tucson	17	17	16.0	16.0

¹ Includes deaths with ICD-10 codes: U01(.6-.7), X40-X49, X60-X69, X85-X90, Y10-Y19, and Y35.2.

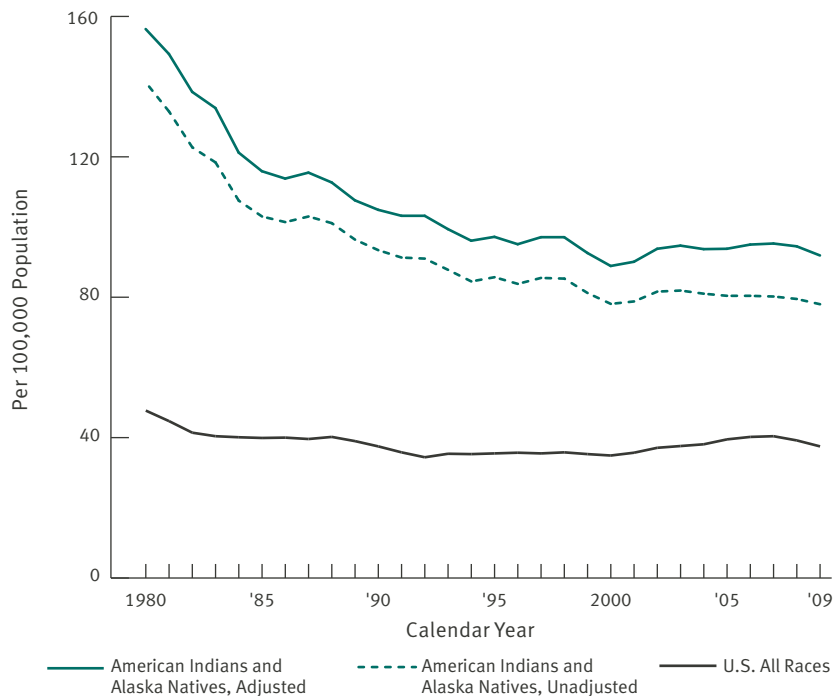
² Age-adjusted rate per 100,000 population.

³ Adjusted to compensate for misreporting of AI/AN race on the state death certificate.



AI/AN death rates associated with unintentional injuries have decreased over the last several decades. The AI/AN age-adjusted injury death rate of 91.9 for 2008-2010 is 59 percent lower than the age-adjusted rate of 223.2 observed during 1972-1974. Similarly, the 2008-2010 motor vehicle death rate of 36.0 reflects a 64 percent decrease from the highest rate of 100.4 seen in 1972-1974. Despite these reductions, AI/AN mortality from unintentional injuries, including motor vehicle accidents, is still higher than that seen in the U.S. all races population. During 2008-2010 the age-adjusted AI/AN unintentional injury death rate was nearly 2.5 times the rate of 37.5 seen in the U.S. all races population in 2009, and the AI/AN age-adjusted motor vehicle death rate (36.0) was 3.1 times the U.S. all races rate (11.6). The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 15 Age-Adjusted Unintentional Injury Death Rates



CHARTS AND TABLES

Table 15 Unintentional Injury Deaths and Death Rates

*American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-2009
(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native						U.S. All Races Rate		U.S. White Rate	
	Total Death Number		All Unintentional Injuries Rate		Motor Vehicle Rate		All Unintentional Injuries	Motor Vehicle	All Unintentional Injuries	Motor Vehicle
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
(2010)	1,367	1,644								
2008-2010 (2009)	1,398	1,677	78.0	91.9	29.4	36.0	37.5	11.6	39.5	12.1
2007-2009 (2008)	1,369	1,661	79.5	94.5	32.0	39.3	39.2	12.8	41.4	13.3
2006-2008 (2007)	1,361	1,663	80.2	95.3	35.1	42.9	40.4	14.3	42.1	14.8
2005-2007 (2006)	1,390	1,671	80.4	95.0	36.8	44.7	40.2	14.9	41.7	15.4
2004-2006 (2005)	1,325	1,577	80.4	93.8	38.6	46.5	39.5	15.1	40.7	15.6
2003-2005 (2004)	1,223	1,442	81.0	93.7	40.0	47.6	38.1	15.1	39.2	15.5
2002-2004 (2003)	1,287	1,516	81.9	94.7	42.4	51.0	37.6	15.2	38.6	15.6
2001-2003 (2002)	1,242	1,468	81.6	93.8	42.2	50.7	37.1	15.6	37.9	16.0
2000-2002 (2001)	1,097	1,280	78.8	90.1	41.9	49.9	35.7	15.2	36.1	15.4
1999-2001 (2000)	1,101	1,274	78.1	88.9	40.5	48.1	34.9	15.2	35.1	15.5
1998-2000 (1999)	1,091	1,287	81.2	92.6	40.3	47.5	35.3	15.1	35.2	15.2
1997-1999 (1998)	1,087	1,272	85.3	97.1	38.4	45.1	35.8	15.8	35.6	15.8
1996-1998 (1997)	1,103	1,277	85.5	97.1	37.2	43.2	35.5	15.9	35.0	16.0
1995-1997 (1996)	1,055	1,212	83.8	95.1	37.0	43.0	35.7	16.2	35.3	16.3
1994-1996 (1995)	1,016	1,180	85.7	97.2	37.8	44.0	35.5	16.3	34.9	16.3
1993-1995 (1994)	1,022	1,173	84.5	96.1	36.9	42.9	35.3	16.1	34.5	16.2
1992-1994 (1993)	1,007	1,168	87.8	99.4	37.9	43.8	35.4	16.0	34.6	16.1
1991-1993 (1992)	977	1,126	91.0	103.2	39.7	46.2	34.4	15.8	33.6	15.9
1990-1992 (1991)	988	1,154	91.3	103.2	39.9	46.3	35.8	17.0	35.0	17.1
1989-1991 (1990)	970	1,101	93.4	104.9	40.4	46.5	37.5	18.4	36.7	18.5
1988-1990 (1989)	969	1,097	96.4	107.6	41.2	47.1	39.0	18.8	37.9	19.0
1987-1989 (1988)	1,012	1,148	101.1	112.7	43.3	49.5	40.2	19.5	39.1	19.7
1986-1988 (1987)	1,000	1,135	103.0	115.5	45.3	52.0	39.6	19.2	38.7	19.5
1985-1987 (1986)	983	1,120	101.4	113.8	44.8	51.5	40.0	19.1	39.1	19.3
1984-1986 (1985)	913	1,034	103.0	115.9	44.5	51.2	39.9	18.6	39.0	18.8
1983-1985 (1984)	921	1,049	107.5	121.2	45.2	52.5	40.1	18.8	39.4	19.2
1982-1984 (1983)	907	1,038	118.4	133.9	48.9	56.7	40.4	18.2	39.5	18.5
1981-1983 (1982)	999	1,136	122.7	138.5	52.7	60.9	41.4	18.9	40.7	19.2
1980-1982 (1981)	975	1,101	132.9	149.3	58.9	67.4	44.7	21.3	44.0	21.8
1979-1981 (1980)	1,058	1,195	141.2	156.4	63.4	71.5	47.7	22.3	46.5	22.6
1972-1974 (1973)	3,001	3,292	204.1	223.2	90.6	100.4	59.5	26.7	57.5	26.2
1954-1956 (1955)	714		184.0		97.6		54.3	24.6	52.2	24.3

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 2000 standard population; the U.S. all races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



Unintentional injury death rates are highest among persons aged 75 and older. Rates for males are higher than females for all age groups in the AI/AN, U.S. white, and U.S. all races populations. Excluding elderly 75 and older, the highest unintentional injury death rate is seen in males aged 35 to 44. The rate of 165.0 for this group is more than three times the death rate of 51.6 for U.S. all race males of the same age. For all age groups below age 85, both male and female AI/AN rates are higher than the corresponding rates in the U.S. all races and white populations. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN on state death certificates.

Chart 16 Unintentional Injury Death Rates by Age and Sex

American Indians and Alaska Natives (2008-2010)

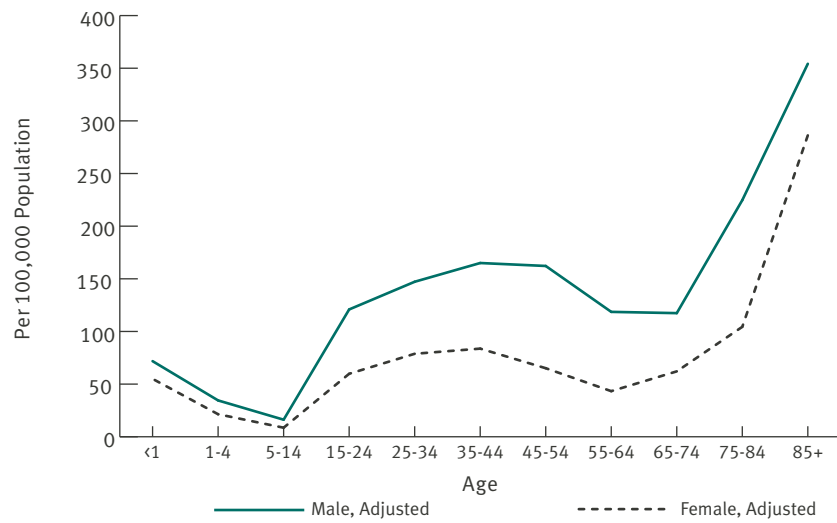


Table 16 Unintentional Injury Death Rates by Age and Sex

*American Indians and Alaska Natives, IHS Service Area, 2008-2010,
U.S. All Races and White Populations, 2009
(Rate per 100,000 Population)*

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹
Under 1 year	56.7	63.5	68.4	71.8	44.7	55.0
1-4 years	19.3	28.1	24.5	34.5	14.0	21.4
5-14 years	10.4	12.4	13.6	16.2	7.0	8.6
15-24 years	69.5	90.9	98.5	120.9	39.6	59.8
25-34 years	84.9	113.5	115.3	147.2	53.7	78.8
35-44 years	103.3	124.0	140.2	165.0	67.1	83.7
45-54 years	99.6	111.8	146.5	162.2	56.2	65.1
55-64 years	72.8	79.0	110.4	118.6	39.0	43.3
65-74 years	83.9	87.4	114.0	117.4	58.4	62.1
75-84 years	146.4	154.7	206.8	224.7	103.0	104.4
85 years +	306.5	308.9	347.0	354.2	286.2	286.2

Age Group	U.S. All Races			U.S. White		
	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	29.5	34.2	24.6	24.5	28.4	20.4
1-4 years	9.0	11.1	6.8	8.8	11.1	6.4
5-14 years	4.1	5.0	3.2	3.9	4.8	3.0
15-24 years	28.6	41.4	15.1	31.6	45.9	16.5
25-34 years	34.5	51.5	17.4	37.9	55.7	19.3
35-44 years	36.4	51.6	21.4	39.2	54.7	23.4
45-54 years	44.5	61.0	28.6	46.7	63.2	30.4
55-64 years	36.5	52.5	21.7	37.0	52.4	22.3
65-74 years	42.1	56.9	29.3	43.0	57.5	30.3
75-84 years	103.5	133.9	81.8	108.0	138.0	86.1
85 years +	310.9	380.0	277.9	325.8	395.5	292.2

¹ Adjusted to compensate for misreporting of AI/AN race on state death certificates.

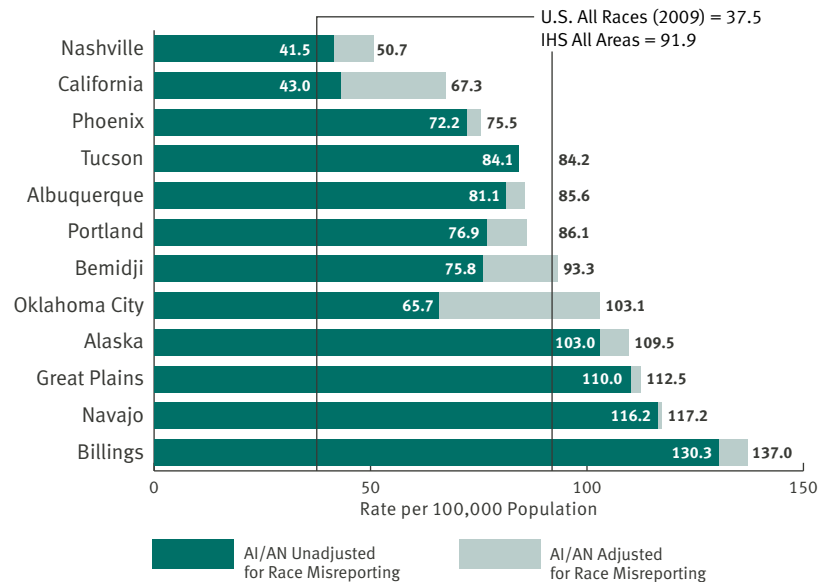
SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



The Billings Area has the highest 2008-2010 unintentional injury death rate (137.0) among the IHS Areas. The lowest rate for this time period is seen in Nashville (50.7). The Billings Area rate is 2.7 times the lowest rate (Nashville, 50.7) and is 3.7 times the U.S. all races rate of 37.5. Even though it has the lowest Area rate of unintentional injury deaths during 2008-2010, Nashville's rate of 50.7 is still 35 percent higher than the 2009 U.S. all races rate. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 17.1 Age-Adjusted Unintentional Injury Death Rates by Area

Calendar Years 2008-2010



The Billings Area has the highest age-adjusted motor vehicle crash death rate (65.8) among the IHS Areas. This rate is three times the lowest Area rate (Alaska, 21.9), and is 5.7 times the 2009 U.S. all races rate (11.6). Pedestrian deaths account for a higher percentage of motor vehicle deaths in the IHS AI/AN population compared with the U.S. all races population (17.6 percent vs. 12.3 percent). The percentage of motor vehicle deaths that are pedestrian-related also varies by IHS Area, with the highest pedestrian-related percentages occurring in Phoenix and Tucson (27.8 percent and 27.7 percent, respectively) and the lowest percentage in Billings (9.2 percent). These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 17.2 Age-Adjusted Motor Vehicle Crashes Death Rates by Area

Calendar Years 2008-2010

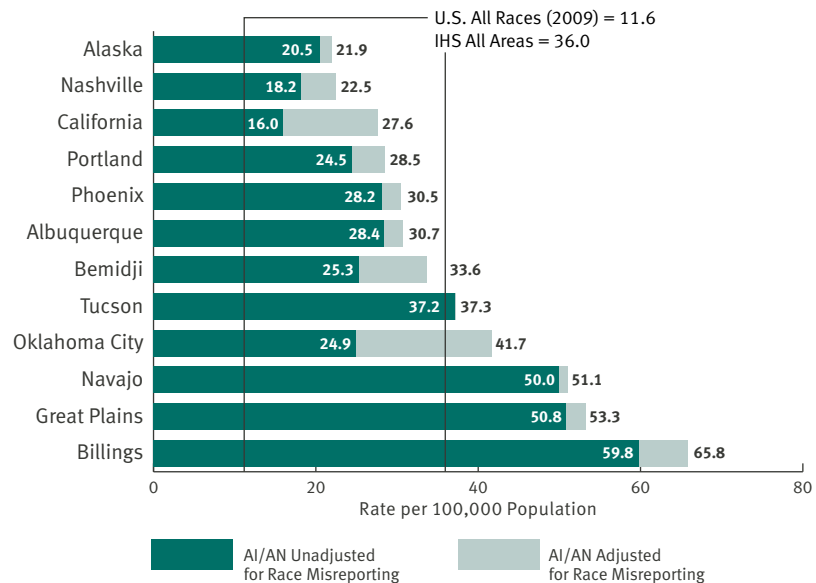


Table 17 Age-Adjusted Unintentional Injury Death Rates by Area

Calendar Years 2008-2010

	All Unintentional Injuries				Motor Vehicle Crashes		
	Deaths		Rate ²		Rate ²		Percent of Motor Vehicle Crash Deaths Pedestrian-related ¹
	Unadjusted	Adjusted ³	Unadjusted	Adjusted ³	Unadjusted	Adjusted ³	
U.S. All Races (2009)	118,021		37.5		11.6		12.3
All IHS Areas	4,134	4,982	78.0	91.9	29.4	36.0	17.6
Alaska	332	356	103.0	109.5	20.5	21.9	24.1
Albuquerque	246	263	81.1	85.6	28.4	30.7	19.0
Bemidji	254	324	75.8	93.3	25.3	33.6	10.0
Billings	233	247	130.3	137.0	59.8	65.8	9.2
California	238	390	43.0	67.3	16.0	27.6	25.3
Great Plains	333	342	110.0	112.5	50.8	53.3	18.0
Nashville	169	211	41.5	50.7	18.2	22.5	15.6
Navajo	723	730	116.2	117.2	50.0	51.1	20.8
Oklahoma City	681	1,107	65.7	103.1	24.9	41.7	10.5
Phoenix	410	435	72.2	75.5	28.2	30.5	27.8
Portland	432	494	76.9	86.1	24.5	28.5	18.4
Tucson	83	83	84.1	84.2	37.2	37.3	27.7

¹ Includes motor vehicle crashes having ICD-10 codes V02-V04 or V09.2, indicating a pedestrian was the subject decedent as a result of the motor vehicle crash. Percentages are based on adjusted numbers of deaths.

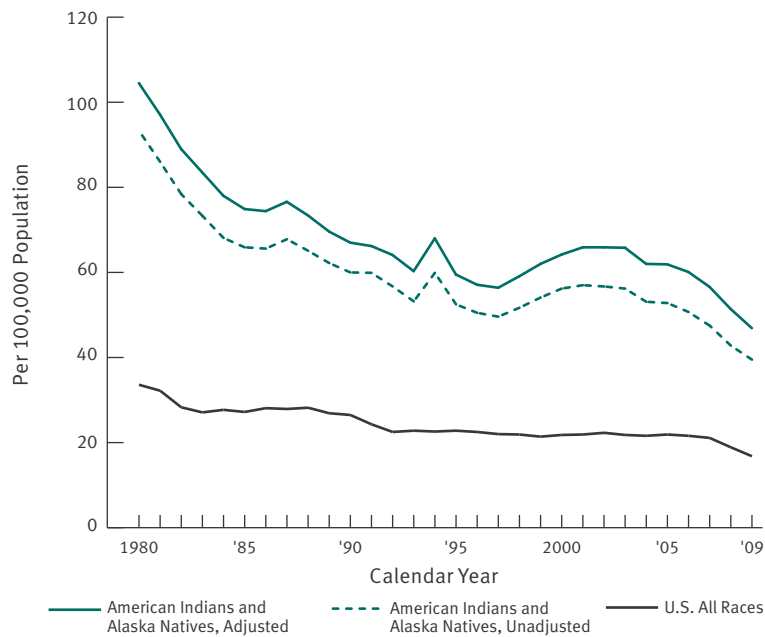
² Age-adjusted rate per 100,000 population.

³ Adjusted to compensate for misreporting of AI/AN race on the state death certificate.



The age-adjusted motor vehicle death rate for AI/AN males has decreased by 73 percent since 1972-1974. Although the motor vehicle death rate disparity between AI/AN and males of the U.S. all race and U.S. white populations has also decreased since 1972-1974, the rate (46.9) for AI/AN males in 2008-2010 is still 2.8 times the U.S. all races rate (16.8) and 2.7 times the U.S. white rate (17.3). These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 18 Age-Adjusted Motor Vehicle Death Rates for Males



CHARTS AND TABLES

Table 18 Motor Vehicle Deaths and Death Rates for Males

*American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1973-2009
(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
(2010)	360	431						
2008-2010 (2009)	378	456	39.5	46.9	16.8	17.3	2.8	2.7
2007-2009 (2008)	391	476	42.8	51.4	18.9	19.6	2.7	2.6
2006-2008 (2007)	416	509	47.5	56.6	21.1	21.6	2.7	2.6
2005-2007 (2006)	481	572	50.7	60.1	21.6	22.2	2.8	2.7
2004-2006 (2005)	460	547	52.8	61.9	21.9	22.5	2.8	2.8
2003-2005 (2004)	420	500	53.1	62.0	21.6	22.1	2.9	2.8
2002-2004 (2003)	475	556	56.2	65.8	21.8	22.2	3.0	3.0
2001-2003 (2002)	491	581	56.7	65.9	22.3	22.7	3.0	2.9
2000-2002 (2001)	424	496	57.0	65.9	21.9	22.1	3.0	3.0
1999-2001 (2000)	424	490	56.2	64.2	21.8	21.8	2.9	2.9
1998-2000 (1999)	410	479	54.1	62.0	21.4	21.4	2.9	2.9
1997-1999 (1998)	396	466	51.7	59.1	21.9	21.8	2.7	2.7
1996-1998 (1997)	407	462	49.6	56.4	22.0	21.9	2.6	2.6
1995-1997 (1996)	417	481	50.5	57.1	22.5	22.4	2.5	2.5
1994-1996 (1995)	396	456	52.5	59.5	22.8	22.6	2.6	2.6
1993-1995 (1994)	373	424	59.9	68.0	22.6	22.6	3.0	3.0
1992-1994 (1993)	367	423	53.2	60.3	22.8	22.7	2.6	2.7
1991-1993 (1992)	382	443	56.7	64.1	22.5	22.4	2.8	2.9
1990-1992 (1991)	393	449	59.9	66.2	24.3	24.2	2.7	2.7
1989-1991 (1990)	399	451	60.0	67.0	26.5	26.3	2.5	2.5
1988-1990 (1989)	381	432	62.2	69.6	26.9	26.7	2.6	2.6
1987-1989 (1988)	410	467	65.1	73.4	28.2	28.1	2.6	2.6
1986-1988 (1987)	423	481	67.8	76.6	27.9	28.0	2.7	2.7
1985-1987 (1986)	395	447	65.6	74.4	28.1	28.0	2.6	2.7
1984-1986 (1985)	354	403	65.9	74.9	27.2	27.2	2.8	2.8
1983-1985 (1984)	351	404	68.1	78.0	27.7	27.9	2.8	2.8
1982-1984 (1983)	358	413	73.3	83.5	27.1	27.3	3.1	3.1
1981-1983 (1982)	362	408	78.4	89.0	28.3	28.6	3.1	3.1
1980-1982 (1981)	405	462	86.0	97.1	32.2	32.6	3.0	3.0
1979-1981 (1980)	429	488	93.3	104.5	33.6	33.8	3.1	3.1
(1979)	448	488						
1972-1974 (1973)	1,199	1,330	157.7	175.5	39.3	38.4	4.5	4.6

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

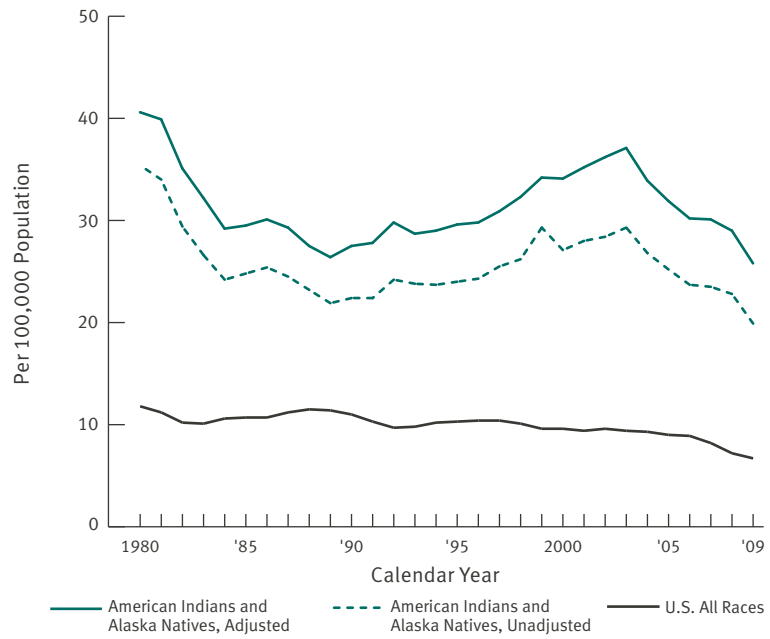
NOTE: Data from 1972 and forward are drawn from specific counties in the IHS service area. The AI/AN death rate columns present data for the three-year period specified and age-adjusted to the 2000 standard population; the U.S. all races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



The age-adjusted AI/AN female motor vehicle death rate of 25.8 for years 2008-2010 reflects a 60 percent decrease from the rate of 64.1 that was observed in 1972-1974. However, AI/AN females died from injuries suffered in motor vehicle accidents during 2008-2010 at a rate that is 3.9 times the rate of 6.7 occurring in the U.S. all races female population in 2009. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 19 Age-Adjusted Motor Vehicle Death Rates for Females



CHARTS AND TABLES

Table 19 Motor Vehicle Deaths and Death Rates for Females

*American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1973-2009
(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
(2010)	181	241						
2008-2010 (2009)	198	264	19.9	25.8	6.7	6.9	3.9	3.7
2007-2009 (2008)	208	278	22.8	29.0	7.2	7.6	4.0	3.8
2006-2008 (2007)	220	282	23.5	30.1	8.2	8.6	3.7	3.5
2005-2007 (2006)	240	318	23.7	30.2	8.9	9.2	3.4	3.3
2004-2006 (2005)	207	271	25.2	31.9	9.0	9.3	3.5	3.4
2003-2005 (2004)	235	299	26.8	33.9	9.3	9.6	3.6	3.5
2002-2004 (2003)	252	330	29.3	37.1	9.4	9.6	3.9	3.9
2001-2003 (2002)	252	327	28.4	36.2	9.6	9.9	3.8	3.7
2000-2002 (2001)	200	261	28.0	35.2	9.4	9.5	3.7	3.7
1999-2001 (2000)	233	294	27.1	34.1	9.6	9.8	3.6	3.5
1998-2000 (1999)	206	273	29.3	34.2	9.6	9.7	3.6	3.5
1997-1999 (1998)	223	278	26.2	32.3	10.1	10.3	3.2	3.1
1996-1998 (1997)	204	253	25.5	30.9	10.4	10.5	3.0	2.9
1995-1997 (1996)	208	257	24.3	29.8	10.4	10.6	2.9	2.8
1994-1996 (1995)	194	247	24.0	29.6	10.3	10.4	2.9	2.8
1993-1995 (1994)	179	218	23.7	29.0	10.2	10.2	2.8	2.8
1992-1994 (1993)	201	249	23.8	28.7	9.8	10.0	2.9	2.9
1991-1993 (1992)	156	197	24.2	29.8	9.7	9.8	3.1	3.0
1990-1992 (1991)	165	218	22.4	27.8	10.3	10.5	2.7	2.6
1989-1991 (1990)	149	186	22.4	27.5	11.0	11.2	2.5	2.5
1988-1990 (1989)	155	186	21.9	26.4	11.4	11.7	2.3	2.3
1987-1989 (1988)	155	188	23.2	27.5	11.5	11.7	2.4	2.4
1986-1988 (1987)	151	185	24.5	29.3	11.2	11.5	2.6	2.5
1985-1987 (1986)	171	202	25.4	30.1	10.7	11.0	2.8	2.7
1984-1986 (1985)	154	184	24.8	29.5	10.7	11.0	2.8	2.7
1983-1985 (1984)	134	166	24.2	29.2	10.6	11.0	2.8	2.7
1982-1984 (1983)	140	175	26.6	32.2	10.1	10.4	3.2	3.1
1981-1983 (1982)	168	204	29.4	35.1	10.2	10.5	3.4	3.3
1980-1982 (1981)	165	193	34.0	39.9	11.2	11.7	3.6	3.4
1979-1981 (1980)	193	230	35.4	40.6	11.8	12.2	3.4	3.3
(1979)	168	192						
1972-1974 (1973)	480	533	58.5	64.1	14.5	14.5	4.4	4.4

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

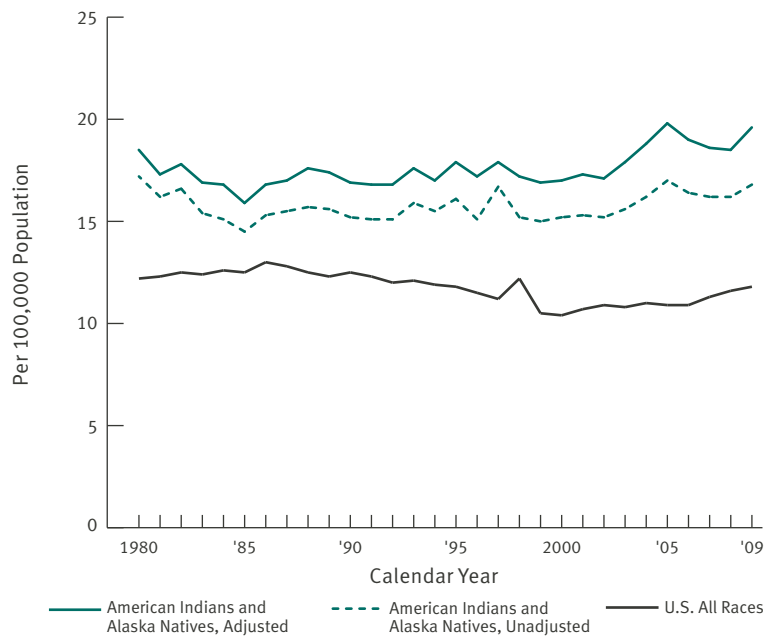
NOTE: Data from 1972 and forward are drawn from specific counties in the IHS service area. The AI/AN death rate columns present data for the three-year period specified and age-adjusted to the 2000 standard population; the U.S. all races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



AI/AN suicides were at a peak for years 1972-1974 (29.4) and then fell to a low of 15.9 in 1984-1986. During the 2008-2010 period, the AI/AN age-adjusted suicide rate of 19.6 was 66 percent higher than the U.S. all races rate of 11.8 for 2009, and 48 percent higher than the suicide rate of 13.2 for the U.S. white population. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 20 Age-Adjusted Suicide Death Rates



CHARTS AND TABLES

Table 20 Suicide Deaths and Death Rates

*American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-2009
(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
(2010)	376	457						
2008-2010 (2009)	336	390	16.8	19.6	11.8	13.2	1.7	1.5
2007-2009 (2008)	311	368	16.2	18.5	11.6	12.9	1.6	1.4
2006-2008 (2007)	292	338	16.2	18.6	11.3	12.5	1.6	1.5
2005-2007 (2006)	326	376	16.4	19.0	10.9	12.2	1.7	1.6
2004-2006 (2005)	317	374	17.0	19.8	10.9	12.1	1.8	1.6
2003-2005 (2004)	315	369	16.2	18.8	11.0	12.0	1.7	1.6
2002-2004 (2003)	255	289	15.6	17.9	10.8	11.8	1.7	1.5
2001-2003 (2002)	261	303	15.2	17.1	10.9	12.0	1.6	1.4
2000-2002 (2001)	258	286	15.3	17.3	10.7	11.7	1.6	1.5
1999-2001 (2000)	238	273	15.2	17.0	10.4	11.3	1.6	1.5
1998-2000 (1999)	235	265	15.0	16.9	10.5	11.3	1.6	1.5
1997-1999 (1998)	252	283	15.2	17.2	12.2	11.1	1.4	1.5
1996-1998 (1997)	234	273	16.7	17.9	11.2	12.1	1.6	1.5
1995-1997 (1996)	225	262	15.1	17.2	11.5	12.4	1.5	1.4
1994-1996 (1995)	205	228	16.1	17.9	11.8	12.7	1.5	1.4
1993-1995 (1994)	242	263	15.5	17.0	11.9	12.7	1.4	1.3
1992-1994 (1993)	204	226	15.9	17.6	12.1	12.9	1.5	1.4
1991-1993 (1992)	193	219	15.1	16.8	12.0	12.8	1.4	1.3
1990-1992 (1991)	184	200	15.1	16.8	12.3	13.2	1.4	1.3
1989-1991 (1990)	195	218	15.2	16.9	12.5	13.3	1.4	1.3
1988-1990 (1989)	192	217	15.6	17.4	12.3	13.1	1.4	1.3
1987-1989 (1988)	185	206	15.7	17.6	12.5	13.3	1.4	1.3
1986-1988 (1987)	187	206	15.5	17.0	12.8	13.7	1.3	1.2
1985-1987 (1986)	158	168	15.3	16.8	13.0	13.9	1.3	1.2
1984-1986 (1985)	172	193	14.5	15.9	12.5	13.4	1.3	1.2
1983-1985 (1984)	148	165	15.1	16.8	12.6	13.5	1.3	1.2
1982-1984 (1983)	161	177	15.4	16.9	12.4	13.2	1.4	1.3
1981-1983 (1982)	154	164	16.6	17.8	12.5	13.3	1.4	1.3
1980-1982 (1981)	157	166	16.2	17.3	12.3	13.1	1.4	1.3
1979-1981 (1980)	146	156	17.2	18.5	12.2	13.0	1.5	1.4
1972-1974 (1973)	351	374	27.6	29.4	13.2	13.9	2.2	2.1
1954-1956 (1955)	39		11.9		9.9	10.4		

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 2000 standard population; the U.S. all races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



For 2008-2010, the highest male AI/AN suicide death rate occurs in the 15-24 age group, and the AI/AN rate of 64.0 for males in this age group is nearly four times the U.S. all races rate of 16.1. The highest AI/AN female suicide death rate (24.0) also occurs in the 15-24 age group, and this rate is over six times the corresponding rate (3.6) for U.S. all race females aged 15-24. However, suicide rates among elderly AI/AN males are lower than corresponding age-specific rates for elderly U.S. all race and U.S. white males. The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 21 Suicide Death Rates by Age and Sex

American Indians and Alaska Natives (2008-2010)

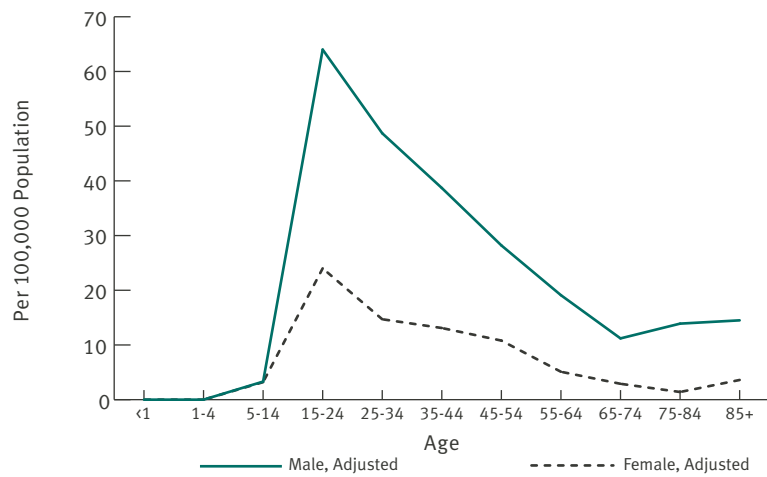


Table 21 Suicide Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	3.3	3.3	3.3	3.3	3.2	3.2
15-24 years	36.3	44.3	54.5	64.0	17.5	24.0
25-34 years	26.1	31.9	39.9	48.7	11.9	14.7
35-44 years	21.8	25.8	33.3	38.7	10.5	13.1
45-54 years	18.2	19.2	26.8	28.2	10.3	10.8
55-64 years	10.9	11.7	17.4	19.1	5.1	5.1
65-74 years	6.3	6.7	10.4	11.2	2.9	2.9
75-84 years	6.7	6.7	13.9	13.9	1.4	1.4
85 years +	7.2	7.2	14.5	14.5	3.6	3.6

Age Group	U.S. All Races			U.S. White		
	Both Sexes	Male	Female	Both Sexes	Male	Female
	Under 1 year	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	0.6	0.8	0.5	0.6	0.8	0.5
15-24 years	10.0	16.1	3.6	10.9	17.6	3.8
25-34 years	13.1	21.0	5.1	14.5	23.2	5.5
35-44 years	16.1	24.9	7.4	18.5	28.2	8.6
45-54 years	19.2	29.3	9.3	21.9	33.3	10.7
55-64 years	16.4	26.1	7.4	18.5	29.0	8.4
65-74 years	13.7	24.3	4.6	15.2	26.6	5.1
75-84 years	15.8	32.9	3.6	17.1	35.3	3.8
85 years +	16.4	44.0	3.2	17.4	46.9	3.2

—* Represents zero.

¹ Adjusted to compensate for misreporting of AI/AN race on state death certificates.

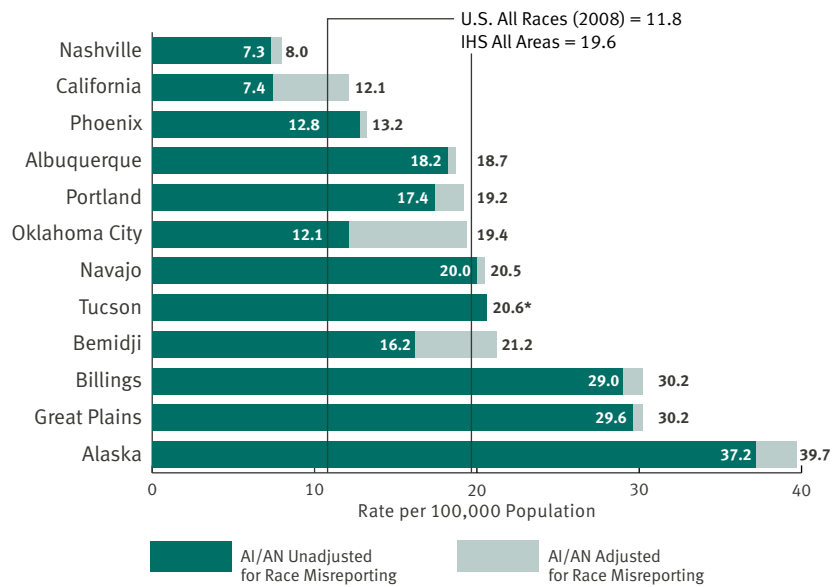
SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



Among IHS Areas, Alaska has the highest age-adjusted suicide death rate. The Alaska rate (39.7) is 31 percent higher than the next two highest Areas (Billings and Great Plains, each with rate of 30.2) and is five times the lowest Area rate (Nashville, 8.0). With a rate of 8.0, Nashville is the only Area to have a suicide rate that is below the U.S. all races rate of 11.8. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 22 Age-Adjusted Suicide Death Rates by Area

Calendar Years 2008-2010



* IHS unadjusted and adjusted rates are the same for misreporting of AI/AN race.

Table 22 Age-Adjusted Suicide Death Rates by Area

Calendar Years 2008-2010

	Deaths		Rate ¹	
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²
U.S. All Races (2009)	36,909		11.8	
All IHS Areas	1,034	1,215	16.8	19.6
Alaska	148	159	37.2	39.7
Albuquerque	66	68	18.2	18.7
Bemidji	61	81	16.2	21.2
Billings	61	64	29.0	30.2
California	46	79	7.4	12.1
Great Plains	117	120	29.6	30.2
Nashville	31	34	7.3	8.0
Navajo	152	156	20.0	20.5
Oklahoma City	133	219	12.1	19.4
Phoenix	85	88	12.8	13.2
Portland	109	122	17.4	19.2
Tucson	25	25	20.6	20.6

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 AI/AN race on the state death certificate.

Age-adjusted homicide rates among AI/AN have declined by 58 percent from their highest point which occurred in 1972-1974. The 2008-2010 age-adjusted AI/AN homicide rate of 11.3 is 2.1 times the U.S. all races homicide rate (5.5) for 2009, and 3.2 times the homicide rate (3.5) of the U.S. white population. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 23 Age-Adjusted Homicide Death Rates

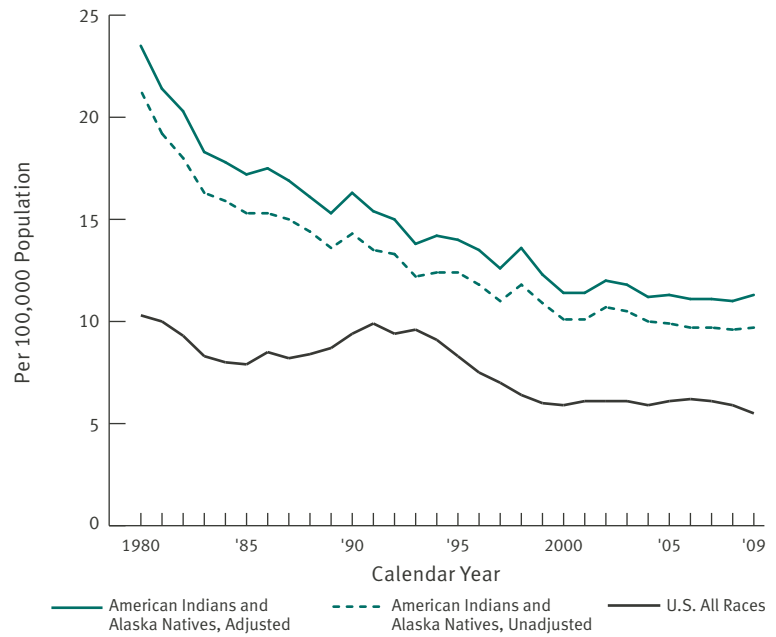




Table 23 Homicide Deaths and Death Rates

*American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-2009
(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
(2010)	201	236						
2008-2010 (2009)	197	234	9.7	11.3	5.5	3.5	2.1	3.2
2007-2009 (2008)	197	226	9.6	11.0	5.9	3.7	1.9	3.0
2006-2008 (2007)	165	187	9.7	11.1	6.1	3.7	1.8	3.0
2005-2007 (2006)	199	233	9.7	11.1	6.2	3.7	1.8	3.0
2004-2006 (2005)	190	221	9.9	11.3	6.1	3.7	1.9	3.1
2003-2005 (2004)	165	187	10.0	11.2	5.9	3.6	1.9	3.1
2002-2004 (2003)	194	218	10.5	11.8	6.1	3.7	1.9	3.2
2001-2003 (2002)	202	236	10.7	12.0	6.1	3.7	2.0	3.2
2000-2002 (2001)	160	186	10.1	11.4	6.1	3.8	1.9	3.0
1999-2001 (2000)	143	162	10.1	11.4	5.9	3.6	1.9	3.2
1998-2000 (1999)	181	206	10.9	12.3	6.0	3.8	2.1	3.2
1997-1999 (1998)	172	199	11.8	13.6	6.4	3.9	2.1	3.5
1996-1998 (1997)	181	217	11.0	12.6	7.0	4.3	1.8	2.9
1995-1997 (1996)	161	178	11.8	13.5	7.5	4.5	1.8	3.0
1994-1996 (1995)	198	231	12.4	14.0	8.3	5.0	1.7	2.8
1993-1995 (1994)	176	201	12.4	14.2	9.1	5.3	1.6	2.7
1992-1994 (1993)	168	190	12.2	13.8	9.6	5.5	1.4	2.5
1991-1993 (1992)	168	185	13.3	15.0	9.4	5.6	1.6	2.7
1990-1992 (1991)	199	229	13.5	15.4	9.9	5.8	1.6	2.7
1989-1991 (1990)	153	180	14.3	16.3	9.4	5.5	1.7	3.0
1988-1990 (1989)	177	205	13.6	15.3	8.7	5.2	1.8	2.9
1987-1989 (1988)	160	178	14.4	16.1	8.4	5.1	1.9	3.2
1986-1988 (1987)	162	185	15.0	16.9	8.2	5.1	2.1	3.3
1985-1987 (1986)	184	213	15.3	17.5	8.5	5.4	2.1	3.2
1984-1986 (1985)	151	174	15.3	17.2	7.9	5.3	2.2	3.2
1983-1985 (1984)	146	156	15.9	17.8	8.0	5.3	2.2	3.4
1982-1984 (1983)	172	198	16.3	18.3	8.3	5.4	2.2	3.4
1981-1983 (1982)	146	166	18.0	20.3	9.3	6.1	2.2	3.3
1980-1982 (1981)	166	178	19.2	21.4	10.0	6.5	2.1	3.3
1979-1981 (1980)	174	198	21.3	23.5	10.3	6.7	2.3	3.5
1972-1974 (1973)	368	398	24.7	26.6	10.3	5.7	2.6	4.7
1954-1956 (1955)	77		23.8		4.8	2.4		

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 2000 standard population; the U.S. all races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

For most age groups, the 2008-2010 age-specific homicide death rate for AI/AN males was generally higher than the corresponding AI/AN female homicide rate. For example, males aged 25 to 34 were 6.1 times more likely to die from homicide than were females in the same age group. For most age groups shown, male and female AI/AN homicide rates are higher than corresponding rates in the U.S. all races and U.S. white populations. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 24 Homicide Death Rates by Age and Sex

American Indians and Alaska Natives (2008-2010)

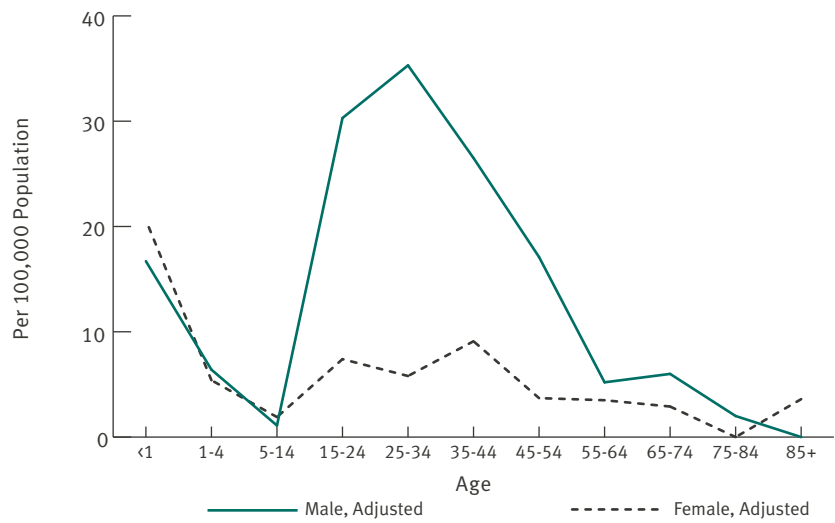




Table 24 Homicide Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹
Under 1 year	13.5	18.6	15.0	16.7	12.0	20.6
1-4 years	4.3	5.9	4.4	6.4	4.1	5.4
5-14 years	1.0	1.5	0.6	1.1	1.5	1.9
15-24 years	15.9	19.1	25.8	30.3	5.6	7.4
25-34 years	17.5	20.8	29.7	35.3	4.9	5.8
35-44 years	15.7	17.7	23.5	26.5	8.0	9.1
45-54 years	9.7	10.1	16.3	17.1	3.7	3.7
55-64 years	4.3	4.3	5.2	5.2	3.5	3.5
65-74 years	4.4	4.4	6.0	6.0	2.9	2.9
75-84 years	0.8	0.8	2.0	2.0	—*	—*
85 years +	2.4	2.4	—*	—*	3.6	3.6

Age Group	U.S. All Races			U.S. White		
	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	7.9	9.0	6.8	6.1	7.1	5.1
1-4 years	2.3	2.3	2.4	1.7	1.6	1.8
5-14 years	0.7	0.9	0.5	0.6	0.7	0.5
15-24 years	11.2	18.8	3.1	5.7	9.1	2.1
25-34 years	10.4	17.0	3.7	5.6	8.3	2.8
35-44 years	6.7	10.3	3.1	4.5	6.3	2.6
45-54 years	4.6	6.8	2.4	3.4	4.9	2.0
55-64 years	2.9	4.2	1.6	2.3	3.2	1.5
65-74 years	2.2	3.2	1.5	1.9	2.5	1.4
75-84 years	2.0	2.6	1.5	1.8	2.3	1.4
85 years +	2.3	3.1	2.0	2.2	2.7	2.0

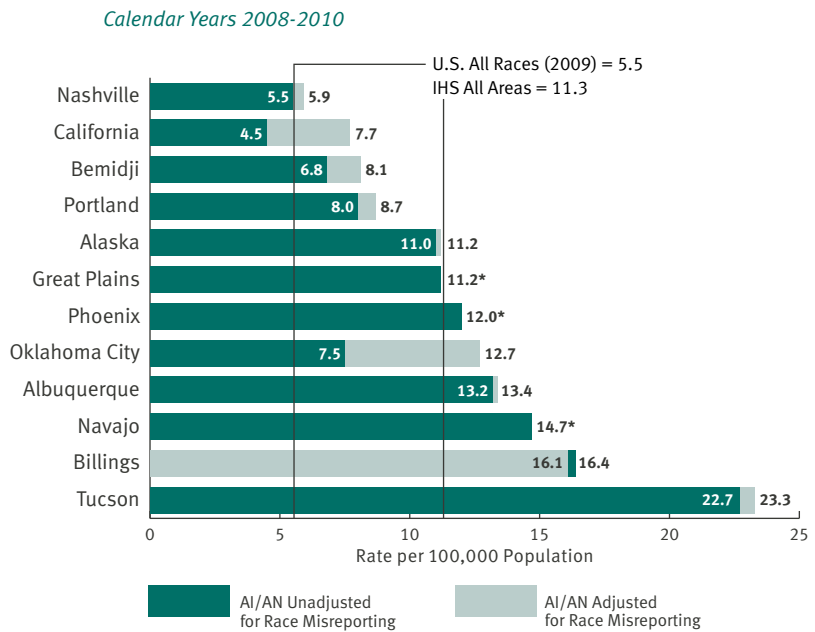
—* Represents zero.

¹ Adjusted to compensate for misreporting of AI/AN race on state death certificates.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

Variability in the age-adjusted homicide rate is apparent among IHS Areas. The highest rate for 2008-2010 is in the Tucson Area (23.3), which had an age-adjusted rate nearly four times that of Nashville, which had the lowest rate (5.9). However, all IHS Areas have age-adjusted homicide rates that exceed the U.S. all races rate of 5.5, and 8 out of the 12 IHS Areas have homicide rates that are more than double the U.S. all races rate. The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 25 Age-Adjusted Homicide Death Rates by Area



* IHS unadjusted and adjusted rates are the same for misreporting of AI/AN race.

Table 25 Age-Adjusted Homicide Death Rates by Area

Calendar Years 2008-2010

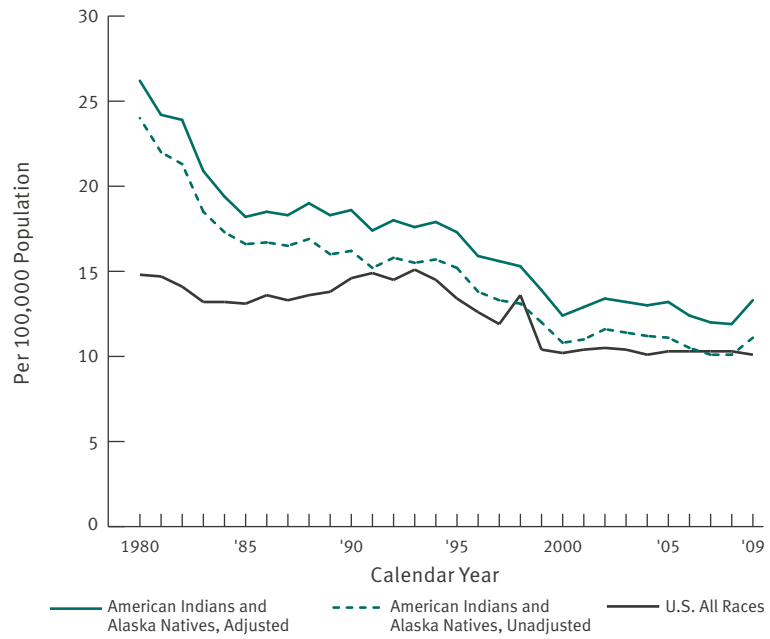
	Deaths		Rate ¹	
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²
U.S. All Races (2009)	16,799		5.5	
All IHS Areas	595	696	9.7	11.3
Alaska	40	41	11.0	11.2
Albuquerque	45	46	13.2	13.4
Bemidji	27	32	6.8	8.1
Billings	34 ³	33 ³	16.4 ³	16.1 ³
California	32	57	4.5	7.7
Great Plains	42	42	11.2	11.2
Nashville	24	26	5.5	5.9
Navajo	101	101	14.7	14.7
Oklahoma City	83	144	7.5	12.7
Phoenix	82	82	12.0	12.0
Portland	56	62	8.0	8.7
Tucson	29	30	22.7	23.3

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 AI/AN race on the state death certificate.
³ The adjusted numbers and rates in the Billings Area are lower than the unadjusted numbers and rates as a result of the linked birth/infant death file (used to obtain the adjusted counts of infant deaths) having less deaths for this cause than did the unadjusted mortality file (2008-2010 data).
 NOTE: Homicides due to legal intervention are not included.



Firearm injury death rates for AI/ANs declined by 49 percent between 1979-1981 and 2008-2010. However, important disparities continue to exist between the AI/AN and the U.S. all races population. The AI/AN age-adjusted rate (13.3) for 2008-2010 is 32 percent greater than the U.S. all races rate (10.1) and 46 percent greater than the U.S. white rate (9.1) for 2009. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on the state death certificates.

Chart 26 Age-Adjusted Firearm Injury Death Rates



CHARTS AND TABLES

Table 26 Firearm Injury¹ Deaths and Death Rates

*American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1980-2009
(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ² to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²				
(2010)	241	294						
2008-2010 (2009)	222	266	11.1	13.3	10.1	9.1	1.3	1.5
2007-2009 (2008)	210	251	10.1	11.9	10.3	9.2	1.2	1.3
2006-2008 (2007)	175	205	10.1	12.0	10.3	9.0	1.2	1.3
2005-2007 (2006)	222	269	10.5	12.4	10.3	8.9	1.2	1.4
2004-2006 (2005)	233	274	11.1	13.2	10.3	9.0	1.3	1.5
2003-2005 (2004)	198	237	11.2	13.0	10.1	8.9	1.3	1.5
2002-2004 (2003)	214	242	11.4	13.2	10.4	9.1	1.3	1.5
2001-2003 (2002)	224	269	11.6	13.4	10.5	9.2	1.3	1.5
2000-2002 (2001)	191	225	11.0	12.9	10.4	9.3	1.2	1.4
1999-2001 (2000)	167	199	10.8	12.4	10.2	9.0	1.2	1.4
1998-2000 (1999)	192	220	12.0	13.9	10.4	9.1	1.3	1.5
1997-1999 (1998)	213	251	13.1	15.3	13.6	11.1	1.1	1.4
1996-1998 (1997)	202	244	13.3	15.6	11.9	12.3	1.3	1.3
1995-1997 (1996)	188	214	13.8	15.9	12.6	10.8	1.3	1.5
1994-1996 (1995)	227	261	15.2	17.3	13.4	11.4	1.3	1.5
1993-1995 (1994)	230	264	15.7	17.9	14.5	12.0	1.2	1.5
1992-1994 (1993)	204	232	15.5	17.6	15.1	12.3	1.2	1.4
1991-1993 (1992)	181	204	15.8	18.0	14.5	12.1	1.2	1.5
1990-1992 (1991)	221	253	15.2	17.4	14.9	12.3	1.2	1.4
1989-1991 (1990)	172	200	16.2	18.6	14.6	12.4	1.3	1.5
1988-1990 (1989)	215	252	16.0	18.3	13.8	11.8	1.3	1.6
1987-1989 (1988)	205	227	16.9	19.0	13.6	11.8	1.4	1.6
1986-1988 (1987)	182	203	16.5	18.3	13.3	11.9	1.4	1.5
1985-1987 (1986)	186	206	16.7	18.5	13.6	12.2	1.4	1.5
1984-1986 (1985)	186	208	16.6	18.2	13.1	12.0	1.4	1.5
1983-1985 (1984)	169	183	17.3	19.4	13.2	12.0	1.5	1.6
1982-1984 (1983)	185	216	18.5	20.9	13.2	11.9	1.6	1.8
1981-1983 (1982)	210	232	21.3	23.9	14.1	12.6	1.7	1.9
1980-1982 (1981)	210	226	22.0	24.2	14.7	12.7	1.6	1.9
1979-1981 (1980)	195	211	24.0	26.2	14.8	12.7	1.5	2.1
(1979)	229	250						

¹ Includes deaths with ICD-10 codes: U01.4, terrorism involving firearms (homicide); W32-W34, accidental discharge of firearms; X72-X74, intentional self-harm (suicide) by discharge of firearms; X93-X95, assault (homicide) by discharge of firearms; Y22-Y24, discharge of firearms, undetermined intent; and Y35.0, legal intervention involving firearm discharge.

² Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Firearm death data are introduced in 1978 for the IHS service area. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 2000 standard population; the U.S. all races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



For all age groups older than four years, age-specific firearm injury death rates are higher for AI/AN males than for AI/AN females. The greatest apparent sex difference is seen among persons aged 15 to 24 years. In this age group, the AI/AN male rate of 49.2 is 9.1 times the corresponding female rate (5.4). Large differences between the sexes are also seen in other age groups, and also exist in the U.S. all races and U.S. white populations to varying degree. The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 27 Firearm Injury Death Rates by Age and Sex

American Indians and Alaska Natives (2008-2010)

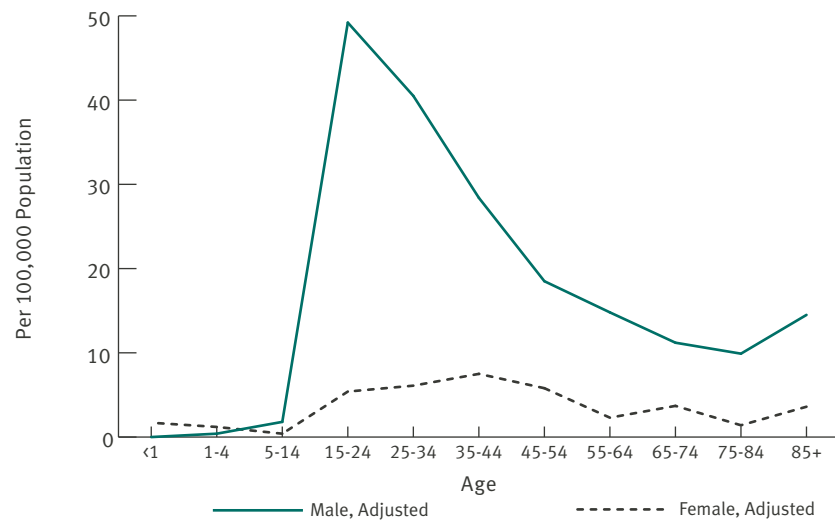


Table 27 Firearm Injury¹ Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²
Under 1 year	–*	0.8	–*	–*	–*	1.7
1-4 years	0.8	0.8	0.4	0.4	1.2	1.2
5-14 years	1.0	1.1	1.7	1.8	0.4	0.4
15-24 years	22.5	27.6	40.5	49.2	3.9	5.4
25-34 years	18.5	23.6	31.9	40.5	4.7	6.1
35-44 years	14.5	17.9	23.2	28.4	5.9	7.5
45-54 years	11.1	11.9	17.4	18.5	5.3	5.8
55-64 years	7.4	8.2	13.0	14.8	2.3	2.3
65-74 years	6.7	7.1	10.4	11.2	3.7	3.7
75-84 years	5.0	5.0	9.9	9.9	1.4	1.4
85 years +	7.2	7.2	14.5	14.5	3.6	3.6

Age Group	U.S. All Races			U.S. White		
	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	0.3	0.3	0.4	0.2	0.2	0.1
1-4 years	0.4	0.5	0.4	0.3	0.4	0.3
5-14 years	0.7	1.0	0.3	0.6	0.9	0.3
15-24 years	14.4	25.3	3.1	9.8	16.9	2.4
25-34 years	14.5	25.0	3.9	10.9	17.9	3.6
35-44 years	11.9	19.9	3.9	11.2	18.2	4.1
45-54 years	11.8	19.6	4.3	12.5	20.5	4.6
55-64 years	10.8	19.1	3.2	11.9	20.6	3.6
65-74 years	10.9	20.6	2.6	12.1	22.5	2.9
75-84 years	13.3	28.8	2.2	14.4	30.8	2.4
85 years +	12.5	35.7	1.3	13.5	38.4	1.4

–* Represents zero.

¹ Includes deaths with ICD-10 codes: U01.4, terrorism involving firearms (homicide); W32-W34, accidental discharge of firearms; X72-X74, intentional self-harm (suicide) by discharge of firearms; X93-X95, assault (homicide) by discharge of firearms; Y22-Y24, discharge of firearms, undetermined intent; and Y35.0, legal intervention involving firearm discharge.

² Adjusted to compensate for misreporting of AI/AN race on state death certificates.

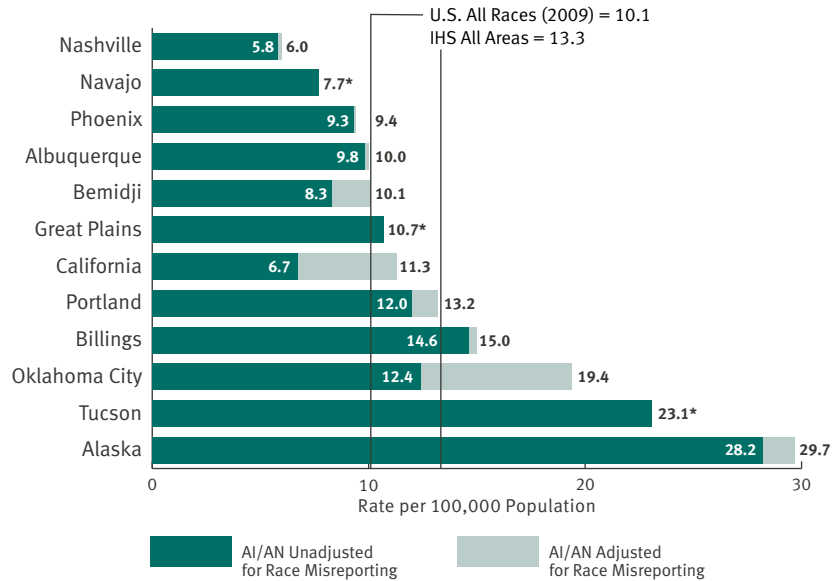
SOURCE: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



The AI/AN age-adjusted firearm injury death rate varies considerably among the IHS Areas. The highest Area rate (Alaska, 29.7) is nearly five times the lowest Area rate (Nashville, 6.0). Four Areas (Albuquerque, Phoenix, Navajo, and Nashville) have age-adjusted firearm injury death rates that are lower than the U.S. all races rate of 10.1, and the rate in Bemidji is equal to the U.S. all races rate. The remaining seven IHS Areas have rates that are higher than the U.S. all races rate. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 28 Age-Adjusted Firearm Injury Death Rates by Area

Calendar Years 2008-2010



* IHS unadjusted and adjusted rates are the same for misreporting of AI/AN race.

Table 28 Age-Adjusted Firearm Injury¹ Death Rates by Area

Calendar Years 2008-2010

	Deaths		Rate ²	
	Unadjusted	Adjusted ³	Unadjusted	Adjusted ³
U.S. All Races (2009)	31,347		10.1	
All IHS Areas	673	811	11.1	13.3
Alaska	112	118	28.2	29.7
Albuquerque	35	36	9.8	10.0
Bemidji	32	39	8.3	10.1
Billings	30	31	14.6	15.0
California	43	75	6.7	11.3
Great Plains	38	38	10.7	10.7
Nashville	25	26	5.8	6.0
Navajo	52	52	7.7	7.7
Oklahoma City	134	214	12.4	19.4
Phoenix	65	66	9.3	9.4
Portland	77	86	12.0	13.2
Tucson	30	30	23.1	23.1

¹ Includes deaths with ICD-10 codes: accidental discharge of firearms—W32-W34; suicide and self-inflicted injury by firearms—X72-X74; assault by firearms and legal intervention—X93-X95,Y35.0; terrorism involving firearms—U01.4; 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 AI/AN race on the state death certificate.

AI/AN death rates associated with fire and smoke injuries have declined considerably over the last three decades. The AI/AN age-adjusted fire and smoke injury death rate of 7.6 occurring in 1979-1981 was 3.3 times the rate of 2.3 occurring in 2008-2010. Despite these reductions, the AI/AN death rate due to fire and smoke injury remains more than twice that of both the U.S. all races and U.S. white populations. The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 29 Age-Adjusted Fire and Smoke Injury Death Rates

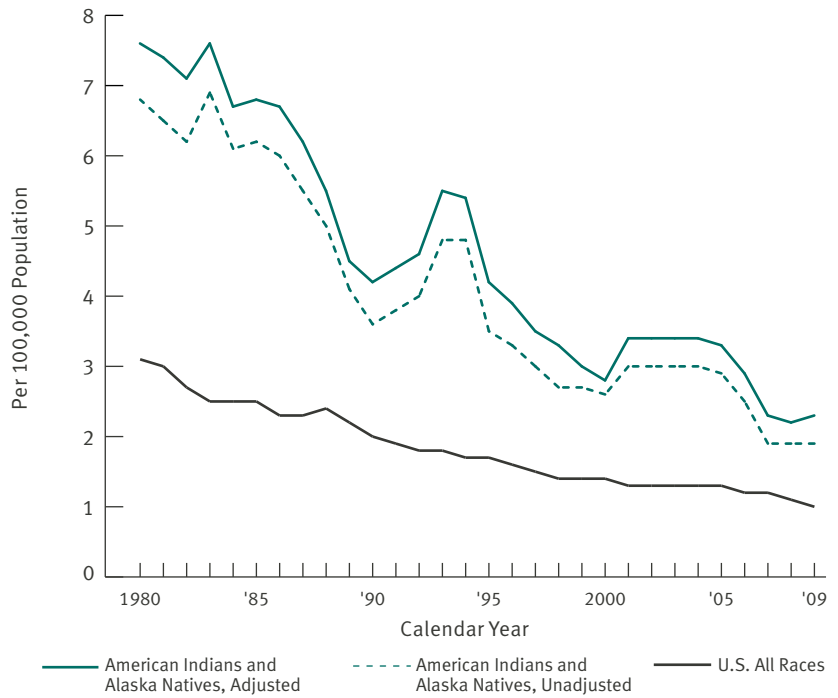




Table 29 Fire and Smoke Injury¹ Deaths and Death Rates

*American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1980-2009
(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ² to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²				
(2010)	40	57						
2008-2010 (2009)	37	42	1.9	2.3	1.0	0.9	2.3	2.6
2007-2009 (2008)	30	35	1.9	2.2	1.1	1.0	2.0	2.2
2006-2008 (2007)	32	40	1.9	2.3	1.2	1.1	1.9	2.1
2005-2007 (2006)	34	40	2.5	2.9	1.2	1.1	2.4	2.6
2004-2006 (2005)	57	65	2.9	3.3	1.3	1.1	2.5	3.0
2003-2005 (2004)	46	52	3.0	3.4	1.3	1.1	2.6	3.1
2002-2004 (2003)	34	40	3.0	3.4	1.3	1.2	2.6	2.8
2001-2003 (2002)	55	65	3.0	3.4	1.3	1.1	2.6	3.1
2000-2002 (2001)	42	47	3.0	3.4	1.3	1.1	2.6	3.1
1999-2001 (2000)	36	41	2.6	2.8	1.4	1.2	2.0	2.3
1998-2000 (1999)	31	34	2.7	3.0	1.4	1.2	2.1	2.5
1997-1999 (1998)	42	51	2.7	3.3	1.4	1.2	2.4	2.8
1996-1998 (1997)	32	49	3.0	3.5	1.5	1.2	2.3	2.9
1995-1997 (1996)	42	45	3.3	3.9	1.6	1.3	2.4	3.0
1994-1996 (1995)	56	70	3.5	4.2	1.7	1.3	2.5	3.2
1993-1995 (1994)	67	81	4.8	5.4	1.7	1.4	3.2	3.9
1992-1994 (1993)	51	60	4.8	5.5	1.8	1.4	3.1	3.9
1991-1993 (1992)	51	57	4.0	4.6	1.8	1.4	2.6	3.3
1990-1992 (1991)	42	54	3.8	4.4	1.9	1.5	2.3	2.9
1989-1991 (1990)	39	46	3.6	4.2	2.0	1.6	2.1	2.6
1988-1990 (1989)	46	51	4.1	4.5	2.2	1.7	2.0	2.6
1987-1989 (1988)	45	49	5.0	5.5	2.4	1.8	2.3	3.1
1986-1988 (1987)	66	79	5.5	6.2	2.3	1.8	2.7	3.4
1985-1987 (1986)	56	66	6.0	6.7	2.3	1.8	2.9	3.7
1984-1986 (1985)	50	57	6.2	6.8	2.5	2.0	2.7	3.4
1983-1985 (1984)	74	80	6.1	6.7	2.5	2.0	2.7	3.4
1982-1984 (1983)	37	42	6.9	7.6	2.5	2.0	3.0	3.8
1981-1983 (1982)	56	64	6.2	7.1	2.7	2.1	2.6	3.4
1980-1982 (1981)	49	57	6.5	7.4	3.0	2.4	2.5	3.1
1979-1981 (1980)	42	45	6.8	7.6	3.1	2.5	2.5	3.0

¹ Includes deaths with ICD-10 codes: U01.3, X00-X19, X76-X77, X97-X98, Y26-Y27, and Y36.3.

² Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 2000 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

Variability exists in age-specific AI/AN death rates for fire and smoke injuries across age groups, but no consistent age trend is apparent. The highest rate (5.2) for AI/AN males occurs among children aged 1 to 4 years, and the highest rate (3.6) for AI/AN females occurs among persons aged 85 or older. For most age groups, male AI/AN rates are higher than the corresponding AI/AN female rates. The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 30 Fire and Smoke Injury Death Rates by Age and Sex

American Indians and Alaska Natives (2008-2010)

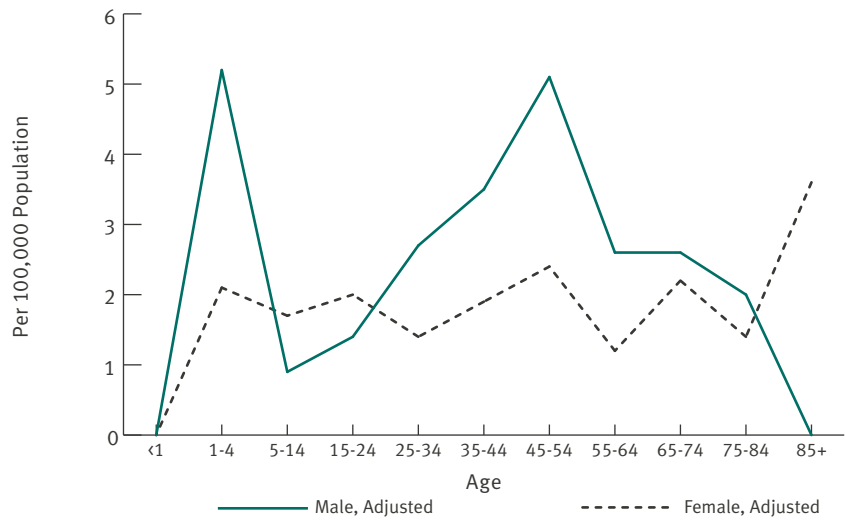




Table 30 Fire and Smoke Injury¹ Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	2.4	3.7	3.6	5.2	1.2	2.1
5-14 years	0.8	1.3	0.6	0.9	1.1	1.7
15-24 years	1.3	1.7	1.4	1.4	1.1	2.0
25-34 years	1.6	2.1	2.3	2.7	0.9	1.4
35-44 years	2.0	2.7	2.7	3.5	1.3	1.9
45-54 years	3.4	3.7	4.8	5.1	2.1	2.4
55-64 years	1.9	1.9	2.6	2.6	1.2	1.2
65-74 years	2.4	2.4	2.6	2.6	2.2	2.2
75-84 years	1.7	1.7	2.0	2.0	1.4	1.4
85 years +	2.4	2.4	—*	—*	3.6	3.6

Age Group	U.S. All Races			U.S. White		
	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	0.7	0.8	0.7	0.6	0.6	0.5
1-4 years	1.1	1.3	0.9	0.8	1.0	0.6
5-14 years	0.4	0.4	0.4	0.3	0.3	0.2
15-24 years	0.4	0.5	0.3	0.4	0.5	0.2
25-34 years	0.6	0.8	0.4	0.6	0.8	0.4
35-44 years	0.7	0.9	0.5	0.7	0.8	0.5
45-54 years	1.2	1.5	0.8	1.1	1.4	0.7
55-64 years	1.4	1.9	1.0	1.3	1.7	0.9
65-74 years	2.0	2.4	1.7	1.9	2.1	1.7
75-84 years	3.2	4.3	2.4	3.0	4.0	2.2
85 years +	4.5	6.4	3.6	3.9	5.5	3.1

—* Represents zero.

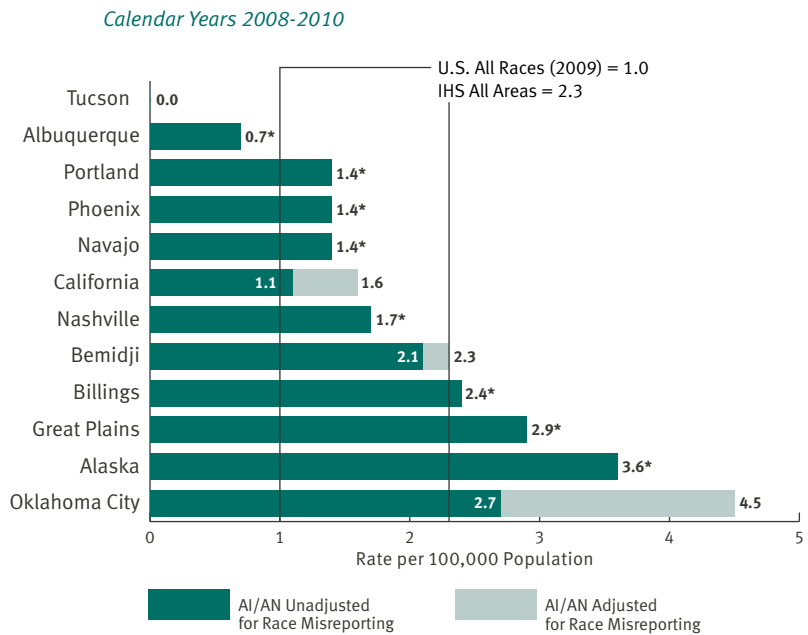
¹ Includes deaths with ICD-10 codes: U01.3, X00-X19, X76-X77, X97-X98, Y26-Y27, and Y36.3.

² Adjusted to compensate for misreporting of AI/AN race on state death certificates.

SOURCE: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

Age-adjusted fire and smoke injury death rates display variability among the IHS Areas. The Tucson Area had no deaths from fire and smoke injury during 2008-2010. Among the remaining areas, the highest Area rate (Oklahoma City, 4.5) is 6.4 times the lowest non-zero Area rate (Albuquerque, 0.7). The aggregate age-adjusted rate of 2.3 for all IHS Areas in 2008-2010 is more than twice the U.S. all races rate of 1.0 for 2009. The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 31 Age-Adjusted Fire and Smoke Injury Death Rates by Area



* IHS unadjusted and adjusted rates are the same for misreporting of AI/AN race.

Table 31 Age-Adjusted Fire and Smoke Injury¹ Death Rates by Area

Calendar Years 2008-2010

	Deaths		Rate ²	
	Unadjusted	Adjusted ³	Unadjusted	Adjusted ³
U.S. All Races (2009)	3,195		1.0	
All IHS Areas	107	134	1.9	2.3
Alaska	13	13	3.6	3.6
Albuquerque	*	*	0.7	0.7
Bemidji	*	*	2.1	2.3
Billings	*	*	2.4	2.4
California	*	*	1.1	1.6
Great Plains	11	11	2.9	2.9
Nashville	*	*	1.7	1.7
Navajo	10	10	1.4	1.4
Oklahoma City	29	52	2.7	4.5
Phoenix	*	*	1.4	1.4
Portland	*	*	1.4	1.4
Tucson	—*	—*	—*	—*

—* Represents zero.

* The number of deaths is greater than zero but less than 10.

¹ Includes deaths with ICD-10 codes: U01.3, X00-X19, X76-X77, X97-X98, Y26-Y27, and Y36.3.

² Age-adjusted rate per 100,000 population.

³ Adjusted to compensate for misreporting of AI/AN race on the state death certificate.



AI/AN fall injury death rates have fluctuated. The rate of 10.2 for 2008-2010 is 4.1 percent higher than the rate of 9.8 reported for 1979-1981. For all reporting periods, AI/AN rates exceed those of both the U.S. all races and U.S. white populations. Over the entire range of years reported, AI/AN rates range from approximately 30 percent to 70 percent higher than the corresponding U.S. all races and U.S. white rates. During 2008-2010, the AI/AN rate (10.2) was 34 percent higher than the U.S. all races rate (7.6) and 26 percent higher than the U.S. white rate. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 32 Age-Adjusted Fall Injury Death Rates

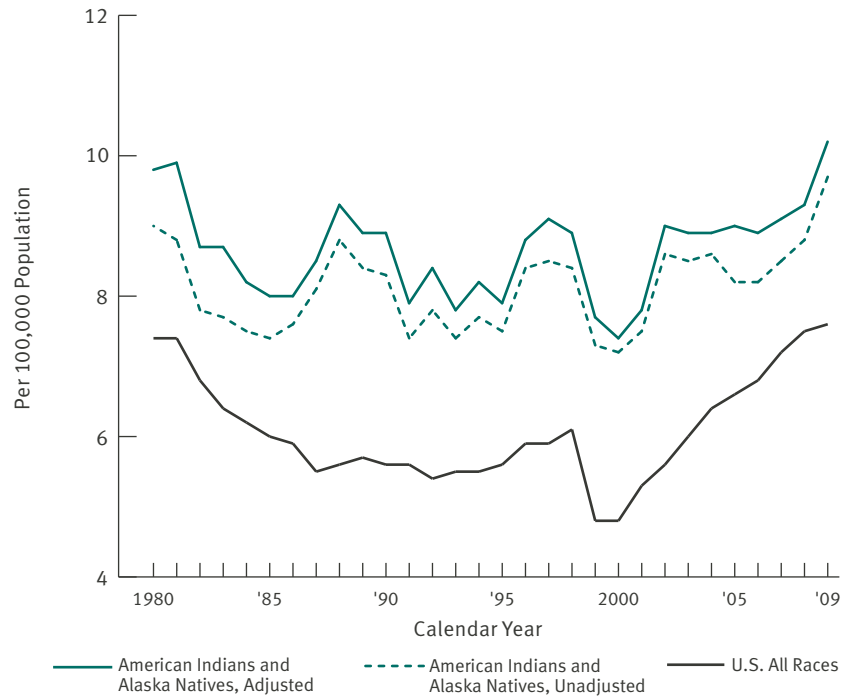


Table 32 Fall Injury¹ Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1980-2009
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ² to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²				
(2010)	126	133						
2008-2010 (2009)	111	116	9.7	10.2	7.6	8.1	1.3	1.3
2007-2009 (2008)	109	115	8.8	9.3	7.5	8.0	1.2	1.2
2006-2008 (2007)	100	110	8.5	9.1	7.2	7.7	1.3	1.2
2005-2007 (2006)	105	111	8.2	8.9	6.8	7.2	1.3	1.2
2004-2006 (2005)	96	104	8.2	9.0	6.6	6.9	1.4	1.3
2003-2005 (2004)	88	92	8.6	8.9	6.4	6.7	1.4	1.3
2002-2004 (2003)	96	101	8.5	8.9	6.0	6.2	1.5	1.4
2001-2003 (2002)	78	83	8.6	9.0	5.6	5.9	1.6	1.5
2000-2002 (2001)	72	75	7.5	7.8	5.3	5.5	1.5	1.4
1999-2001 (2000)	59	62	7.2	7.4	4.8	5.0	1.5	1.5
1998-2000 (1999)	60	61	7.3	7.7	4.8	5.0	1.6	1.5
1997-1999 (1998)	74	84	8.4	8.9	6.1	6.3	1.5	1.4
1996-1998 (1997)	75	80	8.5	9.1	5.9	6.1	1.5	1.5
1995-1997 (1996)	56	58	8.4	8.8	5.9	6.1	1.5	1.4
1994-1996 (1995)	69	73	7.5	7.9	5.6	5.8	1.4	1.4
1993-1995 (1994)	54	57	7.7	8.2	5.5	5.7	1.5	1.4
1992-1994 (1993)	62	68	7.4	7.8	5.5	5.6	1.4	1.4
1991-1993 (1992)	48	51	7.8	8.4	5.4	5.6	1.6	1.5
1990-1992 (1991)	50	55	7.4	7.9	5.6	5.7	1.4	1.4
1989-1991 (1990)	45	46	8.3	8.9	5.6	5.6	1.6	1.6
1988-1990 (1989)	61	67	8.4	8.9	5.7	5.6	1.6	1.6
1987-1989 (1988)	50	53	8.8	9.3	5.6	5.7	1.7	1.6
1986-1988 (1987)	51	54	8.1	8.5	5.5	5.6	1.5	1.5
1985-1987 (1986)	46	49	7.6	8.0	5.9	5.6	1.4	1.4
1984-1986 (1985)	34	38	7.4	8.0	6.0	6.0	1.3	1.3
1983-1985 (1984)	42	47	7.5	8.2	6.2	6.1	1.3	1.3
1982-1984 (1983)	41	46	7.7	8.7	6.4	6.3	1.4	1.4
1981-1983 (1982)	35	41	7.8	8.7	6.8	6.4	1.3	1.4
1980-1982 (1981)	49	53	8.8	9.9	7.4	6.9	1.3	1.4
1979-1981 (1980)	55	64	9.0	9.8	7.4	7.4	1.3	1.3

¹ Includes unintentional fall-related deaths (ICD-10 codes W00-W19).

² Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 2000 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



Fall injury death rates show strong associations with increasing age for both sexes and in all populations examined. The rate of 195.5 seen for all AI/AN aged 85 and older is 27 times the rate of 7.2 for AI/AN adults aged 55 to 64. Similar patterns are seen in the U.S. all races and U.S. white populations, reflecting the strong association of fall injury death risk with advanced age. Age-specific rates for AI/AN males are consistently higher than AI/AN females of the same age, and this gender difference is also apparent in the U.S. all races and U.S. white populations. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 33 Fall Injury Death Rates by Age and Sex

American Indians and Alaska Natives (2008-2010)

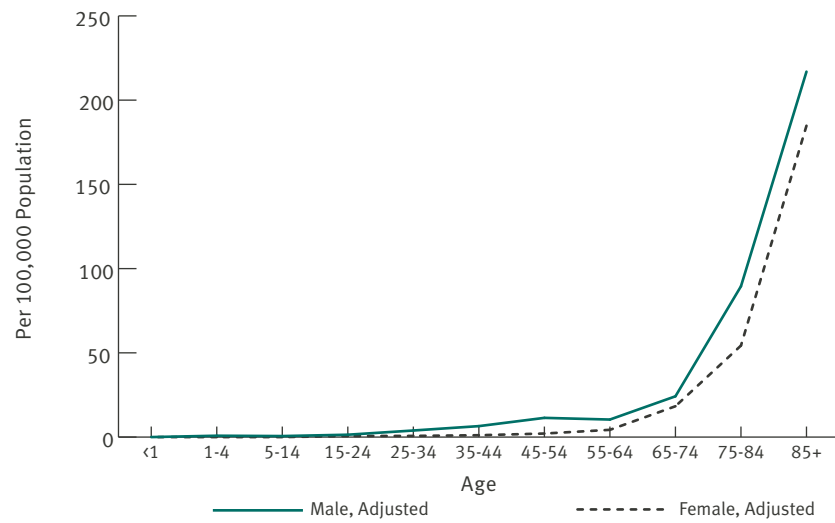


Table 33 Fall Injury¹ Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	0.2	0.4	0.4	0.8	—*	—*
5-14 years	0.2	0.3	0.4	0.6	—*	—*
15-24 years	0.9	1.0	1.4	1.4	0.4	0.6
25-34 years	1.8	2.3	2.9	3.9	0.7	0.7
35-44 years	3.5	3.8	6.0	6.5	1.1	1.1
45-54 years	6.3	6.6	10.8	11.4	2.1	2.1
55-64 years	7.2	7.2	10.4	10.4	4.3	4.3
65-74 years	20.2	21.0	23.3	24.2	17.5	18.3
75-84 years	65.7	69.0	83.5	89.5	52.9	54.3
85 years +	193.1	195.5	209.6	216.9	184.8	184.8

Age Group	U.S. All Races			U.S. White		
	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	0.5	0.7	0.2	0.5	0.8	0.2
1-4 years	0.3	0.4	0.2	0.3	0.3	0.2
5-14 years	0.1	0.1	0.1	0.1	0.1	0.1
15-24 years	0.4	0.8	0.1	0.5	0.9	0.1
25-34 years	0.7	1.2	0.2	0.8	1.4	0.3
35-44 years	1.3	2.1	0.5	1.4	2.2	0.6
45-54 years	3.0	4.5	1.6	3.1	4.6	1.6
55-64 years	5.3	7.7	3.1	5.5	7.9	3.3
65-74 years	13.4	17.6	9.8	14.0	18.3	10.3
75-84 years	53.6	67.8	43.5	57.1	71.3	46.7
85 years +	197.2	234.8	179.3	209.5	246.9	191.4

—* Represents zero.

¹ Includes unintentional fall-related deaths (ICD-10 codes W00-W19).

² Adjusted to compensate for misreporting of AI/AN race on state death certificates.

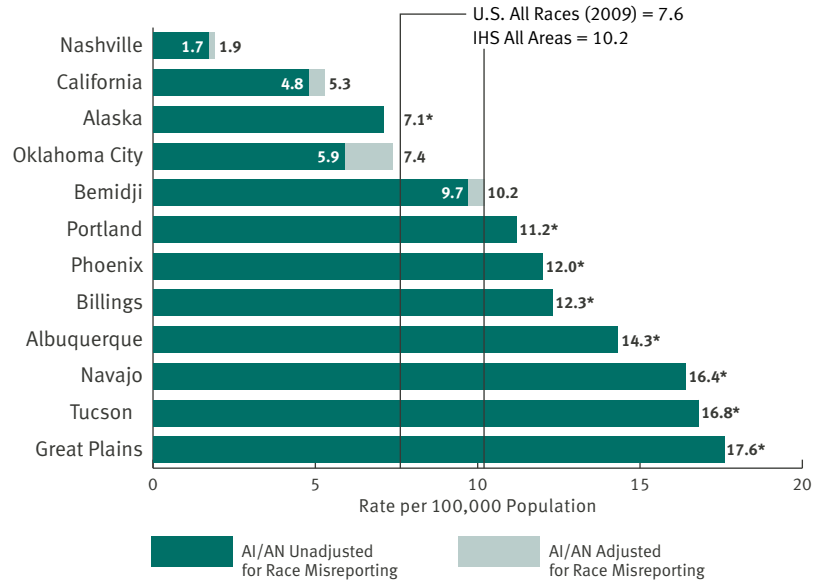
SOURCE: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



The AI/AN age-adjusted fall injury death rates vary greatly among the IHS Areas. The highest Area rate (Great Plains, 17.6) is 9.3 times the lowest Area rate (Nashville, 1.9) during 2008-2010. The overall IHS rate (10.2) is 34 percent higher than the U.S. all races rate (7.6), and eight out of twelve IHS Area rates exceed the U.S. all races rate. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on the state death certificates.

Chart 34 Age-Adjusted Fall Injury Death Rates by Area

Calendar Years 2008-2010



* IHS unadjusted and adjusted rates are the same for misreporting of AI/AN race.

Table 34 Age-Adjusted Fall Injury¹ Death Rates by Area

Calendar Years 2008-2010

	Deaths		Rate ²	
	Unadjusted	Adjusted ³	Unadjusted	Adjusted ³
U.S. All Races (2009)	24,792		7.6	
All IHS Areas	346	364	9.7	10.2
Alaska	16	16	7.1	7.1
Albuquerque	31	31	14.3	14.3
Bemidji	24	26	9.7	10.2
Billings	15	15	12.3	12.3
California	17	19	4.8	5.3
Great Plains	34	34	17.6	17.6
Nashville	*	*	1.7	1.9
Navajo	80	80	16.4	16.4
Oklahoma City	44	57	5.9	7.4
Phoenix	39	39	12.0	12.0
Portland	33	33	11.2	11.2
Tucson	*	*	16.8	16.8

* The number of deaths is greater than zero but less than 10.

¹ Includes unintentional fall-related deaths (ICD-10 codes W00-W19).

² Age-adjusted rate per 100,000 population.

³ Adjusted to compensate for misreporting of AI/AN race on the state death certificate.

Drowning injury death rates have declined in the AI/AN population during the past three decades. The AI/AN age-adjusted drowning injury death rate of 3.0 during 2008-2010 reflects a 68 percent reduction compared to the highest rate (9.5) observed during 1979-1981. The drowning injury death rate disparity between the AI/AN population and the U.S. all races and U.S. white populations has also decreased over time. However, despite these improvements, the 2008-2010 AI/AN rate (3.0) is still 2.7 times the U.S. all races and U.S. white rates (both 1.1 during 2009). The AI/AN rates have been adjusted to compensate for misreporting of AI/AN rate on state death certificates.

Chart 35 Age-Adjusted Drowning Injury Death Rates

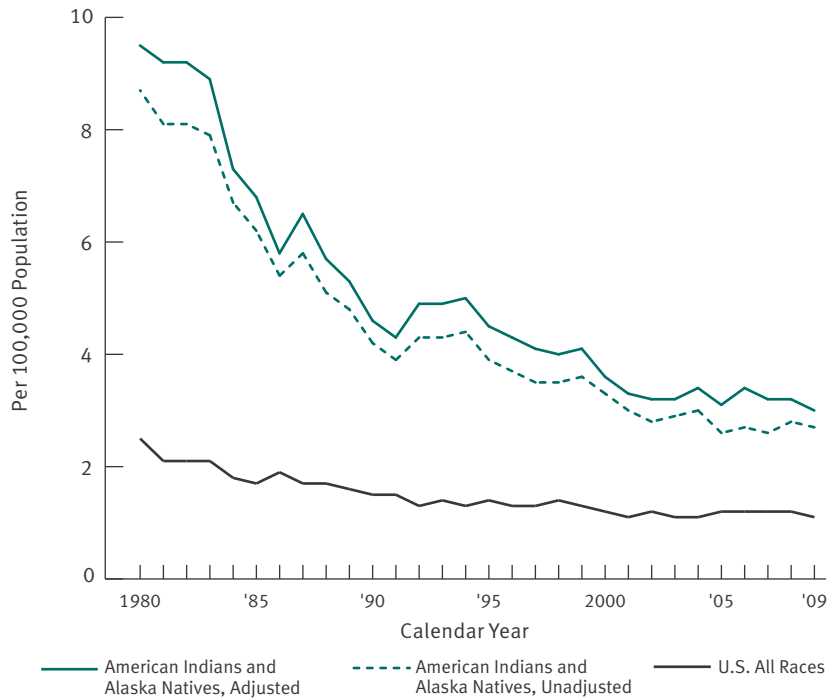




Table 35 Drowning Injury¹ Deaths and Death Rates

*American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1980-2009
(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ² to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²				
(2010)	56	65						
2008-2010 (2009)	48	52	2.7	3.0	1.1	1.1	2.7	2.7
2007-2009 (2008)	57	65	2.8	3.2	1.2	1.1	2.7	2.9
2006-2008 (2007)	55	74	2.6	3.2	1.2	1.1	2.7	2.9
2005-2007 (2006)	38	48	2.7	3.4	1.2	1.2	2.8	2.8
2004-2006 (2005)	57	71	2.6	3.1	1.2	1.2	2.6	2.6
2003-2005 (2004)	47	50	3.0	3.4	1.1	1.1	3.1	3.1
2002-2004 (2003)	52	63	2.9	3.2	1.1	1.1	2.9	2.9
2001-2003 (2002)	51	58	2.8	3.2	1.2	1.1	2.7	2.9
2000-2002 (2001)	40	44	3.0	3.3	1.1	1.1	3.0	3.0
1999-2001 (2000)	65	74	3.3	3.6	1.2	1.2	3.0	3.0
1998-2000 (1999)	57	66	3.6	4.1	1.3	1.2	3.2	3.4
1997-1999 (1998)	48	56	3.5	4.0	1.4	1.3	2.9	3.1
1996-1998 (1997)	61	75	3.5	4.1	1.3	1.2	3.2	3.4
1995-1997 (1996)	54	61	3.7	4.3	1.3	1.2	3.3	3.6
1994-1996 (1995)	64	74	3.9	4.5	1.4	1.3	3.2	3.5
1993-1995 (1994)	61	69	4.4	5.0	1.3	1.1	3.8	4.5
1992-1994 (1993)	72	83	4.3	4.9	1.4	1.3	3.5	3.8
1991-1993 (1992)	51	57	4.3	4.9	1.3	1.2	3.8	4.1
1990-1992 (1991)	46	54	3.9	4.3	1.5	1.3	2.9	3.3
1989-1991 (1990)	50	51	4.2	4.6	1.5	1.4	3.1	3.3
1988-1990 (1989)	55	61	4.8	5.3	1.6	1.4	3.3	3.8
1987-1989 (1988)	70	82	5.1	5.7	1.7	1.5	3.4	3.8
1986-1988 (1987)	55	61	5.8	6.5	1.7	1.5	3.8	4.3
1985-1987 (1986)	75	86	5.4	5.8	1.9	1.7	3.1	3.4
1984-1986 (1985)	52	54	6.2	6.8	1.7	1.6	4.0	4.3
1983-1985 (1984)	66	73	6.7	7.3	1.8	1.6	4.1	4.6
1982-1984 (1983)	75	81	7.9	8.9	2.1	1.9	4.2	4.7
1981-1983 (1982)	82	96	8.1	9.2	2.1	1.9	4.4	4.8
1980-1982 (1981)	76	85	8.1	9.2	2.1	1.9	4.4	4.8
1979-1981 (1980)	76	83	8.7	9.5	2.5	2.2	3.8	4.3

¹ Includes deaths resulting from accidental drowning and submersion (ICD-10 codes W65-W74).

² Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 2000 standard population; the U.S. all races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

The age-specific drowning injury death rate (7.2) is highest for AI/AN males aged 25-34 years, while the highest AI/AN female rate (1.9) occurs in the 35-44 year age group. For most age groups examined, AI/AN drowning injury death rates are higher among males than females. The highest AI/AN male drowning death rate (7.2, 25-34 years) is 3.8 times the highest female AI/AN rate (1.9, 35-44 years). The lowest drowning death rates for both AI/AN males and females are for the oldest age group (85 and older), which had no drowning injury deaths during 2008-2010; there were also no drowning deaths during 2008-2010 among AI/AN females aged 65-74 and 75-84. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 36 Drowning Injury Death Rates by Age and Sex

American Indians and Alaska Natives (2008-2010)

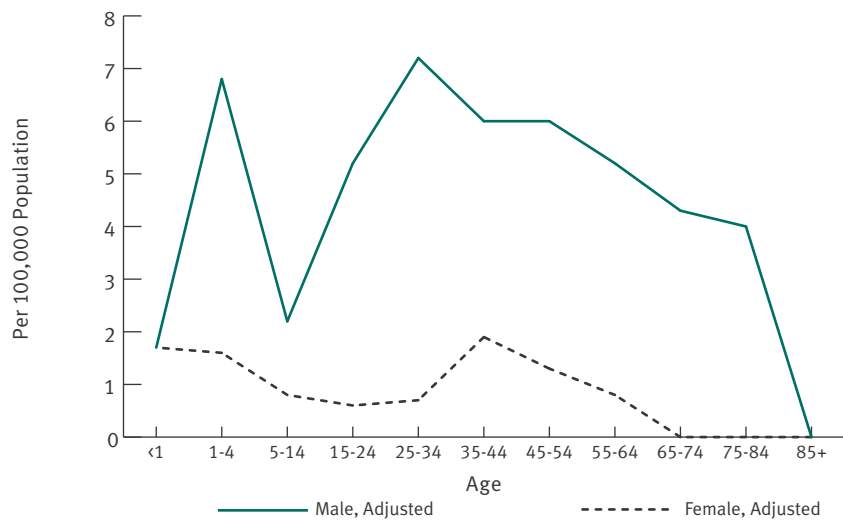




Table 36 Drowning Injury¹ Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²
Under 1 year	1.7	1.7	1.7	1.7	1.7	1.7
1-4 years	3.1	4.3	4.8	6.8	1.2	1.6
5-14 years	1.4	1.5	2.0	2.2	0.8	0.8
15-24 years	2.5	2.9	4.5	5.2	0.4	0.6
25-34 years	3.3	4.0	6.1	7.2	0.5	0.7
35-44 years	3.8	3.9	5.7	6.0	1.9	1.9
45-54 years	3.3	3.6	5.7	6.0	1.1	1.3
55-64 years	2.9	2.9	5.2	5.2	0.8	0.8
65-74 years	2.0	2.0	4.3	4.3	—*	—*
75-84 years	1.7	1.7	4.0	4.0	—*	—*
85 years +	—*	—*	—*	—*	—*	—*

Age Group	U.S. All Races			U.S. White		
	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	1.1	1.2	1.0	1.1	1.0	1.2
1-4 years	2.8	3.6	1.9	3.1	3.9	2.2
5-14 years	0.5	0.7	0.3	0.4	0.6	0.2
15-24 years	1.3	2.2	0.3	1.2	2.1	0.3
25-34 years	1.0	1.6	0.3	0.9	1.5	0.3
35-44 years	0.9	1.6	0.3	0.9	1.5	0.3
45-54 years	1.1	1.7	0.5	1.2	1.7	0.6
55-64 years	1.2	1.9	0.5	1.2	1.9	0.5
65-74 years	1.2	2.0	0.5	1.2	2.0	0.5
75-84 years	1.6	2.4	0.9	1.5	2.4	0.8
85 years +	1.8	3.1	1.1	1.8	3.2	1.0

—* Represents zero.

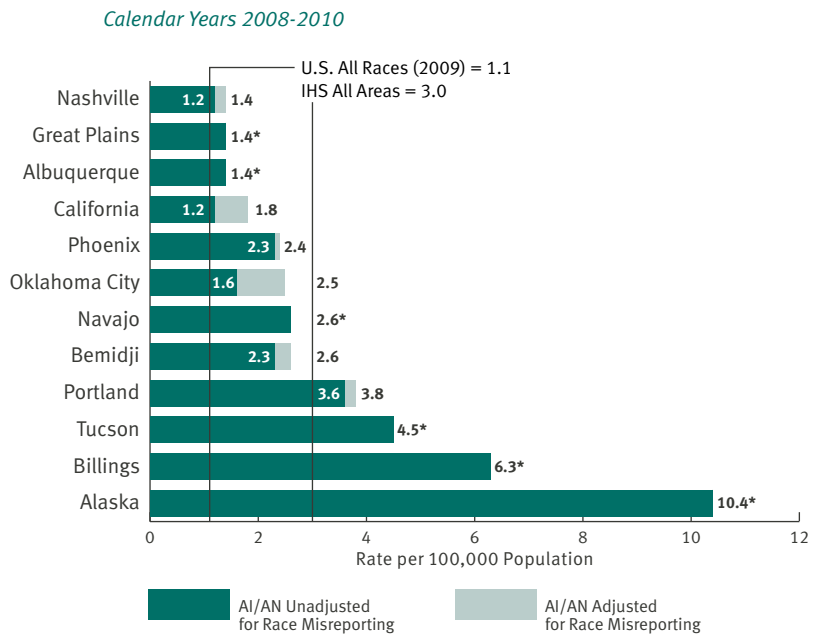
¹ Includes deaths resulting from accidental drowning and submersion (ICD-10 codes W65-W74).

² Adjusted to compensate for misreporting of AI/AN race on state death certificates.

SOURCE: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>

Age-adjusted drowning injury death rates vary among IHS Areas. The highest Area rate (Alaska, 10.4) is 7.4 times the lowest rate of 1.4 seen in three Areas (Albuquerque, Great Plains, and Nashville), and 9.5 times the U.S. all races rate (1.1). The overall IHS rate of 3.0 is 2.7 times the U.S. all races rate, and all 12 Areas have rates that exceed the U.S. all races rate. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 37 Age-Adjusted Drowning Injury Death Rates by Area



* IHS unadjusted and adjusted rates are the same for misreporting of AI/AN race.

Table 37 Age-Adjusted Drowning Injury¹ Death Rates by Area

Calendar Years 2008-2010

	Deaths		Rate ²	
	Unadjusted	Adjusted ³	Unadjusted	Adjusted ³
U.S. All Races (2009)	3,517		1.1	
All IHS Areas	161	182	2.7	3.0
Alaska	35	35	10.4	10.4
Albuquerque	*	*	1.4	1.4
Bemidji	*	11	2.3	2.6
Billings	14	14	6.3	6.3
California	*	13	1.2	1.8
Great Plains	*	*	1.4	1.4
Nashville	*	*	1.2	1.4
Navajo	19	19	2.6	2.6
Oklahoma City	18	29	1.6	2.5
Phoenix	17	18	2.3	2.4
Portland	21	22	3.6	3.8
Tucson	*	*	4.5	4.5

* The number of deaths is greater than zero but less than 10.

¹ Includes deaths resulting from accidental drowning and submersion (ICD-10 codes W65-W74).

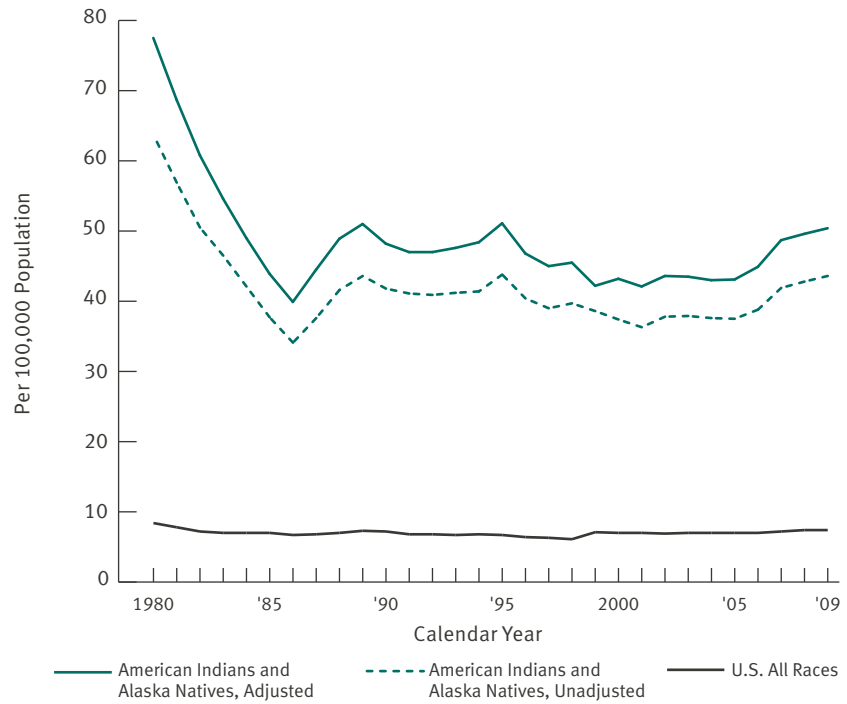
² Age-adjusted rate per 100,000 population.

³ Adjusted to compensate for misreporting of AI/AN race on the state death certificate.



Problem drinking is associated with injuries. The AI/AN population for years 2008-2010 has an age-adjusted alcohol-related death rate (50.4) that is over six times the U.S. all races and U.S. white rates (7.4 and 7.7, respectively). In the six years between 1979-1981 and 1985-1987, the AI/AN rate decreased 49 percent. In the twenty-three years from 1985-1987 to 2008-2010, AI/AN alcohol-related death rates increased by 26 percent, with some year-to-year fluctuating being apparent. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN rate on state death certificates.

Chart 38 Age-Adjusted Alcohol-Related Death Rates



CHARTS AND TABLES

Table 38 Alcohol-Related Deaths and Death Rates

*American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1980-2009
(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Number		Rate				U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹				
(2010)	793	922						
2008-2010 (2009)	692	794	43.6	50.4	7.4	7.7	6.8	6.5
2007-2009 (2008)	722	842	42.8	49.6	7.4	7.7	6.7	6.4
2006-2008 (2007)	665	784	41.9	48.7	7.2	7.5	6.8	6.5
2005-2007 (2006)	602	693	38.8	44.9	7.0	7.2	6.4	6.2
2004-2006 (2005)	537	616	37.5	43.1	7.0	7.2	6.2	6.0
2003-2005 (2004)	538	626	37.6	43.0	7.0	7.1	6.1	6.1
2002-2004 (2003)	557	630	37.9	43.5	7.0	7.0	6.2	6.2
2001-2003 (2002)	499	578	37.8	43.6	6.9	7.0	6.3	6.2
2000-2002 (2001)	483	573	36.3	42.1	7.0	6.9	6.0	6.1
1999-2001 (2000)	441	504	37.4	43.2	7.0	6.9	6.2	6.3
1998-2000 (1999)	497	570	38.6	42.2	7.1	6.8	5.9	6.2
1997-1999 (1998)	465	536	39.7	45.5	6.1	6.3	7.5	7.2
1996-1998 (1997)	435	500	39.0	45.0	6.3	6.0	7.1	7.5
1995-1997 (1996)	456	527	40.4	46.8	6.4	6.0	7.3	7.8
1994-1996 (1995)	460	543	43.8	51.1	6.7	6.2	7.6	8.2
1993-1995 (1994)	427	494	41.4	48.4	6.8	6.2	7.1	7.8
1992-1994 (1993)	395	458	41.2	47.6	6.7	6.1	7.1	7.8
1991-1993 (1992)	402	458	40.9	47.0	6.8	6.1	6.9	7.7
1990-1992 (1991)	367	417	41.1	47.0	6.8	6.0	6.9	7.8
1989-1991 (1990)	350	403	41.8	48.2	7.2	6.2	6.7	7.8
1988-1990 (1989)	376	436	43.6	51.0	7.3	6.2	7.0	8.2
1987-1989 (1988)	375	441	41.6	48.9	7.0	5.9	7.0	8.3
1986-1988 (1987)	264	310	37.6	44.5	6.8	5.8	6.5	7.7
1985-1987 (1986)	264	310	34.1	39.9	6.7	5.7	6.0	7.0
1984-1986 (1985)	274	315	37.7	43.9	7.0	5.8	6.3	7.6
1983-1985 (1984)	302	348	42.1	49.0	7.0	5.9	7.0	8.3
1982-1984 (1983)	295	345	46.5	54.6	7.0	6.0	7.8	9.1
1981-1983 (1982)	293	343	50.5	60.8	7.2	6.2	8.4	9.8
1980-1982 (1981)	344	424	56.9	68.7	7.8	6.6	8.8	10.4
1979-1981 (1980)	369	436	63.7	77.5	8.4	6.9	9.2	11.2
(1979)	377	454						

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: For all years 1979-1998 the causes of death (ICD-9 codes) that define alcohol-related deaths were expanded to include alcoholic polyneuropathy and the entire code group for unintentional poisoning by alcohol, as defined by the National Center for Health Statistics, Centers for Disease Control and Prevention. Data for years beginning with 1999 use ICD-10 codes, which were expanded in 2003 (refer to the appended Glossary of ICD-10 Codes for specific codes reported). The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 2000 standard population; the U.S. all races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



Drinking appears to take a greater toll on AI/AN males compared to AI/AN females, as evidenced by alcohol-related death rates. For all age groups, the age-specific alcohol-related death rates (2008-2010) for AI/AN males are higher than those for AI/AN females. The peak rate for AI/AN males (153.0 for the 55 to 64 year age group) is 4.6 times the U.S. all races male peak (33.1 for 55 to 64 years). The peak rate for AI/AN females (80.2 for age 45 to 54 years) is 48 percent less than the AI/AN male peak of 153.0 (55 to 64 years), but is 7.6 times the U.S. all races female peak (10.5 for 45 to 54 years). These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 39 Alcohol-Related Death Rates by Age and Sex

American Indians and Alaska Natives (2008-2010)

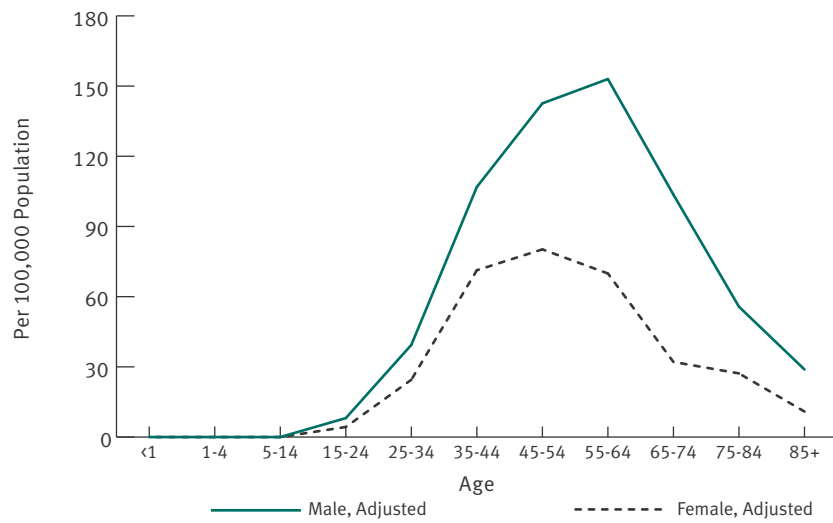


Table 39 Alcohol-Related Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 2008-2010, and U.S. All Races and White Populations, 2009 (Rate per 100,000 Population)

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹	Unadjusted	Adjusted ¹
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	—*	—*	—*	—*	—*	—*
15-24 years	5.3	6.2	7.5	8.1	3.0	4.3
25-34 years	27.1	32.1	34.4	39.4	19.6	24.5
35-44 years	74.8	89.0	91.9	106.9	57.9	71.3
45-54 years	96.7	110.1	125.2	142.6	70.4	80.2
55-64 years	93.6	109.2	130.4	153.0	60.5	69.9
65-74 years	58.2	64.9	89.8	103.6	31.4	32.1
75-84 years	37.4	39.1	51.7	55.7	27.2	27.2
85 years +	16.9	16.9	28.9	28.9	10.9	10.9

Age Group	U.S. All Races			U.S. White		
	Both Sexes	Male	Female	Both Sexes	Male	Female
	Under 1 year	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	0.0	0.0	—*	0.0	0.0	—*
15-24 years	0.4	0.7	0.2	0.4	0.7	0.2
25-34 years	1.8	2.7	1.0	1.9	2.8	1.0
35-44 years	7.6	10.7	4.5	8.1	11.4	4.8
45-54 years	18.7	27.1	10.5	19.8	28.7	11.0
55-64 years	20.8	33.1	9.4	21.5	33.8	9.8
65-74 years	15.1	25.2	6.4	15.2	25.1	6.5
75-84 years	9.2	16.1	4.2	9.5	16.6	4.3
85 years +	4.8	10.3	2.1	5.0	10.7	2.2

—* Represents zero.

0.0 Quantity more than zero but less than 0.05.

¹ Adjusted to compensate for misreporting of AI/AN race on state death certificates.

SOURCE: Rates for U.S. All Races and U.S. White: Centers for Disease Control and Prevention. CDC Wonder. <https://wonder.cdc.gov/>



Substantial differences among IHS Areas in alcohol-related death rates are apparent. The highest 2008-2010 Area rate (Billings, 89.4) is 8.2 times the lowest Area rate (Nashville, 10.9). All IHS Areas have rates that exceed the 2009 U.S. all races rate of 7.4, with rate ratios ranging from 1.5 (Nashville) to 12.1 (Billings). The AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 40 Age-Adjusted Alcohol-Related Death Rates by Area

Calendar Years 2008-2010

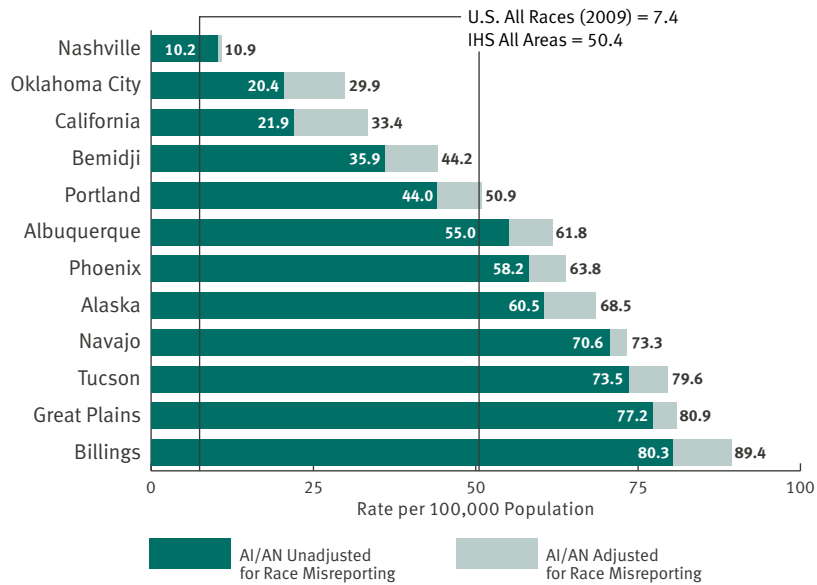


Table 40 Age-Adjusted Alcohol-Related Death Rates by Area

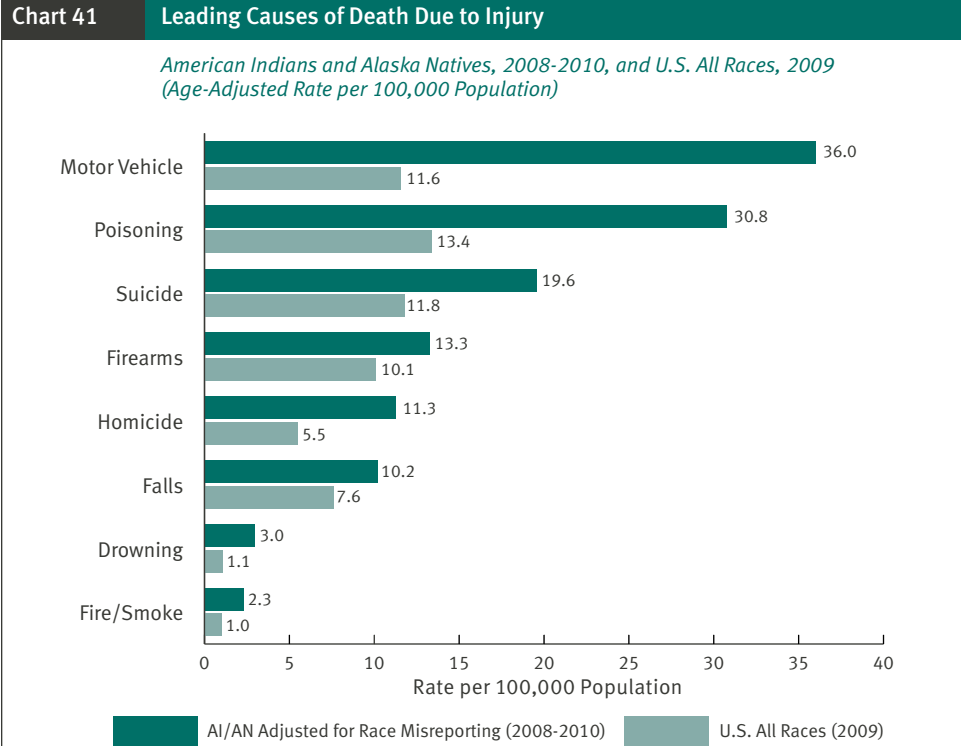
Calendar Years 2008-2010

	Deaths		Rate ¹	
	Unadjusted	Adjusted ²	Unadjusted	Adjusted ²
U.S. All Races (2009)	24,518		7.4	
All IHS Areas	2,207	2,558	43.6	50.4
Alaska	192	219	60.5	68.5
Albuquerque	158	178	55.0	61.8
Bemidji	109	136	35.9	44.2
Billings	136	151	80.3	89.4
California	119	182	21.9	33.4
Great Plains	197	207	77.2	80.9
Nashville	40	43	10.2	10.9
Navajo	428	444	70.6	73.3
Oklahoma City	202	296	20.4	29.9
Phoenix	313	344	58.2	63.8
Portland	242	281	44.0	50.9
Tucson	71	77	73.5	79.6

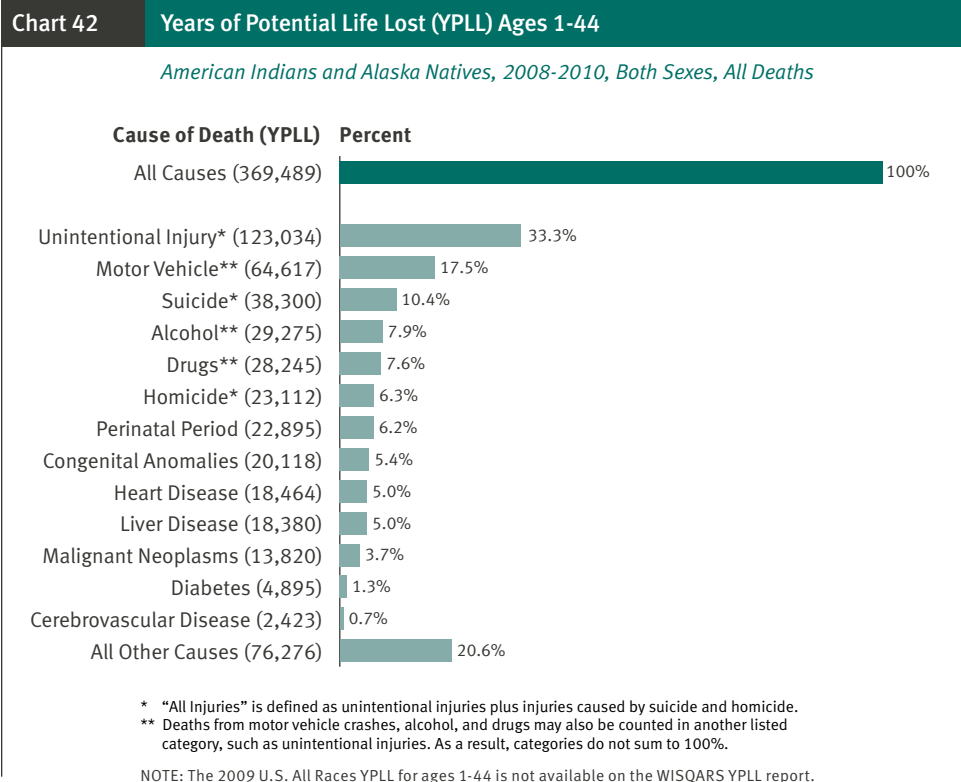
¹ Age-adjusted rate per 100,000 population.

² Adjusted to compensate for misreporting of AI/AN race on the state death certificate.

The AI/AN age-adjusted leading cause of injury death for 2008-2010 is motor vehicle accidents, followed by poisoning and suicide. The lowest AI/AN age-adjusted injury death rates are seen for fire/smoke and drowning injuries. For each injury cause shown, the age-adjusted AI/AN death rate is higher than the corresponding U.S. all races death rate. For the leading injury cause of motor vehicle accidents, the AI/AN death rate is 3.1 times the U.S. all races rate. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on the state death certificates.



All injuries, including unintentional injury, suicide, and homicide, together account for approximately half of the total YPLL for ages 1-44 among AI/AN. Within the category of all injuries, unintentional injuries account for the greatest portion (33 percent of all YPLL before age 45), with motor vehicle accidents contributing over half of the unintentional injury YPLL.

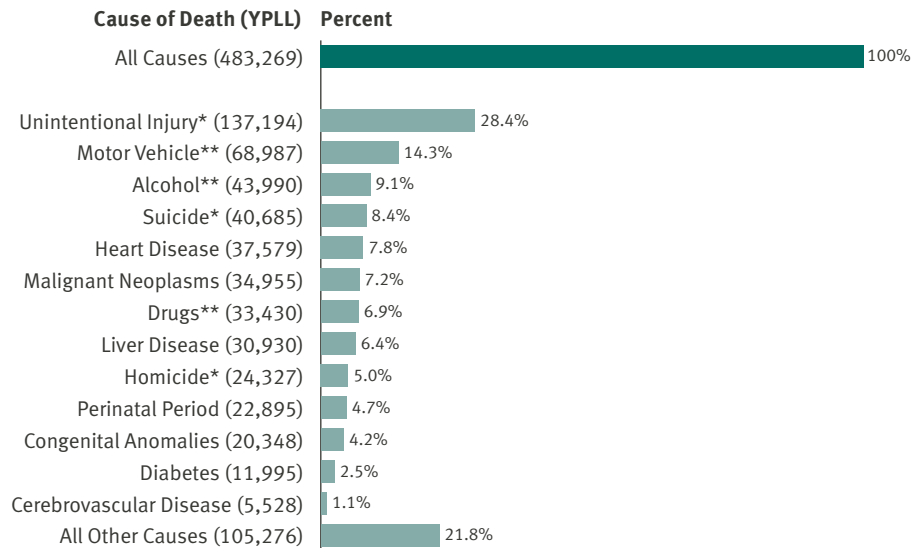




The pattern of contribution to AI/AN YPLL before age 65 is similar to that shown for YPLL before age 45. All injuries combined account for 41.8 percent of total YPLL before age 65, with unintentional injuries contributing the largest share. Motor vehicle accidents account for approximately half of the YPLL that is attributable to unintentional injuries. Alcohol-related deaths are also an important contributor to premature death, and account for 9.1 percent of total AI/AN YPLL occurring before age 65.

Chart 43 Years of Potential Life Lost (YPLL) Before Age 65

American Indians and Alaska Natives, 2008-2010, Both Sexes, All Deaths

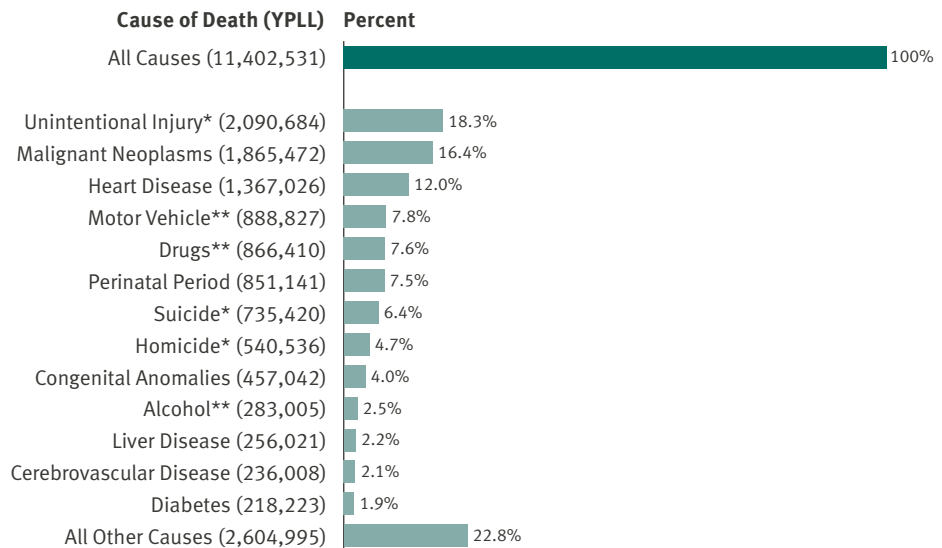


* "All Injuries" is defined as unintentional injuries plus injuries caused by suicide and homicide.
 ** Deaths from motor vehicle crashes, alcohol, and drugs may also be counted in another listed category, such as unintentional injuries. As a result, categories do not sum to 100%.

All injuries account for the greatest part (29.4 percent) of the YPLL before age 65 for the U.S. all races population. However, all injuries account for a relatively smaller proportion of YPLL for the U.S. all races population relative to the AI/AN population (29.4 percent versus 41.8 percent).

Chart 44 Years of Potential Life Lost (YPLL) Before Age 65

U.S. All Races, 2009, Both Sexes, All Deaths



* "All Injuries" is defined as unintentional injuries plus injuries caused by suicide and homicide.
 ** Deaths from motor vehicle crashes, alcohol, and drugs may also be counted in another listed category, such as unintentional injuries. As a result, categories do not sum to 100%.

Table 45 Years of Potential Life Lost (YPLL) Before Age 65 Death Rates

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

Cause of Death	American Indian and Alaska Native		U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native ¹ to:	
	Rate	Rate			U.S. All Races	U.S. White
	Unadjusted	Adjusted ¹				
YPLL for All Causes of Death						
2008-2010 (2009)	72.6	86.3	42.7	40.3	2.0	2.1
2007-2009 (2008)	75.2	89.4	43.7	41.1	2.0	2.2
2002-2004 (2003)	73.0	85.6	45.8	41.8	1.9	2.0
2001-2003 (2002)	72.6	85.2	46.0	41.8	1.9	2.0
2000-2002 (2001)	70.4	82.9	46.0	41.7	1.8	2.0
1999-2001 (2000)	69.4	81.8	45.9	41.3	1.8	2.0
YPLL for All Injuries (Includes Unintentional and Intentional)						
2008-2010 (2009)	30.6	37.4	13.1	13.0	2.9	2.9
2007-2009 (2008)	31.9	39.0	13.8	13.7	2.8	2.8
2002-2004 (2003)	31.3	37.1	14.0	13.6	2.6	2.7
2001-2003 (2002)	31.0	36.6	14.0	13.5	2.6	2.7
2000-2002 (2001)	30.3	35.7	13.9	13.3	2.6	2.7
1999-2001 (2000)	29.6	34.8	13.4	12.7	2.6	2.7
YPLL for Intentional Injuries (Homicides and Suicides)						
2008-2010 (2009)	9.8	11.6	4.8	4.2	2.4	2.8
2007-2009 (2008)	9.6	11.2	4.9	4.3	2.3	2.6
2002-2004 (2003)	9.9	11.3	4.9	4.2	2.3	2.7
2001-2003 (2002)	9.5	10.9	5.0	4.2	2.2	2.6
2000-2002 (2001)	9.1	10.4	5.2	4.5	2.0	2.3
1999-2001 (2000)	8.8	10.0	4.8	4.1	2.1	2.4
YPLL for Unintentional Injuries						
2008-2010 (2009)	19.7	24.5	7.8	8.2	3.1	3.0
2007-2009 (2008)	21.1	26.3	8.4	8.9	3.1	3.0
2002-2004 (2003)	21.5	25.8	8.6	8.9	3.0	2.9
2001-2003 (2002)	21.5	25.7	8.6	8.8	3.0	2.9
2000-2002 (2001)	21.2	25.2	8.2	8.3	3.1	3.0
1999-2001 (2000)	20.8	24.8	8.2	8.2	3.0	3.0

¹ Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates. The AI/AN rate columns present crude YPLL rates for the three-year period specified; the U.S. all races and white columns present crude YPLL rates for the one-year period indicated.

Years of Potential Life Lost (YPLL) is defined by the Centers for Disease Control and Prevention (CDC) as the number of years of potential life lost by each death occurring before a predetermined end point, set at age 75 (Health, United States, 2009; see Table 27). Age 75 is approximate to the current average life expectancy for the United States. IHS and some older and current CDC reports use age 65 as the end point age for YPLL calculation in order to maintain comparison over time.



Injury and poisoning is the fourth leading cause of hospitalization for AI/AN patients, 5 to 14 years of age. For this AI/AN age group, 10.6 percent of all discharges pertain to injury and poisoning.

Chart 46 Leading Causes of Hospitalization: Ages 5 to 14 Years

IHS and Tribal Direct and Contract General Hospitals, Fiscal Year 2016

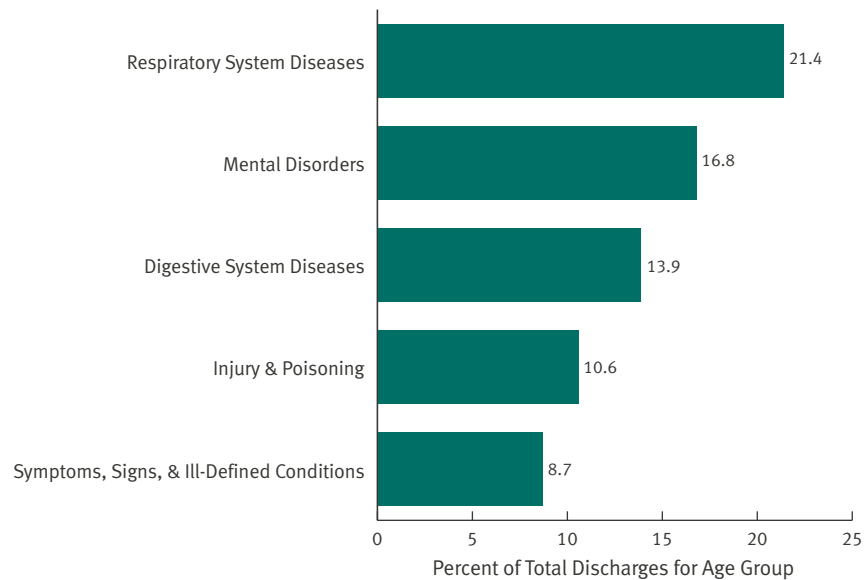


Table 46 Ten Leading Causes of Hospitalization for Patients 5 to 14 Years of Age

IHS and Tribal Direct and Contract General Hospitals, Fiscal Year 2016

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All categories	1,319	688	631	100.0	52.2	47.8
Respiratory system diseases	282	151	131	21.4	21.9	20.8
Mental disorders	221	118	103	16.8	17.2	16.3
Digestive system diseases	184	99	85	13.9	14.4	13.5
Injury & poisoning	140	92	48	10.6	13.4	7.6
Symptoms, signs, & ill-defined conditions	115	54	61	8.7	7.8	9.7
Skin & subcutaneous tissue diseases	98	59	39	7.4	8.6	6.2
Endocrine, nutritional, & metabolic disorders	52	22	30	3.9	3.2	4.8
Infectious & parasitic diseases	36	14	22	2.7	2.0	3.5
Genitourinary system diseases	34	9	25	2.6	1.3	4.0
Musculoskeletal system & connective tissue diseases	30	17	13	2.3	2.5	2.1
Nervous system & sense organ diseases	30	6	24	2.3	0.9	3.8
All other	97	47	50	7.4	6.8	7.9

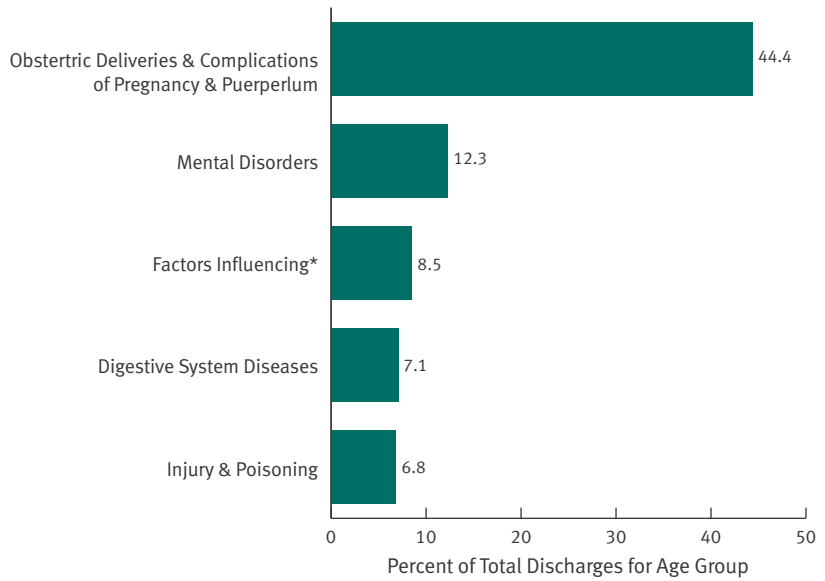
SOURCE: IHS National Data Warehouse

Injury and poisoning is the fifth leading cause of hospitalization for AI/AN patients, 15 to 24 years of age. For this AI/AN age group, 6.8 percent of all discharges pertain to injury and poisoning.

Chart 47

Leading Causes of Hospitalization: Ages 15 to 24 Years

IHS and Tribal Direct and Contract General Hospitals, Fiscal Year 2016



* Factors influencing health status and contact with health services, formerly supplementary classification in ICD-9.

Table 47

Ten Leading Causes of Hospitalization for Patients 15 to 24 Years of Age

IHS and Tribal Direct and Contract General Hospitals, Fiscal Year 2016

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All categories	6,899	1,524	5,375	100.0	22.1	77.9
Obstetric deliveries & complications of pregnancy & puerperium	3,063	0	3,063	44.4	0.0	57.0
Mental disorders	852	398	454	12.3	26.1	8.4
Factors influencing*	586	34	552	8.5	2.2	10.3
Digestive system diseases	491	220	271	7.1	14.4	5.0
Injury & poisoning	469	288	181	6.8	18.9	3.4
Symptoms, signs, & ill-defined conditions	213	74	139	3.1	4.9	2.6
Endocrine, nutritional, & metabolic disorders	190	98	92	2.8	6.4	1.7
Respiratory system diseases	180	87	93	2.6	5.7	1.7
Skin & subcutaneous tissue diseases	176	116	60	2.6	7.6	1.1
Genitourinary system diseases	165	16	149	2.4	1.0	2.8
All other	514	193	321	7.5	12.7	6.0

* Factors influencing health status and contact with health services, formerly supplementary classification in ICD-9.

SOURCE: IHS National Data Warehouse



Injury and poisoning is the fourth leading cause of hospitalization for AI/AN patients, 25 to 44 years of age. For this AI/AN age group, 7.1 percent of all discharges pertain to injury and poisoning.

Chart 48 Leading Causes of Hospitalization: Ages 25 to 44 Years

IHS and Tribal Direct and Contract General Hospitals, Fiscal Year 2016

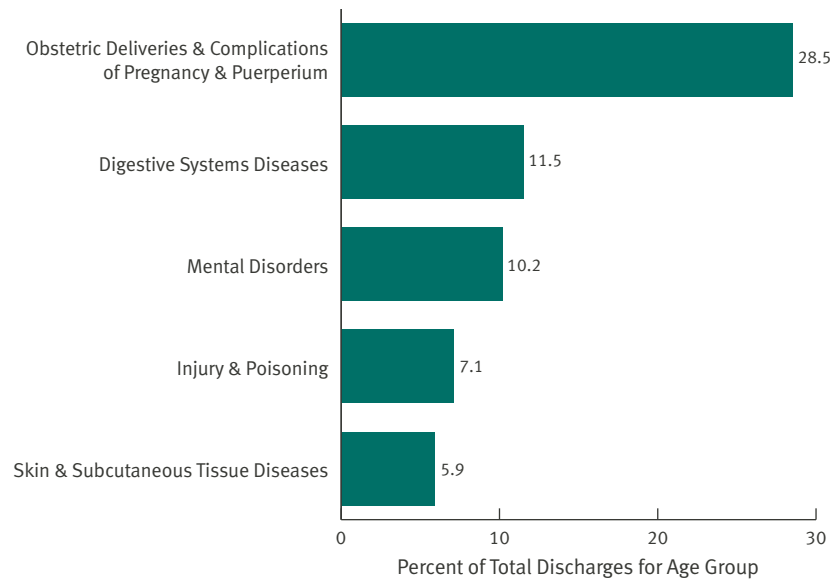


Table 48 Ten Leading Causes of Hospitalization for Patients 25 to 44 Years of Age

IHS and Tribal Direct and Contract General Hospitals, Fiscal Year 2016

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All categories	17,216	5,874	11,342	100.0	34.1	65.9
Obstetric deliveries & complications of pregnancy & puerperium	4,906	0	4,906	28.5	0.0	43.3
Digestive system diseases	1,983	958	1,025	11.5	16.3	9.0
Mental disorders	1,752	963	789	10.2	16.4	7.0
Injury & poisoning	1,226	793	433	7.1	13.5	3.8
Skin & subcutaneous tissue diseases	1,015	645	370	5.9	11.0	3.3
Factors influencing*	976	119	857	5.7	2.0	7.6
Endocrine, nutritional, & metabolic disorders	883	526	357	5.1	9.0	3.1
Genitourinary system diseases	789	165	624	4.6	2.8	5.5
Infectious & parasitic diseases	705	327	378	4.1	5.6	3.3
Respiratory system diseases	685	330	355	4.0	5.6	3.1
All other	2,296	1,048	1,248	13.3	17.8	11.0

* Factors influencing health status and contact with health services, formerly supplementary classification in ICD-9.

SOURCE: IHS National Data Warehouse

Injury and poisoning is the fourth leading cause of hospitalization for AI/AN male patients (all ages). Nine (8.9) percent of all AI/AN male discharges pertain to injury and poisoning.

Chart 49 **Leading Causes of Hospitalization for Males**

IHS and Tribal Direct and Contract General Hospitals, Fiscal Year 2016

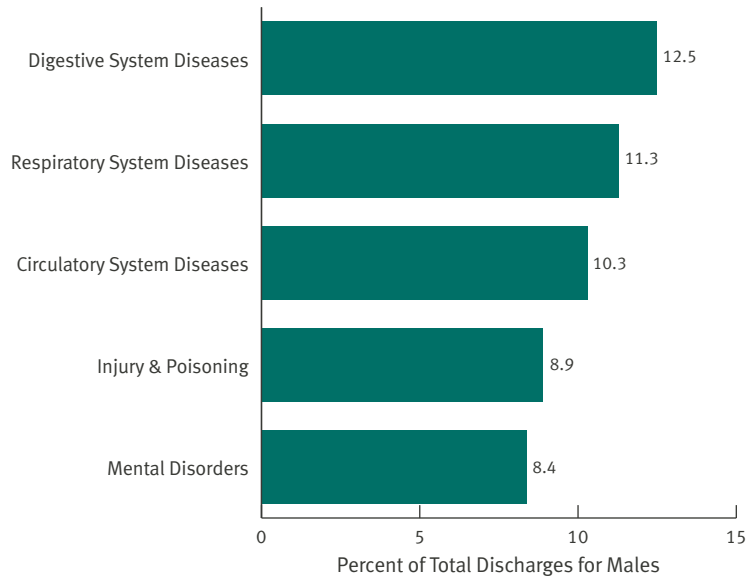




Table 49 Ten Leading Causes of Hospitalization by Sex

Indian Health Services and Tribal Direct and Contract General Hospitals, Fiscal Year 2016

Diagnostic Category	Number of Discharges	Percent of Total
MALE		
All categories	24,727	100.0
Digestive system diseases	3,080	12.5
Respiratory system diseases	2,804	11.3
Circulatory system diseases	2,548	10.3
Injury & poisoning	2,207	8.9
Mental disorders	2,086	8.4
Endocrine, nutritional, & metabolic disorders	1,858	7.5
Skin & subcutaneous tissue diseases	1,755	7.1
Symptoms, signs, & ill-defined conditions	1,609	6.5
Infectious & parasitic diseases	1,548	6.3
Factors influencing*	1,335	5.4
All other	3,897	15.8
FEMALE		
All categories	35,056	100.0
Obstetric deliveries & complications of pregnancy & puerperium	8,009	22.8
Digestive system diseases	3,438	9.8
Respiratory system diseases	3,242	9.2
Factors influencing*	2,612	7.5
Genitourinary system diseases	2,096	6.0
Circulatory system diseases	2,083	5.9
Symptoms, signs, & ill-defined conditions	1,882	5.4
Mental disorders	1,870	5.3
Injury & poisoning	1,699	4.8
Infectious & parasitic diseases	1,682	4.8
All other	6,443	18.4

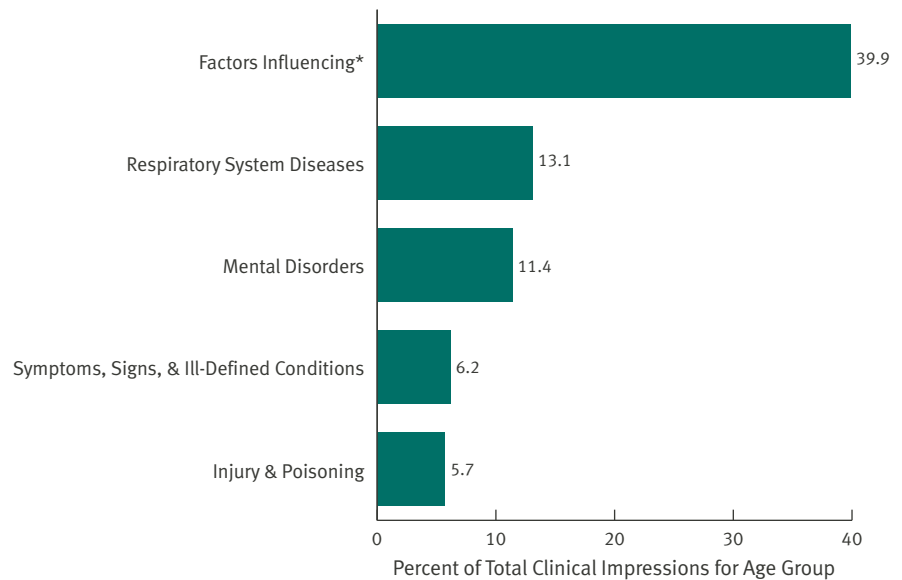
* Factors influencing health status and contact with health services, formerly supplementary classification in ICD-9.

SOURCES: IHS National Data Warehouse

Injury and poisoning is the fifth leading cause of ambulatory medical visits for AI/AN patients, 5 to 14 years of age. For this AI/AN age group, 5.7 percent of all visits pertain to injury and poisoning.

Chart 50 **Leading Causes of Ambulatory Medical Clinical Impressions Visits: Ages 5 to 14 Years**

IHS and Tribal Direct and Contract Facilities, Fiscal Year 2016



* Factors influencing health status and contact with health services, formerly supplementary classification in ICD-9.

Table 50 **Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 5 to 14 Years of Age**

IHS and Tribal Direct and Contract Facilities, Fiscal Year 2016

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All categories	1,081,717	548,010	533,707	100.0	50.7	49.3
Factors influencing*	432,013	222,849	209,164	39.9	40.7	39.2
Respiratory system diseases	141,734	70,101	71,633	13.1	12.8	13.4
Mental disorders	123,281	71,261	52,020	11.4	13.0	9.7
Symptoms, signs, & ill-defined conditions	66,619	31,465	35,154	6.2	5.7	6.6
Injury & poisoning	62,169	34,086	28,083	5.7	6.2	5.3
Eye and adnexa diseases	56,651	26,456	30,195	5.2	4.8	5.7
Skin & subcutaneous tissue diseases	39,761	19,750	20,011	3.7	3.6	3.7
Ear & mastoid process diseases	38,850	19,074	19,776	3.6	3.5	3.7
Infectious & parasitic diseases	34,203	14,725	19,478	3.2	2.7	3.6
Musculoskeletal system & connective tissue diseases	32,188	14,132	18,056	3.0	2.6	3.4
All other	54,248	24,111	30,137	5.0	4.4	5.6

* Factors influencing health status and contact with health services, formerly supplementary classification in ICD-9.

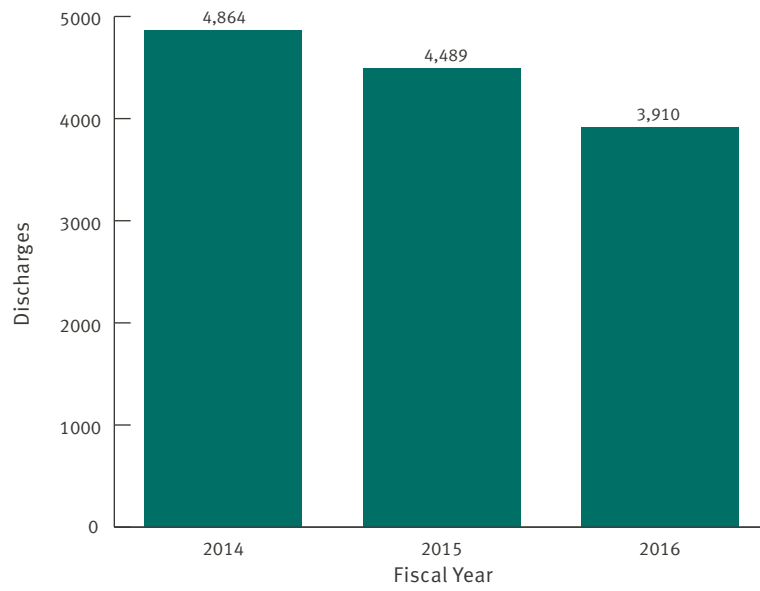
SOURCE: IHS National Data Warehouse



Since FY 2014, the number of discharges for injuries and poisonings from IHS and Tribal direct and contract general hospitals has decreased 20 percent. In FY 2016, there were 3,910 discharges.

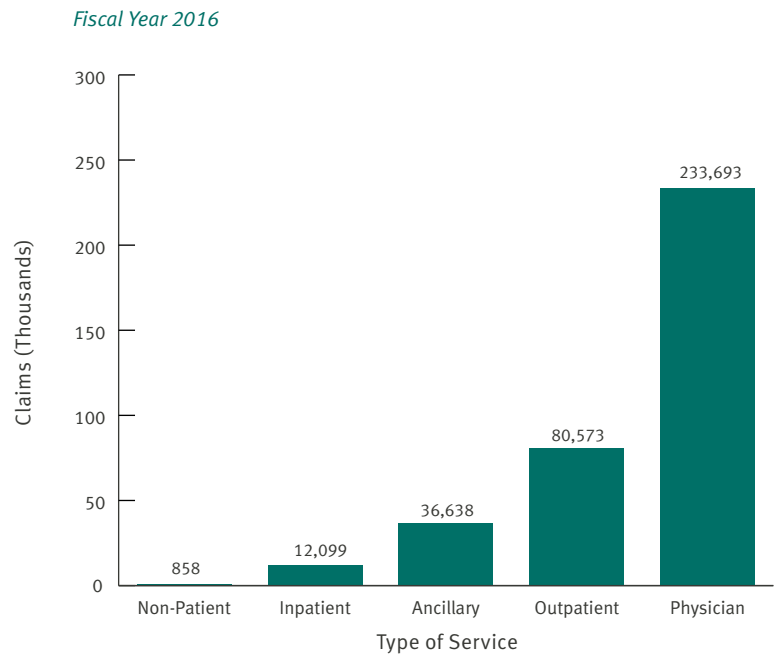
Chart 51 Hospitalizations for Injuries and Poisonings

IHS and Tribal Direct and Contract General Hospitals, FY 2014-2016



During FY 2016, the claim count was 363,861 for all types of services of which 233,693 (64.2 percent) were from physicians. Inpatient claims (12,099) comprised 3.3 percent of all claims paid by Purchased/Referred Care. *NOTE: The data is subject to change as the FY 2016 claims processing is 95 percent complete for these reports.*

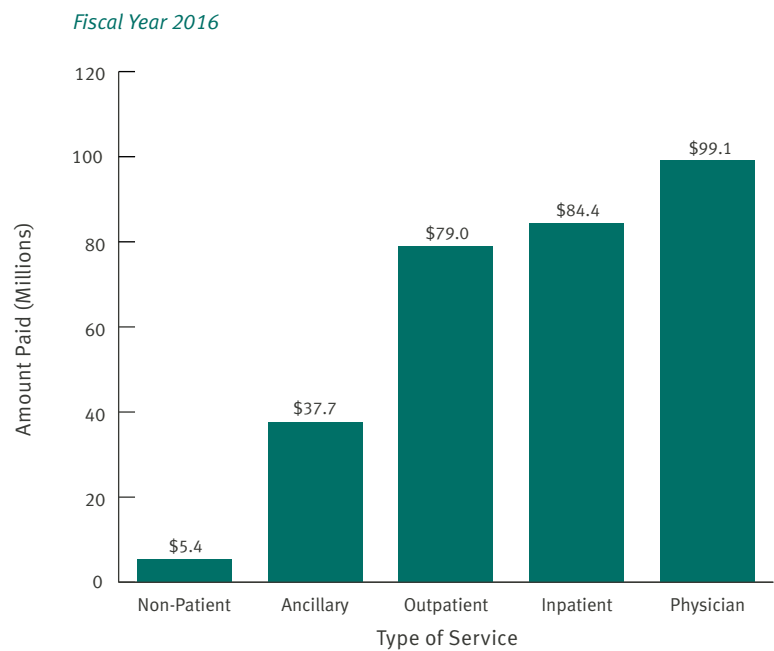
Chart 52.1 Purchased/Referred Care, All Medical Expense Claim Count (Excludes Dental)



NOTE: The data is subject to change as the FY 2016 claims processing is 95% complete for these reports.

During FY 2016, \$305.7 million in claims were paid for all types of services. \$84.4 million in inpatient claims, and \$99.1 million in physician claims were paid by IHS Purchased/Referred Care. *NOTE: The data is subject to change as the FY 2016 claims processing is 95 percent complete for these reports.*

Chart 52.2 Purchased/Referred Care, All Medical Expense Paid (Excludes Dental)



NOTE: The data is subject to change as the FY 2016 claims processing is 95% complete for these reports.

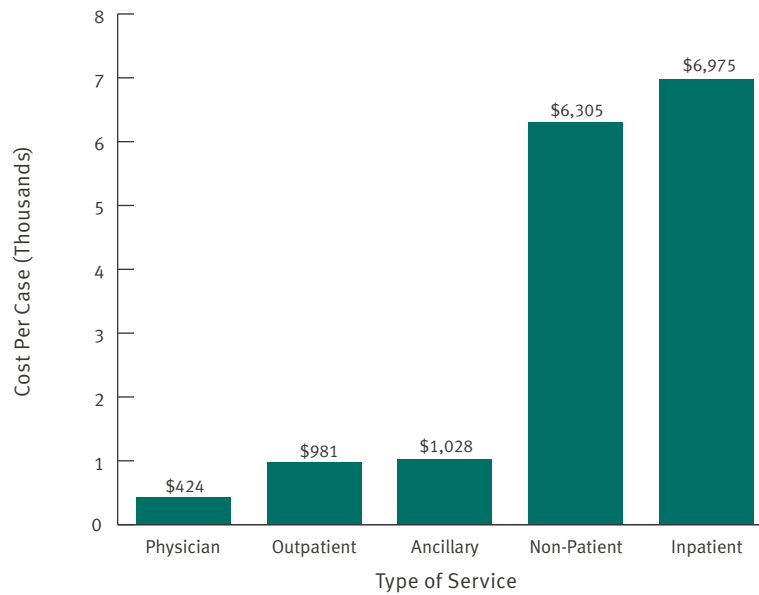


During FY 2016, the average cost of a Purchased/Referred Care inpatient case for injuries was \$6,975 and for an outpatient case was \$981. Inpatient cost per case were seven times higher than outpatient ones in this fiscal year.

NOTE: The data is subject to change as the FY 2016 claims processing is 95 percent complete for these reports.

Chart 52.3 Purchased/Referred Care, All Medical Expense Cost Per Case (Excludes Dental)

Fiscal Year 2016



NOTE: The data is subject to change as the FY 2016 claims processing is 95% complete for these reports.

Table 52 Purchased/Referred Care, Medical Expense

IHS Administered Purchased/Referred Care, Fiscal Year 2016

Type of Expenses	TYPE OF SERVICE					
	TOTAL	Physician	Inpatient	Outpatient	Ancillary	Non-Patient
All Medical Expense Claim Count	363,861	233,693	12,099	80,573	36,638	858
All Medical Expense Paid	\$305,651,602.60	\$99,147,356.56	\$84,389,691.54	\$79,048,548.15	\$37,656,474.49	\$5,409,531.86
All Medical Expense Cost Per Case	\$840.02	\$424.26	\$6,974.93	\$981.08	\$1,027.80	\$6,304.82

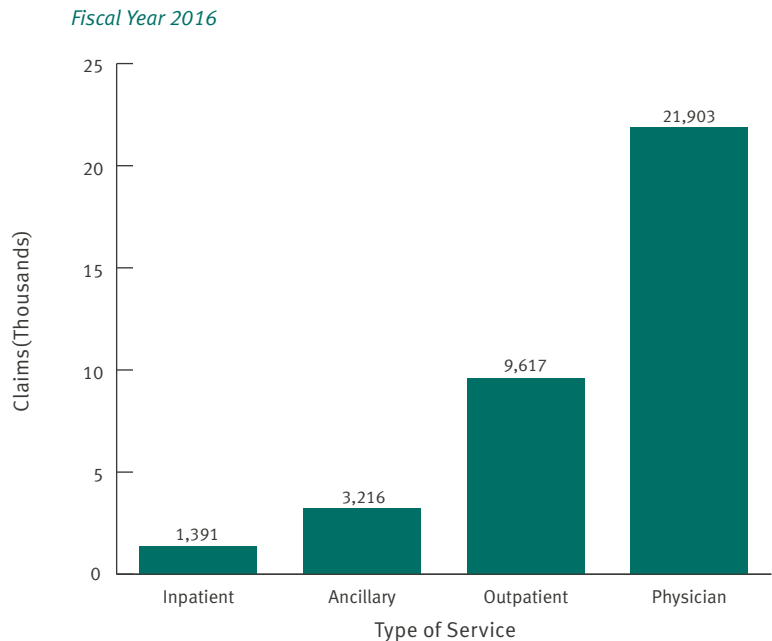
NOTE: The data is subject to change as the FY 2016 claims processing is 95% complete for these reports. Injuries were identified by claims with a Primary Diagnosis as indicated by an ICD-10 Codes S00-T88.ZZZZ or ICD-9 Codes between 800-999.99. External cause of Injury Codes (E Codes) were not considered. Dental is not included.

SOURCE: Office of Resource Access and Partnerships. Fiscal Intermediary Claim History Files for Purchase Order, Fiscal Year 2016.

During FY 2016, the number of Purchased/Referred Care claims from physicians was 21,903, 9,617 outpatient claims and 1,391 inpatient claims were processed in that fiscal year. Outpatient claims outnumbered inpatient claims by a ratio of 6.9 to 1.

NOTE: The data is subject to change as the FY 2016 claims processing is 95 percent complete for these reports.

Chart 53.1 Purchased/Referred Care, Cost per Injuries and Poisonings Case Claim Count (Excludes Dental)

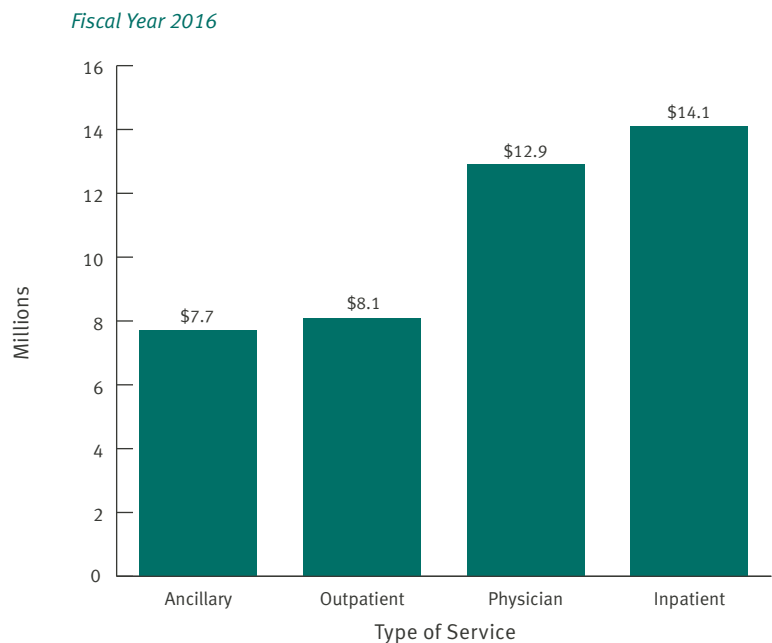


NOTE: The data is subject to change as the FY 2016 claims processing is 95% complete for these reports.

During FY 2016, the total amount paid for Purchased/Referred Care inpatient cases of injuries and poisonings was \$14 million and for outpatient cases was \$8 million. The amount paid for inpatient claims exceeded outpatient by 1.75 times.

NOTE: The data is subject to change as the FY 2016 claims processing is 95 percent complete for these reports.

Chart 53.2 Purchased/Referred Care, Expenses Related to Injuries and Poisonings Paid (Excludes Dental)



NOTE: The data is subject to change as the FY 2016 claims processing is 95% complete for these reports.

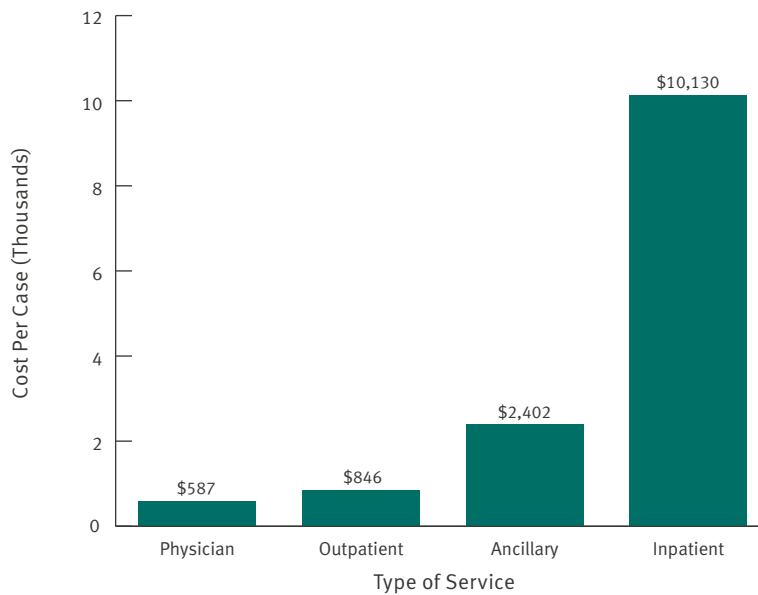


During FY 2016, the average cost of a Purchased/Referred Care inpatient case for injuries and poisonings was \$10,130 and for an outpatient one was \$846. The cost of an average inpatient injury and poisoning case exceeded an outpatient one by 12 times.

NOTE: The data is subject to change as the FY 2016 claims processing is 95 percent complete for these reports.

Chart 53.3 Purchased/Referred Care, Injuries and Poisonings Cost Per Case (Excludes Dental)

Fiscal Year 2016



NOTE: The data is subject to change as the FY 2016 claims processing is 95% complete for these reports.

Table 53 Purchased/Referred Care, Expenses Related to Injuries and Poisonings

IHS Administered Purchased/Referred Care, Fiscal Year 2016

Type of Expenses	TYPE OF CLAIM				
	TOTAL	Physician	Inpatient	Outpatient	Ancillary
Injury Claim Count	36,127	21,903	1,391	9,617	3,216
Injury Paid	\$42,813,633.67	\$12,862,130.53	\$14,091,492.81	\$8,134,438.05	\$7,725,572.28
Injury Cost Per Case	\$1,185.09	\$587.23	\$10,130.48	\$845.84	\$2,402.23

NOTE: The data is subject to change as the FY 2016 claims processing is 95% complete for these reports. Injuries were identified by claims with a Primary Diagnosis as indicated by an ICD-10 Codes S00-T88.ZZZZ or ICD-9 Codes between 800-999.99. External cause of Injury Codes (E Codes) were not considered. Dental is not included.

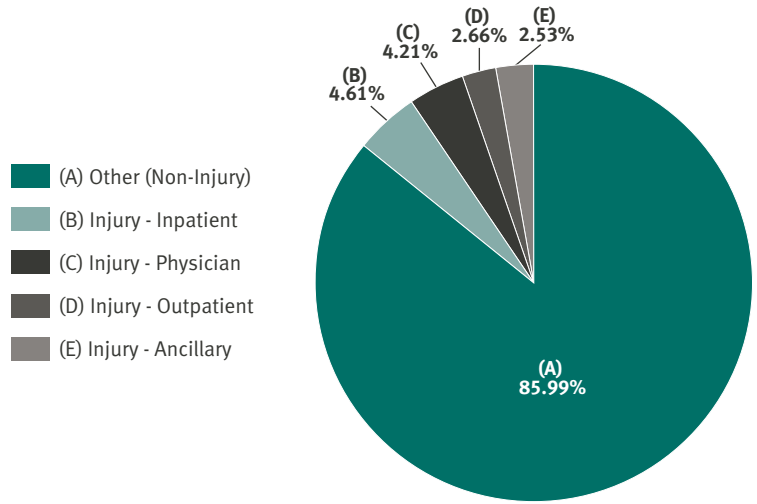
SOURCE: Office of Resource Access and Partnerships. Fiscal Intermediary Claim History Files for Purchase Order, Fiscal Year 2016.

Fourteen (14) percent of the total medical expenses paid for IHS-administered Purchased/Referred Care during FY 2016 were associated with “injuries and poisonings” claims of which five percent were inpatient claims and three percent were outpatient claims. Eighty-six (86) percent fall under “other medical” (non-injury) claims expenses.

NOTE: The data is subject to change as the FY 2016 claims processing is 95 percent complete for these reports.

Chart 54 Percent of Injury and Poisoning “Total” Medical Expense Paid by Type of Service (Excludes Dental)

Fiscal Year 2016





GLOSSARY OF ICD-10 CODES

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

Cause of Death	ICD-10 Codes
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
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 infarction	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 endocarditis	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, I15

GLOSSARY OF ICD-10 CODES

Cause of Death	ICD-10 Codes
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	J09-J18
Influenza	J09-J11
Pneumonia	J12-J18
Other acute lower respiratory infections	J20-J22, U04
Acute bronchitis and bronchiolitis	J20-J21
Unspecified acute lower respiratory infection	J22, U04
Chronic lower respiratory diseases	J40-J47
Bronchitis, chronic and unspecified	J40-J42
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
Cholelithiasis 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



Cause of Death	ICD-10 Codes
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
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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
Diphtheria	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



Cause of Death	ICD-10 Codes
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
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, U04
Acute upper respiratory infections	J00-J06
Influenza and pneumonia	J09-J18
Influenza	J09-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, U04
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

Cause of Death	ICD-10 Codes
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 birth weight not elsewhere classified	P07
Extremely low birth weight or extreme immaturity	P07.0-P07.2
Other low birth weight or preterm	P07.1, P07.3
Disorders related to long gestation and high birth weight	P08
Birth trauma	P10-P15
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



Cause of Death	ICD-10 Codes
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 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-R94, R96-R99

Cause of Death	ICD-10 Codes
All other diseases	F01-F99, H00-H57, L00-M99
External causes of mortality	U01, V01-Y84
Accidents (unintentional injuries)	V01-X59
Transport accidents	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-V80.5, 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)	U01, X85-Y09
Assault (homicide) by hanging, strangulation and suffocation	X91
Assault (homicide) by discharge of firearms	U01.4, X93-X95
Neglect, abandonment and other maltreatment syndromes	Y06-Y07
Assault (homicide) by other and unspecified means	U01.0-U01.3, U01.5-U01.9, 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 causes 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	E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, Y15
Breast cancer (females)	C50
Cervical cancer	C53
Colon-rectal-cancer	C18-C21
Drug-related deaths	D52.1, D59.0, D59.2, D61.1, D64.2, E06.4, E16.0, E23.1, E24.2, E27.3, E66.1, F11.1–F11.5, F11.7–F11.9, F12.1–F12.5, F12.7–F12.9, F13.1–F13.5, F13.7–F13.9, F14.1–F14.5, F14.7–F14.9, F15.1–F15.5, F15.7–F15.9, F16.1–F16.5, F16.7–F16.9, F17.3–F17.5, F17.7–F17.9, F18.1–F18.5, F18.7–F18.9, F19.1–F19.5, F19.7–F19.9, G21.1, G24.0, G25.1, G25.4, G25.6, G44.4, G62.0, G72.0, I95.2, J70.2–J70.4, K85.3, L10.5, L27.0–L27.1, M10.2, M32.0, M80.4, M81.4, M83.5, M87.1, R50.2, R78.1–R78.5, X40–X44, X60–X64, X85, Y10–Y14
Enterocolitis due to Clostridium Difficile (C. difficile)	A04.7
Firearm deaths	W32-W34, X72-X74, X93-X95, Y22-Y24, Y35.0, U01.4
Human Immunodeficiency virus (HIV) infection	B24
Lung cancer	C33-C34
Maternal death	A34, O00-O95, O98-O99
Prostate cancer	C61, D29

List of ICD-10-CM Codes used in Patient Care Charts and Tables

Condition	ICD-10-CM Codes
Infectious and parasitic diseases	A00-899
Neoplasms	C00-D49
Endocrine, nutritional, and metabolic diseases and immunity disorders	E00-E89
Diseases of the blood and blood-forming organs	D50-D89
Mental, behavioral and neurodevelopment disorders	F01-F99
Diseases of the nervous system	G00-G99
Diseases of the eye and adnexa	H00-H59
Diseases of the circulatory system	I00-I99
Diseases of the respiratory system	J00-J99
Diseases of the digestive system	K00-K95
Diseases of the genitourinary system	N00-N99
Complications of pregnancy, childbirth, and the puerperium	O00-O9A
Diseases of the skin and subcutaneous tissue	L00-L99
Diseases of the musculoskeletal system and connective tissue	M00-M99
Congenital anomalies	Q00-Q99
Certain conditions originating in the perinatal period	P00-P96
Symptoms, signs, and ill-defined conditions	R00-R99
Injury, poisoning and certain other consequences of external causes	S00-T88
Factors influencing health status and contact with health services (Formerly supplementary classification in ICD-9)	Z00-Z99
External causes of morbidity	V00-Y99



Methods Used to Rank Leading Sites of Cancer Deaths

Site of Cancer Death	ICD-10 Codes
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	C00-C97
Malignant neoplasms of lip, oral cavity, and pharynx	C00-C14
Malignant neoplasms of esophagus	C15
Malignant neoplasms of stomach	C16
Malignant neoplasms of colon, rectum and anus	C18-C21
Malignant neoplasms of liver/intrahepatic bile ducts	C22.0, C22.2-C22.4, C22.7, C22.9
Malignant neoplasms of gallbladder	C23
Malignant neoplasms of pancreas	C25
Malignant neoplasms of larynx	C32
Malignant neoplasms of lung and bronchus	C33-C34
Malignant neoplasms of bones and joints	C40-C41
Malignant neoplasms of skin	C43
Malignant mesothelioma**	C45
Malignant kaposi sarcoma**	C46
Malignant neoplasms of soft tissue including heart**	C47, C49, C38.0, C45.2
Malignant neoplasms of breast	C50
Malignant neoplasms of vulva	C51
Malignant neoplasms of cervix uteri	C53
Malignant neoplasms of corpus uteri and uterus, part unspecified	C54, C55
Malignant neoplasms of ovary	C56
Malignant neoplasms of prostate	C61
Malignant neoplasms of testis	C62
Malignant neoplasms of kidney and renal pelvis	C64-C65
Malignant neoplasms of urinary bladder	C67
Malignant neoplasms eye and orbit	C69
Malignant neoplasms of meninges, brain and other parts of central nervous system	C70-C72
Malignant neoplasms of thyroid	C73
Malignant neoplasms of lymphoid, hematopoietic, and related tissue	C81-C96
Hodgkin's lymphoma	C81
Non-Hodgkin's lymphoma	C82-C85, C96.3
Multiple myeloma	C90.0, C90.2

METHODS USED TO RANK LEADING SITES OF CANCER DEATHS

Site of Cancer Death	ICD-10 Codes
Leukemia	C90.1, C91-C95
Lymphocytic leukemia	C91
Acute lymphocytic leukemia	C91.0
Chronic lymphocytic leukemia	C91.1
Myeloid and monocytic leukemia	C92-C93
Acute myeloid leukemia	C92.0, C92.4-C92.5, C94.0, C94.2
Acute monocytic leukemia	C93.0
Chronic myeloid leukemia	C92.1
Other and unspecified malignant neoplasms of lymphoid, Hematopoietic, and related tissue	C96
All other and unspecified malignant neoplasms	C17, C24, C26-C31, C36-C39, 44, C48, C52, C57-C60, C63, C66, C68, C74-C80, C97

**These variables can be created with or without Mesothelioma (C45) and Kaposi Sarcoma (C46) as separated groupings. The list above documents both possibilities. Note that this is only possible with ICD10.





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